PRODUCTION AND SUPPLY CHAIN MANAGEMENT
OF ORGANIC FOOD IN VIETNAM

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ABSTRACT

The certified organic area of Vietnam in 2011 was only 21,000 ha (0.2% of the total cropped area) of which 7000 ha was allotted for aquaculture. The major organic commodities include vegetables, tea and shrimps, though efforts have been expanded to include rice, oranges, cinnamon and ginger. The total export value of the organic products was US$ 12-14 million. Quality assurance is compiled differently from one company to another. The participatory guarantee system (PGS) has been employed by a limited number of farmers to produce organic vegetables for domestic markets. The production of all the export-oriented products follow the quality certification schemes set by the importers. There have been some good models producing organic products to meet the growing demand of local and foreign customers; suggesting greater efforts should be made from public and private sectors in research, development and international cooperation for a better development of the organic production and supply chain management.

Keywords: Vietnam, organic production, supply chain management.

INTRODUCTION

As believed in all other countries of the world, Vietnamese farmers used to grow crops organically hundreds of years ago. However, organic farming, according to the current international standards, is quite new to Vietnam. Modern organic agriculture started in the late 1990s with a small number of initiatives, primarily involving the production of specialty crops, such as spices and essential oils, destined for export to Europe (Simmons and Scott, 2008). According to the 2011 IFOAM report (FiLB and IFOAM, 2012), the certified organic area in Vietnam was some 21,000 hectares, equivalent to 0.2% of the total cropped area of which 7000 ha was allotted to aquaculture (mainly shrimps). The total export value of the organic products was some US$ 12-14 million. Vietnam also has some 1300 ha of natural forest for wild harvest. The major organic commodities include shrimps, tea, leafy vegetables, specialty crops such as spices and essential oils.

The local Vietnamese market for organic products has not been developed, although one company tried to introduce organic vegetables to consumers in Hanoi some years ago. Few international and local organizations are supporting organic agriculture (main exceptions ADDA, GTZ and lately the RDA of Korea). The Government also has no specific policies to support the development of organic agriculture and as a result, there is still little attention given to organic farming from research and the extension service. There is currently only a very sparse amount of information available on organic agriculture and the topic has received little attention in the academic literature. In 2007, the Ministry of Agriculture and Rural Development (MARD) issued national basic standards for organic production (MARD, 2007), which can be used as a reference for producers, processors and others interested in organic products for the local market. MARD is planning to set up a certification system for the local market but a timeframe for this activity has not yet been developed. Some private service providers, such as Qualiservice, recently developed competencies to support farmers in obtaining certification (organic and GAP-Good Agricultural Practice) for agricultural and fishery products. Recent good moves were that in late...
In 2011, Vietnam Organic Agriculture (VOA) was officially founded and in January 2012, the Prime Minister issued a policy decision (01/2012/QD-TTg) to support Good Agricultural Practices (GAPs) for agriculture, forestry and fisheries, including organic farming. Lately, MARD confirms its stronger support for organic farming and production through the implementation of the 2013-2020 core scientific and technological research and development program for the period of 2013-2020 (MARD 2013). Marketing of organic products is reportedly growing in big cities such as Hanoi and Ho Chi Minh.

Though Vietnam had made great achievements in agricultural production, research and training activities to promote organic production have not been paid a considerable attention by the research and training communities. Information on organic research results and training curriculum/program documented either in Vietnamese or in English is scattered. The available research results/activities mainly focus on breeding new crop varieties and developing appropriate production technologies for such crops; producing better quality and safe crop products based on the ICM- and/or GAP-principles. This fact indicates that there is a critical need to inform the public and the Government about benefits and needs to develop a sustainable organic agriculture for the country through greater efforts in research, training, planning and extension activities.

MAJOR ORGANIC ACTIVITIES IN VIETNAM

With the technical and financial assistance from the Korean RDA-supported Project, the Field Crops Research Institute (FCRI) of Vietnam Academy of Agricultural Sciences (VAAS) has lately carried out a survey on the major organic projects/activities in Vietnam (Ngo Doan Dam et al., 2012). This paper presents the major results from our own investigation on the key organic activities/projects up to date, aiming at providing additional information about production and supply chain of organic food in Vietnam.

ADDA-VNFU project on organic farming

With the assistance of the Denmark Government, the Vietnam Farmer Union (VNFU) and Agricultural Development Denmark in Asia (ADDA) implemented a seven-year organic farming project during 2005 - 2012 (Tu Thi Tuyet Nhung, 2012). The project activities aimed at increasing awareness and knowledge on organic agriculture for farmer participants and assist them in the production of organic products. The farmer groups are trained on production and linkages with the markets, traders and consumers.

As a result, the project organized 155 training courses on organic agriculture and established many farmer groups producing organic products in nine provinces with the area of 70 ha with several products such as vegetables, rice, orange, lychee, grapefruit, tea and fresh water fish. These products are produced according to organic standards, ensuring food safety and accepted by the consumers in Hanoi markets. Some partners such as the farmer groups in Bac Ninh province with an area of 5000 m² of organic vegetables have been supplying to some industrial parks, local restaurants; some farmer groups in Ha Noi and Hoa Binh province also sold 2.5 to 3 tons of vegetables to Hanoi Market, providing steady income for the farmers of the project.

Probably the most valuable result from this project is that it has developed successfully a Participatory Guarantee Systems (PGS) for 28 farmer groups and private companies located around Hanoi to implement PGS in the organic production of vegetables and other agricultural products; of which 19 had received certification for a total area of 22 ha. The Project certifies producers based on active participation of stakeholders and on a foundation of trust, social networks and knowledge exchange (IFOAM PGS Task Force, 2008). The project also developed Vietnam PGS Manuals Version 3 both in Vietnamese for farmers use and in English (https://sites.google.com/site/pgsvietnam/).

The implementation of the PGS has proved its effectiveness in helping several farmer groups to apply PGS principles and requirements in successfully producing organic vegetables—from production to marketing. One good example of this success is the case of Tan Duc Commune in Phu Tho Province. The commune started to organize its organic vegetable production since January 2008. In 2010, it has set up three zones of organic vegetable production with a total of 198 farmer household participants. The farmer groups can now self-operate their organic vegetable production, covering all steps from site selection (including analysis of soil and water sample in the production site), farmers’ training in vegetable production such as learning how to prepare compost from organic waste for production; specifying production rules and management, production traceability,
developing marketing network and enabling quality assurance, including how to obtain quality certification from the official certifying bodies.

**The ECOMART company for organic tea and vegetables www.ecomart.vn**

The current Ecomart Vietnam was established when the members joined the original Ecomart and the Ecolink Vietnam. The original Ecomart was founded as a result of a Project funded by the Asia Development Assistance Facility of NZAID from 2002-2006. The founders joined in order to work with MARD to develop national organic standards; and to also work with the Mountainous Resources and Environment Centre (MREC) at Thai Nguyen University of Agriculture and Forestry (TUAF) in order to develop organic production systems. The Ecolink was founded in 2003 with the aim of promoting sustainable livelihoods for small-scale tea producers through improved market access.

The main business of the ECOMART is to produce organic tea for export to European and US markets. The Company started its organic tea production in Thai Nguyen Province. However, it faced difficulties because the contract farmers did not strictly follow the organic production procedure such as no in-organic fertilizers production. For this reason, the Company has shifted its main production areas to Lao Cai province (300 ha) and to Ha Giang Province (500 ha). These are the high mountainous zones with cool climatic conditions and are very isolated from the intensive tea production areas. The Company also invested building two processing plants at the capacity of 15 tons of fresh tea/day (three tons of dried tea/day) at Lao Cai province and four tons of dried tea capacity in Ha Giang province. The processed tea is exported to European and US markets in 30-to-40-kg bags from which the dealers will pack them into small boxes with their own logo and trademark to fit well with their domestic customers.

The main characteristics of the Company’s tea production are: to use only the indigenous perennial tea variety Shan Tuyet and produce them in the registered farms with trained farmers planting and taking care of the tea plants. The tea farms are applied with only organic compost. There are no inorganic fertilizer and insecticide application. All the fresh products are bought, processed and quality checked by the Company. The strategy for quality assurance is to meet the quality standards set by each market, through employing their strict internal quality assurance and inspection and obtaining certificate from the client - required certifying body.

Aside from organic tea, ECOMART is also producing and marketing some 20 kinds of organic vegetables, meeting vegetable demand of some 2000 clients in Hanoi (of which 500 are regular clients and the other 1500 are occasional customers). However the production scale is still small. The Company takes partnership in the ADDA-VNFU organic vegetable project and is employing the Vietnam PGS for quality assurance. Vegetables are ordered online and delivered daily at every customer’s door.

No further information was provided by the Company with regard to the volume, revenues of their marketed organic products and further information on technical matters. However, it is informed that organic tea is exported at 5.5-6.0 US$/kg to the EU and US markets while the normal tea is sold at 2.2-2.5 US$/kg to Egyptian countries. The share of organic tea in the domestic market is considered insignificant, probably due to its high price as perceived by most customers.

**Organik Dalat for organic vegetables http://www.organikvn.com**

The Organik Dalat is located in Dalat which is an ideal area for growing organic crops. ORGANIK’s property includes several hectares of growing land, most of which is covered by greenhouses. The founder of this Company started with research work on organic production and sale of vegetable seedlings in 1997. Then he began production of vegetables on rented land in 2003, and eventually purchased land in Dalat until full production began in October 2006.

The establishment of this company came from an observation that a number of customers in Dalat and several premium-class hotels were looking for organic vegetables produced locally (Nguyen Ba Hung, 2012). At present, the Company produces 105 kinds of organic vegetables to serve some 70 hotels in Dalat, Ho Chi Minh City, Da Nang, Hanoi; Pacific Airline Food Processing Company, restaurants in big cities and some 1000 foreign families working in Vietnam for their home food preparation. The Company has reportedly exported its produce to some neighboring countries.

The Company has modern production and packaging facilities, including greenhouses, facilities for waste treatment, use of clean water to irrigate the crops and use of organic compost for production. Harmful chemicals and pesticides are
not used to control insects and diseases. Records are kept carefully and contain information about each crop’s history in order to guarantee their customers that what they buy is not contaminated. The Company employs very well the IPM principles in their vegetable production. For example, they use crop rotation to control certain pests which love to thrive in lettuce plants. So after harvesting the lettuce, they plant romaine lettuce somewhere else. By rotating the crop this way, they can control the bugs without using chemicals. Another example is that they found out that some nasty insects are not attracted to flowers, so when flowers are grown beside the greenhouse, the other insects approaching with the purpose of damaging the crops are driven away. So they grow some kind of flowers along the side of the greenhouse to control pests, aside from its other useful purposes.

The Company has obtained HACCP Certificate for their organic vegetables valid from January 2009 to January 2012 and was issued by the National Board of Experts of HACCP - Netherlands.

Currently, the Company has no clear plan, but is very willing to expand their production due to their shortage of funds for facility investment and quality assurance of their production is expanded. It is also preparing to produce organic rice production, using indigenous rice varieties.

The Vien Phu green farm for organic rice
http://vienphugreenfarm.com

Though Vietnam is one of the leading rice exporters, the organic rice research and production is still in its infancy stage. At present, there is only one commercial company which is starting to produce organic rice for export to the US markets. This is Vien Phu Organic & Healthy Foods Joint Stock Corporation (Vien Phu JSCO) whose precursor is Vien Phu Trading Co., Ltd founded in 1999. The Company farm is located in Ca Mau Province and has a total land area of 320 ha of which some 200 ha is devoted for crop production. Commercial organic rice production started on 70-80 ha in summer crop of 2011 and expanded to some 200 ha in 2012, using their own rice production protocol, seeds, and bio-organic rice cultivation protocol and processing line. Paddy field is fully fertilized by Agrostim bio-organic fertilizer (accredited by Organic Material Review Institute - USA) without using any chemical fertilizers as well as chemical pesticides, insecticides and herbicides. Paddy farming method combined is supervised and accredited by the international certification organization as per EU and USDA Organic Standards.

The Company is planning to invest in the construction and development of organic rice paddy production area of 320 ha on their own farm and some 10,000 - 20,000 ha with the contract farmers in the region.

The Company’s main products are certified organic rice, including fragrant white rice, black rice, purple rice, red rice and mixed color rice. The Company has complied with the EU and USDA organic standards for their products but still faces a lot of difficulties in expanding production scale due to their lack of agro-technical staff, market demand and quality assurance compliance.

The ecological shrimp model in Ca Mau province

Organic Shrimp Culture was first introduced into Ca Mau province in 1999 and the first farms were certified in 2001 by Naturland (CAMIMEX, 2012). The idea for organic shrimp culture came after a Switzerland-supported forest project which promotes to maintain and expand the natural forest in the saline flooded area of the province, was established. With this project, the Swiss Import Promotion Program (SIPPO) and the Fisheries Department of Ca Mau Province revealed that this area is very clean for aquaculture, especially for shrimps. The first organic shrimp project was implemented during 2003-2006 with the technical and financial assistance from Switzerland, covering activities from training of farmers, selecting of production farms which must have at least 50% of the water surface covered by saline tolerant mangrove forest. In 2011, 10,500 ha out of 23,151 ha of Ngoc Hien Forest farms have been set up for organic shrimp culture. Of this number 6450 ha have been certified as organic shrimp compliant area with some 1238 farmers also officially declared as organic farmers. This project helps to increase farmers’ income through which they can have additional income from shrimp culture at the selling price of 20% higher than the normal shrimps while they can still have income from forest activities. Farmers reported that they can harvest up to 450 kg of shrimp/ha a year at a selling price of US$10-15/kg.

The model has a good production and quality assurance in organic shrimp culture; including certifying the registered production farm, employing the standard production procedure,
internal control system (ICS), quality certified by IMO, Naturland and BIOSUISSE.

The organic shrimp of this Company is currently exported only to Switzerland because the other foreign markets are not ready to accept the high price for buying these products. For this reason, the Company is trying hard in looking for some other new markets in the future.

CONCLUSION

Organic farming has not yet played an important role in Vietnam’s agriculture sector. The country’s certified organic area in 2011 was only some 21,000 hectares, equivalent to 0.2% of the total cropped area of which 7000 ha was used for aquaculture (mainly shrimps). The total export value of the organic products was some US$12-14 million. The major organic commodities include vegetables, tea, shrimp though efforts have been expanded to include other products such as rice, oranges, lychee, longan, cinnamon, ginger.

There is still a lack of specific Government policies to support the development of organic agriculture and as a result, there is still little attention given to organic farming from research, training and its extension services. The most significant efforts made by the Government toward this direction were the issue of the national standard 10TCN 602-2006 on 30 Dec 2006 to guide organic production and lately the policy decision (01/2012/QD-TTg) to support Good Agricultural Practices for agriculture, forestry and fisheries, including organic farming.

There have been some good models for organic production in Vietnam such as the ADDA-VNFU project on organic vegetables for the domestic market; ECOMART for organic tea production intended for export to European countries and the US; organic shrimp in combination with forestation in Ca Mau for export to Switzerland; ORGANIK Dalat for vegetable production to meet the demand of high demanding markets and customers. Initial efforts are also being pursued to produce organic rice in VIENPHU Green Farm for export to the US market.

Compliance for quality assurance for organic produce is done differently from one company to another. The participatory guarantee system (PGS) developed by the ADDA-VNFU project is a good tool to help farmers to produce good organic vegetables for the domestic market. The production of all the export-oriented products follows the quality certification systems of the importing countries. Some foreign companies are collaborating with the local ones to produce such certified products for export; however, the production scale is still small due to unstable markets and profitability.

To promote a significant number of organic farming production in Vietnam, much greater efforts should be made from the Government in setting up long term programming for organic production areas in different agro-ecological regions and localities in order to support farmers and organic agriculture for more sustainable development; prioritizing and implementing research activities and international cooperation; and providing further training and fine tuning of the existing organic production systems to enable them to be farm organically certified.

REFERENCES

Prime Minister’s policy decision (No 01/2012/
QD-TTg) to support good agricultural practices for agriculture, forestry and fisheries, including organic.
