The PMCA, business development services and farmer business schools in Indonesia

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As part of a broader effort to improve the linkage of smallholder vegetable farmers to markets, the Participatory Market Chain Approach (PMCA) was applied in potato market chains in West Java. A PMCA specialist of the International Potato Center (CIP) from Lima, Peru, trained and backstopped a group of Indonesian facilitators who implemented the PMCA with local farmers, other market chain actors, and agricultural service providers. After completing the PMCA exercise, the project team provided business development services to innovators who wished to continue developing new products or new market arrangements. Drawing on the PMCA and the "Farmer Field Schools" (FFS) approach, "Farmer Business Schools" (FBS) were developed to strengthen the entrepreneurial capacities of farmers and farmer organizations. A review of the Indonesian work indicates that the PMCA triggered the development of several new potato-based products that have been profitably marketed. Successful innovators have included both women and men, most of them young, enterprising individuals from relatively well-to-do families in their communities. The PMCA has strengthened relations among market chain actors and with agricultural service providers. Improved relations have facilitated a generation of new products and new ways to produce and market potatoes. The study confirms the value of providing business development services after use of the PMCA, as well as the potential value of Farmer Business Schools to strengthen farmer organization and business skills.

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Indonesian context

Indonesia is the largest potato producing country in Southeast Asia. In the past, potato consumption has been driven by European consumption patterns, but potatoes are now also used in traditional snack foods, which are an important part of the national diet. Potatoes are grown mainly by smallholder farmers in the highlands of West Java, where the potato is one of the most important vegetable crops. Until recently, nearly all potato farmers sold their harvest to local traders or in traditional wholesale markets, but consolidators and brokers are now also buying potatoes for supermarkets. The largest player in the market for processed potatoes is the commercial chipping company, Indofood, which produces western-style snack foods. Hundreds of home-based snack food enterprises in rural and peri-urban areas also process and market snack foods, including ones made from potatoes. These processors acquire their raw materials from local markets or directly from small farmers, and distribute their wares through traditional markets, snack-food stores, and restaurants.

For several years, the Australian Centre for International Agricultural Research (ACIAR) has supported potato Research and Development (R&D) efforts in Indonesia, in partnership with the Indonesian Vegetable Research Institute (IVEGRI). This work, focused on technical issues, has often been frustrated by marketing problems. In 2008, ACIAR and CIP launched a new project to improve the marketing of potatoes and other vegetables in West and Central Java provinces of Indonesia. The project initially used the PMCA to promote pro-poor innovation in potato market chains. Subsequently, a complementary approach for improving small farmers' organizations and business skills, known as the Farmer Business School (FBS) was also developed, and an array of business development services has been provided for innovating small farmers and processors.

1 Indofood is a subsidiary of the multi-national Frito-Lay Corporation.

Capacity development strategy

A major goal of the ACIAR-supported project was to develop local capacity for use of the PMCA. Based on CIP's experience in the Andes and Uganda, the capacity-development strategy included the following elements:

- Participatory planning and decision-making involving local actors
- Negotiation with senior managers in lead R&D organizations to foster institutional commitment to the PMCA
- A comprehensive training strategy that included: action-oriented PMCA training workshops; use of the *PMCA User Guide* and complementary training materials; practical hands-on work with the PMCA in commodity groups; and backstopping and coaching by experienced PMCA facilitators
- Knowledge sharing among the PMCA facilitators and teams working with different thematic groups
- Periodic learning-oriented reviews to improve the implementation process and documentation of results

Key actors

During Phase 1 of the PMCA exercise, about 30 potato producers, market intermediaries, processors, retailers, and restaurant owners were interviewed and participated in a workshop to analyze results of the market-chain survey. During Phases 2 and 3, around 25 small farmers, local traders, larger-scale intermediaries, processors, and owners of small market outlets in the urban centers of Bandung and Jakarta participated in group meetings to develop innovations, Public events at the end of Phases 2 and 3 attracted 60 and 100 participants, respectively - most were market chain actors, but representatives of development organizations, local authorities, and the news outlets were also present.

The PMCA exercise was coordinated by an Indonesian marketing specialist[2] based at CIP's regional office in Lembang, West Java, with guidance from CIP's senior social scientists.[3] The PMCA facilitators came from IVEGRI, West Java's Department of Agricultural Extension, and the agro-business branch of a large and prestigious NGO, Daarut Tauhid. Capacity development for the PMCA was led by a PMCA specialist based in CIP-Lima, who made four trips to Indonesia for training and coaching, and providing backstoppingwith constant communications.[4] Members of CIP's regional team joined local PMCA facilitators in planning and reviewing workshops for the PMCA, the FBS and business development services.

2 Budhi Prasetya.

3 Dindo Campilan and Graham Thiele.

4 Thomas Bernet, one of the developers of the PMCA, provided the training, coaching, and backstopping.

Timeline

The PMCA was implemented in West Java from March 2008 until June 2009.

Phase 1. A PMCA specialist from CIP-Lima delivered a training course on the PMCA for local PMCA facilitators. An informal assessment, of potato marketing chains was conducted, that identified key roles played in the chains and barriers to greater participation of small farmers in market development. Survey results were discussed at a workshop in May 2008 attended by around 40 market participants and service providers, who also identified potential business opportunities for fresh and processed potato products.

Phase 2. A second PMCA training workshop with ten participants was delivered in June 2008 by the CIP PMCA specialist. From July to December, thematic groups met to assess and develop the selected business opportunities. A brand name – *Cumelly* – was selected for new products, based on the Sundanese word for highland potatoes. The public event at the end of Phase 2, in January 2009, attracted about 60 people and served to test prototype products, inform stakeholders about the PMCA activities and results, and motivated new market chain actors and service providers to participate in Phase 3.

Phase 3. The third PMCA training event was held in January 2009. During the next 5 months, members of the two thematic groups met to work on issues related to the development and marketing of fresh and processed products. Both groups worked on packaging and labeling. The fresh potato group arranged for IVEGRI to conduct research to determine how best to increase the proportion of large-sized tubers. The processed potato group focused on developing a novel potato chip product with the skin intact, known as *jacket* potatoes and on use of potato in a traditional snack food known as *dodol*. Focus groups were organized to gauge the reaction of housewives to the new products. Processors and farmers also participated in an agricultural exposition to test consumer reactions to new products marketed with the Cumelly brand. The PMCA exercise drew to a close in June 2009 with a public event held in a traditional restaurant in Bandung, where the new products could be displayed. About 80 people attended this event, including local authorities and journalists from local newspapers, TV, and radio stations.

Development of a "Farmer Business Schools" Approach

The "Farmer Field School" (FFS) is a group-based learning approach developed in Indonesia in the late 1980s to promote integrated pest management for smallholder farmers. Since then, this approach has been adapted and used by governments, NGOs and international agencies in many countries to address a growing array of production problems. In their work in the Andes, Uganda, and Indonesia, PMCA practitioners identified limited business skills and ineffective farmer organizations as key constraints to linking small farmers with dynamic markets. For this reason, the Indonesian project team decided to combine elements of the FFS and the PMCA in a "Farmer Business School" (FBS) approach that would build farmer capacity to work with other market chain actors, strengthen farmer organizations, and promote development of new agri-businesses.

The FBS involves a facilitated action-learning process implemented by a group of farmers during a cropping and marketing cycle. The project team developed a FBS guide that covers five key topics:

1. Identification of market opportunities
2. Assessment of market chains
3. Development of market-oriented innovations
4. Development of business plans
5. Provision of business support services

Two cycles of the FBS have been implemented. In the first one, a single farmer group focused on marketing of fresh potatoes. Four groups participated in the second cycle, focusing on marketing of fresh and processed potatoes, black soybean (for soy sauce), and broccoli – a new high-value crop being introduced in the area.

Comparing the Farmer Field Schools, Farmer Business Schools and the Participatory Market Chain Approach

The three approaches employ action learning to improve the welfare of small farmers, but they go about it in different ways (see Table 1). Whereas the FFS and the FBS work with groups of small farmers, the PMCA engages diverse market chain actors. The key issues addressed in a FFS are technical ones related to production. In contrast, the FBS addresses issues of business development and farmer organization. The PMCA goes beyond farm-level business concerns and seeks to improve the market chain. In systems terms, the FFS addresses the cropping system, the FBS addresses the farm enterprise, and the PMCA addresses the market chain. The FFS takes less time than the other two approaches, as it is carried out during a single cropping cycle. In contrast, the FBS covers both production and marketing cycles, and the PMCA extends over the time required for developing successful market innovations. Given the types of participants involved, the issues addressed, and the system level at which the intervention operates, the FFS is simpler and less costly than the FBS , and the PMCA is the most complex and costly of the three approaches. Whereas the FFS focuses on technical innovation in crop production, the FBS and PMCA pay more attention to institutional innovation, as a driver of subsequent technical innovation. The FFS and FBS strengthen farmer organization, which is a weak area in the PMCA. Instead, PMCA emphasizes building "bridging social capital," which strengthens trust and relations between people from different spheres of activity, allowing them to work together in multi-stakeholder networks.

Table 1. Comparison of the Farmer Field School (FFS), Farmer Business School (FBS), and Participatory Market Chain Approach (PMCA)

	FFS	FBS	PMCA
Participants	Small farmers	Small farmers	Market chain actors[1]
Issues addressed	Technical crop-related	Business development, farmer organization	Development of market chain
System level focus	Cropping system	Farm enterprise	Market chain
Duration of intervention	Crop production cycle (3-6 months)	Crop production & marketing cycle (6-9 months)	Market innovation cycle (12-18 months)
Complexity & cost of intervention	Low	Intermediate	High
Contribution to farmer organization	Intermediate	High	Low
Contribution to multi-stakeholder networks	Low	Intermediate	High

[1] Including small farmers.

Providing business development services

Work with the PMCA in the Andes and Uganda revealed the need to support innovators after completion of the PMCA exercise. For this reason, 'business development services' were built into the Indonesia project. The project team developed a strategy for providing these services, in response to requests for assistance from the innovators themselves. Four types of service have been provided:

1. Advisory services

Smallholders, processors, and market agents have frequently requested advice and assistance to develop or expand their businesses. Project team members provided advice and support to 15 market chain actors, via face-to-face meetings and telephone consultations. This one-on-one support has frequently helped small farmers or processor negotiate prices or related aspects of business agreements. In addition, the project team assisted small-scale processors to prepare business proposals and to obtain credit and grant support from various financial institutions.

2. Public awareness and promotion

The project team has helped several potato processors to participate in trade and agricultural expositions, providing advice on how to prepare posters and demonstrations, how to present their wares, and how to communicate effectively with visitors. Project team members have also promoted the PMCA and the new potato products via promotional fliers, videos, and a web site, and by participating in workshops, conferences, and radio interviews,

3. Facilitation of meetings and interpersonal interactions

Approximately, 20 individuals – including small farmers, processors, service providers, financial institutions, and members of the PMCA project team – have participated in workshops held to review progress in their business initiatives and to discuss challenges and ways forward. One set of issues related to problems small processors had encountered in attempts to work with supermarkets, which require vender to post a bond and sell their goods on consignment, with delayed payments. Through the discussions, it became clear that selling to supermarkets might not be advantageous for small-scale processors. Although most of them later shifted their attention to working with smaller snack food outlets, some continued to sell potatoes via the intermediate wholesale/consolidator company, PT Bimandiri, which had the capacity to meet the terms and conditions set by supermarkets. The PMCA team has also facilitated bilateral negotiations related to investments and marketing.

4. Applied research

The project team has conducted or arranged for several applied research activities, including an informal consumer survey to assess the acceptability of new fresh and processed potato products. Arrangements were made for IVERGI to test a new potato variety for processing and marketing quality, and for Padjajaran University and a local machine shop to develop appropriate machines for small-scale processors to slice and peel their potatoes.

Results to date

New products

A 2011 review of experiences with the PMCA in Indonesia indicates that several of the small farmers and processors that participated in the PMCA exercise in West Java have begun to sell new products or sell their existing products in new ways. Thirteen distinct innovation processes have been documented. Most of these have resulted in new or improved processed products (mainly potato chips and snack foods), rather than fresh potato marketing (see Table 2). Some of the individuals involved have been highly innovative; two of the seven known innovators have been associated with more than half of the innovations. These are both young and enterprising individuals from relatively well-to-do families in their communities. The innovation processes have been dynamic. For example, over time one processor (Iba Rosida) reduced sales of the first products she developed and launched several new products – mainly flavored potato chips – that have been well received in market outlets. She has gained consumer loyalty based on the high quality of her products.

Table 2. Innovations triggered by the PMCA

Innovator (location)	Product	Innovations	Current status
Ida Rosida (Pangalengan)	Jacket potato chips, Cumelly brand	New product (small potato chips, Atlantic variety), new packaging & Cumelly brand	Still sold, but in small quantities
	Potato-based snack foods *(mustyofa, balado*), Cumelly brand	Use of potatoes in traditional snack foods, new packaging & Cumelly brand	Still sold
	Hot spicy potato chips, Cumelly brand	Introducing a series of new products that respond to consumer preferences	Growing market volume
	Other traditional snack foods using, e.g. spinach	Developing new products that respond to consumer preferences	Initial marketing
Chandra Hayat* (Pangalengan)	French fries, Cumelly brand	New product, new packaging & Cumelly brand	Small, growing market volume
	Bleached white potato chips (Granola variety), Cumelly brand	New product, new packaging & Cumelly brand	Erratic production & sales, due to weather
	Fresh potatoes for chips	New market arrangement for supplying a large processor	Growing market volume
	Fresh potatoes sold to a modern food market	Informal farmer group and new market arrangement for supplying a modern food market with sorted, graded, and washed potatoes	Initial marketing
Erilsmiati (Bekasi)	Traditional snack foods using potato	Improved packaging, expanded marketing	Growing market volume
	Other traditional snack foods	New products, improved packaging, expanded markets	Growing market volume
Uus Kusnewan (Garut)	Potato-based snack foods (*dodol*)	Use of potato as main ingredient in traditional snack food	Growing market volume
Six small farmers (Garut)	Bleached white potato chips (Granola variety)	Six farmers working together to supply this product to a modern food market in Jakarta	Marketing interrupted
Hendra* (Garut)	Potato chips for retail shops	New product, new packaging & Cumelly brand	Erratic volume marketed
Asep Carlie (Pangalengan)	Fresh potatoes for sale in supermarket	New informal farmer organization working with wholesaler, farmers sort & grade potatoes	Volatile, but growing volume marketed

* Motivated in part by their experience with the PMCA, these farmers became independent businessmen.

In the case of the FBS, three of the five farmer groups were successful in producing and marketing new products. The two groups that were less successful both attempted to improve the marketing of fresh potatoes.

Changes in knowledge, skills, and attitudes

The 2011 review indicates that the PMCA has contributed to the knowledge and skills of small processors and farmers in the following areas:

- Market chains, the individuals involved, and the roles they play
- Marketing principles and the requirements for successful innovation
- Sources of expertise or support for problem solving
- Communication and negotiation skills
- Cost-benefit analysis
- Methods for selecting and grading fresh potatoes

- Methods for producing, packaging, and labeling processed potatoes

The R&D professionals involved in the PMCA exercise report having learned a great deal and acquired valuable new skills. They have found the PMCA for market development, and they value the skills obtained in facilitation of group work, communication, mediation, and negotiation of agreements involving diverse stakeholders with different backgrounds and interests.

Social capital

The feature of the PMCA that participants seem to value most is its contribution to networking and interpersonal relations among those who participate in the thematic groups and public events. The PMCA has helped build "bridging social capital" that allows people to work more effectively across organizational and cultural boundaries.

Inclusion, empowerment, and wellbeing

By 'inclusion' we mean the extent to which small farmers and processors participate in and benefit from markets for the goods and services they produce. The PMCA has contributed to inclusion, by allowing several small processors and some producers to expand their market involvement or participate for the first time in dynamic markets.

The innovations triggered by the PMCA have contributed to the incomes and wellbeing of the innovators involved. However, these individuals are not from the poorest strata in their communities, but from relatively well-off families who have access to start-up business capital. These individuals generally play leadership roles in community groups, through which they facilitate the entry and participation of poorer farmers in market chains.

Conclusions and future priorities

This case shows that the PMCA can be effectively used to stimulate market chain innovation in Asia, and it demonstrates the value of complementing the PMCA with business development services. In comparison with earlier applications of the PMCA in Peru and Uganda, in Indonesia the PMCA stimulated a wider range of innovations with snack foods in a shorter period of time. This may reflect the strong tradition of household-level food processing in Indonesia, which provided a fertile environment for the PMCA. Provision of business development services after completion of the PMCA has been much appreciated by early innovators. The farmer business school also proved useful for strengthening farmer organizations and business skills. The Indonesian case indicates that the FBS may be the preferred approach where the main challenge is for groups of small farmers to exploit a reasonably well-defined and clear-cut market opportunity. The PMCA is the preferred approach where the market opportunity is less clearly defined and understood and where there are significant potential benefits from innovation in processing or off-farm marketing practices.

Two outstanding issues now being addressed by the project team are: (a) how to institutionalize and scale up use of the PMCA and (b) how to best document and assess outcomes of the PMCA.

Further reading

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