CAPRi Working Paper No. 68 • OCTOBER 2007

Collective Action for Innovation and Small Farmer Market Access: The Papa Andina Experience

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Research Workshop on Collective Action and Market Access for Smallholders
October 2-5, 2006 - Cali, Colombia

CGIAR Systemwide Program on Collective Action and Property Rights (CAPRi)
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ACKNOWLEDGEMENTS

We would like to thank the Swiss Agency for Development and Cooperation (SDC) for supporting much of the work. Thanks to Augusto Guidi, Pablo Mamani, Raúl Esprella and Paola Flores from PROINPA, to Kurt Manrique and Cristina Fonseca from INCOPA and to Iván Reinoso, Cecilia Monteros, Manuel Pumisacho and Fabián Montesdeoca from INIAP who contributed to develop the participatory approaches for market chain innovation with Papa Andina in Bolivia, Peru and Ecuador. We are grateful to Helen Markelova and Ruth Meinzen-Dick from CAPRi and two anonymous reviewers for their perceptive comments, which helped us clarify our ideas and improve the paper. Veronica Valcarcel helped us in editing the working document.

ABSTRACT

The Andean highlands are home to some of the poorest rural households in South America. Native potato varieties and local knowledge for their cultivation and use are unique resources possessed by farmers in these areas. As the forces of globalization and market integration penetrate the Andes, they present both challenges and opportunities for farmers there. This paper reports on how the Papa Andina Regional Initiative is promoting the use of collective action to reduce poverty in the Andes, by developing market niches and adding value to potatoes, particularly the native potatoes grown by poor farmers. Since 1998, Papa Andina has worked with partners in Bolivia, Ecuador and Peru to stimulate pro-poor innovation within market chains for potato-based products. Market chain actors (including small-scale potato producers, traders, and processors), researchers, and other service providers have engaged in innovation processes via two principal tools for facilitating collective action: the Participatory Market Chain Approach (PMCA) and Stakeholder Platforms. The PMCA fosters commercial, technological, and institutional innovation through a structured process that builds interest, trust, and collaboration among participants. Stakeholder Platforms provide a space for potato producers, other market chain actors, and service providers to come together to identify their common interests, share knowledge, and develop joint activities. The PMCA and Stakeholder Platforms have empowered Andean potato farmers by expanding their knowledge of markets, market agents, and business opportunities. Social networks built up among producers, market agents, and service providers have stimulated commercial innovation, which in turn has stimulated technical and institutional innovation. These innovations have allowed small farmers to market their potatoes on more favorable terms and other market chain actors to increase their incomes. This paper describes experiences with collective action in Bolivia, Ecuador, and Peru, via the PMCA and Stakeholder Platforms. Based on these experiences, a number of lessons are formulated for using collective action to stimulate innovation, market access, and poverty reduction in other settings.

Keywords: collective action, potatoes, Andean region, participatory methods, market chains, innovation, stakeholder platform

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INTRODUCTION

Rapid changes are taking place in food production and marketing, globally and in the Andes. In an increasingly competitive setting, producers are no longer able to survive by merely selling what they produce. They need to plan and manage production so as to respond effectively to changing consumer demands and market opportunities. Consumer demands for foods of higher quality and greater variety, downward pressures on food prices, food safety concerns, new agricultural health standards and the emergence of vertically integrated food marketing systems are driving these changes. As a result, the production systems and livelihoods of small Andean farmers are increasingly influenced by the demands of urban consumers, market intermediaries and food industries at home and abroad (Van der Meer 2004).

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In the context of globalization and market integration, small farmers are often at a disadvantage relative to larger and better-endowed commercial farmers who have superior access to information, services and capital, and who can offer larger volumes of quality products to market agents (Johnson and Berdegué 2004). The national agriculture research institutions (NARI) that were traditionally relied on to provide leadership for agricultural change, lack the flexibility, structure, and resources to respond effectively to these new challenges and to provide the support urgently needed by small farmers. For dynamic pro-poor innovation, farmers and farmer associations, researchers and other service providers, NGOs and market chain actors need to interact for identifying and developing potential business opportunities that can generate income for the poor.

This paper introduces two approaches developed by the *Papa Andina Regional Initiative* and its partners to promote pro-poor innovation in potato market chains: the Participatory Market Chain Approach (PMCA) and Stakeholder Platforms. The paper describes how these approaches have been applied in Bolivia, Ecuador and Peru and, based on the Andean experience, presents a number of propositions related to the use of collective action to promote innovation, market access, and poverty reduction in other settings.

THE SETTING

Latin America is a region of extreme social and economic inequalities, reinforced by policy and institutional arrangements that exclude poor and vulnerable groups from decision-making and governance. Poverty is most prevalent in rural areas, where small farms often produce small market surpluses that are traded on relatively unfavorable terms.

Bolivia, Ecuador, and Peru have exceptionally inequitable distributions of income and wealth. Rural laborers and Andean households with small, fragmented land holdings are among the poorest in Latin America. Andean ecosystems are fragile, and their indigenous people have long suffered social and economic discrimination and exclusion. The Economic Commission for Latin America and the Caribbean (ECLAC) estimates that 3/5 of the rural population in Ecuador and nearly 4/5 in Bolivia and Peru are poor (Table 1).

Table 1: Income per capita and incidence of poverty in Bolivia, Ecuador and Peru

	Income per capita (US $)	Incidence of poverty (% of total population)	Incidence of rural poverty (%)
Bolivia	890	63	79
Ecuador	1,820	45	62
Peru	2,140	53	78
Latin America	3,260	44	62

Sources: Statistical Yearbook of Latin America and the Caribbean. ECLAC 2004. Ecuador: Poverty assessment. World Bank 2000.

The potato is both a staple food and a cash crop for small Andean farmers. Native potatoes e grown in high areas where they play central roles in production systems and household economies. It is estimated that over 4,000 varieties of native potatoes are still cultivated in the Andean region of South America (Spooner et al. 2005). Most of these are grown above 3,500 meters above sea level, in remote areas that are subject to frequent frost and drought. Few other crops can be grown in these areas, but native potatoes flourish here without the aid of chemical fertilizers or pesticides.

Native potatoes grow better in the highest zones of the Andes where small, semi-commercial farmers predominate. These farmers possess a deep knowledge of native potatoes and the most suitable cultivation methods for them in their native environment. Native potatoes do not grow as well at lower altitudes, where more commercially oriented farmers grow modern varieties and employ more industrial inputs.

Native potatoes have traditionally been used for home consumption, intra-household exchange, and trade in local markets. The present paper reports on the use of applied research and collective action to develop and exploit niches for these colorful and extraordinary potatoes in the most demanding urban markets. The basic premise is that developing such niches can contribute to the incomes and wellbeing of small-scale Andean farmers.

PAPA ANDINA'S STRATEGY FOR REDUCING POVERTY THROUGH PRO-POOR INNOVATION

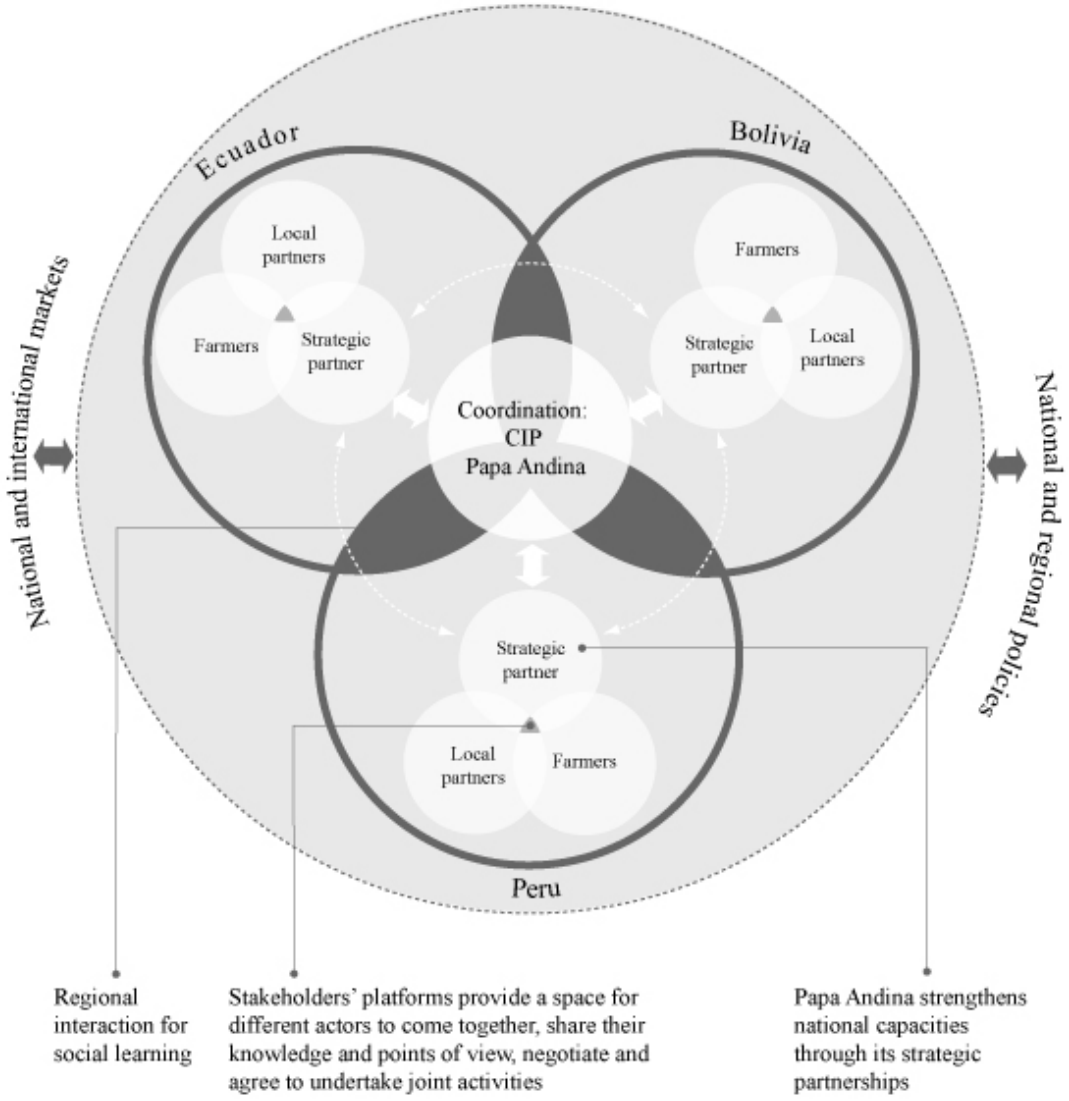
Papa Andina is a regional initiative that promotes pro-poor innovation for development in Andean potato-based production and marketing system in Bolivia, Ecuador, and Peru. It began its activities in 1998, with financial support from the Swiss Agency for Development and Cooperation (SDC). Coordinated by the International Potato Center (CIP), Papa Andina has just completed its second phase of operation and is preparing for a third phase, which will run from 2006 until 2010.

Papa Andina's coordination unit works with one *strategic partner* in each country, to promote capacity development, information exchange, and collaborative learning. These strategic partners are:

- The Foundation for the Promotion and Research on Andean Crops, PROINPA, in Bolivia (http://www.proinpa.org/).
- The National Potato Program of Ecuador's National Institute for Agricultural and Livestock Research (INIAP) supported by a special SDC funded project called FORTIPAPA (http://www.iniap-ecuador.gov.ec/).
- The INCOPA Project in Peru facilitating coalition with private and public partners for improving the access of small-scale potato growers to market (http://www.cipotato.org/papandina/incopa/incopa.htm).

Papa Andina's strategic partners work with approximately 30 *operational partners* in the three countries. By working with and through this network of strategic and operational partners, Papa Andina reaches a large and growing number of farmers, currently estimated to be around 4,000. At the regional level Papa Andina facilitates knowledge sharing and collective learning (Figure 1).

Figure 1: Key actors and relationships in the Papa Andina Initiative



With its partners, Papa Andina seeks to contribute to poverty reduction by strengthening the capacity of small farmers to participate more effectively in markets for potatoes and potato-based products and by facilitating the creation of new market opportunities for their potatoes. Papa Andina pays special attention to improving the terms on which low-income farmers participate in market chains. This is done by promoting farmer organizations, by building trust with other market actors to

stimulate innovation, and by improving the responsiveness of researchers and other service providers to small farmers´ technology needs.

Historically, CIP, Papa Andina, and Papa Andina's partners have focused mainly on research and technology development. Innovation, however, covers a broader set of activities and processes. *Innovation goes beyond research,* which aims to generate new knowledge, and beyond *technology development,* which seeks to create a supply of new production methods of potential use to farmers or other economic actors. *Innovation refers to the application of* new *knowledge to achieve economic outcomes*.

Innovation processes often combine changes in production techniques with institutional changes – changes in the ways production is organized or business is conducted. Doing something new in a specific context constitutes innovation, whether or not it is new elsewhere in the world. Truly radical changes in products or production techniques are innovations. But more commonly innovation involves what may be called the "creative imitation" of practices elsewhere. In many cases innovation takes place through the accumulation of many small changes over time (World Bank 2006).

Papa Andina seeks to foster pro-poor innovation by involving those involved all along the market chain. Because of the potential benefits for poor Andean farmers, Papa Andina has placed special emphasis on fostering market innovations related to native potatoes.

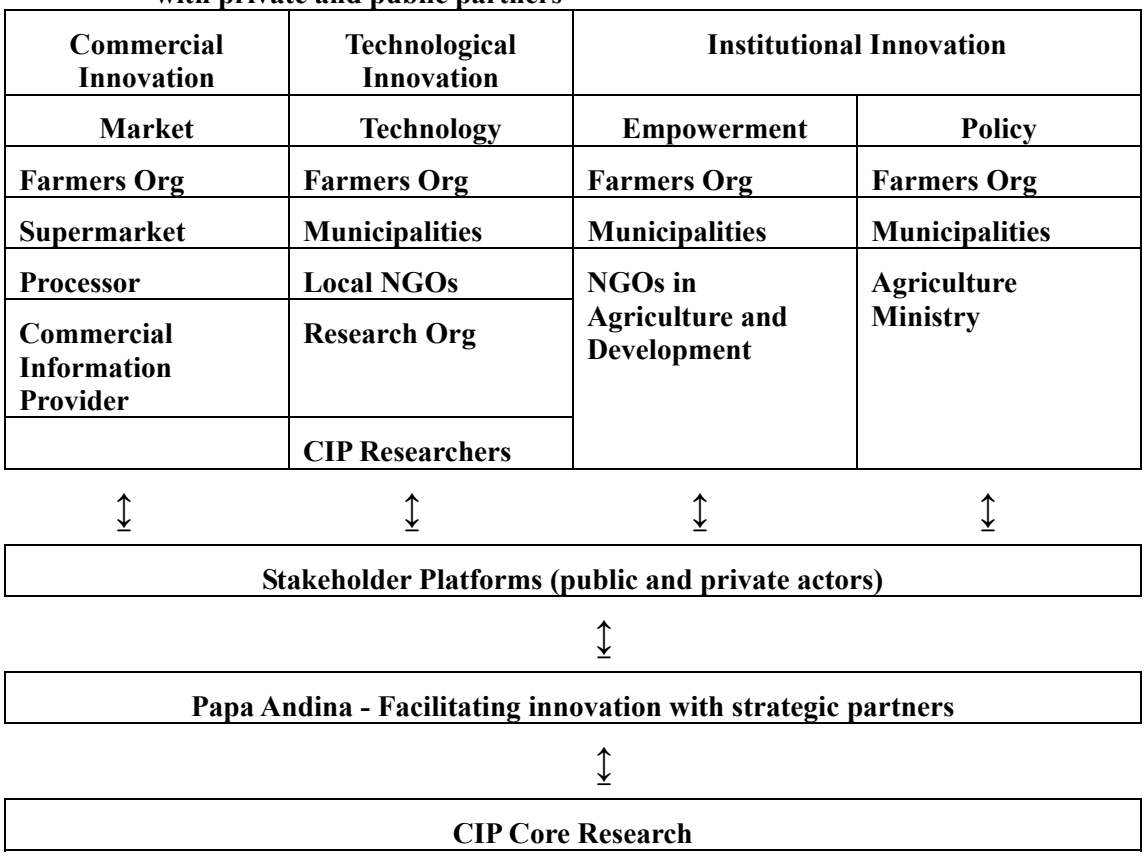
Through action research in Peru, Bolivia, and Ecuador, Papa Andina and its partners have developed two complementary approaches to enhance small-scale farmers' market access through collective action:

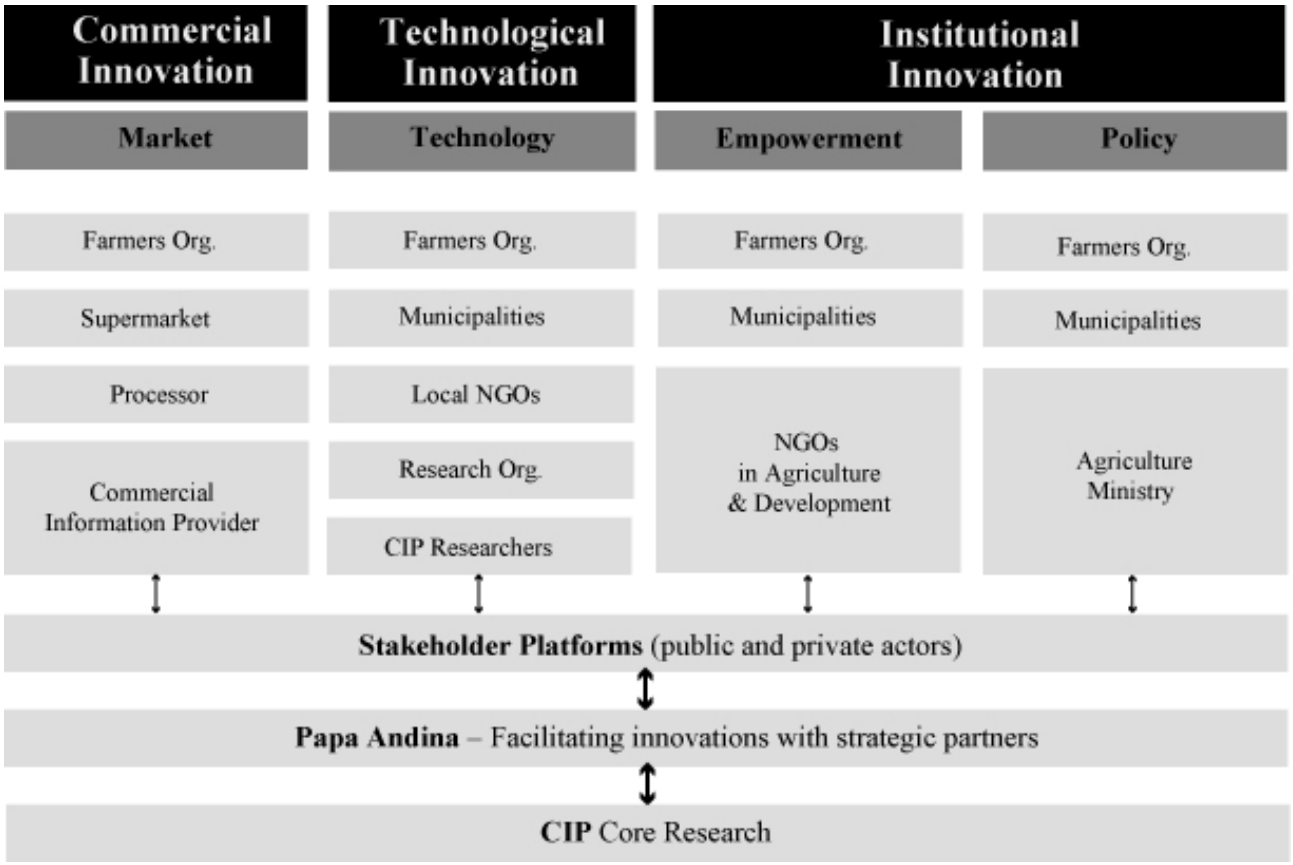
- The Participatory Market Chain Approach (PMCA)
- Stakeholder Platforms

The PMCA (Bernet, Thiele and Zschocke 2006) was developed as an approach for identifying and exploiting new business opportunities that benefit the poor, by stimulating market-driven innovation of different types. It engages market chain actors, researchers, and other service providers in identifying and analyzing potential business opportunities. It helps to build trust among market actors and research and development organizations, and to empower small farmers. Enhanced trust unleashes the potential for innovation around new business opportunities. The PMCA has become a key element in Papa Andina's strategy to engage public and private organizations and entrepreneurs in pro-poor innovation processes.

Stakeholder platforms provide a space for market chain actors and service providers to come together, share their knowledge and experiences, negotiate service provision, and carry out joint activities (INIAP 2005). Different groups may be involved in different types of innovation. As shown in Figure 2, a commercial innovation process may involve market agents, farmers' organizations, a processing firm, and a supermarket. In contrast, a technological innovation process might involve farmers' organizations, municipalities, local NGOs, a national research organization, and a research division of CIP. A stakeholder platform can provide potential partners with the opportunity to interact, get to know each other, and work together.

Figure 2--Example of intensive networking and partnership required to achieve innovations with private and public partners





ROLE OF COLLECTIVE ACTION IN PAPA ANDINA'S STRATEGY

Collective action has been defined as voluntary action taken by a group to pursue common interests or achieve common objectives (Marshall 1998, cited in Meinzen-Dick and di Gregorio 2004). In collective action, members may act directly on their own, but, more commonly, they act through an organization. Group members may act independently or with the encouragement or support of external agents such as governmental bodies, non-governmental organizations, or development projects.

In pursuing its objectives, Papa Andina has promoted collective action at various levels. *At the local level*, Papa Andina and its partners have promoted the organization of potato producers, in order to empower small farmers, reduce marketing costs, and increase efficiency in the delivery of technical assistance. *At the level of market chain*, Papa Andina has fostered the creation of platforms that bring farmers together with transporters, traders, processors, managers of super markets,

researchers, extension agents, chefs, and others with a stake in the production and marketing of potatoes. *At the national level*, Papa Andina and its partners have supported the formation of farmer organizations such as the Consortium of Small Potato Producers (CONPAPA) in Ecuador and multi-stakeholder platforms such as the one for "Quality Agricultural Market Chains in Peru" (CAPAC-Peru). *At the regional Andean level*, the Papa Andina initiative itself represents a form of collective action.

Within Papa Andina, different groups operating in different contexts at different levels have pursued different specific objectives. However, a few broad objectives have been common to all the groups:

- *Empowerment and capacity development*. A basic objective in all cases has been to empower group members at the different levels – from farmers to research organizations – by strengthening the capacities needed for pro-poor innovation. Papa Andina has facilitated access to resources and knowledge for strategic partners. It has promoted collaboration with market chain actors. It has helped farmers establish social networks with individuals in public and private organizations who can play a useful role in innovation processes.
- *Knowledge sharing and social learning*. Group members have been encouraged to pool their knowledge on specific topics for use by the group. This helps to build mutual understanding and trust and often leads to collaboration and joint actions. Papa Andina has developed a method called "Horizontal Evaluation". This participatory evaluation approach combines internal and external evaluation by peers and stakeholders in order to promote knowledge sharing and program improvement (Thiele et al. 2006).
- *Building networks and relationships.* All of the groups have contributed to members' contacts and social networks. Through the PMCA, Papa Andina has encouraged its partners to go beyond their traditional alliances and experiment with new partners and new forms of collaboration. One relevant achievement of the PMCA and stakeholder platforms is that they have brought researchers and development workers in the public sector into direct contact with private entrepreneurs, in groups searching for market opportunities that would benefit all parties involved. The platforms, which often bring diverse stakeholders together for the first time, have proven effective in stimulating knowledge sharing and innovation.
- *Pro-poor innovation*. A fundamental goal of the collective action promoted by Papa Andina has been to stimulate innovation that benefits poor potato producers.

In pursuing these objectives, most groups have paid special attention to identifying and developing commercial opportunities for the native potatoes grown by small farmers in the Andean highlands.

The Participatory Market Chain Approach

The PMCA has its roots in RAAKS (Rapid Appraisal of Agricultural Knowledge Systems), a method developed in the 1990s by the Department of Communication and Innovation Studies of Wageningen University and Research Centre, The Netherlands (Engel and Salomon 2003). RAAKS employs a flexible process to improve innovative behavior among stakeholders in agriculture, natural resource management, and rural development. It helps stakeholders gain a better understanding of their situation and performance as innovators. It aims to improve the generation, exchange, and use of knowledge and information for innovation as part of a collective action process that includes different stakeholder meetings. Depending on what topic and sector is targeted, villagers, researchers, policymakers, extension workers, consumers, producers of inputs or services, industrialists, and/or traders may be involved in a RAAKS process, guided by a team of facilitators specialized in this method.[9]

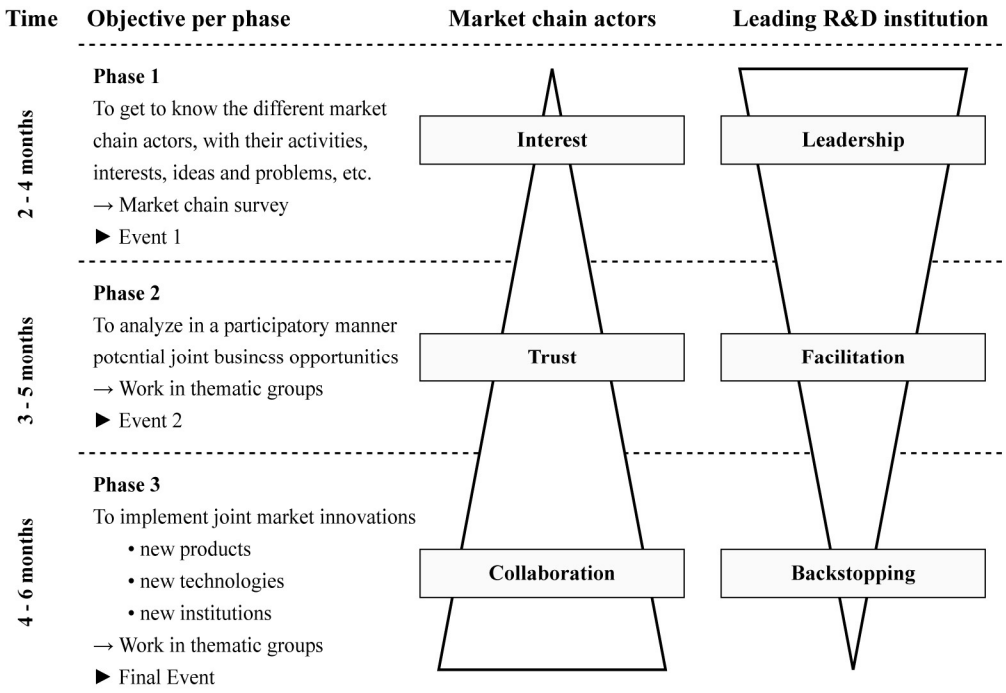
Researchers affiliated with the INCOPA project, including an economist with experience in product development and an anthropologist with experience in market studies, began experimenting with RAAKS as a way to involve market chain actors in a well-structured process that would stimulate learning, build trust, and foster joint actions that would benefit small potato farmers. RAAKS seeks to improve linkages and stimulate some joint actions among market chain actors. The Peruvian group added a more explicit "product development component" and christened the modified approach as the "PMCA".10

The PMCA involves three phases, each of which has specific objectives, core activities, and tangible outputs. The entire process is usually implemented over a period that goes from several months to a year. A research and development (R&D) organization initially takes charge of planning, coordinating, and facilitating the activities in each phase. As the process advances, market chain actors take on more responsibility for decisions making and managing activities. In the optimal case, the R&D organization moves to a backstopping role by phase 3 (Figure 3).

[9] For information on RAAKS, see: www.kit.nl/frameset.asp?/specials/html/untitled.asp&frnr=1&.

10 See Bernet et al. 2006 or http://papandina.cip.cgiar.org/fileadmin/PMCA/User-Guide.pdf

Figure 3. Structure and objectives of the three phases of the PMCA



The three phases of the PMCA

Phase 1 begins with a rapid market survey that includes 20 to 40 semi-structured interviews. These interviews allow the R&D organization that initiates the PMCA exercise to get to know and understand the key actors involved in a specific market chain, including those supporting the market chain. The interests, problems, needs, and the interviewees and other key actors in a workshop later discuss ideas identified during the survey at the end of phase 1. In this event, thematic groups are formed to discuss specific market opportunities identified in the survey. Later, these thematic groups continue to meet during phase 2.

Phase 2 involves a series of thematic group meetings that aim to define and analyze market opportunities. For each thematic group, the R&D organization provides a facilitator who fosters collective learning and trust building by focusing discussions on identifying and developing market opportunities that are of common interest for the group. Six to ten meetings may be required to carefully analyze the different opportunities. To improve decision-making in thematic groups, the facilitating R&D organization may need to conduct or contract out specific market studies. At the final event of this phase, each thematic group presents the identified market opportunities along with a work plan for implementation. The event provides an opportunity to integrate new actors into the

R&D process, to complement the thematic groups with knowledge and capabilities that are lacking for a successful implementation of activities during phase 3.

Phase 3 concentrates on the implementation of activities needed to make the market opportunities become commercial realities. Such activities may include: the development of marketing concepts; the development of new products or introduction of production technologies; the fine-tuning of processing or marketing processes; the design of packages or labels for products; the creation of such new institutions as farmer associations, stakeholder platforms, or business contracts. The time needed to develop the different innovations will depend on the time facilitators and participants have to move the activities along. In our experience, phase 3 usually requires around 6 months.

The PMCA formally ends with a large final event where the involved market chain actors and service providers meet with a wide group of invited guests – including "VIPs" such as national policy makers, donor representatives and the media. At this stage, the responsibility for implementing the innovations is passed on to market chain actors. In this sense, the idea of this final public event is to present the achievements of the PMCA exercise and to formally hand over the leadership to those actors who are most likely to sustain the innovation process in the future and to consolidate the innovations within on-going production and marketing activities. Notwithstanding, this formal closure of the PMCA cycle, the R&D organization that initiated the process, or others, may be called on to facilitate or support specific activities in the future. On-going support is especially useful where new institutions that have been created still require external support during their early development.

Types of innovation

Papa Andina has been using the PMCA to identify market chain interventions that stimulate pro-poor innovation. Three types of innovation are pursued:

- *Commercial innovation* involves the development of new products or services for specific market niches, to add value to potato production. Examples of commercial innovation are new colored potato chip products made from native potatoes in Bolivia and new ways of marketing fresh potatoes by selling selected and washed potatoes in plastic sacks of uniform variety and weight in Peru.
- *Technological innovation* involves improvements in the way commodities are produced or transformed. CIP and NARIs support technological innovation in the region. The interaction of researchers, development professionals, potato producers, and other MCAs has improved the dissemination of technological innovations and has also helped research organizations to align their research agendas to better contribute to innovation in the region.
- *Institutional innovation* relates to changes in attitudes, habits, or relationships among stakeholders, in order to create more favorable conditions for pro-poor innovation.

> Interactions among market chain actors and service providers are frequently characterized by lack of trust, and private-public partnerships, alliances, and teamwork are rare. For these reasons, new institutional arrangements such as stakeholder platforms are extremely valuable for implementing the PMCA, to promote collective action involving market chain actors and service providers.

Stakeholder Platforms

Traditionally, CGIAR centers have worked closely with NARIs, but both international and national research organizations usually work in relative isolation from others involved in innovation processes. For Papa Andina and its strategic partners, the need for demand-led innovation made it necessary to look beyond the research community and to strengthen working relationships with a range of other public and private actors. Papa Andina has developed the concept of the "stakeholder platform" to promote interaction, social learning, and collaboration between the diverse range of actors who may contribute to innovation processes.

A multi-stakeholder platform is a space for interaction that aims to reduce conflict, build trust, and lead to coordination and joint action. Through a platform, things that none of its members could achieve on their own, can be accomplished.

In our experience, platforms help stakeholders understand the interests and perspectives of other market chain actors and help small farmers to take advantage of market opportunities. The platform also facilitates the social process of learning, discovery, and utilization of ideas, which contribute to empower the participants especially the small-scale farmers. Platforms are a means to promote collective action.

The first steps to develop a stakeholder platform were taken during a workshop organized in 2000 in Peru to analyze market opportunities for traditional freeze-dried potato products known as *chuño* and *tunta* (Devaux and Valdivia 2001). Participants at this workshop decided to establish a "*Chuño and Tunta Platform"* to serve as a coalition of diverse actors in southern Peru who wished to work together to identify and exploit new market opportunities for *chuño* and *tunta* (Devaux and Thiele 2002). Based on this initial experience, Papa Andina offered small grants to promote the formation of other platforms involving market chain actors, researchers, and other service providers in Bolivia, Ecuador, and Peru.

EXAMPLES OF COLLECTIVE ACTION IN BOLIVIA, ECUADOR, AND PERU

This section presents four examples of how Papa Andina and its partners have used collective action to foster innovation and improve small farmer access to markets in Peru, Bolivia, and Ecuador. Each example involves the use of the PMCA and/or stakeholder platforms to promote pro-poor innovation and link poor farmers to urban markets. The first three cases are from Peru and Bolivia, where the PMCA has been developed and refined. The fourth case is from Ecuador, where Papa Andina's partners initially chose not to apply the PMCA, but to develop and strengthen local farmer organizations.

Using the PMCA to Develop Markets for Andean Potatoes in Peru

In 2002, the INCOPA project team began studying new ways to link small-scale potato farmers to markets by developing new products for urban markets based on native potatoes. After an initial period of conventional R&D work focused on potato production, the INCOPA team started searching for ways to involve small farmers, market agents, and other market chain actors in identifying and developing new market opportunities. For this purpose, in alliance with CIP's Social Science Department, the INCOPA team developed and applied the PMCA as a way to promote collective action for pro-poor innovation in Peru involving potato market chain actors, R&D professionals, and other service providers. These activities were supported by the Swiss Agency for Development and Cooperation, the donor funding the INCOPA project.

Actors & activities

In 2002, INCOPA formed a team of four persons to lead the PMCA work in Peru. At its first meeting, the team identified the main market chain actors to interview in an initial market chain survey. The survey was then conducted by one of the team members, who interviewed 24 different private and public actors from the market chain and supporting R&D organizations. The survey findings, which complemented information from earlier market studies, were then presented to nearly 100 stakeholders at the final event of PMCA phase 1, involving potato producers, wholesale agents, processors, supermarket managers, researchers, and professionals from non-governmental organizations (NGOs) and international agencies. Participants at this event organized in three

thematic groups to discuss the development of fresh potatoes, processed potatoes, and potatoes for export. Discussions in the thematic groups, facilitated by PMCA team members, gave participants the chance to get to know each other and explore common interests. This initial interaction was very positive and many actors expressed interest in continuing to work with the thematic groups during Phase 2.

Because of perceived limited export opportunities for potatoes, the PMCA team decided to discontinue the Potato for Export Group and to launch phase 2 with only two thematic groups. For the first meeting, all those who expressed their interest to continue meeting were invited. Both thematic groups involved farmers, traders, processors, NGO staff, researchers, and government representatives. Although gender issues were not specially considered, it is important to note that two women with strong leadership capacities got involved and gained considerable authority within the thematic groups as "decision leaders". One of these women leads an NGO in central Peru, and the other represents an association of wholesale market agents in Lima.

Initial discussions in phase 2 centered on identifying joint market opportunities that the groups could work on. The Fresh Potato Group decided to focus on wholesale marketing of high-quality potatoes in a standard potato sack. The Processed Potato Group decided to focus on developing potato chips using native potatoes. A processor in the group offered to invest in the needed processing equipment. At the final event of phase 2 the groups presented their ideas for developing the proposed innovations. For this meeting, the PMCA facilitation team prepared an agenda in which participants presented the market opportunities that were identified in each thematic group. In each group it was felt that potentially important market chain actors were missing from the group (for example, experts in market information). For this reason, several new actors were invited to the final event of phase 2. Convinced by the presentations made by market chain actors, many of the new actors decided to come on board and join the thematic groups for phase 3.

During the final event of phase 2, a survey was carried out to analyze the interaction among participants and their relationships. The results indicated that the frequent interactions had led to new contacts, learning, and greater trust among those involved. The survey also revealed that new "PMCA contacts" had generated economic benefits: for example, some participating farmers had sold potatoes to a wholesaler participating in the process.

In phase 3, activities became more focused and practical. Supported by a CIP trainee, the Processed Potato Group conducted processing trials to define optimal frying procedures. The Fresh Potato Group formed subgroups to work on specific tasks. One group designed a potato grader in collaboration with a NGO and a construction company. Another group analyzed alternative packages for new potato products. An information enterprise developed market information products that could

be produced in collaboration with agents in Lima's largest wholesale market. The activities in each sub-group were taken forward by different actors, who were entrusted with specific tasks by the group. Progress was reported back for decision making by the whole group.

PMCA facilitators were responsible for supervising the whole process and making sure that thematic group meetings were well planned and conducted. At the same time, they took the lead for activities in which they had the necessary expertise. For instance, the facilitator of the Processed Potato Group conducted the market studies for potato chips, while the facilitator of the Fresh Potato Group worked closely with designers to create the required product labels. To enhance knowledge sharing and to build trust among participants, facilitators tried to hold thematic group meetings in the working places of the participants. For instance, the Fresh Potato Group met once in a reception center of a supermarket, once in the wholesale market, and once in a processing plant.

In the Fresh Potato Group, it was decided that a brand name could be used to ensure product quality. A market chain association could be established to "own" the brand and guarantee its quality through a franchising system. The group proposed objectives and procedures for establishing a non-profit organization that would involve a range of market chain actors. Participants decided to name this new organization "CAPAC-Peru", which stands for "Quality Agricultural Market Chains in Peru" in Spanish, but CAPAC in Quechua language also means an Incan noble. The founding members of CAPAC-Peru included farmer organizations, staff from NGOs, traders, and processors.

In the final PMCA event, held in June 2003, market chain actors presented the innovations to the public at CIP headquarters. The potato market chain was replicated in a series of stands for groups to present the main achievements of the PMCA process:

- High-quality, branded wholesale potatoes
- The potato grader
- Information bulletins (with daily whole sale prices for more than 20 different potato categories)
- Yellow native potato chips
- CAPAC-Peru

These achievements were presented by market chain actors who had participated actively during the PMCA process. The innovations were well received by the participants, who included several high-level government officials, representatives of international organizations, and the media. Having these key actors step up and present their innovations helped to consolidate the perception that they "owned" the innovations and would further develop them in the future.

After the final event, CAPAC-Peru started an internal process to define its own activities – including the publication of daily price information bulletins and the launching of a pilot project for the wholesale marketing of high-quality potatoes under a new brand name. CAPAC-Peru received financial support from the INCOPA project.

In 2004, the INCOPA project team launched a new application of the PMCA focusing entirely on native potatoes. This allowed the project to target poor farmers more effectively, since native potatoes are grown entirely by small-scale farmers in the high Andes. This initiative took advantage of the general interest of chefs and supermarkets to get to know the culinary and marketing potential of native potatoes. This second application of PMCA capitalized on the results already obtained from the first application, building on stakeholders that already trust each other and eager to continue to work with INCOPA to develop and launch new products. CAPAC-Peru and its members played a key role in this application, given the organization's interest in promoting the marketing of high-quality native potatoes.

Results

One main result of this second PMCA application was the launching of "T'ikapapa" – a brand of high-quality native potato varieties sold in 1kg bags – in one of Lima's biggest supermarket chains, as an exclusive product. Thanks to the contacts established with farmers, supermarket staff, and researchers, who have helped to define and validate the marketing concept, a private company that had participated in the PMCA process is now buying native potatoes from farmer organizations to process and deliver them to the supermarkets.

A processor also developed an instant potato product from native potatoes for the export market. In collaboration with a farmer association working with white *chuño* – a naturally dehydrated potato product using ancestral processing technology – a marketing concept was developed to launch this product in different supermarket chains of the country. A special highlight was an innovation of one chef who was involved: she developed a sweet based on white *chuño*, which is now fine-tuned with the help of the INCOPA project to be launched on the domestic market.

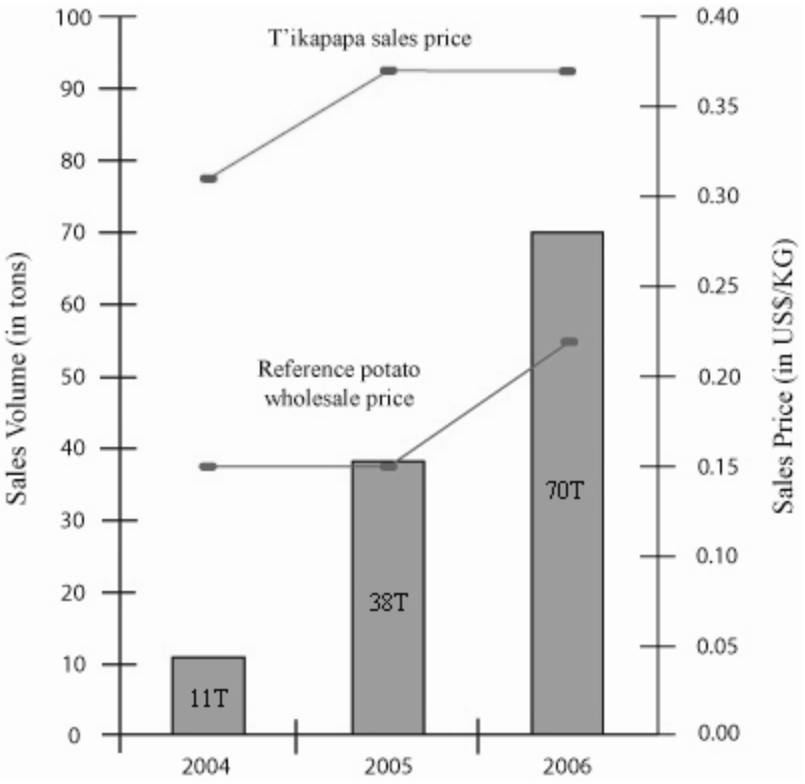
Driven by the launching of new potato products and the PMCA events, the public image of native potatoes has changed in Lima. Traditionally known as a food product for poor Andean farmers, native potatoes are now becoming known as wholesome, nutritious food grown naturally in the Andes and an important aspect of Peru's cultural heritage. In this sense, the PMCA has fostered a new way of thinking about native potatoes, emphasizing not only their culinary value but their important contribution for Peru's biodiversity and culture. The chefs and the media involved in the PMCA

exercise played key roles in this change of perceptions, which has benefited both farmers and consumers. The farmers have benefited from improved market access for their native potatoes, but also have increased their self esteem, as their potatoes gain more attention as a valuable, and sometimes gourmet, ingredient for modern consumers and an important component of Peru's cultural heritage.

Collective action undertaken during and after the PMCA has generated greater trust among participating market chain actors and supporting R&D organizations. The new relationships have stimulated further collaboration and innovation. Motivated by the visible results of the PMCA with native potatoes, the Ministry of Agriculture launched an initiative to create a National Potato Day in Peru. As a result, Peru's Congress declared May 30 as National Potato Day in Peru. The first celebration of this day was on May 30, 2005. Later, inspired by this idea, Peru's Ministry of Foreign Affair proposed to declare 2008 as the International Year of the Potato, and this proposal was accepted by the FAO.

Collective action has also taken place in regard to the formulation of new projects to promote native potatoes at the local and national level. Thanks to contacts and support from the INCOPA project, CAPAC-Peru and NGOs obtained external funding to promote the market development of native potatoes together with farmer organizations. Figure 4 shows how the value of T'ikapapa has grown over time and presents the price differential for T'ikapapa vis a vis other native potatoes sold through traditional market channels. A project initiated in 2006 will allow CAPAC-Peru to consolidate a new marketing system using its own brand.

Figure 4. Commercialization of T'ikapapa from 2004 to 2006



Overall, these indirect types of impacts achieved through PMCA (i.e., enhancement of capacities, building of self-esteem, contacts, access to information and trust building) outweigh the direct economic impact obtained in the short term. More economic impact is expected as public awareness on native potatoes increases and niche markets grow and reach more consumers. T'ikapapa sales' volumes increase steadily (see Figure 4), and this marketing concept has already been copied by other supermarkets. In this sense, the innovation process initially stimulated by the PMCA is continuing, where actors like CAPAC-Peru will play a more predominant role in future exploration of market opportunities (including the export market), whereas INCOPA may provide important leverage as an critical strategic ally.

Developing markets for native potatoes in cochabamba and santa cruz, bolivia

The PROINPA Foundation is dedicated to the promotion of research on Andean crops in Bolivia. Between 1998 and 2003, the Foundation carried out several market chain studies and promoted the sale and processing of Andean crops produced by small farmers. In 2001, based on groups established for Farmer Field Schools, PROINPA organized a series of meetings for market

chain actors. One result was an agreement for farmers of the communities in the Cochabamba area to supply potatoes to the potato chip manufacturer, LUCANA. The next year, PROINPA and a group of farmers affiliated with a Local Agricultural Research Committee (CIAL) in the Candelaria community and decided to establish the Candelaria Producers' Association for Andean Tuber Crops (APROTAC) to market uniform quality bagged native potatoes.

In both these cases, the proposed business ventures failed due to weak farmer organization, unstable potato prices, fluctuations in the supply of potatoes to the market, variable and often poor quality of the potatoes supplies, and weak contractual relations among those involved. One lesson PROINPA drew from these experiences is that *"*marketing is more than just finding a buyer for whatever is produced*"*. Those involved decided that an organization dedicated to promoting R&D, such as PROINPA, should not become directly involved in marketing activities but should work with private partners.

At this point, in 2003, the PMCA appeared on the scene in Bolivia. In February, professionals from PROINPA participated in a participatory evaluation of INCOPA's work with the PMCA in Peru. At the event, the Bolivians learned about the theory and principles of the PMCA and observed practical work in the field. While the PMCA was still under development, early results looked promising. Consequently, PROINPA professionals decided to experiment with the approach back home.

Actors & activities

The first application of the PMCA beginning in 2003 was built on the earlier, unsuccessful, market chain work. PROINPA provided leadership for implementing the PMCA, and carried out the initial diagnosis of market chain actors. During this phase, three other entities showed interest in participating in joint exercises to identify and develop potential business opportunities: APROTAC, a medium-sized food processing firm (LUCANA), and a supermarket in Santa Cruz. Aside from the pre-existing relationship between PROINPA and APROTAC, the participants knew little about each other prior to the PMCA exercise.

Each of the key actors came to the table with specific interests. PROINPA's primary interest was to promote the conservation and sustainable use of the biodiversity represented by Andean tubers. APROTAC was interested in finding viable markets for its members and strengthening the organization itself. The processor was interested in diversifying its product line with new products based on native potatoes. The supermarket was eager to exploit the market potential of new products.

Based on these interests, on the collective knowledge of group, and on the results of previous market studies, the group decided to develop two new products for sale in supermarkets:

1. Colored potato chips made from native potatoes
2. High-quality, selected fresh native potatoes sold in attractive plastic bags

At the beginning of phase 2, two thematic groups were formed to work on these two products. Members of these groups had different stakes in the native potato market chain and were committed to working together to develop new market opportunities. Most of them had participated in earlier informal surveys of the market chain. Papa Andina provided methodological support and training for staff members of PROINPA and other participants. PROINPA facilitated the two groups. Each of the groups who participated in the PMCA exercise did so for different reasons, and one task of the facilitators was to help elicit these interests and search for common ground.

In the Native Potato Chips Group, cooking trials were carried out by LUCANA to determine the best native varieties and the best frying techniques. LUCANA also carried out market trials for the new chips. Based on these trials, two native potato varieties were selected for processing. Personnel of LUCANA visited potato producers associated with APROTAC to establish working relations and negotiate contracts.

In the High-Quality Fresh Potatoes Group, APROTAC delivered samples of the selected and bagged native potatoes for market testing in supermarkets in Santa Cruz and traditional markets in Cochabamba. PROINPA trained members of APROTAC to select, wash, and bag their native potatoes for market. A name was selected for the new product, “Q’ Rica papa” (that means “how delicious is this potato” in Spanish). Six varieties of native potatoes were selected for the new product.

In both groups, women participated actively with ideas and in decision making. These were business women, including the owners of a supermarket and a food processing plant. Later, when the community of Colomi began supplying native potatoes to a processing plant and a supermarket, Colomi women also participated actively in group meetings.

These meetings and activities helped build trust and collaboration among the participants and contributed to social learning among the participants. Farmers became interested in the cooking evaluation tests because the results would influence the selection of varieties they would need to produce for processing. Farmers also became interested in the market pilot studies in supermarkets, which they had never visited before. Through its involvement in the process, PROINPA learned what types of technical assistance were needed to support the producers and what technical and administrative capacities were needed for APROTAC.

During phase 3, the groups moved ahead to bring the new products into the market on a commercial basis. A contract was signed between APROTAC and the food processor to ensure the steady supply of quality native potatoes for processing. A brand name, a label, and packaging were developed for the new potato chip product. Both of the new products (chips and quality native potatoes) were officially released to the public at the final event for phase 3. The food processor began processing native potatoes on a small scale to supply food stores and supermarkets in Santa Cruz and Cochabamba. Advertisements for the new products were prepared for television, radio, and newspapers. Posters were displayed in food stores and supermarkets. Free samples of the native potato chips were given out in supermarkets. The market trials for high-quality fresh potatoes were extended to supermarkets in Santa Cruz. Based on the results, sales began in several supermarkets.

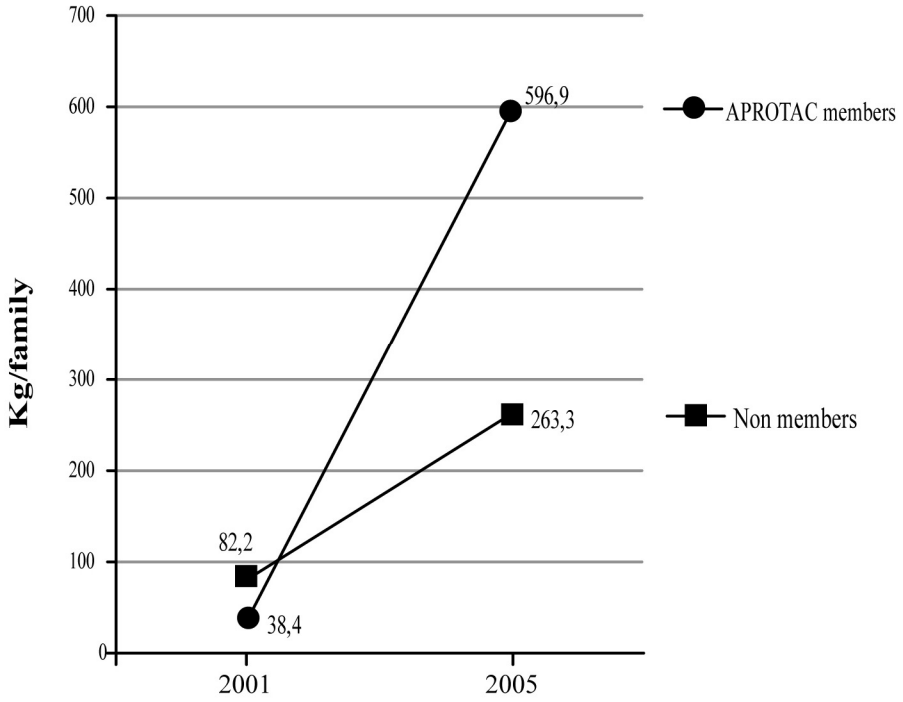
Results

This first implementation of the PMCA in Bolivia served to validate the method developed in Peru and to adapt it to address local conditions and interests. The Bolivian experience and the information generated helped the Papa Andina coordination team analyze the strengths and weaknesses of the approach and to appreciate the need to adjust it to specific local settings.

A study of the impact of the PMCA in Bolivia (Oros et al. 2006) has highlighted impacts in the areas of social capital, production of native potatoes, marketing, and the income of APROTAC's members. As mentioned earlier, the association was established on the foundation of Local Research Committees (CIAL), which worked to improve crop production. As APROTAC worked with the PMCA, its image has changed significantly, and people now think of the association as a farmer-run organization that supports both the production and marketing of high-quality native potatoes. Whereas APROTAC was seen as a very fragile organization in its early years, it has a much more solid image now. Seventy-five percent of the members interviewed for the study expressed satisfaction with the services provided by the association. Most members also stated that their involvement with the association and the PMCA had improved working relations with market chain actors, including supermarkets and processors.

The impact study compared trends in production of native potatoes for APROTAC members and other farmers in the community over the period 2001–2005. Results indicate that members have increased their plantings by a factor of 15 whereas non-members had increased theirs by a factor of 3 (see Figure 5).

Figure 5. Increase in plantings from 2001 to 2005



Source: Oros et al. 2006

Members also note significant changes in marketing patterns. Nearly all farmers continue to consume a portion of their native potatoes, exchange a portion, and sell a portion in local markets. The share going to three new buyers – the food processor, supermarkets in Santa Cruz, and urban food markets –has increased markedly, without altering the normal levels of native potato consumption among the communities, as the production has also increased.

APROTAC's members are now selling new products (high-quality potatoes for chips and the fresh potato market) to new clients (a processor and supermarkets) under new terms (contracts). As a result, the study indicates that farmers are now receiving much higher prices for their native potatoes than previously. Moreover, the association's members are currently receiving prices that are about 70 percent higher than those received by other farmers in the same community.

The study indicates that increases in production and sales of quality native potatoes have raised annual incomes of APROTAC members by US$ 300–700 since 2001. Members of APROTAC say they have used most of this additional income to invest in land and production inputs.

Developing Quality Standards and Markets for Traditional Freeze Dried Native Potatoes in La Paz, Bolivia

Traditional freeze-dried potato products known as *tunta* and *chuño* are very popular in Bolivia. These products are produced by small farmers mainly from frost-resistant native potatoes, known as "bitter potatoes," that are grown in high regions – sometimes as high as 4,400 meters above sea level. Bitter potatoes (of the sub-species *Solanum x juzepczukii* and *Solanum x curtilobum*) were domesticated some 8,000 years ago and have been cultivated extensively for at least 3,000 years. To be eaten, bitter potatoes must be processed to remove bitter-tasting glycoalkaloids. Traditional processing in the high Andes, described in various works, involve exposing tubers to several night frosts and drying them each day in strong sunlight (Bermejo and León 1994). White chuño or tunta in the Aymara language is obtained by "washing" the frozen potatoes. For that purpose, the frozen potatoes are transported to a river and deposited in pools. The final step is drying them in the sun. Black chuño is obtained directly from freezing, trampling, and refreezing. The product is not washed or exposed to water again; after freezing and trampling it is simply sun-dried. Bitter potatoes have generally been considered to have a very restricted market potential, so this case is particularly interesting because it illustrates a way to expand the market for native potato products. .

In the central Altiplano (high plateau) of Bolivia it is estimated that around 20,000 tons of potatoes are used for preparing chuño and tunta, which are mainly consumed on farms or are distributed through informal channels to Bolivian towns and cities. In the cities of La Paz and Cochabamba the average total consumption of these products is around 120 and 110 kg respectively, for a family of five (Guidi et al. 2002). Virtually, all the tunta and chuño that is marketed is sold in bulk; little attention is paid to food safety or the appearance of the product in markets. Despite these marketing deficiencies, chuño and tunta are consumed throughout Bolivia and play an important role in the national diet, both in rural and urban areas.

Actors and activities

The PMCA was applied two times in the Bolivian market chains for tunta and chuño. These applications involved farmers, traders, food processing firms, exporters, cooking schools, and R&D organizations working in the capital department of La Paz.

In the first cycle, carried out in 2003, participants felt that one of the most important barriers to expanding the marketing of traditional freeze-dried potato products in urban areas was the unreliable quality of the products available in markets. To address this problem, they decided to prepare a set of "Bolivian Quality Standards for Chuño and Tunta". The Bolivian Institute for Quality Standards (IBNORCA) played a leading role during this process, which resulted in establishment of a

formal set of quality standards recognized by the government. In this case, the collective action was temporary and ended when the quality standards were officially published.

In 2004, once the quality standards were available, the PMCA was used in a second exercise facilitated by PROINPA, which had a broader commercial orientation. This exercise involved some participants from the first cycle (NGOs, processors, commercial firms and exporters) plus chefs from cooking schools and a manager from a new food-processing firm (Ricafrut). The aim was to identify new uses for chuño and tunta and new ways to improve the products' image. Through this work, a new product was developed: clean, selected and bagged chuño, marketed under the brand, "Chuñosa". Exporters have also expressed interest in marketing this product in ethnic markets in the USA, Argentina, and Brazil.

In 2005, when the two cycles of the PMCA were completed, the participants decided to establish the "Bolivian Chuño and Tunta Platform", in order to sustain and consolidate the work developed by the sector, by improving the production and marketing of these products and promoting their export. The platform usually meets in the city of La Paz but sometimes holds meetings in rural communities. Members of the platform meet every month or more often if required to deal with emerging issues. The platform is still defining its organization and management procedures. Over time, new members from the private sector (export and processing companies) have joined the platform, motivated by their interest in participating in new income-generating activities. Until now, the main activities implemented by the platform have been related to the production and processing of chuño and tunta, including better production techniques for native potatoes and improvements in the quality of harvested tubers. The platform has also helped to develop new products based on chuño and tunta such as dehydrated soups and flour. It has also helped to identify new markets at national and international levels. In order to stimulate greater interest and demand for chuño and tunta in urban areas, a Gastronomical Festival for Chuño and Tunta was organized in La Paz in 2005. Here, well-known chefs presented a series of attractive dishes made with these products. Processors, hotel and restaurant managers, R&D institutions, public officials (including diplomatic corps), and members of the press were invited. The event had good coverage in the national media and was promoted through the Internet.

Beyond commercial activities, the members of the platform have pursued the more strategic goal of promoting development of the tunta and chuño market chain by improving its image and public awareness. Farmer associations' objective to participate in the platform was to link with market agents who want a reliable supply of high-quality chuño and tunta. CIP and PROINPA participated as a means for getting researchers and technology users together and to develop a research agenda that is more impact-oriented.

Results

As a result of collective activities carried out through the PMCA and later with the stakeholder platform, a new processed product has been introduced into the urban markets of La Paz and Santa Cruz (Bolivia's main cities): the "Chuñosa" brand is a clean, selected, uniform-quality chuño sold in clear plastic bags. Two additional products are about to be introduced: a brand of chuño and tunta soup and a brand of chuño flour.

In the institutional realm, a significant result of this work has been the official Bolivian Standards (NB 316001) for Chuño and Tunta, which has been approved by Bolivia's food regulatory institute, IBNORCA. Additionally, the Chuño and Tunta Platform has been officially established to promote marketing of traditional freeze-dried potatoes and to develop the sector more broadly. This multi-stakeholder platform has taken up the challenge of developing the traditional potato processing sector through collective action. Whereas this sector has traditionally been disorganized and fragmented, it has begun to structure itself around common interests and objectives.

The platform was an opportunity to involve an interesting actor, a project called FOMEM, which foments small businesses for stimulating commercial initiatives. FOMEM has helped the private companies, members of the platform, to improve their business plan to access new funding opportunities. R&D organizations such as PROINPA and some NGOs are putting more emphasis on working to improve farmers' production techniques and tuber quality for responding more efficiently to quality market criteria. As a result of the activities of the Chuño and Tunta Platform, the image of these products is beginning to change in Bolivia, from one of a traditional "folk" food to one of a sophisticated and healthy Andean product.

USING stakeholder platforms and collaborative projects to develop potato markets in Chimborazo, Ecuador

Stakeholder platforms and collaborative projects are being developed in the context of considerable social and political instability in Ecuador. In recent years, there have been numerous abrupt changes in the national government. Rural poverty has been exacerbated by liberal economic policies, including the "dollarization" of the economy, reduced import restrictions and reduced public expenditures for agricultural research and development. These trends have widened the gap between urban and rural incomes and stimulated migration to the cities. Ecuador is decentralizing its public sector and local governments are gaining a larger share of total public expenditures. In the cities, the increased participation of women in the workforce is stimulating the demand for convenience foods,

and increasing urban household incomes and education levels are stimulating demands for higher-quality foods. Over the years, native potatoes have nearly disappeared, and most potatoes consumed are now from modern commercial varieties.

Actors & activities

INIAP's potato program has explored different approaches for promoting the development of the potato market chain. Initially, supported by Papa Andina and IICA, it attempted to create a national level consortium of market chain actors and development organizations to address macro-level problems on a thematic basis. This attempt eventually foundered, and a new approach was tried again with guidance from Papa Andina to work with local level multi-stakeholder platforms around particular market opportunities. A platform was conceptualized as an alliance among diverse local actors, representing public and private sectors, which came together to achieve common objectives related to potato production or marketing. The SDC through the Fortipapa project provided small grants for the establishment of a "collaborative project" to link small potato farmers with specific market niches through capacity building supported by the platforms.

Platforms and collaborative projects were set up in Tungurahua, Chimborazo, Cotopaxi, and Bolivar provinces. The first three of these have operated since 2003; the fourth began operating in 2006. INIAP and the FORTIPAPA project have played a crucial role in the establishment of these platforms.

The development of platforms and collaborative projects in Ecuador has involved four key stakeholder groups:

1. Agricultural producers, either independent or organized
2. Public institutions, such as INIAP, universities and local governmental bodies
3. Private and non-governmental entities
4. Others, including the Inter American Cooperation Institute for the Agriculture (IICA) and the Food and Agriculture Organization of the United Nations (FAO)

Each of the platforms has been set up following a five-stage process:

- *Identification and motivation of participants*. This step includes definition of the geographical scope of the intervention, identification of potential participants (both individual producers and institutions), and providing motivation to the different actors to develop relationships

with others in the zone. One of the local organizations in the platforms takes on the role of platform coordinator.

- *Analysis of market opportunities*. In this step, the "market chain approach" is introduced as a framework for analysis and later action. Motivational activities continue to encourage participants to work together. Market studies are carried out to provide information needed by groups to identify and analyze potential business opportunities.
- *Development of collaborative projects.* The platform is formally established. Operational rules and procedures are discussed and agreed on. Production bottlenecks and potential market opportunities are discussed. Areas for possible joint action are identified and assessed. Work plans and business plans are drawn up.
- *Development of business opportunities*. Means are sought to put into practice the plans prepared in the previous step. Essential studies are carried out, and training and technical assistance are provided to support the business development.
- *Strengthening the entrepreneurial capacities of potato producers*. A management system is implemented for the platform. Internal operational procedures are strengthened. New participants with complementary skills or resources are encouraged to join the platform. FORTIPAPA turns over responsibility for decision-making and assumes a backstopping role.

Monthly plenary meetings are usually organized for members to discuss issues at each decision point and to reach decisions by consensus. In these meetings, FORTIPAPA and the other R&D organizations inform members about studies being carried out and services available that are related to the market opportunities being developed. At these meetings, members also assess progress with potato production and sales, in relation to pre-established plans. Each potato producer must contribute with 6 percent of the value of potatoes sold through the platform, to cover the operating budget of the platform.

Results

The platforms and collaborative projects have produced a number of results to date. Selected fresh potatoes have been marketed to 29 restaurants, fast food outlets, and processors in Ambato and Riobamba. The platform had a major advantage compared to other providers through the Fripapa potato variety which was not previously grown in the area and is much more suitable for processing than the varieties grown previously. (*Fripapa* was originally developed by the INIAP potato program based on CIP materials for FritoLay). Without Fripapa, none of this would have happened, as it gave farmers an advantage analogous to the native potatoes. Initially, the platform tried to target FritoLay, but they found it very hard to meet the quality requirements and in particular the need to keep sugar levels low to stop chips from burning. From 2003 to 2004, approximately 545 tons have been marketed via the Chimborazo and Tungurahua platforms. The price received by farmer members of

the platforms was approximately 30 percent above that received by non-members during the same period. This commercial success resulted from successful collective action as outlined below.

- NGOs, universities, and research programs have worked together to organize different capacity building activities to improve small farmer productivity and the quality of potatoes supplied to the market. Eighteen field days and four technology fairs have been organized for small farmers. More than 1,000 farmers have participated in these events or received other forms of training. Twelve applied research projects conducted with local universities have addressed technical constraints identified by members of the platforms. Thirty-two R&D institutions and 61 farmers' organizations have participated in the activities of the platforms. Participating R&D organizations include NGOs, universities, provincial, and municipal councils. These organizations have all provided financial resources for the platforms' activities.
- A national organization, Consortium of Small Potato Producers (CONPAPA), has recently been established to put decisions about the production and marketing of potatoes into farmers' hands. CONPAPA participates in meetings of the regional platform to ensure that service providers meet farmers' needs for capacity development and market intelligence.

DISCUSSION

This section highlights some of the salient patterns and trends in collective action that emerge from the cases presented in Section 5. The major areas discussed, which are summarized in Table 2, are:

- Origins of collective action in each case
- Objectives of the collective action
- Intended duration or lifespan of the collective action
- Geographical and thematic scope of the collective action
- Type of group members
- Main activities carried out
- Legal status and governance of the groups
- The groups' financial base
- Challenges faced by the groups in linking smallholders to markets

The section ends with an outline of priorities that Papa Andina has identified for addressing these challenges in the future.

Origins of collective action

All the organizations studied have been established since the year 2000. The CAPAC-Peru platform and the two groups working on chuño and tunta in La Paz emerged from PMCA exercises. APROTAC in Cochabamba was established before work with the PMCA began there, but was consolidated as a result of the PMCA work. The Chimborazo platform in Ecuador is the only case studied that did not emerge from, or was not consolidated by, work with the PMCA.

Table 2. Comparison of five cases of collective action

CAPAC Peru	APROTAC	Chimborazo Platform	Chuño Norm Group	Chuño & Tunta Platform
Established 2003. Emerged from PMCA exercise. Responds to growing market demand for high-quality potatoes for supermarkets, processing and export.	Established 2002. Emerged from a Local Agricultural Research Committee, with support from PROINPA. Strengthened through PMCA exercise and development of a viable native potato product.	An initiative of INIAP's potato programme to bring together development organizations to help small potato farmers enter more promising markets	Established 2003. Emerged from a PMCA exercise in La Paz. Ceased operating when quality norms were established for *chuño* & *tunta.*	Established 2005. Emerged from the PMCA
Promote marketing of quality potatoes and other Andean crops.	Develop market opportunities for farmers' native potatoes. Strengthen farmer organization.	Strengthen farmer organization. Link small farmers to high-value potato markets.	Develop quality norms for *chuño* & *tunta.*	Develop new markets for *chuño* & *tunta.*
Long-term.	Long-term.	Long-term.	Operated for 12 months, to develop the quality norms for *chuño* & *tunta*.	Long-term.
National.	Local.	Local.	National.	Local.
Platform of market chain actors and service providers. Members include farmer associations, small agro-industries, wholesale market agents & NGOs.	Mainly small farmers.	Small farmer orgs & service providers (NGOs, univ's, INIAP, CIP, municipal govts). Market agents are clients, not members.	Producers' associations, merchants, processors, government offices, NGOs.	Producers' associations, merchants, processors, exporters, government offices, NGOs.

Table 2. Comparison of five cases of collective action (continued)

CAPAC Peru	APROTAC	Chimborazo Platform	Chuño Norm Group	Chuño & Tunta Platform
Provides daily market information and services to promote native potato production and marketing. Markets wholesale potatoes under the brand 'Mi Papa'.	Provides to its members services to enhance potato production and quality and to promote marketing through market identification and negotiation tools.	Organizes farmer field schools on agricultural topics, coordinates production plans, assists with marketing and development of new markets. Coordinates research on technology to improve product and add value.	Preparation of quality norms for *chuño* & *tunta*.	Product development and promotion, technical assistance in production and processing.
Formally constituted non-profit association with elected board. Presidency assumed by an NGO; private sector representatives serve on the board (www.capacperu.org)	Formal farmers association, with board and statutes. Commercial relations between APROTAC and LUCANA are bound by contracts.	Informal organization. No specialized governance mechanisms. INIAP-FORTIPAPA assumes overall responsibility for convening the platform and designates a coordinator.	Informal organization. The Bolivian government legally sanctioned the norms produced by the group.	Informal organization until now. Members expect to formalize the organizations when they have defined objectives, roles, and rules.
Receives contributions from members and support from Papa Andina. Obtained support from a USAID grant in 2006.	Operates with funds from member contributions and support from PROINPA.	INIAP-FORTIPAPA provides financial support to cover operating costs.	Participating organizations provided resources.	Resources are coming mainly from the development organizations that participate to the platforms and from Papa Andina.

Table 2. Comparison of five cases of collective action (continued)

CAPAC Peru	APROTAC	Chimborazo Platform	Chuño Norm Group	Chuño & Tunta Platform
Informal, traditional potato marketing system, difficulty of getting a price reward for quality, high transaction costs involved in working with small farmers in new market development.	Few market actors and service providers appreciate the potential for markets for native potatoes. Service providers and market agents lack effective ways of working with small farmers. Native potato markets are informal, with lack of trust, inequitable relations and asymmetrical access to information.	Difficulty in meeting stringent quality and volume requirements of large processors (such as Frito Lay). High transaction costs of supplying fragmented markets for restaurants. Instability of prices.	None were experienced.	Traditional marketing of *chuño* & *tunta.* Investment is needed for advertising, promotion and public awareness campaigns, to improve the image of these products.
Need to disengage from operational marketing activities and assume a more strategic role in linking small farmers to markets through decentralization of its activities at departmental level.	Need for alliances with more native potato growers, other service providers and other market chain actors to reduce the seasonality of supplies, increase volume of quality produce, and lower dependence on a single processor. Need to consolidate and diversify markets and sources of financial support.	Need to disengage from the direct marketing of potatoes and allow CONPAPA to assume this role. Need to empower farmers to assume more decision-making roles.	The main challenge was to reach consensus among participating stakeholders on quality norms.	Need to define a strategic vision for the group and prepare a work plan with clear definition of roles and responsibilities. Need to improve the quality of *chuño* & *tunta* supplied to the market.

Objectives

Most of groups began with broad objectives, such as improving market opportunities for native potatoes, linking poor farmers to urban markets, and strengthening farmer organizations. In contrast, the group that developed the quality norms for chuño and tunta in Bolivia had a very specific objective. Groups with more specific objectives have tended to be more transient in nature.

Intended lifespan of collective action (transitory vs. more durable groups)

As all the organizations have been recently established, we can't assess their sustainability or long-term viability. However, the cases illustrate that where a group's objectives are specific and quickly achievable, collective action of short duration may be quite productive (chuño and tunta norms in Bolivia). In other cases, even when the original objectives were achieved, members decided to continue interacting, for example, to organize the provision of services required for innovations to become economically viable. This has occurred in APROTAC in Cochabamba, the Tunta & Chuño platform in La Paz, Capac-Peru, and CONPAPA in Ecuador. For collective action to be sustainable, it must generate sufficient benefits for members to compensate for the costs of participation.

Geographical / thematic scope (local vs. market chain vs. national vs. regional level)

Some groups have functioned at the local level – for example, the Chimborazo stakeholder platform involving farmers, local government, and other service providers. At the market-chain level, the PMCA has promoted collective action that brings farmers together with market agents in other locations – for example, APROTAC in Cochabamba, which began working with supermarkets in Santa Cruz. At the national level, formal organizations, such as CAPAC-Peru, have promoted innovation more broadly within the potato sector also involving the policymakers. At the regional level, the Papa Andina initiative itself facilitates knowledge sharing and social learning among its partners.

Membership (homogeneous vs. heterogeneous members)

Some groups, such APROTAC in Cochabamba and the national producer association CONPAPA in Ecuador, have a relatively homogenous membership of small farmers. Others, such as the Chuño & Tunta platform in Bolivia and CAPAC-Peru, have a diverse membership, including a range of market chain actors researchers and other service providers. One type of group can evolve into another. For example, in Bolivia, the Native Potato Chips Work Group started with research

institutions, a private processing company, and a farmer organization. But, after the new product was developed, the collective action has focused on the farmers' association, APROTAC.

Main activities / services

The scope of activities has reflected the scope of objectives, which, as already noted, may evolve over time. CAPAC-Peru, a national organization with broad goals, has perhaps the broadest range of activities, including provision of daily market information, technical assistance to potato producers, and management of its own brand of potatoes in the wholesale market. The Chimborazo platform provides a somewhat more limited range of services to link farmers to specific urban markets. The Chuño & Tunta platform focuses even more narrowly in order to promote the use of traditional products in urban markets.

Legal status and governance

CAPAC-Peru, APROTAC and the Chuño & Tunta platform are all formally constituted membership organizations with governing bodies and internal operating procedures. In contrast, the Chimborazo platform in Ecuador is an informal body with no specialized governance mechanisms; INIAP and the FORTIPAPA project convene the platform. Coordination is provided by institutions that are members of the platform and is renewed every year.

Financial base

In all the cases, initial financial support was provided by Papa Andina or its local partners (R&D organizations). As the collective action evolved, members began providing resources. In Peru the three phases of the PMCA were supported by INCOPA and Papa Andina with important contribution from the private-sector participants (processors and cooking schools) for the development and promotion of new products. The CAPAC-Peru platform charges a small membership fee, but is still dependent on external funding. It has developed fund raising capacity and in 2006 it obtained a USAID grant through the Peruvian Ministry of Agriculture to cover its costs for the next three years. In Bolivia, implementation of the PMCA and the formation of stakeholder platforms have been supported by PROINPA. However, APROTAC is financially autonomous and has taken advantage of the new business opportunities with native potatoes to increase both of its

members' and its own income. In Ecuador, the Chimborazo platform is financed by the FORTIPAPA project managed by INIAP and also by the NGOs members of the platform.

Challenges faced by the groups in linking smallholders with markets

In the work of Papa Andina with the PMCA and stakeholder platforms in Bolivia, Ecuador and Peru, there have been five main challenges:

- Providing adequate facilitation for group work
- Ensuring the sustainability of collective action
- Scaling up
- Costs of participation
- Improving gender equity

a) Providing adequate facilitation for group work

Effective facilitation of groups implementing the PMCA and developing stakeholder platforms requires well-trained facilitators who understand the complexity of developing business opportunities with small-scale farmers without being paternalistic. Staff members of national research organizations who are Papa Andina's strategic partners have usually played the facilitation role. These professionals generally have technical backgrounds in crop production. One common error has been for the research or development entities to take on responsibilities for some of the marketing tasks, instead of strengthening the capacity of farmers' groups to perform these tasks. The lack of facilitators' knowledge and capacity in areas such as market analysis and market chain development were important challenges in the early stages of implementing the PMCA. Skills in these areas have been developed over time. The facilitation of heterogeneous groups also has required sensitivity to the interests and aspirations of diverse participants and the ability to promote leadership among the participants. All these skills were developed over time.

b) Ensuring the sustainability of collective action

Smallholders generally face higher marketing costs than larger farmers because of their small volume of marketable surplus, the lack of business skills, and lack of access to information and technology. Collective action may provide opportunities for farmers to access services and information that allow them to improve their capacities in these areas. But these services have a cost that needs to be covered. Until now, the costs have been covered largely by the R&D organizations

involved in the PMCA exercises and the stakeholders' platforms. New approaches need to be developed to finance the services that small-scale farmers require to access new market opportunities. More efforts are required to take advantage of the political and administrative decentralization that is taking place in Andean countries by involving local authorities in activities and getting their financial support. New approaches to promote social responsibility are also needed to involve the private sector more effectively.

c) Scaling up

Our work to date has mainly involved the development of niche markets for smallholders and small agro-industries. The participatory approaches we have used to identify and develop new market opportunities have mainly involved small agro-processing firms because of the small size of these markets and the time required to develop new products and processes. Although small firms have invested resources in the development of new market opportunities, their financial resources have been limited, and they have lacked risk capital. Moreover, they sometimes have not had the business tools and skills needed to adequately evaluate business opportunities. These factors have prevented the expansion of markets and have limited the number of farmers and businesses involved to relatively small numbers.

d) Costs of participation

The PMCA and development of stakeholder platforms involve participatory process that are, or seem to be, time consuming, especially in the beginning, before tangible results have been produced. This has proven to be a limitation to the participation of private entrepreneurs, who are often reluctant to spend time in knowledge sharing activities and collective learning without seeing quick results. The public events in each of the phases of the PMCA have been planned to inform people about the progress made and the concrete results achieved; these have attracted new members interested by the innovations that are being developed in the process. Yet, involving busy private business people has often proven to be difficult.

e) Gender equity

Women have participated in the work carried out in the three countries; however, much remains to be done to significantly impact gender equity. Women involved in marketing and processing activities (for example in the Chuño &Tunta platform) have played more prominent roles in group work and decision-making than those engaged in production. This is partly because men traditionally lead farmers' associations.

f) How Papa Andina intends to address these challenges

Papa Andina intends to address these issues through capacity building for strengthening its partners in the areas of market analysis, chain development, participatory approaches, product

development, and social responsibility. Special attention will be given to empowerment and to developing areas where women can play more significant roles in collective action, which will potentially generate greater benefits for women and children.

Papa Andina will also seek to strengthen small agro-industries through on-the-job training in business development. Particular attention will be paid to strengthening their capacity to access and effectively manage resources for promoting private-sector development. Efforts will also be made to strengthen more strategic types of platforms, such as CAPAC-Peru, which, in turn, can facilitate the provision of services that can help small farmers and agro-industries of different types to respond more efficiently to market opportunities.

In order to draw lessons from its work and to scale up use of the PMCA and stakeholder platforms, Papa Andina is monitoring and evaluating its work, documenting its cases and developing guidelines for approaches that have potentially broad application. It has begun to develop training materials on participatory methods for collective action at different levels. For example, a PMCA User Guide has been prepared in Spanish and English, and capacity building workshops for the PMCA have been carried out not only in the Andes, but also in Nicaragua, Uganda, and Laos. Building networks and strengthening capacities for using the PMCA and stakeholder platforms will be a priority for phase 3 of Papa Andina, and it is expected that this will contribute to scaling up the use of these approaches, leading to an increasing impact on poverty reduction at the national and regional level over time.

LESSONS LEARNED AND CONCLUSION

Lessons Learned

In regard to collective action theory, Papa Andina's experience gives interesting practical insights of potential value to others who wish to promote pro-poor innovation and market access through collective action. In the remainder of this section, we summarize a number of lessons learned from the Papa Andina experience in Bolivia, Ecuador and Peru.

Lesson 1: Collective action can stimulate innovation in ways that contribute to smallholder market integration and poverty reduction

One of the most important lessons from the experiences with the PMCA and stakeholder platforms is that collective action can stimulate pro-poor market innovation. In each of the cases in

Bolivia, Ecuador, and Peru, collective action led to technical, commercial, or institutional innovation that in turn contributed to improved market participation of smallholders and improved livelihoods of the poor. In the cases studied, the interaction of people participating in group activities strengthened business contacts, social networks, knowledge sharing, and interpersonal trust. As the capacity for teamwork developed, participants identified new market opportunities and developed new production processes, ways of working, and products to exploit these opportunities. These innovations helped link small farmers to emerging markets at more favorable terms and improved their livelihoods.

Lesson 2: The diversity within multi-stakeholder platforms can be a valuable source of commercial, technical, and institutional innovation

It is often observed that diversity within a group complicates collective action. Papa Andina's experience is that while diverse groups may me more difficult to facilitate than homogeneous ones (e.g. producer associations), they are more likely to result in new products, processes, norms, and behaviors. The PMCA experiences illustrates that there is great value in diversity for learning and innovation. Such multi-stakeholder initiatives directly benefit those participating in these platforms as they gain important insight, make new interesting contacts, and may access new business opportunities. Such platforms can also be of value to "outsiders," who can gain access to valuable information and contacts at a low cost. In other words, a multi-stakeholder platform is a very attractive entry point for "newcomers" – be they researchers, donors, politicians, farmer groups, or business men – to discuss and set up new R&D projects or new businesses.

Lesson 3: Commercial innovation can drive subsequent technological and institutional innovation

Experiences with the PMCA in Peru, Bolivia, and Ecuador have shown that commercial innovations (i.e., development of new products) can stimulate the use of new production technologies as well as new institutions. At the local level, the launching of native potato products has stimulated the formation and strengthening of farmer organizations to facilitate marketing as well as improvements in production and post-harvest practices. At regional and national levels, such formal associations as the Chuño & Tunta platform in La Paz and CAPAC-Peru have been formed to advance the interests of small holders and other market chain actors. In the technical sphere, market development has stimulated the use of new cultivation and post-harvest techniques needed to supply the types of potatoes demanded by processors and urban consumers. For example, methods to inhibit potato sprouting have been adopted to allow native potatoes to be stored, reducing the seasonality of

supplies to processors and consumers. In its efforts to link research to development and to engage CIP and national research organizations into impact-oriented research, Papa Andina is using the PMCA and stakeholders platforms as means to involve them more closely in the innovation process with technology users at different levels.

Lesson 4: Collective action at different levels can produce valuable synergies

Stakeholder platforms and the PMCA have proven to be highly complementary. Groups operating at the market-chain level, in the framework of the PMCA have found that exploitation of new market opportunities often requires collective action at the local level needed to build farmers' capacity to respond effectively to market signals. Similarly, producer associations and stakeholder platforms at the local level have benefited from market chain development work that identified new market opportunities and built social and commercial networks to link producers with market actors.

Lesson 5: Collective action does not just happen - it needs good facilitation

Actors involved in Papa Andina's PMCA applications in Peru and Bolivia mentioned that this was the first time that the representatives from the whole sector came together to discuss how it could be improved. They also appreciated the fact that for the first time research institutions were listening to them. This reveals that opportunities for information exchange and collective action need to be actively created. This is especially true for bringing together actors along the market chain who compete in their daily business and whose time has a high opportunity cost. To guarantee active participation of key actors in a participatory setting, good process facilitation is needed to generate tangible benefits for actors who get involved. When looking across all experiences Papa Andina has had with multi-stakeholder platforms, successful collective action has usually been associated with highly competent (social and technical) facilitation of these processes.

Lesson 6: Bio-diversity and cultural identity can add value to collective action for market access

In our work in the Andes, native potatoes are important assets of small farmers in highlands as they have a comparative advantage in producing these potatoes in relation to large farmers in the valleys and abroad. In Bolivia and Peru, where there is greater potato biodiversity than in Ecuador, commercial innovation with native potatoes has been a key element in linking small farmers to markets. Native potatoes have been used as a "pro-poor filter" for developing high value niche

markets for which small-scale have a comparative advantage. We call them “pro-poor filters” because native potatoes are mainly grown in the highlands where poor farmers predominate and where the ecological conditions are favorable for their production. As these potatoes are part of their culture and heritage, products made from native potatoes give them more opportunities to participate in these niche markets and promote their culture. These products also have a good potential to do well in external markets because they are seen as exotic and coming from a well-recognized region, the Andes. Native potato can add value to collective action, making small farmers and small agro-enterprises more competitive in the potato market chains. The PMCA is helping involve small farmers in new markets and place a market value on their cultural heritage.

CONCLUSIONS

The PMCA and stakeholder platforms have proven to be effective in developing commercial innovations, and these have became drivers for institutional and technological innovations along the market chain. To ensure that small farmers benefit from innovation processes, stakeholder platforms help them get organized and gain access to services they need from public and private providers to exploit new business opportunities and increase their incomes. Various forms of collective action have been promoted at different levels (local, sub-national, national, regional). These have involved different market chain actors (including small farmer groups) and service providers to perform a range of tasks and achieve different objectives.

At the local level, farmers have been integrated into producer associations or stakeholder platforms that brought them together with NGOs, local governments, traders, and service providers. These platforms have provided opportunities for knowledge sharing, capacity building, and collective learning at the local level, which have improved farmers’ capacity to exploit potential market opportunities. At a more strategic level, multi-stakeholder platforms have been established as part of a participatory approach to market development (the PMCA). These have involved consumers, processors, market agents, farmers associations, national governmental bodies, and R&D organizations. These actors have identified market opportunities and worked on innovations needed to exploit them. At the regional level, Papa Andina itself functions as a platform for knowledge sharing, learning and documentation of experiences. The experience of Papa Andina and its partners demonstrates how different forms of collective action involving different stakeholders can stimulate commercial, technical, and institutional innovations that contribute to market integration and poverty reduction.

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