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Sustainable Rural Development Through Alternative Economic Networks: Redefining Relations in the Commodity Chain For Export Vegetables In Western Guatemala

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FLORIDA INTERNATIONAL UNIVERSITY

Miami, Florida

SUSTAINABLE RURAL DEVELOPMENT THROUGH ALTERNATIVE
ECONOMIC NETWORKS: REDEFINING RELATIONS IN THE COMMODITY
CHAIN FOR EXPORT VEGETABLES IN WESTERN GUATEMALA

A dissertation submitted in partial fulfillment of the

requirements for the degree of

DOCTOR OF PHILOSOPHY

in

COMPARATIVE SOCIOLOGY

by

Ryan J. Klotz

2012

To: Dean Kenneth G. Furton
College of Arts and Sciences

This dissertation, written by Ryan J. Klotz, and entitled Sustainable Rural Development Through Alternative Economic Networks: Redefining Relations in the Commodity Chain For Export Vegetables In Western Guatemala, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this dissertation and recommend that it be approved.

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Florida International University, 2012

DEDICATION

I dedicate this dissertation to Courtney, my wife, co-researcher, and partner in all things. Without your support, feedback, and tireless efforts, this project would have never left the ground.

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I wish to thank all of the members of my committee for their hard work, guidance, and insights throughout this project. I appreciate the efforts of Dr. Liliana Goldin for her mentorship during the entirety of my graduate career and for her involvement in this project, from its preliminary stages to completion. Dr. Guillermo Grenier has not only provided strong support for me along the way but has also been a constant source of new and insightful perspectives on the project. The theoretical development of this research owes much to the insights of Dr. Laura Ogden, whose reflections on my work have been crucial to my scholarly development. I would like to acknowledge the deep involvement of Dr. Mahadev Bhat for making accessible to me the wealth of pertinent information available in the fields of agricultural economics and environmental studies. Finally, I would like to thank Dr. Richard Tardanico for familiarizing me with the fundamental research methods employed in this project. This work is as much a reflection of the committee's efforts as my own. My hope is that it is worthy of their confidence and guidance.

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ABSTRACT OF THE DISSERTATION

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ECONOMIC NETWORKS: REDEFINING RELATIONS IN THE COMMODITY
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Ryan J. Klotz

Florida International University, 2012

Miami, Florida

Professor Guillermo Grenier, Major Professor

The current research considers the capacity of a local organic food system for producer and consumer empowerment and sustainable development outcomes in western Guatemala. Many have argued that the forging of local agricultural networks linking farmers, consumers, and supporting institutions is an effective tool for challenging the negative economic, environmental, and sociopolitical impacts associated with industrial models of global food production. But does this work in the context of agrarian development in the developing world? Despite the fact that there is extensive literature concerning local food system formation in the global north, there remains a paucity of research covering how the principles of local food systems are being integrated into agricultural development projects in developing countries. My work critically examines claims to agricultural sustainability and actor empowerment in a local organic food system built around non-traditional agricultural crops in western Guatemala. Employing a mixed methods research design involving fifteen months of

participant observation, in-depth interviewing, surveying, and a self-administered questionnaire, the project evaluates the sustainability of this NGO-led development initiative and local food movement along several dimensions. Focusing on the unique economic and social networks of actors and institutions at each stage of the commodity chain, this research shows how the growth of an alternative food system continues to be shaped by context specific processes, politics, and structures of conventional food systems. Further, it shows how the specifics of context also produce new relationships of cooperation and power in the development process. Results indicate that structures surrounding agrarian development in the Guatemalan context give rise to a hybrid form of development that at the same time contests and reinforces conventional models of food production and consumption. Therefore, participation entails a host of compromises and tradeoffs that result in mixed successes and setbacks, as actors attempt to refashion conventional commodity chains through local food system formation.

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ABBREVIATIONS AND ACRONYMS

AGEXPORT	<i>Asociación Guatemalteca de Exportadores</i> —Guatemalan Exporters Association
ALCOSA	<i>Alimentos Cogelados Monte Bello S.A.</i>
ANT	Actor Network Theory
ATQ	<i>Amigos de la Tierra, Quetzaltenango</i> —Friends of the Land, Quetzaltenango
BANDESA	<i>Banco Nacional de Desarrollo Agrícola</i> —Guatemalan National Bank for Agricultural Development
BMI	Body Mass Index
BMP	Best Management Practices
DIGESA	<i>Dirección General de Servicios Agrícolas</i> —General Directorate for Agricultural Services
GEXPRONT	<i>Gremial de Exportadores de Productos No Tradicionales</i> —Guatemalan Association of Exporters of Non-Traditional Products
IAF	Inter-American Foundation
IMF	International Monetary Fund
IPM	Integrated Pest Management
KWIC	Key Word in Context Coding
LAAD	Latin American Development Corporation
MAGA	<i>Ministerio de Agricultura, Ganadería, y Alimentación</i> —Guatemalan Ministry of Agriculture and Livestock
NGO	Non-Governmental Organization
NTAE	Non-Traditional Agricultural Export
OPEC	The Organization of the Petroleum Exporting Countries

POSC	<i>Productores Orgánicos del Valle de San Carlos</i> —Organic Producers of the Valley of San Carlos
PRA	Participatory Rural Assessment
Q	Quetzal: Basic monetary unit in Guatemala. 1 USD= 7.76 <i>quetzales</i>
USAID	United State Agency for International Development
USDA	United States Department of Agriculture
WTO	World Trade Organization

LIST OF TERMS

<i>Agroservicio</i>	Privately owned agrochemical store
<i>Broza</i>	Dead leaves, bark of trees
<i>Campesino</i>	Peasant, farmer
<i>Cuerda</i>	Guatemalan unit of measure for land equaling approximately 43.7m ²
<i>Güipil</i>	Traditional Maya blouse
<i>Habas</i>	Broad beans
<i>Junta</i>	Board of directors
<i>Ladino</i>	Non-indigenous, mestizo or hispanicized ethnic group in Guatemala
<i>Milpa</i>	Mixed plots of maize, beans, and a variety of squashes for household consumption
<i>Nixtamal</i>	Corn flour
<i>Panela</i>	Brown sugar cake
<i>Quetzal (Q)</i>	Basic monetary unit of Guatemala. 1 USD= 7.76Q
<i>Quintal</i>	Unit of weight measure used in Guatemala. 1 <i>quintal</i> =100 pounds or 45.36kg

I. INTRODUCTION

Every morning, Monday through Friday, Margarita can be seen boarding the rickety converted school bus leaving her hometown of *Comunidad de los Pinos* in the Valley of San Carlos. The 24-year-old, like nearly all women seated on the bus leaving the indigenous Maya community, is wearing a brightly colored *güipil* (traditional Maya blouse) and *falda* (skirt) that stretches down to her ankles. Margarita is headed to nearby *Quetzaltenango*, Guatemala's second largest city. It is only a short bus ride away from her hometown. Once there, she will walk several city blocks to the offices shared by two non-governmental organizations (NGOs), *Amigos de la Tierra, Quetzaltenango* (Friends of the Land, Quetzaltenango—ATQ) and *Negocio Orgánico* (The Organic Business). After arriving, she will begin her 8-hour workday as an office manager, promoter, and marmalade maker for these rural development organizations.

Margarita is the only daughter of a farming couple who began working with ATQ and *Negocio Orgánico* over a decade ago when the organizations first arrived in San Carlos. Her parents were some of the first residents to begin organizing local farmers to participate in the seminars on organic farming and business skills offered by the two NGOs. They later participated with the NGOs in the formation of a farmer-owned microenterprise for the sale of organic vegetables to city residents in *Quetzaltenango*. Though Margarita periodically helps her parents with farming on her family's land, her primary occupation is her work in the city for the farmer-run business under the San Carlos organic farmers' association, *Productores Orgánicos del Valle de San Carlos* (Organic

Producers of the Valley of San Carlos—POSC). A second generation member of POSC, Margarita was hired and trained by the groups to handle general office administration and the organization of organic vegetable distribution routes for the business throughout *Quetzaltenango*. Unlike generations of family before her, Margarita knows as much about business administration, word processing, and other office activities as she does about farming.

In many ways, Margarita's situation has been shaped by numerous processes of change that have recently come to impact the daily lives of residents in San Carlos and rural Guatemala as a whole. As a result of shifts in economic and social currents in the countryside, rural residents are increasingly seeking nonfarm paid work through migration to urban centers like *Quetzaltenango* or outside of Guatemala. With the emigration of large numbers of able-bodied men, more and more rural women are compelled to take on work outside the home, particularly in agriculture. Frustrated with high risk and falling profitability of commercial agricultural ventures like the cultivation of non-traditional agricultural export (NTAE) crops, established farmers have begun seeking changes to agriculture itself. For development planners and agencies like ATQ and *Negocio Orgánico*, the convergence of these factors has made places like San Carlos ripe for the generation of new employment opportunities and farmer microenterprises through market-led, integrated agricultural development program activities.

Despite the growth of nonfarm migratory employment and falling profitability of commercial farming for small producers in Guatemala and

elsewhere, agriculture remains an important sector of the economy for low-income countries. Worldwide, approximately 60 percent of labor in low-income countries continues to be engaged in agriculture. Further, approximately 3 billion of the 5.5 billion people living in the developing world live in rural areas and 75% of the world's poor depend on agriculture as their primary source of income (Dethier and Effenberger 2011:2). For this reason agriculture continues to attract a high proportion of development aid from international funders for programs like those of ATQ and *Negocio Orgánico* in Guatemala.

Trends in Rural Development under Neoliberalism

While the problem of rural poverty in Latin American and the developing world is longstanding, the approaches of planners to addressing this problem change considerably with time. The current research focuses on the convergence of three major trends that have ascended to a place of prominence in contemporary development planning over the past several decades.

Beginning in the 1980s neoliberalism rose as a guiding principal for national economic growth and trade policy and was injected into international financial bodies as well the policies of many nations. A major step in this process was the formation of the Washington Consensus by the International Monetary Fund (IMF), the World Bank, and the United States Department of Treasury in the 1980. The policy recommendations for developing nations reached by the consensus centered on fiscal management, macro-economic stability, privatization, and the liberalization of trade and labor markets (Gwynne and Kay

2004). As a result, nations have since been encouraged to abandon previous statist, inward-looking strategies and open up their national economies to world-market competition and ensure free movement and action for capitalist enterprise (Arrighi et al. 1999). A reduction of governmental control of trade and the removal of quotas and bureaucratic licensing arrangements are now seen as the central to reducing inefficiencies that held back overall economic growth in the past (Stiglitz 2003).

Free market policy recommendations were formalized in the stabilization and structural adjustment policies of the World Bank and IMF and have since been reinforced by international trade agreements under organizations such as the World Trade Organization (WTO). These policies encourage nations to remove structural blockages that are believed to decrease the efficiency of free market operations. It is maintained that trade liberalization, through the removal of restrictions on imports such as quotas, the streamlining of taxation on imports, and currency devaluation, ensure economic wellbeing by maximizing the free flow of goods and services between nations. Domestic market liberalization, through the elimination of price controls and marketing boards, works to ensure that national economies specialize and take advantage of their comparative advantage in efficient industries while allowing those less competitive sectors to be outcompeted by foreign imports (Rapley 1996:74-75).

It is assumed that these deregulatory trade policies and economic specialization paved the way for the neoliberal key to economic development—export-led growth (Green 2003). National governments are encouraged to take

advantage of the Ricardian notion of comparative advantage and employ deregulatory policy and fiscal austerity to create a favorable economic climate for foreign investment in export-oriented sectors of the economy (Stiglitz 2003). It is widely believed that encouraging private sector investment in dynamic sectors of the national economy brings needed technical expertise and foreign market access (Stiglitz 2003:67).

The influence of the neoliberal perspective on economic growth has deeply influenced thinking on rural development around the globe. Market integration of the rural poor has become a major component of a large proportion of international development schemes. With the spread of International Monetary Fund (IMF) structural adjustment policies that emphasize free market and free trade as the keys to economic growth (Green 2003), market-led development and agricultural production for export to global markets have become fundamental aspects of policy and development planning.

Under the same neoliberal agenda of adjustment, trade liberalization, and reduced government has come a retreat of the state from the types of large-scale agricultural development projects that became commonplace in the post World War II era (Green 2003). The reduction of state involvement in rural development has opened new spaces and paved the way for the rise of NGOs as primary orchestrators of contemporary development processes. Seen as the “bottom-up” counterpart to “top-down” overly bureaucratic projects of the state, NGOs are believed by many to be better at integrating farmers at the grassroots into the planning and direction of agricultural development projects. Their

meteoric rise to prominence in recent years is a testament to the power of this belief. Though exact figures concerning this rise are not available, there is agreement among observers that the amount of international aid money channeled toward NGOs has grown dramatically since the 1980s (Lewis and Kanji 2009). According to one estimate, by 2004 NGOs received \$24 billion in aid funding, about one third of all international development aid worldwide (Riddell 2007: 53, cited in Lewis and Kanji 2009).

Accompanying the neoliberal trends toward market-led development, a reduced role of the state, and the rise of NGOs to fill this void was the popularity of sustainable development paradigms among international planners. A growing recognition of the conflicts that arise between unregulated market-led growth and global ecological wellbeing fueled interest among such planners in establishing a balance between these two competing goals for the benefit of future generations. This interest culminated in the formation of the United Nation's (UN) Brundtland Commission in 1983 and the subsequent release of the group's influential report, *Our Common Future* in 1987. The report outlined the most popularly accepted definition of sustainable development, which focuses on the interaction between goals in the three major areas of economic growth, environmental protection, and social equality. Beyond influencing the 1992 UN Earth Summit in Rio de Janeiro, Brazil and the 2002 UN Conference on Environment and Development in Johannesburg, South Africa, the Brundtland reports' three pillars of sustainability continue to be a central focus of contemporary international development

schemes under major global organizations such as the World Bank and Oxfam International.

Focus and Structure of the Current Research

My research focuses on how these broad trends are manifest in the activities of two urban-based Guatemalan NGOs that promote organic agriculture and attempt to enact fundamental changes to the commodity chain for commercial vegetables in Guatemala. It has entailed my collaboration with NGO workers, governmental agency representatives, organic farmers, and urban promoters in partnerships forged during my first fieldwork experience in Guatemala in 2006. In the 6 years that have followed, these initial partnerships have evolved into broader networks that include international development agencies, alternative food movement organizers, farmer association leaders, fair-trade promoters, rural development organizers from the Catholic Church, and many others.

During this time, the research itself has also grown and involved my conducting intensive data collection across numerous sites along this alternative food chain. Months at a time spent collecting both quantitative and qualitative data in each of the locales across which this food network is stretched have placed me in the unique position of being able to view the project from the perspective of an international funder, organic farmer, NGO organizer, produce distributor, and even a consumer. To capture this diversity of perspectives, I specifically designed this project to integrate numerous methods of data

collection for the purposes of strengthening the validity of my conclusions through triangulation and cross-checking across methods. This has included my synching results from free-listing activities with the results of text analyses, interview notes, as well as results of descriptive and inferential statistical procedures.

Participant observation, the centerpiece of the anthropological method, has been integral. It has been the thread tying all the pieces together. Dividing 20 months of fieldwork over a 3-year period between these sites has allowed me to contextualize data from multiple methods like interviewing, text analysis, and surveying into the broader picture of ongoing changes taking place in Guatemala's urban and rural areas. Only through this experience have I been able to synthesize these diverse forms of data into a coherent picture that reveals larger processes of change affecting how food is produced, distributed, and consumed within Guatemala.

Breaking with the singular focus on production that characterizes many traditional political economic and development studies frameworks, my research considers the networks of social relations formed by producers, consumers, and support NGOs along the entire commodity chain, from the purchasing of agricultural inputs by farmers to the preparation of foods by their final consumers. More specifically, I follow the work of Murdoch (2000) and others by considering how the goals held by involved actors and institutions compel them to forge new networks of social relations of collaboration, compromise, and conflict. My research asks how actor goals for redefining the conventional commodity chain

for commercial vegetables at the same time contest and are conditioned by the context of mainstream NTAE production and consumption in Guatemala.

I address several ongoing discussions in the anthropology of development, rural sociology, agricultural economics, and the anthropology of food and nutrition in the present study. In the area of development, this research problematizes longstanding binaries of “top-down” versus “bottom-up” programs. It argues that successful realization of development goals has much more to do with how agencies create and deploy legitimacy for their projects through various relationships with involved actors that defy such classifications. Further, I identify several crucial points of conflict in market-based development schemes seeking to integrate producers into commercial markets through human capital development. The conclusions of this research highlight the central role played by NGOs as intermediaries of development aid from abroad and their struggle to find a middle ground between meeting the goals of international funders and the setting of priorities with the input of participating farmers and consumers on the ground. It shows that NGOs, in attempting to establish to funders the importance of their own role in the development process, often generate solutions to problems that are based on an overly simplistic notion of social and economic relations in farmer communities. As a result, their true successes in the eyes of participants are often those secondary and unintended impacts that do not figure prominently in agency goals.

In the area of alternative food network formation, I argue that new values for food consumption and production in Guatemala are providing a basis for

social network formation and collective attempts at refashioning conventional NTAE chains. These are realized through alternative forms of exchange and production among producers and local consumers. I conclude that the new values for food held by participating actors are deeply embedded in the greater political economic context of production and consumption of NTAE in Guatemala. Reflecting the uniqueness of the Guatemalan case, these values simultaneously contest and reinforce numerous aspects of industrial models of commercial agricultural production specific to the country.

Organized to focus on the goals, activities, and relationships formed by the primary actors at each stage in the commodity chain for local organic vegetables, the individual chapters of this work all make a unique contribution to the arguments outlined above. Immediately following two chapters that outline the theoretical context and methods employed for the research, I focus on the role of the rural development NGO, ATQ and the diffusion of agricultural innovations in development programs through partnering, cooperation, and agricultural extension services in Chapter IV. I argue that NGO goals and subsequent relationships are shaped discursively through official communications and funding proposals of the organization sent to outside agencies. Further, I show that, for the diffusion of agricultural innovations, the struggle to change agriculture is a struggle over the control of information and the level of trust NGO scientists are able to inspire in farmers. In doing so, I highlight the importance of appropriate technology diffusion and producer participation in the setting of priorities for development activities. I also reveal the importance of

the generation of symbolic capital (Bourdieu 1986) on the part of NGO agricultural scientists and their repeated, long-term contact in farming communities for successful farming technology transfers.

In Chapter V, my analysis of NGO activities shifts to focus on the market-led integrated development scheme of the ATQ partner NGO, *Negocio Orgánico*. Here I consider how this marketing NGO attempts to balance farmer economic and social enrichment with the market imperatives of profit generation and the expansion of a consumer base for a farmer-led microenterprise for organic vegetables. Addressing existing literature on small-farm economics, I argue that risk mitigation through stable and fair pricing is often not the only goal sought by producers of commercial agricultural products. Instead, farmers often prefer to play the highs and lows of conventional market prices for their goods, regardless of the economic risks. Further, producer integration into new agricultural microenterprises through human capital development requires that participants be given sufficient opportunity to apply newly learned skills and incentives to become engaged as true stakeholders interested in the long-term sustainability of the new business. Finally, the chapter concludes with a discussion of the deep conflicts that arise as the goals of participatory and market-led development schemes are fused into one program.

In Chapter VI I unpack producer goals and values for the ATQ/*Negocio Orgánico* program, organic cultivation, and microenterprise development. I show that the needs of residents in the towns of San Carlos are very different from those based on the overly-simplistic images of rural communities

discursively created in NGO diagnostic reports. As a result, producers tend to focus on the secondary and unintended impacts of the development project as their major motivations for participation. Rather than the central economic goals proposed by the NGOs in these reports, producers continue to sacrifice their time and labor for non-economic reasons that have more to do with community social relations, socioeconomic difference, household livelihoods, and the changing roles of agriculture and women in community life.

In Chapter VII, I consider urban consumer participation in social networks surrounding ATQ/*Negocio Orgánico*'s farmer-run microenterprise for local organic vegetables. Focusing on the rise of new values for consumption and production of commercial vegetables, I show how the formation of social networks involving consumers, producers, and supporting institutions facilitate new forms of exchange that challenge aspects of conventional agricultural markets. Going beyond instrumental considerations of price and cosmetic qualities for produce, new consumer values for food express reactions to the unique political economic conditions of production and consumption of NTAE crops in Guatemala. Echoing the findings of many scholars from the Actor Network (ANT) and Conventions theoretical traditions, it shows that these network relations involve the enrollment of actors through both cooperation and compromise. Notions of embeddedness and trust are paramount, as transparency becomes a key consumer value and an attempt to mitigate the risk of contamination from toxic agrochemicals used in commercial agricultural production. Still other values are tied to local reputation and quality guarantees

for food embedded in personal relations with farmers and the NGOs. These values, like others reflecting changes in the occupational profiles of urban Guatemalans, express consumer desires to access diverse, uncontaminated foods as a counter to prevailing trends in conventional agricultural markets in the country. However, they do not always result in new relations of power between participants in the food system.

Aims and Objectives

The purpose of this research is not to advocate or reject any one broad approach to rural development in Latin America over others. It contains no generalized arguments for or against market- versus state-led development models, top-down technology transfers versus bottom-up participatory approaches or any other generalized plans for development. Instead, following Ferguson (1994), I attempt to go beyond the concrete successes and barriers in the design and execution of the development program and see the project for what impacts, intended or otherwise, it makes in the lives of those on the ground. Rather than judging the program's success based solely on the explicit goals laid out in NGO documents, I look at how these plans structure subsequent relationships and roles taken by participants in each aspect of the program. My analysis centers on the diverse networks of relations established between development planners and other actors on the ground and how these often defy easy classification under the binaries listed above. It also calls for a focus on the messy roles and partnerships forged between involved actors on the ground.

These are, in many cases, extremely successful in securing goals agreed upon by all. In others, they are frustrated and fraught with contradiction and conflict. Overall, however, these relationships are composed of a liberal mix and fusion of elements of numerous, often conflicting philosophies. As a result, their structure and capacity for securing development goals reveal a good deal about the benefits and drawbacks of specific aspects of these approaches and their combination on the ground.

At the same time, the development partnerships remain closely attached to the macro development paradigms described above. As a result, focusing on their impacts has been an extremely useful endeavor for informing both development theory and practice as well as documenting existing social and cultural processes that are intertwined with rural development projects. This, after all, is a fundamental objective of the study. My aim has been to not just evaluate a development program's comprehensive impacts using a set of concrete measures of progress. I instead attempt to reveal how development programs themselves become deeply embedded in broader cultural processes and currents operating from the global to local levels. In doing so, I not only hope to highlight the gains and setbacks met by development planners in their quest to address rural poverty. I also wish to emphasize those impacts that are the result of the program's adaptation to and melding with ongoing processes and expressions of local actors' desire for changing commercial agriculture as practiced in Guatemala. It is in these areas, where the interests of developers

meet with those of actors on the ground, that the largest impacts of the project are made for participating producers and consumers.

II. DEVELOPMENT, FOOD SYSTEMS AND GLOBALIZATION IN GUATEMALA

The arguments and conclusions in the chapters that follow address literature concerning two separate but interrelated areas of research relating to agricultural development. This research engages literature concerning the philosophical approaches guiding the development process. From these broad trends are derived the specific activities, goals, and general orientation of projects on the ground. They constitute overarching perspectives concerning the proper roles of specific actors in the development process, levels of cooperation and power in decision-making, the ends pursued by development programs, and the types of intervention employed by developers and selected for support by funders. Overall, these changing macro intellectual currents and perspectives on development are the guiding principles under which development projects take shape and are carried out throughout the world.

At the same time, my research also engages a robust theoretical field concerning approaches and frameworks for studying such development, particularly in the areas of rural and agricultural growth. The body of theory is in constant dialogue with the currents outlined above, as planners do not create programs in isolation from the evaluative and investigative research that it guides. However, the two are not always parallel and do not necessarily engage in the same discussion of development at any given time. For this reason, I have divided this review of literature into two sections, each reflecting the evolution of distinct theoretical currents and debates that the current research project addresses.

The first section of the chapter concerns the formation of a philosophy that has given rise to market- and export-led development as an overarching orientation for agricultural growth. In this section I highlight the intersection of major intellectual and theoretical trends that have given rise to NTAE as a key strategy for small-farmer development and poverty alleviation in Latin America. I then provide an overview of major critiques and key points of debate concerning the effectiveness of NTAE in fostering rural economic growth and poverty reduction and the ways in which the apparent shortcomings of NTAE and agricultural modernization are addressed in this literature.

The first section is followed by a second in which I trace the rise of NTAE in Guatemala as a development strategy for small farmers, showing how the country's history with export agriculture has been influenced by these trends in development philosophy. This second section includes debates and critiques of NTAE adoption by small farmers in Guatemala. In it I show how recently orchestrated approaches by developers to NTAE cultivation and alternative agricultural production in the country's west provide an ideal context for addressing development theory discussed in the preceding section. I then show how the current program activities of two rural development NGOs in Guatemala have integrated the critiques of previous top-down development models and have begun to address the sustainability of small-scale agriculture and the structural barriers faced by small-farmers participating in commercial cultivation of non-traditional crops.

A final section of literature will contextualize the framework I have employed for the present research on the activities of these NGOs. It first traces recent shifts in approach to the study of agricultural development schemes and as well as the formation of alternative food systems. It then shows how studies of development have come to look beyond program success in meeting stated goals and have taken a deeper interest in the processes surrounding the setting of program objectives. Next, it discusses how frameworks for studying agricultural development and change have moved further than production alone, taking into account the structure of entire commercialization chains and the dynamics that arise between production and consumption in agricultural systems. Finally, it outlines even more recent trends in the study of the formation of alternative agricultural systems that tightly link rural development to consumption through the forging of new social and economic relations and notions of food value. I argue that, by applying a unique framework derived from these theoretical traditions concerning the study of food systems and agricultural development in the context of Guatemala, my study offers new insights and contributions to both the theory and practice of development in Latin America as well as to theory guiding the study of the formation of alternative food systems.

Theory Concerning Export-Led Development and Approaches to Agricultural Growth

Small-scale agricultural development through NTAE has been a strategy pursued in Latin America since the early 1970s. International development agencies such as the United States Agency for International Development

(USAID) have vigorously promoted the cultivation of NTAE crops like broccoli, snow peas, and carrots among small farmers in this region for decades. These products, destined for sale in global produce markets and distribution in the United States and Europe, were originally seen as the solution to the widespread poverty and economic stagnation in the region that followed in the wake of the OPEC (The Organization of Petroleum Exporting Countries) oil crises of the 1970s (Green 2003). Pursuit of NTAE for rural growth has varied greatly by country, with a broad array of results in achieving macroeconomic growth and poverty alleviation (Conroy et al. 1996).

Conceptually, NTAE as a strategy for rural development is derived from the convergence of prevailing neoliberal doctrines and philosophies of economic growth with emerging trends in agricultural economics, and advances in agricultural technology that began in the late 1960s and early 1970s. Neoliberalism, as an overarching economic philosophy, assumed a place of prominence among development planners beginning in the 1980s. Rejecting the large-scale economic interventions and broad-based development programs orchestrated by national governments in the decades following World War II, neoliberal thinkers like Milton Friedman of the Chicago School of Economics were soon joined by proponents of the New Political Economy in their calls for a new approach to economic growth (Rapley 1996). These theorists argued against a state role in directing economies on the grounds that it was less representative of the public will than the free market. They further argued that rational, utility maximizing individuals that were free from government

interference would have the freedom to pursue their own self-interests and naturally produce the best economic outcomes. Such theorists championed the notion that rational utility maximization by individuals, if channeled through free market interactions, would generate spinoff benefits like employment. However, if these opportunities for individual gains were located in large interventionist states, actors would neglect the private sector in favor of rent-seeking behavior or outright corruption (Rapley 1996:66-67).

The widespread integration of these philosophies in development policy began in the 1980s with structural adjustment and market liberalization in Latin America under the IMF and World Bank. These effectively shifted development's focus from state intervention to market integration, export production, and technology-based agricultural modernization. Planners began to view the promotion of free markets and free trade, the liberalization of trade and labor markets, and export promotion as the proper role of government, not the pricing schemes, subsidized credit programs, or industry nationalization of the past (Gwynne and Kay 2004). Instead of being seen as the principal orchestrator of development, state intervention became vilified in neoliberal critiques as a bulwark to economic growth and efficiency (Rapley 1996). For this reason under the tenets of contemporary development blueprints such as the Washington Consensus (1989), privatization, market integration, and trade liberalization have come to replace state intervention and subsidy as the key drivers of development.

In the realm of agriculture, neoliberal approaches to development emphasized export-led growth in the name of new market generation and diversification of this sector (Green 2003). Following a model of comparative advantage inspired by the economic philosophy of David Ricardo (1772-1823), planners began to see free trade and market integration through exports as a way of eliminating government inefficiencies in the development process. As a result, beginning in the 1970s, development agencies prioritized the production of non-traditional exports as the primary engine of economic growth in both agriculture and manufacturing in Latin American nations (Rapley 1996).

Not only did NTAE fit with pro-market, pro-export neoliberal trends beginning in the 1970s, it also fit with contemporary changes in rural development philosophy that turned to see small farmers as a crucial base of rural growth. Up until the 1960s, prominent theorists like Lewis (1954) and Fei and Ranis (1964) largely saw agriculture in the developing world as being divided into a “dual-economy”, in which, “...the subsistence sector possessed negligible prospects for rising productivity or growth” (Ellis and Biggs 2001:440). Following this overarching perspective, development planners designed projects under the assumption that the greatest potential for agricultural modernization was held by large-scale operations such as plantations, commercial farms, and industrial agricultural plants. However, conventional wisdom was challenged in the 1960s with rise of what is popularly referred to as the “small-farm efficiency” paradigm (see Schultz 1964, Johnston and Mellor 1961). Theodore W. Schultz (1964) in advancing his popular, “efficient but poor” thesis argued that small

farmers were more efficient than large-scale farms but were restricted by lack of resources and other constraints on household economic decision-making.

Schultz's argument fit well with contemporary theories put forth by agricultural development scholars such as John Mellor (1966), who asserted that farmers in the subsistence sector of developing nations were essential to overall national economic growth because of their ability to provide of labor, capital, food, and markets for domestic consumer goods. In a reversal of previously held beliefs regarding agriculture, small farms were then viewed as having a distinct advantage over large-scale farming operations because of their ability to draw upon abundant and cheap family labor reserves to substitute for scarce land and capital. As a result, many planners (Berry and Cline 1979) came to see small farmers as the ideal recipients of "scale-neutral" technologies and agricultural inputs associated with NTAE because of their comparative advantage over larger farms in the areas of efficiency and labor.

In the eyes of developers and agencies in the United States and Europe, efficient small farms in the developing world would need to undergo a process of technological modernization in the interests of increasing output relative to land sown for greater competitiveness in export agricultural markets. Modernization involved the integration of modern technologies and crop varieties into their cultivation strategies (Scott 1998). Advances in scientific knowledge occurring in the late 1960s rose to meet this need in what is now referred to as the Green Revolution. The central components of Green Revolution agricultural

technologies were new high-yielding varieties of crops, synthetic nitrogen fertilizers, and chemical-based pesticides.

Accompanying the distribution of these new input “packages” to farmers were seminars concerning how to apply the technologies and explanations of new farm management techniques for optimal yields. International agencies like USAID worked with governments of developing countries to sponsor these agricultural education programs in which modern crops and their supporting technologies were promoted to small farmers by formally trained agricultural specialists. Such workshops followed the model for agricultural extension that had been employed in the United States for decades before (Rogers 2003). Farmers were encouraged to give up subsistence farming, crop rotation, and mixed cropping schemes for monocropping, the process of planting single commercial crops over large tracts of land (Altieri 1995, Von Braun et al. 1989). They were instructed to plant genetically uniform high-yielding variety seeds sold by agricultural research and development firms (Holt-Gimenez 2006). These new varieties, unlike their predecessors, tolerated recommended pest controls and other agrochemicals while producing harvests that were more uniform in shape and size.

The primary scheme for rural development at this time thus became the dissemination of agricultural technologies developed in the United States and Europe to recipients throughout the developing world. The top-down model of agricultural development embraced western scientific knowledge as the key to simplifying differences in ecological conditions and various farm management

strategies of agriculturalists across a variety of microclimates and cultures. In this way developers hoped to design a blueprint “...’module’ that could be redeployed to almost any locale.” (Scott 1998:271) With the advent of the Green Revolution and technology transfer through agricultural extension modeled on the U.S. Cooperative Extension Service, theory guiding rural development shifted to the discovery of optimal conditions for the diffusion of these new agricultural innovations to small farmers.

The depth of literature to date on the diffusion of innovations rivals the most popular of social science theories. Specifically in the field of agriculture, beginning with Ryan and Gross’s (1943) early work on the diffusion of high yielding corn varieties among Iowa farmers, researchers have focused on a range of factors concerning adoption of new agricultural innovations by farmers across the globe. Empirical studies have emphasized the importance of farmer characteristics such as formal education and human capital (Ram 1976), indicators of wealth and risk such as farm size (see Binswanger 1978), and types of communication channels through which information about an innovation travels (Strang and Soule 1998). Among these factors, much of the theoretical research conducted on the diffusion of agricultural innovations has been focused on two major aspects of the diffusion process—the characteristics of the innovation itself (Rogers 2003) and the diffusion system—how the innovation is communicated (Dearing 2009).

In the seminal 1962 work on the diffusion of innovations, Rogers (2003) outlined five major characteristics of a newly introduced technology that promote

or inhibit its general adoption among a population. He argues that innovations are more likely to be adopted when their benefits are easily perceived by an individual (“relative advantage”), when they are highly consistent with existing values and norms of a group (“compatibility”), when they are easily experimented with (“trialability”), and when their results are highly visible (“observability”). He further argues that innovations are less likely to be adopted by a population when they have the opposite characteristics or when they are perceived as difficult to understand or use (“complexity”). Much theoretical attention, supported by a variety of empirical studies, has been dedicated to exploring the characteristics of an innovation and how these impact its diffusion. As early as the Ryan and Gross (1943) study mentioned above, many theorists have confirmed Rogers’ assertions concerning a technology’s relative advantage and compatibility (Dearing et al. 2006, Ruttan 1977) as well as trialability and observability (Dearing 2009, Magill and Rogers 1981, Katz 1963)

Another major aspect of the diffusion process that has received a good deal of attention has been the specifics of how the innovation is transferred through a population or group. Approaches to this issue have been varied and derived from a wide selection of academic fields (see Dearing 2009). Many have centered on the role played by the types of channels through which an innovation travels among a population and the specific source of the innovation in individuals’ decisions to adopt or reject it. Focusing on the avenues through which an innovation spreads among groups, mathematical models of diffusion have been put forth to contrast “broadcast” systems that depend on the

introduction of new ideas from outside agents with “contagion” systems in which ideas are introduced from within a group and travel via social ties of friendship and face-to-face interaction among a population (see Strang and Soule 1998). Viewing diffusion as a process divided into discreet phases that make up an S-shaped curve, Rogers (2003) argues that external channels are more important in early phases when the innovation is introduced. For later adopters, however, interpersonal channels become more influential in the decision to adopt or reject an innovation.

Accompanying diffusion research concerning adoption over time are studies that highlight the role played by the source of information and the ways this source communicates new knowledge to potential adopters. According to Rogers (2003) an innovation’s successful spread is largely dependent upon the activities of “change agents” and “opinion leaders.” Though both of these terms refer to actors supporting the adoption of a new idea by others, change agents are external to a group whereas opinion leaders are members of a group that hold a unique position of influence among members. To effectively influence others’ decision to adopt a given technology, change agents and opinion leaders must draw on a mix of externally derived authority and more embedded (Giddens 1990) forms of expertise. In the case of the latter, researchers have argued that, in order to be influential, these individuals must be nearby to those they influence (Feder and Savastano 2004), perceived as influential (Weimann 1994) and credible (Lam and Schaubroeck, 2000) within a group. Borrowing terminology from Lazarsfeld and Merton (1954) and echoing these conclusions, Rogers

argues that acceptance of new ideas within a group is facilitated when the perceived homophily of the opinion leader or change agent to potential adopter is high. Specifically, individuals are more likely to adopt an innovation coming from a source that is perceived as more like themselves in beliefs, values, education, or occupation.

In the early 1980s research and practice in the diffusion of innovations in rural development programs began to focus more on the ways technology was imparted to farmers and the role of the farmers themselves in the agricultural change. By the early 1980s, U.S. federal agricultural extension programs began to integrate on-site demonstrations of new agricultural technologies into their activities. Contemporary researchers (Magill and Rogers 1981) found that such “exemplary demonstrations” increased the likelihood of farmer adoption by decreasing the perceived riskiness and complexity of new technologies and making their results more visible and observable. Other studies have since concluded that involvement in the demonstration process on the part of potential users has been positively related to adoption and implementation of new practices (Douthwaite 2002).

By the late 1980s and early 1990s, however, many researchers began to question the organization of traditional state-led agricultural extension and development models based on Green Revolution technology altogether. The rise of “farmer-first” and “participatory” (Conway and Barbier 1990, Chambers 1989) approaches to development embodies these concerns. Under the new paradigm, long-held assumptions concerning the role of farmers in top-down

agricultural extension models were questioned. Scholars characterized traditional extension models as being a one-way transfer of technology and knowledge from an insulated epistemic community (Haas 1990) of agricultural scientists to farmers who have little or no say in the process (Holt-Giménez 2006). Instead, proponents of participatory development began to advocate cooperation and two-way knowledge flows between farmers and developers in the development process. This, they argued, resulted in plans for development that accounted for the, “local, complex, diverse, dynamic, uncontrollable, and unpredictable realities experienced by many poor people.” (Chambers 2007:3)

Participatory strategies have sought to integrate popular knowledge and farmer participation in the appraisal, analysis, planning, evaluation, and monitoring of new agricultural innovations. The goal of this process has been the development of context-specific, appropriate technologies that fit with the aims of farmers and their circumstances. Also involved is the reexamination of the role of professional knowledge in agricultural extension (Bebbington 2004 Scarborough et al. 1997). Participatory approaches are numerous (see Chambers 2010) and farmer-first elements have been grafted onto rural development programs of all kinds. However, the majority share core emphases on farmer input in the determination of goals and technologies for rural development, technology development through *in-situ* experimentation (Holt-Giménez 2006), value for farmer agreement and understanding of new technologies (Lilja and Dixon 2008), and increased cooperation and knowledge exchanges between farmers and extension agents (Chambers 1989).

One final critique launched against market-led agricultural modernization and top-down rural development models during this time was rooted in a rising concern on the part of researchers regarding the adverse ecological impacts of agricultural modernization and market integration on farming populations. The rise of sustainability as a guiding concept for international development grew out of increasing recognition of the conflicts that arise between unregulated market-led growth and global social and ecological wellbeing. Researchers became increasingly interested in the effects of market integration on economic growth, environmental protection, and social equality in the developing world. Interest in the interplay between the economic, environmental, and social was given concrete expression with the release of the UN's Brundtland Commission report *Our Common Future* in 1987.

Specifically applied to agricultural development in Latin America, critiques of export-led commercial agricultural development have emphasized Brundland's focus on sustainability in the economic, ecological, and sociocultural realms. In the economic realm, critics (Holt-Giménez 2006, Carter et al. 1996, Conroy et al. 1996, Thrupp et al. 1995) have identified numerous structural barriers, including price risk, rising input costs, and disproportionate amounts of value concentrated outside the farmgate, that prevent small farmer competitiveness in markets for agricultural exports. Numerous observers (Altieri 1995, Murray 1994) have questioned the environmental sustainability of export agriculture by focusing on the environmental and human health impacts of increased use of toxic agrochemicals and other Green Revolution technologies by small farmers. In the

sociocultural realm, Morgan and Murdoch (2000) and Vandeman (1995) argue that the exclusive control of knowledge about technological inputs for commercial crops held by retailers and scientists result in a de-skilling of farmers. This, in turn, leads to a disruption of informal networks of information sharing that transfer context-based agricultural knowledge between farmers at the local level.

Along with these critiques, observers have advocated the integration of organic farming (Conroy et al. 1996), and reduced chemical, agroecological¹ production techniques into participatory development programs. Proponents argue that such systems help to control the economic risks to small farmers in commercial markets by reducing overhead costs associated with chemical inputs and diversifying farm production with the integration of multiple crops (Altieri 1995). Others (Pretty 2002) argue that decreasing or eliminating the need for chemicals in agriculture results in greater environmental sustainability. Finally, advocates of participatory approaches to development (Chambers 1989) and organic agricultural production (Morgan and Murdoch 2000) have argued that both approaches to development serve to re-valorize farmer knowledge of agriculture and contribute to general social betterment.

However, despite these claims, there remains a paucity of empirical research concerning how these factors do or do not result in sustainable impacts for farmers in the economic, environmental, and sociocultural realms. Many

¹ Broadly defined, agroecology refers to an approach to agricultural systems that treats them as being deeply embedded in the ecosystems and ecological processes of the surrounding environment. In practice, agroecology can involve myriad techniques and processes. However, such techniques generally focus on syncing ecological relations in agricultural fields with naturally occurring processes and organisms for improved production outcomes and minimal negative environmental and social impacts (See Gliessman 1998, Altieri 1995).

have argued that the creation of participatory development programs focused on agroecology or organic agriculture is crucial for addressing the structural inequalities and deleterious effects of mainstream export market integration for farmers (Chambers.1997, Altieri 1995). However, few studies to date have taken on the question of what the actual impacts of such programs are for the economic viability of small-farm agriculture in the developing world. The question of what economic, ecological, and sociocultural impacts are made by such projects remains crucial to advancing theory in sustainable agriculture and market-based development. Regarding the diffusion of agricultural innovations, research is needed to examine the interplay between the characteristics of organic and agroecological farming technologies and the types of opinion leaders and change agents in participatory development programs. The interplay between the characteristics of a technology, levels of farmer participation in its development, and characteristics of the information source has yet to be concretized. More generally, a closer examination of the role of opinion leadership and homophily in the transfer of agroecological innovations through participatory development schemes would illuminate questions of how power over agricultural knowledge is shared and the impact this has on farmer technology uptake.

NTAE and Export-Led Growth in Guatemalan Agricultural Development

Non-traditional vegetable promotion and agricultural modernization fit well with development discourses concerning global poverty alleviation through market integration that have emerged in recent decades (Escobar 1995). The

promotion of NTAE among Guatemalan smallholders has seemed ideal to developers from the 1970s onward. Since colonial times Guatemala has been plagued by widespread rural poverty and inequality. As a result of the fact that the country has pursued what Alain De Janvry (1981) refers to as Lenin's "junker road" to the development of capitalism, a process in which the slow transformation of large feudal estates into capitalist enterprises takes place alongside a massive displacement of the majority of smallholder peasants. As a result, there has been a political and socioeconomic polarization of Guatemalan agriculture into a small group of elite, non-indigenous large-scale landowners that make up the *latifundia* and the vast majority of indigenous Maya small-scale farmers that make up the *minifundia* (Berger 1992).

This *minifundia* of small, mainly indigenous producers became the focus of NTAE promotion efforts in Guatemala beginning in the 1970s. By the logic of the small farm efficiency paradigm outlined above, developers believed that small producers were at an advantage in NTAE markets because such crops were labor intensive, could be grown on small stretches of land, and were able to produce 2-3 harvests per year (Von Braun et al. 1989). Also, though the country's land distribution is known for its inequality, landholdings in poorer areas of the country's highlands (where small indigenous farms are concentrated) are extremely fragmented. Land ownership among rural highland populations remains high, with the majority of households owning stretches of land smaller than 1 hectare (Carter et al. 1996).

The transition from traditional export crops like bananas, coffee, and sugar to NTAE meant little in terms of Guatemala's orientation toward economic development. The country has consistently adopted free trade policies and an export-oriented development model. Policies were first employed to protect the interests of landholding colonial elites and later the feudalistic plantation-owning rural gentry engaged in large-scale cash cropping (Brockett 1998). More recently, the Guatemalan government has done so in order to serve the needs of an uneasy alliance between rural power holders, capitalist agribusiness under the direction of multinational corporations, landed military leadership, and a government of transnational elite policymakers (Robinson 2000, Berger 1992). For this reason the neoliberal trends discussed above have meant little significant change for Guatemalan policy insofar as the country has always been market oriented. The government has never seriously intervened in the economy except to protect and extend the narrow rights of property owners, has made no attempt to construct social safety nets, and cannot develop an extensive sector of publicly owned enterprise (Chase-Dunn and Manning 2001). It has followed almost exactly the neoliberal program prior to the contemporary period, leading scholars such as Alejandro Portes (2001:232) to assert that, "Neoliberalism has little to say to Guatemala that the country doesn't already know or has not already experienced."

Regardless, by the late 1960s it was increasingly recognized that diversification of Guatemalan exports was necessary in the face of declining coffee and cotton prices on the world market. International lending institutions

such as the World Bank and USAID encouraged Guatemalan policymakers to promote increased cultivation of NTAE for sale in growing U.S. markets.

Guatemalan leaders of the mid 1960s responded with the establishment of the *Banco Nacional de Desarrollo Agrícola* (Guatemala National Bank for Agricultural Export—BANDESA), an institution that provided agricultural credits to promote export adoption among medium and large landholders. BANDESA's development was accompanied by the foundation of one of the country's early agricultural extension programs under the newly-formed *Dirrección General de Servicios Agrícolas* (General Directorate for Agricultural Services—DIGESA) (Berger 1992).

Non-traditional vegetable promotion continued in subsequent decades. In 1970, USAID provided \$8.5 million in loans to help spread NTAE adoption in Guatemala through traditional agricultural extension and technology transfers. The loan was accompanied by the introduction of *Alimentos Cogelados Monte Bello S.A.* (ALCOSA), an NTAE exporting company that was a subsidiary of the U.S.-owned Hanover Brands Corporation (Brockett 1998:52). ALCOSA received \$17 million in USAID loans through the Latin American Development Corporation (LAAD) to purchase and export NTAE produced by Guatemalan farmers while implementing a massive Green Revolution style technology-transfer to small-scale farmers (Brockett 1998). BANDESA joined in the promotion of new agricultural technologies among Guatemalan farmers, issuing \$5 million in agricultural credits between 1974 and 1978, stipulating that purchases made by recipients within the first three years of the program must include chemical

fertilizers. The caveat, a condition implemented by USAID, was specifically aimed to break down farmer skepticism of chemical inputs (Berger 1992).

By the 1980s, Guatemalan national trade policy continued to reflect the importance of exports, especially NTAE, and a growing manufacturing sector. Policies implemented under the National Plan for NTAE Promotion (1985-1989) significantly deregulated agricultural exporting and consolidated the administration of export permits under a single bureau. These and other policies removed duties on imported agrochemicals while reducing or eliminating taxes on NTAE leaving the country. Free market policies and export promotion in the 1980s were further reinforced by the establishment of government supported NTAE export associations like the *Gremial de Exportdores de Productos No Tradicionales* (Association of Exporters of Non-Traditional Products—GEXPRONT) (Thrupp et al. 1995:30).

Non-traditional vegetable promotion continued in Guatemala in the 1990s under favorable policies and USAID sponsored promotion programs such as “Highlands Agricultural Development,” “Trade and Investment,” and “Private Enterprise Development” (Barrett 1995: 297). The export-oriented trajectory of such programs combined with agreements under international bodies like the World Trade Organization (WTO) to sustain free trade policies in Guatemala and privilege the role of multinational foreign investment and local elite in the country’s economic development. However, imports of Guatemalan NTAE vegetables dropped dramatically beginning in the early 1990s, as large volumes of produce were detained at U.S. borders due to unacceptably high levels of toxic

agrochemical residues. Guatemalan producers lost approximately \$20 million in product rejections at U.S. ports of entry between 1988 and 1994 (Thrupp et al. 1995). The country dropped from ranking fifth as a world supplier of U.S. vegetables in 1992 to thirteenth in 1998 (Julian et al. 2000).

Gradual recovery in the 2000s can be seen in key NTAE exports like snow peas. By 2003 Guatemala was again exporting over 18,000 metric tons of peas, eclipsing peak export rates from 1995 (Hamilton and Fischer 2005: 35). Though annual rates of growth steadily diminished between 2001 and 2005, NTAE still accounted for 41% of primary sector production in Guatemala in 2006 (PNUD 2008: 125). According to Hamilton and Fischer (2005:35), over 23,000 Guatemalan households were involved in snow pea production alone in 2003, with over 90% of this production being carried out on stretches of land smaller than 1 hectare.

Debates Concerning the Impacts of NTAE for Small Farmers in Guatemala

In addition to high aggregate levels of farmer adoption of NTAE and macroeconomic indicators of sector growth, many researchers have reported positive impacts of NTAE adoption for indigenous small farmers on the ground. Von Braun et al. (1989) argue that NTAE production by small Guatemalan farmers result in higher returns to land and labor than corn production for subsistence. Adoption of new export crops has also been tied to increased farmer wages relative to non-adopting farmers (Hamilton and Fischer 2005). Some researchers argue that the labor intensive nature of NTAE production promotes rural employment (Von Braun et al.1989). Finally, Carter et al. (1996)

indicate that small farmer relationships with NTAE purchasing contractors can mean better access to input capital and agricultural credit. Because of the diffuse nature of landholdings in highland Guatemala, observers claim that these benefits are shared by “all but the tiniest” scale producers in this area (Barham et al. 1995).

Other researchers have tied NTAE adoption to better land access and equitable accumulation. Carletto et al. (1999) link capital accumulation from NTAE production to the expansion of farmlands by adopting producers. Several other researchers (Goldín 2009: 102, Barham et al. 1995) also demonstrate greater land accumulation by small NTAE producers. Barham et al. (1995) also find that NTAE adopting farmers are more likely than non-adopters to purchase additional farmlands. They argue that this increases equality in land ownership at the village level, as land transfers tend to be from medium sized farms to small ones. Hamilton and Fischer (2003) found similar trends among small producers in the *Kaqchikel* region of Guatemala’s highlands. Goldín (1996) argues that agricultural diversification through NTAE results in upward economic mobility and better economic status for individual Maya households as well as village level development. Adoption has also been positively associated with household access to amenities such as electricity and refrigerators (Goldín and Asturias de Barrios 2001).

Studies have shown positive farmer perceptions of NTAE impacts on their lives and on village life as a whole. Goldín and Asturias de Barrios (2001) report that 80% of households included in a study of small farmers in the Guatemalan

highlands indicated that their lives were generally better since the arrival of non-traditional exports. Adoption of non-traditional crops has been perceived by many indigenous farmers as being a force for the preservation of land ownership, an agrarian way of life, and traditional affective ties to the land (Hamilton and Fischer 2003). Further, women's participation in NTAE cultivation is linked to their increased roles in household decision-making, control over profits from NTAE, and income generation through NTAE sales (Hamilton and Fisher 2003).

Nevertheless, since the beginning of NTAE promotion in Guatemala, developers have wrestled with the problem of low uptake of commercial crops by the smallest of producers (see Von Braun et al. 1989). Barham et al. (1995) report that planting of NTAE by smallholder farmers levels off quickly at 30% of available land dedicated to NTAE, limiting many potential benefits of the farming strategy. As a result, a good deal of research by development organizations and planners has been dedicated to increasing the rate and scale of small farmer adoption of modern agricultural technologies (Carletto et al. 2010, Rogers 2003).

For some, low or partial uptake of NTAE by small farmers raises questions about the effectiveness of export-led development for addressing rural poverty and economic growth in Guatemala. The persistence of inequality in the Guatemalan countryside has spurred several interrelated debates concerning the effects of export market integration on small farmers in the economic and environmental realms. These debates parallel overarching critiques of mainstream global food systems that have given rise to a variety of local and

alternative food movements that stand in opposition to one or more negative aspects of conventional food chains.

Economic Aspects of NTAE

Several questions concerning the effects of export promotion under neoliberal free market policies structure the debate concerning the capability of NTAE to address rural poverty and inequality in Latin America. The first of these involves small-farmer competitiveness in global markets for agricultural goods in the context of trade liberalization. As mentioned above, a key assumption guiding NTAE promotion in Guatemala is that smallholders can outcompete large-scale agribusiness by relying on a comparative advantage afforded by the fact that most NTAE can be grown on small irregular stretches of land and the intense labor requirements for cultivating such crops (Von Braun et al. 1989). By the logic of small-farm efficiency, peasant competitiveness in global markets for NTAE should be assured.

While promoters of NTAE development in the region see the relative efficiency of small farms as their key advantage over large-scale commercial firms in world markets, other researchers (Lipton 1979) have argued that the comparative advantage afforded by small farmers' superior efficiency is offset by a variety of risk factors that disproportionately affects them. They contend that small-scale farmers become increasingly risk averse in the face of highly fluctuating international prices for export crops coupled with increased input expenditures for NTAE cultivation (Thrupp et al. 1995). According to this argument, because small-scale farms tend to be at the economic margins they

can be easily bankrupted or face starvation with the loss of a single crop. They therefore tend to follow a “safety first” (Scott 1976: 15) principal and seek to minimize the probability of economic disaster before maximizing average returns (Ellis 1993: 97).

In the case of NTAE in Guatemala, critics have argued that risk aversion is a root cause of small farmer unwillingness to adopt at significant scales. Carter et al. (1996) find an adoption ceiling among small farmers in Guatemala, with those owning 1 hectare or less committing no more than 30% of available land to commercial vegetables. Others have found that while size of landholding is not tied to initial adoption of NTAE crops, it is significantly tied to high rates of withdrawal from NTAE production after adoption (Carletto et al. 1999). Thrupp et al. (1995) argue that NTAE present a formidable risk to smaller Guatemalan producers because of highly volatile markets for the vegetables, the perishability of the produce, and high startup costs for required inputs. In addition to this, rising rents and land values associated with the spread of commercial vegetable production in Guatemala have increased the amount of required investment capital and risk for NTAE (Conroy et al. 1996). Critics argue that late, partial, or non-adoption of NTAE crops because of risk aversion hampers small-scale competitiveness in NTAE markets. Larger commercial farms, on the other hand, are able to bear the risk of new technology adoption because they are in a better position to weather price fluctuations and can take advantage of economies of scale in NTAE markets (Lahiff et al. 2007, Kay 2006).

A related debate concerns whether the gaps created by the retreat of government from the provision of inputs and services in rural areas can be adequately filled by the market and private sector investment (Beatriz et al. 2000). Free market proponents encourage governments to “rationalize” policy in the rural sector with macroeconomic policies of fiscal austerity and privatization of public services. Policy reforms to promote free market agriculture include lowering of trade barriers like quantity restrictions and quotas, removal of food crop subsidies, and termination of state supported agricultural trading organizations. Instead of providing public extension services and credit through rural development banks, the role of government has been increasingly restricted to the provision of infrastructure, research and development, and general export promotion (De Janvry et al. 1997).

Critics have pointed out that the deregulation of agricultural factor markets and reduction of subsidies for agricultural inputs has made the costs of new agricultural technologies relatively higher for smaller producers than for larger ones. Additionally, the privatization of rural financial markets has reduced credit access for farmers because of more stringent collateral requirements and lending standards by private lenders and commercial banks. Thrupp et al. (1995) report sharp declines in credit access by Guatemalan farmers throughout the 1990s because of increasingly stringent lender restrictions. The researchers argue that this hinders NTAE uptake by small farmers, as purchased chemical inputs represent nearly half of the total investment associated with NTAE production in Guatemala (Thrupp et al. 1995:120).

One major result of these structural biases against small farmers in NTAE markets is increased economic differentiation between those who can and those who cannot take advantage of the profit generating potential of commercial cultivation. Carletto et al. (1999) argue that households with more and higher quality land are more likely to persist in NTAE cultivation over time than are households with smaller plots and lower quality land. Hamilton and Fischer (2005) argue that NTAE markets unfairly advantage medium and large-scale producers, reinforcing existing patterns of stratification at the community level. Goldín and Saenz de Tejada (1993) find increased economic differentiation between individuals and communities in the wake of NTAE adoption in the western highlands.

Finally, critics such as Ferguson (1994) argue that market-based agricultural development schemes like NTAE promotion do not help small farmers because they rely on overly simplistic notions of agrarian economies as isolated from capitalist markets and other employment opportunities. He argues that these notions seldom fit the reality of the communities in which agricultural development programs are launched. In the case of Guatemala the diversity of household livelihoods and income generation among small farmers is well established by existing research (see Goldín 2009, Annis 1987, Nash 1967). Annis (1987) found over 30 forms of nonfarm employment practiced by a sample of 74 households in Guatemala's highlands. Remittances from migratory labor contribute to the complexity of Guatemalan household livelihoods. According to a 2000 survey conducted by Guatemala's National Institution of Statistics, over

20% of all Guatemalan households receive a significant portion of household income from migratory wage labor (Adams and Cuecuecha 2010). In light of this diversity, the opportunity costs to farmers associated with allocating labor to commercial agriculture schemes like NTAE is potentially greater than planners conceive. As a result, the notion of a comparative advantage for small export farmers based on surplus family labor does not fit with the reality of diverse income earning ventures in which rural Guatemalans engage.

Environmental Aspects of NTAE Cultivation

New export-oriented commercial crops require high amounts of agrochemical inputs and fertilizers. Such inputs work to simplify production by making it less vulnerable to ecological circumstances while also ensuring uniformity in crop yields and conformity of produce to global market standards for quality (Goodman et al 1987). As exposure to pesticides rapidly selects for resistant pest varieties, higher dosages are required in a circular biological arms race referred to by Hansen (1988) as the “pesticide treadmill.” Increased doses of often highly toxic chemical pesticides then contaminate nearby watersheds, affect populations of other exposed species, and endanger the health of farmers through chemical inhalation and ingestion (Barrett 1995).

In 1990, the use of toxic pesticides on NTAE crops resulted in a rejection of 27.3% of all Guatemalan produce at U.S. ports of entry for unacceptably high levels of pesticide residue (Murray and Hoppin 1991). In a survey of NTAE producers in the western highlands, Arbona (1998) found that 53% of all farmers practiced calendar spraying of pesticides regardless of signs of pest invasion.

These spraying regimes all exceeded levels of recommended use issued by chemical manufacturers. Further, she found that 41% of the pesticides used by NTAE farmers in this area were restricted, no longer sold, or banned for use in agriculture in the United States because of high levels of toxicity. Hoppin's (1991) survey of 148 NTAE farmers in Guatemala's highlands revealed that 98% of respondents reported engaging in such calendar spraying.

Others have pointed out the adverse health impacts of pesticide overuse on the producers of NTAE in Guatemala. One thousand two hundred cases of acute intoxication were reported in Guatemalan in 1995 (Arbona 1998: 55). The figure represents only those cases reported by farmers and excludes chronic toxicities resulting from long-term exposure through inhalation and physical contact with the chemicals. Further, high instances of upper respiratory infections, congenital malformations and other common symptoms of pesticide exposure have been found in NTAE producing villages in the western highlands (Arbona 1998). Conroy et al. (1996) argue that the health threats to poor farmers are increased by the fact that pesticides that are less toxic and leave smaller residue traces are generally more expensive.

Structural Aspects of NTAE Promotion

According to numerous observers (Holt-Giménez 2006, Conroy et al. 1996, Thrupp et al. 1995) several aspects of the food production and distribution chain for NTAE prevent small farmers from capturing significant economic gains for agricultural goods and from addressing the health and environmental issues outlined above. Firstly, NTAE crop dependence on imported foreign inputs ties

farmers to agrochemical retailers and distributors, concentrating high amounts of capital in these activities outside the farmgate. Secondly, farmers are often bound by satellite-core contracts with exporters, large scale purchasers, or wholesalers who control producer access to agricultural credits and terms of lending for startup capital. Producers of NTAE often bear disproportionate amounts of risk while failing to capture significant value added when selling in bulk to local intermediaries (Conroy et al. 1996). Farmer perceptions of intermediary dominance and advantage in NTAE chains are a reflection of inequality in export chains for agricultural goods (Goldín and Asturias de Barrios 2001). According to Conroy et al (1996:104) over 89 percent of the total profits from typical NTAE production chains are captured by shippers, exporters, and retailers in post-farmgate operations. They find that less than 4 percent of total profits from NTAE production go to farmers.

Mounting critiques of NTAE in these realms have fueled theoretical debates concerning the sustainability and inclusiveness of export agriculture for small farmers. They have also influenced the general approach to rural development assumed by programs in the country. The current study focuses on the activities of two rural development NGOs in Guatemala that have promoted organic agriculture and agroecological farming systems for NTAE through the formation of a local organic food system among a cooperative of small indigenous producers and urban consumers in the country's western highlands. Studies by Navas et al. (1997), Dix and Carroll (1997) and Sánchez et al. (1997) have all concluded that the implementation of organic and agroecological

cultivation techniques by Guatemalan NTAE farmers were as successful as chemical alternatives at limiting rates of pest infestation and sustaining crop yields. For this reason, they argue that these alternatives have the potential to address the environmental and human health hazards associated with conventional NTAE production in the country. However, these studies do not consider how such alternative farming techniques impact the economic, social, and political structures of commercial agriculture or what types of new structures are formed around the circulation of organic agricultural products. The case considered in my study unites these overlooked areas, standing at the intersection of market-based rural development initiatives, the political economy of agricultural production and consumption in Guatemala, and the emergence of social movements for alternative food systems among Guatemalans. As a result, an in-depth look at this system and the social structures that form around it provides a more comprehensive analysis of the debates outlined above concerning development processes and the effects of NTAE promotion to small farmers.

Approaches to the Study of Rural Development and the Formation of Alternative Food Systems

Because the activities of this network of producers, consumers, and development NGOs are so far reaching, I employ a framework for this study that draws not just upon recent approaches to researching rural development systems but also theoretical trends guiding the study of food systems. These seek to broaden the focus of previous production-centered studies of agriculture

and to integrate new notions of value and quality that go beyond instrumental economic decision-making. Overall, I argue that my focus on the forging and maintenance of networks of social and economic relations between actors and institutions at each stage of the development process is an apt framework in that it is capable of 1) tracing the synthesis of diverse goals held by producers consumers, and support NGOs in the construction of a local organic food system, 2) showing how these goals are conditioned by the context of mainstream NTAE production and consumption in Guatemala, and 3) revealing the specific compromises, tradeoffs, and innovations reached by actors at each point in the food chain and how these do or do not contribute to the functioning of the new food system.

Accompanying the critiques of market-led development outlined above, has been the rise of “post-development” approaches that shift focus to the analysis of development projects themselves (Sahle 2009). Expressing a growing frustration with the limited nature of dominant development theories, scholars (Li 2007, Escobar 1995, Ferguson 1994) in this tradition look beyond the simple mechanics of programs and their successes and failures in meeting stated objectives. They instead focus on what the construction of specific types of development discourses accomplish (Escobar 1995). These studies emphasized the divide between discourses of development produced by agencies and organizations and the actual accomplishments of their programs on the ground.

In such studies a focus on the representation of development problems and sites has been central. For example, in Ferguson's (1994) study of development in Lesotho, he argues that through internal documents developers discursively create representations of the problems experienced by rural populations that then actively facilitate the production of specific constructs of social reality. These representations, though often inaccurate, form the basis for program activities as well as knowledge-power dynamics in the development encounter. In an argument later expanded upon by Li (2007) in her study of environmental improvement and livelihood development in Indonesia, Ferguson concludes that rural development projects are often limited by a discursive "depoliticization" of the problems of development. He contends that processes of depoliticization work to erase economic and political structures from the discourse of development as it lays out a set of solutions and activities for programs. Instead, such structures are represented as technical problems, amenable to the solutions that programs have to offer. Despite the fact that such solutions rely on overly simplistic representations of the problems and sites of development, the goals nevertheless fit with program needs insofar as they are measurable, concrete, and able to be addressed by the technical activities put forth in program plans.

Integrating these political and structural impediments to development into research frameworks is also advocated by numerous approaches that extend the discussion of market-based development beyond just production of commodities. Instead, such frameworks have been used to analyze total systems of production

that involve much more than changes to production alone. Capturing total systems of a product's production, distribution, and consumption has also been a principal goal of scholars studying the construction and maintenance of global commodity chains (Raynolds 2003, Talbot 2002, Gereffi and Korzeniewicz 1994). Commodity chain research has focused on the distribution of capital specific to each stage of trade for a product, from raw material sourcing to retailing (Gereffi 1994). Rather than viewing global trade as simple exchanges between nations, commodity chain studies focus on how advances in communication and transportation have made possible the orchestration of production, transport, and marketing of products across national borders by transnational corporations (Gereffi 1994).

Researchers like Gereffi (1994) argue that the distribution and marketing segments of global value chains tend to be more profitable and result in higher profits for distributors than for producers, who generally participate only in earlier segments of the chain. Producer losses are facilitated by the spatial segmentation of labor (Fröbel et al. 1981), by which transnational firms take advantage of low labor costs for production in developing countries while concentrating the highly profitable marketing and distributing activities in developed nations. Rather than simple integration into global markets, observers of commodity chain research have argued that true development requires a shift in the tasks taken on by producers in the developing world. Focusing on the back and forward linkages that connect each stage in the commodity chain, they maintain that the best way for producers to capture more surplus economic value

is through vertically integration into forward and backward links in the chain and the taking on of more value added stages like marketing or product distribution (Gereffi 1994, Gereffi and Korzeniewicz 1994).

Commodity chain research applied to agricultural development has risen out of a growing critique (Amin and Thrift 1995) with the “state versus market” and “endogenous versus exogenous” development models described above. Instead, as Murdoch (2000) points out, critiques have called for a shift in perspective on development to focus on the ways that agriculture is incorporated into broader processes that exist beyond rural areas and agents of development themselves. Critiques have also called for a deeper examination of how “vertical networks” (Murdoch 2000:409) of different agricultural goods integrate unique compositions of technical, economic, and natural resources to produce unique structures along their respective commodity chains (Friedland et al. 1981). In this way, commercial agricultural production is brought into dialogue with the structures that govern post-harvest handling, marketing, and consumption of farm goods. Such research has shown how the connection of rural economies with processes that involve rural and urban spaces of production and consumption configure the behavior of involved actors at all stages in the commodity chain (Buttel et al. 1990).

Rather than seeing market integration and commercial production of farmers as unexamined goals, scholars have focused on how the structuring of commodity chains leads to the concentration of value and economic benefits in specific links of chains. Their research has led to deeper recognition of how the

expansion and lengthening of chains for export agriculture takes place through the industrialization of food products and the need to transport foods over greater distances (Goodman et al. 1987). For many (see Bonnano et al. 1994), the lengthening of agricultural commodity chains for export has led to greater complexity and a need for their orchestration that is beyond the capacity of farmers themselves. For this reason, farmers are often confined to lower, less profitable chain links.

Recently, the commodity chain focus on integrating all aspects of agricultural systems has been extended by a parallel strand of scholarship that centers on the “horizontal” networks of actors that give rise to alternative forms of production and consumption. With a particular focus on the growth of non-conventional food systems of local, organic production, researchers (Hinrichs 2003, Jarosz 2000, Murdoch et al. 2000) have emphasized how networks of consumers and producers have formed non-conventional, local food chains. In doing so, these assemblages of producers, consumers, and related institutions work to generate new forms of exchange based on face-to-face interaction between producers and consumers and social definitions of value for production and consumption. Through this, involved actors attempt to challenge conventional agricultural commodity chains.

Specifically, recent empirical research has shown that, in attempt to address the structural shortcomings of conventional commodity chains for agricultural goods, many producers and consumers reject global trade networks in favor of participation in local food distribution systems. The proliferation of local

food systems in developed nations like the United States and Europe is well documented (Holloway et al. 2007, Marsden and Smith 2005, Hinrichs 2003, Murdoch and Miele 2003, Jarosz 2000). Researchers have found that, through the production and distribution of local food in networks of face-to-face relationships, producers and consumers attempt to create new economic arenas in opposition to one or more aspects of mainstream, global food chains (Murdoch and Miele 2003). By focusing on local production and circulation of goods through supporting institutions, participants secure economic goals like a higher proportion of profits going directly to farmers and a reclaiming of farm-level production decisions by the producers themselves (Hinrichs 2000). At the same time consumer goals for increased transparency in production practices are met through direct interactions with farmers (Goodman 2003). A variety of environmental and health goals jointly held by farmers and consumers have also been pursued through the formation of local food systems (Murdoch et al. 2000).

One of the principal analytic categories employed by studies of local food systems is the concept of embeddedness. Following the early works of Karl Polanyi (2001) and more recent scholars (Granovetter 1985), numerous researchers (Sonnino and Marsden 2006, Jarosz 2000) show that local food system formation is an attempt to contest the disembedding of social, cultural, and natural relations that accompany the standardizing and commodifying tendencies of industrial commodity chains. Kirwan (2004) suggests that re-embedding in local food systems takes place through several channels. First, the incorporation of social, environmental, and health issues into the production

and consumption of local food embeds transactions in face-to-face social relations of trust between farmers and consumers. Rather than relying on external certification systems or state regulatory regimes, trust in the quality of a food product is secured through personal relationships between actors. Additionally, the agricultural system as a whole is re-embedded in local ecology as well as through the valorization of local assets and seasonal variations in agricultural production. Allen et al. (2003) argue that embedding in these food systems takes place through local and regional provisioning that links production and consumption to specific sites. These researchers assert that embedding also occurs as agricultural products are attached to specific characteristics of a given terrain or locale in claims to particular environmental or social qualities. Overall, these and other observers (Murdoch and Miele 2003) argue that embedding is part of a broader attempt to create, “‘new economic spaces’ that are more capable of withstanding the countervailing, disembedding forces of globalization, unfettered markets, an increasingly complex division of labour, and corporate power.” (Goodman 2003:2)

Many of the studies discussed above have shown the ways in which narrow self-interest in economic transactions is muted by embedded relations of trust and shared norms in local food networks. However, researchers have recently called for a deeper interrogation of embeddedness in such systems (Goodman 2003, Sayer 2001). Sayer (2001) argues for a greater focus on how embedding processes in local food systems are shaped by the pressures of external market forces and other system imperatives. Similarly, Murdoch et al.

(2000) argue that, in order to ensure the survival of the local food chain, certain industrial and commercial elements of mainstream commercial food production must be integrated into the system. These researchers suggest that social embeddedness of alternative food networks is shaped in dialogue with extralocal processes and actors as well as the greater political economy of conventional food production.

To further explore the concept of embeddedness in local food systems, much of the research outlined above focuses on how networks of individuals within food chains and systems redefine value and quality through inter-actor agreement and compromise. The focus is in large part derived from French *filière* approaches like ANT (Law 1998, Callon 1998, Latour 1987) and conventions theory (Allaire and Boyer 1995, Boltanski and Thevenot 1991). For scholars following these approaches, the study of alternative food networks begins with an examination of how notions of value and quality are constructed through agreements and compromises reached among actors and entities in the networks themselves. By studying how these are redefined in local food systems, researchers seek to understand how networks gain strength and increase their scope. Actor Network theorists like Callon (1998) argue that this involves a process of “translation” by which networks gain scope and power by promoting shared values and goals among incorporated actors. Though this is a process of constant negotiation and conflict, it is through translation and actor “enrollment” that networks gain strength and become bases for collective action

and agency. A network's ability to do this is seen as a measure of the alternative food system's capacity to challenge aspects of conventional food chains.

Conventions theory builds on the concepts of enrollment and translation in ANT by focusing on how these are secured among actors and institutions in a network. It starts with the assertion that commodity transactions suffer from incomplete contracts, making it necessary to qualify commodities using rules, norms, and conventions (Wilkinson 1997). Generally, these conventions embody points of agreement, conflict, and compromise between entities in a commodity network. Researchers see conventions as being in a constant state of flux and renegotiation between entities and actors in the network. Their formation is the process by which competing and diverse goals for the food chain held by various actors are united and translated. Overall, they serve to bind actors to the network through the establishment of mutual expectations and agreements for exchanges (Murdoch et al. 2000). In this way, the interests of numerous heterogeneous actors in the network are simplified into conventions that are then bundled together to form "modalities" (Latour 1987) that are more or less accepted by actors as "virtuous combinations of all the enrolled elements" (Murdoch et al. 2000: 114). Both ANT and Conventions theory argue that, through local food networks, shared goals and understandings between actors give rise to new notions of value for "local", "natural", and "fair" agricultural production and consumption (Marsden and Smith 2005). Value for local products is redefined in opposition to standardization, industrialization, and other disembedding associated with conventional food chains (Bonnano 1994

A final key feature of local food chains identified by researchers is the redefinition of product value and quality through network conventions (Goodman 2003, Murdoch et al. 2000). Seen in this way, alternative values for food reflect contingent and often delicate alliances between network actors, institutions, and the environment at a variety of scales. Definitions of value are indicators of, “differences in farming systems, cultural traditions, organizational structures, consumer perceptions, and institutional and policy support.” (Sonnino and Marsden 2006). They are a result of numerous compromises between actors and structural features involved in reproducing a shared framework of value for food (Arce and Marsden 1993). For this reason the politics of defining value can be seen as an indicator of power relations within food networks and the broader cultural economy of local consumption.

The centrality of value and quality in local food networks has led to research concerning the types of goals for local food systems held by actors and how these are translated into quality and value (Murdoch et al. 2000, Nygard and Storsted 1998). It has been argued that macro and structural factors such as farmer exploitation, food scares, and health risks have influenced notions of value for food held by actors in local food systems (Sonnino and Marsden 2006). Environmental concerns related to resource use, chemical applications, and environmental contamination affect definitions of quality in local organic and agroecological food networks (Murdoch et al. 2000). Seeing how these conventions are combined in a framework for producing value for food is central

to defining power relations within local food systems as well as showing how food quality is constructed through interactions between network actors.

Commodity Chain Networks: A Framework for Agrarian Development and Alternative Food Studies

For the present study I respond to the critiques of traditional political economic approaches put forth in the recent work on food systems and agrarian development outlined above. I do so by bringing production and consumption into dialogue in an integrated study of the social and economic networks of relations between actors at all stages of the commodity chain for organic vegetables in western Guatemala. I combine the ANT and Conventions theoretical emphasis on networks and agreements formed between actors with the commodity chain focus on the structuring of linkages that unite stages in a commodity's transfer from production to final consumption. In doing so, I address the types of social and economic relations that grow around each point of interface in a market-led rural development project when it is combined with a growing movement of urban consumers of local organic foods. More generally, my framework demonstrates how successive waves of capitalist penetration of agriculture result in the formation of new social and economic relations and structures and how these are intertwined in efforts at rural development and social movement formation. On the ground, I show that coordination and general maintenance of a new alternative commodity chain rests upon the enrollment of a wide variety of actors and institutions with diverse interests and aims for restructuring conventional structures for commercial agriculture in the country.

My framework follows the ANT and Conventions perspectives in emphasizing the social significance of transactions and the orchestration of new values for food defined through networks in alternative agricultural production systems. I explore how exchange in such systems often goes beyond narrow self-interest and industrial notions of value expressed in conventional food provisioning systems. Further, I show how this results in a restructuring of consumption and production by local actors. However, responding to more recent literature on local food system formation, I include a critical exploration of the staple concepts of embeddedness, trust, and alternative values for food in local organic food systems. By showing how these are often tied to the same socioeconomic imbalances, values, and power structures that grow out of the context of conventional agricultural chains, my research emphasizes the intermingling of “the alternative” with “the conventional” in hybrid chains.

Applied to existing literature on local food systems, I use this network framework to ask: *“How is the growth of an alternative food system shaped by context specific processes, politics, and structures of conventional food systems in the developing world?”*, *“Do the values and symbolic meanings attached to food in such systems truly work to resituate power to producers and consumers through the creation of new economic spaces outside conventional agricultural chains?”*, and *“To what extent must alternative food systems be brought into accord with industrial and commercial imperatives to ensure their own economic survival?”*

In the realm of rural development a focus on new networks, social relations, and structures in these aspects of the commodity chain helps to get around the popular but not always appropriate “top-down/bottom-up,” “state/market,” “endogenous/exogenous” development binaries by showing how power in the development process is situated in multiple sets of contingent relations between involved actors. Further, it demonstrates how mixed successes and failures in realizing development project goals, including diffusing new agricultural innovations, securing producer participation, developing human capital, and building a microenterprise, can be traced back to the ways the goals of involved actors are aligned through cooperation and compromise. Interests in these projects are shown to be quite diverse and include those of funding agencies, local NGOs, producer cooperatives, state agencies, and small farmers.

In the general area of rural development program design and goal-setting, I follow the critiques of the post-development scholars like Ferguson (1994) by asking: *“How are the needs of funding agencies, NGOs, and actors on the ground combined in discursive representations of the problems of and solutions to rural development?”*, *“How does this give rise to specific relationships of cooperation and power in the development process?”*, and *“What do these accomplish in terms of the goals of involved actors?”* Connecting with the literature on the diffusion of agricultural innovations and participatory models of rural development, I ask, *“What characteristics of the development specialist-producer interface foster the transfer of organic agricultural techniques and agroecological farming methods?”* Further, I ask, *“How successful is the*

construction of a local organic food system in addressing the economic, ecological, sociocultural, and structural limitations of conventional agricultural chains for small farmer development?”

Although recent research has begun to investigate the theme of local food system formation and development (Sonnino and Marsden 2006, Allen et al. 2003, Hinrichs 2003) in the United States and Europe, there is a paucity of research concerning their formation in the developing world, specifically in countries like Guatemala where NTAE cultivation and export food systems are so pervasive. Given the new emphasis scholars place on how embeddedness in local food chains shaped by the context of external political, cultural, and economic structures of conventional food chains, comparative studies are crucial for understanding the diverse trajectories of local food systems across cultures. However, no studies to date have considered the formation of local food systems in the developing world and the overarching political drive for export-led development, commercial cultivation, and the integration of the rural sector into capitalist markets. There is a lack of empirical research focusing on how local food systems in the developing world take shape in dialogue with conventional commodity chains for commercial vegetables and existing rural development models.

My research addresses this need by analyzing the formation of a local organic food system among a cooperative of small non-traditional vegetable producers and local consumers in western Guatemala. Pursuing these major themes in the cases of producers, consumers, and supporting institutions, the

project reveals how relationships between these groups of actors are brokered by unique conventions concerning product value and quality in the food system. Further, it shows how these are synthesized to give rise to new modalities and norms for production and consumption that are shared across the food network. In providing an analysis of these features, I seek to situate this local food system in the context of the greater political economy of commercial agricultural production and consumption in Guatemala. Further my research attempts to highlight relations of power, contestation, and compromise within the food system itself, even as actors seek to redefine aspects of mainstream food chains according to shared goals and relations of trust.

III. RESEARCH SITES, DATA COLLECTION, AND METHODOLOGY

Research Sites

Multi-Sited Ethnography: The Food Network and Development Apparatus as Research Site

This research project employs a multi-sited ethnographic framework (Marcus 1995) that treats the food network and associated institutional development apparatus as research sites themselves. Rather than focusing primarily on the discrete, bounded locations in which actors are physically situated, the study takes the food chain for eco-vegetables as the primary site for the research. It concentrates on the connections, associations, and relationships within networks of actors and institutions across numerous locales along the food chain for eco-vegetables. As a result the study focuses on the formation of networks of social relations between actors and institutions at each stage in a commodity chain, from eco-vegetable cultivation and development within small communities of indigenous farmers, to farmer training, packaging, and delivery coordinated by rural development workers in an urban NGO office, to purchases by urban consumers and restaurant patrons in Guatemala's second largest city.

While I maintain that this multi-situated milieu is characterized by the generation of unique forms of association and exchange shared by actors within the food network for eco-vegetables, an investigation into the social relations and interactions among these actors and institutions reveals how the network structure often reflects external interests, tensions, and relations of power. Though it is held together by numerous shared rules for exchange and goals for

food production and provisioning defined in opposition to external structures, the food chain is ultimately a product of the greater political economy of conventional production and development in rural Guatemala. It does not exist in a vacuum. As such, it is in constant dialogue with the political and economic structures of mainstream export agriculture as practiced in the country's western highlands. For this reason, my study considers the structural conditions of the multiple sites connected by the chain for eco-vegetables. In doing so, the study reveals how political and economic factors at local, regional, and global levels are melded and combined by actors within the food network. In this way the research avoids dichotomizing notions of "global" and "local" as well as "conventional" and "alternative" forms of production in favor of a more nuanced interpretation of how these themes are combined and synthesized by dynamic processes within the food network.

Sites of Eco-Vegetable Production and Post-Harvest Handling

Production of non-traditional crops for local distribution and marketing as "eco-vegetables" is conducted by the farmer association, POSC, an organization of 125 small-scale indigenous farmers spanning across 8 rural hamlets, or cantons, in the northern region of the Valley of San Carlos in Guatemala's western highlands. Historically, an important agricultural center for traditional export crops like coffee and sugarcane and later NTAE crops like broccoli and snow peas, this region of Guatemala has undergone recent economic and cultural shifts accompanying new global processes of change and transnational integration. Occupationally, scholars (Goldín 2009) have noted increasing

diversity in livelihood strategies among rural Maya populations that dominate the region. The rise of *maquiladora* garment manufacturing, petty industry, and service sector employment offered by the growing presence of transnational industry have challenged agriculture as the dominant economic activity for many rural dwellers. Further, the employment opportunities offered in urban centers or in the United States have compelled many rural dwellers to migrate in search of more stable work, often leaving behind children and other family members.

In urban centers of the region, women have been increasingly compelled to seek work outside the home (PNUD 2008) to support their families beyond the domestic realm. The emergence of large-scale transnational industries have provided some employment opportunities in the service sector, as large scale banking institutions, supermarket chains, and other retailers begin to populate urban centers. With the arrival of these have come new modes of consumption, production, and engagement with global processes. No longer can western Guatemala be simply labeled an agricultural center. It is now much more a site of economic diversity, global commodity flows, and varied forms of connection with the outside world. The same is true of the locales involved in this research project, from the small cantons of eco-vegetable producers to urban consumers of their products.

Within western Guatemala, the cantons of San Carlos are located in the Department of *Quetzaltenango*, one of 22 political administrative units directly under the Guatemalan national government. The department spans 1,951km² across the country's western highlands and is bordered by the Departments of

San Marcos and *Retalhuleu* to the north- and southwest respectively, *Suchitepéquez* to the south, *Huehuetenango* to the north, and *Totonicapán* and *Sololá* to the east.



FIGURE 3.1: MAP OF GUATEMALAN DEPARTMENTS (*Quetzaltenango*=14)

Among departments, *Quetzaltenango* is known for its concentration of indigenous *K'iche'* and *Mam* inhabitants, who make up over 60% of the population (Hernández and González 2004). *Quetzaltenango* is further recognized as a center of indigenous identity in that it was the site of a famous confrontation between the *K'iche'* prince *Tecúm Umán* and Spanish conquistador Pedro de Alvarado in the early 16th Century. The battle, in which *Umán* lost his life, is largely viewed as a key turning point in the Spaniard's eventual pacification of the *K'iche'* Empire in western Guatemala (Sharer and Traxler 2006).

Within the department, the communities of San Carlos are located in the municipality of *Quetzaltenango*, the next smallest political administrative unit of government under the department.

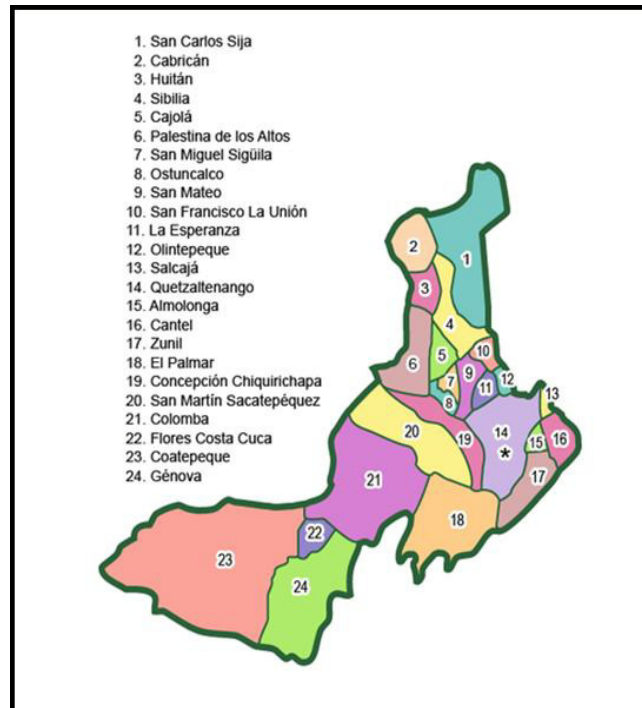


FIGURE 3.2: MAP OF QUETZALTENANGO MUNICIPALITIES

The Valley of San Carlos is adjacent to the city of *Quetzaltenango*, the departmental capital and municipal seat. The farthest community is less than seven kilometers away from *Quetzaltenango*, though this distance is stretched across mountainous terrain and steep land grade with poor road conditions. Regardless, due their close proximity the rural cantons are largely under the city's political and administrative jurisdiction. Most administrative decisions concerning infrastructure, public initiatives and services, and rural development in San Carlos lie with the urban municipal authority. However, each hamlet has a democratically-elected executive body charged with minor political administrative

duties and general community leadership. Depending on the community, these auxiliary bodies can be composed of one or more auxiliary *alcaldes* (mayors), a *vice-almcalde*, secretary, treasurer, and one or more *vocales* (*directors*).

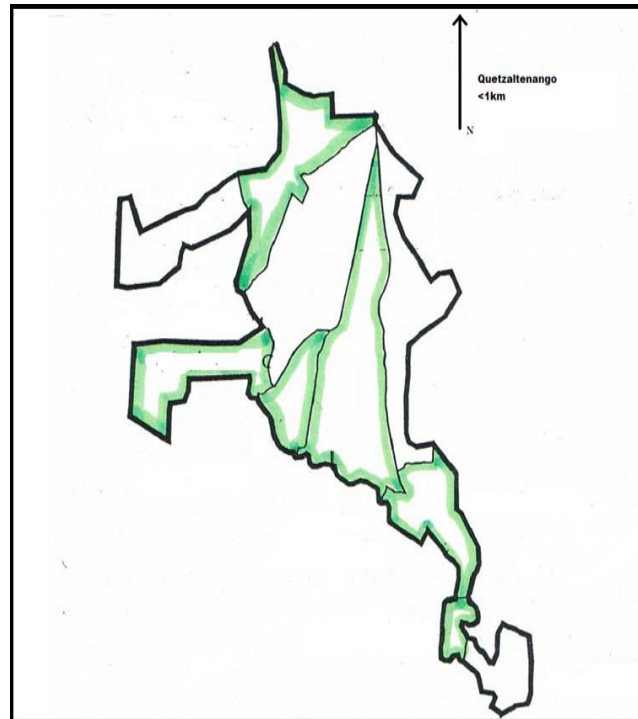


FIGURE 3.3: MAP OF TEN HAMLETS IN THE NORTHERN VALLEY OF SAN CARLOS (BLUE SHADING INDICATES PARTICIPATION IN POSC)

At an elevation ranging from 2300m to 2900m above sea level, the terrain of San Carlos is classified as montane and subtropical moist forest according to the Holdridge life zone classification scheme. The area receives between 700 and 2000mm of rainfall per year, the majority of which occurs during the rainy season months of May through October in which commercial vegetable production is also concentrated (ATQ Diagnostic Report 2002b). Like rainfall, temperatures vary widely by location but range from 2 to 22°C throughout the year. Agricultural scientists working in the area (ATQ Diagnostic Report 2002b,

ATQ Diagnostic Report 2001b) have classified the soil as belonging to the sandy loam class of the United States Department of Agriculture's (USDA) particle scale taxonomy scheme. However, this soil is spread over land grades ranging from 5 to 40%, depending on the part of the valley. This wide variation in rainfall, temperature, elevation, and land grade has resulted in the formation of numerous distinct microclimates across the valley. Scarce natural resources accessed by residents of San Carlos include strips of standing forests in concession by the municipality and a few natural springs that provide small amounts of water that do not come close to meeting the needs of the valley's population.

Though the valley has been populated since pre-colonial times, its current settlements were established throughout the 19th and 20th centuries. While specific dates for community settlement are unavailable for many of the villages in this area, documents indicate that at least one canton was founded in 1916, as settlers began leaving already established villages in the area in search of new farmland (ATQ Diagnostic Report 2001b). According to municipal statistics from a 2000 census, the current total population of these ten cantons in northern San Carlos is approximately 10,158 inhabitants (UIEP-PROINFO 2000). Of these inhabitants, 44 individuals, or less than half of a percent, are ethnically non-indigenous *ladino*² (non-indigenous, mestizo or hispanicized ethnic group in

²Guatemala's *ladino* population is a discrete ethnic group, described by the Guatemalan Ministry of Education as, "...a heterogeneous population which expresses itself in the Spanish language as a maternal language, which possesses specific traits of Hispanic origin mixed with indigenous cultural elements, and dresses in a style commonly considered as western." (MINED 2008) According to official estimates, *ladinos* constitute half of the Guatemalan total population. Historically, this group has controlled a disproportionate amount of political, economic, and sociocultural power over the country's indigenous groups.

Guatemala). The remaining residents are ethnically indigenous Maya, many speaking the Maya *K'iche'* language in addition to Spanish.

The six sampled cantons in which this fieldwork was conducted make up 77% of the total population of this group of ten villages (UIEP-PROINFO 2000). Within these communities, the 7,816 residents are divided into approximately 1318 households. The majority of such households include spouses, their children, and some extended kin. Average household size is 5.93 inhabitants and average number of children per family is 4.65. Dwelling structures in the sampled villages generally include 1-2 rooms constructed of cinderblock walls with corrugated steel or fiberglass ceilings. Other homes are made of various combinations of wood planks and corrugated steel walls. Within the sampled communities, approximately 74% of dwellings have potable water service and 78.5% have electricity. Approximately 93% of the homes in the communities have no system for waste water removal. For this reason, the vast majority depend on outhouses as the primary form of waste disposal (UIEP-PROINFO 2000).

Within the sampled communities, adults report having attended an average of 2.76 years of primary school. However, men have generally received more schooling, reporting an average 3.97 years of primary school to women's 2.17. Reports of adult illiteracy in the cantons of San Carlos range from lows of 25% (ATQ Diagnostic Report 2001b) to highs near 80% adult illiteracy (ATQ Diagnostic Report 2002a). Though the majority of communities in San Carlos have at least one primary schoolhouse, children wishing to pursue education

beyond the initial six years offered by such schools must travel between 1 and 7 kilometers by bus or on foot over mountainous terrain to nearby *Quetzaltenango* to receive such an education. Because education is an added cost to the family in terms of foregone labor and capital, education beyond primary school is largely seen as a significant investment that is beyond the means of many families in San Carlos.

Medical services are similarly scarce in these communities. The majority have no local access to medical treatments and services. Though a few of the communities are home to a makeshift clinic where outside medical personnel offer services at weekly or monthly intervals, residents are generally forced to travel to *Quetzaltenango* for treatment of serious injuries or medical conditions.

Households in San Carlos tend to engage in at least some farming activities, commercial or subsistence. *Milpa* cultivation (the planting of mixed plots of maize, beans, and a variety of squashes for household consumption) is the most common form of agriculture among farmers in the communities. Cultivation of a variety of non-traditional vegetables on small plots for commercial purposes is also common. Farming households in the sampled communities farm an average of 6.54 *cuerdas* (1 *cuerda*=43.7m²) divided between commercial and *milpa* cultivation.

Residents tend to combine a variety of income earning strategies with farming, resulting in diverse household livelihood portfolios. Among households sampled in this study, 64.64% reported holding at least 1 job in addition to agriculture. Popular forms of employment include rural day labor on other farms,

building construction, driving and transport, paid domestic work for others, and auto repair. Other residents, predominately men, opt to migrate to the United States in search of work. Though exact numbers concerning emigration from San Carlos are unavailable, a few observers and researchers (see ATQ Diagnostic Report 2002a, ATQ Diagnostic Report 2001a) working in these communities have noted the prevalence of an emigration scenario. According to one report (ATQ Diagnostic Report 2001a) found that migration was the third most popular economic activity in one San Carlos community. Others (ATQ Diagnostic Report 2006) estimate that 50% or more of the male population of another community have migrated out of the village in search of work.

Migration is yet another thread that integrates communities in San Carlos into broader global economic networks. As many residents leave communities in search of employment, wage labor within and outside of Guatemala increasingly ties rural livelihoods to a cash-based economy subject to price shifts for consumer goods and changes in currency values taking place at the global level. Wage work adds an increasing complexity to household economic decision-making and challenges longstanding notions concerning a gendered division of labor within households. In addition to the growing availability of cheap telecommunication technologies like cell phones and the increased prevalence of retail outlets for clothing, food, and other goods, migration serves as major channel for the introduction of new ideas into San Carlos communities.

Overall, the communities of San Carlos reflect much of the climatic, economic, and infrastructural diversity and change that characterize rural

Guatemala as a whole. Their proximity to *Quetzaltenango*, a major urban center, has afforded them many economic, educational, and development opportunities not available to other more isolated communities. At the same time, rural participants in this study frequently expressed feelings of discontent with the municipality's lack of engagement with and provision of basic infrastructure to their communities. The juxtaposition of economic development realized in urban *Quetzaltenango* with the widespread poverty and lack of basic infrastructural services in the cantons of San Carlos is a reminder of the great disparities in access to resources that affect Guatemala at the national level. At the same time it is this disparity that has attracted the attention and involvement of numerous rural development agencies based in *Quetzaltenango*.

Urban Networks for Rural Development, Eco-Vegetable Distribution, and Consumption in *Quetzaltenango*

As mentioned above, *Quetzaltenango* is Guatemala's second largest city. With an urban population of over 120,000 (*Instituto Nacional de Estadística de Guatemala* 2002), the city serves as an administrative and economic center for the country's western periphery. It has been an important hub since pre-Columbian times. A major center under the control of the indigenous *Mam* and later *K'iche'* Maya empires, the city is thought to have been in existence for several hundred years before the arrival of Spanish explorers in the early 1500s.

During colonial times the city grew in importance as a marketing depot connecting the country's western Pacific Slope with Guatemala City. It became an object of dispute during the early 19th century, as it was briefly claimed by the

short-lived Federal Republic of Central America between 1838 and 1840. After being forcibly reincorporated into Guatemala by the armies of Rafael Carrera, the city continued to function as a strategic economic and political site located at the intersection of Guatemala's productive Pacific Slope, the country's border with Mexico, and Guatemala City.

With the rise of coffee production in the mid to late 19th and early 20th centuries, *Quetzaltenango* became increasingly important as a marketing center for coffee harvested by plantations on the Pacific lowlands and destined for export via Guatemala City. As such, it was the major destination of the *Ferrocarril de Los Altos* in the early 1930s. The short-lived electric railway connected *Quetzaltenango* to the coffee producing regions of country's western slope, facilitating the transfer of coffee from plantation to exporting centers, with *Quetzaltenango* functioning as the major depot. The highland city also served as an indigenous labor reserve for coastal coffee plantations under the forced labor policies of General Justo Rufino Barrios and subsequent Guatemalan presidents.

Today, *Quetzaltenango* continues to function as a marketing, political, and cultural center for the country. According to national and municipal statistics, the urban population is divided nearly evenly between indigenous and *ladino* groups (UIEP-PROINFO 2000). However, it is widely accepted by students of Guatemala that these figures tend to underestimate the size of the country's indigenous population. It is more likely that the city's ethnic composition is more similar to that of the municipality as a whole, with an indigenous majority between 55 and 60 percent or more. Regardless, *Quetzaltenango* is recognized by

scholars and Guatemalans alike as a Maya city with a majority indigenous population.

Quetzaltenango is home to numerous public and private colleges and universities, including the national University of San Carlos and the private University of Rafael Landívar. Economically, the city is highly diverse, functioning as a central market for rural products as well as a site of urban industry, both domestic and international. In addition to various national and international supermarket chains, restaurants, factories, and financial institutions, *Quetzaltenango* is also home to five major agricultural markets where local producers, consumers and intermediaries buy and sell both traditional and non-traditional crops. These agricultural markets draw small producers from all parts of *Quetzaltenango* and neighboring departments, involving thousands of buyers and sellers on a daily basis. In these markets it is not uncommon to see tropical produce from the country's lowlands being sold next to live animals, fresh fruits and vegetables from highland producers, and a variety of nonagricultural domestic goods.

Quetzaltenango also contains many NGOs and state-sponsored development agencies. One *Quetzaltenango*-based NGO that is focused on sustainable rural development in the region is ATQ, *Amigos de la Tierra, Quetzaltenango*. Founded in 1994, this non-profit group has worked to support indigenous farmer organizations and cooperatives in the Guatemalan departments of *Retalhuleu, Chimaltenango, San Marcos, Huehuetenango, Petén, Sololá, Totonicapán, and Quetzaltenango*. Throughout its history, ATQ's

activities and programs have been funded by various international donors, including OXFAM, the Inter-American Foundation (IAF) and the Italian Development Cooperation (*Cooperazione Italiana*). The NGO is currently headquartered in *Quetzaltenango* and focused on rural development in the communities of San Carlos.

Amigos de la Tierra consists of four Guatemalan agronomist advisors, an office staff of three administrators, and one local promoter/farmer group coordinator. The group works with local farmer organizations to promote agroecological farmer techniques and technologies, to foster the economic diversification of small farmers in San Carlos, to promote farmer vertical integration into new areas of product development and marketing, and to form productive channels for the economic integration of small farmers into new agricultural markets. Overall, the group seeks to develop and enact sustainable agricultural development at the local and regional levels through rural economic diversification, the formation of new markets for farmer produce, and the promotion of agroecological farming techniques.

Between 2000 and 2003 ATQ assisted in the incorporation of numerous producer groups throughout the cantons of San Carlos to form the umbrella producer organization, POSC. Along with POSC, ATQ works to promote initiatives in San Carlos under its five principal programs of “ecological agriculture”, “agroindustry”, “business organization”, “commercialization”, and “political presence.” Its primary activities include giving weekly capacity building workshops concerning agroecology and agroindustry to local POSC branches in

the cantons of San Carlos, scheduling field visits and offering technical assistance to individual members of POSC, training and integrating member farmers into post-harvest handling and marketing of produce, providing microloans to member farmers, and producing and distributing organic farm inputs to POSC members.

The NGO and POSC work closely with a third organization, *Negocio Orgánico*. The group, housed in the same *Quetzaltenango* office as ATQ, is charged with the promotion and marketing of the vegetables produced by POSC farmers under the techniques promoted by ATQ. *Negocio Orgánico* supports a total of seven regular employees, including a general manager, an accountant, four part-time drivers and one office manager. The group is responsible for the marketing, distribution, promotion, and post-harvest handling of POSC member produce.

Negocio Orgánico is tied to a market of urban-based consumers of agroecologically produced, local agricultural products and non-traditional vegetables in *Quetzaltenango*. The consumer market is represented by approximately 120 households and 5-7 food retailers and restaurants that purchase *Negocio Orgánico* products on a regular basis. The group of purchasers makes up the last node in the commodity chain for eco-vegetables produced by POSC in San Carlos and the final site of exchange and interaction considered in this study.

Research Design and Data Collection

This project is based on 20 months of field research conducted over a three year period in the Department of *Quetzaltenango* in the western highlands of Guatemala. Primary methods of data collection employed were participant observation at the research sites, ethnographic and semi-structured interviewing with participants, document analysis of relevant texts from support NGOs and governmental agencies, and the administration of consumer questionnaires and a survey of participating producers.

Participant Observation

Participant observation was continuous throughout the project and included attending producer meetings and seminars organized by ATQ and POSC, visits to producers' agricultural plots, participation in post-harvest handling activities such as vegetable packaging and delivery, as well as informal interviewing conducted in *Quetzaltenango* among consumers and purchasers of the eco-vegetables produced by these groups and circulated by *Negocio Orgánico*. In exploratory phases of the research, participation in producer seminars and visits to farm plots allowed me to familiarize myself with the terminology employed by farmers and NGO workers when discussing matters pertinent to the focus of my research. Topics covered in these meetings were recorded and provided the basis for interview questions and survey items used in later stages of the research. Regular visits to farmer fields also provided me with the opportunity to familiarize myself with the mechanics of vegetable farming, allowing me to cross check data collected through surveying and interviewing.

Such was the case with weekly visits to the *Negocio Orgánico* packaging center and mornings spent accompanying drivers on the eco-vegetable delivery routes in *Quetzaltenango*. These experiences were also crucial for establishing rapport with informants who provided key insights that guided analytical development of the project in later phases of the research.

Participant observation conducted among consumers in *Quetzaltenango* involved attending public events sponsored by restaurants and groups promoting chemical-free agricultural products like the eco-vegetables. This also included conducting interviews with direct purchasers of the eco-vegetables as well as patrons of establishments in which *Negocio Orgánico* products are sold. These experiences were instrumental in the development of central themes used in subsequent structured interviews with consumers and the consumer questionnaire administered in the final stage of the research.

Open-Ended and Semi-Structured Interviewing

Open-ended interviews with producers and consumers of ATQ eco-vegetables, officials from governmental ministries, and NGO agronomists took place during the exploratory phases of the research. These interviews involved 29 participants. A set of original themes for such interviews was developed on the basis of an *a priori* framework derived from theoretical literature pertaining to areas of interest to the research project itself. Responses to these items were then used to define new domains and categories relevant to the focus of the research. New concepts and ideas put forth by respondents were followed, as

participants were encouraged to provide information that they themselves felt was important (Bernard 2006). The described format for interviewing allowed me to guide interviewees to respond to topics pertinent to the research project while also encouraging the generation of new concepts and domains grounded in their perspectives.

Open-ended interviews also included the use free-list activities for defining cultural domains of relevance to the research (Weller and Romney 1988).

Participants were asked to verbally list items that corresponded to themes and categories introduced in the interviews. Prompting on the part of the interviewer encouraged respondents to produce more exhaustive lists of terms and definitions for each domain. The statements and phrases generated by free listing activities in exploratory interviews were then tabulated. Salient domains were isolated using word frequencies and the order of lists given by respondents (Ryan and Bernard 2003). These domains were then used in the development of items included in structured interviews and surveys administered in later phases of the research. Overall, these activities allowed me to ensure that categories and concepts used in the research were culturally relevant and understood by all informants (Weller and Romney 1988).

Semi-structured interview protocols were developed for both producers and consumers based on recurring concepts from previous interviews and observations made in the field. Semi-structured interviews with both consumer and producer groups combined theory-guided items with exploratory activities used to exhaust cultural domains that were later included in the survey portion of

the research. Producer interviews were conducted in pairs and involved 28 respondents. Interviews with 19 consumers of ATQ and POSC products were conducted in *Quetzaltenango*. Responses to semi-structured interview items for both consumer and producer groups were coded using an open-inductive coding scheme (Glaser and Strauss 1967). Analysis of the included exploratory activities followed the procedures for domain definition described above for unstructured interviews. Emergent concepts derived from popular themes mentioned by respondents were included in structured surveys and questionnaires after piloting.

Document Analysis

Document analysis took place during the exploratory phases of the research project and included an inductive analysis of documents from support NGOs like ATQ and POSC, the producer association. Analyzed texts included PowerPoint presentations from ATQ, POSC meeting notes, and ATQ agronomist diagnostic reports concerning the communities in which the research took place. An *in vivo* coding framework (Strauss and Corbin 1990) was used to isolate emergent concepts in these texts and to model relationships between overlapping themes. Theoretical models of these relationships were tested against negative cases in a constant comparison method (Glaser and Strauss 1967) that helped to ensure the validity of concepts and terms used in interviewing and surveying.

Structured Questionnaire and Surveying

Data collection through producer surveys and self-administered consumer questionnaires took place in the final stages of the research project. One hundred and eighty one producer surveys were collected in six villages in which ATQ and POSC have membership. Producer survey items were developed through the review and analysis of interview transcripts taken from interviews with producers, field notes concerning participant observation, and analyses of primary documents. The items included in the producer survey protocol were based on repetition of ideas in interviews, the linking of concepts by interviewed producers, and emergent themes from text analysis of primary documents from ATQ. Draft survey items were pretested with five key informants using cognitive testing (Bernard 2006) in which informants were asked to think aloud about the precise meaning of concepts and terms included in the protocol. The surveys were then administered orally to respondents by the interviewers.

Self-administered consumer questionnaires were collected from 29 purchasers of the eco-vegetable bags produced by ATQ and POSC. Items for the consumer questionnaire were derived from salient themes taken from 19 interviews previously conducted with consumers. Selection was determined by repetition of domains and themes across interviews as well as their intersection with other themes in context. Questionnaires were pretested using cognitive testing with 3 purchasers. They were then piloted on a sample of 20 respondents before being administered.

Timeline for Study and Data Collection

As stated above, this study was conducted over the course of 20 months of field research between 2007 and 2010. The study was broken into 2 principal periods of research. Exploratory research took place from June to August of 2007, May to June of 2008, and October of 2009 to April of 2010. Exploratory research was broken into two phases, the first covering preparatory research in 2007 and 2008. The second phase immediately preceded the explanatory period of research and covered 7 months of initial data collection conducted in October of 2009 through April of 2010. The final, explanatory period of the research followed immediately, taking place during 8 months of research from May to December of 2010. The data gathered during each phase was used to guide the theoretical and methodological development of the study in all subsequent phases.

Exploratory Research Phase 1

The initial phase of the research took place over the course of five months in 2007 and 2008. During this phase I familiarized myself with the research communities, established rapport with key informants involved in organic cultivation in the area, interviewed members of POSC and ATQ, and consulted technicians and agents from the *Ministerio de Agricultura, Ganadería, y Alimentación* (Guatemalan Ministry of Agriculture, Livestock, and Food—MAGA). I also conducted participant observation during this phase by attending ATQ and POSC producer meetings, working with support NGOs and non-profit groups

involved with ATQ and POSC, making field visits with POSC association members, and observing work at the ATQ packaging center.

During this early phase of the research informants were sought using a purposive sampling scheme in which I choose individuals on the basis of their ability to provide valid information about specific aspects of the research project (Johnson 1990). For this reason, informants were chosen according to their familiarity with aspects of organic cultivation, product distribution, administration of one or more parts of the commodity chain for POSC's eco-vegetables, participation in group decision-making bodies, and involvement in relevant governmental regulatory ministries. Overall, a total of seven in-depth, open-ended interviews were conducted. Of those interviewed, three were POSC member producers, two were support NGO workers from ATQ, and two were government officials from MAGA.

Unstructured interviews with informants during this phase helped me to establish rapport within the research sites and guided the development of concepts and models used in later phases of the research. Though these interviews elicited responses from informants on several *a priori* topics taken from existing literature, respondents were largely left to discuss those aspects of their involvement with POSC, ATQ, and organic agriculture that they felt were important. In this way, new concepts, themes, and relationships between these were uncovered in a data-driven, exploratory interviewing scheme that allowed me to explore and follow new ideas as they were introduced into the conversation by the respondent. In this early exploratory phase of the research,

this format for interviewing allowed for the generation and investigation of new concepts within a framework set according to the *a priori* dimensions of the study itself.

Exploratory Research Phase 2

The second phase of exploratory research began in October of 2009 and ended in April of 2010. Participant observation in the form of meeting attendance, field visits, and informal discussions with informants continued throughout this period. In this phase, participation was expanded to more aspects of the production and distribution chain for POSC eco-vegetables. Participation included my making weekly visits to ATQ's packaging shed where POSC members prepare eco-vegetable products and my riding on delivery routes with POSC personnel. During this phase, my participation expanded to involve urban consumers of POSC's eco-vegetable bag and other products. I began attending events sponsored by alternative consumer groups in the city of *Quetzaltenango*, participating in informal conversations with restaurateurs and distributors of POSC products, and attending event planning meetings of these consumer groups. By expanding participation to include these aspects of the research project, I was able to establish connections and develop rapport with consumers, restaurateurs, and other purchasers of POSC products in *Quetzaltenango*. I was also able to familiarize myself with inter-group dynamics within the institutional network of NGOs, consumer groups, distributors, and promoters of POSC products.

Participation in this phase allowed me to verify previous theoretical models developed in the first phase of exploratory research and to refine existing concepts and domains taken from early interviews. Field notes written during this participation experience were recorded and later coded according to themes pertinent to the aims of the research. Coding followed a logical deductive approach (Charmaz 1990) insofar as several *a priori* constructs from existing literature and the previous phase of exploratory research provided the initial framework for analysis of field notes. However, as outlined above, concept and domain refinement also took place through constant comparison and open coding methods embraced by grounded theory (Corbin and Strauss 2008, Glaser and Strauss 1967).

During this phase, I began analysis of primary documents provided by ATQ and the organic producer association. These documents included notes from local POSC meetings, ATQ agronomist diagnostic reports from producer communities, PowerPoint presentation slideshows given by ATQ agronomists at POSC producer meetings, and ATQ internal documents concerning finances and the NGO's activities. Text analysis of these documents provided insights concerning relationships between the various groups and institutions involved in the operation of the commodity chain for eco-vegetables and other POSC products. Additionally, these documents revealed a great deal about the philosophy and approach taken by these groups toward the pursuit and maintenance of numerous development and environmental goals.

Primary document analysis identified and followed themes as they were featured in the data. Frequency and repetition of concepts, comparing and contrasting of ideas, and the identification of cultural categories were used to isolate emergent domains and generate theoretical relationships between them (Ryan and Bernard 2003). Focused coding (Charmaz 2006) and correspondence analyses (Greenacre 1983) were used to model relationships between categories and subcategories as well as the overlap of concepts in texts to determine their centrality within the sets of documents.

Core concepts taken from PowerPoint presentations and meeting notes were used in the generation of items featured in semi-structured interview protocols with producers as well as in the producer survey conducted in the final phase of the research. In this case, *in vivo* (Strauss and Corbin 1990) and key word in context (KWIC) coding of these documents allowed me to familiarize myself with and include the appropriate terminology in survey and interview items. Frequently used and repeated themes taken from ATQ lesson plans and meeting notes were adapted to make up producer interview and survey sections concerning agroecology in practice and aspects of participation in POSC and *Amigos de la Tierra*.

As mentioned above, I also conducted free listing activities and semi-structured interviews a total of 19 urban consumers of POSC products. Lists concerned consumer notions of quality in farm produce, motives for purchasing POSC products, and knowledge of the food chain for such products. These activities took place in two restaurants in which POSC products were sold and

used in regular menu items. Participants were selected using a nonprobability sampling scheme that stratified informants by period of day in which they entered the establishment. The current purposive sampling strategy (Bernard 2006) sought to include as great a diversity of clientele as possible by seeking quotas of participants in the mornings, afternoons, and evenings on both weekdays and weekends.

In interviews participants were asked to list all descriptors of quality that they felt applied to the products sold in the restaurant. They were then asked to give their principal reasons for purchasing these products. These activities produced exhaustive lists after respondents were prompted by interviewers to continue listing until they could no longer come up with new responses. Consumers were then asked a series of questions concerning their knowledge of other consumers of such products, frequency of visits to the establishment in which the interview took place, and their likelihood of recommending these products to other consumers.

These interviews were complemented by six in-depth interviews with direct purchasers of POSC's eco-vegetable bag. Informants for these interviews were selected according to a respondent-driven sampling strategy (Bernard 2006) in which interviewees referred me to other consumers that they knew would be willing to participate in the study. Along with the free-listing activities described above, these interviews included in-depth questions concerning interactions with ATQ and *Negocio Orgánico* distributors, benefits and drawbacks

of purchasing the bag of eco-vegetables, problem resolution with the distributors, and knowledge of the production end of the POSC vegetable commodity chain.

These consumer interviews were transcribed and coded for cultural domains of meaning concerning consumer choice of farm product, interest in ecological and economic aspects of vegetable production, notions of quality, and interactions with POSC product distributors. The results of listing activities were analyzed and ranked by the order that items appeared on individual lists and their frequency across respondents (Weller and Romney 1988). Themes from interviews and popular items from free listing activities were then integrated into the self-administered consumer questionnaire distributed in the final stage of the research.

During this phase I also conducted semi-structured interviews with 28 growers of commercial vegetables from four of the six communities involved in my study. The majority of these interviews were conducted with pairs of respondents. The format for interviewing was adopted in order to encourage individuals to speak more candidly and confidently with the interviewers than they would otherwise feel comfortable doing. All participants were given the option to elect an individual interview but paired interviews were unanimously chosen when this option was possible.

Interview respondents were chosen according to a nonrandom purposive sampling strategy (Bernard 2006) in which I intentionally chose participants representative of four of the six communities in which the producer cooperative POSC is active. Nearly all interviews took place in the home community of

respondents, aside from those with POSC and ATQ personnel. The latter generally took place in the city of *Quetzaltenango* in or near the ATQ offices.

Interviews with producers were divided into two distinct parts. Items included in the primary, semi-structured portion of the interviews were developed according to the theoretical interests of the study and emergent themes taken from previous phases of the research. These items focused on producer household labor and income-earning strategies, organic versus conventional agricultural practice, the use of agrochemicals in commercial vegetable production, prices for agricultural inputs and products, aspects of vegetable marketing, and interactions between agricultural production and the surrounding biophysical environment.

Secondary, open-ended portions of these interviews were used to outline key domains of the study and then refined and integrated into survey items in the final phase of the research. Respondents were asked to name all vegetables they had sown, topics covered in workshops given by ATQ, the benefits and drawbacks of working with ATQ, sources of agricultural information and advice, and the qualities of organic versus conventional vegetables.

The contents of these interviews were used in the development of a producer survey protocol administered in the final phase of the research. Semi-structured items from the primary portion of interviews were analyzed using an axial coding procedure (Strauss and Corbin 1990) that outlined tentative relationships between concepts concerning labor use, agricultural production, organic agriculture, vegetable marketing and input prices, and agriculture's

relationship with the external environment and human health. I then refined these relationships using existing theory and materials from previous exploratory phases of the research to develop hypotheses that formed the basis for items on the producer survey protocol.

The results of free listing activities from producer interviews were analyzed for frequency and repetition across respondents as well as prominence in list order (Ryan and Bernard 2003). Popularly listed items for vegetables grown, reasons for participation in POSC and ATQ, lessons from ATQ seminars, and sources of agricultural information were used to form battery items appearing on producer surveys administered in the final phase of the research.

Explanatory Phase

I conducted the final, explanatory phase of the research between May and December of 2010. The final phase focused on quantitative data collection in the form of a face-to-face survey of 181 vegetable producers conducted in six rural communities in which POSC and ATQ are active. In addition to the producer survey, a self-administered consumer questionnaire was collected from 29 direct subscribers to POSC's eco-vegetable bag distribution program in the city of *Quetzaltenango*. Results from these structured data collection procedures were then analyzed to test core hypotheses developed in exploratory phases of the research in dialogue with existing theoretical concerns of the research.

Producer Survey Sampling Scheme, Development, and Administration

Face-to-face surveys with commercial vegetable producers took place in six rural communities in which POSC and ATQ have active branches. To

facilitate comparison between POSC members and other vegetable growers as well as between producers across villages, I conducted a stratified sample (Babbie 2005) that sought to maximize member representation and sample representativeness of the surveyed communities. In sampling I attempted a full census of POSC members from each community. Survey administration took place during weekly POSC meetings in each community as well as home visits to members in an attempt to meet representation goals as outlined by the quota sampling design (Bernard 2006).

A random sample of non-member producers was selected in each community using satellite maps of the communities and the assignment of numbers to all dwelling structures therein. Structures were selected for surveying using a random number generator. Unqualified individuals or those declining the survey were replaced with additional respondents selected using the same random number generator. Selection and surveying continued until the community-level quota was filled by the combination of member and non-member samples.

The producer survey instrument was developed based on data gathered from interviews, document analyses, and participant observation in the exploratory phases described above. The survey was pretested using cognitive testing (Bernard 2006) and piloting before administration. For cognitive testing, three key informants were given the survey orally and encouraged to explain their personal interpretation of survey items, definitions of key terms, and understandings of instructions. Results from these tests were used to further

refine survey items to ensure that all concepts were understood similarly by participants and surveyors. The protocol was then piloted orally with nine individual producers from the surveyed communities. As a result of high rates of illiteracy in rural Guatemala, all surveys were administered in a face-to-face oral format. Surveys were administered by myself and one trained research assistant. Surveying took place either in respondent homes or public areas within the communities.

Consumer Questionnaire Sample and Administration

Items for the self-administered consumer questionnaire were derived from consumer interviews from previous phases of the research as well as 19 questionnaires piloted with customers of a café that markets *POSC/Negocio Orgánico* produce in *Quetzaltenango*. Questionnaires included battery items concerning consumer reasons for purchasing *Negocio Orgánico* eco-vegetable bags and notions of quality concerning organic versus conventionally produced vegetables. Additionally, questionnaires included open-ended items eliciting consumer knowledge of *POSC* production techniques and economic organization as well as respondents' social ties to other purchasers of the eco-vegetable bags.

Because this population proved difficult to access, questionnaires were designed to be self-administered and distributed along with the eco-vegetable bag by delivery personnel from *Negocio Orgánico*. I accompanied these employees on weekly delivery routes through *Quetzaltenango*, distributing the questionnaires to consumers, giving them a brief description of the project and

the nature of their participation. Consumers were asked to fill out the questionnaire and return it to *Negocio Orgánico* drivers with the delivery of the vegetable bag on the following week. Of the 115 questionnaires delivered to consumers, 29 were returned completed. These questionnaires were then analyzed quantitatively along with producer surveys to test core hypotheses and evaluate theoretical models produced by the research.

Multi-Method Approach

My project employed a multi-method approach that offered several advantages for cross-checking data collected through one method with many others. Direct participant observation of farmer cultivation practices and my attendance at cooperative meetings strengthened the validity of derived from on interview responses and survey items with producers. Participation in various events sponsored by consumer groups in *Quetzaltenango* also allowed me to cross-check and verify information reported in consumer questionnaires and interviews (Bernard 2006). Document analysis of meeting notes and PowerPoint presentations by ATQ agronomists provided me with background and context for the responses given in producer interviews and free listing activities. Analysis of archived meeting notes and diagnostic reports of ATQ agronomists also provided context for many of my observations recorded in field notes during the participant observation process. Interviewing with key informants provided rich narrative accounts to strengthen the validity of quantitative data acquired through questionnaires and surveys (Bernard 2006). Quantitative data collection, in turn,

provided a reliable measure of the accuracy of theoretical models derived from both document analysis and interviewing.

IV. RURAL DEVELOPMENT NGOS: ATQ—RESHAPING THE COMMODITY CHAIN THROUGH ALTERNATIVE AGRICULTURAL PRODUCTION

The neoliberal critique of state-led rural development that gave rise to NTAE as a development strategy for small farmers in Guatemala emphasizes the ability of market-based development solutions and agricultural modernization to provide economic benefits to small farmers in an efficient manner. Critics argue that, unlike the free market, the overly bureaucratic apparatus of large development programs under state control result in inefficiency, corruption, and general dependence (Green 2003). For this reason, the state's role in the rural development process was reduced with the implementation of market-oriented policies since the 1980s.

The shift in approach to development in Latin America described above has resulted in the rise of new forms of engagement with rural populations. State withdrawal from rural development in many Latin American nations, often in adherence to strict adjustment plans of the IMF and World Bank, paved the way for the emergence and proliferation of NGOs as central agents of development in the global south. Filling the spaces left by state retrenchment, NGOs are seen by proponents as especially responsive to the unique needs of developing communities and adept enablers of social change arising from the grassroots (Lewis 2001). They are promoted as a counter to state-led "top-down" approaches to agricultural development that, according to critics (Scott 1998), function as a one-way transfer of knowledge and technology from a detached epistemic community of agricultural scientists to poor farmers.

Non-governmental organizations are perceived by many as embracing a more “bottom-up”, grassroots approach to development that is based on the needs and input of farmers and farmer groups. Unlike the state development apparatus, NGOs have been portrayed as facilitators of the activities of civil society (Wallace et al. 2006). By virtue of their regular engagement with rural communities on the ground, they have been characterized as especially attuned to the needs and goals of farmers. For this reason, they are popularly perceived as engaging in a more inclusive, participatory, and empowering type of intervention that has the potential to achieve sustainable rural development goals that address the true needs of farmers.

The present chapter and the one that follows take as their central theme the development apparatus of an urban-based group of NGOs that pursue market-led rural development for small farmers near *Quetzaltenango*. Each chapter focuses on the programs of one of two closely related NGOs. This chapter covers the ecological agriculture program of a non-profit NGO called ATQ. The following chapter covers the programs of the for-profit ATQ collaborator, *Negocio Orgánico*. This group of NGOs works to simultaneously secure sustainable economic, environmental, and social goals for farmers while promoting organic produce among urban consumers.

However, the approach that I take in these chapters is an attempt to get around the popular “top-down” versus “bottom-up” binary described above by examining the types of relationships and diverse forms used by the NGOs to maintain their legitimacy and credibility in the eyes of funders, producers, and

consumers. For this reason, these chapters focus on the types of partnerships and interfaces that are produced as the NGOs attempt to alter the conventional commodity chain for non-traditional vegetables in western Guatemala. They ask what these relationships accomplish with respect to the broader development goals of the NGOs and identify the major successes and failures that result.

In the current chapter I will first present an overview of the history and basic structure of the institutional network surrounding these NGOs. The section will clarify the basic roles and responsibilities held by ATQ and *Negocio Orgánico* and outline their general approaches to securing development goals. I will follow the section with a more specific analysis of how the NGO ATQ discursively establishes its place as a legitimate intermediary of development aid in the eyes of funders. Using documents and promotional materials produced by the group, I will show how the NGO carves a role for itself in the development process while maintaining a focus on producer empowerment, participation, and farmer-led solutions under the broader narratives of sustainability and market-led development. It will be argued that this leads to the production of certain types of goals and development activities undertaken by the NGO in an attempt to blend these broad themes into a working program promoting 'ecological' agriculture.

Taking these activities and goals as a starting point, the following section will focus on the relationships formed between the NGO and participating producers in the Valley of San Carlos. It will be shown that fundamental to the success of the development program is establishing the credibility and legitimacy of ATQ as a source of agricultural knowledge for producers. As ATQ attempts to

replace the *agroservicio* (privately owned agricultural technology store) as the chief source of agricultural information and technological inputs for farmers in these communities, the NGO employs a liberal mix of participatory development techniques (Chambers 1997) and classical top-down agricultural extension methods. Such a situation gives rise to a host of interfaces between farmers and NGO staff that have mixed results in terms of the goals held by ATQ for agricultural sustainability in the environmental, economic, and sociocultural realms.

Overall, it will be shown through these examples that, within the development encounter, a diverse set of interfaces form between NGOs and the networks of actors with which they interact. Such diversity challenges much of the literature on rural development, sustainability, and participatory development methods insofar as it shows that the relationships formed under development schemes often blur the lines between “top-down” and “bottom-up” approaches as well as between participation and one-way knowledge and technology transfers. By focusing on how these NGOs attempt to establish their legitimacy and credibility with other actors, these chapters will shed light on how specific types of relationships, goals, and activities for rural development are produced and realized by the group with mixed levels of success.

The Development Apparatus: Roles and Basic Structures

At its root, the development NGO partnership of ATQ and *Negocio Orgánico* seeks to reshape relationships along the conventional commodity chain for non-traditional vegetables by creating and securing a niche market among

local consumers for the organically-produced vegetables of small farmers. Their market-based approach to integrated development and environmental conservation has placed the group in the position of intermediaries and brokers of economic and development relationships for a host of involved actors and institutions. Since ATQ's creation in 1994 in *Mixco*, Guatemala, the NGO of four agricultural scientists and two local promoters has focused on facilitating market integration of farmers in marginalized rural areas as the primary engine for sustainable development. From the beginning, the group's attempt to fuse economic, environmental, and social goals in various rural development endeavors has centered on the promotion of agroecological farming techniques, organic or low-input agriculture, and integrated pest management (IPM) technologies to small commercial farmers in the Guatemalan countryside.

Though ATQ began in the Department of Guatemala, it has engaged in a variety of rural development projects throughout the country in regions such as the Northern *Petén* and *Santiago Atitlán* as well as in numerous municipalities throughout the departments of *San Marcos*, *Retalhuleu*, and *Huehuetenango*. Since coming to the Department of *Quetzaltenango* in 2000, the NGO has worked with a variety of farmer groups in the municipalities of *Salcajá*, *Zunil*, and *San Juan Ostuncalco*. Upon arrival in the department, ATQ began working with a loosely knit network of farmer organizations spread across 3 communities in the Valley of San Carlos outside the city of *Quetzaltenango*. With support from various international development funders like *Intermón (Oxfam) España*, The IAF, and the *Cooperazione Italiana*, ATQ began working with the organized

producers of San Carlos to promote organic agriculture, agroecology, and IPM techniques to small non-traditional vegetable farmers in this region.

In 2005, the group's promotion of agroecology and organic agriculture among farmers in San Carlos expanded to include producer groups from three additional villages. With a total of six farmer organizations spread across San Carlos, ATQ took steps to consolidate these groups by forming the umbrella farmer organization POSC. The farmer association currently includes 125 small-scale indigenous farmers from organizations in eight hamlets in the northern region of San Carlos. The democratically elected POSC *junta* (board of directors) consists of representatives from all eight villages and functions as a collaborator with ATQ in various decision-making processes.

With the expansion of POSC membership, the growing need to provide farmers with economic incentives for participation, and a grant from Oxfam—Great Britain, ATQ set itself to the task of direct market integration of member farmer crops. Because ATQ was registered with the Guatemalan state as a non-profit organization, it was necessary to create a new, for-profit institution to take over post-harvest handling and commercialization of POSC farmer produce. *Negocio Orgánico*, as this new commercializing institution came to be known, currently consists of a total of seven regular employees, including a general manager, an accountant, four part-time drivers, and an office manager.

The integration of *Negocio Orgánico* and POSC into ATQ's program for agricultural development in San Carlos resulted in the groups' coverage of all aspects of the commodity chain for NTAE. It now attempts to leverage this

reach to alter relationships at all nodes in the conventional chain for NTAE, which are seen by the group as exploitative to farmers and local ecosystems as well as responsible for the consumption of contaminated produce by local consumers. ATQ, through the promotion of alternative, low-chemical technologies and environmentally beneficial agricultural techniques to farmers, intervenes in the pre-farmgate and farmgate aspects of non-traditional vegetable production. In doing so, they attempt to lessen farmer dependence on expensive, chemical-based agricultural inputs distributed through local agrochemical retailers as well as to increase farmer crop diversification and soil conservation in the fields.

Post-farmgate interventions and vegetable commercialization fall under the responsibility of *Negocio Orgánico*. By purchasing, processing, and marketing member farmer produce, *Negocio Orgánico* attempts to break producer dependence on intermediary bulk vegetable purchasers and contracting exporters of NTAE crops. In an effort to vertically integrate farmers into these processes, *Negocio Orgánico* also hires member farmers for delivery and processing of organic non-traditional vegetables. These paid employees are trained by *Negocio Orgánico* and ATQ as part of the groups' commitment to human capital development and in preparation for the eventual takeover of the *Negocio Orgánico* business by POSC.

Negocio Orgánico's commercialization responsibilities involve post-harvest handling and packaging of vegetables as well as product development and promotion among local consumers. Rather than attempting to export the uncertified organic vegetables produced by POSC, the group instead focuses on

local distribution in niche markets of urban consumers in *Quetzaltenango*. The NGO then reinvests these profits back into the program to fund future ATQ activities, provide member farmers with stable and fair prices for organic vegetables, and to develop and distribute new products. In the latter endeavor, *Negocio Orgánico* created and began distribution of the *bolsa de eco-verduras* (bag of eco-vegetables) in *Quetzaltenango*. The bag, delivered to subscribing urban consumers on a weekly basis, consists of ten different non-traditional vegetables produced and processed by POSC members. The bag is the hallmark of the *Negocio Orgánico* enterprise and, as a result, absorbs the majority of the NGOs efforts at promoting and marketing POSC produce.

Through its programs in these areas, the development partnership of ATQ and *Negocio Orgánico*, works to secure sustainable development goals in the economic, environmental, and sociocultural realms by enacting fundamental changes to the conventional commodity chain for non-traditional vegetables on both production and consumption ends. To accomplish this, the NGOs position themselves as intermediaries of development funding from abroad marked for farmer enrichment and environmental protection. Further, they act as brokers in a host of transactions surrounding agricultural production and consumption. They are involved in every aspect of the commodity chain, from farmer purchases of agricultural inputs to the sale of eco-vegetables to final consumers in *Quetzaltenango*.

Commodity Chain For POSC Organic

Organizational Support

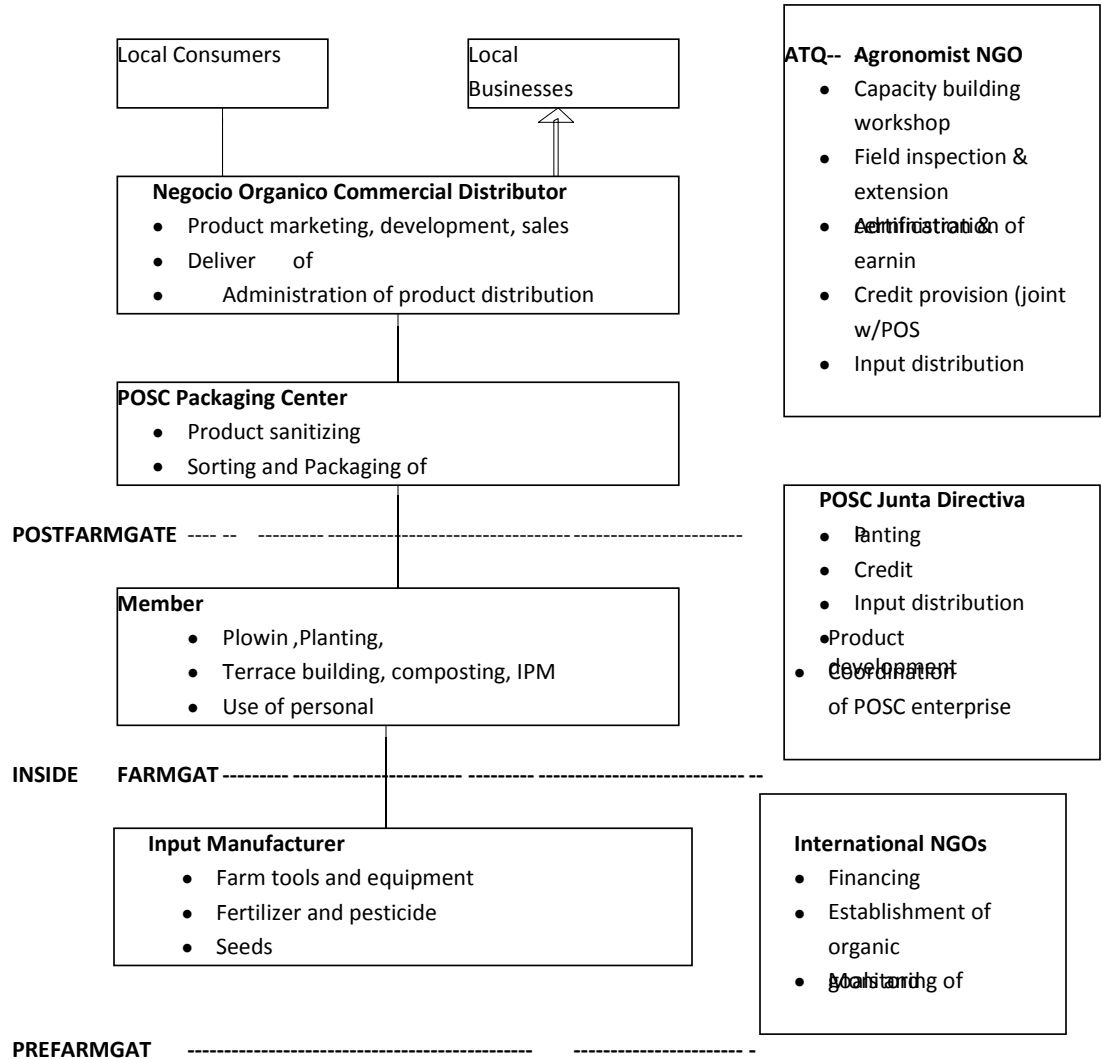


FIGURE 4.1: COMMODITY CHAIN FOR POSC ORGANIC VEGETABLES

However, as will be shown in the following sections, to accomplish this the NGOs must maintain their own legitimacy as developers as well as that of their program to a variety of participating actors, including funders, producers, and consumers. Their efforts require a host of activities and interfaces with others through which this legitimacy is produced and employed in the achievement of program goals. The first stage in this process is the establishment of the

program and the NGOs' roles as competent developers in the eyes of international funders.

Intermediaries of Development: Establishing Roles in a Sustainable Participatory Program

The list of international funding bodies that have supported ATQ and *Negocio Orgánico* activities over the course of their near 20-year existence is impressive. The group has been underwritten by major bilateral and private funding organizations from all parts of the world, including Oxfam in Great Britain, the U.S.-based IAF, German Technical Cooperation (*Deutsche Gesellschaft für Technische Zusammenarbeit*—GTZ), and Italian Cooperation (*Cooperazione Italiana*). In establishing the place of their organizations in development, NGOs like ATQ and *Negocio Orgánico* create and assume responsibility for carrying out a variety of activities aimed at securing specific goals or initiatives. They then present these activities and goals to funding agencies like those listed above in the form of grant proposals, progress reports, and other informational materials. These documents make up a kind of official story that serves to not only relay information about the NGO to outsiders but to also present an argument for its role in the development process.

This section and the remainder of the chapter focus on ATQ's program promoting ecological agriculture to POSC farmers, leaving *Negocio Orgánico* and its activities for the following chapter. Expanding on the theme described above, it draws on ATQ official documents and promotional materials to show how the NGO discursively creates a role for itself in rural development. By employing

broader narratives surrounding sustainable agriculture, market-based development, and participatory rural development, the NGO creates a specific set of concrete, measurable activities and goals to present to funders. At its core, the ATQ project is an integrated development program that pursues goals under the areas of ecological agriculture and farmer participation and empowerment. In the following section I will show how the NGO draws upon numerous tropes of these approaches to rural development in order to legitimize itself and highlight the importance of its role as development specialist to funders. In practice, pursuing these goals through the proposed activities requires that the NGO form new relationships intended to maintain credibility and the program's legitimacy in the eyes of actors in subsequent stages of the commodity chain. In doing so, it realizes varying degrees of success in meeting program goals.

Promoting Ecological Agriculture to Funders

In promoting ecological agriculture, ATQ describes its program as taking a holistic approach to development that links the socioeconomic betterment of producers with biological processes involved in agricultural production. In official documents and publications generated by the group, these goals and activities are connected to broader development discourses of sustainability and participatory rural development. Under the program of ecological agricultural promotion, the group broadly defines its goal as the promotion of agriculture based in the natural processes that exist in the surrounding environment. The NGO's programs focus on working within total "agricultural ecosystems" via principles of agroecology. The organization's approach involves "...observing

units in which mineral cycles, energy transformations, biological processes, and socioeconomic relations are analyzed as a whole.” (ATQ N.d.5) By encouraging this form of agriculture the group seeks to put into place,

agroecological systems that focus agriculture on a balanced environment, productive and sustainable soil fertility, and natural pest controls through the design of diversified agroecosystems and the use of self-sustaining technologies...supported by ecological concepts that result in optimal nutrient cycling and organic materials, closed energy flows, balanced insect, arachnid, and microorganism populations (ATQ N.d.5)

Couched in the language of sustainable agriculture, the overall objective of putting such systems in place is to, “further the integral use of natural resources [by farmer] in a sustainable form, permitting their conservation and recuperation, with appropriate technologies that are economically viable and socially just. (ATQ N.d.5)

The activities that the group proposes for the promotion of ecological agriculture to farmers in San Carlos all hinge upon the central role of ATQ agronomists as provider of new agricultural knowledge and technologies. The NGO’s documents and mission statements break down the objective of securing sustainable agricultural systems into three major themes. These are the promotion of diversified planting, soil conservation and fertility, and minimal application of agrochemicals. Specific activities are then presented in ATQ documents to address these areas, always emphasizing the central role filled by the NGO scientists.

To promote biological diversification in agricultural plots, ATQ agronomists encourage farmers to plant numerous crops on the same stretch of

land to create symbiotic systems. Often referred to as polyculture, this planting of mutually benefiting species in a single plot is seen as central to promoting biological diversity, resilience of crops to pest attacks and climatic shifts, and general soil health. The NGO's scientists pursue the goal of crop diversification and polyculture among farmers through numerous activities. The first of these activities is the field diagnostic. This diagnostic involves a field visit conducted by ATQ scientists and the participating farmer to analyze the potential for diversifying planting. These visits take place once per planting season and result in the drawing up of a farm management plan. According to one summary document intended to promote ATQ to funding agencies, the purpose of the diagnostic is, "to plant the ATQ methodology that will then transform the farm into a productive system...with the diagnostic and [resulting] farm management plan, numerous activities can take place with a vision of change in agriculture and with the introduction of agroecological knowledge that values principles like the diversification and rotation of crops." (ATQ N.d.3)

The role and expertise of the ATQ agronomist is central to the design and implementation of the diagnostic, through which subsequent planting decisions are made by the farmer and the ATQ methodology for plant diversification is realized. Overall, the skills of the expert agronomists are put to use in, "a diagnostic with an agroecological focus in which information is organized, analyzed, and established in accordance with the concepts of agroecology. This diagnostic should permit us [ATQ] to know the situation, actors and their activities, and the ecological, economic, social, and cultural relations...that

determine their level of development.” (ATQ N.d.5) Seen in this way, the purpose of the diagnostic is for the NGO agronomist to become familiar with the economic, social, and ecological relations surrounding agriculture in a given area through the collection and analysis of key information. On the basis of a deep understanding of the collected information, the agronomist can then design a farm management plan for farmers that reinforces ATQ’s objective of crop diversification.

Once the farm management plan is put in place by participating farmers, ATQ continually reinforces diversification through activities that take place during weekly POSC meetings led by NGO agronomists in member villages. The ATQ scientists often bring to these meetings seed for new crops that are not being planted in the area. Delivery of seed is generally accompanied by a brief lecture given by the scientists to farmer recipients on the benefits of the seed, general care for the crops, organic cultivation, and proper harvesting techniques.

A second goal under the ATQ ecological agriculture program is the promotion of soil conservation and soil structural integrity. According to the group, soil conservation is important for promoting sustainable plant health by fostering, “the formation of microorganisms...that are responsible for the availability of nutrients to crops” and “making the soil a living media, not just an anchor for the plant.” (ATQ N.d.5) For this reason, ATQ agronomists assume responsibility for ensuring the, “creation of favorable conditions for microorganisms in the soil, raising the content of organic material [in the soil], the

use of fermented compost fertilizers and cover crops [by farmers], and...crop rotation.” (ATQ N.d.5)

In pursuing these goals, the agronomists again take on the role of providers of new knowledge and sustainable farming techniques and technologies to farmers. To promote soil conservation, ATQ agronomists organize activities for POSC members during which the agronomists demonstrate to farmers various techniques for preventing soil runoff like digging terraces and drainage canals. In a similar manner, the group organizes workshops and demonstrations in which the farmers are instructed on how to construct compost heaps using locally collected organic materials. Further, member farmers are frequently reminded of the benefits of such techniques in the educational seminars and meetings held weekly by the NGO agronomists during village visits. Periodically, ATQ also promotes the use of organic fertilizers and compost through direct gifts of these materials to farmers. Terracing, composting organic fertilizer, and crop rotation are often included in farm management plans in the interests of preventing topsoil loss and maintaining soil fertility.

Finally, under the program of ecological agriculture, ATQ promotes minimizing the use of agrochemicals in member farms. In a statement contrasting concepts in ecological agriculture promoted by ATQ with those of conventional production, the group claims that, “Capitalist development requires industrial development. For this, it liberates the labor of the rural sector, through agricultural ‘modernization’ and the technological packet [agrochemicals], making

agriculture more uniform and focused on chemicals.” (ATQ N.d.2) The ecological results of chemical-based agricultural production cited by the NGO are, “Loss of biodiversity, contamination and the destruction of natural water supplies...farmer poisonings, food contamination, and chemical destruction of flora and fauna.”

(ATQ N.d.2) Further, farmer use of agrochemicals results in an inescapable cycle in which chemical applications bring on, “ecological alterations that provoke the presence of organisms that feed on crops, generating more pests and disease. The solution is then more pesticide.” (ATQ N.d.2)

Developers in ATQ sees reduced chemical use as an objective not only for securing environmental goals and the health of farmers but also for diminishing farmer dependence on expensive foreign technologies. In documents, NGO scientists charge the global spread of agrochemicals with broader trends in farmer underdevelopment. For example, the document cited above claims that chemical use incurs, “From 50 to 60% higher production costs for farmers due to the purchasing of chemicals”, resulting in, “technology dependence that exaggerates currency devaluation and inflation.” This places farmers at, “high risk in markets due to oversupply” and at “high risk for natural catastrophes.” Further, this system is in direct opposition to the goals of sustainability because of the fact that, “Over time, [agrochemical use] results in more investment and lower production” for farmers. The document goes on to argue that chemical-based agricultural systems are, “a pyramid...centering agricultural knowledge with scientists and promoters [of agrochemicals], with

knowledge being held in universities and agricultural research centers” and not by the farmers themselves (ATQ N.d.2).

To address the problem of agrochemical contamination and overuse among farmers, ATQ’s primary tool is capacity building and training. The NGO meticulously documents the dates and contents of trainings given to member farmers for their own records as well as for presentation to funding agencies. In the workshop for organic agriculture the role of the agronomist is a teacher and facilitator of educational activities concerning pesticide use and awareness for farmers. In crowded rooms of POSC farmers and family, ATQ agronomists, “train farmers about the diagnostic...sources of contamination, organic cultivation techniques...[and] pest management and control.” (ATQ 2003) ATQ lessons employ audiovisual technologies such as PowerPoint presentations, photographs, and videos concerning agrochemicals and the environmental degradation and risks they present. Overall, the main objective for the ATQ agronomist is to, “Conduct a theoretical training in the [POSC] meeting that effectively explains, using audiovisuals for the greatest understanding of the theme [of pesticide use].” (ATQ 2006) To aid in these efforts, the group occasionally conducts more hands-on trainings in which POSC farmers are taught to make organic alternatives to chemical pesticides using inexpensive and naturally occurring ingredients. Like the training workshops, these activities also place the ATQ scientist in the role of teacher and provider of new agricultural technologies to the farmer pupils.

Overall, in promoting ecological agriculture, ATQ draws on prevailing development narratives of sustainability in agriculture. On the basis of these narratives, the group forms a series of goals and activities for their achievement that are proposed in the NGO's promotional materials and official documents. In articulating the very tangible and measurable goals of increased crop diversification and polyculture, efforts at soil conservation, and reduced pesticide use on the part of farmers, the group uses these documents to discursively create as space for its interventions and solutions to the problem of development. Discourse serves the dual function of establishing the group's legitimacy in the eyes of funders and structuring relations with the communities in which the NGO works. Organizational documents consistently set up this relationship between NGO scientist and farmer as one of teacher and student. In this way, ATQ's role in the development process is portrayed as central for the promotion of ecological agriculture.

Promoting Participatory Development for Farmer Empowerment and Market Integration

The establishment of the pivotal role played by ATQ in the agricultural development of POSC farmers becomes somewhat murky when combined with a second major initiative of the group, that of participatory rural development and farmer empowerment. Based on an increasing body of literature concerning the central role of farmers in rural development, the participatory rural assessment (PRA) and farmer-first paradigms (Chambers 2007, 1997) invoked in ATQ documents emphasize farmer participation in the setting of goals and activities

for agricultural development. Instead of a one-way transfer of knowledge and technology from scientist to farmer, participatory approaches emphasize farmer input, experimentation with new technologies, and partnership with NGO staff in the setting of priorities for development. In ATQ documents this involves integrating farmers as partners in the design of farm management plans and the development of organic technologies.

Throughout NGO documents, farmers are portrayed as storehouses of traditional agricultural knowledge that can be applied to the problems of contemporary agriculture. To promote farmer participation the NGO prioritizes, “the experience and knowledge of the *campesino* (peasant, farmer), revalorizing the knowledge that already exists in each community or group of farmers, where *they* are the transmitters of knowledge.” The document goes on to assert that ecological agriculture itself, “utilizes both modern and traditional techniques and practices.” (ATQ N.d.5) In this case, ATQ scientists promote participatory farmer-led development not as “teachers” but as “facilitators”. One ATQ document asserts that the group embraces a “farmer-to-farmer” method in which,

...the scientist-promoter is the *acompañier* and *facilitator* of the implementation process, stemming from the recognition of farmer rationality. This means understanding that the farmer has his or her own form of seeing and understanding reality and has the ability to make decisions based on this understanding. The facilitator (NGO scientist) must, therefore, take on a constant attitude of respect for producers and their understandings. (ATQ N.d.5)

In the interests of meeting the goals of the NGO in a participatory manner, the group trains and employs several local POSC farmers to take on the role of promoters of new agroecology technologies. Such promoters are responsible for

visiting member farmer fields and solving problems that arise, as members put the ATQ farm management plans into practice. Problem solving responsibilities taken on by promoters include recommending organic methods of pest control to farmers, evaluating crop planting schemes, and demonstrating proper soil conservation techniques to farmers in the field. In the absence of ATQ scientists, such promoters occasionally preside over the weekly POSC meetings in San Carlos.



FIGURE 4.2: A POSC PROMOTER (LEFT) ASSISTING MEMBER FARMERS CONSTRUCTING A GREENHOUSE

Beyond employing local promoters for these activities, ATQ periodically involves farmers in hands-on trainings in the fields. However, in written descriptions of these hands-on trainings, NGO “facilitation” of participatory processes disappears and documents again focus on the pivotal role of ATQ agronomists as teachers and demonstrators of new agricultural techniques to

farmers. As will be shown in the following sections, the fluidity with which these documents shift from the language of facilitation of participatory processes to teaching and the one-way transfer of new technologies is indicative of the complexity of NGO interactions with producers on the ground. Neither wholly top-down nor bottom-up, the relationships forged between ATQ agronomists and producers represent the NGO's attempt to secure program goals by establishing the credibility and legitimacy of their program and activities to participants.

Reshaping the Commodity Chain for Non-Traditional Vegetables: Pursuing Sustainable Development Through Participation and Empowerment

The NGO's commitment to sustainable agricultural development supports a host of activities through which it attempts to reshape relationships in the conventional commodity chain for commercial vegetables. As shown above, the group's program promoting organic agriculture and agroecology is principally realized through a series of predetermined goals and activities promoted by the NGO to funders. These all hinge upon the central role of the NGO as a legitimate intermediary of development support.

The NGO's documents outline three major areas targeted for change in this area. These are increasing crop diversification, encouraging a variety of soil conservation techniques, and reducing farmer use of agrochemicals. Through these, the NGO seeks to alter a key point of contact in the commodity chain for non-traditional vegetables: the relationship between farmers and input vendors in local *agroservicios*. In the following sections it will be shown that, in its attempt to meet these goals, ATQ must build new relationships with producers through

which it attempts to establish its own credibility as a viable source of agricultural information outside the *agroservicio*. These relationships must impress upon farmers the general legitimacy of the ATQ program and its pre-set activities for agricultural development. The varying levels of success the NGO realizes in meeting agency goals reflect the capacity of such relationships to establish these in the eyes of participating producers. Further, these attempts blur the lines between top-down and bottom-up approaches to development and highlight the diversity of roles and partnerships created under rural development schemes.

The Importance of Advice and Inputs from the *Agroservicio*

Critical research concerning smallholder participation in commodity chains for non-traditional vegetables has suggested that numerous changes in the control of agriculture information take place in the transition from subsistence to commercial cultivation (see Conroy et al. 1996, Arbona 1998). These observers argue that the importance of agricultural knowledge held by farmers concerning local cultivation techniques and crops is diminished as farmers adopt non-traditional commercial crops. Unlike the production of established local cultigens, commercial cultivation for export relies much more on specialized knowledge of modern agricultural technologies, chemical-based inputs, and commercial farming methods. Arbona (1998) argues that, in this process, Guatemalan farmers adopting NTAE crops have become increasingly dependent upon local agrochemical distributors and retailers as sources of agricultural information. In a survey of NTAE farmers in the western highlands, she found that the majority of information concerning agricultural inputs and cultivation

techniques was disseminated to farmers by such salespersons in local *agroservicio* chemical stores.

The author connects this to high degrees of misinformation concerning agrochemical use among farmers. She argues that, because *agroservicio* distributors have no incentive to reduce the quantity of inputs they can sell to farmers, they often encourage excessive application of chemicals in the field. Conroy et al. (1996) argue that NTAE farmer dependence on imported chemical technologies and information from such distributors results in higher capital investment in agricultural inputs required by adopting farmers, increased economic risk assumed by such farmers, and the concentration of wealth in input provisioning links of the commodity chain.



FIGURE 4.3: AGROSERVICIO CHEMICAL DISTRIBUTOR

Much like the scenarios described by these critics, the *agroservicio* is a ubiquitous feature in the communities of San Carlos where ATQ programs are

present. Though the relatively smaller and more remote villages often do not have one inside their own borders, *agroservicios* in neighboring villages are rarely more than a short walk or bus ride away. An afternoon visit I made to one of the more popular *agroservicios* in the producer town of *Comunidad de la Montaña* revealed the extent to which shop owners discuss agricultural matters with local farmers. During this hour-long visit, numerous farmers entered the store in search of treatments for plant diseases, bringing in leaf samples or other evidence for the owner to evaluate. Many others came in to buy chemical inputs for treating specific crops or to eradicate particular pests.

Behind the counter and surrounded by shelves filled with bottles of various pesticides stood the *agroservicio* owner, giving farmers recommendations for dosages, application schedules, and other technical aspects of chemical treatment. The owner of this *agroservicio* was born in *Comunidad de la Montaña* but attended a degree program for agriculture science at the University of San Carlos in nearby *Quetzaltenango*. His degree certificate, obtained in 2005, was framed and mounted on the wall behind the sales counter along with his MAGA registration and certificate of inspection from the Guatemalan government. He conceded that the popularity of his store had much to do with the trustworthiness of the advice that he gave to farmers. However, he was quick to mention that the credibility of this advice was not specifically derived from his degree or educational background. He indicated that farmers in San Carlos had a general preference for experience-based knowledge from the field over the theoretical knowledge that could be obtained

through formal education. His claim to this experience stemmed from his having been a farmer in *Comunidad de la Montaña* since adolescence. Further, he continued to cultivate non-traditional crops on eight *cuerdas* of land in San Carlos. For this reason, he was able to recommend products to farmers on the basis of his own experience, claiming to have experimented with all products carried by the store.



FIGURE 4.4: SHELVES CONTAINING AGROCHEMICALS IN AN AGROSERVICIO

On the day that this interview was conducted, the *agroservicio* was also visited by a regional level promoter and distributor for one of Guatemala's larger pesticide importers, *PROMOAGRO S.A.* According to this representative, the importer takes a similar experienced-based approach to transferring knowledge of chemical use and cultivation techniques to client farmers. One major way that the company accomplishes this is by renting highly accessible stretches of land in or near farming villages to set up test plots for chemical demonstrations.

Through demonstrations, local farmers are given the chance to see a product's results and use in action. Farmers receive a visual impression of the effects of various chemicals and how these work with specific crops under local climatic and soil conditions.

The *PROMOAGRO* representative brought several flyers to add to the various stacks of announcements that already cluttered the service counter at the *agroservicio*. These flyers were to announce what, according to the distributor, is the most effective way of promoting specific products to farmers. Referred to as farmer *dias del campo* (field days), these promotional events are designed to bring farmers to the new technologies being sold by the company. Field days are organized by distributors like *PROMOAGRO* and take place once or twice per month. In this case, the distributor had set up test plots in the nearby vegetable growing region of *Chimaltenango* to demonstrate the various chemicals it intended to promote to nearby NTAE farmers. The company had produced announcements of the dates and times for the field days and was now distributing them to the various *agroservicios* carrying their products.

Accompanying these announcements was a sign-up sheet for local farmers. The representative claimed that, on the date of the field day, *PROMOAGRO* intended to commission a bus to bring farmers to the field sites in *Chimaltenango* for half the price of a normal bus ticket. Once there, farmers would be given refreshments and brought on a tour of the test plots for the featured chemicals. The *PROMOAGRO* representative and *agroservicio* owner agreed that these were extremely popular events among farmers in San Carlos.

Interviewed producers generally confirmed these claims and the centrality of the *agroservicio* as a source of advice and information concerning agriculture. When asked about important sources of agricultural information during interviews for this study, farmers from San Carlos frequently cited the *agroservicio* as a significant giver of advice. Responding to a question about how she would solve a problem she had cultivating a non-traditional crop, one farmer said she would ask,

...in the *agroservicio*...where they receive the product...the chemicals. Yes, there we [farmers] can consult. With any pest or disease or if the harvest isn't coming well, we ask them. We don't ask one another...only in the *agroservicio*. We go there for consultations, just as it is where we go to buy. They already have the idea of how to use chemicals...how to prepare them and how to apply them. (Sara, interview, May 21, 2010)

Echoing this sentiment, another farmer claimed to seek advice, "More where they sell seeds and insecticides. This is because, here in the community, we don't tell one another. People are very egoistic and don't tell." (Rosa, interview, May 24, 2010)

Many farmer participants in this study expressed a preference for experience-based over theoretical knowledge concerning agriculture. One farmer framed this in terms of a relative closeness to the realities experienced by farmers. He stated, "Let's say that books can sometimes make things up a little bit...For the people that work [in agriculture] it's different...what a person *knows* versus what a person *lives* in the country (*en el campo*)...the city is one thing and the country is another. Reality is very much the difference." (Jacinto, interview,

June 9, 2008) Finally, in discussing his reasons for asking for advice from the *agroservicio*, another farmer indicated that,

...there you can get a consultation with a packet of fungicide. You ask, "What products work well?" and they [the *agroservicio* workers and owners] say, "With your problem you need this." So they can indicate what it is that you need to make your crops stronger. Yes, [I would choose] the advice of the store owner...the *agroservicio*...those who work in the *agroservicio* sow crops and *try* the chemicals. They don't sell just any product if it doesn't work for them. (Rigoberto, interview, May 1, 2010)

Farmers surveyed in this study confirm the importance of the *agroservicio* as a highly valued source of agricultural information for NTAE cultivators. In the survey of 181 randomly selected respondents from six of the villages in San Carlos where ATQ works, farmers were asked to rank potential sources of agricultural information by importance. In 51% of cases, farmers identified the *agroservicio* as the most important source of information concerning agriculture. Moving to more specific dimensions of farming, surveyed farmers were then presented with a series of questions concerning agricultural issues targeted by ATQ for promotion of agroecology and organic farming techniques. Across all questions dealing with specific agricultural issues, the *agroservicio* was the source most frequently cited by respondents as the first place they would go in search of advice or information. Overall, for NTAE cultivation, the *agroservicio* remains the dominant source of agricultural information for the farmers of San Carlos.

To promote the use of agroecological farming methods and organic inputs to POSC farmers, ATQ attempts to alter relations in the conventional commodity chain for non-traditional vegetables by replacing the *agroservicio* as the chief

source of agricultural information and inputs to farmers. Rather than promoting chemical technology and industrialized farming procedures that have come to characterize non-traditional agricultural production in Guatemala's highlands, ATQ attempts to shift the focus of agriculture to alternative production techniques that secure environmental sustainability goals and meet the demand of a growing niche market for local organic vegetables in *Quetzaltenango*. However, in order for ATQ to successfully promote these alternative technologies and cultivation methods to farmers, it must establish itself as a legitimate and credible source of information and provider of effective alternative farming procedures and inputs. The group finds itself in a double bind situation in which ATQ agronomists must establish their own credibility as teachers and the legitimacy of the program in the eyes of farmers while still maintaining a commitment to the participatory rural development mission goals of openness to farmer-led problem solving, hands-on learning, and farmer experimentation with new technologies. The pursuit of these dual goals leads the group to form unique partnering relationships with POSC farmers in an attempt to achieve the overall objectives of ecological agriculture. The analyses that follow are an attempt to understand the relationships formed between the NGO and participating farmers, highlighting their intended and unintended effects and ability to secure ATQ's goals of sustainable agriculture through crop diversification, soil conservation, and reduced pesticide use.

Challenging the *Agroservicio* as Source of Agricultural Information

For years ATQ agronomists have made weekly visits to the meetings of local branches of POSC in each of the villages of San Carlos. Local branch meetings are generally attended by between 5 and 15 producers and are hosted in the home of a member or in a village-wide community center, depending on the community's facilities. Meetings begin in the morning with the arrival of Don Javier, the principal ATQ agronomist working in San Carlos. POSC members know when Don Javier has arrived because it is quite easy to spot his white pickup coming down one of two major roads leading into the villages. Don Javier is always accompanied by a local promoter who is paid by *Negocio Orgánico* to work with member producers, promoting ATQ's ecological agriculture techniques and helping members put such techniques into practice. On meeting days, however, the job of the promoter is to assist Don Javier with giving lessons on the principles of ecological agriculture to attending POSC members.

Don Javier brings numerous tools to maintain producer involvement and participation in such lessons. He almost always has a projector that he links to his laptop computer for giving slideshow presentations that accompany his lectures. Member farmers slowly trickle into the small dirt-floored home of the host to join the meeting as Javier sets up the projector. Many more will join as the lesson gets under way. In addition to his projector and laptop, Don Javier often brings along incentives to increase farmer participation. Distributing gifts such as refreshments, packaged lunches, vegetable seeds, and sacks of organic fertilizers is mainly the job of the promoter, who collects signatures or thumbprints of members in attendance for NGO records as he goes.

Javier's seminars cover various topics concerning the principles of organic agriculture and agroecological farming techniques. His lessons generally involve technical language concerning the science of agriculture but he is often able to break larger concepts down using examples familiar to his audience. For example, when talking about biological pest controls, Javier uses the analogy of buying a cat to catch a mouse in one's home. Crop fertilization is almost always likened to a mother caring for and feeding her children. Seminar points are frequently accompanied by photographs and other visual representations. Lectures concerning soil conservation include images depicting extremely eroded hillsides. Pest control lectures may include pictures of unwanted insects or diseased plants. These kinds of pictures make up the bulk of Javier's slide presentations, as many attending farmers are illiterate and would not be able to read slides containing text.

Association farmers attending these meetings tend to remain silent as Don Javier moves through his hour-long slideshows. Despite his attempts at getting farmers involved by asking questions and requesting their input, Don Javier is generally the only voice heard during these meetings and seminars. Exceptions to this pattern occasionally occur and a single spokesperson for the attendees will voice a question that has been whispered among the audience. Rarely do more than one or two such group members speak over the course of an entire seminar. The rest of the attendees generally sit quietly throughout Javier's presentations and ask no questions even when he opens the floor for discussion.

However, after the seminar has concluded and Don Javier makes his way outside the meeting room, the same farmers who were silent throughout the seminar pose a barrage of questions to the agronomist concerning actual problems or issues they are experiencing in their own fields. In addition to answering all questions asked by the attending farmers, Javier and the promoter are often coerced into visiting several farmer fields for hands-on diagnoses and advice giving sessions. It is during such field walks that Javier and the promoters are able to address specific problems experienced by member farmers and ensure that that the ATQ farm management plan is being put in place. The advice given to farmers by the agronomist and promoter rarely fails to conform to the major tenets of ecological agriculture held by ATQ developers. After an hour or two of such field visits, Javier and the promoter return to the ATQ pickup and make their way back to the NGO office in *Quetzaltenango*. There, among other things, they will prepare for meetings in the other communities or for their next weekly meeting in the village they have just left.



FIGURE 4.5: ATQ AGRONOMIST VISITING THE FIELD OF A POSC FARMER

The seminars and field visits described above make up the major form of involvement that ATQ has with the POSC farmers of San Carlos. Unlike the process of problem diagnosis and recommendation of solutions that takes place in the *agroservicio* or on agrochemical distributor field days, the ATQ experience involves very little hands-on participation, input testing, or problem definition on the part of farmers. Farmers attending ATQ seminars are not given the opportunity to engage in hands-on experimentation of proposed solution on test plots. A field day for ATQ generally involves the agronomists teaching farmers how to do things like build a compost heap using local organic refuse, wood, or *broza* (dead leaves, bark of trees) collected from the mountain forest. The NGO agronomists do not have land in San Carlos and cannot speak of the effectiveness of their proposed solutions on the basis of experience in their own fields. Further, the benefits of many of the agricultural practices promoted by the

NGO are only realized over the long term and are often not immediately visible to farmers. The ATQ program, the level of farmer participation in defining agricultural problems and goals for development is minimal. Farmers have nearly no involvement in developing and experimenting with new agricultural technologies proposed by ATQ agronomists. Though the NGO does employ local farmers from San Carlos as promoters of ATQ's technologies, it rarely involves rank and file members in matters of problem-solving or decision-making.

The fact that farmers have little direct participation in these aspects of ATQ's program and the teacher-student character of most interactions between NGO agronomists and farmers places ATQ closer to the "theory" side of the "theory/experience" dichotomy described above. The NGO would also appear to be open to criticism as an overly top-down model of traditional agricultural development. Indeed, many POSC farmers consulted in this study characterized ATQ agronomists as givers of less than practical advice for their needs. When asked about NGO agronomists as a source of agricultural information, one farmer claimed to seek ATQ advice,

...really not that much...it's because they work more in theory, not practice. So...yes in *some* cases, but it isn't the same as those who work in practice. Those people who work in practice already know. They know what they're doing. They *know*. For this reason, it [their advice] is more secure. The [ATQ] agronomists know *theoretically*. I don't have confidence because it's not good what they're telling me...I have more faith in practice...Those who work in the *agroservicio* know more about this. (Rigoberto, interview, May 1, 2010)

Expressing her lack of confidence in ATQ farming techniques and advice, one POSC member stated that she consulted ATQ but only after the *agroservicio*

because, “they [ATQ] only talk about organic. They don’t talk about chemicals.”
(Sara, interview, 5/21/10)

At the same time, the ATQ-farmer partnership is broadly successful in achieving the goal of establishing the NGO as a credible source of advice for member farmers. According to results from a survey of randomly sampled farmers in San Carlos, when asked to rank sources of agricultural advice according to importance, the majority of POSC member farmers ranked “agronomists from agencies” as their most important source of agricultural information. More specifically, 64% of member farmers ranked agronomists above “*agroservicio* employees” compared to just 2.9% of nonmember farmers.

This significant ($p < .001$) difference in member versus nonmember rankings carried over into survey items concerning specific dimensions of agriculture targeted for change in the program. For these 4 items, respondents were asked to select their first choice for advice when confronted with agricultural problems related to weed removal, soil fertility, a new class of crop, and conserving topsoil. Farmer association members ranked “agronomists” as their first choice for information concerning these topics an average of 2.10 times across all four items versus the nonmember average of .15. This difference of means was found to be statistically significant ($p < .001$) as well.

Though not overly participatory in terms of farmer involvement in problem definition, the development of solutions, or hands-on experimentation, the relationship between ATQ and POSC farmers fosters trust in agronomist information concerning agriculture. According to numerous POSC farmers

interviewed for this study, this confidence in ATQ agronomists is based on the presence and level of involvement the NGO maintains in the farmer villages. Agronomists like Don Javier have been meeting regularly with producers in their own communities for years. Their availability for field visits and direct observation of problems experienced by farmers exceeds any levels of involvement on the part of the *agroservicio*. Discussing her experience with ATQ and their help putting lessons into practice through field visits, one POSC member stated that she learns, "...to maintain the lands well, to keep them sown as they [ATQ] teach...to harvest vegetables and package them... What they teach us, we do. This is because they come and visit our lands to see how they are doing." (Josefina, interview, May 11, 2010) Demonstrating the closeness that many farmers feel toward ATQ agronomists and the confidence this inspires, one farmer from a more isolated village indicated that she values ATQ advice because, "They're the only ones who are with us...the agronomists...the agronomists Don Javier, Don Julio, and Don Pedro...with them [I would ask advice]. Yes because they're the only ones who come *here*. (Ingrid, interview May 18, 2010)

Even when the agronomists are not in the villages, ATQ continues to maintain a presence through the work of the local promoters. When asked who she would consult if she had a problem related to agriculture, a member farmer reported that she would seek out, "Don Jacinto [an ATQ promoter]...You can ask him what can be done or what can be applied [for agricultural problems]...This is because he knows much more about these kinds of things...Or with Don Javier

when he's here...sometimes he doesn't come [to the village]." (Ruth, interview, May 11, 2010). When asked about how she came to join the association, another POSC member emphasized the organizing role played by the local promoter. She stated that she had joined, "Because Don Jacinto invited us. For this reason we came to participate...because of him. He knows many things so we felt the need to come find out what was happening. If one doesn't come, one doesn't know." (Clara, interview, May 4, 2010)

The relationship ATQ holds with member farmers may not be participatory according to the criteria of many observers. It does not involve partnership that emphasizes farmer control over problem definition, the goals of development, or experimentation with new technologies. However, the relationship ATQ has with farmers successfully challenges the *agroservicio* as the sole source of agricultural information for producers in San Carlos. Much of this success can be attributed to the trust and rapport the group has developed with member farmers through repeated, regular visits to villages over the long-term. Trust is reinforced by the NGO agronomists' familiarity with and willingness to visit farmer fields as well as their extended presence in the villages through the activities of local promoters.

The NGO's accessibility and regular interactions with farmers provide a base upon which trust and a belief in the credibility of ATQ information is inspired. Through such a relationship, member producers are able to learn about alternatives to the recommendations of the *agroservicio*. The availability of such alternatives opens the door for them to choose new agricultural practices that

diverge from conventional modes of non-traditional vegetable cultivation. On the NGO's end, regular contact with the same farmers over the long term inspires in agronomists like Don Javier a sense of investment in the success or failure of the agricultural enterprises of POSC farmers. By providing an alternative source of agricultural information that is seen as credible by many member farmers, ATQ makes an impact by exposing farmers to alternatives to the advice of the *agroservicio*, thus empowering them to choose between several potential solutions to problems they experience in the fields.

It is clear that member farmers regularly consult ATQ agronomists to solve such problems. However, the record for farmers putting advice received from ATQ into practice is mixed. The ATQ relationship with farmers, while inspiring some credibility in the eyes of members, does not directly involve them in the processes of problem definition, goal setting, or experimentation with new technologies. Instead, ATQ comes to the communities with the pre-determined set of agroecological practices outlined in NGO documents. Farmer input is not involved, as the goals of diversifying farmer planting, promoting soil conservation and organic fertilization, and minimizing farmer application of agrochemicals are already in place. Because experimentation is not a prominent feature of the NGO's program, ATQ must seek other ways to impress upon members the value of these new techniques, even when they come into conflict with other goals for agriculture held by farmers.

Promoting Intercropping and Polyculture

The NGO employs several strategies to encourage farmers to diversify their planting and shift from monocultures, or the planting of a single crop over large tracts of land, to intercropping of many mutually beneficial species in the same plot. Apart from educational seminars covering which crop species to plant together and the benefits of intercropping, ATQ also distributes vegetable crop seeds and seedlings to members for planting in their fields. The group attempts to reinforce intercropping through the farm management plans developed by ATQ agronomists in conjunction with individual farmers. These plans lay out recommendations for the best use of farmlands held by POSC members and almost always involve intercropping in polycultures.



FIGURE 4.6: POLY CULTURE FIELD OF POSC FARMER

The NGO promotes intercropping and polyculture to farmers as both an environmental and economic goal. In seminars, the agronomists attempt to

impress upon farmers the environmental benefits of planting numerous crops on the same stretch of land. A few farmers interviewed in this study did mention cited environmental benefits like reduced pest prevalence, more resilience of crops to disease outbreaks, and greater nutrient cycling. However, the majority of farmers tended to focus on the economic tradeoffs involved in multicropping. Member farmers felt much more comfortable planting numerous crops when ATQ had given seeds or seedlings at discounted prices or on credit. In fact, many put off planting for the season until these came. When asked what was currently planted on her lands, one member farmer indicated, “Right now all I have are a few radishes and a little *ase/ga* (Swiss chard) because the seeds haven’t come for this summer...I already have my land prepared...I have fertilizer ready...Now all we are waiting for is the [ATQ] nursery to bring us the seed.” (Josefina, interview, 5/11/10)

Many farmers were willing to give polyculture a try because much of the risk associated with investment in numerous seed varieties was removed under ATQ’s scheme. Discussing the economic benefits of ATQ, one producer explained, “Yes they help us a lot. For example, cilantro costs 100 [Guatemalan *quetzales* (Q)³] per pound of seed and we only pay 50Q. We pay half...just half. For every vegetable that costs 50, they [ATQ] give it to us for 25Q. They help us in this way...Before we only bought seed in *Zunil* [a neighboring town], and we lost a lot that way.” (Miriam, interview, May 21, 2010)

³ Basic monetary unit in Guatemala. 1 USD= 7.76 Quetzals(Q)

Indeed, farmer surveys do reveal that member farmers were much more likely to report intercropping than nonmember farmers. Among the entire sample, 48% of farmers reported planting polycultures of mixed crops on the same stretch of land. Among POSC farmers, 61% reported intercropping non-traditional crops while only 41% of nonmembers did. This difference was found to be significant at the $p=.016$ level.

Though significantly greater percentages of POSC farmers are planting polycultures, there still remains a 39% minority that does not put ATQ recommendations for intercropping into practice. For many, the value of this farming technique is not sufficiently established to be worth undertaking. Association member farmer decisions to adopt or not adopt intercropping techniques are closely tied to the nature of their participation in the ATQ program as outlined above. Member farmers are not given the opportunity for hands-on participation or experimentation with new cultivation methods. They are, therefore, left with insufficient experience with the techniques involved in intercropping. They cannot invest the labor required to maintain such crops and they are not given sufficient knowledge of the plants to make the system a less risky venture.

Furthermore, because farmer involvement in the development of this goal was minimal, ATQ agronomists failed to account for its conflict with another basic economic objective of producers—that of bulk sales to intermediaries. With diversified plots, farmers are unable to sell in bulk by stretch of land to intermediaries for NTAE, who only buy single crops by the *cuerda*. By promoting

polyculture ATQ is, in effect, asking POSC farmers to turn their backs on a major avenue of sales of non-traditional crops. The loss of this opportunity, in addition to the added labor and human capital requirements for caring for polycultures, is one fundamental barrier to the adoption of this farming technique by POSC members. Overall, member farmers are more likely to engage in intercropping practices than neighboring farmers. However, the extent to which this practice will spread and continue among POSC farmers is likely dependent on the NGO's ability to provide the necessary human capital to farmers for managing such systems and their ability to demonstrate to farmers the value of such techniques in the face increased labor requirements and a loss of a major opportunity for commercializing non-traditional vegetable harvests.

Promoting Soil Conservation Techniques and Organic Fertilizers

A second major ATQ initiative for spreading agroecology and organic agriculture techniques is the promotion of natural methods of soil conservation and fertilization to farmers. In ATQ seminars and lectures members are told about the benefits of soil conservation and natural forms of fertilization. Lessons generally include pictures of severely eroded hillsides, runoff, and mudslides. Apart from these kinds of seminars, member farmers are occasionally taken by NGO staff to a member's plot and taught how to construct drainage canals and terraces to prevent topsoil loss after rains. In a similar fashion, agronomists teach members to build compost heaps using animal manure, organic waste, and

leaf litter collected from the floor of the surrounding forest. As with intercropping schemes, the construction of drainage canals, terraces, and compost heaps for organic fertilizer production is frequently included in NGO farmer management plans for members. The NGO periodically donates or sells 100- pound bags of organic fertilizers to farmers on credit in an attempt to encourage the replacement of chemical fertilizers with organic ones.



FIGURE 4.7: FARMER ADDING WOOD ASH TO A COMPOST HEAP

Association member producers consulted in this study overwhelmingly extolled the virtues of soil conservation techniques and organic fertilizer applications. Discussing the benefits of organic fertilizers over their chemical counterparts, one member farmer indicated that,

We only use organic fertilizers. We make these using the waste of bulls and pigs. We don't use *chemicals*. Right now they sell a lot of chemicals but, according to what they [ATQ] have told us, for an organic harvest, one only uses organic fertilizer. This fertilizer doesn't hurt (*dañar*) the land either. A lot of chemicals hurt the land. That's not all. A person hurts themselves as well...It hurts our own bodies just the same. (Manuela, interview, May 20, 2010)

Highlighting the economic benefits of organic fertilizers, another POSC member proclaimed, "I prefer to not spend this kind of money on buying [chemical fertilizer]...In my case I have three bulls and with them, I make fertilizer...I also have a pig...This brings me a huge benefit...If I don't have money...money for fertilizer, I can make it myself and I am saving money. I like using organic [fertilizers]. This is a big help (Sara, interview, May 21, 2010).

Finally, recounting her experience learning to make a compost heap with ATQ agronomists, another producer described the somewhat lengthy process as,

...very nice because we made the fertilizer with *broza*, yeast...limestone, *panela* (brown sugar cake)...and animal waste...that of horses, chickens...bulls. They taught me how to do this...We added four sacks of *broza* and later turned the pile. We then left it covered for four or six months...but added water and turned it every three days...When we used it...[it was] *pure earth* (*pura tierra*)...fine, fine, fine. (Rosa, interview, May, 24, 2010)

While interviewed POSC producers frequently brought up the virtues of organic fertilizer production and soil conservation, their relative level of

engagement in activities and techniques advocated by ATQ to secure these goals did not reflect a strongly significant departure from the practice of nonmember farmers. When surveyed farmers were asked if they constructed terraces or canals for soil conservation, 45% of the total sample responded in the positive. Association member farmers did tend to report constructing these more often than nonmembers. Where 58% of member farmers claimed to have done so, only 39% of nonmembers did. The relationship between membership in POSC and reported soil conservation practices was positive and a chi-square test revealed that the difference between member and nonmember practices was significant ($p=.016$).

In the realm of organic fertilizer production and application, member farmer practices were closer to those of nonmember farmers. While 47% of POSC farmers reported having constructed a compost heap to only 12% of nonmembers, this was likely because of the fact that members had at one time attended a demonstration held by ATQ on organic fertilizer production. A significant result is not necessarily an indication of regular engagement in this practice. When farmers were asked how much organic fertilizer they applied per *cuerda* of land planted in non-traditional vegetables, member and nonmember group means were nearly identical. POSC members reported applying an average of 7.26 *quintales* (1 *quintal*=100 pounds=45.36kg) of organic fertilizer per *cuerda*. Nonmembers reported applying 7.74 *quintales* per *cuerda*. In this case, the nonmember average amount of organic fertilizer applied per unit of land was higher than that reported by POSC members. Group medians were the

same, however, indicating that this difference in mean is a possible effect of a few outlier cases. At the same time, POSC member farmers reported applying less *chemical* fertilizer per *cuerda* of land than nonmembers. The member mean of .58 *quintales/cuerda* is significantly lower than the nonmember mean of .93 *quintales/cuerda* ($p < .001$).

The NGO's efforts have, to some extent, inspired a belief in the value of organic fertilizers and soil conservation among member farmers. Their program to promote terracing and soil drainage canal construction has been modestly successful. Further, member farmers are not applying as much chemical fertilizers to their farmland as nonmembers. At the same time, the group has not been successful in convincing a large majority of member farmer to produce and apply organic fertilizers in any greater quantities than neighboring nonmember farmers.

Like the results reported above for crop diversification, high rates of member non-adoption of terracing, compost heap construction, and organic fertilizer application can be tied to the nature of ATQ's interaction with member farmers. Farmer willingness to adopt the new technologies and farming methods presented by ATQ is in part determined by the NGO's relative success in showing members that the benefits of these are sufficient to offset tradeoffs with competing goals. When a technique requires a larger tradeoff, the interface between the NGO and member farmers is crucial in that it must be capable of inspiring a greater value for the practice relative to its drawbacks.

As described earlier, ATQ promotes the construction of drainage canals, terraces, and compost heaps among member farmers mainly through educational seminars and the occasional field demonstration. Farmer participation and hands-on experience with these tasks in the ATQ program is minimal. Because many farmers are illiterate, they must commit most of these lessons to memory for later application in their own fields. The situation is further complicated by the fact that these technologies require a good deal of labor and specialized knowledge on the part of practitioners. Canals and terraces must be carefully constructed to effectively prevent soil loss. Compost heaps require a large investment of labor, as farmers must collect the necessary materials for fertilizer production and maintain the fertilizer over several months before it can be used.

Many POSC farmers interviewed in this study brought up these kinds of difficulties when discussing soil conservation and fertilization practices endorsed by the NGO. In discussing the knowledge and labor requirements for these ATQ recommendations, one member stated, "...when you make organic fertilizer, you have to work. When you make terraces in the lands, you have to work. So this is what they [ATQ] teach...this is the required work...For me it's not much because I have the support of the association [POSC]... but it is sometimes a little complicated because one doesn't...sometimes one doesn't know how to do these things." (Clara, interview, May 4, 2010) Another member, Rosa, went into detail describing the importance of precision in the construction of such canals. She indicated that,

When the land is like this [gestures incline with hand] they [ATQ] teach us to make canals in the land...You have to make them in the form of an “A” so that when the river comes, it doesn’t take away your fertilizer...it stays in the ground. You have to make your canals in the path of the water. For this reason you have to dig deep holes in the ground...This is the way to keep your land from sliding down.

However, Rosa later went on to describe the difficulty that she and her husband had in making the canals on their own. When asked if she had made these canals on her own lands she replied, “Mmm...yes, up to this year. This year my husband *tried* to make the canals. However, the lands are filled with fertilizers and sand. So when he digs the hole, the land falls right back in. When he fills the hole a little more, it doesn’t work. Don Jacinto [ATQ promoter] told us that he was going to help us but he hasn’t. For this reason, we just haven’t done them. (Rosa, interview, May 24, 2010)

Labor investment was also a fundamental concern for farmers discussing the making of organic fertilizers on their own. One important issue for producers was the time and labor spent in scaling a steep mountainside to collect leaves, branches, and other organic matter for composting. When asked if it was important for a farmer to make his or her own fertilizer, one interviewee stated, “Mmm...when a person has a lot of land, they can make a lot of composted fertilizer. I would like to but I can’t make enough fertilizer [using just what I can collect here]. This is because if you want organic fertilizer you have to get animal waste and *broza*, which you have to bring all of the way from the mountain.” (Esperanza, interview, May 20, 2010) When asked if she made compost heaps for fertilizer, another POSC farmer confessed, “Now? No. They [ATQ] taught us

how to do this but...sometimes we don't want to because you have to go to the mountain to collect *broza* (Eva, interview, May 4, 2010). Still another complained that,

You have to dig at least one big hole. Then you have to put *all* of your trash in. You then water it, mix it up, and cover it with nylon...This is what I learned but, unfortunately, I haven't done it...I don't do it at all these days...This is mostly because of the time. It requires a lot of time to go and collect *broza*, dig the hole...which is *deep*...For this reason we haven't made one. (Eluvia, interview, April 27, 2010)

These and other farmer reports indicate that most members understand the reasons given by ATQ for engaging in soil conservation practices and the production and use organic fertilizers. Further, they were often eager to purchase and apply organic fertilizers using loans provided by the NGO. However, because they receive no hands-on training from ATQ on how to independently carry out the procedures for producing organic fertilizer, a large minority of member farmers feel that they cannot put them into practice in their own fields. Because many members lack the ability to read, write, and take notes on ATQ lessons, hands-on, participatory trainings are essential in this area. The NGO's method of teaching members through seminars and demonstrations does not transfer the necessary experience and human capital to these farmers for carrying out these practices in the fields.

The lack of human capital and direct experience adds to an already large investment of time and labor required of farmers for making terraces or a compost heap. Because they were not involved in the planning and development of these organic farming practices, many POSC farmers do not see enough

value in them to make the additional sacrifice of work and time to trek up the mountainside to collect *broza* for compost heaps or to dig deep canals or terraces on their farmlands. The ATQ program, because it lacks farmer participation in these areas, does not reveal, for many members, sufficient value for the practices of terracing or composting to offset the necessary tradeoffs of labor and time that they require.

By contrast, the value of purchasing and applying less chemical fertilizers to farmlands is immediately apparent to most farmers. As indicated by farmer interviews and the survey, producers know very well that chemical fertilizers make up a large direct expense in the agricultural enterprise. For this reason, the message of less chemical fertilizer application was readily accepted by most of these marginal, small-scale farmers that make up the majority of POSC's membership.

Promoting Organic Alternatives to Chemical Pesticides and Herbicides

The third and final dimension of agriculture targeted for change by ATQ programs is the control of pests and unwanted plants in farmer plots. The NGO employs a plan divided into several stages that seeks to slowly reduce the amount of agrochemicals used by farmers, ending in full organic production. Apart from giving seminars to farmers about the dangers of pesticides and other agrochemicals to human and environmental health, ATQ agronomists offer farmers alternatives to these types of control. During field walks, ATQ agronomists frequently give farmers advice on how to control pests using IPM

techniques like sowing varieties of plants that naturally repel pests or setting mechanical traps near fields to intercept pests. The NGO also offers seminars to farmers on how to make organic pest repellents and remedies using common household items. The NGO's agronomists suggest to farmers specific types of repellents for pest control, knowing that most farmers will be able to access their components. Such repellents involve ingredients like garlic oil, chili oil, animal urine, or chopped native herbs. Agronomists encourage farmers to spray their crops with these as an alternative to the chemical controls sold in the *agroservicio*.

In interviews, POSC members expressed views on the dangers of chemicals and the benefits of organic agriculture that largely conform to the ATQ message on pest control. One member farmer indicated,

They've [ATQ] helped us a lot. Because...here there is cancer. Right now we know that *many* people here have cancer...This is because of the chemicals. It is a lot of chemical that people use in onions, carrots, and lettuce. For this reason there is a lot of cancer...We don't cook these vegetables. They're only used in salads and this is why cancer spreads through them. For this reason I say that the group [ATQ] has helped us a lot. Without them we would die. We realize this. We would spread more and more chemical, killing ourselves. (Miriam, interview, May 21, 2010)

Many producers connected the practice of chemical free agriculture with recovering a lost agricultural tradition of their ancestors. One respondent indicated,

Even when a vegetable is of high quality, what good is it if it is contaminated? This hurts even the farmers. In our case, in this community...the ancestors farmed *purely organically*. They didn't know anything about chemicals...For this reason they lived for more *years*...Nowadays, however, we're contaminated more than

anything...including in the *milpa*. Nowadays, our bodies don't resist chemicals...For us [POSC members], then, no more chemicals. (Sara, interview, May 21, 2010)

Still other farmers highlighted the deleterious effects of chemical use on farmland and agricultural production. One farmer argued, "With *chemicals*...we've already seen that with chemicals the land won't produce. It is burnt...and already our children are growing and they won't have land to sow because it's all been burned with so much chemical."(Josefina, interview, May 11, 2010) Overall, for these reasons POSC farmers are nearly unanimous in the view that there is a need to reduce agrochemical use in non-traditional vegetable cultivation.

POSC farmers are in agreement with the ATQ message that agrochemicals are harmful. In farmer surveys, respondents were asked to report the number of chemical pesticides and herbicides they applied to non-traditional vegetable crops in the past growing cycle. Across the entire sample the mean number of chemicals reported was 3.5. The POSC member mean of 1.67 was significantly ($p < .001$) lower than the 4.27 mean for nonmember farmers.

However, the majority of members are nevertheless unfamiliar with IPM techniques or the ways to produce and apply the organic repellents endorsed by ATQ as chemical substitutes. When farmers were asked if they employed any biological alternatives to chemical pesticides, less than 20% of member farmers reported having ever done so. Further, most POSC farmers interviewed in this study were unfamiliar with the most common repellents promoted by ATQ and with the IPM techniques they advocated.

POSC farmers, despite their expressed interest in and willingness to reduce chemical use in their fields, had little confidence in the eventual replacement of chemical inputs with organic substitutes. While recognizing the value for organic cultivation and reduced chemical use, farmers remained skeptical about the feasibility of using only organic inputs. One farmer commented that,

Nowadays there are many chemicals being sold. According to what they've [ATQ] told us, an organic harvest only uses things like organic fertilizer. This is so we don't hurt the land. Too much chemical also hurts the land...However, these days, if a person sows vegetables without chemical controls, it won't grow. It won't grow and will later dwindle. (Manuela, interview, May, 20, 2010)

Similarly, another member farmer argued that, despite the dangers of chemical use, their total replacement with the organic substitutes promoted by ATQ would be impossible because the land was already "accustomed" to chemicals. When asked if farming was possible without chemicals she replied,

No...*Maybe* yes but you have to understand that the land is already accustomed [to chemicals]. This is the *other* question. The land is already *accustomed* to fertilizer, pesticide, and chemicals. The land is already *accustomed*. And if we don't use chemicals, we won't see vegetables either. Well...maybe we would see *some* but they will not be of good quality. They would be tiny. Why? Because the land is already accustomed. (Sara, interview, May, 21, 2010)

Specifically addressing her lack of confidence in the organic pest controls advocated by ATQ, one farmer stated,

According to Don Javier, he has told us that we can control [pests] with natural pesticides. But we haven't tried these. We haven't tried these...For example, earlier there was an insecticide called Tamaron...It's mostly for killing worms. They [ATQ] told us to stop using Tamaron

because we should instead try a repellent with chili. I tried it but, no. It didn't work. (Esperanza, interview, May, 20, 2010)



FIGURE 4.8: THE HIGHLY TOXIC ORGANOPHOSPHORUS INSECTICIDE TAMARON (METHAMIDOPHOS) IN AN AGRICULTURAL PLOT

As in the examples from above, the ATQ program to reduce farmer use of chemical pesticides and promote organic alternatives realizes mixed levels of success. The mixed record is a result of the relationships the NGO forms with farmers and types of activities it employs to promote these ideas to members. The NGO's strategy for interacting with farmers to encourage them to reduce chemical use is consistent with those employed by the NGO for promoting soil conservation and intercropping. The NGO's agronomists principally take on the role of teachers who make farmers aware of the dangers agrochemicals pose to human and environmental health. They promote organic alternatives, but not in a participatory or experimental manner that would directly engage the farmers in

defining agricultural problems or devising appropriate solutions. As with the examples discussed above, through this type of interface, farmers are convinced of the credibility of the ATQ agronomists and the benefits of organic over chemical agriculture. At the same time, their record of putting the proposed alternatives to chemical agriculture into practice communicates a different message. Because the ATQ program lacks hands-on trainings and significant farmer input, members are not shown the value of most ATQ techniques, which may or may not be appropriate to their needs.

Association member farmers reported applying significantly fewer chemicals to non-traditional vegetable fields. One major reason for this is that they can easily see the value in reducing chemical use. They do not need to be convinced of this by the ATQ program because they see directly the economic benefits. Through a reduction of chemicals purchased and used on the farm, farmers save on what has been widely (see Conroy et al. 1996, Thrupp et al. 1995) identified as the most significant overhead cost to practicing non-traditional agriculture for Guatemalan farmers. On the other hand, farmers must be convinced, through experimentation, participation, or otherwise, of the value and effectiveness of the organic substitutes recommended by the organization. In its current form the relationship established between the NGO and farmers is not capable of inspiring this type of change.

Beyond Top-Down versus Bottom-Up Development: The Formulation and Execution of a Rural Development Plan Through Relationships of Legitimacy

Neoliberal arguments for reduced state involvement have come to dominate popular development discourses. At the same time, calls for increased farmer participation in rural development programs are gaining force among planners. Non-governmental organizations have been referred to by many as the missing link that employs farmer participation as the grassroots, “bottom-up” antidote to state-led “top-down” programs of the past. In this chapter I have attempted to move beyond this well-established dichotomy of top-down versus bottom-up to show how complex relationships between multiple actors are formed, as agencies seek to establish and deploy legitimacy for the realization of development goals. It has been shown how the NGO ATQ, through organization documents, discursively establishes a legitimate role for itself in the development process in the eyes of funders. Drawing on broader narratives of rural sustainability, participation, and market-led development, the group proposes to their funders a set of goals and activities that highlight the centrality of the organization’s role in the development process. By proposing to funders the tangible and measurable goals of increasing crop diversification and soil conservation while reducing pesticide use among farmers, the NGO creates a space for its interventions and solutions to the problems of development for Guatemalan farmers.

On the ground, this results in the formation of unique relationships between ATQ and member farmers, as the NGO attempts to secure the legitimacy of agronomist advice and a set of pre-determined practices for ecological agriculture in the eyes of farmers. Neither strictly top-down nor

bottom-up, these relationships involve varying degrees of farmer participation and involvement in the program. On the basis of the nature of these relationships, the NGO enjoys mixed levels of success in establishing its credibility in the eyes of farmers and securing their compliance in putting recommended activities into practice.

Through repeated contact with farmers over the long term, availability for consultation, and a sustained presence in farmer communities, ATQ is successful in establishing itself as a source of agricultural advice and information that is seen as credible by farmers. Its employment of local farmers as promoters allows the group to maintain a deeper presence in villages that is enough to challenge the position of the *agroservicio* as sole source of agricultural information to farmers. Member farmer survey responses ranked NGO agronomists as a preferred source of advice across numerous dimensions of agricultural production.

Many of the successes enjoyed by ATQ in getting member farmers to put recommendations into practice are tied to the extension of various forms of credit. Interviewees from POSC frequently indicated that they applied organic fertilizer or experimented with planting new crops because these inputs were either donated or provided to them on credit. Because local banks tend to see small farmers as high risk borrowers, they rarely provide them with credit (see Conroy et al. 1996). In this case, member producers reported feeling inclined to try new kinds of agricultural techniques like polyculture because they were awarded low-interest credit for inputs by ATQ. By removing the risk associated

with investment in seed and fertilizer, the NGO compelled many member farmers to at least experiment with organic agricultural techniques like polyculture or the substitution of chemical fertilizers with organic alternatives.

While enjoying a degree of success in promoting polyculture among member farmers, the NGO's impacts in this realm remain limited. The NGO message extolling the benefits of diversification, combined with periodic distribution of vegetable seeds, encourages the majority of member farmers to sow polycultures. At the same time, because farmers are not given hands-on experience or the opportunity to develop these field practices, the program fails to transfer the necessary human capital to a large minority of members or to demonstrate to them sufficient value for the practice to offset the additional labor requirements that it incurs. Making matters more complicated is the fact that sowing polyculture entails a loss of a major avenue for commercialization of farmer harvests.

Similarly, in the area of soil conservation and organic fertilizer production, POSC farmers are convinced of the accuracy of ATQ advice concerning the benefits of these concepts. They even purchase and apply less chemical fertilizers than neighboring farmers. However, the NGO's success in inspiring farmers to perform more labor and time intensive tasks like constructing terraces or compost heaps is limited. While the benefits of purchasing less chemical fertilizer is immediately apparent to farmers, many fail to see enough value in the other recommended practices to counter the large time and labor investment they require. Farmers were not highly involved in the planning, development, or

testing of terracing practices or compost heap construction as recommended by NGO agronomists. For this reason, there was no opportunity for them to see the value in these techniques or to participate in the development of less labor intensive alternatives.

Finally, in its program to promote pesticide reduction, ATQ has been successful in convincing member farmers to purchase and apply fewer pesticides to their non-traditional crops. As in the case with chemical fertilizers, farmers are very much aware of the value of spending less on chemical pest controls. A growing awareness among these producers of the deleterious effects of many agrochemicals on human and environmental health reinforces this practice and may be indicative of larger trends in the general population. However, they are not being effectively shown the value of the organic pest repellents and IPM techniques recommended by ATQ as replacements. Again, because they are not given the opportunity to experiment with and develop these alternatives in conjunction with ATQ agronomists, they are not convinced of their ability to replace all chemical inputs in agriculture.

The ATQ program enjoys numerous successes in its core goal to promote ecological agriculture among the farmers of San Carlos. However, there remain numerous areas in which the project's impacts are muted or inexistent. The barriers limiting ATQ's program for ecological agriculture were well captured in an interview with, Don Ricardo, a non-member interviewee from *Comunidad de la Montaña*. I met with Don Ricardo as he worked a small parcel of his 26 total *cuerdas* of non-traditional vegetable plots. It was midmorning and Ricardo

couldn't afford to miss an hour of daylight for an interview. Despite being illiterate and having never finished elementary school, Ricardo tracked with meticulous care and attention his profits and expenditures on agriculture down to every hour of labor spent in the field.

By local standards, Don Ricardo was a big producer. He not only maintained his 26 *cuerdas* but also had several greenhouses for growing tomatoes. Further, Ricardo was a member of the local irrigation guild that co-owned and maintained a system of pumped water irrigation for their fields. Ricardo recalled the brief partnership between the *Comunidad de la Montaña* irrigation guild and ATQ. He recalled being very excited about the NGO's message of chemical-free agriculture, soil conservation, and the use of organic farming technologies. He felt that he had experienced firsthand the deleterious effects of chemical overuse and had seen production fall off in many farmer fields for this reason. However, like the rest of the irrigation guild, he quickly became frustrated with the lack of practical application of ATQ recommendations. "Always explanation, never practice" he recalled. The NGO never came out to test new technologies in the field. Unlike MAGA seminars or the *agroservicio* field days, ATQ never followed through on the practice end. "Teach me in the field", Ricardo implored. He was frustrated by the fact that he wasn't the kind of person to memorize lessons and then put them into practice. What he wanted from ATQ was hands-on experience to test out the procedures recommended by the agronomists in lectures.

Frustrated, he and the rest of the *Comunidad de la Montaña* irrigation guild soon parted ways with the organization. Ricardo now goes to the local *agroservicio* for diagnoses of agricultural problems and a recommendation for a chemical treatment. He prefers the specialized, experienced based information and advice that he receives there. Unlike the ATQ agronomists, who Ricardo likens to a theory-based medical practitioner with a general understanding of medicine, the *agroservicio* workers are medical specialists with the experience to treat specific maladies and problems relevant to farmers. Like many other farmers in the villages of San Carlos, this type of advice and practice is something that he can see value in. Despite his ambivalence toward applying more chemicals to his lands, he sees this as an unfortunate but practical solution to the problems of agriculture experienced in this area.

V. RURAL DEVELOPMENT ORGANIZATIONS: *NEGOCIO ORGÁNICO*— VERTICAL INTEGRATION AND MARKET-LED DEVELOPMENT

Like ATQ, the NGO *Negocio Orgánico* attempts to refashion relations at critical nodes of the conventional commodity chain for non-traditional vegetables to provide an economically, environmentally, and socioculturally sustainable alternative to participants. Also like ATQ, to realize this goal *Negocio Orgánico* seeks to establish the legitimacy of its program in the eyes of funding institutions

and participating POSC producers. In the case of funding agencies, the group does this through documents that discursively secure this legitimacy by drawing on prevailing discourses concerning market-based development, forward integration of farmers into new value-added activities, and sustainable business development. The group's official documents and communications with funders combine these paradigms in various ways to develop a set of measurable activities that center on the role of the NGO as an effective facilitator of development processes. Just as with ATQ, these activities structure subsequent relationships with participating producers in the interests of realizing organizational goals.

However, unlike ATQ, *Negocio Orgánico* is centrally involved in the commercialization of POSC produce among consumers in urban *Quetzaltenango*. For this reason, the NGO assumes the unique role of broker of rural-urban economic transactions involving commercial produce. Beyond maintaining the legitimacy of its program through relationships with producers, *Negocio Orgánico* must secure similar relationships among urban consumers to build a niche market for POSC produce that is large enough to sustain the enterprise. The situation gives rise to a host of tradeoffs and interactions with outside actors made by the NGO in an attempt to balance the program's goals for development with the economic imperatives of profit generation and cost recovery. On the production end, *Negocio Orgánico* finds itself in the position of having to be a preferable and consistent purchaser of member produce. To secure farmer vertical integration and microenterprise development, the NGO

must also be a facilitator of producer involvement in a business that will one day be under POSC's control. On the marketing and consumption end, the group must form relationships that engage urban consumers of organic produce in order to successfully scale up the market for eco-vegetables. In doing these, it attempts to generate a sustainable business that maintains consumer confidence while also upholding its commitment to producer vertical integration and economic enrichment.

This chapter takes as its starting point the activities and programs proposed by *Negocio Orgánico* in its official documents and proposals to funding agencies. After providing a basic structure of *Negocio Orgánico's* history and activities, it will then show how the NGO uses these documents and official communications to create a role for itself in the rural development and market integration processes. In this way, it attempts to secure legitimacy for itself and its program in the eyes of funders. Unlike ATQ, the activities proposed by *Negocio Orgánico* extend beyond production and involve forming relations with consumers in the interests of market expansion and sustainable microenterprise development. For this reason, the group also assumes the role of temporary recipient of development aid that will one day be replaced with profits generated by the successful business under POSC producer control.

The discussion will be followed by sections that analyze the relationships formed by the NGO on the ground, focusing on their capacity to secure the organization's numerous goals for development outlined in official documents. Highlighting the contradictions confronted by *Negocio Orgánico* as it pursues the

dual objectives of sustainable business development and farmer empowerment, these sections will show how the economic imperatives of large-scale production and distribution are in many ways incompatible with the NGO's goal of participation and the vertical integration of POSC farmers. Overall, it will be argued that the NGO's attempt to pursue these objectives simultaneously has given rise to mixed successes and failures in both the production and commercialization aspects of the organic vegetable enterprise. Far from independent, these highly interrelated aspects of the *Negocio Orgánico* program produce a constant tension that drives the NGO into an ambiguous space between pure market participation and development underwritten by international funding. What is accomplished easily in written statements concerning the goals and activities of the NGO proves difficult in practice, requiring numerous tradeoffs and multiform partnering relationships between the organization and other involved actors. Just as with ATQ, it will be shown that these relationships are unevenly successful in establishing the group's legitimacy and accomplishing its stated goals, leaving the NGO caught between a model of viable business development on one hand and continued reliance on international development aid on the other.

Basic Structure and History of *Negocio Orgánico*

As outlined in the previous chapter, the commercializing NGO *Negocio Orgánico* was formed by its partner organization ATQ in the early 2000s with a grant from Oxfam—Great Britain. Since its inception, *Negocio Orgánico* has been charged with the marketing and distribution of non-traditional produce from

POSC member farms. With the expansion of ATQ programs in San Carlos that took place in 2003, the NGO was faced with the need to provide a growing association of organic farmers with economic incentives for participation. Because ATQ was already registered as a non-profit organization with the Guatemalan federal government, it was legally barred from engaging in profit-generating activities like the marketing of POSC farmer produce. For this reason, the for-profit commercializing organization *Negocio Orgánico* was formed to handle this responsibility.

Currently, *Negocio Orgánico* consists of a regular staff of seven that includes a general manager, an accountant, an office manager, and four part-time drivers. In addition to these employees, the organization also hires teams of POSC farmers from San Carlos to work in its packaging center for the NGO's featured products. Each week, two teams of two women producers work in this packaging center to prepare, wash, and package vegetables for delivery to consumers in *Quetzaltenango*. Each of the eight village-level POSC groups in San Carlos has a team of these paid employees that works in the center once every four weeks on a rotating schedule.



FIGURE 5.1: POSC WORKERS ASSEMBLING ECO-VEGETABLE BAGS IN A *NEGOCIO ORGÁNICO* PACKAGING CENTER

Negocio Orgánico's handling and distribution activities for POSC's organic vegetables fits with the broader ATQ mission of rural development through, "profitable production that is economically, culturally, ecologically, and socially sustainable" (ATQ N.d.1) By covering all aspects of the commodity chain for organic vegetables, the group pursues the ATQ objective of rural development through, "productive chains" (*cadena productivas*). In conjunction with the POSC *junta*, the NGO directs post-farmgate activities, including vegetable sourcing, packaging, and delivery. By conducting the purchasing, handling, and distribution of POSC products, *Negocio Orgánico* seeks to break producer dependence on intermediary bulk purchasers of non-traditional vegetables and contracting exporters of NTAE crops. In keeping with the ATQ goals of producer empowerment, vertical integration, and participation, *Negocio Orgánico* involves

farmers as employees in these phases of the chain for organic produce. The practice reinforces the group's commitment to human capital development for farmers and prepares them for the eventual takeover of the *Negocio Orgánico* business by POSC when external funding ceases.

In addition to these responsibilities, the organization also oversees product development and marketing to consumers. Rather than attempting to export vegetables, as in conventional NTAE chains, *Negocio Orgánico* instead focuses on local distribution in niche markets for organic non-traditional vegetables among consumers in *Quetzaltenango*. It then reinvests a portion of the profits generated by this microenterprise into the program to underwrite ATQ's activities and to provide POSC member farmers with stable and fair prices for their produce. A final part of the capital generated by *Negocio Orgánico* is spent on the organization's endeavors to generate and distribute new products. Through this initiative, the group developed what has become its central product: the bag of eco-vegetables. The bag, delivered weekly to subscribing urban consumers in *Quetzaltenango*, contains 10 different non-traditional vegetables grown organically, processed, and delivered by POSC farmers. By involving the POSC farmers and *junta* in all of these activities, *Negocio Orgánico* attempts to integrate producers into yet another aspect of an economically sustainable microenterprise that will one day be under their own administration.

Negocio Orgánico's Legitimacy with Funders: Creating a Role for NGO Intervention in Market-Based Development Schemes

Negocio Orgánico's internal documents, publicity materials, grant proposals, and communications with funding agencies create a public face for the NGO that reveals much about its approach to rural and sustainable business development. Through such sources, the NGO produces a series of concrete goals and activities designed for their achievement. In doing so, it structures a set of ideal relationships with other actors and establishes the pivotal role of the organization in the development process. Just as in the case of ATQ, *Negocio Orgánico* documents draw on popular development discourses concerning market-based sustainability and economic growth, farmer vertical integration, and empowerment to generate a program for rural development in which the NGO's role is central.

Official *Negocio Orgánico* documents, like those describing ATQ's program, propose an intervention that is based on three major areas of development support. Firstly, in pursuing a plan of market integration of participating farmers, the NGO constructs a role for itself as liaison between producers and organic vegetable markets. Implicit in this approach is the assumption that market integration of farmers is a solution to poverty and environmental degradation but that this integration must occur under the terms established by the NGO. Secondly, to vertically integrate farmers into post-harvest and distribution ends of the commodity chain, *Negocio Orgánico's* proposed activities establish the NGO as trainer and facilitator of human capital development among producers introduced to new, unfamiliar aspects of non-traditional vegetable chains. Central to this process is the NGO's ability to train

producers to take on new aspects of the commodity chain of a business that will one day be under POSC control. Finally, in their attempt to build an economically viable, sustainable business, the group assumes the role of co-coordinator and temporary administrator of the enterprise. Here *Negocio Orgánico* focuses on consumers rather than producers, attempting to scale up markets for POSC eco-vegetables by establishing consumer confidence and engaging growing markets in *Quetzaltenango*.

As will be shown below, in practice the group must continually work to maintain the credibility of its activities with outside actors like participating producers and consumers. In an effort to realize organizational goals, *Negocio Orgánico* forms new relationships with these actors that are intended to establish the NGO's credibility and effectively challenge relations that typify the conventional commodity chain for NTAE. The character of these new relationships reveals the diversity of partnering arrangements in development schemes and has a bearing on the level of success realized by the program as a whole. However, it will be shown that their success in achieving core NGO goals is greatly affected by tradeoffs between competing objectives, as *Negocio Orgánico* attempts to secure market-based sustainable development and producer empowerment in San Carlos and *Quetzaltenango*.

Market Integration—*Negocio Orgánico* as Broker of Urban-Rural Economic Transactions

Because the overall objective of the *Negocio Orgánico* program is market-based agricultural development, one of the major goals of the NGO is farmer enrichment through market integration and direct purchases of POSC produce. The underlying logic behind the NGO's activities is that, under conventional chains of commercial agriculture, farmers are integrated into agricultural markets in a way that is unfair and results in, "the disappearance of the *campesino* sector and the destruction and contamination of the environment." (ATQ N.d.2) By participating in conventional production of non-traditional crops, farmers are exposed to a system that places them at, "high risk [of loss] in oversupplied markets" for non-traditional vegetables. Further, according to the NGO, production for export markets leads to, "a lack of development of internal markets" and the "economic empowerment of intermediaries." (ATQ N.d.2) Echoing the findings of numerous researchers of NTAE as a development strategy in Guatemala (see Goldín 2009, Conroy et al. 1996, Thrupp et al. 1995), *Negocio Orgánico* asserts that, in conventional markets for NTAE, profit tends to concentrate in the hands of exporters and bulk intermediary purchasers, referred to locally as "*coyotes*".

On the basis of this premise of unfairness, *Negocio Orgánico* proposes to connect farmers to commercial non-traditional vegetable markets under different terms. The NGO takes on the central role of just liaison and broker of rural-urban market activities through direct purchase of POSC members' organic produce. Summing this role, one introductory document for *Negocio Orgánico* states that, "We develop and market agricultural goods and services...to elevate the quality

of life of associated producers and to promote the utilization of technologies that contribute to the protection of the natural environment.” According to this document, *Negocio Orgánico*’s direct purchase of POSC member vegetables, “stimulates integral development of associated producers” and “elevates the quality of life of producers.” (ATQ N.d.4) By offering farmers a contracted stable and fair price for their produce as well as a predictable purchasing schedule, *Negocio Orgánico* attempts to remove much of the risk that producers bear in conventional markets for non-traditional vegetables.

Farmer economic enrichment through these direct purchases is considered the base upon which subsequent *Negocio Orgánico* development activities are formed. Through this, the NGO works to secure the conditions necessary for farmer-led, “community development and the further growth of the organizing capacities [of farmers].” (ATQ N.d.3) By providing the economic benefits of market integration, the group helps to lift farmers out of poverty and establish, “the process of transformation and value added production for the primary sector...giving [farmers] the opportunity to diversify the rural economy, employment, infrastructure, and services.” (ATQ N.d.1) In this scheme *Negocio Orgánico* takes on the role of actively connecting farmers of organically produced vegetables to niche markets in nearby *Quetzaltenango*.

Vertical Integration—*Negocio Orgánico* as Provider of Trainings, Human Capital Development, and Farmer Organization

As this base level of economic betterment is established, *Negocio Orgánico* facilitates farmer participation by integrating them into new stages of the commodity chain for nontraditional vegetables. Under their program of agroindustry, the *Negocio Orgánico* staff works as instructors who impart human capital and “teach small farmers the art of sales so that they can become vendors of their own products and obtain the largest profit possible.” (ATQ N.d.1) The goal of this is producer empowerment through the development of, “systems that bring on a change in vision [on the part of farmers] from one focused on subsistence to one focused on development and the opportunity to enter markets (local, regional, national, international).” (ATQ N.d.4) Beyond training, the group also seeks producer vertical integration through the formation of farmer associations and organizations that “strengthen the administrative and managerial capacities [of farmers] and...their organizational development to defend their productive interests.” Strong farmer organizations allow farmers to, “restore the interests of the *campesino* sector to private enterprises, the government, and other international entities.” (ATQ N.d.1) For this reason, the creation of farmer organizations and associations is a central part of the NGOs’ program for development.

To achieve these goals *Negocio Orgánico* embraces a mix of activities that include numerous farmer trainings and workshops aimed at human capital development, paid employment of producers, and the sharing of administrative activities with the leadership of the producer organization POSC. Firstly,

Negocio Orgánico offers seminars designed to impart upon POSC members the importance of entrepreneurship and to teach them basic business skills and concepts. It also trains and seeks certification for certain POSC members in the Best Management Practices (BMP) and procedures for post-harvest handling of agricultural produce. Advanced and maintained by MAGA, BMP certification allows *Negocio Orgánico* to employ producers in the packaging center for vegetables that the NGO built in San Carlos in 2008. *Negocio Orgánico* points to such activities as providing opportunities for farmers to achieve paid hands-on experience in new aspects of the commodity chain as well as providing a more general form of “diversification of rural employment.” (ATQ N.d.1)

Secondly, six producers are trained and hired as part-time drivers and coordinators of the weekly delivery of *Negocio Orgánico*'s bag of eco-vegetables in *Quetzaltenango*. Beyond driving, these producers are given the responsibility of coordinating the delivery routes to urban consumer residences, purchasing *Negocio Orgánico* eco-vegetables from POSC producers, and some management of activities in the NGO's packaging shed. *Negocio Orgánico* staff train these drivers, who then assume limited authority in selecting produce for purchase by the organization, coordinating production of the bag of eco-vegetables, and promoting new products among consumers. Through this and other employment opportunities outlined above, producers are trained to, “work in all of the institutional programs in an integral manner, strengthening the association and, in the program for commercialization, marketing the products of the agroecological farms.” (ATQ N.d.3)



FIGURE 5.2: *NEGOCIO ORGÁNICO* TRUCK ON A WEEKLY ECO-VEGETABLE BAG DELIVERY ROUTE

Finally, in the interests of securing farmer participation in the administration of its programs, *Negocio Orgánico* has supported the formation of the umbrella farmer association POSC and its integration into major program decision-making processes. The association was formed shortly after ATQ's arrival in San Carlos. A document describing ATQ's activities reports,

With the objective of changing to an economy of development from one of subsistence and exchange arose the first economic organization of the Valley of San Carlos: POSC. This group consists of representative from each [local farmer] organization from *Comunidad de la Montaña*, *Comunidad de la Loma*, *Comunidad de las Nubes*, *Comunidad de los Pinos*, *Comunidad del Río*, *Comunidad de la Neblina*.... Members of the [local] organizations elected representatives to form the *junta*...with the goal of bringing change to members toward an economy of development established by the accompanying institution, ATQ. Following this scheme is the best way that associated farmers of POSC can interact and empower the association. (ATQ N.d.3)

The formation of POSC in 2005 provided a platform for producer participation in the activities of ATQ and *Negocio Orgánico*. The existence of the organization alone is part of a broader claim to producer participation and empowerment in ATQ documents. The NGOs name the association as the inheritor of the *Negocio Orgánico* enterprise after external funding for the development program ends. In the interests of developing the human capital necessary for such a transition, the group's *junta* is given a degree of control over project funding and the provision of credits to association members. Nevertheless, the role of the NGOs is ever present. All decisions made by POSC remain under their supervision. For example, responsibility for the control of the groups' checking account is under, "the POSC *junta*—in conjunction with the accompaniment of ATQ...with the commitment of sales of products to the marketing firm, *Negocio Orgánico*." (ATQ-2007) However, rather than exerting top-down control, the NGOs seek to "accompany" ongoing processes that, "strengthen the associational structures of the producers to improve their organizational and managerial capacities." (ATQ N.d.3)

Scaling Up Consumer Markets for POSC Produce—Promoters and Coordinators of Business Activity

As mentioned above, *Negocio Orgánico* trains and employs POSC farmers in several aspects of post-harvest vegetable preparation and circulation. The group directly supports POSC farmer production through purchases of non-traditional vegetables at fair, stable prices. Much of this is accomplished with subsidies of development aid from international donor agencies. However, in keeping with

the objective of economic sustainability and the practical need to fund these activities over the long-term, the group must scale up consumer markets in *Quetzaltenango* for the bag of eco-vegetables and other *Negocio Orgánico* products. Commercialization is a central aspect of *Negocio Orgánico* and the first function mentioned in the group's vision statement, which explains, "We are a world class private commercializing enterprise for high quality agricultural products, which are distinct for being ecological and healthy. Through this we drive integral development for associated producers." (ATQ N.d.4) In other documents describing its formation, *Negocio Orgánico* is portrayed as filling a temporary need for market consolidation and product promotion involving farmers that will eventually end in a self-sustaining business under producer control. Though the group's origin is tied to international development funding, it strives to become a surplus generating business venture set to be under the direction of farmers themselves. As one ATQ introductory document describes,

The second major idea [of ATQ] is commercial—with the formation of *Negocio Orgánico*, which was supported by Oxfam, GB...which gave the initial formal structure to *Negocio Orgánico* as a commercializing business of farmer organizations. With a minimal tool set, consisting of a packaging center for commercializing, began the first workshops for the selection and preparation of vegetables as well as their packaging [by farmers]. Also *Negocio Orgánico* began consolidating existing markets with the goal of improving the earnings and productive capacities...of 90 small producers in six organizations in *Quetzaltenango*. *Negocio Orgánico* strengthens these organizations with a business focus on efficiency and capacity for independent direction [of the business]. (ATQ N.d.3)

In the interests of becoming a self-sustaining business venture set to be under POSC coordination, *Negocio Orgánico* reports working with POSC to

expand the group's urban consumer base by conducting, "business plans, market studies, and product development [activities]." (ATQ N.d.4) In the realm of product development, the group has produced a host of agricultural goods that include marmalades, dehydrated mixed vegetables, and pepper sauces. These are marketed by the group to consumers purchasing the bag of eco-vegetables as well as through various retail outlets throughout *Quetzaltenango*. Other activities aimed at market expansion mentioned by the NGO include engagement with urban markets through participation in agricultural fairs and expositions, direct advertising through radio ads, and the distribution of flyers to potential consumers. With these activities the group aims expand its market and establish itself as a reputable business of high-quality organic produce.

The NGO documents consulted above make a clear argument for the legitimacy of *Negocio Orgánico* and its activities. However, as will be shown in the remainder of this chapter, realizing these goals in practice requires that *Negocio Orgánico* continually maintain this legitimacy in the eyes of numerous outside actors on the ground. In the project of farmer market integration, *Negocio Orgánico* must establish itself in the eyes of POSC members as a sufficiently stable buyer of produce that is preferable to other marketing options. As trainer and facilitator of human capital development and farmer vertical integration, the NGO must impress upon farmers the value of the skills being taught, their integration into a farmer-run business, and the continued viability of that business under POSC control. Finally, *Negocio Orgánico* must establish the sustainability of the business by meeting market imperatives of profitability and

scaling up demand for POSC organic produce and eco-vegetables. To do so the NGO must secure consumer confidence in the business and engage new markets in *Quetzaltenango*. Rather than remaining a development project underwritten by international aid, *Negocio Orgánico* must build a successful business that is economically self-sustaining after external funding has ended.

However, effectively establishing this legitimacy for the program on the ground is a considerably more complicated matter. In the sections that follow, it will be shown that the documents referred to above contain fundamental contradictions in the goals of the NGO that present formidable obstacles to the project of sustainable microenterprise development. Specifically, in each aspect of the program *Negocio Orgánico* finds itself caught between competing objectives tied to farmer empowerment, participation, and the imperatives of market-based development and sustainable business building. Neither fully integrated into competitive agricultural markets nor financially sustained as a development project, *Negocio Orgánico* occupies a space between full market participation and development activities underwritten by international aid. It will be shown that the consequences of this situation have a direct bearing on the ability of the NGO to secure several of its core goals.

Establishing *Negocio Orgánico*'s Legitimacy through Relationships on the Ground

Market Integration: Establishing *Negocio Orgánico* as a Viable Purchaser of Farmer Produce

To foster the integration of POSC farmers and organic produce into *Quetzaltenango's* consumer markets, *Negocio Orgánico* seeks to establish itself to producers as a suitable replacement for existing avenues of sales in conventional chains for non-traditional vegetables. Specifically, in order to secure continued farmer participation and a steady supply of organic produce, *Negocio Orgánico* must ensure that producers see sales through the NGO as preferable to sales in open produce markets and to intermediary bulk purchasers and exporters. *Negocio Orgánico* does this by attempting to remove many of the risks to producers associated with price fluctuations in conventional markets for non-traditional vegetables. It also seeks to do so by offering to producers a fair price and a fixed, contracted amount of sale. However, despite these efforts the NGO confronts several barriers to establishing itself as a suitable replacement to purchasers in the conventional chain. This, in turn, jeopardizes the economic impacts of the program.

Throughout existing literature on NTAE (see Goldín 2009, Julian et al. 2000, Conroy et al. 1996, Thrupp et al. 1995) much attention has been focused on the structures of sales and circulation of commercial produce as it leaves the hands of small farmers. In outlining the options for non-traditional vegetable sales available to producers, much current literature has shown that purchasers in open markets and intermediary exporters hold a considerable amount of power in determining pricing and quality requirements for produce. As a result, small non-traditional vegetable farmers shoulder high levels of risk associated with price fluctuation in commercial markets and natural calamities, while receiving

only a fraction of the final sale prices of their produce. When discussing transactions in open produce markets and with bulk intermediary purchasers, farmers in San Carlos described a scenario similar to the case studies upon which the above conclusions are based. Though not without specific benefits, each avenue of sales available to these producers carries considerable drawbacks.

By far the most popular mode of circulating non-traditional vegetables for farmers in San Carlos is through one of the many open agricultural markets in *Quetzaltenango*. Farmers from San Carlos and other nearby farming regions fill several major markets for agricultural produce inside the city on a daily basis. Based on season and overlap in planting schedules, different farmers often bring the same products to sell in these markets. For this reason, competition is fierce and producers commonly engage in price wars that result in a race to lure customers with the lowest price for a given product.



FIGURE 5.3: A BUSY OPEN MARKET FOR NON-TRADITIONAL VEGETABLES

The price fluctuations tied to oversupply and competition in open markets are exacerbated by the unpredictability of climatic conditions in the highlands and other natural phenomena. It is not unusual for periods of surplus production of a given crop to be separated by shortages because of sharp changes in rainfall, temperature, or pest prevalence. For this reason, farmers are forced to assume a high risk of loss brought on by frequent spikes and dips in prevailing prices for agricultural goods. Having already invested significant capital and labor in producing a harvest over the course of several months, farmers find that they have no way of controlling the profitability of the agricultural enterprise at the time of sale. Two farmers described the difficulty of this situation in a conversation by stating,

Esperanza: We just don't know. Because when everything is already sown, you might not earn anything. There might be a good price and their might not. Vegetables do not have any kind of fixed price.

Manuela: No. *No vegetable...No vegetable* has a fixed price at all.

Esperanza: *But* the seed that we buy...that *is* a fixed price. For example, carrot seed only has one price. This is the same with all the seed we use to plant. The prices don't rise or fall. It is very different when the hour of sales arrives...

(Esperanza and Manuela, interview, May 20, 2010)

Another producer tied price uncertainty in markets to overproduction on the part of farmers. She explained,

Yes. Sometimes in the market *many* [vendors] come from all over. We are not the only area that grows vegetables. So, when they come there is too much produce. Sometimes things like cauliflower and cabbage sell for good prices [for buyers], like thirty five or forty [Q] for the dozen. When there isn't any, like now there isn't cauliflower or cabbage, people are

charging five per head for *tiny* cauliflowers. This is what happens with vegetables. The price is not fixed. (Ruth, interview, May 11, 2010)

The investment already made by farmers in cultivating vegetables is increased by the extra time and costs of selling in open markets. Farmers must pay for a market stall in advance. They pay round trip bus fare for themselves and their cargo into and out of the city and dedicate their entire day to sales. These costs associated with selling in the market were a popular theme among interviewed producers. Speaking on the disadvantages of sales in the market, one producer complained, "If you go to sell in the market, a person has to sit there. They have to pay for food when they get hungry They pay for their bus fare and they contribute their day...Also, carrying [one's cargo] and enduring the sun in the market...these are even *more* expenses." (Marisol, interview, April 20, 2010)

The highs and lows of open market sales and pricing can make any given day a great success or devastating failure for vendors. The time and capital investment in these transactions make bulk sales an attractive alternative to open markets for many farmers. Sales of non-traditional vegetables in bulk generally take place through intermediary buyers, who are given the dubious title "coyote" by selling farmers. Intermediaries from popular vegetable producing towns can frequently be seen driving pickups around the fields of San Carlos, arranging purchases with farmers and hauling off loads of fresh vegetables. These transactions involve sales of commercial vegetables by the extent of land, most often by the *cuerda*. Once a price is agreed upon, the selling farmer will either

harvest and package the vegetables grown on the purchased *cuerda* or the intermediaries themselves will assume responsibility for this work.

The advantages of selling to intermediary exporters as opposed to in purchasers in open markets are clear to many farmers consulted for this study. One prominent advantage cited by producers is the fact that selling to intermediaries means saving time. Intermediaries buy a large amount in a single transaction, potentially saving farmers days of time and capital in open market sales. Explaining this aspect of selling to intermediaries from the nearby town of *Almolonga* , one farmer indicated,

Those from *Almolonga* come here sometimes to buy vegetables by the *cuerda* . They then go far away [to resell them]. They go to El Salvador, Nicaragua, and wherever else vegetables are sold. They go to Guatemala City as well. Here they buy by the *cuerda* , which is a help to us and maybe even for those buying abroad. This is because they come *here* to buy.
(Sara, interview, May 21, 2010)

Discussing the convenience of receiving one single payment for an entire crop, another farmer indicated, “Sometimes, when a person needs money immediately...they [the intermediaries] give it to us right there...For example, if lettuce is 4000Q per *cuerda* ...then, yes! I’ll sell to the intermediary because they will pay that amount in cash, right there.” (Rigoberto, interview, May 1, 2010)

For this reason, many farmers are willing take a lower per unit price for their produce in order to sell in bulk to intermediaries. Farmers understand that, in transactions with coyotes, it is the purchaser who controls the price. One farmer explained a typical transaction by stating, “Because they [intermediaries] buy by the *cuerda* ...it’s them who control the prices. One can ask [for a certain

price] by saying, 'I want this much.' But they will reply, 'I will give your this amount.' And [the farmer will respond], 'Okay, I'll take it.'...but with the costs of production, if one invests a certain amount and they pay less, it is a loss."

(Jacinto, interview, April 30, 2010)

According to many respondents, a farmer's loss is the coyote's gain. One interviewee indicated that intermediaries generally pay less than purchasers in the open market, "because they have to see a profit as well [in the resale]."

(Sara, interview, May 21, 2010) Overall, sales to intermediaries or in the open market require tradeoffs for farmers. One informant summed this situation by explaining,

What happens is that those from *Almolonga* are the ones who come to buy [in bulk], right? So they say "I'll buy your produce. How much do you want per *cuerda*?" So they come. They come in their pickup trucks or cars to harvest and package the vegetables for El Salvador, Costa Rica or Mexico. I'm not sure. We [farmers] don't have this capacity. We don't have these trucks...we don't know how to work pricing and costs...These intermediaries all pay the same...and it is *less*. Selling in bulk, the price is lower than by the unit [in the open market], which is higher. This is because people are saving their time, their day, and their earnings [by selling in bulk]. The buyer purchases a cauliflower...at maybe one fifty or two *quetzales* and resells at three or three fifty. He is earning one fifty per unit. (Josue, interview, June 9, 2008)

In order to establish itself as a legitimate purchaser of POSC producer goods, *Negocio Orgánico* attempts to address these concerns and the disadvantages faced by non-traditional vegetable producers in conventional agricultural markets. Throughout the week, the POSC farmers employed by *Negocio Orgánico* as drivers and vegetable purchasers drive NGO pickups

between the villages and vegetable fields in San Carlos, visiting with local POSC members and association leadership. In conjunction with full-time NGO staff, these employees coordinate vegetable purchases from POSC members based on the weekly orders of the bag of eco-vegetables in *Quetzaltenango*.

Occasionally, the *Negocio Orgánico* drivers/purchasers are joined by the NGO's general manager, who personally verifies that quality produce is contracted and that there are no disputes concerning prices paid. Seeing the *Negocio Orgánico* representatives coming into the village, POSC producers often come out to meet the pickups, bringing sample produce to the purchasers in hopes of selling their harvest for the week.

From a distance it would be difficult to see a significant difference between the *Negocio Orgánico* purchasers and the coyotes of conventional agricultural export chains. However, it is in the terms of the transaction where the biggest differences exist. *Negocio Orgánico* attempts to maintain the loyalty of POSC producers and establish the NGO's legitimacy as a preferred mode of commercialization by reorganizing the terms under which these purchases take place. Seeking to remove the risks associated with price fluctuations in open market sales, *Negocio Orgánico* offers to farmers a fixed price and guaranteed sale that is contracted before the harvest. Instead of wondering whether they will be able to recover their overhead costs and generate a profit at the time of sale, farmers are given a reliable purchase price that they can depend on receiving at harvest time. Risk is minimized as farmers are protected from the price instability and competition that accompany open market sales.

At the same time, *Negocio Orgánico* seeks to maintain for farmers the advantages of bulk sales to intermediaries while removing the less desirable aspects. Just as with coyote purchasers selling to *Negocio Orgánico* saves farmers time and expense that would be spent selling their produce in the open market. Rather than trekking to the nearest bus stop, paying round trip fare, and sitting in the market on multiple days to sell a harvest, farmers engage in a one-time sale of an entire *cuerda*'s worth of a crop. Like the intermediaries, *Negocio Orgánico* then assumes responsibility for the transport and circulation of the produce. However, unlike the coyotes, *Negocio Orgánico* offers to farmers a price that is generally higher than the going rates for bulk vegetables. In the interests of farmer enrichment and rural development, *Negocio Orgánico* pays to farmers a "fair" price for their produce. Overall, the group attempts to secure POSC farmer loyalty by providing them with the benefits of intermediary bulk purchases but at fair, predictable, and fixed prices.

According to *Negocio Orgánico* representatives, the benefits of this scheme are clear. The general manager of the group explained,

Negocio Orgánico...is obligated to contact the producers concerning their products. Through this [contact] we establish a commercial relationship with the farmers in which we discuss quality and prices for their produce. For the producers to be able to establish themselves as businesspersons, we purchase fixed quantities of the needed produce...with the idea of maintaining an unchanging price. Therefore, if it is high season for produce, our prices remain the same. If it is low season and the [conventional] price is down, we continue maintaining same price. (Julio, interview, October 14, 2009)

Many POSC farmers were in agreement that *Negocio Orgánico*'s stable pricing scheme was highly beneficial. Compared to the fluctuation and unpredictability of market prices for commercial vegetables, the NGO's offering of a stable price for produce was seen as bringing a necessary element of security to sales. One farmer explained,

In the market the price is not regular. Let's say it can be pretty good or it can fall very, very low. By contrast, the business...*Negocio Orgánico*, they always pay the same price. They pay only the highest prices that the market offers, paying only one [fixed] price. When the market drops, they always pay the same. This is an advantage...a stable price." (Jacinto, interview, June 9, 2008)

When asked her preferred method of selling vegetables, another POSC farmer replied, "When the association [*Negocio Orgánico*/POSC] takes the produce...it [the price] is always the same. This is important." (Clara, interview, May 20, 2010)

At the same time, numerous farmers demonstrated a much more ambivalent position on the notion of fixed pricing. Many farmers were quite content to accept *Negocio Orgánico*'s fixed, contracted price for their produce when market prices were low. However, the contracted price was seen as insufficient by many farmers at times when market prices soared. When asked if she considered *Negocio Orgánico*'s fixed pricing to be a benefit, one POSC farmer replied, "Yes. When prices for lettuce are low...they [*Negocio Orgánico*] have already told how much they will pay. If lettuce is cheap or if it is expensive [in the market] *Negocio Orgánico* pays fifteen *quetzales* for a dozen, whether the price is high or low. It's when the prices are high that it hurts us to accept just

fifteen.” (Manuela, interview, May 20, 2010) Echoing this sentiment, another farmer stated, “Sometimes the price goes up five to eight *quetzales* per dozen [in the open market] and they [*Negocio Orgánico*] say, “Here is your payment.” And it is *still* twenty five or thirty [Q]...how it hurts [*como cuesta*]! (Esperanza, interview, May 20, 2010)

The issue concerning *Negocio Orgánico*'s fixed pricing scheme is one that is also felt by the NGO itself. Speaking on the severity of the issue of pricing, *Negocio Orgánico*'s general manager lamented,

They [POSC farmers] know that this is *their* business but they sell to it like it isn't. For example, the price we put on products is often the same price that they would sell them for in the market. Any other company would give them a lower price just to generate a profit. But this is something that they [POSC farmers] just do not understand. Some understand but others do not. They think that *Negocio Orgánico* is obligated to buy from them at whatever price *they* want. This is illogical. It's as if you have something...a product and your own mother wants to buy it. She asks you to sell it to her for the five *quetzales* that it cost you. Instead, you say, “Give me fifteen and I'll sell it to you.”...So this is a change in mentality that we are trying to inspire in them. (Julio, interview, June 13, 2008)

Many member producers did not consider the *Negocio Orgánico* price to be significantly different from prices they received either in open markets or from intermediaries. Discussing pricing in various forms of sale, one farmer indicated, “It's all the same. It's equal. The price is the same with *Negocio Orgánico* as it is in the market.” (Sara, interview, May 21, 2010). Numerous other interviewees expressed similar beliefs. One POSC member even indicated that he generally received better prices for his produce from intermediaries than from *Negocio Orgánico*. When asked to elaborate on why he continued to sell to coyotes, he

simply stated, “They pay more than the association.” For this reason, when asked to choose who he would sell to in the event that both *Negocio Orgánico* and an intermediary wanted to purchase his crops, he responded, “The one who pays the best price.” (Rigoberto, interview, May 1, 2010)

In spite of these issues, results from the farmer survey conducted for this study indicate that the majority of POSC farmers continue to see *Negocio Orgánico* as a preferred avenue of sales over both the open market and intermediaries in conventional markets. When asked to rank these three in order of preference, 44.8% of POSC farmers indicated that selling to *Negocio Orgánico* was their highest preference. However, this was followed closely by sales in open markets, which was the preferred mode of sale for 31% of member producers. Nearly a quarter (24.1%) of all member respondents indicated that selling to intermediaries was their preferred mode of commercializing their produce.

Despite a general preference for selling to *Negocio Orgánico*, producers did not see the stable, contracted prices offered by the NGO as an unmitigated good. Just as reported by interviewed producers, price remains a central issue, as POSC members do not want to lose when prices in open markets rise above those offered by *Negocio Orgánico*. For this reason, they do not see *Negocio Orgánico* as being superior to open markets in the realm of price. The periodically higher prices offered in open markets contributed to the belief among farmers that pricing was generally better there than with the NGO. The opinion can be seen in the results of the farmer survey. When POSC farmers were asked

to rank the three major modes of commercialization for produce in terms of which pays the best price, 65.9% ranked the open market as offering the best prices for vegetables. Only 27.3% reported receiving generally higher prices from *Negocio Orgánico* than from the open market or intermediaries.

However, perhaps the biggest issue faced by *Negocio Orgánico* as they attempt to establish themselves as a legitimate buyer of POSC farmer produce is the question of volume and frequency of sales. Nearly every interviewed POSC member expressed disappointment at the small proportions of their harvests purchased by the NGO. Further, nearly every interviewed farmer reported selling large portions of their harvest in the open market or to intermediaries. When asked how he sold vegetables, one POSC farmer indicated, “We sell only a part [to *Negocio Orgánico*] and the other part we get rid of in the market...Weekly they [*Negocio Orgánico*] only buy...for example, with lettuce, they buy only fifteen dozen weekly...the rest [we sell] in the market.” (Jacinto, interview, June 9, 2008)

Several farmers tied this issue to the number of members participating in POSC. One indicated that she sold to the NGO,

only a fourth of our harvest, nothing more. That is all they will accept. There are a lot of us [POSC farmers] and sometimes we have the same things [to sell]. For example, if Doña Esperanza has carrots and I have carrots too, *Negocio Orgánico* will buy a little from her and a little from me. You can't sell large quantities to them because they haven't sold many bags [of eco-vegetables]. (Manuela, interview, May 20, 2010)

Another informant indicated that *Negocio Orgánico* rarely came to make purchases in her village. She recounted that, “When they decide to come, they take everything [we have produced]...we give them everything. But often they

don't come at all. What can a person do when they've already harvested their vegetables? The vegetable would be lost. It's therefore better to take them to the [conventional market] purchasers. (Ingrid, interview, May 18, 2010)

Survey results confirm the assertions of these producers. Data indicate that *Negocio Orgánico* purchases are limited in scope, frequency, and volume. Among responding POSC producers, only 68% reported having ever personally sold produce to the NGO. As indicated in the discussion above, this can be tied to the fact that the group must divide the weekly purchases of eco-vegetable bags between 100 or more participating producers. The market for *Negocio Orgánico* eco-vegetables is simply not large enough to support the number of POSC farmers selling produce.

Low levels of sales can also be seen in survey responses of POSC members concerning the frequency and scale of their marketing through *Negocio Orgánico*. Member farmers are not selling to *Negocio Orgánico* more often than through conventional channels for non-traditional crops. A mere 10.5% of members reported selling the majority of their produce to *Negocio Orgánico*. The low percentage of farmers selling to the microenterprise is dwarfed by the 64.9% of member farmers who reported selling the majority of their harvests in open markets and the 24.6% that sell the majority in bulk to intermediaries. Similarly, only 12% reported that *Negocio Orgánico* was their most frequent avenue of sales for non-traditional vegetables. A full 70% reported selling most frequently in the open market and 18% sold most frequently in bulk to intermediaries.

Negocio Orgánico's attempt to integrate POSC farmers into markets for commercial vegetables addresses several real concerns of farmers selling in conventional channels for non-traditional vegetables. The organization has, to a great extent, established itself to the majority of POSC farmers as a preferred mode of sales. It has done so mainly by offering to farmers many of the benefits of bulk sales through intermediaries without the decrease in purchase price farmers have come to expect from coyotes. By handling the transport and circulation of member produce, *Negocio Orgánico* saves farmers a good deal of time and investment in selling in *Quetzaltenango's* open markets. Despite the fact that some farmers expressed ambivalence about the actual benefits of these efforts, the majority still consider *Negocio Orgánico* their most preferred avenue of sales.

The NGO's efforts to remove the risk borne by farmers in open markets for commercial crops do not realize the same degree of farmer approval. By offering a stable, contracted price for their goods, the NGO attempts to protect farmers from sudden price drops that result from overproduction or high competition. However, as indicated by both farmers and NGO staff, many producers do not see the value of the stable price offered by *Negocio Orgánico* when open market prices are high. For this reason, they tend to see the market as generally providing prices superior to those paid by the NGO.

The NGO's most formidable stumbling block remains the issues of scale and frequency of products purchased from members. *Negocio Orgánico* is unable to secure loyalty and a reliable supply of organic produce from farmers

because the market demand for the eco-vegetable bag is not sufficient to keep producers engaged in production primarily geared for the business. Many member farmers instead sell the majority of their crops in open markets or in bulk to NTAE intermediaries. For this reason, the majority of member farmers do not cite *Negocio Orgánico* as the primary avenue of sales for their harvest. The NGO is instead perceived as a supplement, though not unvalued, to these conventional modes of sales. As the NGO general manager pointed out, farmers are not being engaged in the business due, in large part, to insufficient sales and low levels of market expansion.

Vertical Integration: *Negocio Orgánico*'s Role in Human Capital Development and Business Administration

The principal way that *Negocio Orgánico* works to empower producers is by integrating them into numerous post-harvest activities along the commodity chain for commercial vegetables. By focusing on establishing a local market for organic non-traditional crops, the NGO makes accessible to these farmers many of the handling and distribution aspects of the enterprise that are out of their reach in conventional chains for non-traditional vegetables. In order to increase their involvement in these activities, the NGO concentrates its efforts on developing producer human capital through trainings, guided hands-on experience, and partnership in administrative activities. By doing this among POSC's general membership, *Negocio Orgánico* attempts to foster the development of an entrepreneurial spirit in producers through their participation in the farmer-run business. In seminars on basic business skills and produce

handling practices, the NGO assumes the role of teacher and provider of skills that are applicable to members' integration into this business venture. With paid employment of farmers in product handling and distribution, the NGO attempts to inspire in POSC members a desire for mastery of tasks for the benefit of a business in which they are part owners. Finally, in sharing coordination and administrative duties with POSC leadership, the group assumes the role of facilitator of a process in which leaders gain the necessary skills to run the *Negocio Orgánico* enterprise after development funding has ceased to support the NGO staff.

Human Capital Development among the General POSC Membership

Across numerous informal conversations with *Negocio Orgánico* staff that took place over the course of the fieldwork for this project, the relationship between paternalism and development was a repeated theme. Non-governmental organization managers and ATQ agronomists frequently cited “paternalist attitudes” and frameworks for development interventions in Guatemala as the bane of their programs. Seeking sustainable business generation and market-based development in rural areas, the NGO staff felt that the biggest obstacle to the realization of these goals was a widespread “paternalistic mentality” in rural areas that had resulted from the work of previous development programs and initiatives. For them, many community members were accustomed to accepting handouts from a host of outsiders and had come to expect this from all development projects. Over the course of years of governmental and non-governmental interventions in Guatemala's impoverished

rural areas, many indigenous villagers had come to understand that outsiders give gifts for participation in programs, attempting to secure anything from political backing to the simple dispersal of charity funds. This paternalistic mentality was seen by NGO staff as the antithesis of the *Negocio Orgánico* program for sustainable business development. Rather than giving handouts to producers until funding ran dry, *Negocio Orgánico* and ATQ were attempting to build with members a farmer-run business in which each and every one had a stake. For this reason, the NGOs claim to work only with farmers, “who like to work” rather than those who joined simply to take advantage of whatever gifts and support the program had to offer.

For *Negocio Orgánico* staff, the persistence of a paternalistic mentality in farmers would mean the unmaking of the group’s attempt at integrating members into new aspects of the commodity chain for eco-vegetables. For them, crucial in this struggle was their ability to inspire in members a value for enterprise and a willingness to learn the skills necessary for involvement in the producer-run business. *Negocio Orgánico*’s work to develop human capital among the general POSC farmer membership can be seen as part of a broader attempt to spread this entrepreneurial spirit. For the NGO, this is a key requirement for the transition from an economy of “subsistence” in which, “farmers don’t apply techniques of business administration” to a “business” economy involving, “investment of capital, production destined for markets...and the use of administration techniques.” (ATQ N.d.5)

The NGO works toward this goal by reaching out to the general membership through seminars and workshops designed to impart upon farmers a value for business administration and participation. Apart from workshops concerning basic math, record keeping, and cost calculation, *Negocio Orgánico* also gives periodic seminars to farmers on concepts of business administration. In a typical seminar that I attended in the community of *Comunidad de la Montaña*, Don Julio, the *Negocio Orgánico* manager covered many topics designed to make attending farmers aware of the structures of conventional commodity chains for non-traditional vegetables. The seminar opened with Julio asking members whether or not they knew if they had made a profit in agriculture in the previous year. "You might actually be losing money." He warned. Many of the attendees had no reply when asked this question or when asked what had happened to the blue notebooks the NGO had distributed to farmers earlier in the year with the hope that they would use them to log their expenses and earnings from agriculture.



FIGURE 5.4: A *NEGOCIO ORGÁNICO* TRAINING SEMINAR IN SAN CARLOS

After a brief discussion of these issues, Julio launched into a 45-minute seminar covering such topics as the conceptual distinction between “selling” (*vender*) and “commercializing” (*comercializar*) produce, the exploitation of farmers on the part of coyote intermediaries, and the value added to produce as it progresses through each stage of the commodity chain from the farm to final consumer. Along the way, Julio highlighted the pros of farmer participation in POSC and *Negocio Orgánico*. He discussed such things as the benefits of direct sales to consumers, basic concepts and advantages of recording costs and returns in agriculture, and the importance of surplus generation and reinvestment. The meeting concluded with Julio reminding attendees of the advantages of selling produce through *Negocio Orgánico* instead of to intermediaries or in the open markets.

Meetings like the one described here occur once or twice per month in each of the communities where POSC has membership. In much the same fashion as the meeting in *Comunidad de la Montaña*, *Negocio Orgánico* staff members like Julio attempt to teach farmers the value of activities like basic cost calculation, budget management, reinvestment, and the development of skills for entrepreneurship. Occasionally, *Negocio Orgánico* engages farmers in hands-on activities like the distribution of notebooks and pencils to members for recording what they have spent in agricultural inputs and other expenses related to cultivation. Using these strategies, the NGO attempts to impart upon the general POSC membership a basic skill set that is practical for their engagement in the affairs of the enterprise.

Numerous producers consulted for this study regarded favorably the lessons given by *Negocio Orgánico* on these aspects of human capital development and learning in general. When asked what she had learned in the training seminars, one POSC member responded that she had learned the importance of calculating, “How much was spent, how much was invested, and, in the end, how much was earned...how much profit was made.” She continued, “How many days a person works on vegetables and how much chemical they used. In the end, one has an account total and knows how much they need to earn from the vegetables. This is what we learn in the workshops. They [*Negocio Orgánico*] train us so that we can support the group [POSC].” (Clara, interview, May 4, 2010) Contrasting her attitude toward learning new skills with that of neighboring non-member farmers, another POSC member stated,

My neighbors, for example say, “Ah. Those who participate in groups don’t learn anything.” It’s the same as saying, “When one studies they learn nothing.” And this is how *they* are. But we who participate with the engineers [from *Negocio Orgánico*] know...over the eight years we’ve worked with them...they have helped us a lot. (Miriam, interview, May 5, 2010)

Another POSC member was so inspired by her involvement with *Negocio Orgánico* and the new skills she had learned that she envisioned a future in which, “We [members] have in our own community a small business...with our own packaging center...With time we will achieve this and produce our own products...with our own small business belonging to everyone in the group [POSC]...We will have our own packaging center and nursery...We will be able to succeed.” (Josefina, interview, May 11, 2010)

However, while nearly all farmers interviewed for this study expressed a general appreciation for learning new things with *Negocio Orgánico*, very few were able to recall many workshop themes other than those concerning organic agriculture given by *Amigos de la Tierra*. A small number of farmers recalled attending seminars given by *Negocio Orgánico* on budgeting and basic skills for cost calculation. Many POSC farmers, however, were unable to identify lessons from *Negocio Orgánico* seminars without some form of prompting. Also, many admitted not performing the recommended practices advocated by developers. Several member farmers reported not calculating overhead costs for agricultural production and not selling with profit generation or reinvestment in mind. In fact, many of these farmers spoke of things like profit generation and cost recovery as

beyond their own ability to control, not as variables to be calculated for the survival of a business.

In an unusually candid conversation, a group of interviewees shed light on one central reason why farmer uptake of these skills is slow to develop. When asked about the human capital development seminars given by *Negocio Orgánico* they indicated,

Esperanza: Yes. We do receive talks about these kinds of things. They gave us these books...Don Julio and Don Javier...they gave us these because they wanted us to make lists of...mmm...how much money we invest, how much work we put into agriculture ourselves, how many hours we work, and how much we pay other workers. So you have to make note of these so that, as they say, when we sell onions, carrots, whatever, they want us to have these accounts of what we have spent. They tell us to ask ourselves, "How much do I want to earn from onions?" but this is not possible. They want us to total how much we spend on a *cuerda* of onions...how much we spend from the beginning to harvest time. They tell us to calculate how many bunches of large and small onions we have and to calculate the price we need to sell them at. In my case, I tried to do this but it's not possible. This is because, when the price is really low for onions and I would like to sell them at 5 *quetzales* per bunch, they [purchasers] won't pay me this amount. For this reason you can't sell like this. They [*Negocio Orgánico*] tell us to write everything in these books that they gave us so that we have everything recorded about what we harvest. But in my case it wasn't possible...They tell us that we need to make logs...that we are the ones calculating the price, and that we have to think about how much we are making but this is not possible. There's a lot of competition in markets so, even if I say, "Well, I'll only sell at this price", if other farmers are selling for less, it just won't work.

Manuela: And the buyers...For example, if we sell at a higher price, they won't buy from us. They will buy from someone selling cheaper. For this reason, a person has to lower their prices in order to sell at all. There is always competition.

Esperanza: A person can't have this kind of control. It's just that we can't get whatever we wish to earn.

Gladys: Yes. This is what they told us to do but you can't. I tried it as well. I can't because the price I receive is the same. They [*Negocio Orgánico*] told us "You all calculate what you want to earn just like this."...They told us, if we worked two hours, we should make note. If we pay workers, we should make note...Everything...including the time we spend in the market selling. But it just isn't possible.
(Interview, May 20, 2010)

It is likely that many POSC farmers have attempted to calculate their costs of production only to find, like these interviewees, that this activity does little to affect their final price of sale. In this case, the skills taught to farmers like cost calculation, budgeting, and planning for reinvestment cannot be applied unless producers gain control over the prices they receive for their produce. Seeing little practical application for these skills, members tend to react favorably to the concept of learning new things but do not see these as a step to greater control over price. In this case, the application of these new skills by farmers faces a structural barrier inherent to conventional markets for non-traditional vegetables in Guatemala. For now, farmers cannot apply these skills because they lack leverage in transactions with purchasers other than *Negocio Orgánico*. Provided that the market for *Negocio Orgánico* products in *Quetzaltenango* grows, farmers will increasingly be able to put such skills to use. However, at this time other strategies employed by the NGOs like economic diversification through the planting of numerous crops and the formation of producer organizations are better suited to address the problem of low bargaining power faced by member producers in vegetable markets.

Hands-On Capital Building Through Employment

Beyond training the general POSC membership in basic business skills and other concepts related to the commodity chain for non-traditional vegetables, *Negocio Orgánico* also integrates a few members into more hands-on forms of capital development. It does this by training and employing POSC members in the post-harvest handling and distribution of eco-vegetables. Every Thursday morning, two pairs of POSC farmers from different village-level associations come to the NGO's packaging center to process vegetable and assemble the bags of eco-vegetables. Having been through several trainings for certification in the BMPs for vegetable handling, these workers don hairnets, gloves, and aprons before proceeding to wash, weigh, and classify the vegetables delivered to the center by the *Negocio Orgánico* drivers. Teams from each village rotate into this position once per month, working from noon until the final bag of eco-vegetables is assembled using the 10-12 weekly vegetables. Workers are paid by the number of bags assembled rather than by the hour. For this reason salaries vary according to the number of bags sold per week.

During the numerous visits I made to the *Negocio Orgánico* packaging center during this study, it became apparent that the work there is generally disorganized, resulting in frequent errors in bag assembly and problems with overall production. Employees and supervisors alike spend a good deal of their time reassembling bags that contain too many or too few of one or more items. Workers' decisions to include or leave out overripe or bruised produce are frequently reversed by supervising NGO staff, resulting in many completed bags being reopened so that their contents can be adjusted. It is not uncommon for

workers to spend their entire afternoon and early evening organizing and getting the 100 to 120 bags ready for delivery on the following day.

Although POSC worker teams have been trained according to the BMPs to maintain sanitation and cleanliness and use proper equipment when handling foods, they are rarely exposed to the organizational or administrative tasks of coordinating the center or its operations. These tasks are the sole responsibility of NGO staff and organizers, who supervise and oversee all packaging center activities. Work in the center does not begin until the arrival of these key-holding supervisors. Once inside, the producer teams are given instructions from NGO staff on how many of each item to place in the eco-vegetable bags. It is the staff supervisors who calculate these figures and double-check the work of the POSC employees. A very clear division of tasks emerges between *Negocio Orgánico* supervisors and POSC staff, with supervisors handling the coordination, organization, and oversight of general operations while the staff follows supervisor instructions for carrying out the manual tasks of bag assembly.

On the following day, another set of POSC employees will come to the packaging center where the eco-vegetable bags have been left by these workers. These employees are POSC farmers from San Carlos who have been hired as drivers and delivery personnel for the eco-vegetable bags. Using two NGO pickups to deliver the bags to subscribing consumers along two separate routes in *Quetzaltenango*, these four drivers generally spend an entire day following a list of consumer addresses, knocking on doors, delivering bags, and collecting

payments. Like the packaging center employees, the drivers are paid by the number of bags delivered, not by the hour or day worked.

Delivering bags with the POSC drivers can be a frantic affair. Knowing that they are paid only per bag delivered, these employees do their best to distribute all of their assigned bags as quickly as possible. Another way that drivers attempt to get rid of their bags is by giving them to consumers on credit. It is highly common for drivers to leave a bag with a consumer who cannot pay at the time of delivery. However, a glance at the *Negocio Orgánico* consumer account register shows the seriousness of the situation that this creates. A high proportion of consumers have debts with the company, ranging from 35 to as high as 805Q per household. Because drivers are paid by the bag delivered, they are given no incentive to collect these debts or withhold bags from consumers who carry large debts with the company. For this reason, the overextension of credit nearly destroyed the entire *Negocio Orgánico* business in 2009, when the group discovered that it held nearly 15000Q in unpaid consumer debt.

In both the packaging center and delivery route scenarios, the issue is not that the paid employees from POSC have a lack of appreciation for the experience of learning new skills or for being given a paid position by *Negocio Orgánico*. Employees expressed a deep gratitude for being employed by the organization. A few ranked their employment with *Negocio Orgánico* among the more important sources of income for their home. Further, *Negocio Orgánico's* employment project is successful in providing POSC members with new skills

and human capital that can be applied in a host of other employment scenarios. One packaging center worker spoke of her employment with the NGO as a point of pride. Describing the circumstances in which she was given the job she indicated that she was singled out for it because,

“I participated in the meetings. With my friend, we went nearly every month to the workshops. For this reason Don Javier told us, ‘You have participated in the workshops and for this reason, I’m going to give you the work there [in the packaging center].’ We then showed up to work and were given three more seminars. We were then ready to work!” (Clara, interview, May 4, 2010).

Another employee, a delivery route driver, indicated that his work with *Negocio Orgánico* was the most important work he had. He proudly stated that, between bag delivery, vegetable purchases, and general transport, the majority of his time was spent working for the microenterprise. He indicated that he was able to work, “Five days per week with them [*Negocio Orgánico*]! Yes, five days. Monday through Friday!” (Rigoberto, interview, May 1, 2010)

However, as one ATQ agronomist complained in an informal conversation, a major problem is that the employees do not seem to be taking on this work with the knowledge that they have a stake in the business. They instead work for and speak of *Negocio Orgánico* as an employer with which they have little more than a working relationship. Overall, employees are not being shown that the *Negocio Orgánico* enterprise is a business in which they have a long-term stake. Drivers, because they are paid only by the bag delivered, have no incentive to collect consumer debts or take the time to promote other *Negocio Orgánico* products along the delivery route. Packaging center workers, because they have so little

exposure to the coordination of tasks, gain little appreciation for their own roles in the business and fail to learn key organizational skills to make their work more efficient and accurate.

The employees remember and value the trainings they receive from *Negocio Orgánico*. However, they are not being shown that these skills are valuable human capital that can be applied toward building a business. Instead, workers feel as if they have no stake in the sustainability of the enterprise because the nature of their participation does not make apparent to them the fact that the business they are building will one day be their own. Instead, employees see themselves as having a job, albeit one they might not normally have. While these jobs constitute a first step toward their integration along the commodity chain, a few key changes may improve the quality of producer participation in the *Negocio Orgánico* business. Specifically, the slow integration of packaging center workers into coordination tasks currently held by NGO supervisors may help transfer key organizational skills to these workers. Reorganizing delivery driver payment schemes so that they are given incentives for collecting consumer debt and promoting *Negocio Orgánico* products would align their interests more closely with the long-term wellbeing of the business.

POSC *Junta* Participation in Administering the *Negocio Orgánico* Enterprise

In all of these attempts at farmer vertical integration, *Negocio Orgánico* has been slow to engage producers in the business and only partly successful in convincing them that they are partners in the building of a new enterprise. The NGO's objective of providing to farmers the human capital necessary for

partnership in all aspects of the commodity chain for eco-vegetables is not being fully realized among the general membership. A similar situation arises with the future inheritors of the administration for the *Negocio Orgánico* business—the POSC *junta*. Ideally, the *junta* is comprised of one elected member from each of the local groups from the eight villages in San Carlos. These eight *junta* members then decide among themselves who will best fill the positions of president, vice-president, treasurer, secretary, and four director positions. As described above, apart from managing the functions of their respective village-level POSC groups, the *junta* members also participate in some coordinating duties for the *Negocio Orgánico* enterprise. According to the NGO, this hands-on experience is intended to prepare the *junta* for administrative control of the business after development support for the program has run out. In conjunction with NGO staff, the *junta* is given control of the *Negocio Orgánico* bank account, the coordination of microloans to individual POSC members, and some general administrative activities like coordinating consumer orders and delivery schedules. Overall, the objective of the NGO is to train the *junta* members for a future in which full responsibility for the business is theirs.

However, the transfer of this responsibility from *Negocio Orgánico* staff to the *junta* has been slow. One NGO director, admitting that ultimate decision-making power still rests with NGO employees, likened this situation to teaching someone to drive. He explains that POSC coordination of the business is still,

...a proposal that we have. This is what we would *like* to do...where we *want* to be. So we're working to get to this point [where POSC fully

controls the business]. Our first step was forming the association, now we're working to empower...so that they [the producers] may be the owners, so that they feel like the owners. It's like with a car. I lend you the car saying, "Use it as if it were your own" but you continue using it reluctantly, fearing that you will break it. I tell you "Don't worry about it. It's your car." but don't give it to you fully until I see that you can drive it well. This is the idea...At this point, however, the control is still shared between our team and them. (Javier, interview, June 3, 2008)

In this optimistic description of the *Negocio Orgánico*-POSC *junta* partnership, the NGO's activities conform to the role of facilitator and temporary co-administrator of a business that will one day be transferred to producer control.

However, *junta* member accounts of their activities with the group can be decidedly less optimistic about this prospect. For example according to one POSC administrator, the job of *Negocio Orgánico* is to, "Coordinate us...For the moment they are teaching us so that later on... We know that one day the support [development funding] will run out. For this reason they want us to have an idea of how to move forward." (Josue, interview, June 9, 2008) However, this same interviewee later expressed some frustration with the fact that *Negocio Orgánico* continued to leave the producers out of many executive decisions. Specifically speaking of external funding, he indicated that, "This support is indirect because it must go through an [NGO] office. All of the funds end up staying there, being spent mainly on rent, paying water, light, and personnel. What the farmer receives of this is *very little*." For this reason when referring to things like microloans and funds for new activities, this interviewee focused on the NGO as giver, indicating that it is, "*Them giving us credits*." (Josue, interview, June 9, 2008) Just as with the employees and general POSC members above,

this POSC leader did not feel especially integrated as a partner or owner of the business.

According to interviewed *junta* members two principal barriers prevented POSC's ascendance to owners of the *Negocio Orgánico* business. The first had to do with not being given sufficient experience or skills to run the business. One *junta* member expressed appreciation for the skills she had learned with *Negocio Orgánico* but did not see them as sufficient for carrying the business forward. She stated that, "Yes, we've learned a lot of things [with *Negocio Orgánico*] but we still don't have the capacity to move forward and continue doing it [after the NGO leaves]. (Josefina, interview, May 11, 2010). Focusing on more specific limitations, a POSC leader indicated that,

One major barrier is that we don't have sufficient familiarity with the offices and positions [for running the business]. We need more knowledge and experience...For this reason it is hard for us to interpret certain kinds of information. For example, with using the computer, we have little experience." (Josue, interview, June 9, 2008)

The second barrier to moving forward cited by POSC leadership was the lack of capital for reinvestment in the business. They felt that their increased participation was wasted on a business facing the impossibility of raising sufficient funding for reinvestment. Speaking of the group's need to scale up processing, one member explained that sufficient money was not being generated by the business to move forward. She stated, "We would like to have another packaging center and equipment...but for this we lack *much* money. To build a center with all of the equipment would be too expensive." (Josefina, interview, May 11, 2010) Similarly, another argued that the most important

issues for the business was, "...economic. Sufficient resources and money have not been generated to start seeing benefits...Also we have a real need for our own greenhouses, irrigation systems, and a refrigerator...to sell more...we need investment." (Josue, interview, June 9, 2008)

Just like the general POSC membership and other employees, the POSC leadership expressed a feeling of distance from control of the organization. For this reason, while appreciating the efforts on the part of the NGO to integrate them into the business, they do not seem to feel that this business is their own. Despite the NGO's efforts, participating farmers do not generally consider themselves stakeholders or co-owners in a farmer-run business. They instead approach their activities for the group as paid employees with little to no stake in the long-term survival of the company would. Falling considerably short of *Negocio Orgánico's* goal of inspiring entrepreneurial attitudes through involvement in new tasks, POSC farmers do not see their stake in the business because they are either left out of key decision-making processes or they do not see a future in a business that is not generating sufficient profit to win over their dedication and efforts.

The difficulties experienced by *Negocio Orgánico* as it attempts to engage farmers in these aspects of the business are principally rooted in the fact that POSC members are not convinced of the usefulness of the skills being transferred or of their actual ownership of the business. However, as many POSC members point out, much of this could be resolved with sufficient capital generated by the business for reinvestment and engaging employees with

appropriate incentives. For this reason, it behooves the NGO to expand consumer markets for the eco-vegetables to restore legitimacy for the business and the NGO's trainings in the eyes of farmers. However, as will be shown, the NGO faces significant barriers in market expansion as well. These reveal fundamental contradictions between the objectives of *Negocio Orgánico's* project for rural development underwritten by international aid and the need to meet market imperatives for a fledgling business by expanding the scale and efficiency of its production.

Expanding Consumer Markets for Long-Term Economic Sustainability: *Negocio Orgánico* as Business Builder

At least part of *Negocio Orgánico's* goal of farmer engagement in post-harvest activities is dependent upon the ability of the organization to establish the viability and legitimacy of the eco-vegetable business to participating farmers. For this reason, and in the interests of generating the profit necessary to keep the business afloat, *Negocio Orgánico* must increase market sales of the eco-vegetables by addressing the needs of current consumers while reaching out to new markets through promotional activities. Moreover, the NGO needs to establish itself to consumers as a legitimate business by maintaining their confidence in the product and by engaging new markets for eco-vegetables. However, the group's success in this venture is modest. In fact, according to numerous employees and *Negocio Orgánico* management, weekly eco-vegetable bag sales slid steadily from nearly 150 orders per week at the end of 2009 to between 110 and 120 at the time of this study in early to mid 2010. This

constitutes a decrease of 20% or more of the business' total market. The section that follows will show that *Negocio Orgánico* efforts to expand markets are thwarted in many ways by its dual commitment to inclusive rural development with international funding on one hand and increasing the business' capability to scale up markets on the other. Caught between these often contradictory trajectories, the NGO achieves only mixed successes in each.

In order to ensure the economic sustainability of the eco-vegetable business, *Negocio Orgánico* must address consumer needs and remain competitive with other channels of food provisioning available to purchasers in *Quetzaltenango*. Doing so is especially important for the group, as word of mouth promotion is highly common among consumers of the eco-vegetable bag. According to a consumer questionnaire of eco-vegetable purchasers, nearly half (48%) of responding purchasers first heard about the bag from a friend. Further, 90% of respondents reported having recommended the bag to other friends at one time or another. It is therefore crucial that *Negocio Orgánico* maintain the satisfaction of these existing consumers in the interests of expanding the market for their products.

One way the NGO can do this is by addressing their needs and concerns. According to the same questionnaire from above, one of the major improvements consumers would like for the eco-vegetable bag is the ability to personalize its contents. Among the 29 responding consumers, over 30% reported that the most important change that could be made to the bag was the ability to personalize its contents. Despite the fact that this is a service already offered by

Negocio Orgánico, the group is not actively promoting it to consumers, often to the detriment of the business. One ex-buyer of the eco-vegetable bag stated that she quit buying it because of this lack of personalization. She explained, “There are vegetable I don’t eat and there are other vegetables that I really like to eat. I always [when purchasing the bag] still went to the market a little bit, sometimes to buy some extra things [not included in the bag].” (Emma, interview, May 10, 2010) Another frustrated purchaser complained,

You’re limited by the bag because [you say to yourself], ‘This week I’m going to get, this, this, and this [vegetable in the bag] but all I want is to make is a spinach salad. So we’re going to have all of these vegetables that we’re not going to use but all we really want is a ton of spinach.’ Or something like that.” (Hannah, interview, April 23, 2010)

One possible reason why this already existing feature of the business is not well known or widely promoted by *Negocio Orgánico* is the difficulty the group would face in coordinating this option, even on the smallest of scales. In the interests of maintaining current demand for the product, the NGO would be well served by making personalized bags to be delivered to subscribing consumers. However, coordinating and organizing this option would be nearly impossible. Organization in the packaging center is already deficient. Employees often work well into the night just to ensure that the uniform bags all contain the same items. Varied and special order bags would add complication to an already strained system of processing that is far from consistent and established. Further, coordinating the delivery of personalized bags would be yet another hurdle. Such a practice would require that drivers ignore a payment structure that gives them direct incentives to deliver bags as quickly as possible. Because they are

not shown their direct stake in the sustainability of the business, they would have very little reason to take the extra time to deliver personalized bags simply in the interests of expanding *Negocio Orgánico's* consumer base.

Perhaps an even bigger issue for *Negocio Orgánico* is assuring the condition of the vegetables in the bag upon delivery to consumers. Over 30% of responding consumers mentioned that they had received bags with bruised, overripe, or otherwise damaged vegetables. The NGO was aware that this had been a problem from the inception of the business. One interviewed employee indicated, "There have been complaints since we began about problems we have with the bag. Many things come out rotten or they are simply not there." (Josue, interview, June 9, 2008) However, the problem persists in spite of consumer complaints.

This issue, like that concerning product variation, can be tied to *Negocio Orgánico's* objectives for rural development. Because the organization attempts to integrate many small producers into its supply chain, the vegetables it delivers are the products of numerous microclimates and ecological conditions spread throughout San Carlos. For this reason, it is not uncommon for produce from one part of the valley to ripen faster or to react differently to processing and transport. One purchaser of eco-vegetables explains that, "The problem [with overripe or bruised food being delivered by *Negocio Orgánico*] is that it is not possible to aggregate from small parcels of land because of the climatic conditions. This is why the quality [of the produce] varies so much. (Gavino, interview, October 18, 2009)

However, even if the NGO were able to collect enough produce of a uniform durability and ripeness, they would still be forced to confront issues related to low human capital development among farmers and the fact that employees do not see a direct incentive to assure the quality and condition of vegetables upon delivery. Microenterprise employees, from the packaging shed to the delivery route, do not believe that they have enough of a stake in the business to concern themselves with these elements of customer satisfaction. Because their integration into decision-making and coordinating roles is limited, they do not see much use in developing new skills or putting forth extra effort to ensure customer satisfaction in these areas.

The issue of quality control, like the general inflexibility of the company in processing individualized orders, reveals how *Negocio Orgánico* is caught between competing goals in the realm of rural development and in meeting the market imperatives of efficient, profitable business building. On one hand, there is a need to expand consumer markets for their produce, requiring a degree of efficiency and viability in large-scale processing and production. On the other hand there are the goals of participation, inclusion, and vertical integration of farmers with potentially low human capital and efficiency. Moreover, the NGO is caught between the need to remain competitive and expand consumer markets for the sustainability of the business and the need to develop among farmers a value for the skills being taught and an enterprising attitude toward the work they do for the enterprise.

The conflict cuts to the core of *Negocio Orgánico*'s philosophy. It is an organization occupying a marginal space between the needs of market-based sustainability and profit generation and participatory rural development that is underwritten by external funding from international aid agencies. It is this aid that is at the same time the making and unmaking of the *Negocio Orgánico* project. With this funding, the NGO has been able to continue giving human capital development seminars to farmers and putting some to work in various aspects of the business. At the same time this aid has shielded them from the need to build an efficient and competitive business model capable of surviving profits from sales alone. Nowhere is this contradiction more apparent than in *Negocio Orgánico*'s efforts to promote the eco-vegetable by engaging new markets of urban consumers.

Negocio Orgánico in the Market

In early May of 2010, the Second Regional Nutrition Fair took place in front of the historic municipal theater in *Quetzaltenango*. Sponsored by a growing network of urban activist groups, restaurants, and development organizations in *Quetzaltenango*, the Fair was well publicized and drew several hundred visitors over the course of two days. Activities and events such as food tastings, lectures by guest discussants, street theater performances, and documentary film screenings reinforced the fair's general theme of, "Good, Clean, and Just" ("*Buenos, Limpios, Justos*") foods. In addition to these activities, the Fair also featured a small market where local vendors and restaurants sold specialty food products and other goods.



FIGURE 5.5: VENDORS SETTING UP FOR THE 2010 REGIONAL NUTRITIONAL FAIR IN QUETZALTENANGO

The Fair was focused on promoting alternative consumption habits among urban consumers. The aim was to pose a direct challenge to conventional systems of food provisioning that are seen by participants as unfair, exploitative, and unsustainable for both producers and consumers. Emphasizing the importance of local, organic, and fairly traded foods, organizer claimed in publicity materials that, “This fair attempts, through educational and promotional activities, to propel a new culture of consumption that is based in respect for nature and human beings. In pursuing these ends, we [the promoters] support the consumption of organic and local goods as a counter to the global model of production that currently drives an unequal logic of production, distribution, and consumption.” To realize this goal, organizers proposed two objectives for the Fair. These were, “The construction of a regional network of nutrition that

privileges local consumption in opposition to the savagery of global commerce.” and “The promotion of critical conscience among urban consumers concerning the culture of consumption and how this can positively or negatively affect networks of production and distribution of foods.”

The Fair was brought to the attention of the *Negocio Orgánico* staff by numerous outside sources, including restaurant purchasers of eco-vegetables, partnering NGOs, and even the fair organizers themselves. Organizers went so far as to offer the NGO a free stall from which to sell products and promote the business in the Fair’s marketplace. In spite of these efforts to get *Negocio Orgánico* to participate, the NGO did not do so. Speaking of *Negocio Orgánico*’s lack of promotional presence, one worker of a partnering NGO commented, “I think there can be a big interest [in eco-vegetables among consumers]...For example, last week there was a nutrition fair...That would be a good contact for them [*Negocio Orgánico*]...but they weren’t selling things or making promotion [in the Fair]. (Emma, interview, May 10, 2010)

The seeming lack of interest in promotion demonstrated by *Negocio Orgánico* in this situation reappears frequently throughout the program for commercializing the eco-vegetables. In spite of the fact that the future survival of the business depends on increasing revenue, the NGO is not making successful attempts at promoting the eco-vegetables to new markets of consumers. Discussing her frustration with this lack of effort in promotion, the former coordinator of a partnering NGO, Entremundos, commented,

I think they [*Negocio Orgánico*] could do more publicity if they wanted to raise sales. Even the bag [of eco-vegetables] is without change. They don't make publicity at all at this moment. Even when I was working at Entremundos, I offered them free publicity in the magazine and they never got back to me....A half page [ad] is normally 500 [Q] and the smaller ones are like 200, 300, depending... I also told them, "You can write or we can find someone to write...in the Entremundos magazine. They'd publish it for *free*." I also invited them for the workshops in Entremundos but they never came...So I think they can definitely have some space, for example in this magazine. Which is just one of the so many things they *could* do, right? (Emma, interview, May 10, 2010)

As in the areas outlined above, the NGO's difficulty with promotion activity and engagement with nascent markets like those represented in the Nutritional Fair, highlight the contradictory nature of *Negocio Orgánico* project goals. Despite the fact that the long-term success of the business depends on generating revenue by increasing demand for the product, *Negocio Orgánico's* program is not securing this economic goal. Part of the reason for this is that, from its inception, the group has been supported in large part by funding from external donors. For this reason, they have no exposure to building a business that is self-sustaining on profit alone. Occupying a space that is neither pure development project nor pure market-based enterprise building, *Negocio Orgánico* appears caught between dependence on development funds and the formation of a business that is viable, self-sustaining, and profit-generating. In order to foster producer engagement in the commodity chain and *Negocio Orgánico* business, the group requires funds to reinvest that can only be generated through market expansion. However, market expansion cannot be realized until producer engagement and human capital is such that the *Negocio*

Orgánico chain is capable of reorganization to meet the flexibility and efficiency needs of mass production for larger markets. Caught in this way between two diverging paths, the NGO has little choice but to continue straddling this line between externally supported rural development and the market.

Dependence and Sustainable Market-Led Development

This chapter has been an attempt to highlight the ways an NGO navigates the spaces between pure market participation and participatory rural development in Guatemala. It has been shown that *Negocio Orgánico*, much like ATQ, must seek credibility for their program and activities through partnerships with funders, producers, and consumers. In official communications and promotional materials, *Negocio Orgánico* creates a role for itself as a trainer and instructor that imparts human capital to farmers as well as temporary collaborator in the building of a viable business venture. In this way, it seeks to secure its own legitimacy in the eyes of international funders by creating a set of concrete goals and activities using the tropes of participatory rural and market-based development discourses.

However, what is easily accomplished on paper becomes problematic in practice, as contradictory goals frustrate many of the organization's attempts to build the necessary relationships with actors on the ground for their achievement. Overall, it has been shown that there are fundamental tensions between meeting the imperatives of large-scale production for the economic sustainability of the business on one hand and the NGO's efforts at pursuing rural participatory development reliant on external funding on the other. The NGO's attempts to

secure these objectives simultaneously have produced a mixed record of success and failures in both the production and commercialization aspects of the eco-vegetable business.

For production, the NGO has enjoyed success in establishing itself to farmers as a mode of vegetable sales that is in several ways preferable to other options of commercialization. Further, *Negocio Orgánico* has also provided to farmers opportunities to learn new things and enjoy some economic rewards through human capital development and employment. However, the organization still struggles with engaging producers as stakeholders in these aspects of the commodity chain due to an inability to provide them with sufficient economic incentives and opportunities for involvement in the *Negocio Orgánico* business. Many producers are not in the position to apply the skills *Negocio Orgánico* promotes as human capital. For this reason, many workers approach their involvement in the business as paid work that is done for a separate employer.

On the commercialization side, vital areas of consumer need are not being met and *Negocio Orgánico* is limited in its ability to engage key consumer markets for organic produce. These barriers highlight the conflicts between the NGO's interests in building a viable business according to the laws of pure market and rural development subsidized by international aid. Caught in an ambiguous space between the market and dependence on development aid, *Negocio Orgánico* cannot expand into emerging markets for organic produce due to inefficiencies in the production chain that persist in part because the business

has never had to be self-sustaining. *Negocio Orgánico* has not yet had to put a plan for market expansion into practice because the safety net of development aid has been available since the NGO's inception.

Overall, the market-based development NGO *Negocio Orgánico* faces numerous barriers to realizing any one goal in their production or commercialization activities. Neither here nor there, the group's efforts to pursue both rural development and market-based business building agendas have frustrated attempts on both sides. The NGO becomes ensnared in a catch-22 situation where, due to a small consumer market for eco-vegetables, it cannot provide producers with sufficient incentive to commercialize or work for the long-term sustainability of the business. At the same time, it cannot expand its consumer market due to the inefficiencies that have been nurtured by the subsidies of development aid intended to increase producer vertical integration. For this reason, the NGO is largely unable to fully realize either of its explicit goals of producer vertical integration or sustainable microenterprise development. However, as will be shown in the following chapter, both ATQ and *Negocio Orgánico* programs successfully meet numerous objectives held by participating *producers*. Despite the barriers faced by the NGOs in their efforts to deliver on many of the intended goals put forth under their respective development programs, they do provide farmers with numerous secondary and supplementary benefits that keep them involved in spite of these difficulties.

VI: PRODUCER PARTICIPATION AND VALUES FOR RURAL DEVELOPMENT PROGRAMS

The arguments put forth in the previous chapters concerning the activities of the development NGOs ATQ and *Negocio Orgánico* take as their starting point the fact that the organizations discursively create a space for their work through official documents and other forms of communication with funders. In doing so these organizations structure subsequent relations with producers, consumers, and other outside actors along the food chain. I begin this chapter by instead moving backward from NGO activities to explore the conceptualizations of San Carlos communities from which the problems identified in these documents are derived. Following the development critiques of Scott (1998), Li (2007), and Ferguson (1994), I will employ ATQ community diagnostic reports and summaries of producer needs in San Carlos to argue that the problems identified by the NGOs stem from an overly simplistic picture of economic and social relations in these communities. I will argue that NGO depictions of these hamlets as isolated agricultural communities, divorced from commercial markets and reliant on subsistence agriculture as their primary activity, have far reaching consequences that shape the results of the program. While allowing the organizations to present to funders solutions that directly address the problems of rural development according to their models, these solutions do not always reflect the true interest or needs of producers in these communities.

In this chapter I show that life in San Carlos experienced by producers is often quite different from such constructs. For this reason, the values for the ATQ/*Negocio Orgánico* program held by POSC members are not necessarily those intended as core goals by the NGOs. Largely bypassing the explicit

economic and agricultural development objectives of the organizations, producers continue their involvement in the program principally because of the less tangible, unintended impacts of the NGOs' activities. Many producers continue to participate not because of economic incentives or the potential for vertical integration, niche marketing, or building a business. Instead, producer goals have more to do with socioeconomic relations in San Carlos as they experience them. More generally, the ATQ/*Negocio Orgánico* experience in San Carlos is a testament to how the unintended consequences of integrated development projects can provide significant benefits to participants, even when they are only modestly successful in their most central and explicit goals.

The ATQ Participatory Rural Diagnostic

The agricultural scientists and staff of the NGO ATQ develop their rural development program activities according to the conclusions reached in rural diagnostic reports conducted in each of the communities in San Carlos. These documents employ numerous data collection techniques including field walks, interviews with village residents, and participatory mapping in an attempt to determine the particular needs of a given community. Written mainly by ATQ agronomists or student interns from the *Quetzaltenango* branch of the University of San Carlos, these documents are intended to identify key areas of intervention that may guide NGO program activities in San Carlos. Though these reports are written exclusively by agricultural scientists, they attempt to integrate unique historical and socioeconomic information about each village to produce a broader picture of the problems faced by inhabitants in context. On the basis of the

analysis of these multiple factors, diagnostic reports attempt to offer more socially, economically, and culturally appropriate solutions to barriers to development identified through the research.

The structure of the diagnostic reports for the San Carlos villages in which ATQ programs operate is fixed. The first section of a report elaborates upon the general purpose of the investigation and the methods of data collection employed in the study. Across all reports, the overall objective is the creation of development programs and initiatives through a more inclusive analysis that views agricultural problems in their social, economic, and historical contexts.

One report explains,

...this diagnostic document contains a characterization and description of the economic, agricultural, livestock, and social problems of the Canton of *Comunidad de la Loma* of the Valley of San Carlos, Municipality of *Quetzaltenango*. The document was conducted with the fundamental objective of knowing the area of study, the population, and its needs and limits in order to later establish and execute projects that allow for its socioeconomic and cultural development. (ATQ Diagnostic Report 2001a: 4)

Emphasizing the importance of integrating these factors into the rural diagnostic, one report begins by challenging the limited scope of traditional agricultural analysis, arguing that, "...the base of the [traditional] analysis of the components [of agricultural systems] has been in an isolated fashion, without consideration of their interactions. This atomistic focus is still central to traditional agricultural investigations." (ATQ Diagnostic Report 2002b:4) By contrast, the modern rural diagnostic report diverges from this path by, "analyzing the agricultural, livestock, and socioeconomic systems of the community...as a system, knowing the

relationships between components.” (ATQ Diagnostic Report 2002b: 4-5).

Overall, as these introductory sections of the reports explain, the rural diagnostic is an attempt to integrate many elements of the social, economic, and historical context of a community into the analysis of the problems it experiences with agricultural development. The diagnostics claim that the only way to create and carry out successful development activities is to take account of these contextual factors.

Just as all of these diagnostic reports conducted by or in conjunction with ATQ emphasize the importance of integrated programs for rural development, they employ similar methods of data collection. Apart from personal interviews with village residents to explore topics such as, “socioeconomic characteristics, social organization, average education, land tenancy, health, and types of [economic] sectors” (ATQ Diagnostic Report 2002a: 4-5), investigators also collect data on local availability of natural resources relevant to the needs of agriculture. They collected this data via observation during the fieldwork phase of the project during which the agronomist conducts numerous visits to farmer fields to collect information on soil types, water availability, topography, and other areas pertaining to agricultural production. The investigator then merges these findings with information from secondary sources concerning local climate, geography, and community distance from nearby points of interest.

Following the portion of the diagnostics in which these methods are described, the reports then go on to outline the findings of the research in a “Results” section. With some variation between reports, this section is generally

divided into findings in the areas of geographic and environmental characteristics of the village, its level of infrastructural development, the socio-economic and demographic features of its population, sectors of economic activity, and local agricultural production. Throughout these sections, the report's author makes an effort to consider all of these aspects of village life and how they do or do not affect the level of development and wellbeing of the village's population.

The final section of the diagnostic report contains a summary of the major findings of the researcher and his or her recommendations for the goals and activities of subsequent development initiatives in the community. Including agricultural and non-agricultural issues alike, the recommendations are an attempt to address the problems faced by villagers as well as the conditions that give rise to and sustain them. For this reason, the recommendations of the ATQ diagnostics extend beyond issues of agricultural production and refer to many socioeconomic arrangements that affect development at the village level. These findings are then directly integrated into both ATQ and *Negocio Orgánico* activities and interactions with POSC producers in each of the villages. In this way, the diagnostics provide a blueprint guide for NGO activities and goals in San Carlos.

Beyond format and method, there are similarities in the ways that the diagnostic reports used by the NGOs portray the villages of San Carlos and the barriers to development faced by their populations. The following section will argue that there are recurring themes in the manner that these reports portray village life, impacting the types of conclusions reached and activities integrated

into ATQ and *Negocio Orgánico* programs. Specifically, all reports concerning the villages in San Carlos tend to emphasize specific barriers to development and problems for which ATQ and *Negocio Orgánico* have solutions that fit within the philosophical realm of market-based agricultural development. Result sections, conclusions, and recommendations emphasize specific features of village life while downplaying or omitting others. In doing so, they create an image of communities whose needs match exactly the development programs of the NGOs.

Specifically, in this section I show that, through these diagnostic reports, NGO representatives emphasize or downplay certain types of information to portray the communities of San Carlos as being primarily agricultural, isolated from and un-integrated into commercial markets, and lacking economic diversification. While these three major issues fit well with the development plans of the NGOs, they do not wholly reflect the realities of village life as experienced by POSC producers. For this reason, producers report that such goals are low priorities for their participation. Instead, they tend to cite unintended or secondary impacts of the NGO programs as their principal reasons for continuing to participate. Unlike the specific core goals sought by the development program, the motives for participation described by producers reflect their actual needs and objectives for the future. For this reason, they see value in remaining active in POSC in spite various cited drawbacks.

San Carlos Communities as Agrarian Economies in Transition

Throughout the rural diagnostic reports, villages in San Carlos are portrayed as being agricultural and caught between two competing economic bases. The documents consistently emphasize the centrality of agriculture as the economic core of these communities. One report cites agriculture as a defining characteristic of the community. Mentioning it in the opening sentence of the report, it states, “This diagnostic was produced in the village of *Comunidad de la Neblina*, a community situated in the Valley of San Carlos, *Quetzaltenango*, whose population is indigenous and of Quiché-Maya descent and dedicated principally to agriculture.” (ATQ Diagnostic Report 2004:2) In describing the economy of another community, another report finds, “The most important activity of the population of the canton of *Comunidad de la Montaña* and the base of its economy is agriculture.” (ATQ Diagnostic Report 2002c:20)

This same report then goes on to describe two major paths taken by agriculturalists in this area. On one hand, it finds that the majority of farmers principally dedicate themselves to subsistence agriculture and the cultivation of mixed plots of corn, beans, and squash. On the other, it notes that farmers also engage in the production of NTAE and other commercial vegetables on a smaller scale. Another diagnostic report, describing the same scenario, portrays farmers in San Carlos as being in a transition between subsistence and commercial agriculture. In this report, ATQ is given the role of fostering this transition. It argues, “The principal crop is corn, but there are already farmers who are working in conjunction with ATQ to cultivate different vegetables and develop effective cultivation techniques to obtain greater development” (ATQ

Diagnostic XC, N.d.:16) Deploring the inefficiency of subsistence agriculture while spending pages proving the economic efficiency of commercial agricultural production, the diagnostic cites among its conclusions that, “One of the problems in the canton of *Comunidad de los Pinos* is that the farmers are accustomed to traditional agriculture, making problems for the relationship between them and agronomists. The farmers, therefore, only have corn and beans as a principal [source of] income.” (ATQ Diagnostic Report 2006: 13) Echoing this sentiment, another report brings up subsistence agriculture in its conclusions by stating, “The production of corn is uneconomical, generating losses for the farmer and their family.” (ATQ Diagnostic Report 2004: 30)

Overall, these reports portray the villages of San Carlos as being economically dependent on agriculture that is undergoing a transition in which inefficient subsistence production is being replaced by the cultivation of commercial crops. As hinted at by the quote above, the documents assert that a group like ATQ can play an active role in this transition by offering farmers technical assistance and incentives to transition from subsistence cultivation to more economically lucrative production of non-traditional crops. Recommending more technical assistance as a key to harnessing commercial agriculture as a development strategy, one diagnostic report indicates, “With technical assistance, [farmer] organization would be promoted, as well as good cultivation techniques. Farmers would have more leverage with consumers of their products with better administrative knowledge and knowledge of commercial cultivation.” (ATQ Diagnostic Report 2001a: 41) According to this report and

others, because they are caught between subsistence and commercial cultivation, economic development in these communities has stagnated. For this reason, they require technical assistance and a demonstration that commercial farming is more efficient and profitable than subsistence cultivation. Based on these conclusions ATQ and *Negocio Orgánico* activities focus on promoting to farmers commercial agricultural production as at least a partial replacement for subsistence crops.



FIGURE 6.1: SAN CARLOS HILLSIDE PLANTED IN *MILPA* FOR SUBSISTENCE

San Carlos Communities as Isolated from Commercial Markets

According to the diagnostic reports, adoption of new crops and technical assistance are still not enough to bring rural development to San Carlos. Development through commercial agriculture is stymied by the communities' isolation from lucrative markets. The majority of the diagnostic reports argue that farmers are not profiting as they should from commercial agriculture because

of their inability to directly control the marketing of their produce. This is because they are left out and isolated from marketing opportunities by various factors. For this reason, the diagnostic reports portray San Carlos communities as economically self-contained entities, offering very little opportunity to inhabitants for integration into commercial markets.

The reports cite many barriers to integration of communities into commercial markets, giving rise to, “deficient channels for product commercialization” in San Carlos. (ATQ Diagnostic Report 2001a: 25) Pointing to the ubiquitous presence of intermediary purchasers in commercialization chains, one report argues that farmers are not progressing economically because, “very few sell [produce] directly in markets” (ATQ Diagnostic Report 2001a: 45). Instead, development is inhibited, as farmers sell at a loss to these middlepersons. Another report finds that, “Adequate systems of agricultural commercialization do not exist [in San Carlos] due to a lack of institutional support, that would orient them [farmers] to new markets.” (ATQ Diagnostic Report 2004: 15) Citing poor transportation infrastructure, another report argues that a major barrier to farmer integration into markets is, “the highway [connecting the community to *Quetzaltenango*]. Because it is mainly dirt and rock, it makes transportation to the community difficult.” (ATQ Diagnostic Report 2002b: 20)

For these reasons, the diagnostic reports tend to portray communities as lacking development due to their isolation and inability to access more lucrative markets. Descriptions of community economies contained in these reports

focus exclusively on the inadequacy of village level structures. Concerning the economy of one village a report argues that development is limited because, “there is no specific market [in the village]. Therefore, inhabitants have to travel to the city of *Quetzaltenango* to make daily or weekly purchases.”(ATQ Diagnostic XC, N.d.:12) Another report, finding little marketing opportunity for commercial farming inside the village, argues that one “principal problem” for community economic development is that farmers must, “find markets for the products that they harvest.” (ATQ Diagnostic Report 2001b:24)

Overall, ATQ documents tend to portray community economic activity in isolation and excluded from the opportunities offered by larger commercial markets. For the reasons cited above, the diagnostic reports all include the general argument that, in order for economic development to take place in San Carlos, inhabitants must be connected to larger markets for agricultural goods. Therefore, one major problem for development is the fact that farmers have insufficient opportunity to market their goods directly. The solution to this problem would then be to integrate farmers into larger markets through new commercial channels like those offered by *Negocio Orgánico*.

San Carlos Communities Lacking Economic Diversification

One final point that is made repeatedly across ATQ community diagnostic reports is that San Carlos communities lack economic opportunity and diversification in employment. Drawing on the dialogue of isolation described above, reports find that a major barrier to development is that village residents have few employment opportunities beyond conventional agricultural production.

Citing the underdevelopment of service and manufacturing sectors inside communities, reports propose that a major barrier to development is too, “few processes of economic transformation.” (ATQ Diagnostic Report 2004: 16) As a result, there is a scarcity of, “economic investment and few work opportunities” available to residents (ATQ Diagnostic Report 2001a: 42).

As a result many of the reports describe community residents as engaging in just a few minor economic activities outside of agriculture. According to one report’s description, there is barely any employment for the village population outside of agriculture. In an extremely brief description of nonagricultural employment available to residents, the report’s author explains, “There are a few inhabitants who practice embroidery, for example making tablecloths. Others make baskets for sale. There are tailors and one metalworking workshop that serves the community.” (ATQ Diagnostic Report 2001a: 18) Other diagnostic reports have similarly brief and limited descriptions of the economic opportunities available to community members. According to one report, the only nonagricultural activity in one village consists of, “3 *nixtamal* (corn flour) mills distributed in different places in the canton, three stores selling various items...[and] a group of a few women who make *güipiles* to sell.” (ATQ Diagnostic Report 2002a: 13). The employment situation is described by another ATQ diagnostic as being particularly difficult for women. The author reports that, “Women exclusively dedicate themselves to the care of children and the home. They rarely participate in agricultural activities, though a few work making

artisanal products like *güipiles*, *gabachas* (traditional skirts), etc. that they then sell within and outside the community.” (ATQ Diagnostic Report 2002b: 20)

Overall, NGO document accounts give a bleak impression of the economic opportunities available to village residents in San Carlos. Because of their lack of economic diversity, isolation from markets, and engagement in subsistence agriculture development in these communities cannot help but follow the trajectory outlined by ATQ and *Negocio Orgánico* programs. Through such programs, residents in these seemingly agrarian economies begin to see the value of dedicating more land to commercial cultivation instead of inefficient subsistence crops. Further, their physical and economic isolation from lucrative commercial markets can be overcome via sales to *Negocio Orgánico*. Finally, because there is an apparent surplus of labor due to lack of economic diversification and employment opportunity, the program can help create new sources of income for residents by revalorizing agriculture production through labor intensive technologies associated with organic agriculture.

Despite the fact that these portrayals of San Carlos communities fit well with the core goals of programs designed by ATQ and *Negocio Orgánico*, they tend to omit numerous aspects of village economies that complicate the neatness of this picture. In the following section I will show that community resident accounts of their own economic and social activities often diverge greatly from the descriptions contained in the diagnostic reports. Further, regional survey data collected for this project frequently stand in stark contrast to the arguments made and conclusions reached by the diagnostic report authors.

Using these data, I argue that producers do not see as much value in the core initiatives of agricultural diversification and commercial market integration in the *ATQ/Negocio Orgánico* program. They instead continue to participate and dedicate their time and effort to the program for reasons that, though secondary or unintended by the NGOs, reflect their own goals for development based in the reality of community life as they experience it.

Community Structures and Economic Activities in San Carlos

To be sure, there are numerous exceptions within the diagnostic reports to the themes outlined above. Findings are periodically presented that contradict these general patterns. However, the conclusion sections of the reports all come back to and base their recommendations for development on these constructs of life in the communities. Their portrayal of communities in San Carlos as being caught in a transition between subsistence and commercial agriculture as their primary economic base fits well with the ATQ program activities to promote non-traditional vegetables. Within this scenario, ATQ brings an opportunity for development to primarily subsistence farmers who simply have yet to see the potential benefits of non-traditional cultivation.

However, the picture of communities caught between an inefficient, traditional subsistence economy and commercial cultivation does not reflect the reports of many village residents consulted for this study. The image that emerges from these respondents is a situation in which commercial agriculture has been well established among some producers in the area for several generations. Far from ignorant of the potential benefits of non-traditional

cultivation, survey respondents from San Carlos consulted for this study reported having had, on average, over a decade of experience working in commercial agriculture. Further, 38.4% of survey respondents reported having over 20 years of experience in commercial cultivation, often crossing generations of family members. For example, when asked if she had previous experience in commercial agriculture before the arrival of ATQ, one POSC member reported, “Yes...since my parents came here [to the village]. In the case of my husband too...his father sowed [commercial] vegetables....Also my father, we sowed together. He grew leek...as well as onion.” (Rosa, interview, May 24, 2010)



FIGURE 6.2: SAN CARLOS HILLSIDE PLANTED IN COMMERCIAL CROPS

Despite the fact that commercial cultivation is well established in San Carlos, many community members who had previously sown commercial vegetables had either scaled back or completely given up the enterprise. Instead of being ignorant of the benefits and drawbacks of non-traditional vegetable

farming, these producers had tried vegetable cultivation only to find that it did not suit their economic needs. Often reverting back to subsistence cultivation for household consumption, farmers reported discontinuing commercial vegetable farming for a variety of reasons, including high input costs, low profitability, and market risk. One interviewee reported having given up selling non-traditional vegetables after several years because of too much competition within the region and falling profitability. Recalling the previous year when she decided to stop, the farmer explained, “Last year [the price for] onions didn’t rise. *No one* in this area was able to sell...because there was so much competition...This is because every year everyone plants onion. For this reason the price goes down and you can’t make any money.” (Irma, interview, May 24, 2010) Another producer, having experimented with commercial vegetables, had reverted back to exclusively sowing flowers for sale in nearby markets. When asked what crops were most important as a source of income, she indicated, “For us, flowers because we already know how to work them well. Vegetables, on the other hand, always have disease that we can’t control...Therefore, we [now] only plant what doesn’t attract disease.” (Carmelita, interview, May 17, 2010) Finally, for some producers vegetable cultivation was less important for reasons having to do with household economics and plant life cycles. One producer argued that she had scaled back vegetable cultivation to focus on flowers because, “For flowers...we can harvest [and sell] them every eight days. With vegetables we sow them, yes. But the day you sell them, you sell everything [at one time], leaving us with nothing...One day and everything is gone. With carnations,

however, this is not the case. The carnation will last us three years. Yes, three years if you treat it well.” (Ingrid, interview, May 18, 2010).



FIGURE 6.3: FLOWER CULTIVATION IN HOME GARDENS IN SAN CARLOS

Just as with commercial cultivation, integration into larger agricultural markets is not something unknown to farmers in San Carlos. Unlike many diagnostic report conclusions that producer villages are isolated and poorly integrated into greater agricultural markets, community members consulted for this study reported frequent activity in numerous outside markets, principally in *Quetzaltenango*. According to farmer survey results, a full 70% of POSC farmers reported selling produce most frequently in the open markets of *Quetzaltenango*. Taking a private pickup or one of several busses that serve the San Carlos area on a daily basis, 64.9% of member farmers reported selling the majority of their vegetable harvests in outside markets.

Reports from interviewees tend to confirm the high levels of market engagement reflected in the survey. One producer reported, “In my case, when I have vegetables, I go [to the market] three times a week [to sell]. I go Monday, Wednesday, and Friday. Sometimes, I even go on Saturday. If I didn’t, there wouldn’t be another way to get rid of the vegetables and they would rot out here.” (Manuela, interview, May 20, 2010) Another producer from one of the more remote villages in San Carlos indicated, “When we have vegetables to sell, we go [to the market] every day.” (Clara, interview, May 4, 2010)

Commercial cultivation is well established in San Carlos. Many farmers practicing other forms of cultivation have done so after experimenting with or cultivating non-traditional vegetables in their own fields. Also well established is the integration of these communities into commercial markets for agricultural goods in *Quetzaltenango*. In fact, community member involvement in larger economies outside of San Carlos does not end with agricultural markets. Many community members engage in larger labor markets by maintaining a diverse set of paid work activities outside of their home communities. Paid employment often generates more household income for community residents than agriculture. Far from being principally agricultural economies lacking diversification, the communities of San Carlos are extremely varied in terms of employment and income generating strategies. Overall, survey respondents from San Carlos reported engaging in over 20 different types of paid nonagricultural work, including construction work within Guatemala, housekeeping and laundry in *Quetzaltenango*, and a host of migrant work

activities in the United States and elsewhere. Over half of all respondents (64.6%) reported engaging in some form of paid employment beyond farming. 17% reported holding two or more paid jobs.

Many interviewed community members preferred to combine agriculture with paid employment as a form of economic diversification. One interviewee claimed that mixing agriculture with wage work formed a type of security for his family. He explained, "Many times there isn't enough work for everyone. Like my son...he studies *and* works. If he can't find work through his education, he can always stay in *el campo* (the countryside) to work. He can plant. He can eat without having to buy food. This is the idea that we want to give to our children and grandchildren." (Josue, interview, May 28, 2010) Some respondents, however, did not want their children to continue in agriculture at all. Discussing her ambitions for her children, one informant stated,

My oldest [child] has already graduated and is working in an office. However, my second oldest quit school in the sixth grade. He didn't want to study anymore...He didn't like it. He said it was difficult. I tried to enroll him in a high school (*un instituto básico*) but he refused. I told him, "You will regret this later because education is useful. It will help you find a better job." But he still refused. Now, he works with a hoe, machete, and pickaxe. I tell him, "This is the work you chose. You will be carrying that hoe for the rest of your life because you refused to study."...Now he's just a farmer like my father. (Josefina, interview, May 11, 2010)

This informant's wishes for her son were education and some kind of professional work outside of agriculture. She later went on to describe an ideal work scenario by stating, "Studying helps a person...[without it] we cannot work sitting in an office with a computer. We can't because we didn't study...I have

seen, however, women working in offices with their own desks.” (Josefina, interview, May 11, 2010)

Unlike the isolated, economically uniform agricultural villages described in many of the rural diagnostic reports, the image of villages in San Carlos that arises from these interviews and survey is more economically diverse, integrated into numerous markets, and often non-agricultural. Commercial cultivation is well established in the region, with some farmers dropping in and out for a variety of reasons. Most farmers are aware of the economic benefits and drawbacks of non-traditional vegetable farming. They regularly participate in commercial markets for vegetables in nearby *Quetzaltenango*.

Further, agriculture is often only one of a host of different strategies for income generation for households in San Carlos. Many families in the communities do not hold agriculture to be their most important income earning activity. They instead emigrate outside of their home villages to engage in a variety of paid work opportunities. For these and other reasons outlined below, the true impacts of the ATQ and *Negocio Orgánico* programs according to producers are often those unintended and minor aspects that are outside of the primary goals of the NGOs themselves.

POSC Members in Context: The Demographics of Participation

Within the greater context of the communities of San Carlos, POSC members are a group that is distinct from the general population in many ways. Firstly, POSC survey respondents tended to report lower monthly household incomes per number of residents than did their neighbors. Where members

reported a median household income of 1100.00Q per month, nonmember farmers reported 1500.00Q. The member group's mean monthly income of 1366.07Q per household was significantly lower than the 1597.84Q nonmember average at the $p < .028$ level.

Secondly, POSC members tended to be less engaged in agriculture than neighbors across numerous measures. Specifically, members reported less experience than nonmembers in agriculture as well as dedicating less total land to agriculture. According to survey results, POSC members are not planting as much land as nonmembers. Members reported sowing a mean of 5.13 *cuerdas* in the previous planting cycle compared to the 7.23 *cuerdas* reported by nonmembers. The difference was significant at the $p < .06$ level. Further, member survey respondents tended to have less experience sowing vegetables than nonmembers. Whereas POSC members reported a mean of 12.9 years of experience farming vegetables, nonmembers averaged 16.9 years of experience with non-traditional vegetable planting. The difference was significant at the $p < .04$ level.

Dedicating less time to agriculture, POSC member engagement in paid employment exceeded that of nonmember community residents by a small margin. As mentioned above, in the total survey sample, 64.6% of respondents reported engaging in paid work outside of agriculture on their own lands. The POSC member average of 68.3% was slightly higher, with 18% of these farmers reporting having two or more paid positions away from work on their own

farmers. Overall, POSC members are engaging in a host of paid income-earning activities that equal the economic diversity seen at the village level.

The general picture of POSC members emerging from this demographic sketch reveals that they tend to be poorer than other village members and less engaged in farming by amount of land sown and years experience cultivating non-traditional vegetables. Further, POSC members are just as likely as neighboring farmers to engage in wage work away from agriculture on their own lands. One final demographic quality that sets POSC members apart from village-level features is related to the nature of wage work in San Carlos. The POSC membership is overwhelmingly comprised of women. In fact, 93% of the association's membership is female. According to many interviewees, much of the reason for this is that their spouses spend the majority of their days working for wages outside of the communities. When asked why there were so few men participating in POSC meetings, one respondent replied, "It's because they [the men] go to work...They have their work in *Xela* [*Quetzaltenango*]...For this reason, they are unable to be here. Instead, the wives come. When the men are here, that is when they work [in agriculture]. They help the women then."

(Josefina, interview, May, 11, 2010).

In situations where men spend the majority of their working hours outside the community, women are increasingly responsible for managing agriculture for the household in addition to their other domestic responsibilities. Many female respondents indicated that they assume more and more work outside of the home as their male relatives engage in paid employment outside the community,

region, or country. This often includes managing family agriculture, as agricultural plots are generally closer to their villages of residence. According to several respondents, this allows them to more easily switch between domestic responsibilities and work in cultivation. Describing this balance between activities, one respondent explained, “We are women who work [in the fields]. This is what has helped us the most. In this community, almost all women *work*. With their babies on their back or even really pregnant, they’re ready to work and struggle (*luchar*) for it...With our children we work. If we’re pregnant, we work. This is how the children grow up in this village.” (Sara, interview, May 21, 2010)

Association member farmers are different from their neighbors in several key ways. In the sections that follow it will be argued that these specific characteristics, combined with the regional-level features outlined above, condition the impacts of the *ATQ/Negocio Orgánico* program and its primary benefits as seen by participating producers. Because POSC members tend to have lower incomes, engage in a diverse portfolio of income earning activities, are less active in agricultural production, and are principally women, the values they hold for the program do not necessarily correspond to those core goals of the program derived from diagnostic reports. However, these benefits are sufficient to compel members to remain active in POSC in spite of numerous costs in time and effort to themselves. Further, the benefits outlined by these producers comprise some of the most significant impacts and greatest successes of the *ATQ/Negocio Orgánico* program in San Carlos.

The Drawbacks of Program Participation Through the Eyes of Producers

Farmer association members consulted for this study brought up numerous reasons for their participation in the *ATQ/Negocio Orgánico* program. For producers, these benefits were sufficiently important to offset the necessary tradeoffs and drawbacks to participation that were identified in interviews and surveys. However, these disadvantages were enough to turn away many former members and others seeking membership in the association. The costs of participation discussed by producers centered on the extra time and effort one spends in the required activities put forth by NGO representatives. Several members argued that the requisite weekly meeting attendance was enough to drive many community residents away. In describing the requirements for involvement issued by POSC and the NGOs to farmers, one member immediately focused on meetings by stating, “The only requirement is that you attend the meetings. You just have to be present in all of the meetings, and the trainings that they give. There are many trainings...how to sow, how to cultivate, all of these. Diversification of vegetables...how to prepare the land...all of this.” (Carmelita, interview, May 17, 2010). When asked why other community residents did not join, another member brought up the issue of time by stating, “They [neighbors] don’t want to learn and they don’t want to spend their time...It’s because of their time, yes. They don’t have time to...do like we [POSC members] do. We come at midday for a couple of hours. There are those that don’t want this. They don’t want to participate.” (Clara, interview, May 4, 2010)

Some members saw the major drawback of the program as time spent in activities other than weekly group meetings. For example, one member indicated

that it was the group projects that took so much of her time. Discussing her volunteer work for the construction of a POSC greenhouse she stated, “Some don’t want to offer their time. They don’t want to participate...This is why many leave [the group]. Here’s an example. Right now we are already four months into the year. We haven’t received anything from the group but we still have to build this greenhouse...It will maybe benefit us later but it takes time. We have given so much time.” (Clara, interview, May 4, 2010)



FIGURE 6.4: POSC MEMBERS CONSTRUCTING A GREENHOUSE

Another member indicated that the principal disadvantage was the work and time required to maintain agricultural plots according to ATQ plans. She complained that benefits like gifts of organic fertilizer from POSC or the NGOs were often contingent upon more work and time in the field. She explained, “They [the NGOs] will bring us fertilizer in eight days...They’ve already come to bring us two sacks...But for this they will have to verify that we have completed all of the

work...that the work is done. If you don't work, they won't give anything to you...And it's *something* [difficult]...so that they can see that the fields are planted...So that they can see how we are working and what we've done.”

(Marisol, interview, April 20, 2010)

For the vast majority of member respondents, the key drawback to participation is the issue of time. This may mean time spent attending meetings and workshops, the additional time and effort required to volunteer in association projects like greenhouse building, or the increased time and labor expended in making compost heaps and other tasks associated with organic cultivation. The sacrifice of time is particularly difficult for women associates who have to divide their work time between several locations like the home, agricultural plots, and a place of formal employment in *Quetzaltenango*. However, they continue to faithfully participate in POSC and in NGO activities. Many report having been active members in the group for ten years or more. Members identified numerous reasons for engaging in the *ATQ/Negocio Orgánico* program. Although these reasons did not generally conform to the core missions of the NGOs, they are nevertheless significant in their impacts in the lives of responding members.

The Benefits of Participation According to POSC Producers

Economic Versus Non-Economic Benefits

As discussed in the previous chapter concerning the NGO *Negocio Orgánico*, the direct economic benefits for producers participating in the ATQ/*Negocio Orgánico* program are limited. Despite the fact that economic enrichment of producers and the transformation of nodes in the commodity chain for non-traditional vegetables are central goals of the NGOs, the impacts of their activities in these areas are not major incentives for producers. In a survey of 60 POSC producers in San Carlos, respondents were asked to identify important reasons for their participation in POSC and to select the most important of these. The benefits, selected due to their prevalence in open ended interviews with producers, are included in the table below.

1.	The opportunity to learn new things <i>(la oportunidad de aprender algo nuevo)</i>
2.	Education to protect the environment in agriculture <i>(educación para proteger las tierras en la agricultura)</i>
3.	Support such as fertilizers, seeds, etc. <i>(apoyo como abonos, semillas, etc.)</i>
4.	The opportunity to participate in a group <i>(la oportunidad de participar en un grupo)</i>
5.	More earnings from product sales <i>(más ganancias por el producto)</i>
6.	Transportation for the harvest out of the community <i>(transporte para la cosecha de la comunidad)</i>
7.	A fixed price for vegetables <i>(un precio fijo para el producto)</i>

TABLE 6.1: LIST OF BENEFITS TO PARTICIPATION IN POSC INCLUDED IN PRODUCER SURVEYS

Responses to survey items given by producers focused not on the direct economic impacts of the program but on other indirect aspects of participation pertaining to the social conditions of life in San Carlos. In surveys, the only direct

economic benefit to be ranked as the “most important” by producers was “more earnings from product sales.” However, this was ranked as the most important benefit by only three responding producers. Further, this was mentioned as a general benefit of the program by only 60% of respondents. The other direct economic intervention, “a fixed price for vegetables”, was not listed by any respondents as the most important aspect of the program and was identified by only 55% of producers as a benefit to participation in general.

Instead of these direct economic benefits, respondents focused on numerous secondary aspects of the program as their most important reasons for participation. Overall, the five variables mentioned by producers as most important are, “the opportunity to learn new things” (47.5% of total responses), “education to protect the environment in agriculture” (25.4%), “support such as fertilizers, seeds, etc.” (16.9%), “the opportunity to participate in a group” (5.1%), and “more earnings from product sales” (5.1%). The first two of these were listed as general benefits of the program by all respondents. Support in the form of gifts of seed and fertilizer was also popular, being mentioned by 91.7% of all producers as a general benefit of the program. Although more earnings from product sales and the opportunity to participate in a group were listed as most important by three producers each, a stark difference can be seen in the proportions of respondents that considered these to be general benefits of the program. Highlighting the primacy of non-economy benefits for POSC producers, the former was agreed upon as a benefit of the program by only 60% of respondents whereas 96% agreed that the latter was a benefit.

The sections that follow will place these benefits and others not included as choices in the survey in the context of social relations and economic participation in San Carlos outlined by responding producers. In doing so, they unpack the significance of these impacts of the ATQ/*Negocio Orgánico* program as discussed by POSC producers. In these sections I will show that the perspectives of producers concerning the program and POSC are deeply linked to the many ways that they and other village structures diverge from the diagnostic reports' construct of agrarian villages isolated from participation in larger commercial markets. Instead, the benefits they see to the program have less to do with market integration and income generation and more to do with changing social relations, the focus of commercial agriculture, and the position of women in what is seen by many residents as a *machista*⁴ society. Taken together, the aspects of participation discussed above show that many major impacts of integrated rural development programs like that of ATQ/*Negocio Orgánico*/POSC do not necessarily coincide with the core goals of planners. Instead, to appreciate the values for such programs held by participants, it is often necessary to look beyond the explicit goals put forth by planners and see how program activities are applied by producers to various aspects of their social and economic lives.

The Benefits of Education: Learning New Things with POSC

⁴ According to *Encyclopedia Britannica* "machismo" is defined as an, "Exaggerated pride in masculinity, perceived as power, often coupled with a minimal sense of responsibility and disregard of consequences. In machismo there is supreme valuation of characteristics culturally associated with the masculine and a denigration of characteristics associated with the feminine. It has for centuries been a strong current in Latin American politics and society"

By far the most important benefits mentioned by POSC producers were related to education and exposure to new ideas. Producer interviews concerning participation in the group nearly always came back to the interviewees' value for learning new things in ATQ/*Negocio Orgánico* seminars. In the San Carlos communities, opportunities for formal education are scarce. For this reason, participating community residents were eager to take advantage of any opportunity to learn and educate themselves. More generally, many respondents saw lack of education as a significant barrier to the economic and social betterment of their communities as a whole. For this reason, NGO instructional seminars, though not the same as formal education, were of paramount importance for group member participation.

Within the surveyed villages, average years of education reported by producer respondents was slightly under three years of formal schooling (2.76 years). None of the communities contain schools offering classes beyond the elementary level (*6° primaria*). For this reason, one POSC member lamented the fact that community members were on the verge of losing their value for education entirely. He stated, "We [community members] are accustomed to being poor and we *never* say 'Why don't I study something? Why don't I go [to school]? I could. Couldn't I?' Sometimes we are very conforming (*conformistas*)...All people want is to generate money...To have money, earn, and earn...to eat well and dress well. Many don't think about education." (Josue, interview, May 28, 2010)

As discussed above, due to widespread migration and community member engagement in paid work, the majority of POSC producers and participants are women. According to these female members, the community-wide lack of education is particularly concentrated among women. Many female interviewees described a childhood of watching their male relatives sent away to school while they stayed home to learn domestic duties with their mothers and grandmothers. Explaining why she was unable to be president of POSC because of her illiteracy, on sixty-year-old member stated,

[I couldn't be president because] I don't know how to read...For this reason I don't know anything. My parents didn't take me to school...No. They didn't want me to go. They said that women weren't worth taking to school...[that they were] only good for helping their mothers in the kitchen. They didn't enroll us in school...neither me nor my sister. My brothers, on the other hand, yes they enrolled them. The men, yes. And us women, no. Nowadays, however, more and more girls are going to school. They didn't teach us like that [in the past]. (Ingrid, interview, May 18, 2010)

When asked about educational opportunities across generations in her home community, another interviewee in her early 40s responded,

I still work here, just like always, in *el campo* (the countryside). But now [that I've been working as a domestic worker in *Quetzaltenango*], I realize that there the work is much easier than here [in agriculture]...This is what I tell my children, "Too bad my parents didn't allow me to study. I'd have reached a higher level." ...But they didn't let me study. I now give this opportunity to my children by they don't want to....My parents didn't want me to study. I wanted to finish basic education and move on to high school but they said, "No."...I wanted to study to become a nurse or something like that. During that time, there were many kidnappings, just like there are today. People would suddenly kill one another and everyone was full of fear. Because I was the only child [my parents wouldn't let me go to the city for school]. (Josefina, interview, May 11, 2010)

For this respondent and many other POSC members, the key benefit to participation with POSC is the ability to learn new things and grow educationally. She went on to say that she started working with ATQ, “because we saw that what they were coming to explain to us was useful...They’ve taught us a little bit of everything...They’ve taught us to make marmalades...onion powder...dehydrated vegetables...We’ve learned lots of things with them...We don’t have anything else like this here [in the community]. (Josefina, interview, May 11, 2010) Expressing a similar sentiment, another member stated, “We’ve learned a *lot*. Like I said, we’ve learned a lot with them [ATQ/*Negocio Orgánico*]. And that is, for me, the first thing. For me, I *like* it. I like the things that the group does. They’ve helped us. That is certain. It all stays in my mind...We meet with them every two weeks...Just like I said, it’s worth it because we’re learning good things.” (Miriam, interview, May 21, 2010)

Discussing education, many producers tied what they had learned in ATQ seminars to a desire to make agriculture more environmentally benign. Just as survey responses indicated that, “learning to protect the environment in agriculture” was a primary benefit of the program, interviewees also expressed a concern for learning to protect the environment and human health in agriculture. Focusing on agricultural knowledge and education, one member stressed the importance of learning to reduce agrochemical use. She stated,

A person has to have an interest in learning the things that they [the NGOs] are teaching...They give advice like how to make [drainage] trenches, how to apply fertilizers, what size and how much chemical. Sometimes a person uses too much [chemical]. For this reason they

explain these things to us. For this reason, a person needs to learn. This is why I joined the association [POSC] (Clara, interview, May 4, 2010).

Another respondent focused on addressing environmental and human health needs in agriculture by arguing, “According to what we have learned...organic agriculture only uses, for example, organic fertilizer. This is so that we don’t hurt the land, because too much chemical hurts the land. Also, one is hurting themselves. Sometimes when one goes to work, they feel a pain. We are hurting our own bodies in this way.” (Manuela, interview, May 20, 2010).

Overall, the educational opportunities offered by the NGOs are of primary importance to POSC members. In interviews, participants highlighted the value they have for education for its own sake.



FIGURE 6.5: POSC MEMBERS IN AN ATQ EDUCATIONAL SEMINAR

Largely left out of formal schooling during childhood, many adult community members, particularly women, see the opportunity to learn new things within

POSC as bringing to them the benefits of personal improvement and empowerment in a milieu in which women's education was not valued until recently. Further, as more and more women in San Carlos engage in agricultural and nonagricultural paid work outside the home, they are increasingly able to put many lessons and skill learned in such seminars to use. Most apparently in agriculture, participants in the group learn new techniques for cultivation that conform to their expressed views concerning agricultural sustainability and the protection of human health.

More indirectly, some participants are learning new skills and gaining experiences in the program that provide them with human capital that can be transferred to one or more of the other work scenarios in which they are engaged. Some even see the experience they have gained with POSC as a key to upward mobility. For example, one POSC member employee talked about her experience working for *Negocio Orgánico* as a stepping stone to better employment in the future. Describing her work and future plans she indicated,

I can't say, "Aww. They're [the NGOs] paying me poorly!" No. For me, everything is good. Even though it is tiring making marmalades...I'm learning....to work. I don't like every part of it but...I like working here, doing what I'm doing....But it is better that I [now] look for other options. I still haven't gone to college and will need to have better work. When I came here, I didn't have experience...It was difficult but now I do...Other jobs are now looking for people with experience like mine! (Margarita, interview, April 29, 2010)

Overall, the educational experiences offered by ATQ are applied by participants in numerous scenarios and aspects of their lives, making this the most popular reason for participation cited by POSC members.

The Opportunity to Participate: Cooperation, Extradomestic Activities, and Losing One's Fear

Apart from direct gifts of agricultural inputs like fertilizers and seeds, the next most popular benefit of the program cited by POSC producers was the opportunity to participate in a group. A repeated concern of village residents consulted for this study was a perceived lack of cooperation and sharing among community members in San Carlos. Many respondents claimed that a sense of self-centeredness and individualism (*individualismo*) had been spreading among residents in recent years. Numerous informants stated that neighbors were less and less apt to help one another, share agricultural advice, or work together in groups.

Seeing an economic connection, many claimed that egoism had grown out of high competition between too many producers selling goods in the same saturated agricultural markets. For this reason, neighbors were becoming less likely to volunteer to help one another without expecting some form of payment in return. Explaining the trend, one farmer indicated that, "People [in the community] are *very* individualistic. Therefore, they work and sell everything they have without thinking about other things. This is a *very* individualistic system [of agriculture]." (Jacinto, interview, April 30, 2010) Even advice concerning agriculture had become highly guarded by individual farmers and treated as a secret to be kept from neighbors who might take advantage of a personal farming strategy. As a result, when asked to whom she could turn for agricultural advice, one producer replied, "Mostly from the people who sell seeds and insecticides because here, within the community, we don't tell one another. People are very

egoistic and they won't tell." (Rosa, interview, May 24, 2010). Responding to the same question, another stated,

Everyone works to find out how to sow their own vegetables and they won't tell...anything. Like how we're talking here...we're discussing questions like "How do you cultivate?" or "How do you do this?" No...here [in the community] nobody asks questions like this to one another...There's a lot of egoism...because in vegetables there is a lot of competition...As you can see, the majority of our neighbors plant onion, onion, onion, onion. (Irma, interview, May 24, 2010).

According to the owner of one *agroservicio* in San Carlos, many customers went so far as to ask him to transfer their chemical purchases into unmarked containers so that they could hide their chosen brands from other farmers after leaving the store.

In the context of fierce competition among commercial farmers in small communities, respondents felt that POSC provided one of the few opportunities for residents to participate in a group together. Many saw the program as the only avenue for involvement in local groups. Describing the lack of community organization in her home village, one POSC member stated, "No, there isn't anything. That's for sure. There isn't anything. We're separated like that, each person looking out for their own harvest...how to sow, how to harvest, and how to sell. Here there isn't anything more than our group [POSC]. There are no groups between us in the community. There are no other groups" (Sara, interview, May 21, 2010). Focusing specifically on economic cooperation among community members, one long-time POSC member summed the purpose of POSC by indicating that,

The idea of all this, at least from my perspective, is that there aren't any groups organized to allow us to offer our products together in the markets...maybe in local markets... But there aren't any groups [of community members]. Therefore the idea is that we organize together so that we ourselves can come around to...to develop our own agriculture and sales and that we ourselves can sell our own products. It is so that we can say, "Yes we can do it." This was the idea when POSC was formed. (Josue, interview, June 9, 2008)

In fact, bringing community organization and the opportunity to participate in public groups is a priority frequently talked about by ATQ and *Negocio Orgánico* staff. Even though it is not one of the core priorities of the NGOs according to official statements and documents, it is a goal taken seriously by the organizations on the ground. The *Negocio Orgánico* coordinator explains,

The [POSC] meetings take place in groups. The sales of products take place in groups. This requires that you communicate with others and begin to lose your egoism that says, "I have my product and only I will sell it." Because, for example, the idea is that, as we [*Negocio Orgánico*] grow, we need say...500 broccolis. Within each [POSC] group, they should be saying to each other, "Okay I have 100." And "I have 50." And between all of them, they bring together this amount. *This is the idea. This is what we want to do.*" (Julio, interview, June 13, 2008)

The notion of cooperation was shared by numerous members of POSC.

Summing the idea of overcoming community individualism with cooperation, one leader explained, "There are some that have achieved everything. They've gotten well ahead...nice house, more land, educated children. But [this is only] *personal, individual*. How much better it would be in a group! Much better!

When one dies, they ask themselves, "What I can bring with me? I can't bring my money with me." (Josue, interview, May 28, 2010)

One final benefit of participation in a group like POSC became the focus of several interviews with female members. For women respondents, POSC provided an opportunity to build confidence and self-esteem by getting out of the house and participating more in the public sphere. Living in what they described as communities in which machismo is prevalent and widespread, these women appreciated the ability to take part in and make a contribution to public group activities and functions. According to one POSC leader, even the decision of female members to participate in the group was a step away from male domination in the home that can be bitterly opposed by husbands. Speaking about the problems confronted by POSC, he complained,

There's a lot of *machismo* [among community residents]. This is the word that we must mention. [Some husbands interrogate their wives by saying] "And what are you going to do there [at the meeting]? You came home late. What were you doing?" So the wife then decides that it's better not to go [to the POSC meeting]. So what they're doing is not allowing their wives to prepare themselves [to get ahead] or value themselves. I feel that this is what has screwed up [*ha fracasado*] many organizations. For this reason, groups are unable to rise up...They have never given women opportunities. However, lately...in these past fifteen or twenty years, women have begun valuing themselves [*ya se están valiendo por si mismo*]. Women have awoken...The mentality of women is now changing. They now want to value themselves. (Josue, interview, May 28, 2010)

Explaining the personal transformation that took place for her as she became increasingly involved in local POSC meetings, one member in her late thirties indicated,

Yes. For this reason I like to talk. Because of this group [POSC] I have rid myself of this timidity for speaking. Now, people look for me. I have words now...just as I had asked God for. Yes, it is nice...Just as you have

come to speak with us and we are living together with you...For this reason I *like* it. I like to participate...I am timid but, as I work like this within groups...and also attend [POSC] meetings...It's nice because we're guiding ourselves...These are good things. Bad things, no. (Sara, interview, May, 21, 2010)

One POSC leader and member of the *junta* described the drastic changes that took place for her when she began working with the group. Shortly before she joined the group, this interviewee and her three children were abandoned by her husband, who had left the community several years earlier to migrate to the United States in search of work. However, she had come to see this occurrence in a positive light, arguing that it pushed her outside the home and increased her participation in the group. Through the group, she began to overcome many social and personal issues and broaden her public participation. She explains,

Through the institution ATQ...we are connected with many more NGOs. It is because of them. If they hadn't come, we would not have raised ourselves up and we wouldn't know anything. But now my mind is lifted up because I have learned so many things. I used to live here in my house...and I didn't even like talking like this with other people. [Then] if there was a group [meeting], only others would talk and not me. I would sit there just listening. I didn't like to talk...But then I began working in the group because they [the NGOs] brought us together and one should represent their community. From then on, I began losing my fears. And, as I had been separated from my husband, I began looking for something else. I found another institution...and began participating with them as well. They supported us [POSC members] by explaining to us topics like living single and how to move on. Now...I can go to other groups and I am not afraid to talk in front of a group. (Josefina, interview, May 11, 2010).

However, the experience was only the beginning of this interviewee's personal growth through participation in groups like POSC. Since joining, she began

expanding her activities outside the home, taking on new responsibilities with POSC, and joining other groups. Looking back, she sees divorce from her former husband as a major turning point that freed her from many of the bonds placed on women in a *machista* society. She goes on to explain the process by stating,

From there I went on losing my fears. Now I also work in the church. I work here with my group [POSC] and I go to other groups. This is how it is. Now they [ATQ] call me and select me because they see that I'm not timid like I was before. It's a lot to do because I now have to work and don't have as much time...I don't have time to go to all of the meetings...The church calls me for meetings...and I go to various places...I have to represent my community...This, I can say. Perhaps God did it. I don't know...separated me from my husband. Because if I were still with him, I wouldn't have been able to learn everything I've learned. With a husband, one has to be at home. One doesn't leave. Many of the women tell me, "Our husbands won't give us permission to go to group [meetings]. We [can] rarely come." They tell me this. Because sometimes I go three days...two days...I go to group [meetings]. I do what others don't want to do because they have their husbands. They say that they have to stay home and have no time...With a husband, he'd be angry because there wasn't any food ready...But *now* I have opened myself up a little. I am not closed. Some people can't interact with others. It gives them fear...Now I don't have fear. One goes on losing this fear...I've learned many things here. It's not the same as being in your house. There, one is fearful...But I can tell you this, I've now sat in front of people...who are graduated *professionals* [*licenciados*]. We've learned to interact with them...like those from...perhaps you've heard of AGEXPORT?⁵ With the [ATQ] engineers, I've also gone to El Salvador...I've interacted with a *lot* of different people. Now I say to myself, "Look where I've arrived!" (Josefina, interview, May 11, 2010)

⁵ AGEXPORT "(The Guatemalan Exporters Association) is a private non-profit entity, established in 1982; that represents, promotes and develops non-traditional exports of Guatemalan companies." (AGEXPORT 2011)

Though rare in interviews, such stories of personal transformation and growth through participation in groups like POSC highlight the importance of the *ATQ/Negocio Orgánico* programs for women participants. They also add a new meaning to the NGOs' stated objective of bringing "political impacts and change" to San Carlos. Modest successes in reconfiguring commodity chain relationships for vegetable farmers through political organizing are reinforced by large impacts in the personal lives of female community members, as they struggle for more public involvement against isolation in *machista* communities. The *ATQ/Negocio Orgánico* project brings this opportunity to them by creating avenues for participation where there were previously none.

Food Security and Insulation from Economic Shock

One final area of impact of the *ATQ/Negocio Orgánico* program noted by numerous interviewees is related to the position of POSC members as smaller farmers with, on average, lower socioeconomic status. Many members saw major benefits to engaging in the cultivation of vegetables not as much for commercial purposes but rather for home consumption and food security. Because POSC members tend to farm smaller plots of land and engage in paid work outside of agriculture, they often resort to purchasing fresh produce for home consumption in the markets of *Quetzaltenango* or from neighboring farmers. For this reason, many described the vulnerability of their households' diet to market forces in terms of sudden rises in market prices for foods. Numerous farmers complained that it was increasingly difficult to afford enough food in agricultural markets to sustain their families.

When discussing key advantages of the ATQ/*Negocio Orgánico* program, one POSC member indicated that she was most interested in growing and securing vegetables for consumption within her own household. She states, “Vegetables...yes, that’s it. We grow just a little bit of vegetables to have *something* to eat. This is because vegetables are very expensive in the market. And the market in *Quetzaltenango* is far from here.” (Marisol, interview, April 20, 2010). Touching again on the issues of cost and time, another member described the benefits of cultivating vegetables over purchasing them in the market by indicating, “[Having] these vegetables throughout the week can only help us...to not have to *buy* them over there [in *Quetzaltenango*]. It’s also very far...from here to *Quetzaltenango*. To go...if I want some herbs for my food...I have to go on foot from here to there in order to buy them...It’s better that we sow them ourselves.” (Ingrid, interview, May 18, 2010)



FIGURE 6.6: NON-TRADITIONAL VEGETABLE GARDEN OUTSIDE POSC MEMBER HOME

Many other interviewed members brought up production for home consumption when discussing the importance of cultivating vegetables introduced by the ATQ program. Because the proportion of member harvests purchased by *Negocio Orgánico* was generally low, producers saw a key benefit in being able to save some of the surplus food for home consumption. Discussing how she distributes her vegetable harvests, one interviewee explained, “Yes, half for home and half to be sold...That is the benefit that we have. Because now we don’t have to go to buy [vegetables]. We just go and cut them [in the fields]. What we do now is go to the ‘market’ behind our house!” (Josefina, interview, May 11, 2010). Forgoing sales almost entirely, another member indicated that home consumption of vegetables was the only reason she planted at all. She explained,

I sow carrot, but only a single bed...I sow cauliflower, but only a single bed. I sow broccoli, but just a bed. I don’t sow cabbage anymore...and lettuce either because the kids won’t eat it. Just a little...half a bed. I don’t grow any more...And in the beds I sow onions but also only to eat. This is because sometimes [the prices for] onions rise and they become expensive. I can’t buy onions because, really, I’m a widow and can’t buy all of this.” (Irma, interview, May 24, 2010)

Overall, POSC farmers are generally poorer, plant smaller tracts of land, and tend to engage in paid employment away from their own fields. As a result, they report frequent market purchases of agricultural goods for household consumption. Accounts given by these farmers express an anxiety over their vulnerability to spikes in market prices for food.

According to recent evidence presented by De Janvry and Sadoulet (2010) on food price fluctuation in Guatemala, the concerns of these interviewees reflect the fact that they are particularly at risk when food prices change in the global market. Presenting survey evidence concerning household consumption and food prices in Guatemala during the “global food crisis” that occurred between 2006 and mid 2008, the authors conclude that, “...the main social categories negatively affected were not the urban poor, as per conventional wisdom...but the rural poor.” (De Janvry and Sadoulet 2010: 1328) Despite the fact that the authors found only a minor transmission of price spikes for staple foods in global market to domestic prices in Guatemala, they found that, “small” and “marginal” farmers (farming less than 2.86 hectares) were most vulnerable to sudden spikes in food prices. They argue that this is because, even though these farmers produce some food for household consumption, they remain net purchasers of staple foods like maize, beans, and rice. Such a situation, combined with the fact that small farmers tend to be the country’s poorest class (making up 66% of the country’s total poor), makes them particularly susceptible to the negative effects of sharp rises in prices for staple foods. This evidence leads the authors to conclude, “In Guatemala, farmers represent 45.6% of the population and 66.6% of the poor. Because most of the poor farmers are net buyers [of staple foods], we find that 64.7% of the poor who lose are farmers with domestic price changes, and 63.6% with international price changes.” (De Janvry and Sadoulet 2010: 1336). Further, in the interests of building the food security of these producers as a protection against price volatility in food markets, they

argue, “Rising productivity in production for home consumption can thus be an important instrument to meet the food deficits of all farmer categories.” (De Janvry and Sadoulet 2010: 1332)

Overall, for POSC producers experiencing increased difficulty affording foods in the context of volatile market pricing, the ability to meet even a part of their households’ consumption needs by growing vegetables with ATQ is a significant step toward establishing food security. As mentioned by many of the interviewees, even the time and costs associated with going to *Quetzaltenango* to make purchases in the market is a significant investment. Because this segment of the Guatemalan population is particularly vulnerable to spikes in international and domestic prices for staples such as maize, beans, and rice, their food budget is often stretched to the point where it is not possible to include essential foods like vegetables. By assisting and often subsidizing small farmer cultivation of non-traditional vegetables, the ATQ program fills a real need for members by helping them to secure the basic dietary requirements of their households.

Producer Participation and the Benefits of Development

The current chapter has emphasized many of the secondary and often unintended impacts of integrated rural development programs in the Guatemalan countryside. The primary aims of the *ATQ/Negocio Orgánico* program are economic development through market integration and key changes to conventional commodity chains for commercial vegetables. Through diagnostic reports and other official documents, the researchers for the NGO discursively

create a construct of villages in San Carlos that, though ideally suited for these approaches to the problem of rural development, is inaccurate in many fundamental ways. The systematic portrayal of villages as primarily agricultural, in a transition from subsistence to commercial cultivation, and isolated from markets has led to the generation of program activities that are not highly ranked among producers as important reasons for their participation.

Instead, farmers from these communities in San Carlos are not isolated from markets or other economic activity. Interviewees reported regularly participating in agricultural markets in nearby *Quetzaltenango*. Further, residents of the communities do not necessarily engage in agriculture as their primary economic activity. As indicated by survey responses, the majority of households take on at least some form of paid work apart from agriculture.

Beyond the demographic features just listed, POSC members hold several other demographic characteristics in common that further influence how they see the benefits of the *ATQ/Negocio Orgánico* program. Related to several of the community-level structures discussed above, participants in the ATQ program also tend to engage in paid work outside of agriculture. Further, they generally have less experience farming, dedicate less land to cultivation and report, on average, lower incomes than neighboring farmers. Also, due in part to changing occupational profiles at the community level, 93% of POSC members are women. For these reasons, producer interviews suggest that participants are taking something very different away from their experience with the program than those economic and commercial agricultural goals outlined by the organizations.

Association member survey and interview responses demonstrate that participating producers are likely to rank noneconomic aspects of the program as more valuable than any benefits related directly to profits from agriculture or forward integration into new aspects of the commodity chain. Instead, producers focus on the value of the opportunities offered by the program for education, participation in a community-wide group, and food security for their households. Due to increases in prevalence of migratory labor and women working outside the home, POSC membership is predominantly comprised of female associates with firsthand experience with the restrictions of living in a *machista* society. Largely shut out of formal education that was often extended to their male relatives, these producers see education through the ATQ/*Negocio Orgánico* program as an opportunity for personal betterment and growth via exposure to new things. In some cases, these opportunities have provided valuable human capital to members who then transfer these skills and experiences to other employment scenarios.

Female producers also expressed value for increasing their participation in community groups outside the home. Many viewed opportunities for participation presented by POSC and ATQ programs as ways to overcome their own timidity and increase their self-worth by assuming a role in and making a contribution to the activities of a larger group. Such a perspective, combined with a general concern for deteriorating social ties between competing farmers within their communities, inspired many producers to join POSC and remain active in ATQ/*Negocio Orgánico* programs.

Other values expressed by respondents were directly related to members' status as poorer individuals who work in a variety of income generating activities and are less engaged in agriculture. For these interviewees, producing small harvests of vegetables is a way of reducing household expenditures on food and establishing food security against sudden changes to domestic food prices. This is especially important for small producers who are the most vulnerable to shocks in global pricing for staples that constitute a large part of the diets Guatemalan households.

Overall, producer values for ATQ/*Negocio Orgánico* program activities do not always match the goals put forth by the NGOs in official documents and diagnostic investigation reports. Instead, it is often the secondary, less emphasized aspects of integrated rural development programs that make the greatest impacts according to participants. Modestly successful in their central goals of producer market integration and direct economic enrichment, the NGOs are nevertheless able to make true contributions in the eyes of producers in the areas of education, food security, and women's participation.

VII. ECO-VEGETABLE CONSUMER PARTICIPATION AND ALTERNATIVE VALUES FOR FOOD

A central focus of existing research on the formation of alternative food chains is the specific ways that involved individuals exercise agency through collective action in an attempt to foster change to conventional food systems (Goodman 2003, Murdoch et al. 2000, Sayer 2001, Callon 1998). Many studies of local food systems in Europe and North America have explored the unique aims and values held by consumers for restructuring conventional chains. In doing so, they have identified numerous combinations of consumer values, goals for political economic restructuring of food chains, and reasons for participating in alternative food systems (Marsden and Smith 2005, Winter 2003, Hinrichs 2000).

The purpose of the current chapter is to characterize the unique configuration of aims and values for consumers of *Negocio Orgánico*'s eco-vegetable bag in *Quetzaltenango*. In the chapter's first section I will do this by contextualizing the rise of this alternative consumer market within the greater milieu of mainstream food consumption in the city. To do so, I detail prominent notions of value for food held by consumers in open farmers markets and transnational supermarket chains in the city. The section will therefore show that eco-vegetable consumer values diverge from established trends in consumption in several fundamental ways. I will argue that many of the unique values held by eco-vegetable consumers express a desire to reconfigure global currents in food production manifest in conventional chains for NTAE in Guatemala. Still other consumer values represent reactions to macro-level political economic trends that hamper their access to diverse and clean foods. I will then move on to explore the innovations, tradeoffs, and compromises made by eco-vegetable consumers as they attempt to realize these unique aims through participation in new networks of food provisioning.

I will then show how several aspects of the food network for eco-vegetables parallel those of mainstream markets for non-traditional vegetables. As in many of the North American and European case studies mentioned above, *Negocio Orgánico* consumer values and aims reflect a desire for specific kinds of change to conventional food chains. At the same time, the new alternative food system is inextricably tied to these conventional chains and the greater political and economic context that sustains their configuration. Focusing on how

consumer aims and values are formed in the context of non-traditional vegetable consumption in western Guatemala, the chapter will show how eco-vegetable consumers enjoy differing degrees of success in reinventing aspects of conventional food chains while at the same time reinforcing others. The food system, like the North American and European examples mentioned above, is a hybrid that encompasses a mix of competing values and aims. However, the case remains uniquely Guatemalan. The fusion of competing values by responding consumers in Guatemala reveals the unique ways that this alternative food system is embedded in the greater political economy of consumption in the country and is inextricably tied conventional systems of food production specific to Guatemala.

Open Produce Markets in *Quetzaltenango*

Because *Quetzaltenango* is located in the center of several non-traditional vegetable growing regions in Guatemala's west, there are numerous open produce markets throughout the city. Five major markets within the city are supplemented by numerous neighborhood markets, serving thousands of urban consumers of farm produce on a daily basis. Mainly indigenous vendors from rural areas within the department are joined by others from the neighboring departments of *San Marcos*, *Huehuetenango*, *Chimaltenango*, and *Retalhuleu* in daily sales of a variety of farm produce and livestock. In such markets large-scale farmers and intermediaries from reputable growing regions like *Almolonga*

or “the garden of Central America”, *Tecpán*, and *Totonicapán* sell vegetables to urban consumers alongside small-scale farmers from nearby villages.



FIGURE 7.1: THE *DEMOCRACIA* MARKET, *QUETZALTENANGO*

Within the larger markets, competition is fierce between growers selling non-traditional vegetable crops not already sold in bulk to local intermediaries and exporters. Prices for vegetables in open markets are highly variable and dependent upon the individual vendor, time of day and year, and the overall availability of specific items. Numerous vendors consulted for the study complained in informal conversations and interviews that others had planted the exact same crops at the same time, thus flooding the market and forcing prices down for their produce.

However, pricing for vegetables in such markets goes beyond simple supply and demand calculations. According to unspoken cultural tradition, haggling over prices is the rule. One consumer explained,

It's like a negotiation. Some say, 'How much for the tomato?' The other responds, 'Ah. Four *quetzales* and fifty cents per pound' So the other one says, 'Oh no. Four fifty is very expensive. Three fifty!' The other then responds, 'Three fifty? No. But because it's you: three seventy five.' And they are negotiating the price the whole time. In reality, the vendor says, 'four fifty' thinking that you will say 'three fifty.' They will then say, 'Okay four. Four is okay. (Luis, interview, April 28, 2010)

Competition, variability in pricing, and the possibility of getting more for less through negotiation contribute to an overall market logic of getting the best deals possible on any given day.

Many respondents, both consumers and farmers, viewed this form of bargaining and deal seeking as part of a broader logic having to do with the popular concept of the "three Bs." Used by Guatemalan consumers to describe a good deal, the three Bs refer to the Spanish words for "nice, good looking, and cheap," all of which begin with the letter "B" (*bueno, bonito, barato*). Reinforcing industrial and commercial standards for farm produce regarding shape and size, the three Bs emphasize the idea that the most desirable transactions occur when one acquires nice, good looking products at the lowest cost possible.

The overarching logic of the three Bs is tied in numerous ways to open market transactions as described by respondents in this study. The importance of vegetable size as a prime determinant of value is a prime example of the logic of three Bs. Speaking on this, one vendor states, "...when we go to sell in the city, in the market, people say, 'Ah no. These *habas* (broad beans) are very small. We want the *big* ones and these are small." (Miriam, interview, May 21, 2010) For many, size is tantamount to the notion of quality itself. One producer indicates, "If it's of quality...a *big* cabbage...people pay a good price. However, if

not, the price is regular.” (Ruth, interview, May 11, 2010). Referring to consumers in the market, another argues, “People often go for *quality*...for *size*, not for flavor...there are people who simply say, ‘Okay. I want the biggest cheapest one.’ (Josue, interview, May 28, 2010)

In addition to size, cosmetic value for market produce is determined by uniformity in shape and color. Consumers seek out unblemished produce with little variation in shape and few deformities. The desirability of uniform produce is such that some farmers are forced to let large portions of vegetable harvests rot in the fields due to malformations tied to poor quality seed, nematodes, or other pests. One respondent describes such a scenario involving a lost carrot harvest,

In the case of carrots, much of the produce can be deformed...and in the market people only want top quality...uniform produce. What then happens is that, instead of selling the [deformed] carrots, people bury them in the soil and till it again, losing more than they have sold. (Julio, interview, October14, 2009)

Speaking more generally, another producer explains that purchasers, “...want vegetables of the same quality...of only one size. If the harvest comes small...they won’t buy. By contrast, what they will buy is only that which is of the same size.” (Miriam, interview, May 21, 2010)

A final component of cosmetic quality valued in open market transactions is visible cleanliness. Consumers in open markets can often be seen inspecting produce closely in search of evidence of caterpillars, aphids, or other pests. Produce containing insects is largely considered to be of lower quality and can be grounds for rejection by consumers. One farmer explains, “Sometimes

people...when the vegetable occasionally has a worm, people say, “Oh! It’s sick. No [I don’t want it.]” (Josue, interview, May 28, 2010) When asked about vegetable quality in the market, another farmer adds, “It depends. If the vegetable doesn’t have any worms or anything and is very clean, people will pay a good price. If they find a cauliflower that has a worm, then no. They won’t pay a good price.” (Ruth, interview, May 11, 2010)

Based on these and other reports it is clear that cosmetic quality for produce is valued in terms of larger sizes, uniformity in shape and color, and cleanliness as reckoned by the product’s freedom from visible markers such as worms, bugs, and blemishes. By the logic of the three Bs, vegetables of these qualities are sought by consumers only at the cheapest prices possible. Quality often takes a backseat to price concerns, as many consumers aren’t prepared to pay the rates asked for rare or cosmetically superior produce.

The combination of price and cosmetic quality considerations on the part of market consumers contributes to the bargaining scenario described above as well as a good deal of time spent in the market, as consumers choose between products and vendors, select only those products that they need, and navigate the highly variable pricing systems for different products. By doing so, consumers have the opportunity to personally select a mix of products tailored to their household needs at the prices they are willing to pay. For these reasons, open markets are the most popular sources of farm products for residents of *Quetzaltenango* and the surrounding areas.

Transnational Supermarket Chains

Within *Quetzaltenango*, a second strand of household food provisioning takes place through supermarket chains like *Paiz* and *HiperPaiz* as well as several affiliated stores bearing the name *Despensa Familiar*. Owned and maintained by the transnational corporate entity *Wal-Mart México y Centroamérica*, these stores tend to carry similar produce to that sold in the markets. However, pricing for items in the stores tends to be higher than for comparable items found in open markets. This is because supermarket items are generally considered by consumers to be of higher quality than those in the open markets. As a result, many consumers are willing to spend a few extra *quetzales* to do at least part of their food shopping in these chains.



FIGURE 7.2: HIPERPAIZ SUPERMARKET, QUETZALTENANGO

Responding consumers in the current study tended to associate supermarket items with the highest possible cosmetic quality for vegetables. Unlike those in the market, fruits and vegetables in *Paiz* rarely have blemishes or

marks due to disease or ripeness. Further, they are generally of a more uniform shape and size than the mixed qualities sold in markets. One respondent claimed that vegetables in supermarkets were cleaner than those sold in open markets. Unlike in the market, the vegetables in the supermarkets are rarely dirty or tarnished. They appear clean and dust free. She therefore feels confident that the vegetables she purchases in Paiz have been washed and are safe to eat. In the case of packaged heads of lettuce and prepared foods, she even sees this printed on the packaging and is reassured that she will not get sick from eating them raw.

One major factor that reinforces the notion of product quality and cleanliness in the supermarket is the level of trust consumers have in the company's reputation. Unlike open markets, where quality and sanitation are only guaranteed by appearance and trust in vendors, supermarkets are able to draw on consumer confidence in quality standards for food enforced by national and international regulatory bodies. More generally, it is a confidence in the operation of expert systems of food regulation behind such standards. Markers of this regulation can be seen throughout the store, reminding consumers that produce meets standards for quality and safety mandated by the company and regulating agencies. Produce bears barcode stickers and labels concerning its country of origin. Other food products include ingredient labels, registration codes from governmental regulatory bodies, and nutritional information. Instead of having to ask questions of vendors concerning product quality, supermarket consumers can place their faith in the quality control mechanisms of the

company and related regulatory bodies. In describing the potential for selling eco-vegetables in Paiz, a promoter from *Negocio Orgánico* explains the involved process of product registration,

The Guatemalan Ministry of Health would have to come to see the plant [for postharvest handling of eco-vegetables] and evaluate it. With this evaluation they would say, "Look, this is okay. You pass." Then we would need licenses...one license for health and safety and one for food handling for all of the women [employees]. With this, they would say, "Okay *señores*, our product needs a barcode, nutritional content labels, an analysis of disinfection, and a registered location of production." The thing we lack now is a registration of sanitation. (Julio, interview, October 14, 2009)

It is to this type of regulatory framework that produce must conform before being sold in a supermarket like Paiz. These standards for product inspection provide a basis for consumer confidence in supermarket products.

Another aspect of shopping in supermarket chains that draws consumers is the fact that many out-of-season vegetables and fruits can be purchased there when they are no longer available in the open markets. Because the supermarket chain can import produce from faraway locations throughout the region, it has the power to provide consumers with items typical to the Guatemalan diet even when they not locally available. One consumer indicated that she shops more in Paiz when avocados are out of season in Guatemala. Although she can find them in the open market, they are nearly as expensive as those sold in the supermarket. As a result, she prefers to go to a supermarket where she knows they will be of higher quality.

Consumers claimed that supermarkets also tend to outperform open markets in terms of the security they provide. Respondents often expressed

concerns about going to open markets due to fear of being robbed or encountering pickpockets. Personal security was an especially prevalent theme when consumers discussed the open market near the city's bus terminal. One respondent indicated that consumers in this market, "...run the risk of being robbed or having their cars broken into and their radios stolen. They [thieves] rob them of their wallets, purses, or their telephones. This is a risk that they have." (Julio, interview, October 14, 2009) Unlike the scenario described by the respondent, all supermarkets in the city have one or more armed security guards stationed at all entrances and exits. Security cameras watch over cashiers and customers as they shop. Supermarkets like Paiz even have lockers where valuables can be stored while customers shop.

Respondents also value the supermarket for the convenience of products and service it provides. One of the major cited differences between shopping for produce in a supermarket versus in the open market is that consumers don't have to spend time searching for the best quality items at the best prices. They are instead given the opportunity to shop leisurely and select vegetables at their convenience. Rather than seeking out quality products among various vendors, consumers select their own produce, knowing that they will pay exactly the price displayed near the product.

In other ways, the convenience of shopping extends beyond the supermarket doors. Paiz and Despensa chains offer a variety of packaged and prepared convenience foods that require little, if any, effort in preparation. Commenting on the growing popularity of convenience foods among city

dwellers, one consumer explained that, “Including here in *Xela [Quetzaltenango]* people...often don’t have time to even prepare agreeable foods, let alone time to go and *look* for vegetables.” As a result, many consumers pass over locally produced items to buy their already prepared counterparts in the supermarket. This same respondent goes on to say that, “...in big cities people eat a lot of fast food and items from the supermarket that are *pre-cooked* or *pre-prepared* and that you only need to put in the microwave, open, and serve.” (Luis, interview, April 28, 2010)

Finally, purchasing vegetables from a supermarket provides some consumers with something unique that open markets simply cannot. This is the prestige and symbolic capital afforded by consumption of products from an international supermarket chain. As discussed above, products in the supermarket tend to be regarded as being of higher quality than those in the open market. Further, in the supermarket even food items tend to bear the label of transnational manufacturers and distributors. Several respondents in this study referred to these labels and names of specific manufacturers as markers of product quality. Even the name “Paiz” confers a degree of status. Discussing consumer preference, a promoter from *Negocio Orgánico* explained,

Why do people so often shop at Wal-Mart? Because it’s “Wal-Mart.” Many people go to shop there, even if it’s just to buy a bar of soap, just because when they leave, they leave with a bag that says “Paiz.” Then everyone sees that they were shopping in Paiz. It’s the same all over the world. You go to a high quality shop and buy something so that you can say, “I bought this in *blank* store.” This is so the people will say, “ahh!” It’s the label that they’re selling. Therefore, people prefer to buy a cauliflower in Paiz for ten *quetzales* instead of buying it from us for four. (Julio, interview, October 14, 2009)

In this way, shopping in supermarkets offers consumers something beyond cosmetically superior products and a quality guarantee tied to national regulatory standards. It offers a degree of prestige through conspicuous branding of products with the labels of major international distributors.

Negocio Orgánico Eco-Vegetable Consumers

Consumers in the eco-vegetable food network described numerous values, motivations for participation, and objectives for reshaping prevailing systems of food production and provisioning that cannot be neatly classified into the above categories. As will be shown in the following discussion, the emergence of new values and objectives for consumption on the part of *Negocio Orgánico* subscribers represents an effort to contest several aspects of conventional food chains for non-traditional vegetables. For participating consumers, the effort has involved numerous divergences from the general patterns of consumption in *Quetzaltenango* described above. Further, purchase of the eco-vegetable bag has entailed various tradeoffs with competing values for food as well as lifestyle changes on the part of some consumers.

At the same time, eco-vegetable consumer values are formed in constant dialogue with and constrained by the context of conventional agricultural production and consumption in Guatemala. As a result, the new political, economic, and social forms maintained within the food network surrounding eco-vegetables cannot exist as completely independent from conventional market imperatives and the greater political economy of consumption in Guatemala.

Subscribing eco-vegetable consumers expressed several values in common with the broad trends for consumption in *Quetzaltenango* described above.

Expressed values reveal the fact that, even as consumers challenge some aspects of the conventional food system through alternative consumption, they continue to reinforce other elements and structures related to mainstream chains for non-traditional vegetables in Guatemala.

Persisting Ethnic Divides in Consumption and Production

“We don’t buy the bag”, reported one *Negocio Orgánico* worker, referring to the indigenous inhabitants of her rural hometown in San Carlos. She chuckled as she said this while we rode together one Friday morning along the central delivery route for the eco-vegetable bag in *Quetzaltenango*. She surely found humor in my asking if any Maya people bought the eco-vegetable bag. For her, my question demonstrated a failure to understand what was a taken for granted fact of the organic vegetable trade: producers are indigenous and consumers are *ladinos*. She illustrated the ethnic divide by going down the list of consumer addresses for the day’s route, pointing and saying “*ladina*” for each of the fifty or more homes appearing on the paper. For her, it was clear that 35Q would be far more than most Maya people would be willing or able to spend weekly on specialty organic vegetables, even if they had the desire to do so. Instead, it was the mid- to upper-class urban *ladino* population that constituted *Negocio Orgánico*’s customer base. “Doctors, lawyers, and professionals...” she stated, describing the consumers to whom she delivered vegetables on a weekly basis.

She was extremely confident in this assessment, as she was personally charged with contacting all consumers each week to confirm the bag's delivery.

The situation illustrated by this informant demonstrates clearly the reproduction of unequal power relations along ethnic lines that characterize Guatemala as a whole. Economic, sociopolitical, and historical inequalities between the country's indigenous Maya and non-indigenous *ladino* populations are so ingrained in new market relations in this local organic food chain that these divides are a foregone conclusion for participants. For my informant, paying 35Q per week for a bag of organic vegetables is something that the majority of poorer indigenous families that she knew would find unaffordable and unacceptable. It was simply not done.

Mirroring mainstream commercial agricultural chains, economic inequality leads to the division of roles in this food system according to ethnicity, with producers being 100% indigenous and consumers and NGO workers being 100% *ladino*. For this reason, the power to define preferred modes of agricultural production and the products themselves lies with these urban *ladino* professionals. Indigenous production conforms to the notions of food quality and value put forth nearly exclusively by such consumers. If current modes of conventional agricultural production undertaken by Maya farmers do not suit the consumption needs of these elite groups, a new market can be created that caters to their specific tastes and concerns with production.

In spite of *Negocio Orgánico's* attempts to integrate indigenous farmers into the marketing and distribution processes in this food chain, producers remain

disempowered in that they are excluded from making key decisions about agricultural production. Inequality is reflected in the ways that new definitions of quality for local organic foods reflect the concerns and needs of *ladino* consumers and rarely the goals of indigenous producers. Despite the fact that Maya producers can and do see the benefits of new forms of production taught to them by the NGOs, they do not have the power to condition consumption or educate the desires of consumers to the same extent that consumer values condition their production methods.

In discussing non-traditional vegetable marketing, many interviewed producers noted the fact that consumption of organic vegetables is an exclusive affair, reserved for *ladino* professionals or other non-indigenous groups. When asked what types of consumers look for organic products, one producer noted, “It’s rare that people ask if a vegetable is organic or not...For example [only] in cafes do they ask if products are organic...More in the cafes where *gringos* eat. There, yes. They ask for organic more...because they *know*. They *understand*. It’s not as important to us [Maya consumers].” (Rigoberto, interview, May 1, 2010) Others spoke of organic vegetables specifically in terms of the tastes of *ladina* housewives in markets. When asked what types of customers buy organic vegetables, one respondent replied, “It is the *ladinas* in *Xela* [*Quetzaltenango*] who know [about organic vegetables]. They know how to prepare them, too.” (Rosa, interview, May 24, 2010)

Just as in the case of NTAE and other agricultural products before, rural indigenous production is largely conditioned by the consumption needs of elite

socioeconomic classes and non-indigenous ethnic groups. The power to define food quality in this chain remains the domain of *ladinos*, a persisting pattern of non-indigenous tastes shaping agricultural production and food provisioning by Maya farmers. The pattern follows historically worn paths of urban market building that can be traced to Guatemala's colonial period. As Goldín (1985) demonstrates, the current system of agricultural markets existing in Guatemala and neighboring countries is a result of the efforts of Spaniards during the colonial era of the 16th through 18th Centuries. Since the time of Spanish colonization, production by the conquered indigenous inhabitants of the region has been conditioned to meet the tastes and economic interests of non-indigenous urban elites.

In the case of the colonial Spaniards, the relocation and reorganization of pre-Colombian markets and goods flows was largely accomplished through royal edict, systems of tribute, and legal regulation of market participation and production by Maya people. Elites thus arranged specific market days and locations for sales of goods by indigenous producers in order to better serve their need for agricultural and other goods. Goldín (1985:11) describes an example of direct Spanish intervention in the agricultural production of indigenous market participants dating back to the 16th Century. In a remarkably similar situation to the present research, colonial authorities attempted to alter existing modes of *milpa* cultivation by Maya farmers based on their own outside understandings of agricultural production. They simultaneously attempted to control both market participation and agricultural production of nearby indigenous farmers.

A continuation of the power dynamic in which non-indigenous consumers and purchasers in urban centers condition Maya production and marketing can be seen throughout Guatemala's history of commercial agricultural development. Just as Conroy et al. (1996) and Thrupp et al. (1995) note, the power to condition production of small indigenous farmers in NTAE chains is held by intermediary purchasers and contractors, exporters, and retailers. Through their specifications of product quality and official regulation, standards for production are applied to the work of indigenous farmers. Though the efforts of *Negocio Orgánico* are concentrated on producer empowerment, historical power asymmetries and ethnic inequality dating back to the colonial period are reproduced in the alternative food system built around their products. As *ladino* tastes and goals shift away from conventional norms of quality for agricultural goods in chains for non-traditional vegetables, indigenous production is again conditioned to meet these needs.

Consumer Characteristics and Values

The *Negocio Orgánico* eco-vegetable bag delivery scheme serves between 100 and 150 consumers per week. Consumer residences are distributed throughout the city, making it necessary for *Negocio Orgánico* to organize 2 separate delivery routes. However, homes tend to be situated in more wealthy areas such as the suburban neighborhood of *Olintepeque* and in the more remote 7th and 9th zones of the city. The delivery personnel for *Negocio Orgánico*'s northern route drive pickups full of eco-vegetable bags past guard stands to reach homes situated in gated communities to the city's north. They

ring bells and deliver bags to large 2 and 3 story homes and new looking condominiums in communities with paved streets lined with decorative trees and ornamental plants. The more southern delivery route includes homes as well as several restaurants and professional offices situated near *Quetzaltenango's* popular historic central park. The delivery personnel rarely have face-to-face contact with the purchasing consumer. They instead leave the eco-vegetable bag with office managers, secretaries, or in-home domestic help, who make the weekly payment on their employers' behalf.



FIGURE7.3: ECO-VEGETABLE BAG DELIVERY IN QUETZALTENANGO

The 29 consumer questionnaires that I collected for this research project confirmed this profile in many ways. Overall, 89.7% of responding consumers of the eco-vegetable bag were Guatemalan nationals. Other reported nationalities included Spanish, Honduran, and Italian. Seventy percent of consumers reported engaging in professional work, including teaching, law, medicine, and

administrative or other professional positions. Housewives and retirees were predominant among the remaining 30 percent. Responding eco-vegetable consumers ranged in age from 25 to 69 years old, with a median age of 40. The overwhelming majority of respondents were women, who constituted 93% of the total sample. Consumer dedication to the bag scheme was varied. The time over which respondents purchased the eco-vegetable bag ranged from one week to several years. Median purchase time was 18 months, with 31% of the sample having purchased the bag for one year or less, and 27.6% having purchased for three years or more.

Consumer Values Questionnaire

Like the face-to-face interviews I conducted with *Negocio Orgánico* eco-vegetable consumers, the self-administered questionnaire discussed above included several items concerning consumer values for food and reasons for participating in the alternative food network for eco-vegetables. Derived from preliminary conversations and 19 face-to-face interviews with consumers, a section of the 11 most commonly cited reasons for purchasing *Negocio Orgánico* products was included in the questionnaire. Respondents were asked to indicate whether or not they participated in the eco-vegetable network for each reason with a “yes” or “no” response. The reasons included in this list were: the flavor of eco-vegetables (“Flavor”), the products’ meeting basic household consumption needs (“Utility”), a desire for increased profits going to producers (“Producer profits”), support for producer organization in a cooperative (“Cooperative”), value for eco-vegetable pricing (“Price”), variety/diversity of eco-vegetable bag contents

(“Diversity”), the desire to support a local business (“Local business”), support for traditional modes of cultivation (“Traditional”), the perception that eco-vegetables are healthier than other products (“Health”), value for the home delivery of the eco-vegetables (“Delivery”), and support for environmental conservation in agriculture (“Environment”).

Immediately following the section, respondents were asked to list their top three reasons for purchasing the eco-vegetable bag. Table 6.1 below shows the frequency that each of these reasons appeared in the top three reasons for participation as reported by responding consumers.

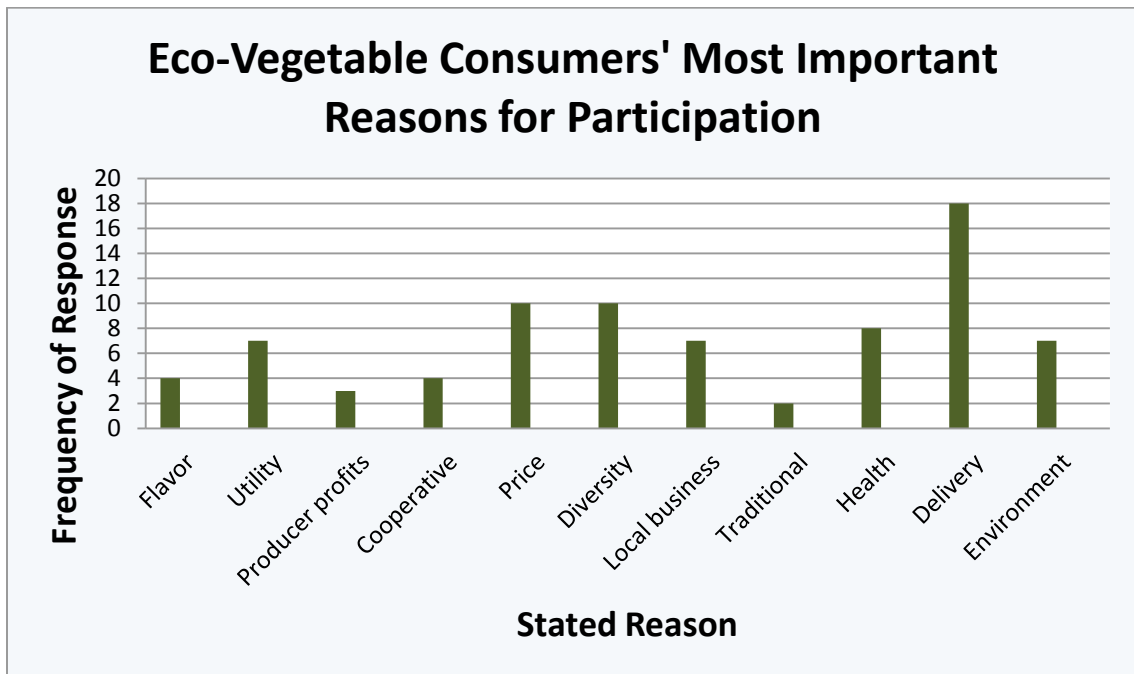


TABLE 7.1: REASONS FOR PURCHASING *NEGOCIO ORGÁNICO*'S ECO-VEGETABLE BAG CITED BY CONSUMER QUESTIONNAIRE RESPONDENTS

Overall, the most frequently cited reasons for participation were the delivery service aspect of the eco-vegetables (“Delivery”), the diversity of

products within the eco-vegetable bag (“Diversity”), the value of products relative to price (“Price”), and the perceived health benefits of consuming eco-vegetables (“Health”). These most popularly cited reasons are treated in detail in the following sections.

Value for *Negocio Orgánico*’s Eco-Vegetable Delivery Service

Negocio Orgánico offers consumers mixed bags of eco-vegetables delivered to their doorstep on a weekly basis. This service element is a popular theme discussed in consumer interviews and the questionnaires alike. Overall, the benefits of delivery were ranked among the top reasons for participation by over 60 percent of responding consumers in the questionnaire, nearly doubling the frequency of the next most cited reasons. Eco-vegetable consumer preference for vegetable delivery is a reaction to several aspects of shopping in the mainstream outlets for non-traditional vegetables discussed above.

Throughout interviews, respondents frequently came back to the theme of the difficulty they face accessing quality foods in the city’s numerous open markets. One eco-vegetable purchaser described her admiration for *Negocio Orgánico*’s service element, asserting that the delivery is, “...really efficient. It’s so easy. That’s the part that I just can’t get over. It’s not like I have to bike eight miles to the farmers market only to find out that, you know, half of the vegetables that I want aren’t there...it [the eco-vegetable bag] just appears at your door.” (Hannah, interview April 23, 2010) For her, the convenience of the delivery scheme was central.

Several interviewees mentioned personal health issues as barriers to their accessing quality foods in open markets. These respondents claimed that their access to non-traditional vegetables was greatly facilitated by their participation in *Negocio Orgánico's* eco-vegetable delivery network. Previously, physical health issues were a significant hurdle for these consumers to shopping for produce in the open markets. One respondent who had recently undergone surgery for a hernia claimed that the strain of walking to markets and back with her purchases was too great for her to handle. For this reason, she claimed that the eco-vegetable delivery scheme was crucial to her ability to purchase fresh farm produce.

Though physical barriers related to age and medical conditions were a significant theme in consumer interviews, the issue of time constraints to market access was most prominent. One restaurant owner explained,

Tangibly I can easily tell you that the foremost benefit [of buying the eco-vegetable bag] is the question of *time*. Not everyone has the opportunity to spend a half-hour, forty-five minutes, or an hour shopping in the market, choosing from whom and which products to buy. So here we have a bag of products, already selected and cleaned...it's a complete package of assorted vegetables that, for you to put together yourself, would take a lot of time. Further, they deliver directly to wherever you like. This is yet another tangible benefit. [The benefit of] This is easy to understand. (Luis, interview, April 28, 2010)

Expressing the same sentiment, numerous working professionals complained that, because of work obligations, they simply didn't have time to pick through produce from multiple vendors in the market or go bargaining for the best prices. According to some accounts, choice isn't even an option by the time

working consumers arrive at the market in the evenings after work. A *Negocio Orgánico* employee explains, “Due to the employment situation these days, many working housewives pass through the markets in the afternoon. By then the remaining produce is already covered in dust, has been burnt by the sun, and is generally covered in diesel fumes and exhaust. However, people still go and buy.” (Julio, interview, October 14, 2009) A similar situation is likely faced by a significant portion of the 70% of responding eco-vegetable consumers who claimed to engage in paid work outside the home.

As mentioned above, nearly all responding consumers for the eco-vegetable questionnaire are women. The result is not surprising, considering the fact that women are generally responsible for family food purchases and preparation in most Guatemalan households. However, the issue of finding time to make food purchases in open markets takes on special significance for Guatemalan women when one considers changes in their participation in the paid workforce over the past several decades. According to national level data taken from the 2007-2008 UN National Human Development Report for Guatemala (PNUD 2008: 271), women, as a percentage of the employed population, steadily grew from 25.2% in 1989 to 38% in 2006. This rise represents a near tripling of the number of formally employed women at the national level, accounting for more than two million workers in 2006 (PNUD 2008: 272). In a section entitled, *The Growth of Women’s Involvement in the Labor Market*, the report goes on to explain that women have been increasingly compelled to engage in formally paid work outside the home due to a variety of

factors that include the growth of factory work in garment production and other industries as well as a general decline of real worker salaries in terms of purchasing power over time. The report finds that women's participation in the workforce has spiked between 1989 and 2006, especially in commercial, service, and healthcare sectors of the economy (PNUD 2008).

Like paid workers, numerous full-time housewives consulted in this study mentioned time-saving as a principal benefit of *Negocio Orgánico's* eco-vegetable bag. Like wage employment, domestic work places a huge limit on women's time. However, women's engagement in formal wage work is especially constraining in that most work shifts require that they be present at the workplace during the prime hours for open market purchasing. As the respondent above pointed out, it becomes a question of access to clean, quality foods on the part of working women, whose time is increasingly constrained by formal work obligations and the double burden of domestic and professional employment.

More and more, due to national economic trends, Guatemalan consumers seeking access to quality foods are unable or don't have time to bargain in open markets or physically visit supermarkets. They instead forgo the option to choose and bargain for their own vegetables according to the logic of the three Bs in favor of the pre-selected and delivered eco-vegetable bag from *Negocio Orgánico*. In this way, eco-vegetable consumers are able to access clean food at acceptable quality without facing the time investment or other barriers inhibiting their access to produce in the open markets or supermarkets.

Value for Diet Diversification and Variety

Among interviewees, many contrasted the diversity of products in *Negocio Orgánico's* eco-vegetable bag with that of typical Guatemalan diets. Numerous respondents associated a perceived decline in the diversity of foods consumed by Guatemalans with the issues of time and work discussed above. Issues of changing diets were also tied to corresponding rises in the consumption of convenience foods from supermarkets and fast food chains. Many respondents blamed these trends for reduced longevity, spikes in vascular disease and obesity, and a general increase in early dependence on medical treatment and medications. Overall, among questionnaire respondents, diet diversification and nutrition (“Diversity”) tied with price (“Price”) as the second most frequently cited reason for purchasing the bag of eco-vegetables.

In discussing the benefits of purchasing the eco-vegetable bag, many interviewees brought up the importance of diet diversification and nutrition. Several contrasted the diversity in their own diets with that of other Guatemalan consumers. Eco-vegetable buyers lamented a perceived tendency for more and more urban Guatemalans to consume greater amounts of uniform, processed foods from supermarkets and fast food chains. Diet diversification was often related to the issues of work and time discussed above. One consumer elaborated on this trend by stating,

When you pick up a broccoli for one sixty or one sixty nine [USD], it seems very expensive, right? This is because people think, “Well, this I’ll have to wash, cut into pieces, cook, prepare, season, and serve with something else.” You’re not just going to eat a broccoli for lunch, right? So, you have to spend more time, more resources, more energy, and more

ingredients to make it into a meal. And with this, just the broccoli will cost you one sixty nine. Meanwhile, a complete hamburger, prepared and served without need for a plate or anything else, will cost you ninety nine cents. So people say, "Ah. Let's all go to Burger King. It's cheaper, easier, and faster." (Luis, interview, April 28, 2010)

Reflecting on her personal observations, another eco-vegetable consumer discussed the inadequate diets of her younger relatives,

I have a few grandchildren and grandnieces and nephews. I babysit the little ones while their parents work. They mainly feed the children potatoes. I have nothing against this, but just potato is no kind of nutrition. Or often they give them hamburgers to split between two, because the children don't eat much. However, the kids' stomachs were always growling... Suddenly, one day the parents told me, "We don't know what to do [about the children's nutrition]!"... They both work *all* day. They begin at eight in the morning, dropping the kids off here, and working until six in the afternoon. For this reason they can't [feed the children well]. (Roselia, interview, November 2, 2009)

According to some interviewees, processed convenience foods have come to replace whole foods as the most common ingredients in typical Guatemalan diets. One interviewee explained,

There are several *classic* ingredients in Guatemalan cooking. One, for example is, bouillon (*consume*)... It is chicken or beef bouillon. If you look at the television marketing for it, you will see a chef in his uniform telling people to put it in *everything*. He'll put it in beans, meats, any vegetable stew, and even *tortillas*. Bouillon... So you could say that this is the education that people receive. And in *every* house you will *always* see three things: instant coffee, chicken bouillon, and some form of monosodium glutamate. (Luis, interview, April 28, 2010)

He later went to discuss how this has affected his own family.

I have several uncles who are diabetic. Last year they [medical personnel] informed my mother that she was at high risk for developing diabetes. They *tried* to change her diet. It's very difficult and I understand this. She is fifty-four years old and, at that age, one can't just come and radically change a person's lifestyle in a day. However, I as said before,

these are *clear* indicators of very simple things. These being that nutrition and our diet have a huge influence on our health. This is *very* easy to see. You don't have to be a scientist or have advanced education to realize this. This is a fact that we can't change. So, if you are aware of this, it means that you need to be conscious of what you put into your system. Pay attention to what you are consuming. (Luis, interview, April 28, 2010)

A Belgian expatriate respondent and consumer of the eco-vegetable bag indicated that a major benefit of the eco-vegetables for her was that they, "...will help [people] to eat more vegetables, especially Guatemalans. Like, I think I always know *I'm* not eating less vegetables [*sic*] if I don't have the bag. But I think for *Guatemalans*, maybe it stimulates [them] to eat more vegetables...to have that bag coming. And, yeah, another advantage, I guess, is you also eat vegetables you otherwise wouldn't buy." (Emma, interview, May 10, 2010)

Recent data from INE concerning consumption and body mass index (BMI) shows that these respondents aren't far off in their estimations. The data set, collected between 1999 and 2000 contains information on the food purchasing habits and BMI of Guatemalans based on a nationally representative sample of 7276 households across 38 municipalities in all 22 of the country's departments. Based on these data, Asfaw (2011: 185) finds that, all other things equal, a 10 percent increase in household expenditure on partially processed foods is significantly tied to a 3.95% increase in the BMI of members. Further, a ten percent increase in household expenditures on *highly* processed foods is significantly tied to a 4.25% increase in family member BMI, all other things equal.

The article goes on to argue that Guatemala, like much of Latin America, is undergoing what is referred to as the “nutritional transition”. The transition entails a rise in the consumption of processed foods that are heavy in sugar, fat, and sodium. Obesity tends to rise in parallel fashion, as these foods increase as a percentage of food consumption at the expense of unprocessed staples. Like many interview respondents consulted in this study, the article ties this transition in diet to the expansion of transnational supermarket chains and an increasingly sedentary lifestyle. Guatemala, for example, has seen a doubling of the number of supermarkets countrywide in the past two decades. Their share of the retail food market grew steadily at around ten percent annually between 1994 and 2002. Because supermarket chains are the principal suppliers of mass produced, cheap, canned, and processed foods in the country, their proliferation has gone hand in hand with a rise in obesity throughout the country in recent years (Asfaw 2011: 184-185).

Further, Asfaw (2011) finds that high BMI in Guatemalan households is significantly tied to other lifestyle characteristics identified by interviewees in this study. According to the report, urban households had significantly higher BMI levels than rural households. This would make sense, considering the fact that most supermarket chains are concentrated in the country’s urban areas. However, the report goes further, arguing that the sedentary occupations of an increasing number of city dwellers were at least partly responsible for raised BMI levels. The author found that employment in mostly professional, sedentary occupations was significantly tied to higher BMI. Specifically, employment in

“managerial” positions had a relatively large, positive effect on BMI levels of participants (Asfaw 2011).

The decision to purchase the eco-vegetable bag can, therefore, be seen as an effort on the part of many urban Guatemalans to establish a healthier and more diverse diet with less reliance on the processed, uniform foods circulated by supermarkets and fast food chains. In the process of national level shifts toward increased consumption of processed convenience foods, eco-vegetable consumers seek to reestablish the place of unprocessed whole foods through consumption of the diverse products contained in the eco-vegetable bag. In this way they attempt to counter global trends in post-farmgate food processing and supermarket distribution that are tied to increased rates of obesity, vascular disease, and other health problems.

The respondent from above decided to take personal responsibility for her young relatives’ nutrition using the contents of the eco-vegetable bag. She describes this process and transition,

The parents [of the child relatives] allowed me to find places for vegetables in their diets. The base of my diet *is* the vegetable. We only consume meats about two, maybe three times a week. The vegetable, however, is my *base*. At first they wouldn’t eat *any* vegetables. But now, they eat *habas* [*recadito de haba*]! They also eat what we call “small green trees”—broccoli, and “small white trees”—the cauliflower...Now, I tell their parents, “Your children eat *habas*!” (Roselia, interview, November 11, 2009)

Another eco-vegetable consumer indicates that diet diversity should reflect the diverse activities in which people are engaged. He contrasts this with the uniformity of food in *Quetzaltenango*’s restaurants by saying,

All the time we vary, right? This means that we should be varying our diet *all* the time as well...Maybe restaurants should think about expanding their menus...This way you wouldn't be tasting *exactly the same* flavor hamburger on any given day or hour of the year...To the contrary, we have a good deal of versatility [in our diets]...It is very, very healthy and perfectly possible to live without meat as well as this mountain of canned products, filled with preservatives, chemicals, and artificial flavors and colors. These actually go against nature and human nutrition. (Luis, interview, April 28, 2009)

Value for Sanitation and Health

A significant number of interviewees and questionnaire respondents indicated that eco-vegetables are valued because they are healthier ("Health"). As demonstrated in the preceding section, one key dimension of this is diet diversification and variety. However, a second dimension of health that was repeatedly brought up in both consumer and producer interviews was the connection between health, cleanliness, and a food's freedom from agrochemical contamination and residues. Unlike purchases in open markets, where cleanliness is primarily determined by a vegetables' freedom from insects, eco-vegetable consumers were primarily concerned with cleanliness in production and postharvest handling of vegetables. Interviewees repeatedly expressed concern over poisonings from chemicals and other forms of contamination in farm produce. Nearly everyone consulted had either heard stories of or had personal experience with chemical poisonings or other illness from contaminated vegetables that they had purchased in the open markets.

Eco-vegetable consumer concerns about these issues reflect growing trends in open market consumer preferences as described by *producers*

interviewed for this study. Many claimed to have seen a few but increasing number of consumers expressing interest in cleaner products that are free from contamination by toxic agrochemical residues and unsanitary post-harvest handling procedures. Producers characterized rising consumer demand for cleaner foods by describing a growing avoidance of produce from specific locales where agricultural production is reputed locally to be unclean or otherwise contaminated. This reputation is nearly always pinned on the town of *Almolonga*, a community of farmers outside *Quetzaltenango* that is famous throughout Central America for NTAE production. Though regionally known as, “The Garden of Central America”, locally the town is increasingly associated with produce contaminated with chemical residues and the use of polluted waters for irrigation and post-harvest washing. One farmer explains,

You see, many from *Almolonga* come here (San Carlos) to buy vegetables...because in *Almolonga* there are vegetables but they irrigate them with *dirty* water. Therefore, people don't often buy from them....In the market...the people ask if the vegetables are from *Comunidad de la Montaña*. If so, then they are good. However, if they are from *Almolonga*, people will refuse because the vegetables are contaminated by the dirty water...from the River *Samalá*. The disease is this dirty water that they use to irrigate there. (Ruth, interview, May 11, 2010)

Another vendor in the market argues that, more and more, city residents refuse products from *Almolonga*. This is because,

...the *Almolongueño* only farms with *chemicals and poisons*. This is true. This is the only way they work. And so what are they doing to our health? Well, for *us* maybe not as much because we sow [our own] vegetables. But for *you* [the interviewer]...by doing this they are poisoning you and themselves. As you know, they have public bath houses. There, the water from the baths drains into the drainage channels. The farmers then use these streams to irrigate their vegetables...But already people in the

city, especially the *ladinas*, are not accepting vegetables from *Almolonga*. (Sara, interview, May 21, 2010)

Eco-vegetable consumers themselves produced numerous personal accounts of illness or other bodily harm caused to themselves or family members by consumption of contaminated vegetables from *Almolonga*. This was a reason frequently given by consumers for purchasing *Negocio Orgánico's* eco-vegetables. Consumers were confident because they knew the vegetables to be from San Carlos and not *Almolonga*. Describing her reasons for buying from *Negocio Orgánico*, one consumer stated, "For us, we have more confidence in [produce from] *Comunidad de la Montaña*. This is because in *Almolonga* people harvest many vegetables that are watered with water from drainage channels...It has always been known, that the vegetables from *Comunidad de la Montaña* are cleaner." (Roselia, interview, November 2, 2009) Discussing his purchasing habits and the issue of chemical use, another purchaser of the eco-vegetables indicated that,

We try to purchase as much as possible from these people [*Negocio Orgánico*]. You can see the difference, right? When a carrot is this size [*gestures by spreading arms widely*] you think, "No. This isn't normal." So, in *Almolonga*, for example, there is a whole lot of this type of cultivation. It's more of an industrial system, right? It's *excessive*...For me, it's very important that a vegetable be as organic as possible. (Luis, interview, April 28, 2009)

Eco-vegetable purchasers' desire to minimize their risk of consuming contaminated vegetables sold in open markets can be seen as a response to the effects of increased agrochemical use in non-traditional crops across the nation. Lack of regulation of agrochemical imports from developed nations and the

promotion of chemical use by development agencies and chemical distributors have resulted in growing concern over the safety of non-traditional vegetables produced in Guatemala. For example, in the early 1990s the Guatemalan NTAE industry was devastated by extremely high rates of product detentions at U.S. ports of entry due to unacceptably high levels of toxic agrochemical residues (Thrupp et al. 1995). The export of Guatemalan NTAE vegetables continued to decline throughout the decade and beyond, resulting in the loss of tens of millions of dollars in revenue due to import rejections for chemical residue levels and the presence of banned or unidentifiable agrochemicals in NTAE shipments (Julian et al. 2000).

Consumption is even riskier with produce purchased in open markets within the nation, where no comparable regulations for contamination in food exist. Lax regulation and weak policy regimes at the national level do little to protect the Guatemalan population from the threat of food contamination or toxicity, especially in open market purchases (Julian et al. 2000). The town of *Almolonga* in particular has been cited by one researcher as, “probably the best Guatemalan example of the detrimental effects of incorrectly used pesticide on a human population.” (Arbona 1998: 55) Confirming the anecdotal evidence provided by respondents in this study, Arbona (1998) notes that interviewed farmers from *Almolonga* claimed to rinse pesticide receptacles and sprayers in the same irrigation canals used to wash vegetables before bringing them to the market. She also found most farmers in the town, “...apply pesticides too

frequently and at dosages higher than those that are recommended by the makers.” (Arbona 1998:54)

The author the practices to significantly higher rates of upper respiratory tract infections in the town relative to neighboring communities as well as anecdotal evidence of increased congenital malformations in newborns delivered in the town. She concludes that the overuse of agrochemicals in towns like *Almolonga* is responsible for these kinds of health threats to exposed farmers as well as to consumers of the contaminated produce. For some consumers in nearby *Quetzaltenango*, the choice of eco-vegetables over open market purchases is a direct response to this aspect of non-traditional vegetable production in Guatemala.

Tradeoffs, Innovations, and Compromises in Food System Restructuring

In many ways the newly defined modes of consumption for eco-vegetables and the values upon which they are based constitute a direct challenge to existing modes of consumption surrounding non-traditional vegetables. For consumers, participation in the eco-vegetable market has involved new forms of consumption and other lifestyle transformations.

However, as scholarship on alternative food systems has pointed out (see Sayer 2001, Hinrichs 2000), such changes require tradeoffs and compromises with competing values that are tied to conventional food systems. As a result, even as groups of food providers and consumers define new relationships surrounding exchange, systems of provision, and values for food, these sometimes reinforce and grow out of the conventional food systems that they oppose. To illustrate,

the current section will review how the reported consumer values discussed above contrast with and are in some ways parallel to prevailing values in *Quetzaltenango's* open markets and supermarkets.

As discussed above, the service and delivery aspect of *Negocio Orgánico's* eco-vegetable scheme was the most popular value mentioned in consumer questionnaires. It was shown that, for consumers, this value is tied to problems of access to clean, quality vegetables on the part of urban working persons. In an effort to remedy the situation, consumers of the eco-vegetables participate in an innovative form of exchange that diverges from open market and supermarket transactions and values. Eco-vegetable consumers broaden their access to quality foods via doorstep delivery but, in this process, forgo the opportunity to bargain in the open market and hunt for the greatest deals according to the logic of the three Bs. By allowing *Negocio Orgánico* to pre-select and mix vegetable combinations in the weekly delivery, consumers blindly pay a fixed price for their vegetables before having the opportunity to inspect their quality.

In the area *Negocio Orgánico's* delivery scheme reproduces several aspects of the supermarket shopping experience for consumers. The reliance on a 3rd party distributor's ability to pre-select quality conforms very much to those notions of value held by supermarket consumers. Like the supermarket, *Negocio Orgánico* offers to purchasers the time-saving option of having their produce pre-sorted, selected, washed, and made available at their convenience. Further, like the supermarket, *Negocio Orgánico* offers consumer the security of avoiding

the open market and any potential robbery of possessions or money. Instead, the eco-vegetable bag arrives at the consumer's doorstep, eliminating any and all risk tied to market visits.

Like the supermarket, the eco-vegetable delivery moment offers to consumers, at least to some degree, the opportunity for conspicuous consumption. Though it would be difficult to measure with certainty the extent to which consumers purchase the eco-vegetable bag for these reasons, the manager of *Negocio Orgánico* offered this explanation for the spread of eco-vegetables among consumers in the city,

Our delivery trucks pass through the same predetermined routes of the city every week. Consumers can observe them passing by and selling vegetables to their neighbors. Within a week or so they see the truck again and by the third time they say to themselves, 'I want one as well.'...and among themselves the neighbors communicate with their friends and tell them that *they* are now receiving the bag of vegetables as well. (Julio, interview, October 14, 2009)

Among questionnaire respondents, 20% reported first finding out about the eco-vegetables by seeing the truck delivering to neighbors. Further, 48% were referred to the business by friends who were already purchasing eco-vegetables. Though not directly indicative of consumer motivations or their value for the prestige of being seen receiving weekly deliveries of vegetables, these data do point to the importance of social connections in the spread of the delivery scheme.

At the same time, eco-vegetable consumer values diverge from trends in consumption prevalent in supermarkets like Paiz and HiperPaiz. The divergence

can be seen in respondents' expressed value for diversity and the variety of foods found in the eco-vegetable bag. In the face of rising consumption of processed, convenience foods that are made increasingly available by supermarket chains, eco-vegetable consumers expressed interest in diet diversification and the consumption of whole foods. Instead of raising their consumption of nutritionally deficient, highly processed foods, consumers of the eco-vegetables are choosing a diverse array of whole foods in hopes of securing better health outcomes through nutritional improvement.

However, the divergence also entails tradeoffs with conventional values and requires some innovation and lifestyle change on the part of consumers. In opting for the mixed bag of eco-vegetables, consumers accept that this may mean more time in preparation relative to that of convenience foods. Further, purchasing eco-vegetables also means that consumers are bound to consuming seasonally available produce from local sources instead of imports available all year round in the supermarket. For some, the diversity itself can be overwhelming, as the eco-vegetable delivery often includes vegetables that are unfamiliar to consumers. Expressing the difficulty that she and her household have, one consumer indicated, "And actually we [her household] haven't gotten...the bag in maybe like three weeks or so because sometimes you just need a break from it because it's so much...so many vegetables that it forces us to cook a lot and forces us to cook certain foods and every once in a while you want just like a grilled cheese." (Hannah, interview, April 23, 2010) An ex-subscriber to the eco-vegetable offered this explanation, "But also after almost

two years of having the bag I got a bit tired of that. Like eating always vegetables I don't like. Although it's good to eat different things you normally don't eat because you have other vitamins. So, for example, now I don't eat any *remolacha* [sugar beets]." (Emma, interview, May 10, 2010)

According to many consumers, coping with the diversity of the eco-vegetable bag has led them to new and innovative cooking strategies. One consumer describes the transformation in her cooking habits, "One day I told them [*Negocio Orgánico* delivery drivers], 'I don't know how to cook beets.' The man told me to make *chalupas*. I didn't know what those were...but then I went to my neighbors and asked...and they each told me how to prepare them the way that they preferred." (Roselia, interview, November 2, 2009) Another respondent indicated that she valued the fact that, It's [the bag] delivered to you and you get some vegetables that you don't normally use. You learn about different ways to cook it. Or you're like, 'Oh. How should I cook this *güisquil* [chayote]?'...which I wouldn't ever buy normally." (Hannah, interview, April 23, 2010). In this way, the diversity of eco-vegetables is simultaneously a way to ensure nutritional balance in one's diet and a barrier that must be coped with through new and innovative cooking strategies and recipes.

Eco-vegetable consumer values depart from the market logic of the three Bs that evaluates produce only in terms of the best size and visual appeal that can be fetched at a good price. Unlike in the market, consumers see beyond superficial indicators of cleanliness like the presence of insects. They instead demonstrate concern for transparency concerning production practices,

guaranteed product sanitation, and freedom from agrochemical contamination. However, unlike in the supermarket or open market, the guarantee that these standards are met is not derived from a label or direct contact with the vendor. It is instead based on consumer trust in the association farmers and the distributor *Negocio Orgánico*.

At the same time, eco-vegetable consumer values are not free from commercial considerations like those reinforced in mainstream vegetable markets. Evaluations of a product's worth in terms of price and commercial qualities ("Price") tied consumers' value for diversity of foods ("Diversity") as the second most important value among questionnaire respondents. Although eco-vegetable consumer values for food diverge in several fundamental ways from those in conventional markets for non-traditional vegetables, they are not without some commercial valuation of food in terms of price. Echoing recent literature on alternative food systems (see Murdoch et al. 2000), the mixing of conventional and alternative values is a testament to the hybrid nature of alternative food systems in general. Eco-vegetable consumers held price and the commercial value of the eco-vegetable bag as centrally important aspects of the scheme. The limit to consumer desire for altering conventional food systems can be tied to the greater political economic context surrounding consumption in Guatemala. At some point, consumers are unable or unwilling to pay higher prices for alternative foods that meet new criteria for value and quality. The coordinator of *Negocio Orgánico's* eco-vegetable scheme summed this situation by complaining, "No matter what, people don't consider quality. They consider only

price because they don't have the money to buy the product...People are only interested in buying what they can afford. Therefore, this becomes one of the problems...the limits that *Negocio Orgánico* has." (Julio, interview, October 14, 2009)

Food System Reconstruction Through Consumer Values

Recent literature on alternative food systems (Marsden and Smith 2005, Murdoch et al. 2000) has emphasized the central significance of consumer values for food as a basis for collective action for redefining conventional food chains. Researchers have focused on how consumer values reflect a host of goals and aims for alternative food systems that are formed in reaction to broader political and economic contexts. In the case of non-traditional vegetable consumption in western Guatemala, the growth of a market for *Negocio Orgánico's* eco-vegetable bag is a clear expression of consumer reactions to several political and economic structures surrounding mainstream non-traditional vegetable production and provisioning.

Rather than bargaining in open markets to acquire the cheapest mix of foods according to tangible cosmetic qualities like size, color, and uniformity, eco-vegetable consumers forgo these things and prioritize delivery. Through the delivery system they increase their access to quality vegetables, given time constraints imposed by paid work schedules. Cleanliness, rather than being defined as simply the absence of visible insects or disease, is defined as freedom from chemical residues and the use of sanitary postharvest handling procedures. For consumers, the change has meant avoiding produce from

specific locales known for agrochemical overuse and purchasing the *Negocio Orgánico* bag of reduced chemical eco-vegetables from San Carlos. In these ways eco-vegetable consumers reach beyond the market logic of the three B's by expressing value for intangibles like convenience, access, health, and safety in foods.

Eco-vegetable consumer values also diverge from trends in consumption reinforced by transnational supermarket chains. Many respondents embraced seasonal variation in their foods as opposed to the year-round availability of imported foods on supermarket shelves. They expressed value for diet diversification and increased consumption of whole foods for health reasons. Rather than purchasing more processed, convenience foods in supermarkets, eco-vegetable consumers see value in consuming a variety of whole, locally produced foods.

Divergences in value reflect consumer reactions to the unique structures that support conventional chains for non-traditional vegetables in Guatemala. Further, these values provide the basis for cooperation in refashioning commercial agricultural chains through alternative forms of exchange. It has been shown that these are in direct dialogue with one or more aspects of the greater political economy of food provisioning in Guatemala. Consumer value for the eco-vegetable delivery system is related to diminished market access felt by an increasing number of urban women working outside the home. Finding no time to visit open markets and bargain for quality foods, these working women find that eco-vegetable delivery facilitates their access to quality foods.

Consumer value for diet diversity can be seen as a reaction to national level trends in decreased nutritional health and increased consumption of high fat, high sodium processed foods in the wake of transnational supermarket expansion. Eco-vegetable consumers reject these trends and opt for increased diversity of whole, locally grown foods. Finally, consumer value for lower chemical contamination in foods and sanitary postharvest handling is a direct reaction to a weak regulatory context that facilitates the overuse of toxic agrochemicals in non-traditional vegetable cultivation and the use of contaminated irrigation water on such crops.

Such divergences have led to numerous innovations and changes in consumption habits for eco-vegetable consumers. In agreeing to pay a fixed price for delivered vegetables, consumers pay in advance for a mixed bag of pre-selected vegetables, trusting in *Negocio Orgánico* and association farmers to assure vegetable quality and that their values for production are being met. They forgo their right to choose vegetables personally, as they would in the open market or supermarket. Instead, they are satisfied with the diversity of seasonally available vegetables selected by *Negocio Orgánico*. For some, this has led to lifestyle changes and changes in diet. Numerous respondents reported having tried and prepared new vegetables with which they were unfamiliar before subscribing to the eco-vegetable bag. Others claimed to have made significant changes in home food preparation, integrating new recipes learned from friends and neighbors.

At the same time, many eco-vegetable consumer values parallel those reinforced in conventional markets. The importance of commercial value as measured by price is still intact among eco-vegetable consumers. This remains a principal constraint that imposes a limit on consumer willingness to pay for specific qualities in the foods they consume. Further, it reinforces an economic barrier to the consumption of potentially safer, less hazardous, and diverse foods from local producers on the part of poorer consumer. Though consumption of organic foods challenges aspects of producer-consumer relations, it continues to rely upon historical inequalities along ethnic lines. Specifically, agricultural production by indigenous Maya farmers continues to be refashioned to fit the tastes and consumption habits of urban ladino professionals. Further, like in the supermarket, consumers of the eco-vegetable bag receive a third-party guarantee that their standards for production and postharvest handling are being met. Finally, the delivery scheme of the eco-vegetable bag may also bestow upon consumers a degree of prestige similar to that which comes with conspicuous consumption of name brand items from Paiz or other supermarkets.

Similarities between the eco-vegetable market and mainstream outlets for non-traditional vegetables point to the fact that, as consumers challenge certain aspects of conventional food systems through alternative consumption, they continue to enforce other key elements and structures tied to mainstream food chains. Consistent with previous conclusions drawn from North American and European case studies, consumers in the alternative food market for eco-vegetables in Guatemala simultaneously contest and reinforce many aspects of

conventional chains for non-traditional vegetables. Consumer preferences are a hybrid of industrial trends characteristic of conventional agricultural markets and diverging norms and values related to expanding access and food diversity as well as promoting health and environmental safety.

Though similar in many ways to the North American and European examples of alternative food movements cited above, the case of Guatemala stands as an example of how the trajectory of alternative food chains and consumer values are largely conditioned by the specifics of context. As has been shown, eco-vegetable consumer values are formed in direct dialogue with the unique political, economic, and cultural issues surrounding non-traditional vegetable production and provisioning in western Guatemala. New values result in the formation of a distinct system of alternative food provisioning to meet consumers' specific aims and goals. It also results in unique lifestyle innovations and tradeoffs with other values held by consumers. Further, reactions to conventional chains for non-traditional vegetables in western Guatemala influence the types of interactions, compromises, and conventions that uphold social relations between groups of actors involved in the eco-vegetable food system.

VIII. CONCLUSION

The current work has been an effort to render new insights in the fields of rural development and alternative food movement formation by focusing on the networks of social and economic relations that form between involved actors. Following the work of Murdoch (2000) and others from the ANT (Law 1998) and Conventions theoretical (Boltanski and Thevenot 1991) traditions, I have employed a framework that focuses on these types of networks formed between various individuals and institutions at each stage of the development process. Like Reynolds (2003) I have also extended the approach to the networks of interaction that develop around each node in a commodity chain for alternative food. My framework has allowed me to bring to the fore the ways in which

motivations and values of different actors are blended through conflict and compromise, how this results in specific types of partnering relationships, and why these are or are not successful in realizing actor goals for changing the conventional food chain for non-traditional vegetables in Guatemala.

My approach has also served to redirect my emphasis away from the established but not always appropriate binaries of development theory such as “top-down” versus “bottom-up”, “state” versus “market”, and “exogenous” versus “endogenous” development models. Rather than forcing these complex webs of interaction and collaboration into discrete categories or attaching them to a specific point on a continuum, I have instead shown the conditions that give rise to their specific character, how power is or is not maintained through them, and how they accomplish what they actually realize on the ground. By maintaining an emphasis on the form taken by these points of interaction between actors in ATQ/*Negocio Orgánico*’s development program, I have shown the complexity of motivations and the messiness of the alliances that are formed within a seemingly simple plan for promoting sustainable rural development and the consumption of local organic foods in Guatemala.

The goals and corresponding efforts in these areas are truly inseparable on the ground. In the interests of clarity and theoretical consistency, however, I have treated them separately – first, as they pertain to the realm of rural development and then, in the area of alternative food chain formation. In analyzing the sustainable rural development efforts of these NGOs in the Valley of San Carlos, I have followed Ferguson’s (1994) approach by focusing on what

the relationships they form with funders and participating producers actually accomplish. Rather than judging them as simple successes or failures, I have instead focused on their actual impacts and what they succeed in doing. This has involved a deeper interrogation of how program goals are set and carried out by producers and development workers. It has allowed me to address the research question set: *“How are the needs of funding agencies, NGOs, and actors on the ground combined in discursive representations of the problems of and solutions to rural development?”*, *“How does this give rise to specific relationships of cooperation and power in the development process?”*, and *“What do these accomplish in terms of the goals of involved actors?”*

In answering the questions, I show that the relationships the NGOs establish with international funding agencies through program progress reports and proposals is one that seeks to secure legitimacy for the organizations and their programs on the ground. Discursively creating a space for themselves in the development process by proposing a set of measurable outcomes and interventions, the NGOs structure subsequent relations with producers. In the case of the rural development NGO ATQ, this process has direct implications for the execution of program activities and the organization’s relationships with outside actors. Because program goals were developed without significant producer input, they are often inapplicable to participating farmers, not immediately understood or accepted by them, and require developers to again establish their own legitimacy and that of their recommended technologies and practices. The process itself indicates that NGOs per se do not necessarily

represent a more “bottom-up” form of development compared to state agencies. Instead, they themselves often assume the role of brokers of development that are forced to find ways to balance the stipulations of external funders with their own goals and those of other actors on the ground.

Directly addressing the literature on the diffusion of agricultural innovations, I focus on how diffusion is accomplished through the organization’s relationships with producers, asking “*What characteristics of the development specialist-producer interface foster the transfer of organic agricultural techniques and agroecological farming methods?*” Here, I argue for the central importance of the channels of agricultural information chosen by farmers. For successful transfer of new technologies and agricultural practices, establishing the credibility of NGO agronomists as trustworthy “change agents” (Rogers 2003) and sources of information for farmers is crucial. I argue that credibility in the eyes of farmers is less based on disembodied (Giddens 1990) forms of knowledge like educational qualifications or other expert-based systems and centers more on forms of locally demonstrated experience, firsthand displays of a technology’s effects, ownership of agricultural plots in the community, years of farming experience, and other forms of symbolic capital (Bourdieu 1986). I conclude that long-term contact between the same extension agents and participating producers as well as agent availability to address farmer problems or questions on site are effective tools for establishing their credibility as sources of agricultural information in the eyes farmers. In Rogers’ (2003) terms, the

receptiveness of farmers to NGO information tended to be facilitated by a perceived “homophily” between themselves and NGO agronomists.

I further argue that effective development of new, more environmentally benign farming technologies must begin with sufficient farmer education, hands-on experimentation, and the establishment of the technologies’ benefits through demonstration or participatory goal setting involving farmers themselves. Broad-based adoption of organic farming techniques is greatly increased when the risk of investment in inputs shouldered by farmers is partially reduced with subsidies. Confirming the arguments put forth by Holt-Giménez (2006:65) concerning farmer-to-farmer methods of technology transfer, hands-on education and the ability of farmers to experiment with a technology and directly observe its benefits are essential for broad adoption.

The reverse is also true. Adoption of new agricultural methods and technologies by farmers is hindered when they are left out of the planning and setting of program goals or the choosing of agricultural innovations. When producers are excluded from these aspects of program administration, the “relative advantage” (Rogers 2003) of a given technology is not immediately established. Further, hands-on experimentation and visual demonstrations of a given technology’s use foster what Rogers (2003:15-16) refers to as the “observability” and “trialability” of the technology. As a result, I argue that these activities are crucial for the successful transfer of agricultural techniques, especially those that require significant investment in time, capital, or labor on the part of farmers or require specialized knowledge in their execution.

In terms of addressing the environmental and human health concerns brought up in critiques of non-traditional vegetable production by small farmers in Guatemala, the current study shows that great strides can and are being made through development program activities. Farmers consulted in this study demonstrated a greater awareness than neighbors of the deleterious effects of agrochemicals, the environmental benefits of multi-cropping, and the benefits of many agroecological farming techniques. Further, POSC farmers were significantly more likely to engage in polyculture and have experience constructing terraces or drainage canals for soil conservation. They reported using significantly less chemical pesticides per crop per cultivation cycle than neighboring farmers. However, limitations tied to the issues outlined above can be seen in the lack of member farmer application of organic fertilizer, engagement in composting, and use of organic pest controls. In these areas, uptake was low because the value of such technologies was not sufficiently established to farmers through NGO activities or incentives.

Concerning attempts to secure agricultural sustainability through market-based development and forward integration of producers in a new commodity chain for non-traditional vegetables, I respond to the research question: *“How successful is the construction of a local organic food system in addressing the economic, ecological, sociocultural, and structural limitations of non-traditional vegetable commodity chains for small farmer development?”* I argue that the NGOs’ program for vertical and market integration of producers meets with mixed success, tied the nature of their relationships with producers and consumers.

In the economic realm, I argue that specialty food production in an alternative commodity chain does not result in significant economic benefits to producers in the current case. Efforts on the part of *Negocio Orgánico* to increase prices received by farmers and mitigate risk associated with market volatility have little economic impact for members due to low amounts of product purchased. The latter diminishes farmer confidence in the organization as a legitimate replacement for conventional forms of commercial vegetable sales, regardless of price guarantees and other forms of risk management.

Another result is that, ecological sustainability in agriculture is less tied to the incentives offered by the new commodity chain than it is the development efforts outlined above. Specifically, the ability to cater to new consumer demands for organic produce is not a significant motivation for farmers to use more environmentally benign agricultural practices. Because sales through *Negocio Orgánico* are so low, the marketing opportunity opened by organic cultivation makes little difference in farmer decisions to implement the agricultural techniques promoted by the programmers. Though there remains the potential for increased sales to bring direct economic incentives to farmers for organic cultivation and agroecology in the future, this is not currently influential in farmer decisions to implement more environmentally sound farming techniques.

In the realm of structural and sociocultural sustainability, I investigate NGO efforts at farmer vertical integration in the commodity chain, farmer human capital development, and microenterprise building. Relating these to the debates surrounding the structural and sociocultural effects of conventional chains for

non-traditional vegetables in Guatemala, I investigate whether these efforts do or do not result in producer empowerment to determine their own development trajectories and secure greater value capture for their products. Concerning farmer vertical integration, I conclude that human capital transfer and farmer integration into post-harvest tasks are not sufficient in themselves for the building of an entrepreneurial spirit among farmers. As a result many producers in this case do not approach the *Negocio Orgánico* business as stakeholders with an interest in its long-term success. I argue that development planners must find ways to put the newly learned skills of producers to use and that human capital development must be approached as a continuous process that constantly builds on skills previously taught to participants. Further, NGO efforts to employ farmers must be carefully planned so as not to undermine the growth of the business itself.

Overall, I find that the combination of market-led development and sustainability through alternative commodity chain formation contains a fundamental, often self-defeating contradiction between goals. Syncing economic, environmental, and sociocultural sustainability with imperatives for market survival that include efficiency, competitive pricing, and mass-production is a task fraught with difficulty. Including and training less-skilled farmers to participate in a microenterprise necessarily creates inefficiencies that hinder the ability of the new enterprise to scale up markets and meet consumer goals for service on a large-scale. External funding for the development process may temporarily fill these gaps but it is the aid that is at the same time the making and

unmaking of the enterprise. It allows the development scheme to be more inclusive and participatory but it can also shield the new enterprise from the need to build an efficient and competitive business model capable of surviving on profits from sales alone. In this case, *Negocio Orgánico* is left in a space that is neither pure development project nor pure market-based business building. The microenterprise appears caught between a kind of dependence on development funds and the formation of a business that is viable, self-sustaining, and profit-generating.

Farmer motives for participation and goals for the rural development program diverge significantly from those of the NGO planners. I connect the difference in motives to the NGOs' failure to deliver significant economic benefits to POSC members as well as their planning of core development activities without the input of these producers. Consistent with the observations of post-development scholars concerning representation in discourses of development, I find that, in order to secure credibility for their program with funders, the NGOs discursively create a construct of villages in San Carlos that is consistently incomplete and misrepresentative. By presenting communities as agricultural, in transition from subsistence to commercial cultivation, isolated from markets, and suffering from low levels of economic diversification, these documents render an inaccurate image of community life and needs. While these needs do fit well with the established solutions, development activities, and measures of program success proposed by the NGOs, they do not match the reports of producers in this study.

I argue that, as a result, participants in development projects often value those secondary, less tangible benefits of a program more than the core objectives put forth and used to gauge program success by project planners. In the case of ATQ and *Negocio Orgánico's* program, these secondary benefits constitute the greatest impacts of the development project for participants. Producers regarded the opportunities for education and extradomestic participation in public groups provided by the NGOs' activities as centrally important. This was especially the case for female participants faced with limited opportunities for formal education and participation outside the home in what many describe as male-centered, *machista* communities. Beyond meeting participant goals of educational enrichment and the building of self-worth, these opportunities can and do provide community members with valuable human capital and occupational experiences that may open doors to new earning opportunities and paid work. As a result, I find that even as development projects fail to meet their central objectives outlined in funding proposals and official documents, they may continue to make considerable impacts in those often overlooked and less tangible areas that elude direct measurement as outcomes of the program.

Finally, the conclusions of my research shed considerable light on current theory concerning the formation of alternative food networks and local food systems by exploring popular themes and concepts from this literature using cases in the developing world. The result has been a more critical and comparative analysis of established concepts like, embeddedness, trust, and

product value across cultural, historical, and economic contexts. Overall, my research has shown how the establishment of an alternative food system designed to alter relations in conventional chains for non-traditional vegetables is bound in many ways to the same ethnic inequalities, socioeconomic imbalances, values, and power structures that condition conventional modes of agricultural production and consumption. I emphasize the fact that “alternative” food systems are most often hybrid mixtures that grow directly out of the “conventional” chains they seek to change.

Applying the findings from this study to existing literature on local food systems derived from ANT and conventions theoretical traditions, I answer the following question set: *“How is the growth of an alternative food system shaped by context specific processes, politics, and structures of conventional food systems in the developing world?”*, *“Do the values and symbolic meanings attached to food in such systems truly work to resituate power to producers and consumers through the creation of new economic spaces outside conventional chains for non-traditional vegetables?”*, and *“To what extent must alternative food systems be brought into accord with industrial and commercial imperatives to ensure their own economic survival?”* I do this by bringing agricultural production and rural development into dialogue with the marketing, commercialization, and consumption ends of the alternative commodity chain.

Following the ANT and conventions theoretical traditions, I document how new values concerning food are developed and embodied in alternative forms of exchange, cooperation, and compromise in networks of social relations between

consumers and other actors. I argue that values for food are emerging among Guatemalan consumers that diverge significantly from those in conventional markets. Values reflect not just cosmetic preferences or consideration of price but other things like transparency, cleanliness, freedom from contamination, and food access and diversity. New values represent consumer desires for change to conventional systems of NTAE production and consumption. These demonstrate a growing demand for accessible, diverse, and clean foods in the context of broad economic shifts, ineffective regimes of agricultural regulation, the rise of transnational supermarkets, and other changes to agriculture that limit consumers' ability to secure these goals. Not only do new goals inspire participation in networks of economic exchange reflecting new notions of quality for food, they also imply tradeoffs and lifestyle changes going beyond the transaction itself.

However, even as these consumer values express a desire for change to specific aspects of conventional food systems, they leave untouched and reinforce others. I argue that ethnic power asymmetries in Guatemala's historical development persist in the alternative food chain. The power to condition agricultural production of small Maya farmers continues to be the exclusive domain of *ladino* urban professionals, regardless of NGO efforts at producer vertical integration. Maya farmers, on the other hand, have no comparable power to alter the consumption habits of urban *ladinos*. Here is most evident the extension of ethnic inequality in Guatemala across successive waves of capitalist penetration and development in the agricultural sector.

Further, the food system manifests hybridity in that it simultaneously works to embedded and disembedded agriculture in local social relations, economic institutions, and environmental conditions. In this case, embeddedness in local production and environmental conditions often breaks down along the lines of established reputations held by NTAE producing towns. Consumer desires for foods free from contamination frequently translate into purchasing habits that seek out produce from specific villages while avoiding that from others. Although trust in food quality is decoupled from the reputation of transnational supermarket chains or the logo of international food distributors, it is not fully reinvested in personal guarantees of farmers. The NGO *Negocio Orgánico* continues to play a vital role in ensuring to consumers the standards for quality they demand in the bag of eco-vegetables.

Finally, purchases within the alternative food system are not free from consideration of price and a value for uniformity in product size and shape. I maintain that the intermingling of established values with those that diverge from conventional markets gives rise to a hybrid food system that reflects the diversity of alternative food networks in general. The merging of values also shows the degree to which these food systems are inextricably tied to the conventional food chains that actors seek to redefine.

Contributions to Theory and Practice

Concerning Theory on Rural Development and Alternative Food Systems

Building on the conclusions outlined above, the current research makes numerous contributions to theory and practice surrounding sustainable rural development and the formation of alternative food systems. In the realm of development theory, the framework employed by this research demonstrates the usefulness of a focus on how the interests of numerous actors and entities are merged through networks of interaction in the development process. By complicating established binaries of development theory such as “top-down” versus “bottom-up” approaches, “state” versus “market” based project, “participatory” versus “expert-driven” technology development, and NGOs versus the state, my approach provides a more nuanced understanding of how development goals are formed and met with varying degrees of success.

Moving beyond production alone, the current approach has shown how the integration of all stages of the commodity chain for a nascent microenterprise presents a more complete picture of the dynamics driving market-led development projects and their potential to effect structural change. Just as critics of traditional political economic approaches to food systems (see Sayer 2001) have argued for an integration of consumption and notions of product quality into production-centered analyses, I argue that these are equally applicable in the realm of market-led rural development and microenterprise formation.

In the current study I have shown that effective changes to an established commodity chain in the interests of rural development require the building of new relationships on the ground that work to secure the legitimacy of development

program activities, recommended practices, and the developers themselves in the eyes of all involved actors. The results of my research facilitate a greater understanding of the transfer of agricultural information by showing that farmers more readily accept information from more homophilous (Rogers 2003, McPherson et al. 2001) sources that are able to garner and deploy sufficient symbolic capital and forms of locally-embedded credibility. The work contributes to theory in small farm economics by demonstrating that market risk may not be as significant a consideration for small farmers in commercial markets as some theory may suggest (see Ellis 1993). In this case, many farmers expressed a preference for playing the ups and downs of pricing in open markets over settling for a fixed, contracted price provided by purchasing NGOs. Lastly, I argue that market-led development as a guiding principal for rural growth contains a fundamental, often self-defeating contradiction between the goals of meeting market imperatives of efficiency and large-scale production with the goal of broad-based impacts and inclusive program building. Specifically, the dual commitment to inclusive rural development underwritten by international funding on one hand and increasing a microenterprise's ability to scale up markets on the other leaves projects caught between diverging "development" and "market" trajectories.

The study also makes several contributions to theory concerning the development of alternative food movements and systems. It breaks new ground in the area of alternative food studies by bringing many of the concepts and frameworks developed in the existing literature on food systems to a local

organic food system in the developing world. As a result, it demonstrates the uniqueness of alternative food movements across cultures by showing how such systems in the developing world compare to and differ from those North American and European models in the established literature. In doing so, it furthers understanding of how alternative food movements based on organic or local production are tailored to and often grow out of the context of conventional agricultural production and consumption specific to a location. It also shows how alternative values and notions of quality for food vary across culture and are shaped by macro-level political economic forces, the context of existing conventional agricultural systems, and the perceived efficacy of agricultural regulatory regimes.

Often considered the hallmarks of alternative food studies in Europe and North America (see Winter 2003, Hinrichs 2000), the concepts of embeddedness (Granovetter 1985) and trust have been shown to assume new meaning in the Guatemalan context. Demonstrating the need for further interrogation of these concepts in local and organic food systems, this study has shown that transactions in alternative food networks assume both embedding and disembedding aspects. In the current case, transactions are socially embedded in local, face-to-face relations between farmers and consumers who have lost faith in the systems of expertise (Giddens 1990) and regulatory regimes for food safety maintained by the Guatemalan government. At the same time, they continue to rely on a third party—the NGO— for transparency and the brokerage of trust through its official guarantee of minimal chemical use and sanitary post-

harvest production procedures. Just as agriculture becomes re-embedded in highly variable local environmental conditions and ecosystems through agroecology and community-specific production methods, there remains a strong consumer value placed on industrial conventions concerning uniformity in product ripeness and sometimes size. Overall, my findings problematize these established concepts, revealing that even as notions of value for food shift away from instrumental considerations of pricing and cosmetic qualities alone, they remain tied to industrial and market conventions of quality in prevailing markets for non-traditional vegetables.

Concerning the Practice of Development

In the current study I also make numerous arguments concerning the design and implementation of rural development projects by practitioners, program designers, and funders. In the realm of technology transfers, I argue that agricultural technology transfers go beyond direct economic incentives and must include crucial elements of participation, human capital development, and the long-term availability of extension agents for farmer consultations and field visits. Specifically, I argue for more attention to hands-on education of farmers with new technologies and agricultural practices as well as more emphasis on the communication of the benefits of these to farmers. Further, the results of my study underscore the importance of greater syncing of recommended practices with farmer needs and available resources. Finally, I emphasize the value of

long-term contact between the same extension agents and producers as well as the availability of these developers for field visits and addressing farmer questions on site. This was shown to be an effective tool for establishing development agents' credibility as a source of agricultural information and the benefits of new technologies to farmers.

More generally, I argue that the most successful aspects of rural development programs are those that conform to ongoing processes of change relevant to farmers at the community level. In the current case, participating farmers even bypassed the central economic goals of the project held by planners and instead valued the program most for those secondary impacts that better conformed to their expressed needs and goals. These fuzzier aspects are too often ignored by planners and funders in their search for tangible, concrete outcomes for programs in funding proposals and official documents. Instead, these components must be accounted for through the design of new metrics for program success, as these have a direct bearing on the funding opportunities available to rural development projects.

For farmer vertical integration and microenterprise building in market-led rural development schemes, this research shows that the goal of broad-based impacts for development projects interested in poverty alleviation can be easily muted by the limitations of market demand. Integrating more producers into the scheme further divides an already small consumer demand and limits the economic impacts of a program for farmers. Farmer integration into the

microenterprise should either be gradual or with the understanding that economic benefits will be increased over time with consumer market expansion.

I find that human capital transfer and the integration of farmers into distribution and marketing aspects of the commodity chain is not sufficient on its own for engaging farmers as stakeholders in a business. Instead, farmer skills must be put to use and learning must be approached as a continuous process that constantly builds upon and integrates already learned skills. Farmers should be trained with the goal of administering the microenterprise. Therefore, the skills they learn must be useful for the coordination and organizational activities of the business. Furthermore, once integrated into new aspects of the commodity chain, producers must be given the right kinds of economic incentives.

Insufficient income results in less enthusiasm and less stake in a business' success on the part of producers. Some income schemes, like that set up by *Negocio Orgánico* for its drivers, pit the long-term survival of the business against the immediate economic incentives of workers. The overall effect is that participants fail to see the enterprise as their own and do not approach it as stakeholders with an interest in its survival over the long-term.

Overall, for market-led development programs seeking broad based impacts and farmer inclusion through microenterprise building, care must be taken in the merging of market imperatives of profit generation and expansion with producer participation and human capital development. My research has shown that, in the process of training and employing producers in new stages of the commodity chain, inefficiencies often result that endanger the economic

sustainability of the new enterprise. Though these gaps can be temporarily filled with funding from external development agencies, a plan must be formed to address these, lest the business become dependent upon this aid.

Recommendations for Development Practice

Based on the conclusions and arguments outlined above, I make the following recommendations for practitioners of development, including program designers, funders, and development organization staff. In the area of agricultural technology adoption, my conclusions reveal how farmer confidence in developers' knowledge and recommended agricultural practices is better established through hands-on demonstration and experimentation on site. Confidence is enhanced through long-term relationships between developers and farmers, producer participation, frequent field visits, and locally visible demonstrations of new techniques and technologies. These are all crucial elements necessary for broad-based adoption of new farming practices.

Also, results from my study highlight the need for more careful consideration of how the unique characteristics of a given technology or practice call for specific approaches to its transfer. Practices that require less specialized knowledge, depend on resources farmers have on hand, require less time and labor, and whose benefits are immediately apparent are less likely to require participatory demonstrations, hands-on experimentation, or high levels of developer credibility for their transfer. However, these are extremely important in cases when technologies have the opposite characteristics.

In the area of general development planning and the tracking of project outcomes, the conclusions reached in the current study call for a greater recognition of the impacts of development projects that are outside strictly economic outcomes or core program objectives for market-led development. The research reveals the fundamental importance of inquiries on the part of development planners into participant reasons for involvement in a program and how this fits with the greater context of community life and producer livelihoods. As was demonstrated in the *ATQ/Negocio Orgánico* experience, due to economic shifts and migration, women are increasingly responsible for family agriculture in this part of the world. As a result, development programs geared toward the goals of women in agriculture are extremely vital. Also, participant motivations and values for a development project are often not at all tied to the direct goals of the program as outlined in NGO plans or funding proposals. Because these benefits are not as easily measured or quantifiable, they often go unmentioned in program reports. However, they remain those that are most tightly bound to ongoing processes of cultural change at the community and regional levels. It behooves developers to create ways to integrate these more slippery impacts into program evaluation plans and proposals.

In the realm of sustainable microenterprise generation, it is crucial to recognize that human capital development and employment alone are not enough to inspire entrepreneurial attitudes in farmers or for them to approach a new business as stakeholders. Instead, human capital transfers need to be directly tied to producers' actual involvement in the enterprise. Further, human

capital development should be viewed as a process rather than as a one-time training or certification. Collaboration between farmers and developers should be constant, with the aim of mastery of simple to more involved tasks and increased responsibility for the enterprise's administration assumed by participants. Efforts should be carefully balanced with the goals of meeting market imperatives for profit generation and scaling up markets for the fledgling business. As was shown in the current study, it is easy to fall into singular pursuit of profit while neglecting producer integration into key tasks. On the other hand, it is just as easy to focus too much on integrating producers quickly without sufficient human capital while remaining dependent on external funding to fill the gaps created by the resulting inefficiencies. The conflicts between market- and development-oriented goals must be balanced and reconciled through constant re-evaluation of program progress in these areas and how changes to one area invariably affect the other.

Finally, a general point of consideration that is evident in all aspects of the program in considered in the current study is that the most successful efforts are those that are aligned with existing economic, social, and cultural currents already at work on the ground. On the production end, *ATQ/Negocio Orgánico's* greatest successes are those that conform to established producer goals of less exposure to and expenditures on toxic agrochemicals, a desire to fill gaps in education, play an active role in a public group, or gain transferrable skills and work experiences. In the case of many women participants, this includes adjusting to new roles working outside the home or increasing one's self-worth

and public role in a traditional *machista* society. On the consumption end, the group has found an emerging niche market for organic, local produce that is sufficiently diverse and accessible by working consumers, especially working women. By latching onto an already growing urban consumer demand for uncontaminated foods, the new enterprise is able to carve a small and potentially growing niche for their organic products in *Quetzaltenango*. It is the organizations' ability to ride these existing currents that represents some of their greatest achievements in both rural development and microenterprise development.

Suggestions for Future Research

The findings of the current study raise just as many questions concerning agricultural change and rural development as they answer. Many of the conclusions reached are just as likely points of departure for future research. Below I outline just a few of the major areas where I feel research along these lines may continue. The current study has shown that a large part of the work conducted by local NGOs centers on maintaining their legitimacy as brokers of development to a host of actors. However, a fruitful area for study that may facilitate understandings of how the practice of development is carried out is a deeper investigation into NGO worker perceptions of their own roles in the development process. Beyond seeking legitimacy with external actors, how do local NGO staff members view their own responsibilities and roles, specifically in balancing the goals of funders, outside institutions, and individual actors on the ground?

My research has also demonstrated that new, distinct values for food and food quality are emerging among urban consumers. New values challenge prevailing modes of food production and consumption in Guatemala. It was also shown that the conventional agricultural commodity chains that are being contested have been shaped by the country's unique development history and its emphasis on traditional and non-traditional exports. I feel that this relationship between a country's development history and the emergence of alternative food movements is in need of further research. The countryside of the developing world has for decades been a testing ground for a host of internationally sponsored agricultural development schemes. How these histories of development give rise to unique values, relationships between actors, and notions of food quality in alternative food systems requires exploration. Because the developing world has largely been left out of the North American and European centered literature on alternative food systems, this would be a fruitful area for future study.

Future research into the development of alternative food systems would benefit from greater exploration of how the staple concepts of "local" and "embedded" become grafted onto local sociocultural, economic, environmental, and political relations in a given context. According to many respondents in my study, the quest for transparency in production method meant relying on the reputations of some non-traditional vegetable producing communities as cleaner than other neighboring ones. This reliance on reputation indicates at least some degree of the shaping of notions of food quality and "localness" by existing

reputation and relations between production and consumption at the regional level. New studies into local food system formation must begin mapping how consumer desires for local can mean specific *kinds* of local and not others. Investigations of alternative food movements would be well served by asking how the meaning of “local” is molded by historical, cultural, and economic forces specific to a given context. Here the example of *Quetzaltenango* is revealing. The city contains numerous farmers markets where local farmers sell produce. However, for many consumers, the type of cultivation in which these local farmers are engaged is similar to conventional NTAE production insofar as it is based in an industrial model, reliant on high chemical applications and environmental degradation, responsible for the production of potentially contaminated produce, and dominated by large-scale exporters and distributors.

Finally, future studies of alternative food movements, particularly those that may come out of the developing world, could be greatly enhanced by a more thorough treatment of the ethnic and economic dimensions of alternative food consumption. Ethnic relations were laid out in several sections of the current work but alone merit an entire study. The fact that all producers in my study were impoverished, ethnically Maya farmers from the Guatemalan countryside and nearly all consumers were middle- to upper-class *ladino* urban professionals is extremely indicative of the persistence of historically and culturally established patterns of ethnic separation in the country. Further, this casts light upon economic divides that affect access to and consumption of specialty foods like organic or local. Greater emphasis on the economic and ethnic aspects of

alternative consumption is important for food movement studies across the globe. However, such considerations are especially important for alternative food movements arising in developing countries. This is because, apart from marketing research, so little work has been done on consumption in this part of the world and because disparities in food access along economic and ethnic lines can be so pronounced. This is truly the case in Guatemala where divides have persisted since the arrival of the Spanish and the beginnings of export agriculture.

Overall, my study has been an effort to bring the development project itself to the fore of studies in the anthropology of development. Employing mixed methods of data collection and a framework that emphasizes the networks of individuals and institutions that form around these kinds of projects, I have attempted to show what various actors are attempting to do, their motives for doing so, and their ability to realize their goals through cooperation and compromise with others. In the end, these points of compromise, where the interests of involved actors can be aligned and harnessed for meaningful change, are the keys to generating equitable development. Further, it is where such interests represent ongoing cultural, political, and economic processes experienced by the broader population that truly sustainable development may take place. While the impacts of programs like the *ATQ/Negocio Orgánico* are currently modest, their experiences provide valuable insights for researchers and development practitioners interested in rural development and microenterprise building. Beyond this, they pave the way for future efforts and social movements

built around the idea of economic enrichment of small farmers and securing clean, healthy, and diverse foods for all people living in the developing world. In the face of global food markets that have been increasingly fraught with volatility and crises in the past decade, the building of more equitable and sustainable food systems under local control has become an essential element to general human wellbeing and development throughout the world.

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APPENDICES

APPENDIX A—PRODUCER SURVEY PROTOCOL

Información Demográfica

Género: _____

Cuantos años tiene usted? _____

Cuál nivel en la escuela logró Ud.? _____

Es casado/a? _____

Cuantos hijos tiene? _____

Cuantas personas viven en su casa? _____

En cuál comunidad vive? _____

-Desde cuando vive en esta comunidad? _____

Cuantas cuerdas del terreno tiene? _____

-Cuantas son cuerdas propias? _____

-Cuantas son cuerdas rentadas? _____

-Cuántas son cuerdas sembradas en milpa? _____

-Cuántas son cuerdas sembradas en hortalizas? _____

Cuales son las clases de hortaliza que ha sembrado en el último año?:

_____ Cebolla	_____ Zanahoria	_____ Rabano	_____ Repollo
_____ Brócoli	_____ Coliflor	_____ Flores	_____ Haba
_____ Apio	_____ Tomate	_____ Cilantro	_____ Remolacha
_____ Lechuga Salinas	_____ Escarola	_____ Pepino	_____ Papa
_____ Chile	_____ Acelga	_____ Ayote	_____ Guisquil
_____ Ejote	_____ Espinaca		

Desde cuando cultiva hortalizas? _____

Cuántas cosechas tiene Ud. en un año típico? _____

Tiene riego? Sí / No

Es miembro/a de la asociación de productores?: Sí / No

-Desde cuando? _____

Sección Una

1. Ha construido Ud. una abonera alguna vez? Sí / No
2. Hace cuanto tiempo fue la última vez en que construyó una abonera? _____
3. Cada cuanto construye aboneras durante un ciclo agrícola típico? _____
4. Cuántas ha construido Ud. en el último año (desde Julio 2009)? _____
5. *(Sólo socios)* Siempre las construye así, como les enseñan los técnicos? Sí / No
6. En un año típico, cuántos quintales de abono orgánico aplica a sus terrenos sembrados en hortaliza? _____
7. *(Sólo socios)* Aplica la cantidad de abono orgánico que recomiendan los técnicos?
Sí / No -Aplica más o menos de dicha cantidad? _____

8. Ha comprado abonos químicos en el ultimo año? Sí / No

-Cuáles son los que compró?

- | | | |
|----------|----------|----------|
| 1. _____ | 4. _____ | 7. _____ |
| 2. _____ | 5. _____ | 8. _____ |
| 3. _____ | 6. _____ | 9. _____ |

-Cuantos (litros, libras, botellas) de éstos compró?

- | | | |
|----------|----------|----------|
| 1. _____ | 4. _____ | 7. _____ |
| 2. _____ | 5. _____ | 8. _____ |
| 3. _____ | 6. _____ | 9. _____ |

9. Practica Ud. rotación de cultivos en sus terrenos? (*“Tiene extensiones de terreno dedicadas a la producción de solo una clase de cultivo o cambia el cultivo después de una cosecha?”*) Sí / No

10. Cada cuanto cambia el cultivo en una extensión de terreno? _____

11. (*Sólo socios*) Siempre sigue las recomendaciones de los técnicos sobre la rotación de cultivos? Sí / No

12. Construye Ud. (terrazas o canales) para conservar el suelo? Sí / No

13. Aparte de la milpa, siembra Ud. más de una clase de cultivo en la misma extensión de tierra al mismo tiempo? (Asociación de cultivos) Sí / No

14. Ha comprado Ud. pesticidas químicos en el último año? Sí / No

-Cuáles compró?

- | | | |
|----------|----------|----------|
| 1. _____ | 4. _____ | 7. _____ |
| 2. _____ | 5. _____ | 8. _____ |
| 3. _____ | 6. _____ | 9. _____ |

-Cuantos (litros, libras, botellas) de éstas compró?

- | | | |
|----------|----------|----------|
| 1. _____ | 4. _____ | 7. _____ |
| 2. _____ | 5. _____ | 8. _____ |
| 3. _____ | 6. _____ | 9. _____ |

15. Ha comprado Ud. fungicidas químicos en el último año? Sí / No

-Cuáles compró?

- | | | |
|----------|----------|----------|
| 1. _____ | 4. _____ | 7. _____ |
| 2. _____ | 5. _____ | 8. _____ |
| 3. _____ | 6. _____ | 9. _____ |

-Cuantos (litros, libras, botellas) de éstas compró?

- | | | |
|----------|----------|----------|
| 1. _____ | 4. _____ | 7. _____ |
| 2. _____ | 5. _____ | 8. _____ |
| 3. _____ | 6. _____ | 9. _____ |

16. Ha comprado Ud. herbicidas químicos en el último año?

Sí / No

-Cuáles compró?

- | | | |
|----------|----------|----------|
| 1. _____ | 4. _____ | 7. _____ |
| 2. _____ | 5. _____ | 8. _____ |
| 3. _____ | 6. _____ | 9. _____ |

-Cuantos (litros, libras, botellas) de éstas compró?

- | | | |
|----------|----------|----------|
| 1. _____ | 4. _____ | 7. _____ |
| 2. _____ | 5. _____ | 8. _____ |
| 3. _____ | 6. _____ | 9. _____ |

17. En el año pasado vendió Ud. alguna vez su producto en un mercado de Xela? Sí / No

18. En el año pasado vendió Ud. alguna vez su producto a un comerciante en un mercado de Xela? Sí / No

19. En el año pasado vendió Ud. alguna vez su producto a un intermediario que vino a la comunidad para comprar? Sí / No

20. (Sólo socios) En el año pasado vendió Ud. alguna vez su producto a Negocio Organico/ATQ? Sí / No

21. De las maneras en que ha comercializado su producto, cuál es la manera que prefiere Ud.?

-Y cuál sería la segunda manera?

Y cuál sería la tercera?

- | | |
|-------|---------------------------------------|
| _____ | Un mercado de Xela |
| _____ | Intermediario que vino a la comunidad |
| _____ | Comerciante en un mercado |

_____ a Negocio Organico/ATQ

22. Como vende la mayoría de su producto?

-Y cuál sería la segunda manera? Y cuál sería la tercera?

- _____ Un mercado de Xela
- _____ Intermediario que vino a la comunidad
- _____ Comerciante en un mercado
- _____ a Negocio Organico/ATQ

23. En que manera vende Ud. su producto con mayor frecuencia?

-Y cuál sería la segunda manera? Y cuál sería la tercera?

- _____ Un mercado de Xela
- _____ Intermediario que vino a la comunidad
- _____ Comerciante en un mercado
- _____ a Negocio Organico/ATQ

24. De ellas cuál ofrece el mejor precio?

-Y cuál sería la segunda que ofrece el mejor precio?

-Y cual sería la tercera que ofrece el mejor precio?

- _____ Un mercado de Xela
- _____ Intermediario que viene a la comunidad
- _____ Comerciante en un mercado
- _____ a Negocio Organico/ATQ

25. Cuáles son los trabajos y empleos en que trabaja su familia para generar ingreso?

- | | | |
|----------|----------|----------|
| 1. _____ | 4. _____ | 7. _____ |
| 2. _____ | 5. _____ | 8. _____ |
| 3. _____ | 6. _____ | 9. _____ |

26. Y quién es la persona de su familia que trabaja en cada uno?

- | | | |
|----------|----------|----------|
| 1. _____ | 4. _____ | 7. _____ |
| 2. _____ | 5. _____ | 8. _____ |
| 3. _____ | 6. _____ | 9. _____ |

27. De los trabajos y empleos en que trabaja su familia, cuál contribuye más ingreso?

1. _____

Cuál sería el segundo trabajo que contribuye con más ingreso?

2. _____
 Cuál sería el tercer trabajo que contribuye con más ingreso?
 3. _____
28. Cual trabajo es el más importante para el bienestar de su casa?
 1. _____
 Cuál sería el segundo trabajo que es más importante para el bienestar de su casa?
 2. _____
 Cuál sería el tercer trabajo?
 3. _____
29. Sí tendrían Uds. que dejar uno de estos empleos, cual sería? _____
30. Cuantas personas de su familia trabaja en la producción de hortalizas en sus terrenos?

31. Paga Ud. a otras personas para su trabajo en el cultivo de hortalizas en sus terrenos?
 Sí / No
 -Cuantas personas? _____
 -Cuantos días emplea a ellas en un mes típico? _____
32. En un día típico, cuantas personas trabajan con Ud. en la producción de hortalizas en sus terrenos? _____
33. En una semana típica, cuantos días trabajan Uds. en el cultivo de hortalizas? _____

Sección Dos

1. Cuando necesita Ud. ayuda o consejo sobre la agricultura, cuántas personas hay que puede consultar? _____
- De estas personas, cuantas son gente del agroservicio? _____
 - De estas personas, cuantas son otros agricultores o vecinos? _____
 - De Estas personas, cuantas son técnicos o agrónomos de una agencia? _____
2. De ellas, cuál ofrece el consejo más importante para Ud.?
 -Cuál consejo sería el segundo en importancia?
 _____ Gente del agroservicio
 _____ Otros agricultores y vecinos
 _____ Técnicos y agrónomos de agencias

3. Cuando necesita información o consejo sobre el control de malezas o una plaga, a quiénes consulta usted principalmente?
 - a. Técnicos y agrónomos de agencias
 - b. Gente del agroservicio
 - c. Otros agricultores y vecinos
 - d. No lo hace
 - e. No hay nadie

4. Cuando necesita información o consejo sobre el cultivo de una clase nueva de hortaliza, a quiénes consulta usted principalmente?
 - a. Técnicos y agrónomos de agencias
 - b. Gente del agroservicio
 - c. Otros agricultores y vecinos
 - d. No lo hace
 - e. No hay nadie

5. Cuando necesita información o consejo sobre la fertilización de un cultivo, a quiénes consulta usted principalmente?
 - a. Técnicos y agrónomos de agencias
 - b. Gente del agroservicio
 - c. Otros agricultores y vecinos
 - d. No lo hace
 - e. No hay nadie

6. Cuando necesita información o consejo sobre la preparación de suelos, a quiénes consulta usted principalmente?
 - a. Técnicos y agrónomos de agencias
 - b. Gente del agroservicio
 - c. Otros agricultores y vecinos
 - d. No lo hace
 - e. No hay nadie

7. Cuando necesita información o consejo para hacer un presupuesto, a quiénes consulta usted principalmente?
 - a. Técnicos y agrónomos de agencias
 - b. Gente del agroservicio

- c. Otros agricultores y vecinos
 - d. No lo hace
 - e. No hay nadie
8. Cuando necesita información o consejo para invertir su dinero, a quiénes consulta usted principalmente?
- a. Técnicos y agrónomos de agencias
 - b. Gente del agroservicio
 - c. Otros agricultores y vecinos
 - d. No lo hace
 - e. No hay nadie
9. Cuando necesita información o consejo para calcular sus gastos, a quiénes consulta usted principalmente?
- a. Técnicos y agrónomos de agencias
 - b. Gente del agroservicio
 - c. Otros agricultores y vecinos
 - d. No lo hace
 - e. No hay nadie

Sección Tres

1. (*Sólo socios*) Piensa Ud. que las cosas siguientes son beneficios importantes que recibe Ud. de la asociación? Responda con sólo un "sí" o "no".
- | | |
|--|---------|
| a. más ganancias por el producto | Sí / No |
| b. transporte para la cosecha de la comunidad | Sí / No |
| c. la oportunidad de participar en un grupo | Sí / No |
| d. la oportunidad de aprender algo nuevo | Sí / No |
| e. ayuda como abonos, semillas, etc. | Sí / No |
| f. un precio fijo para el producto | Sí / No |
| g. educación para proteger las tierras para la agricultura | Sí / No |

-Para Ud., de éstos cuál es el beneficio más importante? _____ ("*a*", "*b*", "*c*", "*d*", "*e*", "*f*", "*g*")

2. (*Sólo socios*) En su opinion, de la cualidades siguientes, cuáles describen un producto orgánico?
- | | | | |
|---------------------|---------|-------------------------------------|---------|
| a. Más grande | Sí / No | f. Más saludable para el consumidor | Sí / No |
| b. Más sabroso | Sí / No | g. Más saludable para el productor | Sí / No |
| c. Más limpio | Sí / No | h. Más facil cultivar | Sí / No |
| d. Más sano | Sí / No | i. Mejor precio | Sí / No |
| e. Mejor apariencia | Sí / No | j. Mejor para la salud de la tierra | Sí / No |

- a. Aumentar la producción
 - b. Mejorar las tierras
10. Para Ud. es más importante:
- a. Dedicarse al cultivo de sólo unas pocas clases de cultivo
 - b. Diversificar la finca con muchas clases de cultivo
11. Hablando de insumos agrícolas (como abonos, remedios, etc.), prefiere Ud.:
- a. Producirlos por usted mismo
 - b. Comprarlos
12. Emplea Ud. más:
- a. Las pesticidas químicos
 - b. control biológico

APPENDIX B—CONSUMER QUESTIONNAIRE

Información Demográfica

- Cuál es su género? _____
- Cuántos años tiene usted? _____
- Cuál es su país? _____
- Cuál es su profesión? _____
- Cuanto tiempo hace que compra Ud. la bolsa de ecoverduras? _____
- Como supo Ud. de la bolsa de ecoverduras por primera vez? _____
- Cuántas personas conoce Ud. que compran la bolsa?
(numero de personas) _____
- Ha recomendado Ud. la bolsa de ecoverduras a otros consumidores? Sí/No
- Cuántas personas? _____

De la lista siguiente de razones para comprar la bolsa de ecoverduras, indique "sí" si está de acuerdo que es una razón para Ud. y "no" si no.

1. El sabor de los productos que lleva la bolsa es mejor. _____
2. Los productos que lleva la bolsa son los que necesita Ud. _____
3. Comprando los productos que lleva la bolsa da más utilidad a los productores. _____
4. Los productos que lleva la bolsa son hechos por una asociación de productores. _____
5. El precio de la bolsa es bueno. _____
6. La bolsa lleva una variedad de productos. _____
7. Comprando la bolsa apoya un negocio de productos locales. _____
8. Los productos que lleva la bolsa son hechos tradicionalmente. _____
9. Los productos que lleva la bolsa son más saludables. _____
10. Se entrega la bolsa a domicilio. _____
11. La producción de los productos de la bolsa es mejor para el medio ambiente. _____

Favor de escoger las tres razones más importantes para Ud. en orden de importancia:

1. _____ 2. _____ 3. _____ (numerous de la sección arriba).

En su opinion, de las cualidades siguientes, cuáles describen un product ecológico en relación de otros productos? (Responda con un circulo alrededor del "Sí" o "No")

- | | | | |
|---------------------|-------|-------------------------------------|-------|
| a. Más grande | Sí/No | f. Más saludable para el consumido | Sí/No |
| b. Más sabroso | Sí/No | g. Más saludable para el productor | Sí/No |
| c. Más limpio | Sí/No | h. Más facil de cultivar | Sí/No |
| d. Más sano | Sí/No | i. Más caro | Sí/No |
| e. Mejor apariencia | Sí/No | j. Mejor para la salud de la tierra | Sí/No |

Que sugerencias daría Ud. para mejorar el servicio y la bolsa de ecoverduras? (Favor de usar el espacio siguiente para escribir sus sugerencias y opiniones.)

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PUBLICATIONS AND PRESENTATIONS

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2010 Quality Construction and Local Agroecological Food Networks in
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Paper presented at the Annual Meeting of the American Anthropological
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