

**STRATEGIES TO DEVELOP MARKET ACCESS IN THE BOLIVIAN
HIGHLANDS: TWO CASE STUDIES FOR CHUÑO AND TUNTA**

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By

MARIA A. FIGUEROA-ARMIJOS

Dr. Corinne Valdivia, Thesis Supervisor

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The undersigned, appointed by the Dean of the Graduate School, have
examined the thesis entitled

STRATEGIES TO DEVELOP MARKET ACCESS IN THE BOLIVIAN
HIGHLANDS: TWO CASE STUDIES FOR CHUÑO AND TUNTA

Presented by María A. Figueroa-Armijos

A candidate for the degree of Master of Science

And hereby certify that in their opinion it is worthy of acceptance.

Dr. Corinne Valdivia

Dr. Laura McCann

Dr. Jere Gilles

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Glossary

BAP: Bolivian Andean Platform.

Chuño: a freeze-dried potato product traditionally made by Quechua and Aymara communities of Perú and Bolivia. It is a five-day process obtained by exposing potatoes to freezing night temperatures of the Andean Highlands, subsequently exposing them to the intense sunlight during the day. The word chuño comes from Quechua *ch'uñu*, meaning frozen potato.

CIP: International Potato Center

NPVP: Native Potato Varieties Program conducted by CIP-ALTAGRO in Bolivia.

PMCA: Participatory Market Chain Approach.

SANREM-CRSP: Sustainable Agriculture and Natural Resource Management– Collaborative Research Support Program.

Suka Kollus: Pre-Hispanic culture practice for agricultural production in the Lake Titicaca region of Peru and Bolivia. Suka Kollus are raised fields in form of platforms elevated from above soil surface and surrounded by canals. The platforms are up to 1.2m high and 2-20m wide. Canals are 1.6-4.5m wide (Sanchez de Lozada, *et al.*, 1998).

Tunta: a native product similar to chuño that differs from the latter by the use of running water at the end of the chuño process, to eliminate dark components resultant from oxidation processes.

Yapuchiris: farmers who are the best producers within a communal association, who also show a strong commitment to serve the community by sharing their knowledge and abilities.

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Maria A. Figueroa-Armijos

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ABSTRACT

Rural households in the Bolivian Highlands lack reliable information about market prices, consumers' quality expectations, and contacts for trading. They also face climate events, such as droughts, which make agriculture a risky activity and limit the amount and quality of produce they can supply in the market. Several development programs have been implemented to alleviate or solve these problems. Two case studies are the focus of this research. The first focuses on promoting collaboration in the market chain to reach high income target markets with higher returns. The second analyzes efforts to improve the quality of the products to the markets. Both seek to reduce transaction costs through collective action. A single case study design was used for the Bolivian Andean Platform (BAP) developed with the Participatory Market Chain Approach (PMCA). BAP seeks to reduce transaction costs for small-scale producers of chuño and tunta of two producer associations in La Paz-Bolivia. The study identifies incentives within the platform that motivate market chain actors' participation. The second case study is a local native potato varieties' improvement development program (NPVP) supported using a multiple embedded case study design. The program focuses on quality issues, and again

aims to reduce transaction costs of participant farmers. This study also includes a group of non participant farmers, to identify the barriers foreseen by those who do not participate in NPVP. This case aims to evaluate if the NPVP would empower farmers and enable them to participate in the BAP. A 2006 household survey informs the selection of families for the second case study. Selection criteria include participation and non-participation in the Native Potato Varieties Program, and production of native potatoes for the market.

Research findings indicate that the BAP, formed by 10 stakeholder organizations, reduces information, search, and contracting costs in the market chain, while increases participation, monitoring and enforcement costs. It also promotes agency capacity and market involvement for small-scale producers. The BAP price setting policy, on the other hand, is a disincentive to farmer's participation because it does not reward higher quality of chuño and tunta. In terms of collective action to improve native varieties, the NPVP decreases search and information costs, and increases participation, contracting, monitoring, and enforcement costs. It also develops the capabilities of participant farmers to participate in initiatives based on collective action, like the BAP. A major barrier to participation in NPVP is time to attend meetings.

Chapter I

Introduction

1.1 The Problem

Some of the poorest households in rural South America live in the Andean Highlands (Devaux *et al.*, 2006). Farmers who reside in these areas have experienced severe climate events in the last few years, mostly due to El Niño Southern Oscillation (ENSO) (Valdivia, *et al.* 2000). In 1997-1998 alone, droughts and floods consequence of ENSO events cost Bolivia US\$537 millions in total damage (Inter-Agency Technical Committee of the Forum of Ministers of the Environment of Latin America and the Caribbean, 2000). Climate in the Bolivian Highlands is critical to production and consumption decisions, and shape the portfolio of strategies developed by farmers (Valdivia, *et al.* 2000).

Since “climate change includes climate variability and extreme events” (Smit and Skeener, 2002, p. 87), the key attributes of climate change that contribute to agricultural vulnerability are conditions related to climate variability. The latter generates risks for agricultural production, and for the economies that depend on it (Smit and Skeener, 2002). In this scenario of climate variation, adaptation towards resilience is necessary to reduce vulnerability of agricultural production. Chambers and Conway (1992) define resilience of people’s livelihoods as dependent on their capabilities to adapt to shocks and stresses, both internal and external. Valdivia and Gilles (2003) identify livelihoods’

capability for collective action to negotiate with markets, as a factor that contributes to resilience. In fact, some have stated that community management of resources should be a primary piece when building strategies to promote sustainable development (Leach *et al.*, 1999).

Farmers from the Andean region of Bolivia have persisted in agriculture for centuries coping with climate variability (Valdivia, *et al.* 2003). Droughts and frosts in the Bolivian Andes, such as the droughts caused by El Niño in 1997-98, affect potato production produced by the poor (Valdivia, *et al.* 2000). One of the strategies that farmers from the Bolivian Highlands have developed to cope with climate variability is the conservation of indigenous varieties of potatoes. However, market standard pressures for certain commercial potato varieties are displacing the “conservation through use” of native potato varieties (Hellin, 2005). Agriculture that uses native varieties is not only vulnerable because of market risks, but also because it is one of the most vulnerable sectors to climate change. In such scenario, adaptation to market and climate change is crucial for the development of sustainable livelihoods (Smit and Skinner, 2002).

Production strategies in the Bolivian Highlands are determined by access to resources, social networks, and non market institutions; changes in those strategies are mostly influenced by markets, technologies and climate variation (Valdivia and Quiroz, 2001). In addition to climate effects on agriculture, lack of quality in potato production to conform strict market standards, jeopardizes the economic and social development of rural areas in the Bolivian Highlands (Valdivia and Gilles, 2006). Smallholders’ agricultural production in the area is

seen unprofitable and risky (Bernet *et al.*, 2006), as producers have no access to information about market prices, quality expectations, and contacts for trading products.

Although the situation is challenging, native potato varieties and the local knowledge for their cultivation are unique resources possessed by Andean producers (Devaux *et al.*, 2006). The area is characterized by dramatic changes of temperature between day and night that allow the processing of artisanal potato products called chuño and tunta. Both are made from native potato varieties of low commercial value due to their size, shape and flavor (some have a bitter flavor), and can be stored for more than five years. Chuño and tunta are traditionally consumed by Peruvian, Bolivian and northern Argentinean inhabitants. Approximately 2400ton/year of chuño and 1900ton/year and tunta are being produced and consumed in Bolivia every year (Guidi *et al.*, 2002).

Today's high-income markets demand for higher hygiene and quality standards are barriers to many small farmers. These standards represent higher investments, which are costly to small farmers. Community's collective action is seen as means to reduce these costs of production and post-harvest care. Collective action has been defined as "voluntary action taken by a group to pursue common interests or achieve common objectives" (Meinzen-Dick and Di Gregorio, 2004). A study conducted by Guidi *et al.* (2002) finds that to optimize production of chuño and tunta, and generate profits for all the market chain actors, farmers need to act collectively, and so do other stakeholders in the market chain. This is intended to optimize processes, yielding higher quality of

produce and hence, generating higher profits for all the market chain actors (Guidi *et al.*, 2002).

Considering the importance of collective action, and targeting the goal of poverty reduction in the Andean Highlands as a mechanism to articulate small-scale producers to markets, Papa Andina, an initiative of the Potato International Center', is currently promoting collective action among the poorest producers in the region, and among producers and other market chain actors – i.e. intermediaries, processors and exporters (Devaux *et al.*, 2006). The strategy includes: 1) empowerment of farmers on production practices that lead to higher quality of their native crops, and 2) the identification of niche market and value added opportunities for their produce. In order to link small-scale farmers with high income markets, Papa Andina developed a process, the Participatory Market Chain Approach (PMCA), to build multi-stakeholders platforms in Ecuador, Perú, and Bolivia, such as the Bolivian Andean Platform.

The PMCA is the framework that structures the participatory processes implemented to build the Bolivian Andean Platform (Bernet *et al.*, 2006). The PMCA's principles applied in the Platform are aimed at developing market access for small-scale farmers' native potato varieties products in households of rural Bolivia (Devaux *et al.*, 2006). Specifically, the PMCA is an approach that “fosters commercial, technological and institutional innovation, through a structured participatory process that builds interest, trust and collaboration among participants” (Bernet *et al.*, 2006).

Accordingly, the Bolivian Andean Platform, under the philosophy of the PMCA, “provides a platform for potato producers, other market chain actors and service providers to come together to identify their common interests, share knowledge and develop joint activities” within the Bolivian Highlands context (Guerrero, *et al.*, 2005; Devaux *et al.*, 2006).

Because quality is a critical barrier to enter high income markets, aside from the PMCA and the Bolivian Andean Platform, the International Potato Center has also developed the CIP-ALTAGRO project. The goal of CIP-ALTAGRO is to diversify crop production to maintain local institutions and ancient knowledge, at the same time that income is being smoothed (Director of CIP-ALTAGRO, 2007). It started in 2007, and one of its tasks has been the development and management of programs that promote cultivation of native potato varieties in rural communities of La Paz, Bolivia.

1.2 Research Objectives

This study explores the potential for linking small-scale potato producers to high income markets through two collective action institutions: the Bolivian Andean Platform (BAP) and the Native Potato Varieties Program (NPVP). The first addresses building market linkages with high-end consumers, and the second addresses the quality standards of the markets for small scale producers in the Andes.

The specific objectives are:

- 1) To understand what are the incentives for producers who aim to reach high-income markets to participate in collective action initiatives with other market chain stakeholders, studying what motivates participation in the Bolivian Andean Platform and the Native Potato Varieties Program, and what stakeholders perceive as benefits.
- 2) To understand how collective action can address issues of quality, studying the constraints faced by farmers' groups to participation in high-income markets through the case study of the NPVP.
- 3) To identify the barriers small holder farmers in the Bolivian Highlands face to participate in these collective action institutions (Bolivian Andean Platform and NPVP), and the opportunities as well as constraints that persist with these two development initiatives that target market linkages in Andean rural communities.
- 4) To identify the types of reduction or increase of transaction costs for those farmers who participate in both institutions.

1.3 Hypothesis

Both case studies, facilitating market integration through a participatory market chain approach, and access to technology to improve quality to increase participation in markets that pay higher prices, hypothesize that these collective action institutions reduce the transaction costs that currently are barriers to market integration. On the other hand, these institutions may not address the

barriers of all groups of rural households. This research also aims at understanding who, and why, are these excluded.

1.4 Overview of the Thesis

The following chapter contains a literature review on 1) markets and development, 2) economies of scale, supply chains, agency, and niche marketing, 3) sustainable livelihoods and capitals, 4) social capital and collective action, and 5) transaction costs. The first three topics emphasize the framework where social capital, collective action, and transaction costs play a key role for the institutions considered in these research case studies. Chapter III describes a theoretical economic framework for both case studies, along with the case studies research design. Chapter IV presents and analyzes the market chain development institution. Chapter V presents and analyzes the groups formed to access new technologies for native potato. Chapter VI presents an analysis of lessons learned in terms of these initiatives for development and market integration, along with the limitations of this study, and recommendations for future research.

Chapter II

Review of Literature

The Literature included in this chapter is reviewed to establish a background to support the analysis of collective action and transaction costs in both case studies. The Literature explored in this chapter includes markets and development, economies of scale, supply chains, agency, niche marketing, sustainable livelihoods, capitals, social capital, collective action, and transaction costs.

2.1 Markets and Development

“Many markets do not exist and, of those that do, many work imperfectly” (Morduch, 1995). Furthermore, because there is not such thing as a “pure, market-less household” household’s integration to markets is partial (Mayer, 2005). Because high transaction costs are present in commodity markets (Kruseman, 2001), and households choose not to use the market when the costs are higher than the gains (De Janvry *et al.*, 1991), small-scale farmers in the Bolivian Highlands lack participation in imperfect markets. Research has recognized that linking farmers with the market, and improving their access is an urgent challenge in Andean agriculture (Sanginga *et al.*, 2004) to overcome poverty. The SANREM-CRSP LTR-4 project identifies overcoming poverty as developing resilience to climate and market risks (SANREM-CRSP LTR-4, 2008).

A key livelihood strategy of Andean rural households to manage climate and market risks is the diversification of sources of incomes (Valdivia and Quiroz, 2003). Livelihood diversification is the process of creating a diverse portfolio to smooth income (Valdivia and Jetté, 1997) and improve living conditions (Ellis, 1998). By diversifying their crops production, farmers ensure household earnings by reducing fluctuations due to market changes and climate events (Valdivia *et al.* 1996).

2.2 Economies of Scale, Supply Chains, Agency, and Niche Marketing

Even though coordinated supply chains are increasing in developed countries and in urban areas of developing countries, the production in developing countries that is marketed through coordinated supply chains remains small. Small-scale farmers' lack of competitiveness to participate in high-income markets might be caused by market and policy failures (Van Der Meer, 2006). In order to get involved in coordinated supply chains and be competitive, small-scale farmers need to acquire new skills and satisfactory business strategies to be able to take advantage of global markets. Marketing through producers' organizations can be a way to overcome individual farmers' constraints of accessing markets (Bienabe and Sautier, 2005). NGO's have been crucial in organizing and empowering farmers with the leadership and agency necessary to access niche markets (Van Der Meer, 2006). Agency theory emphasizes that those who develop capacity of agency have more efficient risks' bearing than those who do not (Williamson, 2000).

Niche markets are three: fair trade, organic, and gourmet (coffee). The distinctive characteristic of these markets is that the products receive a premium on price that is passed on to the farmer. Fair trade niche markets target the involvement of small-scale farmers whose disadvantaged economic conditions constrain them from participating in traditional markets (Hellin and Hignman, 2002). In the case of developing countries, Logli (2001) found that fair trade chains enhance livelihoods of small-scale farmers who are unable to participate under international traditional trading structures.

Coordinated supply chains are only one component of global food markets, which are also characterized by economies of scale and scope (Van Der Meer, 2006), as they make use of enhanced marketing and logistic strategies. Because it answers questions in market organization, the theory of economies of scale is a key element of the economic theory of social organization (Stigler, 1958). Furthermore, economies of scale in the market make it more likely to have volume of consistent quality, which results in long-term contracts with buyers (Van Der Meer, 2006).

Farmers who participate in coordinated supply chains receive higher prices than what they could receive if freely competing in open markets (Van Der Meer, 2006). However, the processes to achieve the standards required by markets nowadays are costly, and exclude numerous small-scale farmers and processors (Reardon et al., 2001). In order to be able to participate in the instable and aggressive global markets, farmers need to enhance their

competitiveness and ability to take advantage of economies of scale (Bienabe and Sautier, 2005).

Van Der Meer (2006) states that the “benefits of working with small-scale producers in coordinated supply chains will be highest for labor-intensive products”. As labor intensive sub-products of native potatoes, chuño and tunta offer small-scale Bolivian farmers the opportunity to get integrated in coordinated supply chains. In order to get involved, farmers need to be empowered “through extension methods that emphasize active participation and innovation” (Hellin and Higman, 2002).

2.3 Sustainable Livelihoods and Capitals

Sustainable livelihoods are explained by Chambers and Conway (1992) as a conjunction of capabilities –i.e. cultural and human capital-, equity, and environmental and social sustainability. According to these authors, the livelihood comprises people’s capabilities and means of living, represented by food, income, and assets. Valdivia and Gilles (2001) state that to shape livelihood strategies, and create and maintain a sustainable environment, assets and capabilities are key inputs. However, a livelihood is sustainable only when the assets it counts on are “maintained or enhanced”, and when stresses and shocks do not have an effect on upcoming generations (Chambers and Conway, 1992, p.1). Similarly, Bebbington (1999) studies rural livelihoods and poverty by looking at the implications of sustainability. Bebbington’s findings state that enhancement of household’s capabilities empowers its members to govern the ways in which the

resources of their society are managed. Bebbington identifies five assets as constitutive for the development of livelihood strategies, but argues that the most important is social capital. He states that social capital is “a form of collective action that facilitates a more effective participation in certain markets” (Bebbington, 1999, p. 2037), which in turn facilitates small-scale producers’ participation in high income markets.

Bebbington (1999) frames livelihood strategies “and the enhancement of human well-being” by considering not only social capital, but also four other types of capital: natural, produced, human, and cultural. In his framework, those capitals are the resources or inputs without which livelihood strategies are not possible. Those five types of capitals are also considered in his framework as the “assets that give people capability” and the “outputs that make livelihoods meaningful and viable” (p. 2029). Emery and Flora (2006) in their community capitals framework include not only the five capitals already mentioned, but incorporate Financial and Political capitals as also important resources for community development. In such framework, the term constructed capital (Bebbington, 1999) is replaced by built capital (Figure 1). For Emery and Flora (2006), social capital is the key capital source to “initiate and sustain” change in communities.

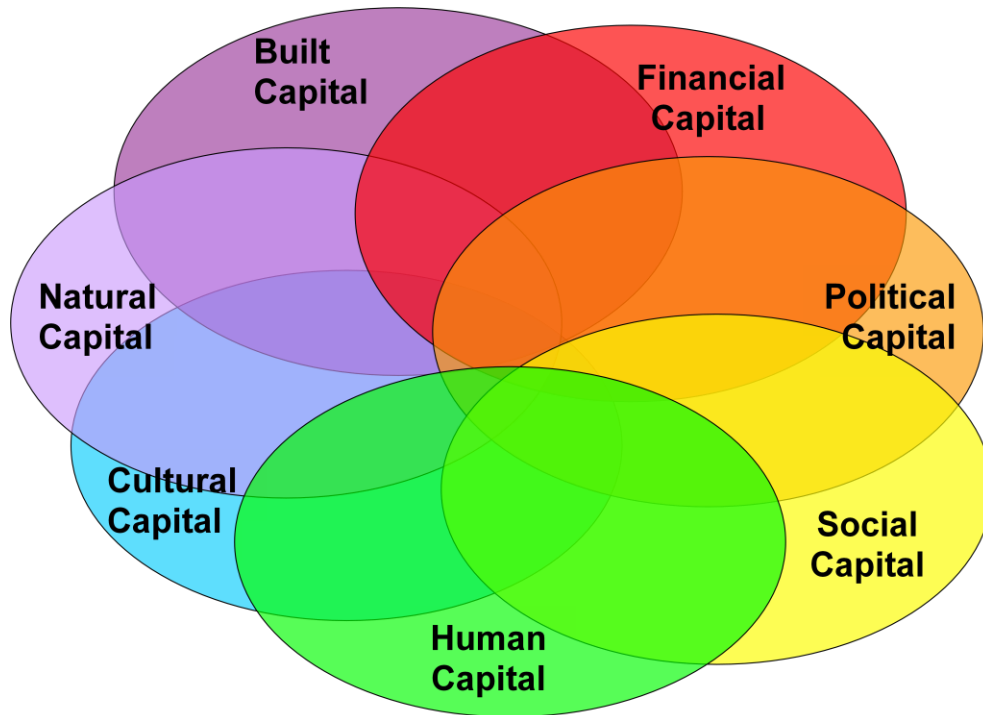


Figure 1. Community capitals
Source: Emery and Flora (2006, pp. 21)

2.4 Social Capital and Collective Action

According to Bebbington and Perreault (1999), social capital is important to access other resources and create networks. A way in which social capital can be developed is by fostering collective action among members of a community because the latter implies social organization. As Bienabe and Sautier (2005) state, by using social capital to promote collective action, communities can deal with market obstacles and alleviate transaction costs. Olson (1971) argues that rational individuals act collectively out of self-interest, especially in actions of economic exchange. He also states that when individuals in a group have a common interest, they will try to achieve their objective. It makes them better off.

His work in *The Logic of Collective Action* states that larger groups are less effective than small ones because of free-ridership. Larger groups are harder to control for participation, whereas in smaller groups participants are more actively involved in common activities. Successful actions will then take place when small groups with a common interest are created. The theory about how to generate effective collective action has been developed in the last thirty years (Meizen-Dick *et al.*, 2004; Ostrom, 1990). However, less research has focused on the sustainability of collective action of development programs (Meizen-Dick *et al.*, 2004) that will eventually enhance small-scale farmers' livelihoods. Meizen-Dick *et al.* (2004) found that even though the concept for collective action has been around for a while, development programs have not made much use of it.

2.5 Transaction Costs

Transaction costs, incentives, rules of enforcement, and shirking behavior are intrinsic issues in collective action theory. However, transaction costs concept has also become more important in economic research (Dahlman, 1979). North (1991), in the field of New Institutional Economics, argues that transaction costs are determined by the local institutions and their rules of enforcement. He also affirms that when institutions are effective, communal positive solutions are possible. He explains that "the mode of exchange within a community implies lower transaction costs" (p.99); hence any transaction carried out within at the community level will incur in less costs than if the same were carried out at the market level. When the exchange that is carried out in the community takes place

in a greater-size market, conflict is possible, therefore more resources ought to be invested in solving potential conflicts (North, 1991).

Transaction costs' definition differs among scientific papers and all of them show inconsistencies in regard to their measurement (McCann *et al.*, 2005). For Coase and his followers, the classification of transaction costs and their implications are still incomplete, given that there still is not a general typology that classifies them (Gordon, 1994). For some New Institutional Economists, transaction costs and administrative costs could be used without differentiation – i.e. interchangeable (Stiglitz, 1986). Critics to the concept of transaction costs argue that it is only a “fancy name for obvious problems”, however, “the theory clarifies many issues” that might be understood only by “some trained economists” (Gordon, 1994).

For Coase (1992), “a completely communist society is the place where transaction costs would be zero”. In his perspective, transaction costs explain both the existence of the firm (1937), and the existence of the law (1960). McCann *et al.* (2005) define transaction costs “as the resources to define, establish, maintain, and transfer property rights”. Williamson (2000) in his introduction to transaction costs economics describes transaction costs by analyzing the transaction as the basic unit of analysis.

Once in the market, as Coase (1961) describes it, in order to carry out a transaction

“it is necessary to discover who it is that one wishes to deal with, to inform people that one wishes to deal and on what terms, to

conduct negotiations leading up to a bargain, to draw up the contract, to undertake the inspection needed to make sure that the terms of the contract are being observed, and so on” (p.15).

Ultimately, transaction costs not only affect the contractual arrangement of production, but also the types and amount of goods and services that are produced to be negotiated in the markets (Wang, 2003). In empirical studies, the measurement of transaction costs is not exact because they are indirectly measured by considering uncertainty, transaction frequency, asset specificity, and opportunism. As a consequence of such process, the resulting costs of transactions are critically affected (Wang, 2003).

Moreover, given that transactions costs tend to fluctuate during the duration of a program (Falconer *et al.* 2001), investment in stakeholder participation at an early stage of the program may reduce monitoring and enforcement costs later (Wang, 2003). Typologies of transaction costs have been discussed by Dahlman (1979) and McCann *et al.* (2005). On the one hand, Dahlman (1979) divides transaction costs into three categories: search and information costs, bargaining and decision costs, and policy and enforcement costs. On the other hand, McCann *et al.* (2005) develop a transaction cost framework that consists of seven categories: research and information, enactment or litigation, design and implementation, support and administration, contracting, monitoring/detection, and prosecution/enforcement. Some other authors have categorized transaction costs differently, but for the purpose of this

study, McCann and Dahlman's transaction costs categories are the point of reference.

2.6 Expected Contribution

The results of both case studies will add to the existing literature on collective action initiatives in the context of markets in the Andes. Case study A focuses on a collective action effort that has already been put in practice in Ecuador and Perú. Case study A intends to fill a gap in the literature in regards to how the Participatory Market Chain Approach applied in a platform in Bolivia reduces transaction costs for all stakeholders. Case study B focuses on a collective action effort that aims to link farmers to high income markets by improving their negotiation power with higher quality of produce and larger supply, when compared to the negotiation power at the individual level. In both case studies, economies of scale is an objective achieved through fostering collaboration among market chain actors, and promoting integration of small-scale producers to participate in high income markets.

The documented findings intend to serve as a point of reference for researchers, and development organizations on further research regarding collective action in the Andes. Incentives and barriers to participation are interpreted in a transaction costs' framework aiming to facilitate understanding of the interviewees' answers.

Chapter III

Methods and Procedures

3.1 Theoretical Framework

Both case studies, chapter IV and chapter V, follow a theoretical framework that identifies collective action as a means to reduce transaction costs for small-scale potato producers in the Bolivian Highlands. Olson's logic of Collective action (1971) argues that rational individuals act in groups when one's outcome is not enough to achieve self-interest objectives. By acting collectively, individuals follow a common interest shared by all members of the group. Producers who work in groups are better off than those who work individually, especially in cases of economic exchange. When the group is small, higher efficiency is achieved. By following Olson, on one hand I assume that if farmers act collectively, the amount of produce to be offered in the market increases and so does their bargaining power. National and international market standards of quality, delivery and hygiene can also be reached by collective investment in the necessary infrastructure, not possible to be built by a single small-scale farmer.

On the other hand, the size of the group matters. Those groups that reach a smaller number of truly interested participants will work better and will achieve higher success than those whose larger number of members allows free ridership. Also, if acting collectively offers incentives (e.g. technical support, credit, insurance, economic and logistic support to entrepreneurial ideas) to

those who participate, the interest for involvement increases and so does the quality of the product achieved by the group. On the other hand, if markets require a certain level of constant supply, small groups may face challenges responding in a timely manner.

In the last thirty years, scientists have developed the theory about how to generate successful collective action (Meizen-Dick *et al.*, 2004; Ostrom, 1990). However, less research has focused on the sustainability of collective action of development programs (Meizen-Dick *et al.*, 2004) that will eventually enhance small-scale farmers' livelihoods. In order to fill a portion of this gap in the literature, the research results presented in chapter IV and V, consider increase and decrease of transaction costs as the outcome of collective action efforts.

Positive transaction costs are determined by local effective institutions (North, 1991). In North's (1991) contribution about transaction costs to New Institutional Economics, he explains that transaction costs are lower at the community level than when they are considered at the market level. In order to understand and analyze transaction costs, several definitions have been developed. However, there hasn't been a consensus on a general typology to classify and measure them (McCann *et al.*, 2005). As several other authors, Dahlman (1979) and McCann *et al.* (2005) have discussed typologies of transaction costs.

This research study explores the potential for linking small-scale potato producers to high income markets through two collective action institutions: the Bolivian Andean Platform (BAP) and the Native Potato Varieties Program

(NPVP). Meizen Dick and Di Gregorio (2004) define collective action as the “voluntary action taken by a group to pursue common interests or achieve common objectives”. A study conducted by Guidi *et al.* (2002) suggests that, in order to take advantage of the potential demand for chuño and tunta, not only farmers’ collective action has to take place, but also active collaboration among producers, wholesalers and the agro-industry is needed.

In case study A (BAP), the platform is seen as a means to promote collaboration among market chain actors targeting producer associations’ integration in the market. Besides, the demand for export quality chuño and tunta offered by the platform wouldn’t exist for the stakeholders if they weren’t participants. On the other hand, community’s collective action is seen in case study B as means to minimize costs of production and post-harvest care to meet market standards. Initiatives like the Bolivian Andean Platform require producer associations to be organized and able to supply permanent quality. Without collective action, producers in case study B wouldn’t be able to participate in such initiatives.

Yin (1994)’s pattern matching logic helps interpret interviews’ incentives and barriers for participation into a typology of six transaction costs. Transaction costs are categorized differently depending on the scope of the study. The typology used in both case studies of this research takes McCann (2005) and Dahlman (1979) as points of reference. On the one hand, Dahlman (1979) divides transaction costs into three categories: search and information costs, bargaining and decision costs, and policy and enforcement costs. On the other

hand, McCann *et al.* (2005)'s transaction costs framework consists of seven categories: research and information, enactment or litigation, design and implementation, support and administration, contracting, monitoring/detection, and prosecution/enforcement.

To summarize, both case studies explore the potential to reduce transaction costs to link small-scale farmers with high income markets through two collective action institutions: the Bolivian Andean Platform (case study A), and the Native Potato Varieties Program (case study B). Case study A (BAP) targets collaboration among market chain actors to allow two small-scale producer associations to get integrated in the market. Because initiatives like the Bolivian Andean Platform require higher standards of quality and supply, when compared to the informal market small-producers supply to, case study B (NPVP) identifies collective action efforts that aim to promote capacity of negotiation in producers of three communities who are currently not participants of the Bolivian Andean Platform. Stakeholders (case study A), and participants and non-participants (case study B) are asked about barriers and motives for participation, and those answers are analyzed through the Pattern Matching Logic designed by Yin (1994) to understand reduction or increase in transaction costs.

3.2 Case Study Research Design

The case study research guidelines in Yin (1994) were used to design each case study. According to Yin's guidelines and the characteristics of the objectives of this research, a single embedded case study was developed to

analyze case study A. A multiple embedded case study was developed to analyze case study B. Both case study designs are further explained below.

3.2.1 Single Embedded Case Study

According to Yin (1994), a single embedded case study is that where attention is also given to subunits. “The main unit of analysis is the organization as a whole, whereas the smallest unit is the individual member” (p.42). So, even though the study analyzes market integration of stakeholders through collective action of a single institution, the BAP, the analysis studies the BAP’s participants, the individual organizations (producer’s associations, processors, NGO’s, sellers, etc.) to understand the incentives and barriers to participation, that translate into reduction or increase of transaction costs.

3.2.2 Multiple Embedded Case Study

Multiple case studies are those that contain more than a single case where independent outcomes occur at different sites. “Thus, each site might be the subject of an individual case study, and the case study as a whole would have used a multiple case design” (Yin, 1994, p. 44). Multiple case studies can be holistic or embedded. In the case of an embedded design, a survey is conducted at each site.

To study access to improved technologies and to study how collective action can address barriers of quality, a case study of the Native Potato Varieties Program is developed using a multiple embedded case study design. Three

groups, each in a different rural community (Kellhuiri, Vinto Coopani and Sirujiri), are studied to compare motives for participation. In two communities (Kellhuiri and Vinto Coopani), comparisons are developed with households who do not participate to understand motives and barriers for participation, and impacts on transaction costs.

3.3 Procedure for the Analysis of Transaction Costs

Since identifying transaction costs by category is necessary to build valid arguments (McCann, *et al.* 2004), a specific typology has been put together from the available literature, by identifying those categories that would be easily accessible to identify and analyze during the field research. Dahlman (1979) and McCann *et al.* (2005) categorization of transaction costs are the key sources of reference for this research study, as information provided in such documents relates to the stages of the market chain analyzed here. The typology used in this research classifies transaction costs in six categories (Table 1), as they are more applicable for the market chain line that is been analyzed. The six categories are: search costs, participation costs, information costs, contracting costs, monitoring costs, and enforcement costs.

3.3.1 Search Costs

This first transaction costs category refers to the costs of time and resources invested in finding a trade partner to conduct business with. The existence of this category is due to the imperfect information in the market

(Dahlman, 1979) of not only business partners, but also other opportunities for native products.

3.3.2 Participation Costs

Considers the costs related to participation in activities within and outside of the community. This includes the opportunity costs of attending meetings, in contrast with dedicating this time to other household activities or leisure.

3.3.3 Information Costs

This category refers to small-scale farmers' costs to access market information. This category also evaluates the transaction costs of the information that is shared among market chain actors.

3.3.4 Contracting Costs

These involve the costs associated with the design and liability (design of clauses) of any contracts signed by market chain actors within a category (farmer with farmer) or in between categories (farmer with final sellers) to be part of market agreements within the chain.

3.3.5 Monitoring Costs

These costs are explained by “the lack of knowledge of whether one or both of the parties will violate their part of the bargain” (Dahlman, 1979). This category refers to the costs of monitoring market chain actors' successful or

failed actions towards achieving collective actions' goals or agreements. Some costs in this category are transportation, lodging, food, and materials needed for the monitoring process.

3.3.6 Enforcement Costs

For both case studies there is no formal set of rules of enforcement of any kind. The enforcement costs considered in both analyses deal with those informal agreements between stakeholders (case study A) and between farmers (case study B). The costs of enforcement can be reduced by the selection of economic agents who will be more likely to fulfill their obligations (Dahlman, 1979) according to agreements in the platform.

Table 1. Typology of Transaction Costs for Both Case Studies

| Type of transaction cost | Some of the costs associated with category |
|---------------------------------|--|
| Search costs | Time and resources invested in finding a trade partner. |
| Participation costs | Opportunity cost of attending meetings and participating in communal work. |
| Information costs | Costs of obtaining finding markets and obtaining information about their characteristics: products, price, size, quality standards, new technologies. |
| Contracting costs | Design and liability of formal/informal contracts. Setting up the price. |
| Monitoring costs | Costs of monitoring platform' stakeholders activities to fulfill the platform's objectives. Costs of monitoring activities and fulfillment of the agreements among farmers. |
| Enforcement costs | Fines or other costs associated to enforcing the fulfillment of agreements. |

Source: own elaboration.

3.4 Quality of Research Design

To ensure quality research design, both case studies were developed according to the criteria described in table 1. The four tests described in the table are widely used in social science methods (Yin, 1994). The first test, construct validity, was applied in this research to ensure that the instrument (open questions) was valid to test the hypotheses. In order to construct validity, multiple sources of evidence are needed. Interviews were conducted with all stakeholders in case study A. In case study B, participants and non-participants from each community were interviewed. Furthermore, a chain of evidence was established when the data was collected on the field. During and after the field research, the key informants (BAP stakeholders, participants and non-participants of NPVP) reviewed drafts of the final case study report.

To prove internal validity two out of the three design tests were applied. Pattern matching and explanation building were used to prove the hypotheses building results to test the match. Time-series analysis was not possible for none of the two case studies because research for only one year was conducted. In chapter VI, recommendations for future research, time-series analysis is suggested to prove internal validity of future similar research.

The external validity test was applied only to case study B because it was the only multiple case in this research. Replication in three communities, Kellhuiri, Vinto Coopani, and Sirujiri, was chosen during research design. Finally, reliability

was ensured by following the case study protocol in Yin (1994), and by developing a database of the case studies.

Table 2. Case Study Tactics for Four Design Tests

| Tests | Case study tactic | Phase of research in which tactic occurs |
|---------------------------|--|---|
| construct validity | use multiple sources of evidence | data collection |
| | establish chain of evidence | data collection |
| | have key informants review draft case study report | Composition |
| internal validity | do pattern matching | data analysis |
| | do explanation building | data analysis |
| | do time-series analysis | data analysis |
| external validity | use replication (logic in multiple case studies) | research design |
| reliability | use case study protocol | data collection |
| | develop case study data base | data collection |

Source: Yin (1994, p. 33)

Chapter IV

Case Study A: Collective Action among Stakeholders of the Market Chain to Link with High Income Markets (The Bolivian Andean Platform)

4.1 The Case Study Set Up

Personal interviews with 10 stakeholders of the Bolivian Andean Platform were conducted. The eleventh stakeholder of the Platform, the Ministry of Agriculture, was not interviewed as it is not a participant, but a stakeholder for required legal paperwork. The questions addressed to interviewees were open-ended, and were conducted in the following order:

1. What are the incentives that motivated your participation in the BAP?
2. How does your organization benefit from participation in the BAP?
 - a. Have you reduced costs of access to information and knowledge?
 - b. Is it easier to reach partners for negotiations at the BAP?
 - c. What has happened to the monitoring and enforcement costs monitoring within your organization while participating in the BAP?

3. Are there any disincentives for your participation in the BAP?
 - a. Have you incurred in any costs because of your participation?

Which costs?

4.2 The hypothesis

Organizations that participate in the Bolivian Andean Platform do so to reduce their transaction costs through collective action, and access high income markets through the linkage with other stakeholders of the market chain. Failure of the platform takes place when economies of scale are not realized. On the other hand, barriers for participation in the platform are group size, lack of organization among farmers, and lack of quality of chuño and tunta.

4.3 The Participatory Market Chain Approach

The Participatory Market Chain Approach (PMCA) employed to develop the Bolivian Andean Platform, built upon existing institutions of rural communities, aims to get farmers involved in higher income markets. The PMCA was applied by Papa Andina, an initiative of the International Potato Center, to promote collaboration among stakeholders through interaction in the Bolivian Andean Platform. The PMCA is an approach that “fosters commercial, technological and institutional innovation, through a structured process that builds interest, trust and collaboration among participants” through three phases (Figure 2).

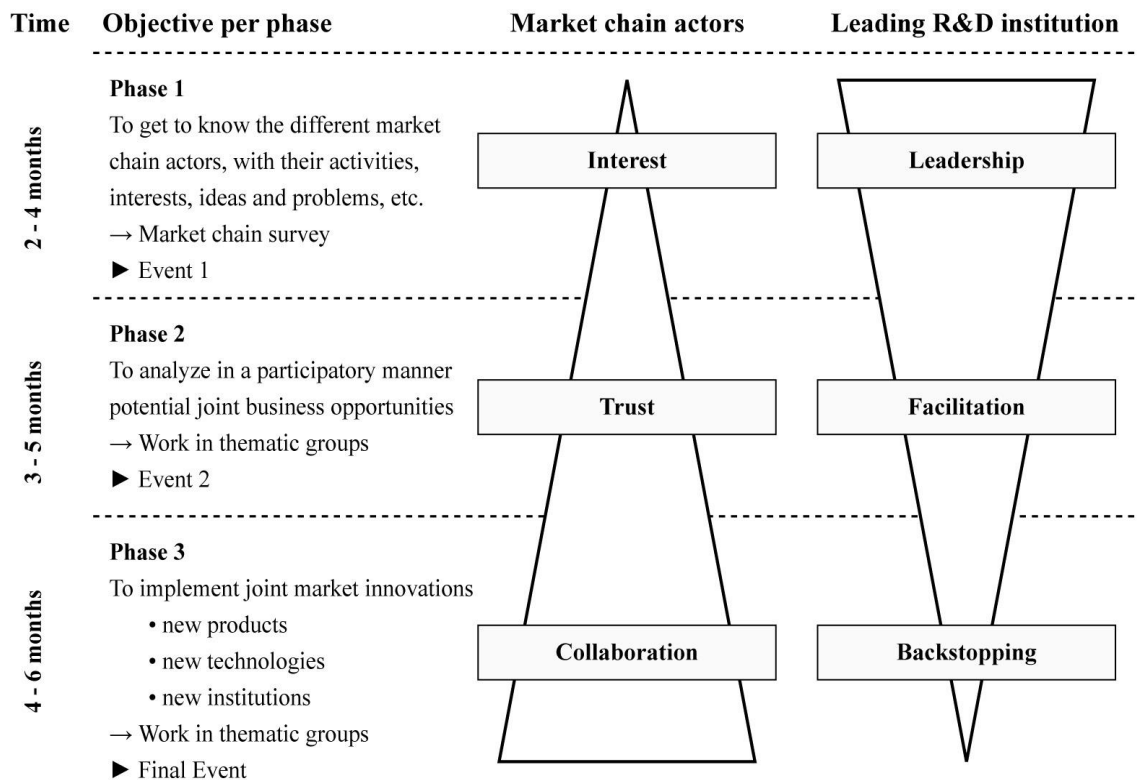


Figure 2. Structure and Objectives of the Three Phases of the PMCA

Source: Devaux *et al.*, 2006. <http://www.cipotato.org/publications/pdf/003296.pdf>

The Bolivian Andean Platform “provides a platform for potato producers, other market chain actors and service providers to come together to identify their common interests, share knowledge and develop joint activities” within the Bolivian Highlands context (Guerrero, *et al.*, 2005; Devaux *et al.*, 2006). In more explicit words, the PMCA is the framework that structures the participatory processes implemented in the Bolivian Andean Platform’s meetings and activities, that facilitate market chain collaboration among actors (Figure 3) (Bernet *et al.*, 2006).

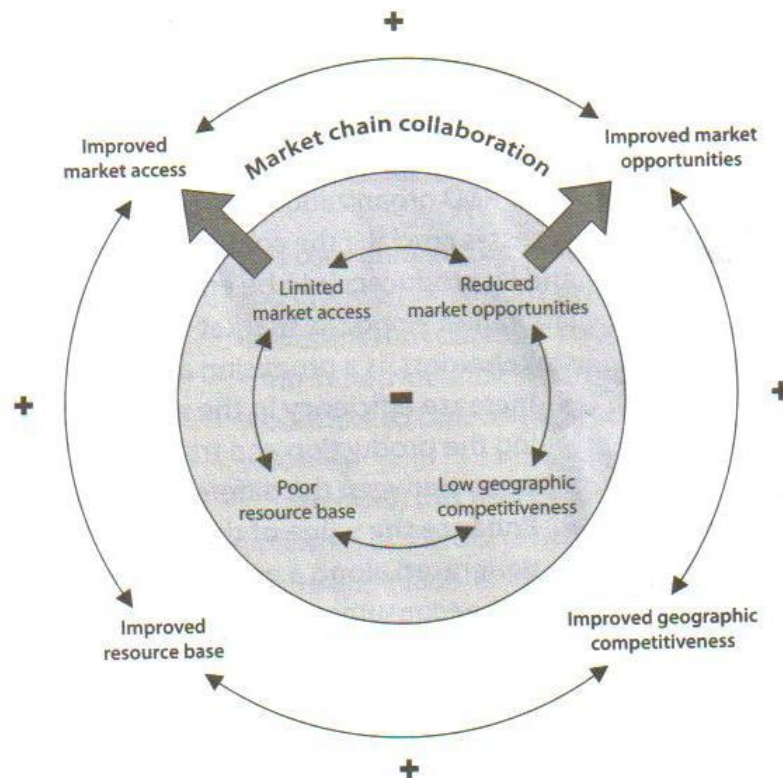


Figure 3. PMCA's Market Chain Collaboration in the Bolivian Andean Platform
 Source: Devaux *et al.*, 2006. <http://www.cipotato.org/publications/pdf/003296.pdf>

According to the developers of the PMCA, within the processes conducted in the Bolivian Andean Platform, transaction costs are reduced for all the market chain actors (e.g. farmers, intermediaries, processors and exporters), and information is made more available to those who lack it. Agency capacity, used in this document as the capacity to negotiate, is enhanced as producer's organizations have the same rights in the negotiations as other actors of the market chain. The PMCA consists of a set of principles that guide negotiations of native Andean products, such as potato, quinoa, chuño and tunta in the Bolivian Andean Platform.

4.4 The Bolivian Andean Platform

As a platform for negotiations, the Bolivian Andean Platform intends to reduce transaction costs for all participants, with special emphasis on small-scale farmers. As a result of reduced transaction costs, the platform intends to facilitate increased negotiation capacity for farmers, and in this process provide them with access to higher income markets. The idea is to achieve these outcomes by creating links between all actors of the market chain: producers, intermediaries, processors, and sellers, being the ultimate goal to reduce the transaction costs of their negotiations. In order to produce such outcomes, in 2001 the UK's Department for International Development (DFID) and the International Potato Center (CIP) created an innovative project called Innovandes. This project seeks to promote interaction among institutions working in the Andes, in an effort to validate and disseminate existing technologies that "build new markets and empower farmers to supply them" (Innova, 2005: 2). Currently, Innovandes is working on research regarding native potato varieties in the Andean Highlands of Bolivia, also supporting the PMCA. The representative of Innovandes for the Bolivian Highlands has office in the PROINPA Foundation in La Paz.

In terms of transaction costs, the BAP is seen as a means to promote collaboration among market chain actors. Collaboration between producers, processors, final sellers and so on might lead to a reduction of transaction costs due to the information and knowledge that is shared back and forth during meetings and joint activities. Figure 4 explains the structure of the Bolivian Andean Platform, which derives from the philosophy of the Participatory Market

Chain Approach, and is a platform where collaboration is driven between market chain actors of all levels.

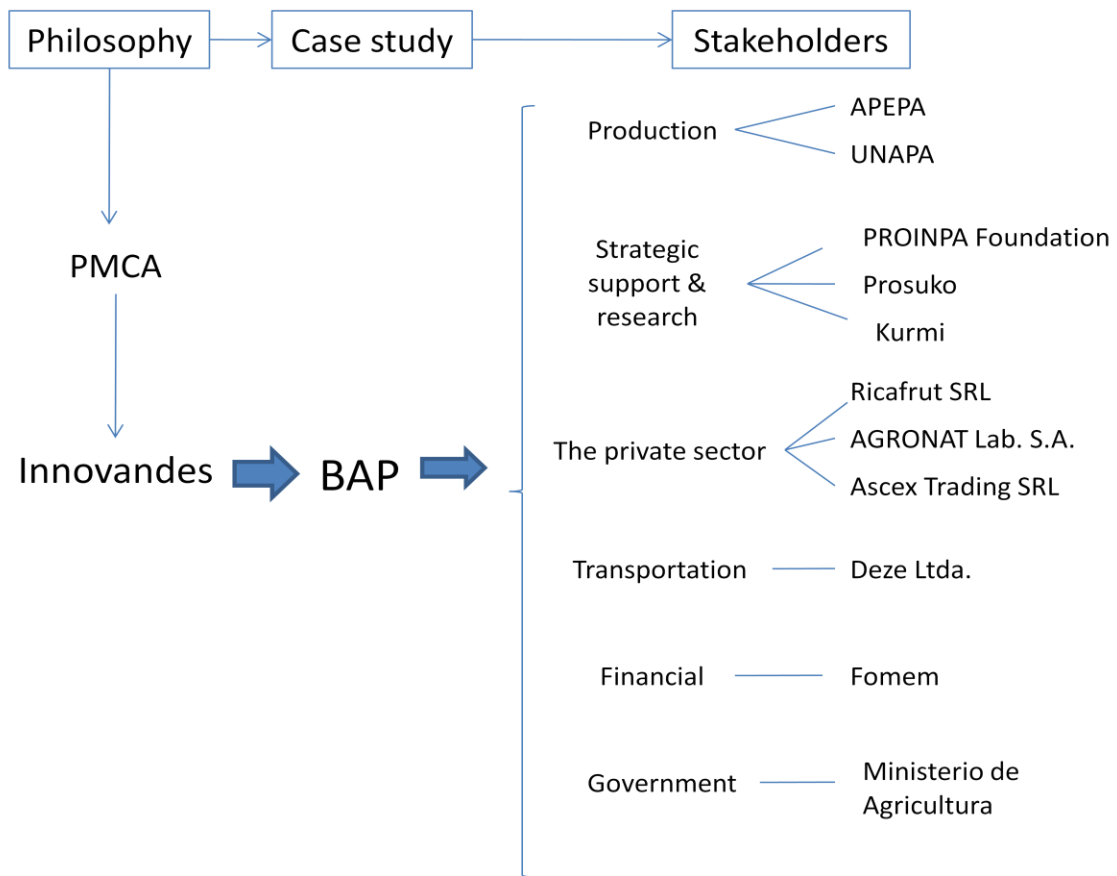


Figure 4. Bolivian Andean Platform’s Structure, Participants and Outcomes
Source: Own elaboration.

As shown on figure 4, participants of the Bolivian Andean Platform are entities of promotion and research, transportation, financial support, producers, processors and sellers, as well as the government, which licenses the Bolivian Andean Platform. PROINPA Foundation, Prosuco, Kurmi, Fomem, DEZE Ltda., and Ministerio de Agricultura (Ministry of Agriculture) participate in the platform to provide strategic support in the negotiation process.

4.4.1 Grading System

The grading system for chuño and tunta in the Bolivian Andean Platform is based solely on size, although cleanness and uniformity of product is necessary. An official quality norm was established when the Bolivian Platform was created in 2006. The official norm was developed based on prices paid to four sizes of potatoes in the market. Therefore, the norm includes four different sizes for chuño and tunta as well (table 3). The bigger the size of the chuño or tunta, the higher the price it will be paid. The price is established once a year according to the price of market clearance, and cannot be changed even when the price in the market is higher than that in the platform.

Table 3. Chuño Size and Quality According to Official Quality Norm – NB 316001

| Quality | Round tubers | Long tubers |
|-----------------|-----------------------------|------------------------------|
| 1 st | diameter larger than 4cm. | diameter larger than 3cm. |
| 2 nd | diameter from 3cm to 4cm. | diameter from 2.1cm to 3cm. |
| 3 rd | diameter from 2cm to 2.9cm. | diameter from 1.5cm to 2cm. |
| 4 th | diameter smaller than 2cm. | diameter smaller than 1.5cm. |

Source: Producers association B, 2007.

However, the price paid for chuño and tunta in the market differs from that paid for potatoes. Because the former are dry and hard due to their transformation process, their cooking time is larger than for the latter. Consumers prefer to buy smaller chuño and tunta because their flavor is better as they

absorb humidity more evenly. As a result, the market demand for smaller chuño/tunta is higher and pays a higher price. This inconsistency in the norm has become a disincentive for the two producers' groups that participate in the Platform. Because there is no formal commitment to buy the produce within the platform, participant producers can -and choose- to sell their yield in the market.

4.4.2 The Bolivian Andean Platform' Stakeholders

Following figure 4, this section describes in detail the focus of stakeholders by category: producer organizations, NGO's and their contribution to the platform. The information provided in the table was gathered from documents provided by each stakeholder and primary information gathered through interviews.

4.4.2.1 Production

4.4.2.1.1 Producers association A

Producers association A is one of the two farmers' organizations that participate in the Bolivian Andean Platform. The creation of this association was motivated to improve agricultural practices, such as pest control and use of Suka Kollus¹ in the provinces of Ingavi and Los Andes led by PROSUKO (Program Suka Kollus). Between 1999 and 2003, PROSUKO had worked with farmers

¹ Pre-Hispanic culture practice for agricultural production in the Lake Titicaca region of Perú and Bolivia. Suka Kollus are raised fields in form of platforms elevated from the original elevation of soil surface and surrounded by canals. The platforms are up to 1.2m high and 2-20m wide. Canals are 1.6-4.5m wide (Sánchez de Lozada *et al.*, 1998).

from the two provinces by providing technical assistance that ultimately motivated farmers to work in communal associations. Diverse communal associations were created in those five years not only in Ingavi and Los Andes, but also in other provinces such as Manco Kapac, Larecaja, Omasuyos, and Aroma. Eventually, communal associations needed an umbrella organization to represent them. As a result, Producers association A was created around 2003 (Producers association A, 2006). The main objective of the institution was to develop market access for those products being supplied by all communal associations in Producers association A, and the achievement of strategic alliances to strengthen the organization. Today, Producers association A represents 600 families grouped in 30 communal associations from the provinces of Los Andes, Ingavi, Manco Kapac, Larecaja, Omasuyos, and Aroma (Producers association A, 2007).

Producers association A has been a participant of the Bolivian Andean Platform since 2006. Within a year since 2006, the organization exported one ton of chuño to Spain through the Bolivian Andean Platform. According to Producers association A (2006) the activities of this organization are divided in four main integrated productive processes: 1) Innovation through CICA's (Research and Agricultural Assistance Committees), 2) agro-meteorologist forecast service, 3) Technical assistance by Yapuchiris, and 4) Agricultural Insurance (FDGRA). For the first task, innovation is promoted by the CICA's, which can be represented by one or more leader farmers who have demonstrated leadership, entrepreneurship or knowledge excellence within the community. These CICA's

have the mission of creating innovative strategies of production along with promoting alternative creative participatory solutions to local communal problems. For the second task, agro-meteorologist forecast service is offered to all members of the association through either the elders of the community, CICA's or Yapuchiris. All of them have been previously identified within the community as the holders of ancient knowledge that allows them to interpret locally available bio-indicators to predict climate conditions for agricultural practices.

The third task refers to technical assistance provided by the Yapuchiris. Yapuchiris are those farmers who are the best producers within a communal association, who also show a strong commitment to serve the community by sharing their knowledge and abilities. Prosuko identifies them as the local human capital that can serve best as local agricultural extension (Baldiviezo, 2007). Producers association A has delegated on-field technical support for its associated members to the Yapuchiris. According to Baldiviezo (2007), the Yapuchiris assume the following responsibilities: 1) to promote changes towards sustainable agriculture in terms of food security, risk management, and market participation, 2) to develop innovations through local research and experimentation for productive and commercialization systems, and 3) to spread knowledge and experiences through technical support. At the same time, Yapuchiris receive two kinds of incentives: 1) recognition within the communities as the experts, and 2) higher access to credits and financial support from Producers association A for innovative projects they would like to develop in their plots. For the latter, the project has to demonstrate that the outcome of any

experiments or research will benefit the community as a whole. Currently, there are two Yapuchiris' organizations within Producers association A, one in Los Andes and one in Ingavi, divided as such due to geographic location (Producers association A, 2007).

The fourth task is the Agricultural Insurance (FDGRA), which is a contingency strategy to face production losses due to climate variability. It was designed by PROSUKO (Suka Kollus Program), PROFIN (Program to support the financial sector), and IC (Inter-cooperation Foundation), and is implemented by Producers association A through its communal associations. In 2006, the FDGRA started with four of the 30 communal associations that are members of Producers association A, with a total of 82 participants (14% of all Producers association A members) (Laura and Quispe, 2007). The method consists in identifying an area with homogenous microclimate where the control plot will be located. All other plots of production will be located surrounding the control plot. In order for the method to work, the plot is taken care of by a Yapuchiri, who is publicly recognized by the community. The Yapuchiri in charge of the control plot will estimate an average yield expected for the potato production. The producers of the plots surrounding the control plot will then sign a contract and pay a fee to Producers association A. In the case that a climate event affects the potato production of the control plot, and reduces the average yield expected, all those who signed the contract and paid the fee are applicable for indemnification. Those who produce more yield than that of the Yapuchiri will not be indemnified, whereas those who produce less than the Yapuchiri will be indemnified (Figure 5)

according to a table that Producers association A has designed for such purpose (Laura and Quispe, 2007).

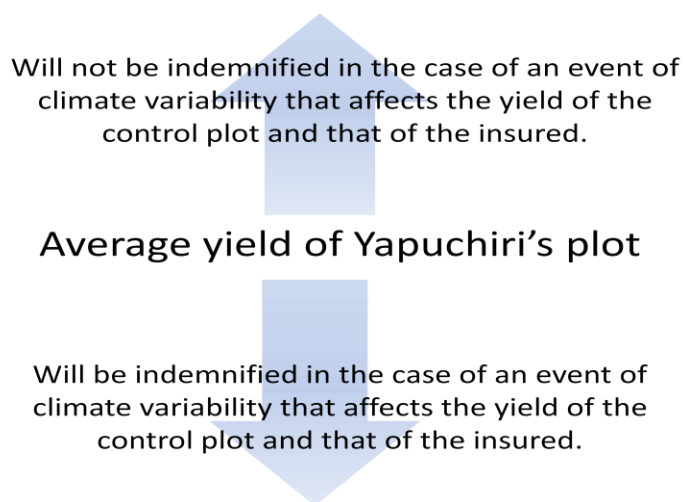


Figure 5. Strategy for Indemnification of FDGRA's Participants
Source: Adapted from Laura and Quispe (2007, p. 11).

4.4.2.1.2 Producers association B

Producers association B was created in mid-2005 as a result of a need for a commercial partner for CIDSA. CIDSA is the Development and Management Committee for South Aroma that had previously been created in the current Producers association B's member communities with the support of Kurmi. As a Development committee, CIDSA is in charge of coordinating and creating solutions for communities' local agricultural problems. Producers association B, on the other hand, is in charge of placing the production of the member communities in the market. Today, Producers association B represents 15 communities in the province of Aroma of the Municipality of Sica Sica, reaching approximately 300 members. Producers association B has been part of the

Bolivian Andean Platform for more than two years, being the first farmers' association to participate in the platform. Within that period, the association has exported chuño to Spain twice: 350Kgs. in mid-2006 and 500Kgs. at the end of the same year. The target consumers are especially immigrants from Bolivia and Perú especially who reside in Spain.

According to Producers association B (2007), the organization has established the following objectives: 1) to practice sustainable agricultural production within a sustainable conservation of the environment, 2) to commercialize their sustainable agricultural products and sub-products in national and international markets, 3) to support gender participation in decision making at the different levels of Producers association B organizational structure, 4) to look for new opportunities for commercialization and industrialization, in alliance with peasant economic networks, 5) to organize sessions to provide technical assistance for Producers association B's human capital, 6) to promote research in sustainable agricultural production by preparing skilled human capital through a specific program, and 7) to start a process of capitalization to ensure the organization's sustainability in the long-run. Accordingly, Producers association B has developed entry norms, which specifically state that only communal associations and unions affiliated to CIDSA could be admitted. From the economic perspective, Producers association B's profits are distributed in three categories: technical assistance fund (20%), social support fund (30%), and capitalization and operations fund (50%).

In order to commercialize their chuño, Producers association B has created the brand Chuñosa. Under that brand, Producers association B produces 0.5 to 1 ton/month of chuño for the national market. The quality required by this market is: 2^a and 3^a for bagged chuño, and 4^a and smaller for flour and soups (Table 3). Additionally, Producers association B produces two to three tons/month of chuño of quality 2^a and 3^a for international markets. At the national level, Producers association B sells in La Paz (KETAL, GAVA Market), Santa Cruz (through Ricafrut in mini-markets), and in the rest of the country through ASCEX (soups). At the international level, Producers association B sells to Europe through ASCEX, FOODS Company, and AGRONAT; to Brazil and Mexico through AGRONAT; and to the USA through DEZE Ltda (Figure 6).

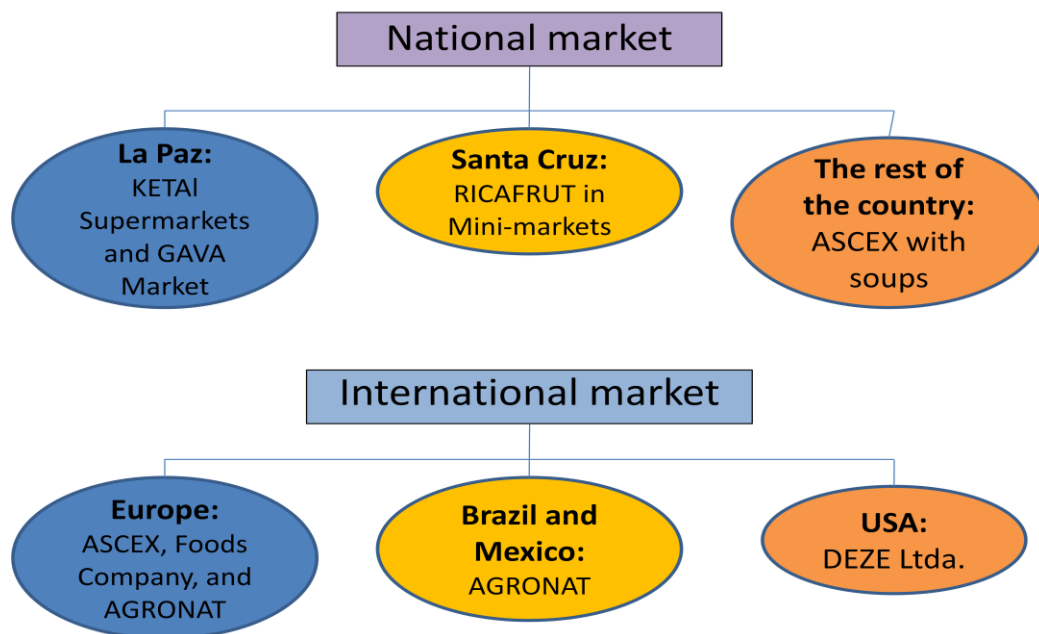


Figure 6. Destination of Producers association B's Production
Source: Producers association B, 2007

4.4.2.2 Strategic Support and Research

4.4.2.2.1 Programa Suka Kollus (PROSUKO)

Prosuko pursues the rescue and revalorization of pre-Hispanic technologies such as the Suka Kollus because the technology used in Suka Kollus keeps the agricultural field irrigated no matter climate events. The Suka Kollus are raised fields in the form of platforms that lay above the original soil surface; a Pre-Hispanic practice designed for agricultural systems in the surrounding area of the Titicaca lake of Perú and Bolivia (Sánchez de Lozada *et al.*, 1998). Prosuko started working in Bolivia in 1992. Since then, their job has been divided into four phases. The first, focused on basic agricultural practices research, whereas the second focused on applied research, and the third on agricultural extension. The fourth and final phase of PROSUKO targets commercialization of local agricultural products. It aims to strengthen production systems by supporting emerging producers' organizations to integrate in the market, especially for those new interested producers and organizations. The purpose of this fourth phase is to gradually reduce PROSUKO's involvement in decision making, and further promote farmers' organization entrepreneurship by facilitating processes, and promoting innovation. In order to achieve this, PROSUKO created the Competitiveness Fund Mechanism, which entails a local technical assistance model through Yapuchiris, Research and Agricultural Assistance Committees (CICA's), and entrepreneurs (Morales, 2005). The model aims to organize farmers at the local level in a way that those organizations will

further assume the costs of technical assistance when PROSUKO leaves the region.

4.4.2.2.2 Kurmi Foundation

Kurmi is a foundation that works with farmers from Sica-Sica and Lahuachaca in La Paz, Bolivia. It aims to develop capacities among farmers by providing them with technical assistance especially regarding irrigation and drainage. Kurmi also collaborates as strategic partner of the International Potato Center's initiatives, such as Papa Andina, CIP-ALTAGRO, and the Bolivian Andean Platform. Because Kurmi has worked in Sica-Sica and Lahuachaca for more than 25 years, it is also the main partner for any development initiative that aims to work with farmers from this area of Bolivia. In this research study, Kurmi works as the strategic support that provides technical assistance to Producers association B, one of the farmers' organizations that participate in the Bolivian Andean Platform. Even though representatives of Kurmi are not always present in the platform's meetings, they provide the support that Producers association B needs in order to be a successful participant of the platform.

4.4.2.2.3 PROINPA Foundation

PROINPA means promotion and research of native products. It has been situated in Bolivia for 20 years. Since mid-1980's, PROINPA has had the mission of promoting technological innovation to improve Andean crops competitiveness, food security, and sustainable use and conservation of genetic resources to

benefit Bolivian producers and society as a whole. The foundation follows three main objectives: 1) to promote conservation and use of natural resources, 2) to develop technologies to ensure competitiveness and food security, and 3) to promote and spread technologies. On the one hand, for the achievement of the first objective, PROINPA works *ex situ* in germplasm banks in alliance with the National System for Food and Agriculture (SINARGEAA), but also *in situ* with producers. Tubers, roots, grains, peanuts, chili, and some fruits' genetic resources are of particular attention in native products conservation.

On the other hand, within the context of the second objective, PROINPA generates post-harvesting and industrialization technologies to promote farmers' production of native Andean crops for further commercialization of fresh and processed products. In order to achieve that, PROINPA promotes farmers' organization in small rural agribusiness enterprises that go along with production chains. Finally, in order to promote and spread the use of technologies, PROINPA's extension teams apply participatory methods in alliance with communities and municipalities.

Farmers and extension agronomists work together to promote small-scale farmers' capacity to negotiate with other market chain actors. They also work together in the search for national and international potential market segments, as well as for commercialization channels. The participatory processes PROINPA uses are: 1) Farmers' field schools (ECAL's), local agricultural research committees (CIAL's), and the agro-food chain participatory focus (EPCA). The latter refers to the development of conciliation platforms for market

chain actors' negotiations (PROINPA, 2007). Currently, PROINPA Foundation works on 40 projects reaching 11,000 direct recipients, and more than 45,000 indirect recipients from 400 communities in 75 municipalities of seven regions of Bolivia (PROINPA, 2007). The activities developed by this foundation are organized in three strategic regions: 1) Regional North Valley (Cochabamba and Santa Cruz), 2) Regional South Valley and Chaco (Chuquisaca, Tarija, and Santa Cruz), and 3) Regional Highlands (La Paz, Potosí, and Oruro). The focus area of this study is part of the latter region. PROINPA works not only on native potatoes, but also on other crops.

4.4.2.3 The Private Sector

Companies from the private sector that participate in the Bolivian Andean Platform are identified beforehand by representatives of Innovandes according to the requirement of the platform. Once the companies are identified, Innovandes sends a letter of invitation to participate in the platform. A representative of Innovandes visits the companies to formally invite them to be a stakeholder of the platform. The companies who decide to participate, share three characteristics: 1) they want to collaborate with the process of facilitating market access for small-scale farmers, 2) they benefit from the process of involvement with other market chain actors in terms of information, and 3) the platform offers a large supply of chuño and tunta from two sources. Reasons of why some companies decide not to participate were not disclosed by Innovandes.

Ricafrut SRL, Deze Ltda., Fomen (Entrepreneurship Promotion Swiss Contact), AGRONAT Laboratories S.A., and ASCEX Trading SRL are Bolivian Andean Platform's stakeholders that provide strategic support to the platform's negotiations. During the platform's meetings, these strategic participants make explicit to farmers and technical support organizations the market requirements for the products the Bolivian Andean Platform has to offer.

4.5 Research Findings and Discussion

BAP's meetings are held once a month and extraordinary meetings are also organized according to specific necessities. In the case of strategic support, and the private sector, the participation costs are slightly lower than those of producers because the former are located in La Paz where most meetings are held. Arrows in bold in table 4 show the different magnitudes. Producers have to travel from their communities to La Paz to participate in meetings. For farmers from Producers association B, a round trip to La Paz takes approximately five hours, that without considering the time of moving within La Paz and the time of the meeting. For farmers from Producers association A, the journey could take a little bit more than that. Considering the costs of transportation, and food participation costs for producers are higher than for other stakeholders. In general, the answers obtained from interviews allowed the creation of a scale in which participation costs are higher for producers and lower for strategic support stakeholders and the private sector. Nonetheless, participation costs increase for all stakeholders.

The moderator of the Bolivian Andean Platform initially selects and invites the participants to the platform. Eventually, the stakeholders as a group will search and invite new participants as it is needed, in which case the search costs will be shared by all participants of the platform. In such case, search costs are reduced for each participant. Search costs are expressed in bold for producers in table 4 because producers wouldn't have access to the network the BAP offers if they weren't participants. Information about prices, products and quality standards are shared by the private sector and strategic support stakeholders to the producer associations. Similarly, information about amount per year, dates, and quality of agricultural produce is shared by both producer associations with other stakeholders. In such case, information costs are reduced for all participants in the BAP because those costs are shared among all participants.

The Bolivian Andean Platform lacks a contract because there is no document that states stakeholders' responsibilities in the platform. Stakeholders participate in the platform motivated by their willingness of being part of a group that reduces most of their transaction costs in the supply chain. Therefore, contracting costs are zero for all stakeholders.

The moderator of the platform, Innovandes, incurs in most of monitoring and enforcement costs. However, the NGOs working with producer associations incur some monitoring costs during their weekly visits to the communities, although these costs will be rather informal. Producer associations' monitoring costs increase for those who are the leaders, who incur in costs associated with informing members about meetings and special activities. Given the lack of

motorized transportation in these communities, the secretary (in charge of reaching all members about meetings and activities) might take five hours in noticing most of the members who will then notify others in closer distance for them. In the case of other leaders of the associations, monitoring costs of the communal and individual plots mean investment of time and resources. The monitoring costs for Innovandes include transportation, food, lodging, and office resources for visits to each stakeholder. Sometimes, when quality standards are not achieved within the context of the agreements, Innovandes incurs in more visits with all stakeholders involved in the process of improving the quality of the final product (farmers, processors, and NGO's).

There are no enforcement costs in terms of fees associated with non-assistance to the meetings or lack of participation. However, the moderator and producers associations incur in some costs of enforcement. In the case of the moderator, when there is lack of participation in meetings and activities, a representative of Innovandes will visit those stakeholders to maintain the motivation for participation. During those visits, there are costs of transportation, food, and in some cases lodging. These could be more considered as monitoring costs, but since they are part of an informal enforcement to promote active participation, they are considered within the category of enforcement costs. In the case of Producers associations, leaders of the associations have developed some rules of enforcement to prevent free-ridership. Some of these rules are fines to those who do not assist to meetings, and the negation of re-integration for those who have been absent for more than a month.

The Bolivian Andean Platform promotes capacity of agency for the small-scale farmers who are participants. All participants have the right to actively participate at every meeting with other actors of the market chain. Farmers have equal voice and vote in the negotiations, which entails a horizontal integration. However, that impact is limited to only those who are allowed to participate. In order to become one of the stakeholders in the Bolivian Andean Platform, the producers must be formally organized (organization or cooperative), and must also have a high quality of produce. The quality of chuño and tunta is expected to be clean and to have a uniform size. The cleaner the chuño the more likely it will last in storage from five to 10 years. Furthermore, the supply of the produce has to be more or less permanent, in order to ensure the product will reach the final market when expected.

Seen from another perspective, because only those to whom Innovandes can provide with technical assistance can participate, the impact of the Bolivian Andean Platform is still very limited. Barriers to participation are farmers' capacity to organize, quality of produce that conforms market standards, and permanent supply. Furthermore, the price that is offered at the platform is established as an average of the year's price, and does not pay off farmers' efforts to produce the higher quality the private sector demands. This is mostly because before Innovandes was created in 2007, in the urge for an official norm for chuño and tunta prices, a market-inaccurate official standardized table of sizes and qualities was created. Table 3 shows that the bigger the size of the chuño is, the higher the price it will be sold at. However, this research found that the market pays a

higher price for smaller chuño because during cooking they hydrate faster than bigger chuño, and therefore taste better and reduce cooking production costs. Moreover, climate changes and imperfect market are constraints that limit a permanent supply for the market.

To summarize, the Bolivian Andean Platform brings incentives such as reduced market transaction costs, active collaboration with other actors of the market chain, development of producers' capacity to negotiate, and availability of information. All those are the incentives for farmers' participation. So, in those cases where costs are higher but benefits are also higher (information, capacity of agency, networking), participation is also desirable. On the opposite side, the disincentive to participation is that the price paid at the platform is lower than that of the market in some seasons. Given that the quality standards required by the platform are higher than those of the informal market, producers incur in additional efforts, which are not paid off by the price in the platform. This is a disincentive to participation.

4.6 Conclusion of the chapter

The Bolivian Andean Platform's main strength rests on its promotion of collaborative interaction between market chain actors and formal organizations of support. It reduces search, information, and contracting costs (table 1) for all stakeholders. It also increases participation costs for all members, and monitoring and enforcement costs for both producer associations (table 4). However, participation costs are offset by the reduced search costs and the

reduced costs of searching and accessing information. Once a month, the platform analyzes achievements and discusses plan activities with the participation of all participant market chain actors for a specific product. This interaction promotes collaboration, and enhances agency for Andean producers, who interact with other market chain actors.

Table 4. Transaction Costs of Stakeholders in the Bolivian Andean Platform

| Type of transaction cost/moderator-stakeholders | Moderator | Stakeholders | | |
|---|------------|-------------------|----------------|-----------------------|
| | Innovandes | Strategic support | Private sector | Producer associations |
| Participation costs | ↑ | ↑ | ↑ | ↑* |
| Search costs | ↑ | ↓ | ↓ | ↓ |
| Information costs | ↑ | ↓ | ↓ | ↓ |
| Contracting costs | 0 | 0 | 0 | 0 |
| Monitoring costs | ↑ | ↓ | ↓ | ↑ |
| Enforcement costs | ↑ | 0 | 0 | ↑ |

Source: Own elaboration.

*Arrows in bold mean greater impact.

Nonetheless, the BAP presents weaknesses mostly related to motivation for participants. First, there is no formal commitment in the form of a contract for the agreements developed within the platform, but only the stakeholders will to participate in the meetings and activities. This increases monitoring and enforcement costs for the moderator (Innovandes). Second, the organizational strategies of the platform about negotiation processes, entry and exit rules for participants are not formally established. Third, the platform does not count with a full financial service entity as a participant, which limits the capacity of the platform to provide financial support to ensure permanent supply to the platform,

and good quality of produce. Deze Ltda., one of Bolivian Andean Platform's stakeholders, offers partial financial assistance, only where Innovandes also invests. Fourth, the platform offers a price that does not pay off producer's efforts for higher quality (hygiene and size) of chuño and tunta (Table 3), thus, there is no economic motivation for farmers' additional quality efforts (Producers association B, 2007).

The BAP's price is established once a year as an average of last year's monthly prices in the market. Sometimes, due to the grading system that rules the BAP (table 3) the market price is higher than the BAP's price. Because the norm pre-established in the Platform states a grading system that can not be changed whatever the conditions of the market, producers can choose to sell in the informal market if the market clearance price is higher than that at the platform. Fifth, participation is limited to those communities where Innovandes is providing technical assistance, which is limited to their budget.

To summarize, the two producer associations that participate in the Bolivian Andean Platform are allowed to participate because both have stronger organizations than those who are not invited to participate [such as the groups of farmers the NPVP works with]. In the absence of formal rules in the platform, the incentives to participate in the BAP are the access to market information for producers association A, and the access to markets for producers association B. At the time when this research was conducted, according to the BAP representatives, both producer organizations lacked on-time supply, and quality of produce in terms of cleanliness and size.

Chapter V

Case Study B: Collective Action among Potato Producers to Get Integrated In High Income Markets (The Native Potato Varieties Program)

5.1 The Case Study Set Up

This case study focuses on groups that were formed in three communities to improve on the quality of native potato varieties. Families that produce native potatoes for commercial purposes in three communities of Umala-Bolivia (Kellhuiri, Vinto Coopani, and Sirujiri) were selected. These native potato marketers were divided into those who participate in programs, and those who do not. The families were selected from the information provided in the Sustainable Agriculture and Natural Resource Collaborative Research Support Program (SANREM CRSP) LTR-4 and CIP-ALTAGRO household surveys of 2006. The surveys were conducted by each project to develop baseline information about the families. The SANREM CRSP's baseline survey consisted of 54 observations from Kellhuiri and Vinto Coopani, whereas CIP-ALTAGRO's baseline survey for Sirujiri only included six, the participant farmers in Sirujiri. All observations from both surveys in these communities were considered in selecting families that produce native potatoes for commercial purposes. Table 6 presents a summary that describes the characteristics of producers from each community.

The three communities were selected because they were participants of Native Potato Varieties Programs, according to information provided by the SANREM CRSP LTR-4 baseline survey. In total, 38 families from the three communities were chosen for personal interviews because they were identified as marketers of native potatoes. From the 40 families, 24 participated in NPVP, and 16 did not. NPVP participants identified included nine farmers in Kellhuiri, nine in Vinto Coopani, and six in Sirujiri (see table 5). In general, fewer non-participant families were interviewed because it was difficult to reach them. Non participant families were possibly not interested in being interviewed or had time constraints, which may be reflected in their lack of participation.

Table 5. Selection of NPVP Participants and Non-Participants

| Community | Observations* from SANREM baseline survey | Observations* from CIP- ALTAGRO baseline survey | NPVP Participant Households | NPVP Non- participant households |
|---|--|--|--|---|
| Sirujiri | N/A | 6 | 6 | 0 |
| Kellhuiri | 25 | N/A | 9 | 6 |
| Vinto Coopani | 29 | N/A | 9 | 9 |
| Observations available for selection | 54 | 6 | | |
| Total | | | 24 | 15 |
| households/interviews | | | 40 | |

* = number of households

5.2 The Hypothesis

Farmers who participate in the Native Potato Varieties Program, do so through producers groups because it reduces their transaction costs to access

information about technologies, and therefore will be more likely to access higher income markets. Collective action is seen as means to reduce transaction costs. On the other hand, the costs of participation may preclude families from becoming involved.

5.3 The Questions to Participants in the Three Communities

NPVP participants and non-NPVP participants (Table 5) were asked different open ended questions. An Aymara/Spanish interpreter was present during all interviews, and was especially helpful when these were conducted with women and old men. The interviews were taped. Handwritten notes were also taken. The questions asked to participants from the three communities were as follows:

1. What are the incentives that motivated your participation in the NPVP?

With a follow up question:

What was your main motivation to participate in the NPVP?

2. How do you benefit from your participation in the NPVP? With the follow up questions:

Have you reduced costs of access to information and knowledge by participating in the NPVP group?

What has happened to the monitoring and enforcement costs within the group of participants?

Have you seen an increase in your bargaining power with other market chain actors?

3. Are there any disincentives for your participation in the NPVP? With the follow up question:

Have you incurred in any costs because of your participation?

Which costs?

The focus of the conversation with those who do not participate in NPVP groups consisted of two main general questions:

1. What are the barriers that stopped you from participating in the NPVP?

With a follow up question:

What was the main barrier to participate in the NPVP?

2. Would you like to participate in the NPVP at some point? With a follow up question:

What would be your main motivation to do so?

5.4 CIP-ALTAGRO and the Native Potato Varieties Program (NPVP)

In an effort to diversify crop production for income smoothing, and enhance local institutions in the Andean Highlands of Bolivia, the International Potato Center (CIP) supported by the Canadian Agency for International Development (CIDA) developed the CIP-ALTAGRO project. The project counts with a budget of 10 million Canadian dollars for a 5-year period, starting in 2007. It intends to benefit 42,000 families from 17 peasant communities located in Perú and Bolivia (Director of CIP-ALTAGRO, 2007). Since 2007, the CIP-ALTAGRO project is developing Native Potato Varieties Programs (NPVP) in rural communities of La Paz, Bolivia. Such programs focus especially on the

preservation of local ancient knowledge regarding the production of chuño and tunta, and their subsequent marketability. Chuño and tunta are two traditional Andean products, foot-made from native potato varieties (Guidi *et al.*, 2002).

On the one hand, chuño is a freeze-dried potato product traditionally made by Quechua and Aymara communities of Perú and Bolivia. It is a five-day process obtained by exposing potatoes to the very low night temperatures of the Andean Highlands; freeze them, subsequently exposing them to the intense sunlight of the day. The word chuño comes from Quechua *ch'uñu*, meaning frozen potato. Its production and consumption levels in Bolivia reach 2400 tons/year (Guidi, *et al.* 2002).

On the other hand, tunta is a native product similar to chuño that differs from the latter by the use of running water at the end of the chuño process, to eliminate dark components resultant from oxidation processes. Approximately 1900 tons/year of tunta are been produced and consumed in Bolivia (Guidi *et al.*, 2002). The processing of both products takes advantage of the temperature contrasts between day and night in the Bolivian Highlands during the winter months of June and July. These are made with native potato varieties, and are latent local assets within the livelihood strategy that could potentially generate marketable outputs for higher income markets.

The CIP-ALTAGRO project is not the only project dedicated to linking small-scale native potato producers to higher income markets in the Bolivian Highlands. There are various methods and approaches based on local

institutions that intend to build capacity among farmers, and enhance the value of native resources upon which livelihoods depend (Sanginga *et al.*, 2004).

Within that spectrum, the project contributes to five of the Millennium Development Goals: 1) eradicate extreme poverty and hunger, 2) promote gender equality and empower women, 3) reduce child mortality, 4) improve maternal health, and 5) ensure environmental sustainability (CIP-ALTAGRO, 2007). The Native Potato Varieties Program is a program developed within the objectives of the CIP-ALTAGRO project in Bolivia and implemented by PROINPA Foundation. The program intends to conserve native potato varieties by promotion “conservation through use” in three communities of Umala in La Paz, Bolivia. This started in 2007. The potato’s native varieties mainly promoted by NPVP are Sacampaya, Pali, Chuncho, and Qullu.

5.5 The Producers Groups

The producers groups in this study are from three communities of Umala: Vinto Coopani, Kellhuiri and Sirujiri. They were selected because the Native Potato Varieties Program was working in those communities at the time this research study was conducted. In order to show the average characteristics of the producers interviewed, this section presents data that describes the producers’ household characteristics, sources of income, average crop production and yield distribution.

5.5.1 Producers Characteristics

In order to describe the characteristics of the producers who participate and do not participate in the Native Potato Varieties Program, table 6 compiles information from each community. The three communities are located at around 4000 meters above the sea, with an average of 5.6 members per household. Similarly, the three communities have an approximate of four potato varieties per household. The amount of land per household in Sirujiri exceeds that of Kellhuiri and Vinto Coopani by about 3 hectares. In terms of education, most of the heads of household in Sirujiri and Vinto Coopani have attended primary school, whereas in Kellhuiri this characteristic reaches 50 percent of the sample for head of the household. However, Kellhuiri shows the highest percentage for secondary school attendance. None of the nine producers from Sirujiri has attended secondary school.

Table 6. Participant and Non-participant Producers Characteristics per Community in Umala, Bolivia 2006 (Mean Values)

| Characteristic/community | Vinto Coopani | Kellhuiri | Sirujiri | Umala* |
|--|---------------|-----------|----------|--------|
| Altitude (masl) | 4012.0 | 4070.0 | 3990.0 | 3914.3 |
| Age head of the household | 53.4 | 52.5 | 54.9 | 50.0 |
| Number of members | 6.2 | 5.0 | 5.7 | 5.7 |
| Number of potato varieties | 3.8 | 4.4 | 4.0 | 3.8 |
| Amount of land (has.) | 4.8 | 5.6 | 8.6 | 6.9 |
| Head of the household attended primary school (%) | 89.7 | 52.0 | 87.5 | 58.7 |
| Head of the household attended 1-4 years of secondary school (%) | 3.4 | 24.0 | 0.0 | 27.7 |
| Head of the household speaks Spanish (%) | 86.2 | 76.2 | 100.0 | 86.6 |

*Umala includes four communities: San José Llanga, San Juan Circa, Vinto Coopani and Kellhuiri. Source: Baseline Survey SANREM LTR-4 (Vinto Coopani, Kellhuiri, Umala) and CIP-ALTAGRO (Sirujiri)

5.5.2 Producers Sources of Income

Table 7 shows the characteristics of income for farmers from each community, and for Umala as a whole. Figure 7 shows that Umala producers' income from agricultural activities represents more than 50 percent of their agricultural-related activities. Producer income from animal-raising and sub-products accounts for approximately 24 percent and 19 percent respectively. Whereas Vinto Coopani's income from animal-raising is higher than that of Kellhuiri, the opposite scenario occurs for income from cropping activities.

Table 7. Characteristics of Participant and Non Participant Producers Income per Household in Umala, Bolivia 2006

| Source | Vinto Coopani | Kellhuiri | Sirujiri | Umala |
|--|---------------|-----------|----------|-------|
| Total income per household (Mean in Bs**) | | | | |
| | 10582.52 | 15624.72 | NA | 20517 |
| Sources of income per household (%) | | | | |
| Income from crops-related activities (%) | 72.04 | 82.13 | NA | 88.46 |
| Income from salaries | 23.19 | 12.17 | NA | 8.1 |
| Income from independent activities | 4.59 | 5.7 | NA | 3.2 |
| Others | 0 | 0.23 | NA | 0.18 |
| Income from crops-related activities (%) | | | | |
| Income from crops-related activities | 54.28 | 62.74 | NA | 57.1 |
| Income from selling large and small animals | 27.4 | 16.26 | NA | 23.97 |
| Income from sub-products | 18.32 | 21 | NA | 18.94 |

NA = Information not available from CIP-ALTAGRO survey

*Umala includes four communities: Vinto Coopani, Kellhuiri, San José Llanga, San Juan Circa.

**Bolivianos (Bolivian currency). In 2007, One dollar was equivalent to 8 Bolivianos

Source: Romero, A.M (2008) for Vinto Coopani, Kellhuiri and Umala. CIP-ALTAGRO's Baseline survey for Sirujiri.

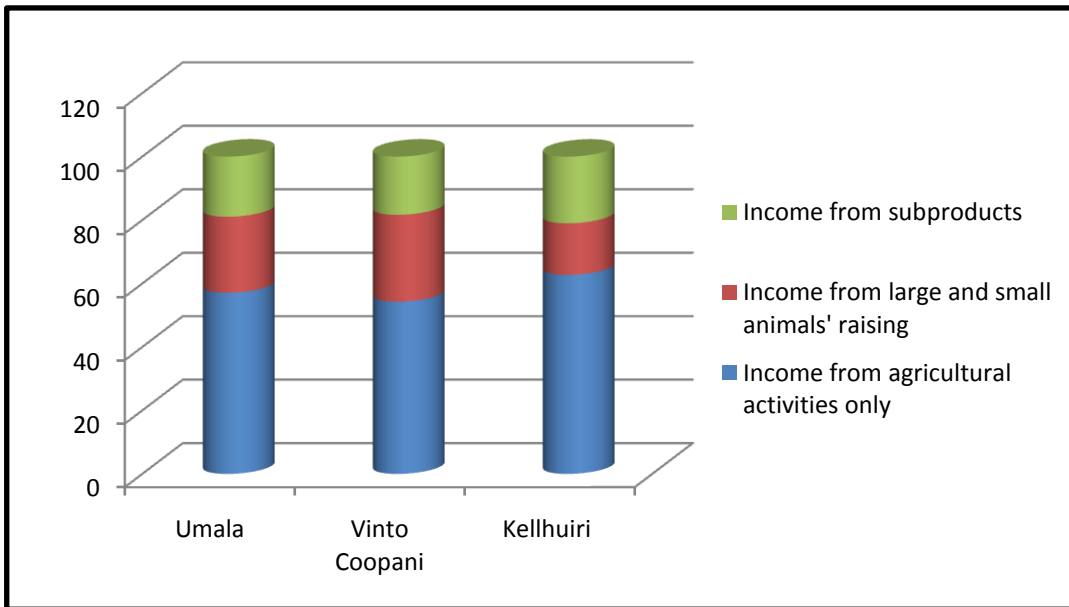


Figure 7. Income from Agricultural-related Activities in Umala, Bolivia 2006 (In Percentage)

Source: Romero, A.M (2008) for Vinto Coopani, Kellhuiri and Umala.

5.5.3 Crop Production and Yield Distribution

Table 8 shows the average crop production per community and for Umala in quintales per household per year. For the three communities, the main source of income is the production of potato. According to production, the second most important crop is barley for Vinto Coopani and Kellhuiri and quinoa for Sirujiri. Barley production is similar for Vinto Coopani and Kellhuiri. For Sirujiri, production of barley is very low when compared to the other two communities. On the other hand, production of quinoa is more than fifty times that of the same crop in the other two communities. Production of lima beans, oats and wheat are low for the three communities when compared to production of potatoes, barley, and quinoa.

Table 8. Average Crop Production in Umala, Bolivia 2006 (qq* per Household per Year)

| Community | Potato | Barley | Quinoa | Lima beans | Oats | Wheat |
|---------------|---------------|--------------|-------------|-------------|-------------|--------------|
| Vinto Coopani | 40.64 | 22.43 | 0.56 | - | - | - |
| Kellhuiri | 73.4 | 22.53 | 1.58 | 4 | 8.13 | 6.5 |
| Sirujiri | 44.76 | 2.69 | 57.07 | 0.00 | 6.21 | 0.45 |
| Umala | 111.89 | 47.75 | 9.07 | 3.47 | 30.9 | 3.702 |

*qq= quintales. One quintal is equal to 46 kg.

Source: Romero, A.M (2008) for Vinto Coopani, Kellhuiri and Umala.

CIP-ALTAGRO's Baseline survey for Sirujiri.

Approximately 42 percent of potato yield in all communities in Umala is destined to commercialization, and 27 percent to transformation for chuño and tunta. The total potato yield is also distributed for household consumption, animal consumption, seed, exchange and gift. As shown on table 9, most of the yield goes for household consumption and transformation for chuño and tunta. A third category, in order of importance, will be keeping seed for the next cycle.

Table 9. Distribution of Potato Yield as a Percentage of Total Potato Production in Umala, Bolivia 2006

| Community | Total Production | Household consumption | Animal consumption | Market | Chuño and tunta | Seed | Trueque (exchange) | Gift |
|---------------|------------------|-----------------------|--------------------|--------------|-----------------|-------------|--------------------|-------------|
| Vinto Coopani | 100 | 34.54 | 0 | 7.35 | 38.48 | 19.6 | 0 | 0 |
| Kellhuiri | 100 | 22.05 | 0.27 | 10.39 | 52.47 | 14.5 | 0.09 | 0.26 |
| Sirujiri | 100 | NA | NA | NA | NA | NA | NA | NA |
| UMALA | 100 | 17.73 | 0.17 | 41.92 | 27.12 | 12.5 | 0.14 | 0.43 |

Source: Romero, A.M (2008) for Vinto Coopani, Kellhuiri and Umala.

CIP-ALTAGRO's Baseline survey for Sirujiri.

5.6 Research Findings and Discussion

On the one hand, farmers who participate in NPVP share the following common patterns (see Appendix E):

Question #1:

- Most participant producers believe that their participation in NPVP will increase their knowledge to improve their agricultural techniques and produce better (PK1-M, PK2-M, PK3-M, PK4-M, PK5-M, PK5-F, PK6-F, PK7-M, PK8-M, PK9-F, PS1-M, PS2-M, PS3-M, PS4-M, PS5-M, PS6-M, PV1-M, PV1-F, PV2-M, PV2-F, PV3-M, PV3-F, PV4-HF, PV5-HF, PV7-M, PV8-M);
- Some participant producers believe that through their participation in NPVP they can have access to higher income markets for their produce (PK1-M, PK3-M, PK7-M, PK8-M, PK9-F, PS1-M, PS2-M, PS3-M, PS6-M, PV1-M, PV2-M, PV3-M, PV5-HF, PV6-F);
- A few participant producers believe that working in groups is better, and that they can work in groups through their participation in NPVP (PK5-F, PK6-F, PK9-F, PS2-M, PS3-M, PS4-M, PS5-M, PS6-M);
- One participant producer expects to learn better techniques for milk production and cattle-raising. He also expects the NPVP will help them reach high income markets for their milk (PS1-M).

Question #2:

- Most participant producers believe that they benefit from their participation because they improve their knowledge about agricultural

techniques that allow them to improve their potato and chuño production (PK3-M, PK4-M), to select seed (PK5-M, PK6-F, PK7-M, PK9-F, PS1-M, PS4-M, PV4-HF), to control for pests (PK5-F, PS1-M, PS4-M, PV2-M, PV4-HF, PV5-HF), to plant (PK6-F, PK9-F, PS1-M, PS2-M, PS3-M, PS4-M, PS5-M).

- Participant producers monitoring costs are mostly bared by the community officers who are in charge of notifying meetings-related information to all participant producers (PS1-M, PS2-M, PV2-M). However, other participants also bare the monitoring costs by helping officers informing other participants about meeting times (PK3-M, PV1-M); One participant producer mentioned that they are not informed about meeting times (PV7-M);
- About enforcement costs, one participant producer mentioned that the group has been trying to determine and enforce an absence fee, but no consensus was reached yet (PV5-HF); One participant producer mentioned that some people leave the communities and do not go back which might make it more difficult to enforce absence fees (PK4-M);

Question #3:

- Most participant producers response referred to time as the main disincentive to participation (PK2-M, PK4-M, PK8-M, PS3-M, PS6-M, PV1-F, PV2-M, PV4-HF, PV7-M, PV8-M);

- A few participant producers referred to last's year bad yield as a disincentive to participation (PK1-M, PK2-M, PK3-M, PK4-M);
- Several participant producers believe that what the topics covered in workshops and seminars relates to information that the producers already know (PK1-M, PK8-M, PV1-M);
- A couple participant producers believe that their small land size is a constraint for their participation (PV3-M, PV6-F);
- One participant producer mentioned that the fact that he is not informed about the meetings anymore is a disincentive for their participation (PV7-M) ;
- One participant producer mentioned that their participation in NPVP is dependent on the participation of other community members (PK5-F);
- One participant producer mentioned that some people decide not to participate in NPVP because they are not offered money for their participation (PS1-M);

The main incentive for participation is to learn about new and/or better agricultural practices that help producers improve their potato yields. The NPVP motivates discussions linking local knowledge to previous research that show that native potatoes are better adapted to local climate conditions, and therefore are more resistant to extreme events. Without the program, the incentive for small-scale farmers in the area is to produce more of the commercial variety *Waycha* because it is more demanded by the market, and consumers pay a higher price. Producers also expect to achieve high income markets for their

potatoes by participating in NPVP. Group work was also mentioned as an important incentive for participation. However, the main disincentive for participation is time to attend meetings and also take care of household chores.

In transaction costs language, the previous statements were interpreted as reduced information costs and higher participation costs. Information and participation costs were seen as more important for producers, among all patterns, so they are showed in bold in table 6.

Another incentive to participation is the expectation that the NPVP will link participant producers with potential buyers in high-income markets. Participant producers believe that by participating in the program it will be easier to access buyers who are willing to pay more for better quality. Producers declared that they understand that those potential buyers demand organization and permanent supply. They expressed they are willing to exercise pressure within their groups through fines and social pressure to ensure quality and supply. These statements were interpreted as higher contracting, monitoring and enforcement costs.

On the other hand, farmers who do not participate in NPVP share the following pattern:

Question #1:

- Most non-participant producers said that time was the main barrier that stop them from participating in the NPVP (NPK1-M, NPK2-M, NPK3-M, NPK5-M, NPK6-F, NPV1-M, NPV2-M, NPV3-M, NPV4-M, NPV5-F, NPV6-F, NPV7-M, NPV8-M, NPV9-M).

- A few non-participant producers said that they are not interested in the NPVP workshop topics or that they are not what they expected (NPK1-M, NPK4-M, NPV7-M, NPV8-M, NPV9-M).
- A few non-participant producers said that they do not go to meetings because they do not want to pay the fee for not going to recent meetings (NPK1-M, NPV1-M, NPV3-M, NPV3-F).
- A couple non-participant producers said that meetings are held in locations that are far from their farms (NPK1-M, NPV5-F).
- A couple non-participant producers said that they do not produce enough to sell in the market (NPK1-M, NPV6-F).
- A couple non-participant producers said that they cannot walk long distances to meetings because they are old and sick. Also, they said that because they are old and sick, they cannot take care of the chores at the household and also go to meetings (NPV3-F, NPV6-F).
- One non-participant producer said that when he participated his yield was worse than that of previous years (NPK2-M).
- One participant producer said that he does not participate because the community officers do not always inform him about when the meetings are held (NPK1-M).
- One participant producer said that he decided not to participate anymore when he had a disagreement with other NPVP participant producers (NPK4-M).

Question #2:

- Most non-participant producers said that they would like to participate in NPVP (NPK1-M, NPK2-M, NPK3-M, NPK4-M, NPV2-M, NPV3-M, NPV4-M) because they learn about seed selection (NPK1-M, NPK2-M), potato planting techniques (NPK2-M), pest control (NPV2-M), new agricultural practices (NPK4-M, NPV3-M), and because last year that he did not participate he had problems with his potato yield (NPV4-M).
- One non-participant producer said that he would like to participate because the NPVP topics are interesting (NPK1-M).
- One non-participant producer said that he would like to participate next year if the yield for those who participate is successful this year (NPK5-M).
- One non-participant producer said that she would like to participate if the NPVP helps them find a permanent market for their potatoes (NPV3-F).
- One non-participant producer said that he would like to participate if the NPVP offer knitting workshops for women so they can have another income for the household (NPV7-M).

In general, the most common barrier seen by non-participants to participate in NPVP is time to attend meetings. Their decisions for non-participation are based mostly on their lack of labor to take care of all activities needed at household, and the consequent less time to attend meetings or participate taking care of communal plots in NPVP. Time and labor availability at

the household level were seen as constraints for participation. The lack of labor is partially due to seasonal outmigration of household members, especially the youngest and men, to La Paz, Santa Cruz, and Argentina, and age for those who do not migrate. In some cases, there is only one member at the family unit. In others, there are only a couple of elders who handle all activities in the household.

The second most common characteristic shared by non-participant producers is the topics covered by the NPVP. The topics are either information that non-participant producers believe they already know, or non-interesting enough for their farming needs. Other disincentives for participation are distance to meetings from producer farms, absence fees, small potato production, low production, age and health, lack of notice for meeting times, and disagreement between NPVP participants.

Future NPVP participation could be motivated mostly by offering topics that fit producer needs, and that serve to increase their knowledge about new agricultural practices. Other incentives for participation are new topics, having a permanent market to sell the potato yield, economic alternatives for women, and a successful year for those who participate this year.

5.7 Conclusion of the chapter

The NPVP benefits small-scale producers in three ways. First, it promotes farmers' organization based on collective action necessary to support long-term activities, such as technological improvements. Such activities require labor and

knowledge for the identification and selection of native varieties' seeds, plowing, planting, fertilization, and harvesting of the communal plots. The communities where the program works are those where potato production and commercialization have greater importance in their economy. Based on administrative costs, CIP-ALTAGRO has established a minimum requirement for communities to run the program: at least 12 people have to commit themselves to the successful development of activities. If the community has less than 12 people, they have to show themselves very committed to the program for the NPVP to run. The latter is the case of Sirujiri, where only six are the committed participants. They have brought their spouses to participate in order to increase the number to 11.

Second, it promotes sustainable livelihoods because NPVP disseminates ancient knowledge regarding native varieties among all participant members of the community. Also, the varieties that are planted are those that are most adapted to the conditions of the area, and can resist climate variability in events such as flood, drought, hail, and frost. Third, because farmers plant native varieties resistant to climate variability, yields are less likely to be lost in the face of events such as floods, droughts, hail, or frost. As a result, farmers are less vulnerable to climate risks. Likewise, because farmers participate collectively in communal activities to conserve their native varieties, it is more likely that they will produce a larger yield of native potatoes for niche markets.

Farmers who participate in NPVP see an increase in their possibilities of access to the Bolivian Andean Platform or other niche markets that require organization and differentiated products.

In terms of transaction costs, those farmers who participate in NPVP see a decrease in search, and information costs when these costs are compared to individual costs. On the other hand, for the same farmers there is an increase in participation, contracting, monitoring, and enforcement costs. These increases and decreases in costs are shown in table 10.

Table 10. Transaction Costs of Small-Scale Producers Who Participate in NPVP

| Type of transaction costs | Small-scale producers | | |
|---------------------------|-----------------------|---------------|----------|
| | Kellhuiri | Vinto Coopani | Sirujiri |
| Participation costs | ↑ | ↑ | ↑ |
| Search costs | ↓ | ↓ | ↓ |
| Information costs | ↓ | ↓ | ↓ |
| Contracting costs | ↑ | ↑ | ↑ |
| Monitoring costs | ↑ | ↑ | ↑ |
| Enforcement costs | ↑ | ↑ | ↑ |

Source: Own elaboration

Farmers who do not participate in NPVP see lack of available time, labor, and lack of interest in the topics covered in NPVP as their main barriers for participation. The common patterns among participants were that there is not enough labor available in the household to attend both household chores and community activities. They choose to work in the chores needed at the household rather than attending meetings or working on communal plots. The lack of labor is partially due to the outmigration of men and the youngest to big cities, which leaves only the elder in charge of household chores.

Chapter VI

Conclusions and Recommendations

6.1 Transaction Cost and Collective Action in Market Integration

By comparing the findings of case study A with the theoretical framework described in chapter III, this initiative has been able to benefit farmers with greater access to resources and market involvement. As defined by Meizen Dick and Di Gregorio (2004), collective action is the voluntary action of a group of people who get together to achieve common objectives. By improving collaboration among market chain actors, the Bolivian Andean Platform indeed serves as a platform for access to market information and joint ventures with other market chain actors.

However, in order for the most vulnerable to benefit, there is need to focus on actions and options that reduce transaction costs in production, marketability, and commercialization of their native products. The Bolivian Andean Platform lacks incentives, contracting and rules of enforcement. New Institutional Economics theory, along with Collective Action literature state that transaction costs can be reduced by introducing incentives, contracts and rules of enforcement.

The grading system needs to change for the platform to motivate participation. The price norm that the platform applies is inconsistent with that of the market; the platform pays a higher price for bigger chuño and tunta whereas

the market pays a higher price for the smaller sizes. A change in the grading system and the price norm will have an effect in all transaction costs. A price that is set according to the market will motivate participation for all stakeholders. Higher commitment of stakeholders entails willingness to sign contracts, which might eventually lead to lower monitoring and enforcement costs. Contracting costs might increase given the need of formal commitment in the platform, however higher contracting costs will be offset by the increased reduction of participation and search costs.

By comparing the results of case study B with the theoretical framework in chapter III, case study B shows a strong effect in promotion of collective action as a means to reduce transaction costs at the producer level. However, lack of interest in the program was also observed due mostly to time constraints. The collective action effort to promote planting and commercialization of native varieties makes the program a contribution to resilience in the area. Producers stated that commercial varieties are more vulnerable to climate events, whereas native potatoes are better adapted and resist extreme conditions. If high-income markets for the native potatoes are achieved in the following years, the program might gain interest in non-participant producers.

6.2 Recommendations for Future Research

At the time this research was conducted (summer 2007) the Bolivian Andean Platform and the Native Potato Varieties Program were on their first year of activities. Both institutions' performance during their second year of activities

might be different from the results presented in this research study. Therefore, the conclusions found here might serve only as a point of reference for the analysis of the overall performance of both institutions, rather than a definite conclusion.

In the case of case study A, the Participatory Market Chain Approach had previously developed platforms in Peru, but the Bolivian Andean Platform was a first experience in the case of Bolivia. In the case of case study B, the Native Potato Varieties Program was not completely settled in the Bolivian Highlands due to legal paperwork delays. At the time this document is printed (2008), the Native Potato Varieties Program does not work anymore on the communities here identified. It has moved to other communities nearby the Titicaca Lake. The reasons for such decision have not been officially disclosed.

Further research regarding these two topics can analyze the impact that the leaving of the NPVP has for the participant communities. It could also analyze the impact on participation for related programs. An evaluation of the Bolivian Andean Platform during its second year will also be valuable for the literature. It could compare performance and impact on communities for both years, having this document as a point of reference for the first year.

6.3 Recommendations for Organizations in Development

In conclusions for case study A, it is made explicit that the grading system established in the platform affects transaction costs. Besides, the grading system norm was designed based on sizes for potatoes rather than on chuño and tunta.

Therefore, this research recommends that the grading system used by an institution to pay for produce or value added products should be designed specifically for the product the platform or institution is going to deal with. Preferably, the price norm should be designed in collaboration with the market chain actors involved in the initiative. Also, the price could be based on other quality properties rather than only price. Those properties could be related to value added characteristics, such as presentation, and brand development.

Lack of contracting is seen as a disincentive for participants of the Bolivian Andean Platform. Producers that achieve higher quality of produce might prefer to sell to the informal market when the price in the platform is lower than that of the market. At the same time, once producers have the supply ready to be delivered, the private sector might prefer not to buy it due to quality concerns. A contract established ahead of time might reduce the uncertainty in the platform for all stakeholders. At the same time, it will increase commitment, and possibly reduce transaction costs for all participants.

Appendices

Appendix A. Field Work Plan

PLAN DE TRABAJO PARA JULIO Y AGOSTO

JULIO:

Lunes 2 de julio:

1pm. Entrevista con Director de CIP ALTAGRO y con Director de la División de Manejo de Recursos Naturales del CIP.
Hotel Presidente.

Objetivo: Proyecto CIP-ALTAGRO. Conocer la misión, objetivos, alcances, metas al corto, mediano y largo plazo, con qué comunidades trabajan, características del proyecto.

Nota: Director de CIP-ALTAGRO se comprometió a enviarme el Marco Lógico y el Plan Operativo del proyecto CIP-ALTAGRO. Me presentó a Representante de CIP Altagro en PROINPA para reunirnos luego de su taller de fin de fase 1.

Martes 3 de julio:

8am. Reunión con Advisors y con coordinadores de campo de PROINPA.
Hotel Presidente.

Planificación y logística para mi trabajo de campo, identificación de traductor, lugar de estadía en Patacamaya y comunidades, arreglo de alimentación y transporte, identificación de familias participantes de ALTAGRO y SANREM.

Nota: La coordinadora de campo de PROINPA se comprometió a enviarme por email las familias que participan en el proyecto SANREM y ALTAGRO de Vinto Coopani y de Kellhuiri.

12pm. Entrevista con Coordinador de área La Paz de PROINPA.
Hotel Presidente.

Objetivo: Conocer la misión de PROINPA, historia en las comunidades en que está SANREM y ALTAGRO. Proyecto CIP-ALTAGRO: qué objetivos se tienen al corto, mediano y largo plazo. Cómo se realiza la coordinación con CIP-ALTAGRO, estructura, organización, problemas encontrados, oportunidades que se divisan para las comunidades, cómo piensan conectarlos al mercado (alternativas), barreras y oportunidades al agricultor, INNOVANDES, Curmi.

Nota: El director de PROINPA se comprometió a facilitarme información en brochures y por email de la misión, estructura, organización, marco lógico de PROINPA.

Cinco de la tarde. Entrevista con el Proyectista generación de ingresos y Manejo

de Recursos Naturales. Programa de Seguridad Alimentaria Save the Children, USAID- Título II.

Resultados: Me explicó el componente generación de ingresos en el que identifican demandas potenciales y luego identifican a los agricultores emprendedores a quienes brindan asistencia técnica para que puedan efectivamente vincularse al mercado.

Miércoles 4 de julio:

8:30am. Asistencia a Taller del proyecto CIP-ALTAGRO Bolivia.
Oficinas de Altagro en Fernando Guachalla y Abdón Saavedra.

Coordinador de CIP-ALTAGRO Bolivia.
Coordinador de CIP-ALTAGRO en PROINPA
Coordinador Regional de PROINPA en el Altiplano
Director de la División de Manejo de Recursos Naturales del CIP

Objetivo: Conocer el proyecto Altagro, su estructura, organización, alcances en su primera fase, problemas, oportunidades, metas y actividades para la segunda fase.

Jueves 5 de julio:

8:30am. Asistencia al taller del proyecto CIP-ALTAGRO Bolivia.
Objetivo: Conocer de cerca (sólo escuchar) lo que el proyecto ha estado haciendo en la primera fase (objetivos iniciales, alcances de la fase 1, propuestas fase 2, metas a corto, mediano y largo plazo.)

Coordinador de CIP-ALTAGRO Bolivia.
Coordinador de CIP-ALTAGRO en PROINPA
Coordinador Regional de PROINPA en el Altiplano
Director de la División de Manejo de Recursos Naturales del CIP

Tarde. Ir a U Cordillera para recoger encuestas de Vinto Coopani.
Tarde (hora a definir). Reunión con advisor en Alexander Coffee en el Sur, Montenegro.

Objetivo: Informar a advisor de las actividades que estaremos haciendo en Bolivia. Recibir recomendaciones para el trabajo de campo/investigación/análisis.

Viernes 6 de julio:

Posibilidad de reunirme con representante de Papa Andina (fecha tentativa).
Objetivo: Conocer la parte conceptual de la plataforma y el enfoque participativo de las cadenas que se aplican en chuño y tunta. Misión, estructura, organización, objetivos a corto, mediano y largo plazo, alcances al momento, oportunidades y barreras al agricultor, incentivos.

Análisis de las familias de Kellhuiri de las encuestas en papel. Identificación de los 5 parámetros de estrategias de vida y capitales. Identificación y clasificación de las familias a entrevistarse. Comparar con la lista de los participantes que me envió coordinadora de actividades de campo de PROINPA.

Sábado 7 de julio:

Análisis de las familias de Kellhuiri de las encuestas en papel. Identificación de los cinco parámetros de estrategias de vida y capitales. Identificación y clasificación de las familias a entrevistarse. Comparar con la lista de los participantes que me envía Carola.

Domingo 8 de julio:

Análisis de las familias de Vinto Coopani de las encuestas en papel. Identificación de los cinco parámetros de estrategias de vida y capitales. Identificación y clasificación de las familias a entrevistarse. Comparar con la lista de los participantes que me envía la coordinadora de campo de PROINPA.

Lunes 9 de julio:

1. Ir a PROINPA para conseguir la información de historia, estructura, plan operativo anual, actividades y proyectos.
Comunicarme con la secretaria de PROINPA y averiguar en el centro de documentación.
2. Análisis de las familias de Vinto Coopani de las encuestas en papel. Identificación de los cinco parámetros de estrategias de vida y capitales. Identificación y clasificación de las familias a entrevistarse. Comparar con la lista de los participantes que me envía la coordinadora de campo de PROINPA.
3. Si no pude reunirme con representante de Papa Andina el viernes, entonces me reuniré con él el día de hoy.

Martes 10 de julio:

Asistencia a la reunión de la comunidad en Vinto Coopani.

Objetivo: Presentarme a las familias y darles a conocer que estaré visitándoles para las entrevistas.

Identificar personalmente (con mi lista previa de selección) las familias a las que estaré entrevistando y preparar los días y la hora de entrevista con ellos.

Coordinar con intérprete, coordinadora de actividades de campo de PROINPA y estudiante de La Cordillera la logística de visitas al campo (carro, gasolina, horarios).

Del martes 10 al viernes 13 de julio:

Terminar las entrevistas en Vinto Coopani.

Sábado 14 de julio:

Revisar los parámetros para las entrevistas en Kellhuiri.

Domingo 15 de julio:

Asistir a la reunión de la comunidad de Kellhuiri.

Objetivo: Presentarme a las familias y darles a conocer que estaré visitándoles para las entrevistas.

Identificar personalmente (con mi lista previa de selección) las familias a las que estaré entrevistando y preparar los días y la hora de entrevista con ellos.

Coordinar con intérprete, coordinadora de actividades de campo de PROINPA y estudiante de La Cordillera la logística de visitas al campo (carro, gasolina, horarios).

Del domingo 15 de julio al viernes 27 de julio:

Tratar de terminar las entrevistas en Kellhuiri.

Del sábado 28 a lunes 30 de julio:

Análisis de las encuestas de Sirujiri que me facilita Abel. Identificación de los 5 parámetros de estrategias de vida y capitales. Identificación y clasificación de las familias a entrevistarse.

AGOSTO:**Del martes 31 de julio 1 al viernes 3 de agosto:**

Entrevista en comunidad Sirujiri.

Lunes 6 de agosto (tentativo, hay que confirmar fecha y hora):

Enviar email a coordinador de Programa de Save The Children para definir día de visita a la oficina para obtener información del proyecto en el componente 1.

Objetivos: Conocer los mecanismos mediante los cuales identifican potenciales demandas y luego empoderan a los agricultores para que puedan vincularse a dichos mercados.

Este proyecto identifica la demanda de un producto en el mercado y luego conectan a los productores con esta demanda.

Del 7 al 15 de agosto:

1. Transcripción de la información de las entrevistas a computadora.
2. Entrevistas para confirmar información o completar aquella que esté inconsistente.

Appendix B. Interviews with Farmers in Kellhuiri

Wednesday, July 11th and 18th 2007

Codes used:

P = Participant

NP = Non-participant

K= Kellhuiri

= number of household interviewed

M = Male of the household

F = Female of the household

HF = Female and head of the household

N/A = Information not available from SANREM CRSP or CIP-ALTAGRO surveys

*For cases where the husband was working in another community/city, only the female was interviewed. In this case, the woman was identified with **F** only, as she described the husband as head of the household.

PARTICIPANTS CHARACTERISTICS:

PK1:

El tiene 47 y ella 45 años de edad. 1 hijo de 15, dos hijas de 13 y 10. Todos viven ahí. Papa (chunchu, kuli, waycha, imilla negra, sacampaya, sutamari, saui, gendarme, luki), cebada forraje, cebada grano, avena, haba, quinua, 90 ovejas criollas, 5 vacuno criollo, 2 burros y 3 gallinas, leche, queso y chuño q vende 2 @ a 35Bs c/u. 2 hijas de 22 y 18 en comercio y cocinera en Cochabamba y La Paz, 7 y 2 años. 1 hijo de 17 en cochabamba por dos meses. 60Bs año. NO bonosol. Sindicato Agrario, Junta Escolar, Apropa-Umala.

PK2:

El tiene 65 y ella 68 años de edad. Hijo (30), nuera (27) y nieto (2). Todos viven ahí. Papa (waycha, sacampaya, chunchu), cebada, 60 ovejas criollas, 4 vacuno criollo, chuño, tunta pa la casa. 3 hijos fuera (37, 30, 28) como artesanos y estudiantes todos en Santacruz. X 20, 18 y 5 años. Hija (40) en santacruz en comercio por 10 años. 250 año. Bonosol 1800. Sindicato Agrario, Proinpa-Apropa.

PK3:

El tiene 31 y su madre 76 años de edad. Papa (waycha, imilla negra, sacampaya, chunchu, luki), cebada, avena, 60 ovejas mejoradas, 4 vacuno criollo, 20@ chuño q no vende. Hermano en La Paz por 18 años en comercio. No envía nada. Bonosol. Proinpa, Jatha como promotor, save the children.

PK4:

Él y su esposa tienen 28 años de edad. 2 hijas de 6 y 3 y 1 hijo de 4. Papa (waycha, sacampaya, chunchu), cebada, trigo, haba, 40 ovejas, 6 vacuno criollo, 2 porcino. Hermano Julio Cachaca en Guaray como arriero por 30 años no manda nada. No bonosol.

PK5:

Él tiene 43 y ella 39 años de edad. 3 hijas (17, 15 y 7), 2 hijos (10 y 8). Papa (waycha, chiar imilla, janko imilla, kuli, sacampaya, chunchu koyo), cebada forraje y grano, trigo, haba, 50 ovejas criollas, 3 vacuno criollo, 2 burros, chuño y tunta q no venden. 1 hermano y 1 hermana fuera de 40 y 27 como minero y artesana en Tipuani y Santacruz hace 10 y 7 años. 30Bs en víveres al año q los visitan. No bonosol. Sindicato agrario, junta escolar, proinpa-apropa.

PK6:

Su hijo Oscar (18) y ella 50 años de edad. Papa (waycha, sacampaya, sani, chunchu, sulaku), cebada, ovejas (11), vacuno criollo (7), burros (2). hermano en Yungas como agricultor 300 años. Sindicato Agrario, Proinpa.

PK7: N/A

PK8: N/A

PK9: N/A

PARTICIPANTS RESPONSES:**PK1-M:**

Del proyecto han aprendido mucho pero ya saben todo sobre la siembra. Ahora quieren aprender del mercado para poder vender la papa. Siempre participa porque se beneficia. Fue un año malo en la producción. Muchos desmoralizados con el proyecto.

PK2-M:

Vive sólo con su esposa porque sus hijos están trabajando fuera por el minifundio (al repartir el padre la tierra le toca muy poquito a cada uno y no les alcanza para vivir, por eso mejor se van a la ciudad). Se ha desmoralizado porque el año pasado fue un fracaso la cosecha en papa y quinua. Sin embargo, va a seguir yendo, aunque su producción no rindió mucho. Hay más que ya se han desmoralizado y no quieren ir más. Prepararon la semilla para la siembra apenas un día antes, el clima fue malo. Pueden ser causas del fracaso. Va a las reuniones porque siempre es bueno aprender.

PK3-M:

Se integró en el proyecto porque le dijeron que le iban a enseñar como mejorar la producción de chuño y él quiere mejorar para vender.

Vende papa. Chuño es sólo para consumo del hogar.

Cuando alguien ya no viene lo siguen llamando, porque en el proyecto le dijeron que tienen que ser al menos 15 para que el proyecto se mantenga. Por eso buscan a los que no vienen para que se integren nuevamente.

Él no está tan desmoralizado como el resto, pero hay varios que sí están muy decepcionados y no quieren ir.

Si hay mercado él quiere producir más para vender a mejor precio.

Él va a seguir en el proyecto porque quiere seguir aprendiendo de chuño.

PK4-M:

Instituciones que vengan a ayudar bienvenidas para ayudar a protegerse. Mucha gente de la comunidad se va y ya no regresa. Vienen instituciones a ayudar y hay que recibirlas con los brazos abiertos.

El año fue malo por un defecto natural en papa y quinua (polillas).

Sacó algo de producción a pesar del mal clima.

Por factor tiempo no ponen en práctica mucho de lo que les enseñan.

La cosecha fue regular, pero hay que seguir aprendiendo para superar y tener mejores cosechas.

Va a seguir con el proyecto.

La gente no está muy concientizada de lo bueno del proyecto.

El proyecto tiene las puertas abiertas para compartir información.

Con nuestro ejemplo otras familias se están animando a participar.

Sólo él o la esposa van a las reuniones porque los niños son pequeños. Muy poco los dejan solitos a los hijos para ir los dos a las reuniones al mismo tiempo.

PK5-M:

No sabe lo que es Altagro. Sólo lo que es PROINPA.

Está en el grupo para conocer, aprender, profundizar más.

En el grupo se junta lo que ya saben con lo que los de PROINPA traen.

Aprendieron a seleccionar buena semilla de buen tamaño porque antes ellos hacían como quiera.

El año fue malo por un fenómeno natural.

Seguirá participando el otro año para producir mejor.

PK5-F:

Bonito es participar en grupo para estar bien y trabajar.

Traen información para curar papa de plagas.

Aprendí a manejar parcelas, controlar gusano y plagas.

En mi parcela aplico pero no mucho porque las parcelas son muy grandes.

Como pruebita nomás hago.

Doña Nelía dijo que si participan todos de la comunidad ellos siguen participando.

Si los demás se retiran ellos ya no van a seguir.
No vende su papa porque ahora tiene hijos y ya no vende, sólo para alimentar a sus hijos. Si vende ya no le alcanza para sus hijos.

PK6-F:

Es separada y su hijo está en el ejército.
Aprende del proyecto y como es sola le ayuda con sus parcelitas.
No le han avisado últimamente de reuniones.
No vende chuño, sólo para ella.
La papa la vende sólo cuando tiene un poquito más.
Su hijo le ha dicho que siga participando y va a seguir participando para seguir aprendiendo.
Ha aprendido a sembrar y seleccionar papa y quinua.
Ya se separaron las comunidades porque ellos son Ullucturi y quieren personería jurídica. Kellhuiri tiene ya personería jurídica.
Dice que van a aprender del proyecto a seleccionar semilla, aporcar, sembrar.
El año fue malo, pero así siempre es en todo. Esto pasa y también es culpa suya porque sembró más tarde que el resto y por eso fue malo.
Va a seguir y la gente de Ullucturi va a seguir para trabajar juntos y aprender.

PK7-M:

No fue a las primeras reuniones.
Ahora ya va porque después no se entera de todo lo que les enseñaron.
Participa porque quiere mercado para lo que produce.
A veces no se vende a buen precio, pero PROINPA les enseña a seleccionar la mejor semilla para vender.
No quiere ir a trabajar fuera. Algunos de la comunidad se van, pero él quiere quedarse y trabajar la tierra. Eso sabe hacer y quiere seguir aprendiendo.

PK8-M:

A veces no hay tiempo, pero se aprende bien.
Enseñan cosas que ya saben, pero ya enseñarán sobre mercado. Él quiere aprender más de mercado.
Es bueno aprender de las variedades y a mantener lo que se tiene, pero si no se tiene a quien vender no hay como producir sólo eso. Hay que producir también lo que se vende a mejor precio.
A veces hay que ir muy seguido y no le queda mucho tiempo. El igual va.
Están pidiendo a los ingenieros que les ayuden a encontrar compradores. Habría más incentivo para ir a las reuniones.

PK9-F:

Va a las reuniones porque le enseñan a cuidar la papa y a matar las plagas. El año pasado le atacaron mucho las plagas, pero fue su culpa porque no hizo todo lo que le dijeron. Este año ya va a usar lo que le enseñan.
Hay papa que no se siembra en las parcelas grandes, sólo para la casa.

Ella quiere aprender a sembrar y seleccionar la papa y la quinua porque con eso cocina. Si sale más papa y más bonita es mejor para vender. No rematan mucho en el precio. Pagan nomás a lo que se vende.

Va a seguir participando porque le gusta aprender y porque es bueno estar en el grupo. Después nos han de ayudar a encontrar a quien vender y que pague un poquito más.

NON-PARTICIPANT CHARACTERISTICS:

NPK1:

4 hijos (40, 37, 32, 19), 1 hija (20) y mamá (70). Papa (waycha, pali, sako, chunchu), cebada, ovejas, ganado, llamas, 1 burros. 4 hijos fuera en comercio en Cobija (2) y La Paz (2). Celia en Thularani como agricultora. 300 al año. Bonosol 1800/año. Pachamama, Sindicato Agrario.

NPK2:

Él tiene 45 y ella 44 años de edad. 3 hijas (16, 8 y 3). 2 hijos (12 y 10). Papa (waycha, imilla negra, kuli), cebada, quinua, avena, isaño, 70 ovejas criollas, 4 vacuno criollo y 2 vacuno mejorado, 7 llamas, 2 burros, leche, queso, chuño. 2 hijas (22 y 13) en España y Cochabamba (emp. domestica) y 1 hijo de chapista de 19 en La Paz. 400 año. No bonosol. Sindicato Agrario, Junta Escolar, Proinpa, Pachamama.

NPK3: N/A

NPK4: N/A

NPK5:

Él tiene 40 y ella 38 años de edad. 4 hijos de 17, 15, 7 y 5. Papa (waycha, imilla negra, imilla blanca, warisaya), cebada, quinua, alfalfa, 30 ovejas criollas, 3 vacuno criollo, chuño q vende 3@ a 35Bs c/u. 4 hijos de 24, 22, 20 y 16 en La Paz, Yungas y La Paz (2). El segundo trabaja en el campo, los demás en la ciudad. No envían dinero. No bonosol.

NPK6: N/A

NON-PARTICIPANTS RESPONSES:

NPK1-M (He is not going to participate anymore):

Entró al grupo porque vinieron unos ingenieros y los llamaron a una reunión. En la reunión hicieron presentaciones, les animaron y él se apuntó.

Les enseñaron a seleccionar semilla.

Él se interesó en el grupo para aprender cómo colocar el abono, como sembrar, pero eso no le han enseñado.

Para el taller de extractos naturales no le avisaron. Dice que a veces le avisa y a veces no.

Su esposa no va a las reuniones porque tiene que cuidar a los animales y a

cocinar porque son sólo los dos.

Ya no va a participar porque ya no hay tiempo. Son sólo dos y tienen que atender a sus parcelas.

No me enseñaron ni me explicaron bien. Además, no tenemos interés de producir en loma, porque queremos producir más y no he aprendido nada. Puedo vender la papa yo solo a mejor precio con un grupo con el que nos juntamos para vender.

Las reuniones son en lugares muy lejos y no quiero pagar la multa por no haber ido últimamente a las reuniones.

Lo desaniman las multas y que la gente no llega a tiempo y él tiene bastante que hacer en la casa.

Vende poquita papa.

No le da pena dejar el proyecto porque a veces es bueno trabajar en grupo y a veces no.

El proyecto les ha dicho que el camino debe llegar a las parcelas de los que participan y sus parcelas están muy lejos del camino.

NPK2-M (He is not going to participate anymore):

Se va a retirar porque ya no tiene tiempo.

Iban con su esposa a las reuniones, pero como tienen que ir a las reuniones de la escuela también, no les alcanza el tiempo para ir a las actividades y reuniones. No compensa el tiempo que invierte en los talleres con lo que tiene que hacer en la casa.

Aprendió a sembrar papa, aporque, seleccionar semilla.

Fue un año peor que los anteriores y no tiene tiempo porque son sólo dos y también sus hijos están en la escuela.

NPK3-M:

No participa porque es Secretario General del gobierno local del cantón San Miguel de Coopani. No le da el tiempo para participar en ambas actividades. Este año en diciembre termina su función como secretario y se integra al proyecto Altagro.

NPK4-M:

Gente de Umacuru no ha participado mucho el año pasado y ahora quieren participar más.

Él aprendió lo que ya sabía. Para otros tal vez sea diferente, pero para él no ha sido nada nuevo.

Entró al grupo para ganar experiencia y aprender algo nuevo, pero se disgustó con la gente de la parcela y por eso se retiró.

Vende papa.

Como se disgustó con la gente de la parcela no cree que entre de nuevo al grupo, pero puede ser.

NPK5-M:

Tiene dos casas: en Kellhuiri y Patacamaya.

No tiene tiempo para asistir a las reuniones porque tiene que asistir a reuniones de ambas comunidades, porque le corresponde por la tierra.

Si ve que el proyecto se ve bien este año podría estar animándose a integrarse, pero el tiempo es su limitante. Su esposa le ayuda con las actividades del campo. Los dos van a las reuniones.

Vende papa y chuño cuando tiene.

NPK6-F:

El esposo es el que sabe. No estaba cuando se hizo la entrevista. Había ido a La Paz porque tal vez había un trabajo para la temporada.

Tienen dos hijos pequeños y ella se tiene que quedar con ellos. Uno ya entró a la escuela y hay que ver que llegue bien. Hay que cocinar y atender al hijo cuando llega. Al esposo también hay que atender. Ella no cree que vaya a reuniones. Ya le han dicho que hay que ayudar en la escuela también.

Ha oído del proyecto por otros de la comunidad. Ha oído que le han comentado al esposo porque él participaba en algo de pastos también. Ahora no ha ido pero tal vez después vayan.

Appendix C. Interviews with Farmers in Sirujiri

Wednesday, July 18th 2007

Codes used:

P = Participant

NP = Non-participant

S = Sirujiri

= number of household interviewed

M = Male of the household

F = Female of the household

HF = Female and head of the household

N/A = Information not available from SANREM CRSP or CIP-ALTAGRO surveys

*For cases where the husband was working in another community/city, only the female was interviewed. In this case, the woman was identified with **F** only, as she described the husband as head of the household.

PARTICIPANTS CHARACTERISTICS:

PS1:

Él tiene 50 y ella 48 años de edad. 5 hijos de 8, 7, 3, 2 y 1 año. Ambos agricultores solamente. Los dos hijos mayores estudiantes. El habla español y Aymara. Ella sólo Aymara. Él no tiene instrucción. 3has de tierra: 1ha sembrada, 1ha descanso, 1ha pastos naturales. Produce papa dulce 1ha., quinua 0.06ha, trigo 0.05ha. Produjo 1500kg papa dulce en 2006-07 y distribuyó 686kg consumo directo, 192kg transformación, 430kg venta. Vende en papa dulce únicamente Patacamaya. Principal cultivo papa. Plagas comunes gorgojo y polilla en papa, polilla en quinua. Tiene 4 vacuno criollo, 1 macho, 2 hembras, 1 cría; 33 ovinos, 1 machos, 27 hembras, 5 crías; Vende todo ganado en Patacamaya. Producen 4 litros leche (vacuno), 1lt consumo directo, 3lts queso consumo. Tiene almacenado 150kg chuño, 50kg quinua. Si le sobra consume más. No ha migrado. No préstamos. Participa talleres de PROINPA. No recibe información de mercado.

PS2:

Él tiene 45 y ella 46 años de edad. 4 hijos 20, 15, 13, 9 años de edad. Ambos agricultores. 4 hijos estudiantes. Ambos hablan Español y Aymara. Ambos fueron primaria. 5.25has de tierra: 2has sembrada, 1ha sembrada aynoca, 1ha descanso, 0.25ha pastos mejorados, 1ha pastos naturales. Produce 1ha papa mezcla, 0.5ha quinua, 0.25ha cebada grano, 0.25 cala grano. Produjo 1380kg papa mezcla en 2006-07. Distribuyó papa mezcla: 506kg consumo, 138kg transformación, 460kg venta. Vende papa en Patacamaya. Principal cultivo papa, segundo cebada. Plagas comunes gorgojo en papa y gorgojo negro en quinua.

Tiene 5 vacuno criollo, 3 machos, 2 hembras; 100 ovinos, 30 machos, 70 hembras; 4 gallinas. Vende vacuno ovino en Patacamaya. No producen leche. Tiene almacenado 230kg chuño, 92kg quinua, 46kg cebada grano. Si le sobra chuño lo guarda o vende. Si le sobra cebada quinua la guarda. No ha migrado. No préstamos. Participa PROINPA cultivos control de plagas. Recibe información mercado (precios de productos) de las personas que van al mercado.

PS3:

Él tiene 68 y ella 65 años de edad. No hijos. Ambos agricultores. Él habla habla Español y Aymara. Ella sólo Aymara. Él fue primaria. Ella no instrucción. 9has de tierra: 1ha sembrada, 6has descanso, 1ha pastos mejorados, 1ha bofedales. Produce 0.25ha papa amarga, 0.5ha papa dulce, 0.25ha papa mezcla, 0.25ha quinua, 1ha cebada forrajera, 0.25ha trigo. Produjo 800kg papa amarga, 1500kg papa dulce and 900kg papa mezcla en 2006-07. Distribuyó papa amarga: 370kg transformación, 230kg venta. Distribuyó papa dulce 1000kg consumo directo, 100kg transformación. Distribuyó papa mezcla 400kg consumo, 300kg venta. Vende papa amarga en Patacamaya. Principal cultivo papa. Plagas comunes gorgojo y karwa karwa en papa. Tiene 4 vacuno criollo, 1 machos, 2 hembras, 1 crías; 53 ovinos, 10 machos, 40 hembras, 3 crías. Vende todos en Patacamaya. No producen leche. Tiene almacenado 138kg chuño, 92kg quinua, 92kg cebada grano, 1400kg papa. Si le sobra chuño, quinua o cebada lo guarda en la casa. Si le sobra papa la vende. Él migra a La Paz de junio-sept albañil. No préstamos. Participa talleres PROINPA. No recibe información de mercados.

PS4:

Él tiene 44 y ella 46 años de edad. 4 hijos de 24, 21, 5, 2 años. Ambos agricultores. Él trabaja de chofer también. Los dos hijos mayores choferes. Hablan habla español y Aymara. Él fue primaria. 6has de tierra: 1ha sembrada en aynoca, 4ha pastos naturales. Produce mezcla únicamente 1ha., quinua 0.25ha, cebada grano 0.16. Produjo 1472kg papa mezcla en 2006-07 y distribuyó 552kg consumo directo, 48kg transformación, 504kg venta. Vende en Patacamaya. Principal cultivo papa, segundo quinua. Plagas comunes gorgojo y polilla en papa, gusano en quinua. Tiene 3 vacuno criollo, 3 machos, 0 hembras; 80 ovinos, 10 machos, 50 hembras, 20 crías; burros. Vende vacuno en ferias, ovino en Patacamaya. No producen leche. Tiene almacenado 288kg chuño, 92kg quinua. Si le sobra vende. Hijos emigraron y viven La Paz, trabajan chofer. No préstamos. Participa talleres de Pachamama y PROINPA. Recibe información de mercado (precios productos) de vendedores e informa a los demás.

PS5: N/A

PS6:

Él tiene 53 y ella 84 años de edad. No hijos. Ambos agricultores solamente. El habla español y Aymara. Ella sólo Aymara. El terminó primaria. 15.5ha de tierra: 5has sembradas, 4ha aynoca, 5ha descanso, 1ha pastos mejorados, 0.5ha pastos naturales. Produce papa amarga 0.5ha, papa dulce 1ha., quinua 0.5ha, cebada 2ha. Produjo 1500kg papa amarga en 2006-07 y distribuyó 500kg consumo directo, 250kg transformación, 500kg venta. Produjo 3000kg papa dulce en 2006-07 y distribuyó 1500kg consumo directo, 500kg transformación, 500kg venta directa. Vende en Patacamaya. Principal cultivo papa. Segundo cultivo quinua. Plagas comunes gorgojo y polilla. Tiene 7 vacuno criollo, 2 machos, 3 hembras, 2 crías; 90 ovinos, 20 machos, 40 hembras, 30 crías; 13 alpacas, 5 machos, 8 hembras. Vende todo vacuno. Algunas ovejas y alpacas para autoconsumo. Producen 3 litros leche (vacuno) para queso criollo solamente. Tiene almacenado 92kg chuño, 92kg quinua, 92kg cebada grano. Si le sobra vende. No ha migrado. No préstamos. Participa Pachamama pastos mejorados. No recibe información mercado.

PARTICIPANTS RESPONSES:

PS1-M:

La cosecha va sólo para semilla porque hubo menos producción.

Sembraron la semilla que tenían.

Entró al grupo para combatir los gusanos, aprender de aporque, tamaño de semilla.

Le avisan de las reuniones aquellos que están en la directiva del grupo.

Él es el secretario de la directiva.

Les avisan de las reuniones yendo a la casa o cuando se los encuentran por ahí. Para la producción de este año, ellos tienen semilla de papas nativas para chuño para poder vender este año.

Quieren aprender también de ganadería porque venden la leche a mejor precio. Quieren vender carne también.

Quiere poder poner etiquetas al chuño y a la carne.

Él y otra familia tienen en Puchuni una máquina de tejer que compraron hace tres años. Entre los cuatro y sus hijas tejen y venden en Patacamaya. Llevan ya 3 años en el negocio.

Su esposa también viene a las reuniones. Además cuida a los hijos y al ganado. Buscan más voluntarios para que junten al grupo, pero la gente sólo quiere ver dinero para participar.

PS2-M:

El proyecto le ha ayudado a sembrar, preparar la parcela, aporcar más alto.

No se ha desmoralizado aunque han fracasado por el clima. La lluvia no llegó a

tiempo.

Quiere producir mejor este año para poder vender.

La esposa viene también a las reuniones porque dejan a los animales amarrados.

Los que tienen cargo en el grupo les avisan de las reuniones.

Es el secretario general del Sindicato de la comunidad.

Son bien unidos en el grupo de esta comunidad.

PS3-M:

No le ha desmoralizado el año malo y por eso sigue con el proyecto.

La esposa va de vez en cuando a las reuniones porque no tiene tiempo con la cocina.

El proyecto les ha ayudado a sembrar mejor.

Esperan que este año llueva, pero todavía no pueden saber.

Esperan vender chuño y papa a mejor precio este año.

Con la comunidad se encargarán de conseguir la semilla.

PS4-M:

Este año fue malo porque no llegó la lluvia a tiempo y hubo heladas fuertes.

Usaron semilla certificada de papa nativa.

Han aprendido a sembrar, atacar a las plagas como el gorgojo, porque alto.

Se integró al grupo porque le gustó lo que le ofrecieron enseñarle.

Aún cuando el año ha sido malo él va a seguir porque piensa que este año será bueno.

Indicadores naturales en los que ellos confían dicen que va a ser año bueno.

Quieren que les ayuden a conseguir buena semilla para poder producir más.

Los ingenieros les apoyan mucho y por eso ellos quieren seguir unidos. Creen que unidos van a llegar a vender mejor.

La que fue la vicepresidenta se retiró porque se casó y ya no puede venir.

Cuando no tienen tiempo para asistir a las reuniones avisan con tiempo y envían la justificación.

Todo el trabajo es voluntario.

No quieren perder el grupo porque quieren mantenerlo para que les ayude con lo que les enseñan.

PSM-5:

Dicen las noticias que este año van a caer antes las lluvias.

Cree que el año que viene será mejor.

No les gusta desunir al grupo porque no sería bien para los resultados.

Ha aprendido a sembrar y cuidar la papa.

Quería aprender a cuidar el cultivo. Por eso se incentivó a entrar al grupo.

PSM-6:

Participa porque le contaron otros comunarios del proyecto que podrían vender papa a mejor precio si se unen.

Él quiere vender su papa. Nadie le informa del mercado. El solito busca con otros de la comunidad.

Estuvo yendo a capacitación de Pachamama. Lo capacitaron sobre pastos mejorados. Aplicó en una hectárea nada más. Si hubo algún resultado bueno.

No tiene mucho tiempo porque su esposa ya está mayorcita (84 años) y no la puede dejar sola.

Se las arregla para arrear y cuidar al ganado, ver la papa y la quinua. Alguito de cebada.

Busca el tiempo para ir a reuniones porque quiere conseguir mejor mercado para su papa. Tiene algo de tierra para producir y quiere aprender para vender mejor.

Appendix D Interviews with Farmers – Vinto Coopani

Wednesday, July 11th 2007

Codes used:

P = Participant

NP = Non-participant

V = Vinto Coopani

= number of household interviewed

M = Male of the household

F = Female of the household

HF = Female and head of the household

N/A = Information not available from SANREM CRSP or CIP-ALTAGRO surveys

*For cases where the husband was working in another community/city, only the female was interviewed. In this case, the woman was identified with **F** only, as she described the husband as head of the household.

PARTICIPANTS CHARACTERISTICS:

PV1:

Él tiene 33 y ella tiene 32 años de edad. 1 hija de 4 y un hijo de 2. Su papá (75) tb vive ahí. Papa (waycha, sako y Khullu), cebada, alfalfa, 35 ovejas criollas, 3 vacuno criollo, 3 vacuno mejorado, 1 burro, leche q vende, queso, chuño. 2 hermanas y 1 cuñada ede comerciantes todos en La Paz x 20, 12 y 10 años. No envían nada. Su papá cobra bonosol. Proinpa, Pachamama, Sindicato Agrario, Pil.

PV2: N/A

PV3:

Él tiene 39 y ella tiene 31 años de edad. 4 hijos de 17, 15, 7 y 5. Papa (waycha, imilla negra, imilla blanca, warisaya), cebada, quinua, alfalfa, 30 ovejas criollas, 3 vacuno criollo, chuño q vende 3@ a 35Bs c/u. 4 hijos de 24, 22, 20 y 16 en La Paz, Yungas y La Paz (2). El segundo trabaja en el campo, los demás en la ciudad. No envían dinero. No bonosol.

PV4:

Ella tiene 37 años de edad. Es viuda. 2 hijos (5, 3). Vive su mamá con ella. Papa (waycha, sacampaya, wiswaraya), cebada, 33 ovejas criollas, 5 vacuno criollo, 1 burro, chuño q no vende. No bonosol. Nadie fuera. Sindicato Agrario, Junta Escolar, Proinpa.

PV5:

Ella tiene 50 años. Es viuda. 5 hijos (25, 21, 16, 14, 11) y 2 hijas (3, 27). Papa (waycha, sacampaya, chunchu, pala), cebada, alfalfa, 27 ovejas criollas, 2

vacuno criollo, 1 porcino, 30@ chuño q no vende. 3 hijos (25, 21 y 27) en Oruro (2) y La Paz-Achacachi por 8, 4 y 9 años. No envían nada. No bonosol. Proinpa.

PV6:

Ella tiene 37 y su esposo tiene 57 años de edad. 2 hijos (17 y 13) y 4 hijas (16, 11, 9 y 3). Papa (waycha, wiswaraya, chunchu), isaño, papalisa, cebada, 28 ovejas criollas, 1 vacuno criollo, 4 vacuno mejorado, leche q vende y chuño. Hijo (35) de obrero-cargador en La Paz x 17 años. No envía nada. No bonosol. Sindicato Vinto Coopani, Junta escolar, esposa va a Proinpa.

PV7:

El tiene 63 y ella 52 años de edad. 4 hijas (35, 32, 29 y 23) y 2 hijos (22 y 19). Papa (waycha, sani, sako, tunari), cebada, 20 ovejas criollas, 4 vacuno criollo, leche q vende, chuño y yogurt. 3 hijas (35, 32, 29) como comerciantes en CBBA x 10, 9 y 9 años. 500/año. No bonosol. Pachamama, Proinpa, Pil, Mippapa.

PV8:

Él tiene 45 y ella 46 años de edad. 5 hijas (30, 28, 24, 23, 28) y un hijo (8). Papa (waycha, sako, sani), cebada, 28 ovejas criollas, 3 vacuno criollo, leche, queso, chuño q no vende. 4 hijas como agricultor y comerciantes (3) en Lupipe, La Paz, CBBA y La Paz x 9, 10, 5 y 5 años. 600 Bs/año. No bonosol. Pachamama, Proinpa, Mippapa, Sindicato Agrario.

PV9:

Él tiene 56 y ella 53 años de edad. 3 hijos (30, 27 y 16), 5 hijas (26, 23, 21, 19, 14) y abuela (75). Cebada, quinua, haba, papa (waycha, sako y kuli), 20 ovejas criollas, 3 vacuno criollo, leche q vende, queso. 2 hijos (30, 27) y 3 hijas (26, 23 y 21) fuera como albañil, agricultor y comerciantes (3) en La Paz, Lupipe, La Paz (2) y Yungas, x 6, 10, 9, 9 y 1 año. No envían nada. Sí Bonosol. Pachamama, Pil.

PARTICIPANTS RESPONSES:

PV1-M:

Tienen parcelita pequeña que produce sólo pa el hogar.

Han ido a los cursos y ya saben todo lo que les han enseñado. Algunos se aburren porque les enseñan siempre lo mismo.

Cuando alguien no viene a las reuniones lo siguen llamando.

No hay institución que apoye a la mujer y lo que ella pide.

Esperan que PROINPA les ayude a encontrar mercado para producir más.

Por ahora quieren seguir aprendiendo para manejar mejor el cultivo para la familia.

Siguen participando porque esperan en algún momento poder vender.

PV1-F:

Ella quisiera que las reuniones sean de 2 a 4pm para ella también poder asistir.

Quiere aprender más porque ella cocina con la papa.

No puede ir al taller de SANREM del jueves por la hora a la que la hacen. Tiene que cuidar alguien el ganado en la casa.

PV2-M:

Con el proyecto hemos mejorado en producción de papa (gorgojo, polillas), y hemos mejorado en otras variedades.

Participan en el proyecto para mejorar y aprender de papa, la cual es sólo para consumo.

Saben de las reuniones porque la secretaria (PV7-HF) les avisa.

Ellos no hicieron la encuesta, pero la hizo su padre y por su hermana Remedios que va a las reuniones ellos se enteraron e interesaron.

No van juntos a las reuniones porque hay que cuidar el ganado y las ovejas.

Si PROINPA le pide que produzca más y se organice él está dispuesto a hacerlo.

Necesitan producir más y mercados para poder vender.

Pide que les enseñen de forrajes.

PV2-F:

El proyecto les ha ayudado a producir más.

Pide que les enseñen a tejer.

Los dos trabajan en los cultivos.

Ella cuida más del ganado y las ovejas.

Ella es la que va al mercado a vender.

PV3-M:

Produce papa y leche.

Papa y chuño sólo para consumo.

Cuando produce más vende 5-10 quintales a 20Bs/@ que no es mucho.

Participa en los talleres porque aprende a manejar mejor el cultivo.

Maritza va a vender porque van sólo las mujeres y entre ellas se entienden y acuerdan a cuanto venden.

Produce quinua, cebada, trigo para la casa.

Quieren aprender más de forrajes porque les da dinero a la semana para pagar la escuela.

Tiene poca tierra como para producir bastante papa, además de que está regada en pedacitos.

Si PROINPA le ayuda a buscar mercado él podría sembrar un poquito más.

PV3-F:

Fue presidenta del grupo.

Maneja principalmente los animales: ovejas, vacas, leche.

Su esposo va solo a las capacitaciones y dice que no le cuenta nada.

Ella quiere saber más de papa y tejer de las ovejas que tiene.

PV4-HF:

Viuda.

Todo para consumo, no vende papa ni nada. Siembra sólo 1, 2 o 3 callpas.

Su esposo era el presidente, pero desde que falleció ella tomó su lugar.

Aprendió de los talleres que la semilla para sembrar debe ser del tamaño de un huevo al menos.

Aprendió a tejer sola.

Participa porque aprende a manejar el cultivo, controlar el gorgojo, polilla y seleccionar la semilla. Por eso sigue participando porque aprende para el consumo de la casa.

Viendo los beneficios que tienen en los cultivos, otra gente viene. Les avisan las horas de reunión a todos.

Va a seguir yendo a las reuniones, pero vive con su mamá que tiene 80 años y ella no puede pastorear las ovejas, así que a veces no puede ir a las reuniones.

PV5-HF:

Viuda.

No se ponen multas todavía a quienes no vienen a las reuniones. Quieren poner, pero no se ponen de acuerdo.

Ha aprendido mucho del proyecto para mejorar gorgojo, polillas y producir mejor para el consumo del hogar.

Produce papa y chuño para consumo del hogar solamente porque sus hijos comen bastante y no le sobra para vender.

Si le proponen que produzca más para vender a un mercado fijo ella está dispuesta a hacerlo.

Se mantiene como vocal avisando a todos porque su hijo mayor le ayuda a avisar.

PV6-F (Her husband was working in Oruro at the time of the interview):

El esposo estaba trabajando en otra ciudad, por lo que sólo pudimos conversar con ella.

Producen sólo para la casa. Cuando producen un poquito más sale a vender ella al mercado, pero muy raro producen más que para el consumo.

Ella es la que va a las reuniones o envía a su hija.

Si le pidieran que produzca más, sí lo harían.

Limitante es que no tienen mucha tierra.

PV7-M:

Ya no le avisan para ir a las reuniones.

Ya se apuntó para el proyecto Altagro. Va a seguir.

Vende papa cuando tiene.

A él le gusta ir porque aprende de los talleres.

Sólo son él y la esposa, pero se las arreglan para ir a las reuniones.

Le da pena que no le avisan para las reuniones del proyecto.

Su esposa es de Cayancani, por eso pasa en ambos lados y a veces no tiene

mucho tiempo, pero se las arregla para ir a las reuniones.

PV8-M:

Está en el grupo para aprender de los cultivos.

Ha entendido de lo que le han enseñado y ha aprendido.

Lo que han hecho en la parcelita demostrativa ellos lo han hecho en sus parcelas.

Hay que seguir para seguir aprendiendo más.

Está produciendo, aunque el gusano mucho entra.

Trabajan sólo los voluntarios en el grupo.

Va a seguir con Altagro. Lo entiende como una continuación al trabajo que ha estado haciendo con PROINPA. No conoce el nombre como algo diferente.

La esposa no va a las reuniones. Sólo cuando él no puede, ella va por él.

La familia va a participar en el proyecto, pero sólo él ha de ir porque la esposa no tiene tiempo. Ella tiene que cuidar a los hijos y al ganado.

PV9-M:

Habla sólo aymara.

La esposa es de Vinto Coopani y por eso es ella quien va a las reuniones. Él es de Santiago de Lupipi y tiene casa en ambos lados que debe atender.

Es el secretario general de la comunidad.

Su esposa ya está inscrita en Altagro.

Ella le ha contado que todo va muy bien con el proyecto.

NON-PARTICIPANTS:

NPV1-M:

No tienen tiempo ni él ni su esposa para atender a las ovejas y las parcelas. Mucho menos les alcanza el tiempo para ir a las reuniones.

Por eso hace dos años se retiró de los talleres de PROINPA. Ya no tuvo tiempo para asistir.

Nunca estuvo participando en los talleres del Sanrem.

No va a participar porque cuando quiso volver le pusieron multa y ya no volvió.

Casi no vende mucho. Sólo cuando tiene.

NPV2-M:

Hablan sólo Aymara

Con PROINPA han aprendido a mejorar el guano para cultivar, MIP, quinua, eliminar gorgojo, trampas.

Se retiró porque su madre no puede cuidar su ganado y trabajar los cultivos mientras él va.

Le gustó el taller porque con el proyecto ahora producen papa guaycha. Él no tenía esta variedad, por lo que ahora está guardando semilla para volver a sembrar.

En octubre quiere integrarse nuevamente al proyecto para preparar la siembra, pero le han dicho que tiene que pagar multa y tiene miedo.

Como no tiene pareja no tiene a quien dejarle a cargo los animales. Dice que hay muchas ocupaciones en la casa y que a veces no le queda tiempo para ir a las reuniones y actividades.

NPV3-F:

Su esposo no puede ir a las reuniones porque ella no puede cuidar los animales sola.

No ha ido a los talleres porque no ve bien y no puede caminar esos 300 metros a la casa comunal porque ya está muy viejita.

Quieren volver a los talleres, pero ella tiene miedo de que le hagan pagar multa a su esposo por no ir a las reuniones, porque no quieren pagar multa para volver a ingresar.

Sólo habla Aymara.

Dice que falta un mercado fijo para vender la papa.

NPV4-M:

No tiene tiempo para ir.

El año pasado no participó y tuvo problemas con la papa, pero produce sólo para la familia.

Produce chuño y papa sólo para la casa.

Ahora se ha anotado en Altagro y dice que empezará a participar si las actividades de la casa le dejan.

NPV5-F:

Fue a una reunión sobre floración pero en la casa tenía bastante que hacer. La segunda vez ya no fue. Le dijeron que vaya, pero ella les dijo que tenía que cuidar las parcelas. El esposo se había ido y ella tenía que cocinar.

Tal vez vaya a las próximas reuniones. No sabe porque ha estado un poco enferma. Es que no hay tiempo para caminar a las reuniones. Queda un poco lejos y luego cansada a hacer.

NPV6-F:

Dice que quisiera ir pero ya está vieja y le duelen las piernas de caminar.

Anda enferma, le duelen los huesos. Tiene que cuidar al ganado y cocinar.

Produce poquita papa de todas maneras y no alcanzaría para vender.

Iría a las reuniones para aprender pero no ya está enferma y no puede trabajar más la tierra. Apenas para la casa.

No tengo quien me ayude ya con todo.

NPV7-M:

Con la esposa trabajan bien. Cuando tienen problema de polilla le preguntan a los comunarios. Siempre les ayudan.

Tienen que ver a los hijos y llevar al ganado a los pastos. Producir la papa y la quinua toma tiempo.

Produce para la casa papa y chuño. Tunta casi no.

No les interesa ir a las reuniones. Ellos tienen bastante que hacer en las parcelas.

Sería bueno que ayuden a las mujeres a hacer algo más para tener otra entrada de dinero en la casa. Algunas mujeres quieren aprender a tejer para vender en el mercado. Cuando vayan a vender la cosecha pueden vender algo más también.

NPV8-M:

No va porque quiere aprender más de leche. Enseñan sólo de papa.

Quisiera que le enseñen de pastos que llaman mejorados para que las ovejas y las vacas engorden mejor.

Con leche gana mejor. La papa es para la casa nomás.

Con la leche hacen queso y comen con la papa que producen.

Si traen proyectos de leche mejor. Ahí entonces sí participaría más.

Tal vez participaría si tuviera más tiempito, pero la papa no sale mucho. Cuando necesita nomás vende o cuando produce mejor.

NPV9-M:

Le dijeron que participe pero no tiene tiempo para eso.

Algunos le dijeron que no se aprende bien. Ya sabe él lo que dicen los ingenieros. Aprendió con Pachamama y antes había participado. No se acuerda el año pero hace tiempito ya.

La esposa heredó una tierrita y él tiene que ir a cuidar la papa. La esposa se queda en la casa y cuida el ganado y las parcelas. Tienen hijos que cuidar también.

No hay tiempo para tanto.

Appendix E. Interview with PROINPA Foundation

ENTREVISTA A COORDINADOR REGIONAL DE PROINPA EN ALTIPLANO BOLIVIA

MISIÓN DE PROINPA:

- Generar tecnología
- Transferir tecnología
- Conservación y uso sostenible de recursos genéticos (biodiversidad)

Estas tres en el marco de los rubros con los que trabajan para el beneficio productivo y socio-económico.

Los dos primeros (generar y transferir tecnología) bajo la meta de alcanzar la seguridad alimentaria y de manera alterna generar competitividad para la comercialización efectiva.

Trabajan en 7 de los 9 departamentos de Bolivia.

Proyectos de PROINPA:

PROINPA trabaja aproximadamente con 40 proyectos. En Perú trabaja en alianza con CIRMA (Centro de Investigación en Recursos Naturales y Medio Ambiente).

Para el trabajo en los proyectos, las instituciones los buscan para crear las alianzas, y en otros casos ellos buscan el financiamiento para sus propuestas.

Para la realización de sus proyectos, cuentan con aproximadamente 100 personas a nivel nacional, de las cuales un 80% es personal técnico. De ellos, 7-10 se encuentran trabajando en campo con las comunidades de Umala.

Historia de PROINPA:

En 1987-1988, el gobierno nacional de Bolivia priorizó el cultivo de la papa y enfocó la necesidad de trabajar en investigación y producción de semilla.

Para alcanzar el objetivo, solicitó financiamiento a la Cooperación Internacional. COSUDE aceptó hacerse cargo de la investigación, mientras que Holanda decidió dedicarse a la producción de la semilla.

COSUDE estableció como requisito que para trabajar en la investigación de la semilla, debía recibirse el apoyo del CIP para la conformación del programa de papa a fin de asegurar la calidad del trabajo.

Por ese requerimiento, en 1989 se crea PROINPA como Programa de Investigación de la Papa (sólo papa). Surge como un esfuerzo de la alianza del Ministerio de Agricultura, COSUDE y el CIP. En este marco el CIP asigna 5 de sus asesores a Bolivia, entre los cuales se encuentra André Devaux que es el responsable de Papa Andina en la actualidad (reside en Perú).

Con ello se crea el IBTA (Instituto Boliviano de Tecnología Agrícola). Sin embargo, este cierra en 1997 por cuestiones políticas. Este instituto trabajaba con varios cultivos andinos. Aunque PROINPA se dedicaba sólo a papa, al cerrarse el IBTA decide darle continuidad a los otros programas que éste

instituto llevaba a cabo. Por ello, en 1998, PROINPA se convierte en fundación y adopta el nombre de Programa de Investigación de Productos Andinos. Actualmente trabaja con papa, todos los tubérculos y raíces, papa, quinua, haba.

EN CUANTO AL PROYECTO ALTAGRO:

Busca formas efectivas de conectar al mercado desarrollando capacidad de gestión y negociación. Para ello han creado el EPCP = Enfoque participativo de Cadenas Productivas.

Este enfoque es una metodología que fue creada en conjunto Papa Andina – PROINPA para ir construyendo la plataforma que permita alcanzar el objetivo de desarrollar la capacidad de gestión y negociación que permita llegar a mercados más competitivos.

En esta plataforma se identifica la demanda, los actores y los intereses de cada uno. La estrategia es sentar a los actores a fin de que juntos logren desarrollar negociaciones en conjunto (consenso), mediante la demostración de sus necesidades y demandas.

El año 2006-2007 no ha sido bueno en cuestión de clima, por lo cual la identificación y caracterización de variedades no ha sido totalmente exitosa. En quinua no estaban trabajando por falta de presupuesto (SANREM está trabajando en este cultivo). En los lugares en que se ha producido quinua (ejemplo del proyecto SANREM) han tenido problemas por el cambio climático.

QUÉ INFLUENCIA TIENE PROINPA EN LA PLATAFORMA?

La plataforma se forma así:

COSUDE en Bolivia le entregó dinero a Papa Andina para que este adjudique dichos recursos en tres países, Ecuador, Bolivia y Perú, para trabajar en un enfoque participativo de cadenas productivas. Papa Andina escoge como socio estratégico a PROINPA para que sea el facilitador.

La Plataforma empezó hace 2 años en la zona de Huachaca con los productores de Asociación de productores B.

PROINPA lleva 7 años (aproximadamente) en la zona de Umala y funcionan como facilitadores, dentro de sus tres objetivos de generación y transferencia de tecnología y la conservación de la biodiversidad o recursos genéticos.

Para el efecto de la Plataforma, PROINPA capacita (asistencia técnica) a **KURMI** para que a su vez KURMI capacite a Asociación de productores B. PROINPA no capacita a Asociación de productores B porque KURMI tiene alrededor de 20 años trabajando en la zona de Lahuachaca y prácticamente esa es su zona de intervención. La capacitación se trata básicamente sobre las metodologías y la plataforma.

Con los esfuerzos de la plataforma, Asociación de productores B a finales del año pasado (oct, nov) logró una exportación de 0.5 toneladas de chuño a España, dirigido a los residentes peruanos de ese país.

Comentario sobre el chuño a la plataforma: El no cree que el chuño sea potencial para llegar a la plataforma. Esto lo analizarán en el taller de miércoles y jueves. Si no hay demanda suficiente para chuño, irían por el lado de papas nativas.

INNOVANDES

Para fortalecer el trabajo de la plataforma, en un esfuerzo conjunto de PROINPA y Papa Andina (socios) desarrollan el proyecto Innovandes cuyos objetivos enfocados a la plataforma son:

- Generación real de buenos ingresos.
- Distribución equitativa de los ingresos en la cadena, especialmente enfocado a los productores.

El financiamiento es Neo-Zelandés (NCD).

El proyecto tiene una duración de 3 años, con posibilidades de una segunda fase. Empezó en el 2006 (ya tiene un año en marcha) y durará hasta el 2008.

Siguiendo con PROINPA:

Además de los esfuerzos para apoyar la plataforma, trabajan con otros grupos de agricultores en el proyecto de Altagro y SANREM en la biodiversidad de la papa para asegurar que no se pierdan los recursos genéticos.

Es así que de 118 variedades que se han identificado en la primera fase del proyecto de SANREM y ALTAGRO, el objetivo de PROINPA es identificar grupos de variedades que puedan desarrollarse para el mercado: 1) gourmet, 2) purés, 3) papas fritas, en lugar de sólo trabajar con 3 variedades. Esto con el objetivo de que es muy importante que haya un incentivo para conservar las variedades.

Appendix F. Interview with Save The Children

ENTREVISTA A PROYECTISTA GENERACIÓN DE INGRESOS Y MANEJO DE RECURSOS NATURALES PROGRAMA DE SEGURIDAD ALIMENTARIA DE SAVE THE CHILDREN USAID – TITULO II

Martes 3 de julio de 2007

Objetivo: Vincular a los productores con mercados para la seguridad alimentaria.
Trabajan bajo 3 componentes:

1. Generación de ingresos. Tiene un enfoque de mercado bajo la estrategia de trabajar con cadenas de valor.

En esto buscan productos con demandas de mercado y luego desarrollan todo el sistema de producción para responder a estas demandas de mercado. Este componente trabaja con capacitación y con el fin de vincular a los pequeños productores con compradores locales y nacionales.

Uno de los productos de este componente es la generación de productos como el durazno de los valles de Supaqui, del valle de La Paz, que ha sido promocionado en ferias organizadas por Save The Children en Cochabamba, Santacruz y La Paz. Son grandes eventos en los que muestran los productos que tienen ahora marca corporativa. Han trabajado con innovación de empaques, producción bajo normas de calidad. Resultados = tienen productos conocidos en el mercado.

2. Salud materno-infantil. Trabajan con niños menores de 3 años. Trabajan con voluntarios de las comunidades PCC (Promoción del conocimiento comunitario). Tienen voluntarios que ofrecen pesar a los niños, conserjería a las madres del grupo, trabajan con sedes de salud de las comunidades y de los municipios.

Objetivo: hacer monitoreo del crecimiento del niño. Mes a mes se pesa al niño y se compara con la tabla de crecimiento que ellos tienen. Se lleva el registro para asegurar la nutrición del niño.

3. Recursos naturales: trabaja en áreas de vocación productiva buscando siempre la generación de ingresos. Tienen tres líneas de acción:

Generación de micro cuencas a nivel comunal. Se identifican áreas de acción en la micro cuenca (dividiéndola en parte alta, media y baja) se identifica que acciones se hacen en cada nivel de la micro cuenca.

Áreas de conservación de praderas nativas donde promueven el

crecimiento vegetativo de pastos nativos. A mediano plazo pueden desarrollarse estas praderas como un plan de manejo comunal. Asimismo en áreas de conservación de bosques nativos (los cercan). Buscan el empoderamiento de la capacidad local. Las comunidades desarrollan el trabajo, siempre buscando generar ingresos después de haber hecho un buen manejo de los recursos naturales.

Estos tres componentes trabajan de manera integral y el objetivo del programa de seguridad alimentaria es reducir la desnutrición crónica de la población infantil.

Estos tres componentes intervienen dentro de la comunidad. Trabajan de cerca con los gobiernos municipales. Actualmente tienen inversión de los gobiernos municipales en el tema salud, generación de ingresos y manejo de los recursos naturales. Es muy importante porque este tema de manejo de RRNN ha estado relegado y ahora hay un aporte de los gobiernos municipales, no sólo para temas de recursos naturales sino también para temas productivos.

Buscan también trabajar de cerca con las empresas, desde el punto de vista de que ellos ya producen una cadena de valor. Desde el momento en que una empresa invierte en el mejoramiento de esta cadena de valor (provisión de empaques, como el de Hanz alimentada), se vuelve sostenible porque hay inversión de la parte privada y del otro eslabón de la cadena que son los productores. En este sentido tb trabajan en convenios con las universidades para el desarrollo de programas de investigación y transferencia de tecnología (la de Oruro y UMSA).

Trabajan también con otras instituciones porque hay otras que trabajan en la misma línea de acción y no quieren que se repitan esfuerzos y se desperdicien recursos económicos. Lo que buscan es tener relaciones institucionales para mejorar la intervención en el área de acción.

Están interesados en tener relaciones con varias instituciones porque les interesa mucho el desarrollo de las áreas rurales.

Trabajan con comunidades de alta inseguridad alimentaria. Trabajan con 7 municipios.

Trabajan con gobiernos municipales y con ciertas había mucho conflicto.

Trabajaban hasta el 2005 en el Altiplano Central (incluido Umala), pero se retiraron por un recorte presupuestario y porque Umala no ofrecía muchas alternativas. La única potencialidad que encontraban para mercadeo era en el área lechera de las comunidades cercanas a Patacamaya (San José Llanga y otras).

MECANISMO DE TRABAJO PARA CONECTAR AL MERCADO

Bajo el enfoque de cadenas de valor.

Las ONG's se enfocan sólo a la producción, por ello Save The Children decidió enfocarse al mercado.

Trabajan de la siguiente manera:

- Realizan un sondeo de mercado (una semana) para ordenar una lista de demandas.
- Identifican la producción potencial de las zonas de oferta. Acuden a las comunidades con las que tienen relación e identifican a emprendedores que posean la producción potencial que se necesita y que tengan la disposición de participar.
Realizan parcelas demostrativas para desarrollar escuelas de campo que provean la asistencia necesaria para ser capaces de proveer al mercado.
- Les proveen asistencia técnica sobre tecnologías, insumos, semilla, así como de prácticas viables de inversión, análisis de costos de producción y rentabilidad.
Tienen un experto en mercadeo y comercialización que les ayuda a crear imagen (etiquetas, envolturas, etc.)
- Conectan a los emprendedores con instituciones de microcrédito que ofrecen hasta \$10000 para inversión. Trabajan principalmente con Sartawi que es una ONG que además de sus actividades ofrecen microcrédito de planes de corto plazo.

Appendix G. Interview with Innovandes (BAP)
ENTREVISTA A REPRESENTANTE DE BAP EN PROINPA

Plataforma de Productos Andinos – 9 de julio de 2007

PMCA:

- Construcción participativa entre Papa Andina y socios estratégicos. En Bolivia el socio es PROINPA.
- Gestionado por el CIP a través de la iniciativa del CIP, Papa Andina, con socios estratégicos para fortalecer capacidades. Los socios implementan y desarrollan las metodologías.
- El dinero viene de Nueva Zelanda al CIP.
- Objetivo principal es promover agronegocios mediante:
 1. Identificar actores, diagnóstico cualitativo, interés y las oportunidades de negocios que ellos ven.
 2. Avanzar en el negocio de mayor interés. Hasta 3 actores involucrados.
 3. Lanzamiento del producto bajo un negocio establecido.
- Realiza varios talleres para promover la reunión de los actores.
- A partir de este momento es que se lanza la plataforma para darle sostenibilidad al negocio.
- De toda esta experiencia han desarrollado productos como Chuñosa (Producer's Association B, Icafrut y PROINPA facilita el proceso y apoya al socio local KURMI). Antes PROINPA hacía todo, pero vieron importante trabajar con quien ya conoce la zona, por ello PROINPA fortalece las capacidades tecnológicas del socio local, KURMI.
- El fortalecimiento del socio local se logra a través de concursos y talleres a los técnicos de Kurmi. Además del fortalecimiento organizacional:
- Kurmi no tiene, entonces entra PROINPA a fortalecer en: manejo empresarial, plan estratégico, plan operativo, capacidad de negociación.
- Entonces, el fortalecimiento a Producer's Association B va en dos partes: tecnológicos con KURMI y de gestión con PROINPA. Sin estos dos componentes de fortalecimiento, no pueden vincularse a mercados diferenciados.

Plataforma demanda:

- volumen
- calidad
- tiempo

En plataforma hay dos asociaciones grandes: Asociaciones de productores A y B.

Inclusión de nuevos productores es muy difícil porque hay sobreoferta y la calidad no es muy buena.

La percepción del coordinador es que las condiciones de fertilidad y el interés de las comunidades donde está Altagro no son favorables porque ellos preferirían vender ganado y leche, pues en estos rubros el clima no les afecta tanto.

Pese a que PROINPA lleva en la zona 14 años no se ve un interés de esas comunidades.

Hay más asociaciones de productores en el caso de ganadería en esa zona.

El cree que se invierte pero no hay resultados.

No es tanto cantidad de gente lo que la plataforma quiere, sino organización.

INNOVANDES:

Nace a demanda de los productores para dirigir la plataforma de manera regional para Ecuador, Perú y Bolivia.

En Ecuador no hay plataforma aún, sino que están en proceso. Están ahora trabajando en una base más sólida de capacidades (cimientos sólidos), para luego dirigirlo a la plataforma.

En Bolivia, en cambio, trabajan en capacitación y la plataforma al mismo tiempo.

Asociación de Productores A:

60 comunidades de los municipios de Tiahuanacu y Batallas.

61 8-10 años.

En papa, chuño, haba, tunta, quinua, cañahua.

Apoiada pro PROSUKO (financiamiento de COSUDE).

Tiene incluso crédito agrícola, que es manejado por Asociación de Productores A. Los proyectos compiten entre sí y el que gana se lleva el crédito.

Partieron con los Comités de Investigación Agrícola Locales (CIALS), que es una metodología dentro de la investigación participativa. De los CIALS nacieron los Yapuchiris, que son una vitrina para los productores de la comunidad.

CIALS se creó en un trabajo de consultoría que hizo PROINPA para PROSUKO en el 2000 o antes.

Los Yapuchiris son los que mejores resultados obtienen en sus parcelas. Son buenos investigadores, conocedores de tecnologías nuevas y ancestrales. Nacieron de la siguiente manera: 10 grupos de agricultores juntos crean metodología araña e identifican los mayores problemas que tienen. Van a instituciones y consiguen la información que necesitan y aparte discuten la

información ancestral que algunos de los comunarios tienen.
PROSUKO empezó en 1990-92 e: investiga, implementa (CIALS) y fortalece la organización, gestión de recursos, crédito y seguro agrícola.
PROSUKO capacita a demanda.

Hay un convenio interinstitucional con PROSUKO y por ello Asociación de productores A son actores de la plataforma.
Antes de la plataforma ya tenían entrega directa a domicilio.

Asociación de Productores B:

14 comunidades
tienen 2 años de conformación legal y 1.5 años en estar en la plataforma.
Tienen el apoyo técnico de KURMI para mejorar capacidades tecnológicas.
Aún tiene problemas en: tiempo de entrega, calidad, volumen.
Oferta de más de 500 ton/año
Asisten a ferias bastante grandes del Altiplano: Lahuachaca, Oruro, Cochabamba.
Tienen aún deficiencias en la parte organizativa, de gestión y de tecnología.
Eso trae problemas a la plataforma con los compradores.

Como apoyo, KURMI para agilizar la gestión creó el CIDSA (Comité de Desarrollo Sur Aroma), que es un ente matriz de Asociación de productores B. Es un ente de gestión y coordinación de las necesidades de sus comunidades. Como brazo comercializador de CITSA aparece Asociación de productores B.

KURMI no se siente involucrado en la plataforma porque dice que promueven la capacitación de la organización a la cual apoyan.

Diferencia entre Lahuachaca y Umala:

1. KURMI es una ONG de desarrollo que invierte en demandas de potencialidad de la zona.
2. PROINPA es de investigación, es decir, no hacen fortalecimiento organizacional (en secuencia de talleres y cursos) en Umala, sólo un taller de vez en cuando.
3. En Lahuachaca hay relaciones de capacidades institucionales entre KURMI y PROINPA.

Diferencia entre Asociación de productores A y B:

1. A está más fortalecido que B porque KURMI hace inversión en parte

agropecuaria y fortaleció CIDSA. Formó B que es su brazo comercial. La diferencia con PROSUKO es que éste último hace lo mismo con diferente connotación, pero además fortalece más las capacidades de los productores con los Yapuchiris + crédito + seguro.

2. El seguro consiste en que si el agricultor pierde por el clima, el seguro le paga lo que pierde. Pero, si pierde por plagas u otras razones, entonces no le paga nada. Cómo saben la razón por la que pierde el agricultor? Comparan con los resultados del Yapuchiri (control social).
3. Entonces, en A hay una relación de trabajo más horizontal, mientras que en B es más vertical. En A hay Collective Action.
4. El enfoque de PROINPA es más horizontal y trabaja en EPCP = busca la eficiencia de cada actor, participativo, negocio conjunto.
5. Ni KURMI ni PROSUKO trabajan con EPCP.
6. PROINPA está capacitando a KURMI en metodologías participativas (EPCP) y otros como seguridad y evaluación participativa, elaboración de planes estratégicos comerciales y administrativos, investigación participativa.
7. PROINPA aún no capacita a PROSUKO porque no tienen los recursos, y porque hacen esta capacitación a demanda de los actores.

Appendix H. Interview with CIP-ALTAGRO

Entrevista a Director de Proyecto CIP-ALTAGRO

Lunes 2 de junio de 2007

1. Se presentó en el 2003 al ACIDI (Agencia Canadiense de Cooperación Internacional), pero tardaron 2 años en negociarlo.
2. Empezaron en Perú hace un año para no perder el año productivo porque empezaron sobre otro proyecto que ya había. En Bolivia igual pero sin tener aún el convenio con el gobierno. Este mediados de 2007 recién están logrando agilizar el proceso legal para el convenio.
3. Durará 4 años: hasta finales del 2010.
4. Es un proyecto de 10 millones de dólares canadienses.
5. Su objetivo es contribuir a las metas del milenio.
6. Distribución geográfica del proyecto:
 - En el altiplano peruano (en gran parte de Puno)
 - Bolivia:
 - La Paz: provincias de Los Andes, Ingavi, Aroma.
 - Oruro: Cercado, Popó, Abarroa.

Más que un proyecto de investigación es un proyecto de desarrollo enfocado a los sistemas de producción.

Sus sistemas de producción:

1. Papa, quinua, haba, chuño, tunta, okra.
En coordinación con PROINPA.
2. Carpas Solares para la producción de hortalizas (o invernaderos).
Altagro financia estas carpas solares en centros educativos.
Dan financiamiento (microcrédito) a familias para que lo hagan a un 12% de interés.
Objetivo es mejorar la nutrición de la familia. Los excedentes van al mercado.
3. Ganadería lechera: vacas y ovejas.
Objetivo es producción primaria, transformación y comercialización.
4. Ambiental.
Recuperación de suelos salinos y praderas lativas mediante forestación.
Enseñan como se siembra un árbol y como se lo cuida en las escuelas.

Hacen concursos entre colegios para ver cuál tiene el mayor número de árboles. Se les da un premio y a su vez más arbolitos para que siembren en sus casas y enseñen a su familia.

PROYECTO DE PAPA Y CHUÑO CON PROINPA:

Por qué PROINPA?

Porque luego de la reforma en que desapareció el Instituto Nacional de Investigación, se creó como un Programa de Investigación de Papas. Es un hijo del CIP. Luego se convirtió en Fundación.

PROINPA ha estado en estas comunidades por muchos años y tiene el know-how de papa, quinua, habas.

De qué se trata este proyecto?

- Están terminando la primera fase (junio 2007) y tienen un taller el 5 y 6 de julio para analizar y definir las actividades para la segunda fase.
- El objetivo de la primera fase fue: identificar variedades, características, rendimiento y calidad final.
- Dentro de este proyecto hay varios trabajos de investigación:
 1. Diversidad de papa nativa
 2. Diversidad de papa nativa para chuño (que tenga mejor aceptación en el mercado y no sea papa descarte, con la posibilidad de integrarse a la plataforma de chuño-tunta).
 3. Haba: insecticidas biológicos para controlar enfermedades del haba.
 4. Quinua: empezará en el 2008.
- Su objetivo final es conectarlos con la plataforma que ha formado Papa Andina.
- Si no fuera factible porque la plataforma no recibe más productores se buscaría otras demandas.
- Si no hay demanda para exportar se enfocarían en el mercado local.
- Por ningún motivo se crearía otra plataforma porque ALTAGRO no quiere competir con otras plataformas ya existentes, así que se buscaría la forma de conectarlos a la plataforma o buscar otros mercados.
- Si encuentran que hay oportunidad de vender el chuño en el mercado, planean para la segunda fase con Bruno Condori, con la referencia de la Oficina regional de semillas, PROINPA y CIP-ALTAGRO. En este caso se les daría Asistencia técnica y se haría el contacto con alguna institución de crédito para que les de el financiamiento.

Appendix I. Interview with Field Technicians for NPVP Proyecto de Biodiversidad de la papa ALTAGRO y SANREM

Field Technician 1:

De 64-65 comunidades? en Umala, sólo 30 conservan todas las variedades. En total son 118 variedades, de las cuales se tomarán las 10 principales. De todas las variedades, un 94-96% son susceptibles a gorgojo en mediana proporción.

De las 64-65 comunidades? 16 trabajan con PROINPA. Dentro de las 16 están las 4 del proyecto SANREM.

Hay tres asociaciones de agricultores de las que debo conocer:

1. C= Asociación en Umala que no está en la Plataforma porque ésta es de chuño exclusivamente y en Umala no producen mucho chuño para comercio.
2. A = Asociación en otra zona del Altiplano Norte.
3. B = En Huachaca (a 15-20 minutos de Patacamaya).

Field technician 2:

1. Se formó por el proyecto de PROINPA llamado PITA-UMALA para innovación y transferencia de tecnología aplicada en MIP.
2. Asociación se formó para fortalecer su capacidad de negociación.
3. Dentro de ellos formaron un comité de comercialización a quienes capacitaron y ellos mismos decidieron a quien vender.
4. Inicialmente le vendían al supermercado, pero las exigencias de calidad y el rechazo de la papa (no tienen agua para lavar la papa, etc.) hicieron que finalmente decidan venderle sólo a mayoristas (rescatistas). El comité de comercialización creó una metodología de ir a los mercados e identificar a los compradores para luego llamarlos cuando tuvieran buena cantidad lista en el campo.
5. Identificaron un comprador mayorista que llegara a la comunidad a comprarles la papa, sin embargo esta señora no quiso pagar el precio que los productores pedían. Decidieron no venderle y llamaron a otro rescatista que vino a comprarles al campo a un precio muy bueno los 150qq y 250 qq.
6. Asociación no consolidada todavía, sin embargo durante la duración del proyecto tuvieron dos ventas exitosas de papa (150qq y 250qq).
7. No se sostiene por sí sola todavía, sobretodo por las distancias entre las comunidades.
8. A la plataforma les interesa vender papa de calidad.

En la plataforma chuño-tunta

- La plataforma empezó con B que ya producía chuño y tenían la necesidad de vender. Debido a esa necesidad se creó la plataforma.

B = sólo comunidades de Guachalla.

A = formado por varias provincias que fueron formadas por PROSUKO.

Ricafrut.

- Si los productores de Kellhuiri no pudieran entrar a producir chuño para la comercialización, habría que ver qué tanto les convendría una plataforma porque competirían con el mercado informal que es enorme.
- Ya se tienen 118 variedades. Cómo podemos colocarlas en el mercado y cuáles variedades podrían colocarse?.

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