

**Volume 25
Number 3
December
2008**

In this issue:

- 1 **Article 1** Adding Value to Fresh and Processed Produce through Product Certification: The Philippine Case
By Josefina M. Lantican
- 3 **Message from the Director**
- 5 **Article 2** Linking Farmers to the Modern Market: Transparent Margin Partnership Model, Case of Mango Growers in Pemalang, Central Java, Indonesia
By Ronnie S. Natawidjaja *et al.*
- 10 **CAPSA News & Activities**

Article 1

Adding Value to Fresh and Processed Produce through Product Certification: The Philippine Case

By Josefina M. Lantican

Bureau of Agricultural Research, Philippines.

The low and unstable income generated from the prevailing farming and fishing activities in the Philippines keeps a lot of farming families below the poverty line. In order to stabilize and augment the incomes of families involved in farming, the Philippine Government continuously promotes value-adding activities, in its various projects and programmes. Concomitant with the promotion of value-adding activities is the improvement of farm-to-market linkages, which is deemed significant in improving the welfare of farming families in the country.

The study

To analyse and identify specific opportunities that secondary crop farmers can tap through product certification, a collaborative study was undertaken by the Republic of the Philippines-Bureau of Agricultural Research (BAR) and the United Nations Centre for Alleviation of Poverty through Secondary Crops' Development in Asia and the Pacific (CAPSA) in July 2008. The study is specifically aimed at: (1) identifying the linkages between smallholder producers and specific market segments, local and urban markets, and cold store chains; (2) determining the post-harvest practices of smallholder producers like cleaning, handling, and packing; (3) determining the pricing, implicit and explicit quality requirements and indicators, and current certification activities at all stages of the marketing channel; and (4) providing a basis for the preparation of training resources and materials specifically designed for small farmers to enable their linkage to dynamic markets.

The study focused on temperate and semi-temperate vegetables grown in the highlands of the Philippines. It covered Benguet Province in the Cordillera Administrative Region (CAR) and Bukidnon Province in Northern Mindanao Region, which are the major producers of highland vegetables in the country. Primary data and pertinent information related to post-harvest practices were collected from the producers, association/co-operative leaders, wholesalers, and retailers. Information on pricing, implicit and explicit quality requirements and indicators and current certification activities at all stages of the marketing channels were also elicited. The roles of local governments and policies were also studied and analysed.



The results of the study will serve as an input for the production of training materials for farmers, farmer associations or co-operatives and other stakeholders. The results were presented at a workshop in Bandung, Indonesia, attended by representatives of relevant agencies, highland farmers' associations and co-operatives leaders and other stakeholders. A similar workshop will be conducted in the Philippines from 17-18 December 2008. Results will also be posted on the web for wider dissemination.

The highland vegetable industry in the Philippines

The most adaptable areas in the country for temperate vegetable growing are the highlands of the Cordillera Administrative Region (CAR), the most notable of which is Benguet Province. Another area known for temperate and semi-temperate vegetable growing are the plateaus of Bukidnon and Misamis Oriental, in Northern Mindanao. Highland vegetables are also grown in the other regions of the country, but only in small quantities.

Area planted

For the last five years the area planted to major temperate vegetables averaged 41,978 hectare. CAR had the biggest cultivated area, averaging 15,505 ha or 35.7 per cent of the country's overall average area grown to temperate and semi-temperate vegetables. Northern Mindanao, on the other hand, has an arable area of 3,479 ha or 8 per cent of the national average. On the national scale, the biggest land area is devoted to tomato, covering 17,394 ha, followed by cabbage with 7,739 ha and carrots with 3,806 ha.

Average production

For the same period, the country produced an average of 455,069 tons of highland vegetables. Tomatoes had the biggest output volume with 169,095 tons, followed by cabbage and Irish potato with 98,178 and 79,125 tons, respectively. CAR produced an overall volume of 224,538 tons annually, about half of the country's total production. Northern Mindanao contributed 10.5 per cent of the total output. The value of produce traded in the La Trinidad vegetable trading post where most of the produce in CAR is bought stands at PhP 20 billion (US\$ 408 million) annually.

Consumption

Highland vegetables produced in the country are mostly consumed domestically, with low quantities being exported. The per capita consumption of both temperate and tropical vegetables in the Philippines stands at 39 kg annually. To increase consumption to 69 kg per capita as recommended by the Philippine Food and Nutrition Research Institute, the country has to increase vegetable production by 50 per cent. Among the low-income households, vegetables are mostly eaten as the main dish.

Vegetables of the Cordillera Administrative Region

Many vegetable growers in CAR are small landholders tilling half a hectare of land. They are generally grouped into associations and co-operatives. According to Benguet Vegetable Farmers Federation, the growing of vegetables per ha per planting season requires PhP 22,000 (US\$ 460) capitalization, incurred mostly for the application of fertilizers (combined organic and inorganic) and pesticides. These input costs usually range from PhP 700-2,000 (US\$ 15-42) per application per ha, depending on the rates of application.

The vegetables brought to La Trinidad are sold to wholesalers who later sell to other wholesalers, wholesaler-retailers, or retailers in Metro Manila, Northern Luzon, Central Luzon, Southern Luzon, the Bicol Region, and Eastern Visayas. Vegetables pass through 4 to 8 sets of traders before reaching their final destinations.

The Philippine Department of Agriculture (DA) has provided support to the vegetable industry in Benguet by providing services and various infrastructure of benefit to the farmers. Examples include cold storage facilities in La Trinidad vegetable trading post, and the agricultural tramline for hauling inputs from roadsides up to the farms in the mountains of the cordilleras and hauling fresh produce down.

Vegetables of Northern Mindanao

Cagayan De Oro is the marketing hub for highland vegetables in Mindanao and the site of the major vegetable trading post, the Agora Market. The average volume of vegetables that enter the Agora Market is PhP 1.88 billion annually (US\$ 39 million), which is a huge contribution to the local economy of Cagayan De Oro.

Most of the vegetables being brought to Agora Market are produced in the provinces of Misamis Oriental and Bukidnon. In Northern Mindanao, it has been a common practice for many small landholder farmers to secure loans from vegetable traders for the purchase of inputs. In return, they are obliged to sell their produce to the traders who provided the loans, which often deprives them from making a decent profit from their farming activities. Aside from this, many farmers incur huge costs in transporting their produce due to the poor condition of many farm-to-market roads.

At the market, farmers are mostly paid in cash when their produce has been totally sold out. To cover the cost of trimming and cleaning, 10-25 per cent of the total value of the produce is commonly deducted. This is in addition to the PhP 1-2 (US\$ 0.02-0.04) per kg of produce usually collected as a storage fee. Vegetables from Agora are commonly transported to the major cities in Mindanao, Visayas and

As I wrote in the last issue of Palawija News, CAPSA is going through a process of restructuring. We are now preparing for the next session of the Governing Council where Ms Noeleen Heyzer, the Executive Secretary of ESCAP, plans to discuss the future direction of CAPSA with the members of the Council. Her intention is to make CAPSA into a centre of excellence on poverty alleviation and secondary crops that addresses the challenges of food and fuel security in a region that will increasingly be affected by climate change.

While we prepare for the Council session and plan the future direction, the normal work of CAPSA continues. One way to improve the income of small farmers is to link them to markets where they can sell their produce. Linking farmers through farmers associations to modern markets is not only a question of physical infrastructure, but also of market information, quality of products and certification. Research has shown that lack of certification and adequate institutional arrangements can be major obstacles for small farmers to market their products to large-scale buyers of agricultural products.

In this issue of Palawija News, we present two articles. The first article deals with the issue of certification in the Philippines. It is part of a study which CAPSA

conducted in Indonesia and the Philippines, with funding from the Government of France. The results of the study have recently been presented to policymakers, researchers and farmers associations at successful and well-attended workshops in Bandung (Indonesia) and Manila (Philippines) in December of this year.

The second article analyses an innovative institutional arrangement between mango farmers and a wholesale supplier of modern markets in Pemalang, Central Java. In this arrangement, the supplier acts as dedicated marketing institution between farmers and retailers, but also supports the farmers with a wide range of services to improve their produce and their income.

I am also pleased to be able to announce that we will continue our research on the impact of El Nino on agricultural production and food security. This study which will start soon is financed by the Japan International Research Centre for Agricultural Sciences (JIRCAS).

Yap Kioe Sheng
Officer-in-Charge
CAPSA

Luzon. Northern Mindanao meets the demand in Metro Manila when production in Luzon falls short due to the destruction of vegetables by typhoons that pass over the island and by cold temperatures in Benguet from December to May, when vegetables, particularly tomatoes, cannot thrive.

Buying and pricing scheme

Traders are often well informed about the prevailing prices in the wholesale and retail markets. This gives them commanding power during price negotiations. Some farmers, who know the existing prices in retail markets, are more willing to bargain for better prices than those who depend entirely on traders' information.

Traders usually impose additional requirements when buying produce at the farm gate level. Most want certain types of vegetables cleaned, sorted and packed. Leafy vegetables like broccoli, cabbage and Chinese cabbage are sold untrimmed because the outer leaves serve as protection against physical damage sustained during transportation. Tomatoes are crated for better protection,

while most produce is packed using sacks, as it is less vulnerable to physical damage. But vegetables such as carrots and potatoes, which are prone to decay when getting wet, are allowed to be packed unclean but must be sorted by size.

Most of the vegetables are bought and priced per kg. Tomatoes are priced per crate, while chayote is sold per sack. Untrimmed leafy vegetables such as broccoli, cabbage and Chinese cabbage are weighted first, and then a determined percentage is deducted from the gross weight in computing for the total value of the commodity. In Agora, 25 per cent is deducted from the gross weight of cabbage and Chinese cabbage, while 10 per cent is deducted from the broccoli.

Traders who purchase vegetables from the trading posts in CAR and Northern Mindanao transport the produce to other provinces and cities, where they sell to wholesalers and retailers. The markups from farm gate to wholesale prices range from 27 per cent (string beans) up to 619 per cent (asparagus) in 2007. On the other hand, the markups from

farm gate to retail prices range from 114 per cent (string beans) up to 314 per cent (chayote).

Commonly encountered problems

The major problem in the highland vegetable industry is the high cost of transport of farm inputs and produce. This problem is compounded by high post-harvest losses, which are placed at 30-50 per cent (for all types of vegetables) due to poor handling, packaging, transport and storage. Likewise, improper use of fertilizers and pesticides remain a problem of the vegetable industry.

Prices of vegetables in the Philippines are unstable, constantly changing with the fluctuations in supply and demand. At the La Trinidad vegetable trading post, the inflow of vegetables from adjacent regions ensues an oversupply of vegetables, which lowers the price considerably. The continuous fluctuations in prices keep farmers vulnerable to the negative effects of sudden declines of vegetable prices.

Farmers cannot dictate the price of the produce for they commonly have no information on the prevailing prices in the significant retail markets. It has also been a constant problem that many farmers produce vegetables without knowing what type of vegetable is in demand in the market. Many farmers just follow what other farmers are planting or what they think would sell, resulting in 'casino' farming, in which profit is unpredictable.

Product certification in the Philippines

Product certification for vegetables is not a common practice in the Philippines due to the disincentives brought about by the high costs of the certification process, and the small portion of the market that demands certified products. Small farmers cannot afford the expensive certification process. Farming conglomerates, on the other hand, can afford to undergo product certification, but they seem less interested in it due to negligible incentives.

Good Agricultural Practices (GAP) Certification

Good Agricultural Practices (GAP) Certification in the country started in 2005. The Philippine Government developed and enforced the Code of Good Agricultural Practices in order to ensure the safety and quality of produce consumed fresh, to encourage farmers to adopt sustainable agricultural practices, and to increase accessibility of horticultural products to both local and foreign markets. Today, certification is still being popularized.

The Department of Agriculture Certification Schemes are differentiated into three categories according to the applicant type, which could be an individual grower, a produce marketing organization (PMO) with full control of

the registered growers of the group, or a company or corporation. Certification involves an on-farm inspection in which the inspector takes samples of water, soil, plant tissue and other important matters for testing. All the materials are tested and the results of the analyses are given back to the producer. The cost of testing is borne by the producer and amounts to PhP 5,250 (US\$ 109) per item. An ordinary inspection usually requires a minimum of three items to be tested. All applicants must implement a transparent and traceable system to keep track of the production from sowing to harvesting and packaging. All farm management activities should be well documented to help trace the history of the farm produce. Once certified, farms are enabled to use the Good Agricultural Practice for Fruits and Vegetable Farming mark on their produce and in advertising.

Organic agriculture certification

Organic agriculture in the Philippines is currently promoted and developed by the government in order to attain an agricultural system that is environmentally, socially and economically sound. The Executive Order 481 titled "Promotion and Development of Organic Agriculture in the Philippines" was approved on December 2005 and further strengthened the government's drive towards extensively promoting agricultural farming in the country.

Organic Certification Center of the Philippines (OCCP) is the country's only accredited certifying body for organic agricultural products. It is an independent and private organization, which started certifying in 2004. They set standards for organic production of various agricultural commodities, which are based on internationally approved standards. The organic certification cost a minimum of PhP 15,000 (US\$ 313). In certifying organic produce, it is the method of production that is being certified as organic and not the product itself. As such, the standards created by OCCP focus on the cultivation of land, growing of plants and processing of produce.

High priority is given to the use of certified organic seeds and plant materials, plant breeding through conventional methods, and the use of biodegradable materials of microbial, plant or animal origin produced as fertilizers. There is a strict prohibition on the use of synthetic pesticides, and synthetic products like growth regulators and dyes. Products should be handled in a manner in which the good quality is maintained and contamination is avoided. When these qualifications have been met and many other requirements have been fulfilled by the farms, OCCP entitles them to use organic farming certification labels.

Pros and cons of certification

The financial cost of adhering to the standards of the

certifying body is the most apparent cost of undergoing certification. Aside from the direct fee, application for certification requires a significant financial outlay for establishing the required facilities, maintaining cleanliness and orderliness in the farm, and keeping an updated record of farm activities.

With organic certification, the transition period for conversion incurs great cost. During the transition, a significant decrease in the quantity of harvest and changes in the quality of the produce has to be expected, causing a sudden, substantial decrease in income.

Even though certification requires a large financial outlay, it is still a risk worth taking for some farmers for it creates benefits in the form of easy market capturing, which results in higher and more stable prices for the produce. Complying with the set standards of the certifying body greatly improves the condition of the farm, quality of produce and welfare of the farmers. The right choice and proper application of fertilizer, pesticides and other farming inputs, which certification promotes, helps improve the condition and productivity of the farm, and helps lessen the wastage incurred by the improper application of farm inputs.

Recommendations

Stabilizing the supply of vegetables through the adoption of an efficient production plan will help minimize wide fluctuations in prices. Moreover, mitigation of the negative effects of unstable vegetable prices can be achieved through improving the flow of price information from the actual market to the farmers. If farmers are informed of the prices existing in the market, negotiating better prices would be much easier. Farmers, who have technological know-how (with the use of cell phones and internet) can be trained in using these technologies to get price information effectively. In the trading posts, posting of prices in major vegetable destinations like Manila, Cebu and Davao is a great way to relay information to the farmers who trade.

The government should encourage farmers to group themselves in associations or co-operatives in order to attain economies of scale and bargaining power leverage. Farmers should also be given training on how to take advantage of the support given by the government through relevant projects and programmes.

Lowering the cost of certification will significantly help to encourage more farmers to undergo certification. Subsidizing the entire cost of certification for some farmers is an option the government may use in promoting production using good agricultural practices. The selected farmers will serve as case study demonstrations on deriving more benefits from certification.

The importance of consuming certified good quality vegetable products should be made known to the public in order to create sufficient demand that would bring forth incentives for farmers to undergo certification. The benefits of consuming certified products should be popularized. Making the certification accredited in the foreign market will also help in widening the market that can be accessed by certified products, thus creating much larger incentive for certification. ■

(References available upon request).

Linking Farmers to the Modern Market: Transparent Margin Partnership Model, Case of Mango Growers in Pemalang, Central Java, Indonesia

By Ronnie S. Natawidjaja¹; Togar A. Napitupulu and I Wayan Rusastra²

¹ Center for Agricultural Policy and Agribusiness Study, Pajajaran University, Bandung, West Java, Indonesia; ² Centre for Alleviation of Poverty through Secondary Crops' Development in Asia and the Pacific (CAPSA), Bogor, Indonesia.

With the rapid development of competitive modern retail markets over the last 10 years, some suppliers to supermarkets have attempted to cut down marketing chains by involving farmers directly in supply chains. However, this strategy failed because farmers breached contract agreements. A breach of contract is a great loss to a supermarket supplier in terms of the investment made, technical assistance given, as well as its affect on the supplier's reputation. Contract breaching generally happens because the supplier cannot always offer the highest price to farmers. One partnership system which has operated since 2003 and successfully brings farmers into direct negotiation with the main modern retailer (such as *Carrefour*) was a partnership between *Bimandiri* (a specialized supplier to modern markets) and an off-season mango farmer's group, KUBM (*Kelompok Usaha Bersama Mandiri*/Self-help Collective Business Group) in Pemalang, Central Java.

The innovation in the mango supply chain

Farmers in Pemalang have adopted off season mango flowering since 1995. Even with technology innovation for off season mango, which enjoys premium prices at the consumer's level, mango farmers in Pemalang still resorted to the traditional marketing system, the *tebasan* system, in which they do not reap the benefit of price premiums. Such

a selling system, benefits only the buyer, collector (*tengkulak*) or wholesaler, who have better knowledge or market information and capital. Under such system the farmers are price takers – they realize their weak position but they have no other alternative.

An institutional innovation, a 'transparent margin system', was introduced by *Bimandiri*, a dedicated wholesaler to supermarkets. The system is basically a partnership between *Bimandiri* and mango farmers. It is based on transparency and mutual trust. All parties involved in this system are aware of the margin they earn. *Bimandiri* gets a fee of 5 per cent from the total sale of mangoes. In return, they provide a service to the farmers including the provision of a guarantee on the quality and quantity of the product and all liability that may occur. The services includes the introduction and testing of new varieties, provision of agricultural inputs in terms of soft loans, quality control, accounting, and contract negotiation with buyers. The terms and operation of the partnership also indirectly affects other mango farmers via features such as an openness of information on technology, price and marketing opportunities for farmers in rural areas.

The transparent margin system generates continual institutional change in the Pemalang area. Firstly, farmers who used to sell their products individually changed to selling in groups. Secondly, the informal market for mango after harvest (open market based negotiation) changed to become a formal market (contract). Evidence shows that the farmers following formal markets tend to develop their farming faster than informal ones. Through the partnership system, the KUBM group has been able to expand its planting area, from 36 hectares (4,680 trees) to 45 hectares (5,800 trees) within only one year. In generating an innovation, there are two processes at work: the main process (core process) and a process that makes the innovation happen (enabling process). The concepts behind core process are idea generation, product innovation, processes of innovation and acquisition technique, while enabling processes are leadership, systems and tools and other resources (Chiesa *et al.*, 1996). The output of these processes is competitiveness. This was done by *Bimandiri* in order to beat its competitors. *Bimandiri* carried out a benchmarking with KUBM farmer group.

Farmers' inclusion and exclusion

Factors that encourage farmers in the KUBM group to adopt the innovations are the capability and willingness to change in response to the demand of modern markets. The group's capability in making the change depends on the skill, competence, and capacity of each farmers in the group.

Bimandiri's motivation to collaborate with KUBM mainly stems from the fact that the group possesses the basic capability to adopt the innovation. The basic capability which *Bimandiri* first looks for from farmers is the skill of generating the off season mango. The members of KUBM were pioneers in the off season mango technology. *Bimandiri* also likes to collaborate with farmers that are capable of expanding their harvest volume. Members of KUBM are owner-operator farmers who are also managing other farmer's mango farms; hence they have capability to expand their supply volume when needed. Another character that *Bimandiri* is looking for from farmer is a strong commitment and responsibility. *Syngenta* Company, a major inputs supplier in the country recommended KUBM as a trustworthy group.

The transparent margin system has encouraged farmers to establish a co-operative formation through five management steps: learning, steering, forming, implementing and developing. The farmers that are adaptable to change will survive, while those who are not will be excluded.

In order to succeed in the innovation process, every stakeholder involved must be able to manage points of critical change. Stakeholders involved in the transparent margin partnership system inhabit three levels. Level 1 stakeholders are directly involved in the change process: farmers, the KUBM group, management of KUBM, *Bimandiri* and *Carrefour*. Level 2 stakeholders are indirectly involved in the change process: local market actors, central market actors, and field extension agents. Level 3 stakeholders are not involved at all in the change process, for example local government, field extension officers, *Syngenta* and other private parties.

The actors at Level 1 mobilized, responded and made necessary changes. They actively played roles in the innovation process, particularly farmers of the KUBM group, management of KUBM, and *Bimandiri* (*Carrefour* did not take part in the innovation process). The KUBM group supports the management of KUBM by continuing innovation and supplying product continuously to the management. Responsibility and commitment of the KUBM management was an important enabling factor in overcoming financial problems encountered by the farmers. However, the actors at Levels 2 and 3 did not contribute solutions to the problems encountered in the innovation process. Level 2 made a change, but only on quality handling. At Level 3, stakeholders responded appropriately to changes at Levels 1 and 2 but did not make any change themselves. In this case, local government did not play role in both inclusion and exclusion processes.

For farmers and KUBM management, administration of farm inputs, labour cost, technology, product specification,

distribution, marketing, financial assistance, subsidies, organization, and regulation/policy have been handled by *Bimandiri* in its roles as the dedicated supermarket wholesaler. In addition, *Bimandiri* has enabled farmers to carry out direct negotiation with *Carrefour*.

Interestingly, the analysis shows that inclusive farmers perceived subsidies as relatively unimportant; and so did *Bimandiri*. This indicates that farmers never felt direct benefit from the government's subsidies. In fact, some farmers often observed that subsidies and the aid programme disturbed the farmers' ability to organize themselves as a group. *Bimandiri* and *Carrefour* perceive that government's subsidy is not required as long as farmers are committed to the agreement in the partnership because the agreement will prevent high transaction costs. Socio-cultural factors are not considered as problems since farmers, KUBM management, *Bimandiri* and *Carrefour* completely comprehend each others' characters and role in facilitating the exchanges.

From the included farmer's point of view, the role of *Bimandiri* and *Carrefour* was to provide advice as well as information and (a set) price, in effect the role was providing marketing strategy and market prediction. Basically, *Bimandiri* had assisted farmers in selling their product to modern markets. It also indicates that strong trust has been developed in the partnership; farmers could deliver mangoes to *Carrefour* without hesitation and agree to the price determined by the retailer. The specialized wholesale provider is very important for farmers because *Bimandiri* provides advance funds (before the retailer pays), technical assistance, information and market knowledge. This is consistent with Mc Fadzean *et al.* (2005) who stated that the entrepreneur is not only looking for financial gain but also other kind of gains. *Bimandiri* and *Carrefour* are considered pioneers in systems that enable farmers to capture market opportunities. The relationship among stakeholders in the partnership has been growing since farmers have demonstrated a higher commitment to deliver mangoes to *Carrefour* through KUBM. The management system in the partnership was perceived as easy to understand and of benefit to all parties involved. This condition could be sustained if an open and transparent communication among actors involved is maintained.

Good management was the second most important factor in the partnership's success because good management results in efficient planning, organizing and monitoring. In terms of marketing policy, *Bimandiri* provided and guaranteed farmers a production channel to the market. This situation has brought farmers to the face of competitive markets. However, farmers must commit themselves to producing the best quality mangoes. Farmers comply with the requirements of the partnership because of the high price incentives for quality, and quick payment. The system

is becoming very important to farmers escaping from the capital loan trap of local traders. In terms of product quality, *Bimandiri* has primarily functioned as a guarantor of quality standards and quantity fulfilment.

Impact of the innovation

In general, the partnership has given farmers the following benefits: increased income, market guarantee for the product, higher than traditional markets price, faster payment and better access to market information. A change in physical flow occurred where the marketing chain was shortened, and the product consigned was changed. Through the KUBM group farmers can now enter into partnership with *Carrefour*. A change in information flow occurred: information about prices, market opportunities, quantity, quality, consignment schedules, and the agreement between the group and *Carrefour* are now available and transparent to all parties. Additional information flow such as information about market opportunities provided by *Carrefour* was perhaps meant to maintain punctuality of consignment delivery from the suppliers.

A change in flow of knowledge occurred in which innovation and know-how (resulting from quality supervision by *Bimandiri* who was responsible for guaranteeing the quality, quantity and continuity which enabled the farmers to have direct access to the *Carrefour* Distribution Centre) became available.

A change in capital flow occurred in which *Bimandiri* provided reserve funds to the group (with a 5 per cent management fee). This situation proves that capital aid from the government was not the main factor for a group's success. The most important thing was member's commitment to manage this aid prudently.

This contract system may position the KUBM as an agent for *Carrefour* and also an agent for the farmers, whereas *Carrefour* acted as the principal. The principal could not observe the behaviour of its agent, and it was with the help of *Bimandiri* that the partnership could come about. *Bimandiri* indirectly caused a change in know-how and capital. The network venture increased the company's social capital through increases in access to information, its assistance technique, and financing support (Burt, 2002).

Through *Bimandiri* KUBM farmers were given access to the modern market, and the farmers had a higher bargaining position in price negotiation with *Carrefour*. Additionally, there was improvement in organization and management of KUBM, resulting in further trust from *Carrefour*, consistent with network theory, i.e., collaboration is based not only on profit motivation, but also on power and trust (Uzzi, 1997).

Institutional analysis of the governance of supply chain divides the actors in three roles, namely, legislative governance, executive governance and judicial governance (Kaplinsky, 2000). Prior to innovation, these were all executed by the dealer in the traditional market. After the innovation the three roles were no longer centred on the dealer, but were spread and implemented, among other things, by *Bimandiri* as judicial governance, *Carrefour* as legislative governance, and KUBM as executive governance.

Supply chain champion

Bimandiri is a model of the supply chain champion, a venture where priority in business operation is given not to a short-term highest profit level, but to market development capability, long-run profit and growth. *Bimandiri* has positioned itself as an entrepreneur which advocates innovation, not as a trader. Suppliers like *Bimandiri* are needed by *Carrefour* as reliable partners in following changes in very dynamic markets (McGrath, 1996).

Entrepreneurs always engage in one or several activities such as: organizing and making use of the right resources to produce and market new products or services; co-ordinating contract arrangements between their partners and partner's suppliers; arranging the right organizational structure and culture to develop and manufacture new products or services; responding to market deficiency with additive resources in the absence of a market and provide contact between buyer and seller at different locations. It appears that *Bimandiri* fulfils almost all of the above categories which makes it a supply chain champion.

From the point of view stakeholders' risk taking, the KUBM farmers avoided risk by surrendering mangoes to KUBM management. The KUBM management may be categorized as a self-insured type of risk taking agent, because the KUBM management kept reserve funds when mango prices declined, but withdrew funds when mango prices were favourable. *Bimandiri* shared the risk, because it received 5 per cent management fee without going into production itself, another characteristic of supply chain champion. On the other hand, *Carrefour* mitigated risk by expecting quality and punctual product continuity. With regard to the transparency dilemma, in this case, there was a tendency for KUBM to engage in poaching risk, because the resources it got benefited only the KUBM farmers or the KUBM management.

Potential replication of innovation

The business partnership model implemented by *Bimandiri* and KUBM is the best practice in anticipating changes in procurement decentralization policy carried out by the modern retail market. The transparent margin system is a form of co-innovation formed as the result of the KUBM and

Bimandiri strategic alliance in the mango supply chain. The continuity of this KUBM-*Bimandiri* partnership is determined by strong commitment and trust of the parties, institutional marketing transformation, innovation learning, and built-in risk management in the partnership in question, and the role of the village production organization which is based on the marketing value of marketed product.

To replicate the success of the transparent margin system, the Government could take the following steps:

1. Search for champions from the entrepreneurs in the supply chain of agricultural commodities to modern retail markets. The champion should be an entrepreneur, like *Bimandiri*, which possesses corporate entrepreneurship necessary to develop a co-innovation creation system with its partner. In identifying champions, the Government may collaborate with research institutions and universities.
2. Provide an incentive to champions to replicate institutional marketing transformation. The incentive could be ease of access to funding facilities in accordance with the characteristics of the system of modern market trade, like factoring, investment development funding and working capital funding.
3. Facilitate the formation of multi-stakeholder organizations in particular those that carrying out monitoring and advocacy of partnership processes in the modern retail market business system.

Conclusion and policy recommendation

The transparent margin partnership system is a co-innovation of a marketing institution. It gives farmers, direct access to the supermarket via support from *Bimandiri*, the value chain champion in the form of quality assurance, continuity of supply, technical assistance, and provision of bridging capital to farmers. There are no product ownership changes (no exchanges) within the marketing institution. Exchanges are only made between the farmer group KUBM and *Carrefour*, the modern retailer. *Bimandiri* receives a commission of 5 per cent from the sales made in the partnership.

The transparent margin system, an institutional evolution, has created dynamic changes at the producer's level. The system has encouraged farmers who previously worked individually to work in a group, thus and transforming the farmers' relationship with the market, from spot market based to contract-based negotiation.

The motivation of the specialized supermarket wholesaler to develop the partnership system is a better ability to respond to the demands of a dynamic market which can be achieved only by organized farmers who guarantee product quality and continuity.

Factors that support farmer's inclusion in the institutional innovation of transparent margin system are farmer's ability, willingness, and trust in adapting to a change in rules of the game created by dynamic markets, and an incentive system that supports individual as well as group business development.

Farmers gain from the transparent margin system by higher incomes, receiving the highest value added in the chain, and gaining a market guarantee and a guarantee of a higher price (for better quality). Additionally, the system also gives the farmer a faster payment after harvest and provides access to market information.

Sustainability of the transparent margin partnership system is dependent on a strong commitment and trust of all agents involved, institutional transformation, an innovation learning process, risk management built into the system, and rural production organization. The government can play role as a catalyst for replicating the process of institutional innovation by giving incentive support to the supply chain champion and other supporting agents, according to the need of dynamic market development.

Referring to the success of *Bimandiri*, the supply chain champion, in providing market access to small producers of mango who are members of the KUBM farmer group to *Carrefour* without any subsidy or support from the government, it is suggested that the government should not intervene in the working partnership. However, policies to systematically promote and support the partnership system might be devised. These include:

1. Give an incentive (such as a tax deduction, technical support, etc.) to an agribusiness company, supermarket supplier or food industry which would like to take a leadership role to become the supply chain champion that creates a partnership with small farmers with a transparent margin system.
2. Provide training for rural production organizations in several technical areas such as Good Agriculture Practice (GAP), food safety certificate (HACCP) and management.
3. Facilitate provision of financial system that includes factoring, investment and working capital, which supports actors in a dynamic market.
4. Provide incentives to facilitate the development of a public-private partnership in the area of research and development for agribusiness supply chain integration. ■

(References available upon request).

New Publications

Towards a joint regional agenda for the alleviation of poverty through agriculture and secondary crop development: proceedings of the regional meeting, Bangkok, 21-22 November 2007

J.W. Taco Bottema, Geoff Thompson, I Wayan Rusastra and Robert Baldwin (eds.), 2008. CAPSA Monograph No. 50, xi, 208 p., ISBN 978-979-9317-70-4.

This document is a record of the Regional Meeting of the above, co-ordinated and implemented by CAPSA, and was held in Bangkok, 21-22 November 2007. The Meeting aimed to determine research priorities for improving the accuracy of policies and programmes addressing rural poverty through agriculture in member countries. Also it aimed to strengthen regional collaboration and information sharing. This volume provides a record of the presentations and discussion of the meeting. ■

Food security and poverty in the era of decentralization in Indonesia

I Wayan Rusastra, Geoff Thompson, Taco Bottema and Robert Baldwin (eds.), 2008. CAPSA Working Paper No. 102, xvii, 204 p., ISBN 978-979-9317-71-1.

Food security enhancement is one of the main objectives of agricultural development. In Indonesia, agricultural and rural development, such as food security and the reduction of poverty and the number of food-insecure households, is being determined by the changing dynamics of the international economy and the domestic strategic environment. The studies contained in this working paper provide an analysis of the current status and suggest future policy directions for poverty reduction strategies in the context of decentralization in Indonesia. ■

Impact analysis of expanding biomass energy use to rural poverty in tropical Asia

By Masdjidin Siregar and Tomohide Sugino, 2008. CAPSA Working Paper No. 103, xiv, 61 p., ISBN 978-979-9317-72-8.

Since the Kyoto Protocol came into effect in 2005, more attention has been paid to the development of biomass resource use. The tropical Asian countries have large potential for biomass production. In order to reduce imported fuel, the Government of Indonesia is attempting to find alternative renewable energy, particularly in the form of biofuel. This report presents the prospects for biofuel projects and the possible impacts on rural society based on a case study of bioethanol production from cassava. In this study, East Lampung and North Lampung districts have been chosen for case study. ■

(These publications are available for free downloading at: www.uncapsa.org)

Research on the “Rural Community Empowerment Model: Analysing Food Security and *Desa Mandiri Pangan* Programme”

This study was implemented by the Indonesian Agency for Food Security (IAFS), in co-operation with CAPSA. It analysed three main food security programmes: Participatory Integrated Development in Rainfed Areas (PIDRA), Special Programme for Food Security (SPFS) and *Desa Mandiri Pangan/Desa Mapan* (Village Food Security Programme).

Research in the programme focused on the following aspects: (i) pre-condition and reorientation of rural development in the selected research sites including improvement of production capacity and market systems, diversification of activity and employment opportunities, and development of infrastructure and contribution of the private sector; (ii) performance and prospects of three main food security programmes including strengthening the programmes and community development, intensification and diversification of household farming systems, and improvement of value-added and agricultural product marketing; and (iii) synergy of the main food security programmes with other poverty alleviation programmes including the implementation, effectiveness and synergy of the direct cash transfer and social safety net programmes.

In August 2008, the research team (senior researchers from Indonesian Center for Agricultural Socio-Economic and Policy Study (ICASEPS) conducted a field survey in Central East Timor district, East Nusa Tenggara. They visited some villages that have implemented PIDRA and *Desa Mapan* programmes.

In September 2008, the research team carried out field survey in West Java province, visiting four sub-districts that have applied the SPFS programme, and villages in various sub-districts that have implemented the *Desa Mapan* programme.

A draft study report has been submitted to IAFS and a seminar has taken place at the IAFS office, Jakarta in the first week of December 2008, to review, discuss and obtain suggestions to improve the study report. It was attended by the study team and the relevant IAFS staff and stakeholders. The final report will be finished at the end of December 2008. ■

Research on Rural Transformation and Farmer Response in Irrigated Lowland Villages in Java

The Japan International Research Center for Agricultural Sciences (JIRCAS) in co-operation with CAPSA has initiated a study called “Rural transformation and farmer response in irrigated lowland villages in Java”. The motivation for this study stems from the observation that Asian rural livelihood systems have been experiencing dynamic changes under globalization and there is a need for gaining in-depth insight into farmer’s livelihood strategies in accordance with changing socio-economic settings, in order to formulate relevant rural development policy. The research team consists of two agricultural economists from JIRCAS, and senior and assistant researchers from ICASEPS.

The aims of study are: (i) to construct a micro-level panel data set in two-time-points of 1996 and 2008; (ii) to capture the demographic change in the sample households during this period; (iii) to trace the change in land tenure and use, crop choice and employment at household and individual level during this the period; (iv) to analyse the technological development or structural change in rice production in accordance with relative change in factor prices; and (v) to clarify the change in employment structure in accordance with the development of labour markets, household human capital, and individual job preference.

The study uses the result of analysis on a 111-sample of households that covered aspects of farm, household and the rural economy, conducted by JIRCAS and CAPSA in 1996-1997 (Yokoyama, 1999; Yokoyama *et al.*, 1998; 2000). In addition, the National Farmer Panel (*Panel Petani Nasional/PATANAS*) data, particularly information on irrigated lowland villages, is being used as a reference.

The work plan of study was prepared on the basis of a preparatory survey conducted in West Java, in October 2007 by a visiting senior researcher from JIRCAS. The research team conducted a field survey in the selected research site, Gegesik sub-district, Cirebon district, West Java in November. The construction of the 1996 and 2008 panel data set will be conducted during December 2008 to February 2009, and a follow-up survey and preparation of study report are scheduled for March to June 2009. ■

Impact Analysis of Expanding Biomass Energy Use to Rural Poverty in Tropical Asia (BIOMASS)

The project report for this project has been written and will be finalized and published in December 2008. The report consists of four major parts: (1) analysis of inputs use, costs and returns of cassava production under the partnership between farmers and companies that will produce fuel ethanol; (2) analysis of the possibility of implementation of the Biofuel Development Action Plan in Indonesia; (3) eligibility of bioethanol projects under Clean Development Mechanism (CDM); and (4) impacts of bioethanol development, particularly on rural poverty.

The case study of cassava farming under the partnership with companies in Lampung indicates that this arrangement is good for farmers because it increases the price of cassava. If cassava as feedstock for bioethanol is collected from the existing agricultural land, its effect on food security is minimal because cassava is not a staple food and some is exported.

From the review of ethanol-related articles, it can be concluded that biofuel projects are in principle eligible under the CDM. To be included in CDM projects, however, biofuel projects have several barriers: (1) establishment of approved baseline and monitoring methodologies which is a necessary requirement for validation; (2) certified emission reduction (CER) revenues will in most cases only cover part of the additional cost of biofuels compared to conventional fuels; and (3) CO₂ abatement costs of biofuels are in general higher than current CER prices. ■

Impact Analysis of Economic Integration on Agriculture and Policy Proposals toward Poverty Alleviation in Rural East Asia (ECOIN)

The mid-term project evaluation was implemented from 6-10 October 2008, at JIRCAS in Tsukuba, Japan. In the evaluation meeting, the overall output of the project in all the participating countries during 2006 to 2007 was presented. The major recommendations by the evaluators were: 1) the findings and recommendations of the project should be widely disseminated to the policy planners in the target regions; 2) though the most of the studies focused on specific cases in which farmers experienced positive or negative impacts from regional economic integration, the recommendations of the project should have relevance for the other areas. After all, the project received a good grade by the evaluation committee and the continuation of the project was approved until the end of the original project period (by March 2010). Based on these recommendations,

a regional workshop will be held in one of the participating countries in 2009 to discuss the policy implications and relevance of the project results. ■

A Workshop on “Adding Value through Agricultural Product Certification”

The rapid growth of urban consumer centres and high population growth in Asia has resulted in an increase in the demand for fresh and processed produce. In addition, the growth of national and international chains of supermarkets has stimulated the modern supply chain for these products which require both quality certification and improvement. A study on agricultural product certification was initiated to provide a comprehensive understanding of the target groups (small farmers, farmer producer/market association and local agribusiness). It was funded by the Government of France and involves Indonesia and the Philippines. The project started in 2007.

A workshop on “Adding Value through Agricultural Product Certification” was the initial workshop of this project. CAPSA in collaboration with the Center for Agricultural Policy and Agribusiness Studies (CAPAS) organized this workshop in Bandung, West Java, on 17-18 November 2008. The main objectives of the workshop were (1) to present product certification requirements for fresh fruit and vegetables in Indonesia and their impact on labour absorption, farmers' incomes and product 'added value'; (2) to raise awareness of government policies on legal aspects of agricultural product certification in Indonesia; and (3) to share experiences in applying certification among participants, private institutions and government. A case study on product certification from the Philippines was also presented in the meeting.

The workshop was attended by local farmers, farmers' groups and associations, the private sector, related government agencies, decision makers and stakeholders. The participants were the representatives from three provinces in Indonesia, namely: West Java, Bali and North Sumatra. More than 80 invitees participated in the two-day workshop.

The general outcomes were: (i) certification was deemed to be an assurance for agricultural produce in terms of quality and consumers protection; it should be conducted by an institution, formally accredited by the National Accreditation Committee; (ii) it was agreed that product certification is required by consumers, with added value; and (iii) an Agricultural Produce Certification Authority has been formed both at the central and regional levels. ■

Palawija News

CAPSA's research newsletter is published three times a year and is distributed free of charge to interested individuals. To have Palawija News delivered by email please contact library@uncapsa.org, or to download, please visit www.uncapsa.org.

Authors are invited to contribute articles on socio-economic aspects of recent good practice in research and development related to secondary crops, food security, rural poverty alleviation and the agricultural sector in Asia and the Pacific.

The word limit for articles is 2500. Contributors are asked to first submit a concise summary of their article by email to library@uncapsa.org.

Palawija – derived from Sanskrit, this is the common term for secondary crops in Indonesian and traditional Malay languages.

Publication Section

Editor Geoff Thompson
Production Fetty Prihastini

UNESCAP-CAPSA

Jl. Merdeka 145
Bogor 16111
Indonesia

Phone (62-251) 8343277
8356813

Fax (62-251) 8336290
capsa@uncapsa.org
www.uncapsa.org

CAPSA

The Centre for Alleviation of Poverty through Secondary Crops' Development in Asia and the Pacific (CAPSA) is a subsidiary body of UNESCAP. It was established as the Regional Co-ordination Centre for Research and Development of Coarse Grains, Pulses, Roots and Tuber Crops in the Humid Tropics of Asia and the Pacific (CGPRT Centre) in 1981 and was renamed CAPSA in 2004.

Objective

CAPSA promotes a supportive policy environment in member countries to enhance the living conditions of rural poor populations in disadvantaged areas, particularly those who rely on secondary crop agriculture for their livelihood, and to promote research and development related to agriculture to alleviate poverty in the Asia and Pacific region.

By Airmail