

Impact of Trade Liberalization on the Agricultural Sector and Adjustment Policy: The Case of Shallot Plantations in Northeastern Thailand

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ABSTRACT

This research examined the impact of the Free Trade Agreement on shallot plantations in Northeast Thailand, the government's adjustment policy, the results of that policy, and ways to improve the policy. The methodology involved collecting research data from 770 households and 44 villages in Sisaket province in Northeastern Thailand using questionnaires for households, structured interviews for village heads, and in-depth interviews of the people in related agencies. The results of the study show that trade liberalization has affected shallot plantations in many ways. The policies for coping with the impacts have not been effective, as reflected in an increase in product quality while production cost have risen, and a decrease in sale price when compared with inflationary conditions. The overall results suggest the strategic recommendation that the government should formulate policies, both general and area-specific, which focus on competition-building under their comparative disadvantage, such as the re-establishment of specific policy-response committees at the provincial level. Moreover, government should also encourage the creation of and support for self-reliance, such as the production by farmers of their own fertilizer and account trading among co-operatives.

Key words: trade liberalization, agricultural policy, shallot plantation

บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์เพื่อติดตามประเมินผลผลกระทบจากการเปิดเสรีการค้าต่อการเกษตรในอีสาน และสร้างข้อเสนอแนะเพื่อการปรับตัวของนโยบายการเกษตรภายใต้ยุทธศาสตร์ โดยเลือกศึกษากรณีผลกระทบต่อเกษตรกรปลูกหอนแคงและน้อยบายหอนแคงในจังหวัดศรีสะเกษ ในการเก็บรวบรวมข้อมูลมีกลุ่มตัวอย่างทั้งสิ้น 770 ครัวเรือน 44 หมู่บ้าน โดยเก็บข้อมูลจากการแจกแบบสอบถามครัวเรือน สัมภาษณ์แบบมีโครงสร้างผู้นำหมู่บ้าน รวมถึงสัมภาษณ์เชิงลึกหน่วยงานที่เกี่ยวข้อง ผลการศึกษา

พบว่าการเปิดเสรีการค้าส่งผลกระทบต่ออาชีพปลูกหอนแคงในหลายมิติ โดยน้อยบายหอนแคงเพื่อรองรับและตอบโต้ผลกระทบทั้งหลาย ไม่สามารถทำให้ผลผลิตโดยภาพรวมมีคุณภาพตามเกณฑ์มาตรฐาน ไม่สามารถลดต้นทุนการผลิต ไม่สามารถเพิ่มน้ำหนักของผลผลิตและไม่สามารถสร้างความสมดุลของความต้องการซื้อและความต้องการขายผลผลิตในตลาดในพื้นที่ สำหรับข้อเสนอแนะเชิงนโยบายเสนอให้ภาครัฐมีนโยบายทั้งในลักษณะภาคร่วมและเฉพาะพื้นที่ซึ่งมุ่งสร้างความได้เปรียบเชิงแข่งขันบนความเสียเปรียบเชิงเปรียบเทียบ อาทิ ด้วยการรื้อฟื้นคุณธรรมการที่รับผิดชอบนโยบายโดยเฉพาะ

ในระดับจังหวัดขึ้นมาอีกครั้ง พร้อมทั้ง หนุนสร้าง และหนุนเสริมวิถีแบบพึ่งตนเองให้กับกลุ่มเป้าหมาย อาทิ หนุนสร้างการผลิตปุ๋ย/ยาปesticide ใช้เองในชุมชน และครัวเรือน และหนุนเสริมการแลกเปลี่ยนสินค้า กันระหว่างสหกรณ์ คำสำคัญ: ยุคการค้าเสรี, นโยบายการเกษตร, การเพาะปลูกหอมแดง

INTRODUCTION

In the new era of trade liberalization, each country has been forced to open its boundaries, to become in an economic sense borderless. Thailand has also been forced to change, partly due to the influence of the World Trade Organization (WTO) and the more powerful countries. After the Thai government signed free trade agreements with other countries, the impacts began to be felt. This research focused on the impacts of free trade on the Thai agricultural sector, specifically shallots planted in Northeastern Thailand. The research, however, started with the intention of learning about the characteristics of shallot plantations in individual communities. The research tried to investigate the impacts of the Free Trade Agreement on shallot plantations in Northeast Thailand, the government's adjustment policy, the results of that policy, and ways to improve the policy.

LITERATURE REVIEW

Agricultural policy

In overview, agricultural policies focus on the two sides of agricultural activity: the production side and the marketing side (Tubtun, 1998: 116-118).

On the production side, the policies focus on adding production values and reducing production costs, such as increasing product quantity, improving product quality, using efficient instruments, reducing cost of transportation, and avoiding product damage. On the marketing side, the policies focus on finding proper markets or places to sell the product, advertising, choosing the period for selling the product, transformation of product image, and funding support for farmers when price levels fall sharply.

However, to study agricultural policy during the era of trade liberalization, it is necessary to add various dimensions to the traditional approach. Examples are: issues concerning the policies to prepare for adjustment under the impact of trade liberalization; reduction of oversupply, such as by finding new markets, expanding the market base, and adding marketing opportunities; systematic alleviation of the debt problem; and management of knowledge to develop both the production side and marketing side.

Policy adjustment: the selection of development strategies

Policy adjustments after an initial trial are essential to successful policy development. There are many strategies for developing policy. These can be divided into two types of strategic approaches: mainstream discourse and anti-mainstream discourse (Table 1).

One-size-fits-all approach

This approach assumes several general characteristics of the agricultural sector:

- 1) Demand consistency; for example, people

Table 1 Mainstream discourse strategy and anti-mainstream discourse strategy

Mainstream discourse	Anti-mainstream discourse
- One-size-fits-all approach	- Community-based development approach
- Modernization and westernization approach	- Alternative development/ Sustainable development approach
- The theory of comparative advantage	- The theory of competitive advantage

Note: Collected from various sources of development policy and strategy approaches

always eat the same quantity of rice each day.

2) Immobility; even as a losing proposition, farmers must continue to plant as in the past because it is difficult to change and plant other kinds of product.

3) State intervention; the market price cannot remain unchanged because while state support helps farmers to gain more income, it leads to a higher price for customers and encourages irrational production, so that farmers tend to grow much more of the supported plant as a consequence of the expectation of a good income. Finally, it becomes a state burden to store greater quantities of the product.

4) Income per head in the agricultural sector is less than in other sectors; in the case of Thailand, it is about six to nine times less.

5) The agricultural sector always faces problems associated with soil, water, and plant pests.

These generalized characteristics of agriculture reflect the idea that a one-size-fits-all or a blue-print approach is necessary and possible. There are many ways to formulate agricultural policy under this approach and they can be divided into two series: production-side policies and marketing-side policies (Tongpan, 1988).

Production-side policies focus on the distribution of production factors at a lower-than-market price for all farmers, such as the distribution of low cost fertilizer, and credit at a low rate of interest. There are three major purposes in doing this: 1) farmers have greater access to production factors; 2) maintaining the product price at the proper rate; and 3) helping farmers to have a chance to use modern production factors.

Moreover, production-side policies in the modern world must also focus on the improvement of product quality and setting a floor standard for the product. In the era of liberalized agricultural trade, governments must be concerned about the competitiveness of agricultural products due to the proliferation of sources of the same product in the world market (Poungsomlee, 1995).

Marketing-side policies focus on helping farmers both with product price problems and

marketing problems by: 1) supporting the price, which means helping to push the price higher than the market price and guaranteeing the price, which means keeping the price at a consistent level that farmers can accept; 2) compensation payment concerning the target price, such as a floor price level; 3) building up price stability by letting the price change but controlling the trend rate through maintaining a buffer stock, setting a buffer or stabilizing fund, scattering product sales in various markets and at various price levels (price discrimination), and by contract farming or futures trading; 4) setting up a floor price or minimum price; and 5) improving the inside market system to reduce marketing costs. All policies have four main purposes: 1) reducing price instability; 2) adjusting farmer income, so that it is equal with other careers; 3) maintaining food prices; and 4) increasing motivation to be a farmer.

Factors which must be considered in policy formulation are: 1) subsidies on the production side are better and cheaper than on the marketing side, as for example, the distribution of low cost fertilizer costs less money than to support price consistency with a target price by a multiple of about four; and 2) resolution of farmer problems must use many methods in many ways.

Community-based development approach

As with agricultural policy, there is a policy type involving a community-based development approach (Pretty, 1995: 172). The characteristics of this policy type are: 1) specific market price supports; 2) choice of direct payments; 3) reduction of costs by each type; 4) provision of general services; and 5) other indirect supports, such as support in landscape development and offering tax concessions or giving grants to farmers.

Modernization and westernization approach

Policy discourse under this approach focuses on supporting unitary plantations for commercial purposes and identifying the product as a production

factor of industry, which can be called “agro-industrial”. Because of this, the production of the farmers becomes a means to an end that is the industrial sector, and the farmers never know who the consumers of their products are, as most are outside their community. This system is called post-productivist.

Alternative development or Sustainable development approach

Alternative or sustainable development focuses on the maintenance and protection of the natural environment today, in order to keep it intact for the future. Thus, this concept concerns both the next generation and the present-day generation. This approach also focuses on development that bridges economic, social, and ecological factors. The principles of this approach are: 1) maximize environmental value; 2) look forward into the future; and 3) make equity a higher priority (Burton and Turner, 2003).

Moreover, sustainability is an aspect of the relationship between human, social, natural, and technological factors. It includes the sustainability of the environment, people's lifestyles and community culture for both producers and consumers, food security, and self-reliance or utilization of mainly-community resources (Pretty, 1995: 172). However, sustainability is difficult to define. Some say that, like beauty, sustainability is in the eye of the beholder (Pretty, 1995: 11). Thus, it is socially constructed and the actors will know themselves precisely by practice, re-experiment or re-adjustment. There is not any blueprint.

As for sustainable agriculture, while the world social forum has the slogan “Another World is Possible”, the movement for sustainable agriculture also has a similar slogan, which is “Another Agriculture is Possible” (Higgins and Lawrence, 2005). The movement has changed radically since the well-known literature of Fukuoka, namely the “One Straw Revolution” was published. The paper states that agriculture should become one with nature because it is a part of nature. It is in error, that the world tries to separate agriculture from nature. Thus,

now, we should try to bring it back to being a part of nature (Rukyuttitum, 2005: 68).

The sustainable agricultural conditions are resource-conserving technologies and practices, which are developed and used by local institutions and groups, through the support of enabling, external institutions (Pretty, 1995: 21), as well as the transformation from quantity agriculture to quality agriculture (Poungsomlee, 1995: 154). However, the sustainable farm and the organic farm are not necessarily the same thing, even though in their general sustainable methods they do avoid chemical use (Pretty, 1995: 9). For instance, the sustainable farms focus on various crops on the same land, while many organic farms focus on commercial production by unitary crop cultivation (Hengsuwan *et al.*, 2004).

Furthermore, the transformation from the modern system of production to the sustainable way faces a serious concern, namely the reduction of income and the rising of expenditure for at least three years. This period is called the “growing pains” situation. It describes the period during which the ecology adjusts to the new conditions. As a result, some people try to find the middle way, that is, the use of chemical methods as long as the equilibrium of the environment can be sustained along with both producer and consumer health. The middle way realizes that both organic and chemical agricultural methods have their own limitations; for example, the chemical way leads to more productivity but damages the environment and human health, while the organic way is friendlier to both the environment and health but risks losing productivity. Thus, the middle way is the best compromise.

The theory of comparative advantage

At the international level of analysis, if it is assumed that the world economy is a goods and services market and the countries are the producers and the buyers through international trade, then a comparative advantage exists when each country produces and buys goods or services in which it excels, through lower investment and higher productivity than others (Tangchareau, 1993). Each

country should not produce the same thing and countries can best replace products with imported ones in areas where they have lost their comparative advantage. In conclusion, the theory maintains that if a product cannot be produced more cheaply, with less investment or with higher quality, than elsewhere, then it should be imported.

Nevertheless, the theory neglects the risk of food insecurity for three reasons. Firstly, international exchange can lead to equilibrium in demand and supply. Secondly, the problem of food insecurity is not caused by an inability to produce food. Rather it is the means to acquire food because when faced with a lack of locally produced food, some people cannot access imported foods because of their high cost. Policy makers must change their focus from retaining food security to giving people the power to purchase; what makes people hungry is not the failure of crops, but rather the inability to buy (Redclift, Lekakis, and Zanias, 1999: 212). Thirdly, the nature of agricultural goods is that each good always can be substituted by others. Consequently, once people cannot access some foods, they consume other foods instead.

The theory of competitive advantage

The difference between competitive advantage and comparative advantage is that competitive advantage includes the assumption that the world is always tending towards economic conflict. Each community or country must compete with others and must try to be a winner by finding opportunities and strengths to compensate for its weaknesses and threats. The route to competitiveness depends on the situation. For example, if ducks compete with birds in the search for food on land, their legs will become an obstacle. When changing to compete on water, however, the legs of a duck become a competitive advantage (Naweekan, 2000). It can be argued that an increase in competitive advantage could counterbalance a loss of comparative advantage.

Porter (1990) offers three methods to increase competitiveness: trying to be a cost leader (the cheapest); creating product differentiation; and

focusing on a niche market. All three methods can be factor driven, investment driven, innovation driven, and wealth driven.

The theory of competitive advantage is concerned with food security maintenance because it is a threat at both the community and country level. The loss of food security means that the community or the country must depend on others, like the ill depend on an oxygen tank to breathe. Moreover, food security implies national security (Poungsomlee, 1995: 156). For this reason, many countries, which follow this theory, are deeply concerned about food security protection, including the United States of America, which has established a specific department to deal with these issues.

METHODOLOGY

Research procedures

The study uses eight research procedures, which were derived from the procedures of Tiraganun (2005: 13-14). They are: 1) studying the background of issues; 2) identifying topics needing assessment; 3) constructing proper indicators; 4) constructing criteria; 5) collecting and analyzing data on the basis of research design; 6) collecting data; 7) analyzing data; and 8) drawing conclusions and making recommendations on how to adjust the policy.

Population and sampling

The population in this research was farmers who plant shallots in Sisaket province in Northeastern Thailand, where the greatest number of shallot plantations in the Kingdom are located. The population covered five districts: Yangchumnoi, Rasisalai, Kantararom, Kantaraluk, and Wunghin. A simple random sampling method was used, with sample data collected from 770 households and 44 villages in Sisaket province.

Method for collecting and analyzing data

The data were collected using questionnaires for households, structured interviews for village heads, and in-depth interviews of the people in

related agencies. The questionnaires were divided into three versions depending on the size of the village. Key people were selected for interviews, specifically, those who were directly involved with the issues. Data analysis mainly used counts and percentages for general analysis. The research also used Chi-square, Cramer's V, Tau-b, and Tau-c to analyze relationships and to correlate data prior to using the logic principle.

RESEARCH RESULTS

Shallot production and marketing in overview

Shallots are mostly planted in North and Northeast Thailand, especially in Sisaket and Lumphun provinces (Ministry of Commerce Thailand, 2006). The rotation length is about two-and-a-half months to three months (Office of Agricultural Economics, 2002: pp. 5-6). The crop is of great importance to the farmers, especially in households whose living depends on shallot production, because the benefits from the shallots will influence the households' ability to live throughout the year.

Problems in shallot production and marketing have existed for a long time. The most important ones are: production quality, cost of production, imbalance of demand and supply, small and diminishing markets, as well as lack innovation in collecting and learning regarding shallot production and marketing. Moreover, because the plantation time-range is such a large part of the income for farmers, many farmers decide to plant shallots commercially. This reflects the high cost of investment and the high profit potential. Farmers are also trending towards chemical-based plantation methods and away from organic plantations because the former offer the chance of higher profits, even though the natural ecology may be destroyed. In addition, the higher costs of commercial production lead to more loans, which is the genesis of a farmer's debt problems. Thus, a farmer's debt problems are caused by systematic and complex problems associated with shallot plantations.

Life cycle of shallot plantation communities: the individual farmer's perspective

The life cycle of the shallot plantation community is used to define an overview of the farmer's mode of life, which involves many factors from pre-production to post-marketing. Production factors are linked by inter-relationships, so that changing some factors involves a change in others. Thus, knowledge of the cycle is very important in adjusting policy to be more reasonable and effective because it helps to achieve positive goals.

The life cycle of the shallot plantation communities observed in the study findings and resulting from the data synthesis is simplified in Figure 1 and identifies several issues that need to be addressed.

Facing non institutional debt and inability to pay dept problems

To begin to understand the whole picture starts with understanding the farmer's way of life from the past to the present. A decision to become a farmer in Thailand means a decision to have debt. This is reflected in the evidence that almost all farmers begin their career with loan money, including shallot plantation farmers.

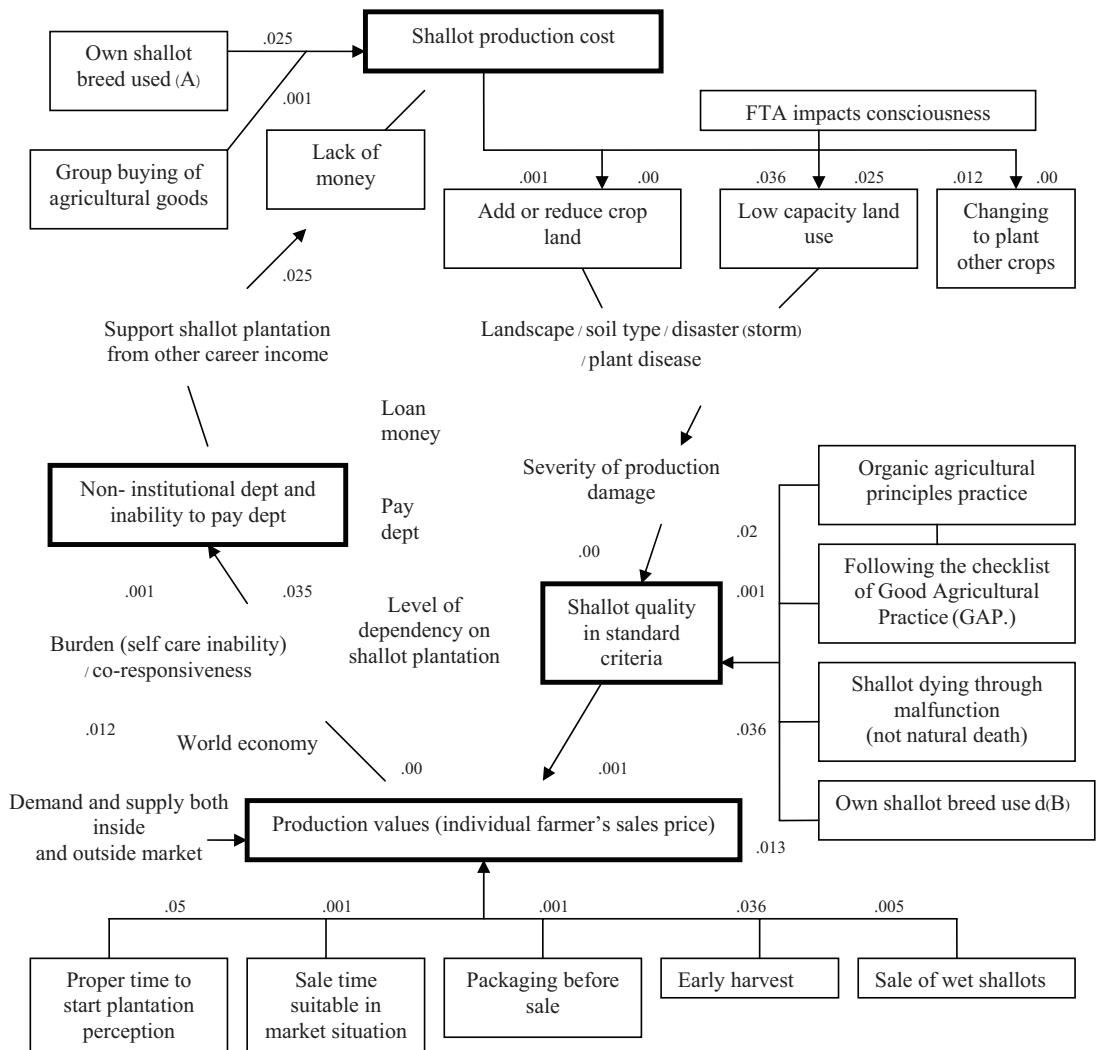
Shallot farmers borrow money before planting. This borrowed money becomes rice and chili plantation capital. Then, farmers expect to realize a profit from rice and chili to invest in shallots, which some plant in parallel with garlic. Finally, farmers hope to get a net income after debt payment. Thus, farmers borrow money to be repaid later based on the hope of making a profit after payments and interest.

However, non-institutional debt and the inability to pay debt relate to shallot production values as well as to the household burden (the number of dependants in the household) and the level or share of responsibility for that burden. Moreover, the debt level also relates to the level of household dependency on shallot plantations, because income from shallot selling is the main income in some

households and not in others (there are unequal levels of dependency on shallot plantations).

The income is used by households in different ways, depending on the number of dependants in the household and the share of responsibility for that burden. Nevertheless, the debt burden of farmers

can be worse or better depending on the world economic situation. Thus, considering all factors, it is clear that there is a correlation with the level of debt. More debt leads to the likelihood of having more non-institutional debt and a greater inability to pay debt.



Note number is significant value of Chi-square

<input checked="" type="checkbox"/> Policy result	→ Correlate with
<input type="checkbox"/> Project / task result	— Include with

No frame indicates important result link conditioners.

Figure 1 The life cycle of shallot plantation communities

Facing shallot production cost problems

Because of the use of loan money to grow plantations of other kinds of crops before shallots, the income from such other crops or activities relates to the lack of shallot plantation investment money. Those incomes may be inadequate to support growing a shallot plantation. However, when analyzing the lack of capital and the cost of shallot production that may increase, decrease or be unchanged from last year, this was found to correlate with the farmer's decisions to add or reduce crop land, to utilize lower capacity land which may have bad soil or insufficient water, or to change to planting other crops instead. Nevertheless, these decisions are affected by a consciousness of Free Trade Agreement (FTA) impacts as well.

When farmers decide to add or reduce crop land, utilize lower capacity land, or change to grow other crops instead, they confront uncontrollable conditioners such as landscape, soil type, disaster (storm), and plant disease, which, finally, may lead to substantial or little product damage. Product damage levels can affect shallot quality in terms of standard criteria.

Facing shallot quality in standard criterions problems

Shallot quality is evaluated in terms of standard criteria: large size, dye head, red color, shining, and small neck. These criteria are related to production damage, the use of a farmer's own shallot breeds, shallot deaths due to malfunction rather than by natural causes, following the checklist of Good Agricultural Practice (GAP), and practicing organic agricultural principles.

Facing production value problems

Production values, which are measured from each farmer's sale price, relate to the supply and demand in both the domestic and international market, the perception of the proper time to start planting, the best time to sell in the context of the market situation, packaging before sale, early harvest,

and sale of wet shallots. In addition, production values also relate to shallot quality in terms of the standard criteria, which is a factor linking the whole picture, including, non-institutional factors and the inability to pay dept.

There is a completed circle of cause and effect that links the last to the first in the cycle, a cycle that reflects the whole picture of a shallot plantation farmer's life. Thus, this picture has been called the life cycle of shallot plantation communities.

Impact of Free Trade Agreement (FTA) on shallot plantations

The Thai government decided to sign a free trade agreement with others countries on engaging with the new era of trade liberalization. There are many countries involved in shallot plantations, including China and India, which signed agreements with Thailand in October 2003 and September 2004, respectively. The agreements have resulted in a trend of market bombing by producers including a loss of competitiveness in target markets, such as the Malaysian, Singaporean, Hong Kong and Indonesian markets, because of the lower price and higher quality of the competing countries' product.

At present, it is accepted that the impact on shallot plantation farmers from free trade agreements with China and India is not widespread or severe compared with the situation for onions and garlic, which are similar types of plants. The price evidence of the last three crop years (after signing the free trade agreement with China) indicates that the shallot price has maintained a high level, especially immediately after signing the free trade agreement. However, some period data shows that there may be a problem in the future, as the shallot price received by farmers in 2003, 2004, 2005 (April) and 2006 (24-28 April) averaged 15.06, 9.32, 9.83 and 22.95 baht per kilogram, respectively (Ministry of Commerce Thailand, 2006). After signing the free trade agreement with China in October 2003, the shallot price in September and November 2003 and January, February and March 2004 averaged 18.55, 12.15,

10.70, 8.70 and 8.30 baht per kilogram, respectively (Office of Commercial Affairs, Sisaket province, 2006) which are overall quite high.

However, a higher shallot price does not mean there is no threat from trade liberalization, since average product gains in price do not necessarily indicate that all farmers benefit from the price. Many households sold their product when the market price was low (Boossabong, 2006). Moreover, the main cause of higher average prices was the reduction in supply, with the quantity produced in 2004/05 reduced from 2003/04 by 10,650 ton, from 232,537 ton to 221,887 ton. In addition, the amount of product in 2005/06 was reduced from 2004/05 by 12,610 ton, from 221,887 ton to 209,277 ton (Ulfa Research, 2006: p 236). The reasons, including some that happened by chance, were (Ministry of Commerce Thailand, 2006; Chartmontree, 2006):

1) Hot weather in the period reduced the growth rate of shallots and increased the probability of disease spreading.

2) Increasing production cost (average production cost in 2003/04, 2004/05 and 2005/06 were 6.45, 7.95 and 8.31 baht/kilogram, respectively (Ministry of Commerce Thailand, 2006). This factor influenced many farmers to reduce their crop area, as they had to deal with a high initial cost, without being able to predict their product sale price. Moreover, increasing costs suggests that a good price does not necessarily mean a benefit to farmers.

3) There was a systematic labor shortage problem.

4) In the crop year 2005/06, there was a devastating flood in North Thailand, which is where most of the shallot plantations are located, so that many areas could not be planted with shallots that year.

Considering the reduction in supply, for these various reasons it is not surprising that shallot prices during that period were still high. The price changes have followed the principles of supply and demand. In addition, because competition from other exporting countries was limited during that period, the amount

of Thailand's shallot imports was less than exports. Imported amounts in 2004, 2005, and 2006 (from January to June) were 26,582, 5796 and 1086 ton, respectively, and for each year the predicted imported amount was 10,000 ton. The imported amounts for the same years from China were 3129, 1679, and 284 ton (from January to June), respectively, while the exported amounts were 60,009, 46,634, and 36,232 ton, respectively, and for each year the predicted exported amount was 45,000 ton (Office of Agricultural Economics, 2006; Customs Department, 2006). Additionally, this data shows that shallots from China and India do not satisfy the taste preference of Thai customers, because shallots from those countries do not smell and have the same spice taste as the Thai shallot. Thus, shallots from competing countries are not completely substitutable goods. Consequently, a good price was maintained, which can mask any deeper impacts of trade liberalization. However, it is not possible to predict whether in the future those factors (including some happening by chance) will occur and the shallot export rate from competing countries could rise in parallel with quality developments leading to a taste more acceptable to worldwide standards. In addition, the negative impacts on shallot plantation farmers in Thailand may increase, and shallot plantation farmers may choose to grow other plants instead, which could lead to food insecurity in the case of shallots because of the price differential (shallots from Thailand being more expensive compared with shallots from other countries).

Moreover, under trade liberalization, Thailand must face intensifying trade competition, not only from China and India, but also from the Philippines and Vietnam (Pearnchareun, 2006). Such a trade policy can allow competing countries to practice market bombing (including illegal imports). This is especially relevant to Vietnam, which is a communist country opening up to international trade. It has been able to increase economic growth (7.5% in 2006), to rank the second highest in the world after China, whose economic growth rate is about 8-9%. Vietnam

has been a member of the World Trade Organization since January 2007. Finally, Vietnam has set goals for its economic growth to be at a greater rate than Thailand's within the next 13 years (Reaungsuwan, 2007).

Combining all these issues with a comparatively stronger monetary exchange value than competing countries (which impacts on the export side and on trade equilibrium), and an unpredictable world environment that is rapidly changing because of global warming problems, it is clear that Thailand will face increasingly complex problems in shallot production and marketing in the future. These initial signs suggest a threat to the farmer's lifestyle, and present a risk to food insecurity.

Policy Adjustment and Implementation

The shallot plantation industry is known to have many problems. Consequently, the Thai government (specifically through the Ministry of Agriculture and Cooperatives, which is the government's principal agent in this field), decided to establish a shallot production and marketing management policy. The policy has been in place since 1985 (The Committee of Agriculture and Cooperatives Policy and Planning, 1989). To manage the policy, the government set up a committee named "the Committee of Garlic, Shallot, and Onion Production and Marketing Management" which was later changed to "the Committee of Garlic, Shallot, Onion, and Potato Production and Marketing Management" (CGSOPP-MM), as the committee wanted to add potatoes to its brief (The Committee of Agriculture and Cooperatives Policy and Planning, 1989).

Characteristics of Policy Management

The government has designed three overlapping and parallel patterns of policy management for shallot production and marketing policy management in response to the intensifying trade competition. This involved setting projects and tasks under

agenda-based management, area-based management, and function-based management. All patterns are compatible with the new public management paradigm, which is described below.

1) Under agenda-based management, there is a policy and a plan for general shallot production and marketing, which include projects and tasks formulated by the CGSOPP-MM.

2) Under area-based management, projects and tasks involved with shallot production and marketing are set at the provincial level under the provincial development strategic plan.

3) Under function-based management, projects and tasks involved with shallot production and marketing are set at the provincial level under the strategic plans of public organizations in the province, which are under the control of the Ministry of Agriculture and Cooperatives, and the Ministry of Commerce.

Main contents of policy

The policy has important four goals.

- 1) Increasing product quality following standard criteria
- 2) Decreasing production costs
- 3) Adding production value
- 4) Reducing farmers' non institutional debt and their inability to pay debt

Results of policy

After a goals-based evaluation of the policy, it was found that the shallot production and marketing management policy was unable to increase product quality while production cost was continuously rising, even though the rise corresponded with inflationary conditions. The policy also could not increase the sale price, which had declined when compared with inflation. Similarly, it could not balance the demand and supply of production that was reflected in price fluctuations. However, the policy was able to reduce farmers' debt, since about 53 percent of farmers were found to be less indebted. The most important determinant of policy success

and failure was the mode of production and marketing, which included many of the area-based conditioners, such as landscape, soil type, and other crops planted in parallel with shallots.

POLICY RECOMMENDATIONS

Direction of general proper adjustment policy in the trade liberalization era

The direction of shallot production and marketing management policy adjustment in the present era of trade liberalization should see the government formulating policy at both the national and area-specific level, focusing on competition building under their comparative disadvantage. This should proceed in parallel with encouraging community innovation and cohesiveness, and support for the farmers' self-reliance, while still being concerned about structural problems.

Policy contents compatible with the policy direction

Policy contents or policy recommendations can be explained using the analogy of making a chair, with shallot policy as the seat of the chair and supporting self-reliance as the legs of the chair. The characteristics of the seat of the chair depend on who is sitting on it. Thus, the builder must focus on both the general customer and the specific customer (such as an old man, a child, a disabled person). The legs of the chair must be strong, as successful agricultural policies need strong communities. The contents of policy can be described at the general and the area-specific level.

General Level

1. Recommendations for development policy: building the seat of the chair

1) The government should support farmers in the use of organic fertilizer and foster bio-planting in three dimensions.

The first dimension aims to decrease production costs by running activities as part of a campaign for farmers to produce their own fertilizer

and by building a community fertilizer production house.

The second dimension addresses increasing quality by developing a fertilizer companion to be of the same quality as industrially produced chemical fertilizer or by adjusting the standard quality to be compatible with organic standards for agricultural products. For example, this may entail adding high levels of food safety as one of the standard qualities on which buyers must concentrate. Moreover, good shallots do not necessarily need to have a strong, red color, just as good, green vegetables do not necessarily need to have a strong, green color, though it is true that the chemical-based production methods can produce a stronger color than the organic methods.

The third dimension involves adding production value and market expansion by publicizing the required food safety standard. This can obstruct competitors because building in food safety standards into the processes of the main competing countries like China and India is progressing slowly. In addition, the government should support special markets that buy only agricultural products with a safety guarantee or that buy organically grown agricultural products at a higher price than agricultural products grown with chemicals. This would provide motivation for farmers to change their mode of production from chemical-based agriculture to organic methods.

2) The government should support production processes that produce quality standard products (that have been proven in appropriate ways) by producing a handbook on methods of good agricultural practice (GAP) and running broader and more frequent campaign activities.

3) The government should apply policies that help to reduce over supply (too much product for market demand, which leads to price crises) and add value by encouraging other crops with high price opportunities to be planted instead of shallots. This should occur in parallel with the creation of a training course covering the production and marketing

technology of substitute crops (supported by the Agriculture Production Structural Adjustment Fund that has been established to reduce the impact of the free trade area agreement).

2. Strengthening of communities and supporting farmer's self-reliance by dealing with structural problems: building legs of the chair

Encourage the creativity of the community (outside explosion)

1) The government should encourage communities to be creative by launching a participatory public policy process (PPP or P⁴) and community-based development. This can be achieved by:

- Adding local representation to the CGSOPP-MM. The new representatives should have important roles in the development of the shallot production and marketing policy and plan formulation. The main purpose is to open up a way by which local people can access policy decision making and participate in solving their problems by themselves.

- Reestablishment of specific policy responsive committees at the provincial level, which have disappeared and been replaced by the provincial development committee. This change will expand participation from the national level to the provincial level and result in a different hierarchy of participation than the current "from above to below".

- Changing the location of the committee meetings from a central (Bangkok) to a regional venue that is appropriate for setting operational plans relevant to the problems of each area. In addition, this can solve the problem of committee members from regional organizations often missing meetings because of the difficulty of traveling from the regions to a central venue.

- Increasing the interaction between public services and farmers by setting some activities to create familiar relationships, which can encourage cooperation and increase the opportunities to get to know each other's needs. Moreover, these interactions can lead to decisions being informed by more precise knowledge of the farmer's needs, and will increase social relevance. These activities also will encourage

employees in the public services to adjust their attitude from one of "working for" the people to "working with" the people; this is the beginning of co-consciousness and co-responsiveness in policy formation.

2) The government should encourage community creativity by co-creating a co-operative system that will belong to the farmers. This would involve setting rules about adding ways to participate in co-operative business and activities, including reducing the complexity involved in establishing a new co-operative. Such participation would increase the farmers' sense of belonging in their co-operative, which can lead to new attitudes including a belief in the co-operative as their organization, and that it is not just a buyer. Moreover, it is also necessary to set rules concerning farmer interests that the co-operative must concentrate on, as many co-operatives run their functions like a business organization, with more concern for profit than their members' well-being. They must remember that their profit is made up of surplus value from the farmers.

3) The government should encourage community creativity by continuously running a farmer's school project as a brainstorming class, which is so important in many ways. However, the government also should expand the project to reach all parts of the community, not only the farmers.

Support for farmers self-reliance (inside explosion)

1) The government should support farmers' self-reliance with broad subsidies to establish account trading among co-operatives, farmers' groups and communities. Account trading is barter trading, in which only the differential value of goods is counted in money terms. Account trade can reduce the level of dependency on money exchange by changing the exchange style to one of "goods for goods".

2) The government should support farmers' self-reliance by using a change agent, such as the head of the village, representatives in local government agencies, the presidents of the co-operatives, or monks. Most people do not have an open mind to

accepting new ideas or to changing production and marketing methods; the change agent will help persuade them. Most of the people in the community tend to be followers, so they are comfortable following the things that the change agent does.

3) The government should support farmers' self-reliance through co-operative subsidies among public agencies, farmers, co-operatives, and buyers to facilitate network development. Networks can transform formal relations to informal relations and build understanding. Under the trade liberalization era, these actors must be mutually dependant. If not, they may fall over like the dominos.

4) The government should support farmers' self-reliance through subsidies to preserve the rich resource of local innovation or local wisdom, which originate from knowledge transactions among farmers. The proper way is through co-building a shallot learning center with the community to gather information about local innovations. However, the public agencies should not manage the center; the center must be managed by the community, so that the community's knowledge is managed by the community itself.

Area-specific level

1. Recommendations for mode of production and marketing in the Yangchumnoi model

Dominant characteristics

(1) There is a great deal of shallot plantation in the area, with many villages and households planting shallots. This can guarantee that all buyers who come to this area will find product to purchase.

(2) The area politicians have become involved because shallots have become a "political plant", and the ability to solve shallot problems provides a chance to be voted as a representative of the people in the area.

(3) There is a festival every year. Besides providing a special market, this festival also has a specific symbolic goal of building pride in the farmers of the career they have chosen; it is expected

that this will lead to production development motivation.

Infrastructure People do not face the problem of a lack of water. Their crop land has access to electricity, reducing the need to use gasoline power. Moreover, almost all villages have a shallot silo.

Other plantation Most farmers plant shallots after rice and chili plantation.

Landscape The area is located on a low plain subject to frequent flooding.

Soil type The soil is loose and described as a mixed sandy soil.

From these characteristics, the public agencies that are involved with policy should link with the politicians to co-support farmers to reduce shallot plantation dependency through a campaign to adopt mixed plantations. Moreover, the support should also include a campaign to reduce breed buying, raise the production of self-made organic fertilizer and its use, and encourage more interest in collective behavior or group action, such as establishing specific shallot farmers' co-operatives.

2. Recommendations for mode of production and marketing in the Zomtarom model

Dominant characteristics

(1) There is safety branding, with a public organization involved with agricultural issues trying to develop best practice examples.

(2) There is strong collective action, such as building a shallot plantation farmers' co-operative and initiation of a shallot festival by the community, with the public sector taking on a role of watching and supporting.

(3) The area is renowned for its famous breeds, so others communities always come to buy breed stock here.

(4) There is contract farming in the area.

Infrastructure This is the same as for the Yangchumnoi model.

Other plantation This is the same as for the Yangchumnoi model.

Landscape The area is located on a low plain

but it does not flood.

Soil type This is the same as for the Yangchumnoi model.

From these characteristics, the public agencies that are involved with policy should concentrate on the community's image by subsidizing "imagination building" that is not only attractive to consumers, but also includes brand building. Contract farming should be supported because it can reduce uncertainty in the life of the farmers. Consequently, the farmers can envisage future outcomes more accurately at the beginning of the production process. Finally, they can avoid having to face rapidly changing prices.

CONCLUSION

The research found that trade liberalization has affected shallot plantations in many ways. The policies for coping with the impacts did not work, as reflected in an increase in product quality while production cost was also continuously rising, and a decrease in sale price when compared with inflationary conditions. The overall results supported the strategic recommendation that the government should formulate policies, both general and area-specific, which focus on competition building under their comparative disadvantage, involving, for example, the re-establishment of a specific policy-responsive committee at the provincial level. Moreover, the government should also encourage the creation and support of self-reliance, such as the production by farmers of their own fertilizer and account trading among cooperatives.

Some lessons learnt about agricultural policy adjustment under trade liberalization through the study of the shallot production and marketing management policy could be generalized to other types of agriculture, while other parts cannot be generalized due to specific conditions. Nevertheless, at the very least, the study reflected the importance of community and household self-reliance, including competitiveness building under comparative disadvantage conditions, which can result in survival for farmers and guarantee the country's food security.

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