



Tropentag 2010
ETH Zurich, September 14 - 16, 2010

Conference on International Research on Food Security, Natural
Resource Management and Rural Development

Key Success Factors on the Organic Vegetable System in Thailand

Pornpratansombat, Panchit and Supaporn Thaipakdee

Kasetsart University, Faculty of Agriculture at Kamphaeng Saen, Department of Agricultural Extension and Communication, Nakhon Pathom 73140 Thailand. Email: ppanchit@gmail.com, agspp@ku.ac.th

Abstract

The objectives of the research were to understand the existing situation and key success factors on the organic vegetable system in Thailand. Data were collected from the best practice farmers, and processors/handlers such as Rai Thon Nuey (Dare to sweat farm), Rai Plook Ruk (Thai Organic Farm), Suwannabhumi Organic Co. Ltd., and Swift Co. Ltd. Semi-structured interview and observation were used collecting data. Empirical and documentary analyses were applied. Findings revealed that organic vegetables are mainly leafy vegetables, especially the salad type, Chinese vegetables and premium crops such as asparagus and baby corn. The empirical study showed that three types of organic vegetable producers are commercial family farms, farmer groups with contract farming and large-scale corporate farms. Key success factors and important techniques of organic farming are practiced with implicit knowledge which starting from the preparation of ecosystem and soil nutrient, during planting, crop maintenance with the system of food chain, and harvesting only edible pieces. These practices need the ability of thinking out of the box. While market access with simple post harvest at farm level conduct to longer shelves life and good quality produces are necessary.

Key words: organic farming, organic vegetables, key success factor, Thailand

Introduction

Health awareness of Thai urban consumers is increasing, particularly regarding the very high level of pesticide use by Thai farmers and thus the possibility of toxic residues in food. Whereas, Thai agriculture suffers from problems linked to the high external input system. As the awareness of problems linked to high-input agriculture is increasing, politicians, NGOs and farmers are searching for alternatives (Roitner-Schobesberger, 2006). In Thailand, organic farming re-emerged beginning in the early 1980's after the health and environmental effects of improper use of and heavy reliance on agrochemicals began to manifest themselves.

Organic agriculture is the most dynamic and rapidly-growing sector of the global food industry. The emerging popularity of organic agriculture in Thailand has resulted from a combination of three major trends. The first is an increasing public aspiration for healthy living. The second trend is the development of sustainable agriculture in response to the crisis faced in the farm sector. The third trend is the rise of environmental awareness, and pollution caused by use and misuse of agro-chemicals (Ellis et al, 2006). Current organic production is overwhelmingly of rice, with vegetables as a distant second and baby corn standing out (USDA, 2006; Ratanawaraha et al., 2007). Of particular interest is the significant expansion in fresh vegetable production, in

response to growth in the domestic as well as export markets. Nevertheless, in relation to the total agricultural area, organic agriculture represents but a small fraction of traded output (Ratanawaraha et al., 2007). Organic vegetables are the most popular in the market place for domestic market (Ellis et al., 2006).

This study aims to understand the existing situation and key success factors on production of organic vegetables in Thailand from a lesson of farmers as well as traders and to formulate recommendations for improving the way to development of organic vegetable system in Thailand.

Methodology

Data was collected from the best practice farmers, and processors/handlers: Rai Thon Nuey (Dare to sweat farm), Rai Plook Ruk (Thai Organic Farm), Suwannabhumi Organic Co. Ltd., and Swift Co. Ltd. The techniques of semi-structured interview and observation were used for data collection. Empirical and documentary analyses were applied.

Results

Thailand's organic sector is driven mainly by private companies, government projects, farmer cooperatives, grassroots support groups and NGOs. The private sector in general comprises farmers who either work on large farms or operate as contract farmers at pre-agreed volumes, grades and price levels. The companies provide technical advice and cash advances to the contract farmers. In registering for organic standards, the companies will also pay for and hold the organic certification in their name- not the farmer's. It is noteworthy that larger Thai-based companies are increasingly entering the organic sector at all stages in the supply chain, including production, processing and marketing levels. These include large agro-industrial companies, whose aim is either to supply modern trade outlets in the domestic market, or to export to industrialized countries (Ellis et al., 2006).

Organic vegetables are mainly leafy vegetables, especially the salad type, Chinese vegetables and premium crops such as asparagus and baby corn, produced mainly in central Thailand and in Chiangmai province. In 2005 the total volume of organic vegetables include herbs in Thailand delivered to market was estimated at 4,618.18 tons, valued at 5.33 million EU (Ellis et al., 2006).

Three types of organic vegetable producers are: (Ellis et al. 2006 and Stracke-Lassmann, 2007)

- 1) producers with single farms (commercial family farms)
- 2) small holders working together as a farmer groups with contract farming which 2 sub categories
 - a. farmer groups under a common organic project
 - b. farmer groups under the large conventional companies with an organic product line as contract grower groups
- 3) large-scale corporate farms

Techniques from best practice of organic vegetable farms (Figure 1) lead from preparation of ecosystem, soil nutrient and tillage depending on plant root system, between planting, crop maintenance with the system of food chain, and harvesting only edible pieces, in addition simply post harvest management is used. However, these techniques need the ability of farmer to think out of the box, especially the box of conventional agriculture, that why most of organic vegetable farmers who success on farming are the career change people.

Preparation

- Improving soil fertility: green manure, compost and manure
- Ecology: predators and parasites
- Soil preparation: plough depending on crop root system, minimum tillage

Plant

- Selected crop type with suitable season
- Diversify crop (biodiversity)

Maintenance

- Insects: food chain e.g. crop for insects, biological control, light and sound
- Weed use and control

Harvest

- harvest only eating pieces
- simply post harvest management at farm

Figure 1: Organic vegetables technique

The “organic agriculture” that the government, private sector, and country-wide farmers are interested in will not occur if they practiced without true knowledge or it may occur in wrong directions (Rangsipaht et al., 2005).

Followings are key success factors and important technique of organic agriculture from the best practice organic farms.

- 1) Knowledge of “organic agriculture” enables people to think and to solve problems.
- 2) Create a balanced ecosystem: to enable all lives to live in harmony and all must have enough to eat.
- 3) Manage plant nutrients: soil must be sufficient with plant nutrients.
- 4) Pest management: practicing nature management as a food chain, manages it all the time...all lives must survive.
- 5) Diversify crop: grow at least two types of plant simultaneously.
- 6) Harvest only eating pieces and leave the rest for safe nutrient.
- 7) Simply post harvest management at farm level.
- 8) Organic agriculture...all systems must be done simultaneously and correlated well.

These seem to be a basic principle; however, it's not easy to do but the practices are necessary. Thinking principal is sharing and giving, at the same time integrating all resources in order to reduce the waste.

The processors and traders of organic vegetable product have key success factors (Table 1) like farm production plan providing sufficient volume, improving quality by having a good farming practice, guarantee of the direct access to markets at minimum or no cost, giving direct supply from farm to pack houses, minimizing waste (approaching zero), on time payment and cost saving by buyer's operation and production line.

These practices need also the ability of thinking out of the box, as well as well planning. While market access with simple post harvest at farm level conduct to longer shelves life and good quality produces are needed in order to promote the market. In addition, cooperation between

producer and processor conduct to low layer of supply chain and promote fair trading is needed to reduce the cost of organic vegetables.

Table 1: Key success factors of organic vegetable system

Production	Processing/ trading
- farm production plan - sufficient volume - good farming practice: knowledge, balanced ecosystem, plant nutrients, pest management - harvest only eating pieces - post harvest control - quality of supply - simultaneous and correlate well system	- direct supply from farm to pack houses - minimizing waste (approaching zero) - cost saving in buyer's operation and production line (min. layer) - on time payment - direct access to market

Conclusion and recommendations

Organic vegetables are mainly leafy vegetables, especially the salad type, Chinese vegetables and exported crops such as asparagus and baby corn. Organic vegetables depend more on market. The success of farming is the practice with true knowledge and all systems must be collaborated and done simultaneously, while production plan providing sufficient volume, improving practice to reduce wastes throughout supply chain, and the direct access to markets are needed to promote the market success. Sharing of problems, knowledge, and exchange know-how between farmer and farmer, and also processors or traders should be taken into consideration. At the same time, farmers/ processors have to understand problems and be able to manage as well as apply knowledge to solve them. Hence, these strategies are needed to improve their lacking capacities e.g. the production plan for farmers, while reduce cost production techniques for a company, and etc.

References

- Ellis W, Panyakul W, Vildoza D and Kasterine A, 2006. Strengthening the Export Capacity of Thailand's Organic Agriculture: Final Report, August 2006. An EU-International Trade Centre Asia Trust Fund Technical Assistance Project.
- Rangsipaht S, Pornpratansombat P, Parnuwad K, and Saengchan N, 2005. Agriculturist Handbook: Mrs. Sommai Nu-daeng and Organic Agriculture for Sustainable Development. Kasetsart University, Bangkok, Thailand.
- Ratanawaraha C, Ellis W, Panyakul V and Rauschellbach B, 2007. Organic Agri-business: A Status Quo Report for Thailand. Bangkok.
- Roitner-Schobesberger B, 2006. Consumers' perception of organic foods in Bangkok, Thailand. Diplomarbeit, University of Natural Resources and Applied Life Sciences (BOKU), Vienna, Austria
- Stracke-Lassmann M, 2007. Strategies of organic producers in Thailand. Diplomarbeit, University of Agricultural Science Graz. Austria.
- USDA, 2006. "Thailand organic products: Thailand's organic outlook 2006". Global Agriculture Information Network Report. No. TH6007. USDA Foreign Agricultural Service.