

Building linkages in the Thai fruit sector

Report of a strategic thinking workshop, Rayong, Thailand, November 2004

Introduction

In Thailand, many small and medium enterprises (SME's) are active in the supply or export chain of fresh and processed fruits. Most of these enterprises are strongly specialized in input supply, fruit production, post-harvest handling, packaging, forwarding, certification, wholesale or export. They also maintain all types of linkages with governments, research organizations or, for example, rural development NGO's. The question addressed in this 'strategic thinking workshop' were how linkages in these networks can be established and how they contribute to a robust strategy for a cluster or network of private and public partners.

Enterprises in the Thai fruit sector need each others' services and support to improve the overall performance of the supply chain. In the competitive and demanding markets for fresh fruits in Europe, the United States of America, Japan, and, increasingly, in urban centers in South and Southeast Asia, supply chain partners are highly dependent on each other to meet all the requirements and to exploit competitive advantages. Dealing with standards and regulations needs a lot of cooperation, information exchange, trust building, technology transfer and communication. Understanding the interests, visions and strategies of all private and public partners in the network surrounding the trade of Thai fruits is a starting point for exploring the opportunities and conditions for joint initiatives of chain partners. In this context the strategic thinking workshop focused on how to build linkages and how to assemble partners around common strategic aims.

This brochure reports on the outcomes of the workshop. The workshop was organized around a number of exercises part of a step by step approach towards building linkages between supply chain partners. Firstly, while 'drawing a rich picture' participants familiarized themselves with the different views and assessments of the situation in the Thai fruit sector. Secondly, by 'drawing the supply chain' everybody got more insight in how the different views of players depended on their positions in the supply chain. Thirdly, in 'the catalyst-barrier debate' on food standards two groups exchanged arguments about the policy implications of standards, and the need for cooperation and alliances surfaced as a key issue for building a viable sector capable to meet market demand. Fourthly, participants completed their individual 'mindsets' specifying their strategic and tactic responses to trends and problems in the fruit sector. Fifthly, in 'the living chess play' the strategic paths of the participants were classified in order to map the different strategic directions and during the game participants were invited to consider new collaborations around strategic themes. Finally, groups formed around three strategic fields sat together to identify next steps.



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The workshop assembled a variety of participants from all kind of companies and organizations directly or indirectly involved in the Thai fruit sector (figure 1). The challenges and problems faced by the fruit sector are complex and thus responding to them requires a complex field of players. The workshop had a strong participatory approach, which assured the use of knowledge and experiences of all the participants. This is reflected in the results presented in this brochure.

The workshop was organized and facilitated by two intermediary, non-profit organizations: Wageningen University and Research Centre (Wageningen UR), the Netherlands, and National Food Institute (NFI), Thailand. Wageningen UR has been commissioned by the Dutch Ministry of Agriculture, Nature and Food Quality to support institutional development for achieving access to and competitiveness in the markets of fresh produce. NFI has been mandated by the Thai Ministry of Industry to support cluster development of small and medium enterprises (SME's).

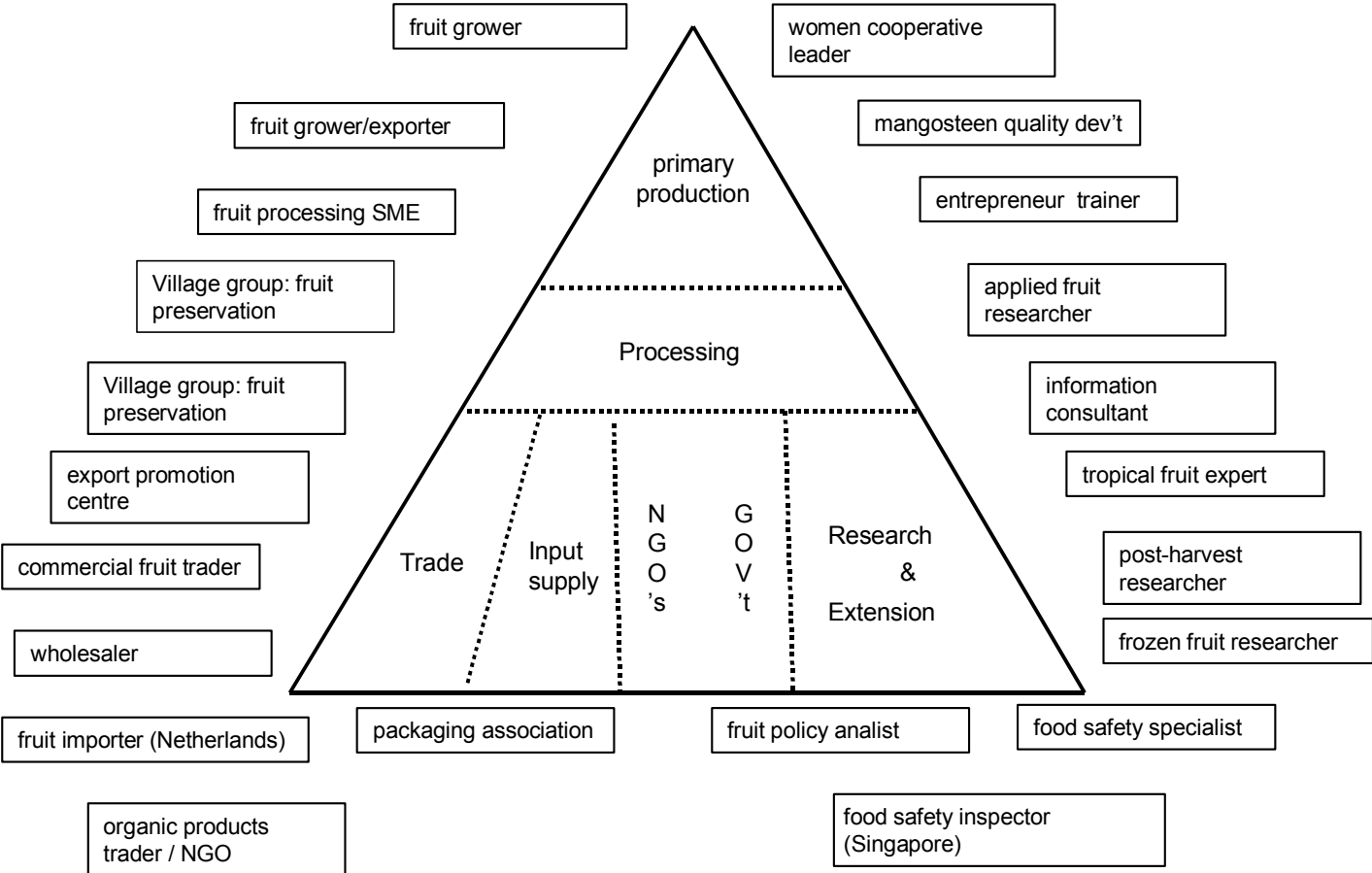


Figure 1: Schematic presentation of stakeholder participation in workshop

1. Drawing a rich picture of the Thai fruit sector

Exercise

In order to get to know each other's views, priorities and visions *and* to get an impression about what issues are at stake in the Thai Fruit sector, four sub-groups were compiled of people from different levels in the supply chain. The groups were asked to draw a rich picture of the Thai fruit sector. "Rich" in this context means that anything people think of as relevant to the fruit sector can be in that picture. Visualizing stories invites people to open their minds and to be creative and to draw whatever they think is important to place on the picture.

Result

All drawings were quite different and all contained a lot of interesting details. The different drawings visualized and combined the various existing perspectives on the situation in the Thai fruit sector. Figure 2 was drawn by a wholesaler, a trader of organic products, a leader of a women fruit processing group, an information consultant and an entrepreneur trainer. The sad face is thinking of all his troubles. His crop suffers from pests and plagues for which he applies various chemicals. He would like to have more money to support his family. Then, farmers receive training, start to cooperate and to introduce a more integrated (organic) farming system. The best fruit is selected, collected, packed and sold in export markets. The smiling face is obviously happy in a situation in which there is more care for the environment. The sustainable produced fruit is branded and the happy farmer is earning larger amounts of money.



Figure 2: Example of a rich picture of the Thai fruit sector

Conclusion

A tour along the different pictures stimulated discussion among the participants and brought forward a number of common issues. There were a number of issues that surfaced in practically all pictures:

- The use of pesticides in the fruit sector
- Fruit quality
- Export
- International fruit standards and labeling
- Lack of money
- Farmer training
- Cooperation
- Processing and packaging of fruit
- Promotion of Thai fruit/ a Thai brand
- Transportation

The fact that the same issues were addressed means that there is at least a common understanding of relevant issues for the fruit sector. The next step was to see how actors at different levels in the supply chain see their own position in the chain and how they relate to other actors in the fruit sector.

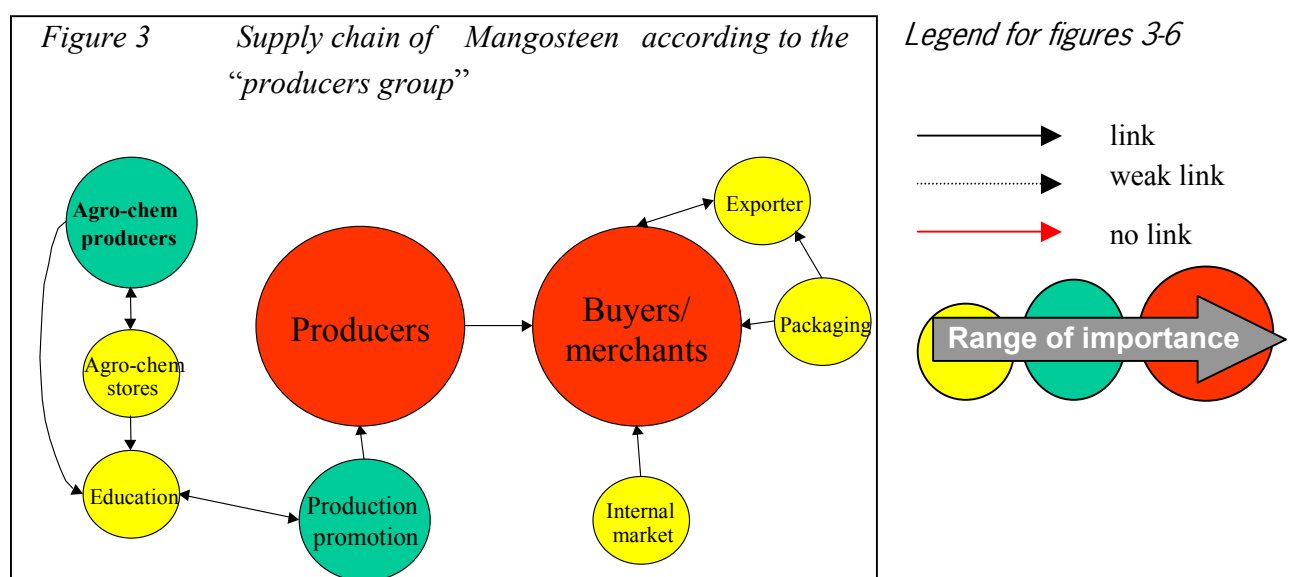
2. Mapping relations in the supply chain

Exercise

For this exercise the group was divided into four sub-groups of actors of the same level in the supply chain: a producers group, a processors group, a trade group and a public sector group. The aim was to get an impression of how the analysis of the supply chain is related to the position of actors in the supply chain and to identify the importance of each of the stakeholders.

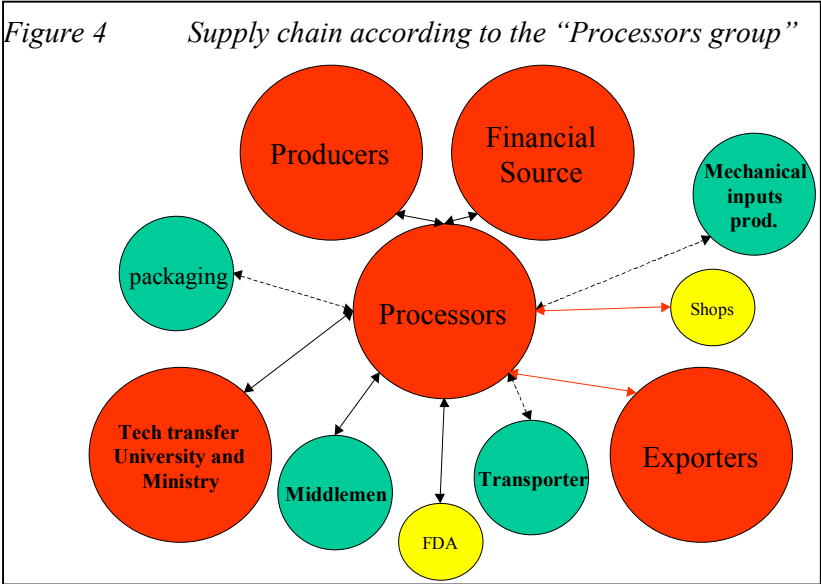
Result

The groups drew quite different pictures of the supply chain, as can be seen from the schemes below. The size of the circles indicates the importance assigned to the chain members: the larger circle the more important the actor. Solid lines between actors indicate a well functioning link, broken lines indicate a weak link and red lines indicate a missing link.



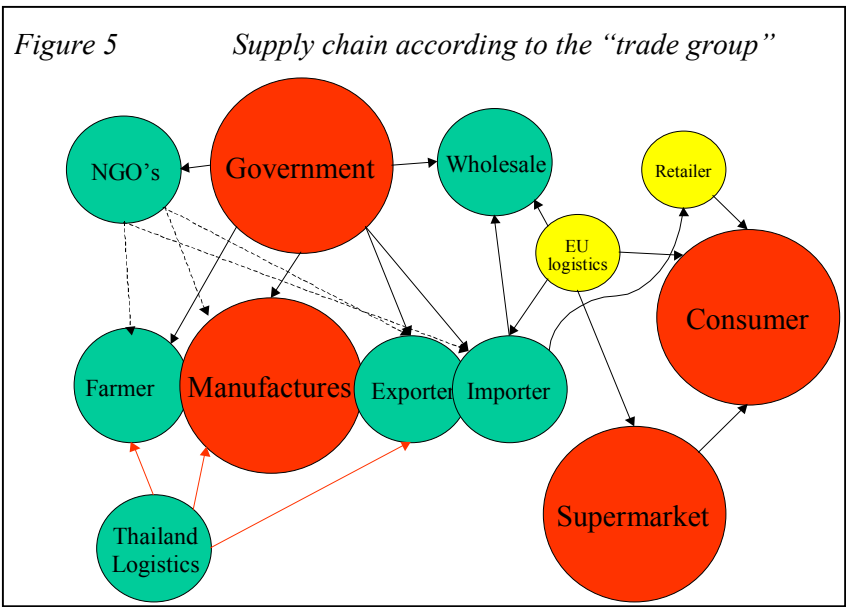
Remarkable for the **producers group** (figure 3) was that they were the only group that mentioned the importance of specifying for which fruit the chain was drawn. The situation in mangosteen, with numerous smaller producers and processors, is completely different from the situation in pineapple with a few dominant processors and shippers. They were also the only group that included the input-side of the producers. On the other hand they left out the government and links of the chain at retail and consumer level.

The **processors group** (figure 4) gave themselves a central position and their drawing represented a network rather than a linear supply chain. This picture suggests that everybody is connected to the processors but that there are weak or no linkages between any actors other than the processors. Another remarkable thing is that the linkages between processors → shops and processors → exporters are missing according to the processors group and that the linkages between processors → transporters and processors → mechanical are considered weak.

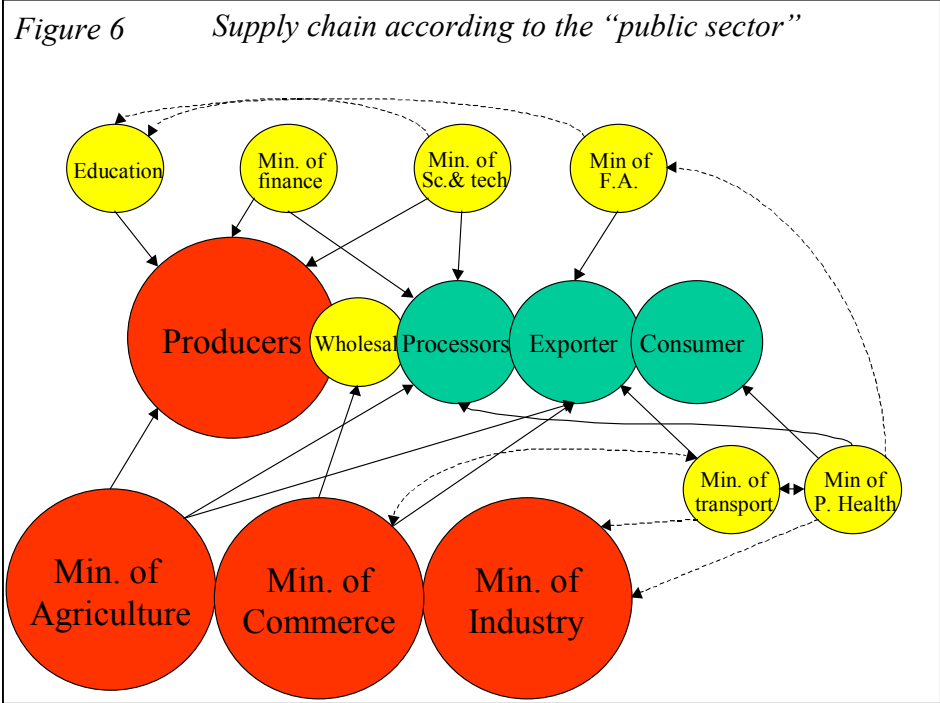


The chain drawn by the **trade group** (figure 5) shows a different picture again. In comparison with the producers' group chain, they left out the input side at production level but they added the downstream links in the supply chain: retail, supermarkets, consumers and also the government.

They indicated consumers, supermarkets, government and manufacturers as the most important players in the supply chain



The **public sector group** (figure 6) shows a supply chain that is basically comparable to the one drawn by the trade group, except the trade group emphasizes players in market and the public sector group emphasizes the crucial role of the government. Apart from government, the producers are indicated as most important actors in the supply chain.



Conclusion

Actors at different levels in the chain the Thai fruit chain analyze the existing relationships differently. The fact that the producers indicate missing links between themselves and importers, retailers and consumers and that all other groups forget about the inputs for production indicates that actors think of the supply chain from the world they live in. The processor group drew a picture that involves a lot of actors but does not resemble a chain and, in the discussion, participants underlines the central role of intermediary actors such as processors and merchants. The trade-group gives quite a complete picture of the Thai-fruit chain: from producer to consumer. The differences between the various group are quite prevalent. Hence, for building linkages we have to acknowledge the variety in outlooks from different worlds. For cooperation, actors have to cross the institutional boundaries of their respective worlds to explore the value of new linkages and to meet potential partners, and to learn about views on, for example, the role of food standards in fruit trade.

3. The debate: Food standards – catalyst or barrier

Exercise

The role of standards in the international trade of agricultural and food products is a hot topic for many debates. Not only in an inter-governmental forum like the World Trade Organization (WTO) but also in the board rooms of companies or during meetings of farmers’ organizations. The controversy is often typified by referring to food standards as either catalysts or barriers of economic growth and development. During a debate in the ‘food parliament’ two opposite groups

defended either position: barrier or catalyst. The two opposite statements summarized here do not necessarily reflect the personal opinions of the group members.



“Food standards act as barriers” (group 1)

Standards truly are a threat. Currently, the introduction of standards is importantly driven by concerns of European consumers, companies and governments. A related problem is that consumer countries, USA, Europe, Japan, do not harmonize standards and, consequently, producers have to comply with the most stringent. We think this reflects a situation of using double standards, particularly because our main concern is the occupational health of producers and workers. Although safety is applicable in all countries, contemporary standards seem to include discriminatory mechanisms. We think it is a major responsibility of the agro-chemical industry, which promoted the use of pesticides for a long time, to solve the problems it created.

Furthermore, the standards are imposed upon farmers. Such a top-down approach does not likely help farmers to improve their practices. On the contrary, farmers need low cost measures rather than costly prescribed recipes. Hence, farmers should set up their own standards. Additionally, standards should be country specific rather than universal. Maintaining a certain level of flexibility avoids problems during the actual implementation. For example, conversion to organic farming needs to take into consideration the specific agro-ecological conditions, like tropical soils that have a shorter conversion period of fertilizer.

A support system for farmers is needed to deal with the specification of new standards. A danger is that farmers are forced to buy from selected, authorized dealers. This neglects the existence of, for example, an oral tradition for disseminating new ideas and practices, which allows farmers to choose their own way of adapting standards. Nowadays it seems that industrial countries want producers to use their services and that they make a business out of monitoring. We wonder who sets the prices for all the inspections, which generates high costs for those producers who want to show compliance, but can they sell more? Hence, producing countries are only at the receiving end and are not stimulated to build their own capacities. Therefore it is important to realize that standards are just one of the instruments that can make our food provision safe and sustainable.

“Food standards act as catalysts” (group 2)

Let's start by stating that Thailand is a top producing country in Asia. We think, therefore, that positive thinking is logical and that we want to move forward rather than stand still and complain. Our main concern is to stay in competition and for this purpose we have to comply with standards, both in domestic and in export markets: it is a universal thing, there is no escape. Our

proposal for countervailing discriminatory mechanisms is to set up our own agency and monitoring and auditing system, and to make sure that this agency is recognized in the market.

Adapting standards means also adapting new technologies and realizing new investments. This gives us the opportunity to create our own dynamics and to combine compliance to standards with lower prices and better market entry. The combination of compliance to standards and the introduction of new and innovative technologies is a unique selling point. We are able to add value and to open new markets: to do something that our competitor is not capable of or willing to. By building on our existing qualities we can make sure that our export potential will grow.

Our aim is to target new consumer groups. Before, we focused on the low-end market, now we work for the catch-up market. This means that we have to invest in fixed costs to create work. A remaining concern is how to obtain proper technologies. Perhaps, we have to build our own networks.

Conclusion

The catalyst group appears to be business and market oriented. It seems that there is still a lot to win by improving performance and transactions throughout the supply chain, in order to gain competitive advantage. The barrier group brings concerns about the situation of producers to the fore and questions the one-sidedness of standards. Both groups seem to consider standards as just one instrument for achieving a similar goal: a healthy and sustainable provision of food, both locally and internationally. But who sets the standards in the international market? If producers remain 'followers', compliance with standards will easily become a matter of additional costs and investments. If producers are able to match compliance with their own business and market strategies it can create access to technologies and markets.

4. Composing individual mind-sets

Exercise

All participants were asked to answer six questions about worrisome trends and developments in the Thai fruit sector and their response to these. The questions were meant both to identify direct and impulsive reactions of participants (tactic track) and to see what they consider to be a long-term solution (strategic track). This resulted in schematic mind-sets, drafted by the organizers, summarizing the tactic and strategic track of each of the participants.

Result

Below are two examples of mindsets of participants, the first (Figure 7) is of a fruit producer. She identified low incomes and financial problems due to oversupply and low farm gate prices as a trend that worries her. By herself she can take action on the tactic track, she can network for market expansion and she could do a trial with *longkong* fruit. This will probably help her for the time being, but it is not a structural solution to the problem she has just indicated. As is derived from the questionnaire she seeks a long-term solution in the management of supply and demand and in regulating supply and growth of the fruit sector. For this, she has to combine her actions with those of others.

The second mind set (Figure 8) is of a marketing officer of an exporting company. According to him oversupply and low product prices are the major problem, due to non-tariff barriers and free trade areas. A relatively "easy" symptom-combat would be to search for alternative markets that do not, or barely demand product standards. The search for alternative markets requires cooperation with partners in the supply chain but does not necessarily lead to a shared strategic perspective. It might be a solution for the short term but on the long term it is very likely that

these new market will also start upgrading their food standards. In other words it does not deal with the initial problem. On the other hand the strategic track portrays a situation in which international standards are met through sharing of knowledge and searching for new technology. In a dynamic strategy one remains updated of changes in international standards and is therefore better prepared to deal with non-tariff barriers and free trade areas. In addition, upgrading to international standards is also strategic from the environmental point of view, because excessive use of chemicals and poor farm management is not sustainable in the long run.

Figure 7: Individual mind set of a fruit producer

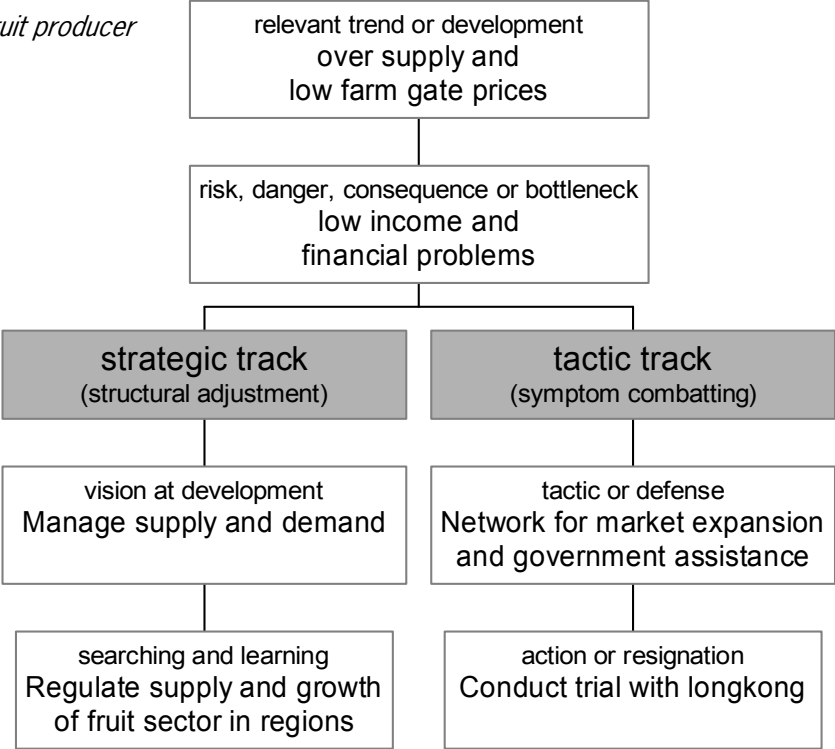
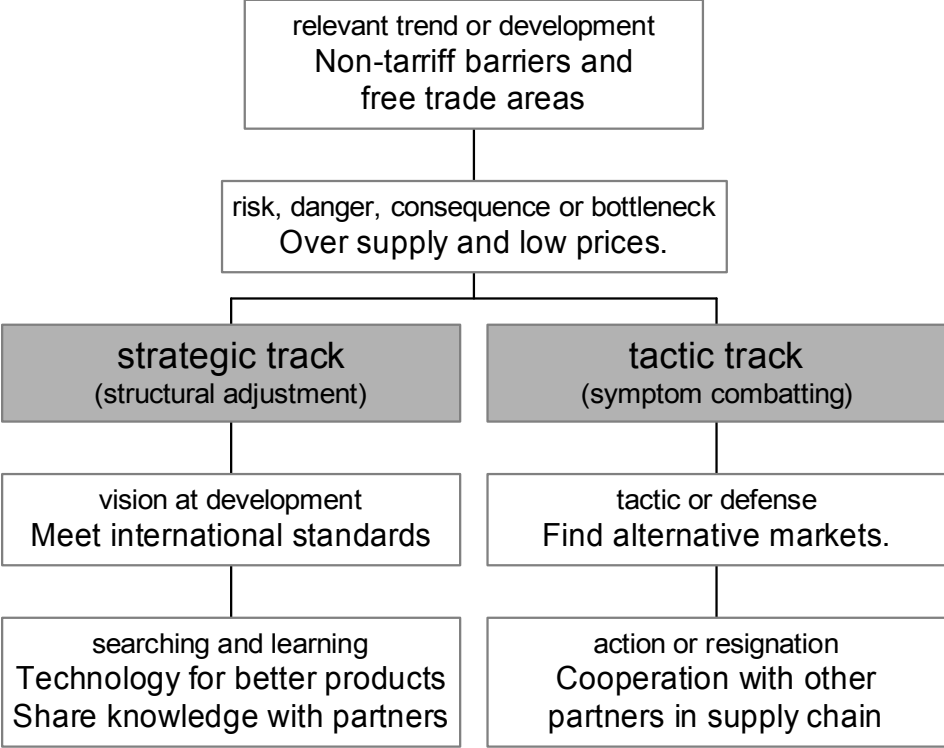


Figure 8: Individual mind set of a marketing officer of an exporting company



Conclusion

The mindsets composing the landscape of the Thai fruit sector were classified into four categories covering the different strategic outlooks in the Thai fruit sector (figure 9). The tables below present the strategic tracks of the participants according to the four categories. This summary is a snap shot of the variety of long-term perspectives in the sector.

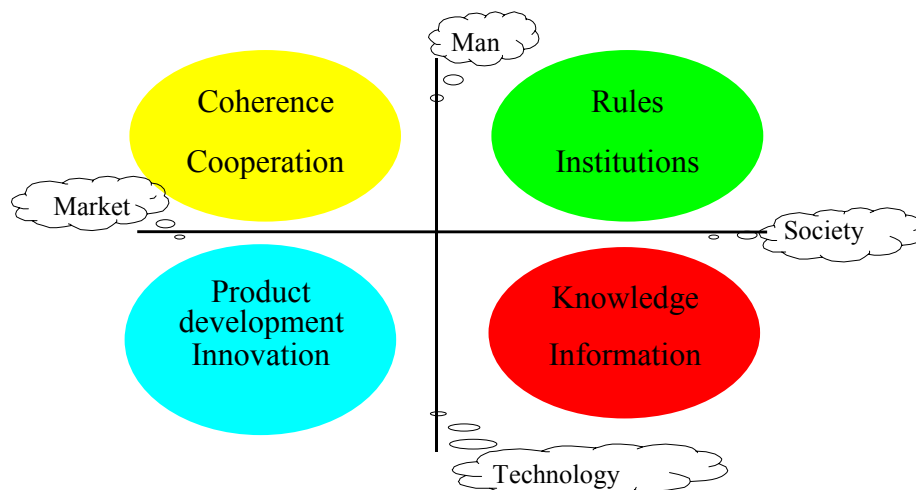


Figure 9: The four areas of strategic tracks in the Thai fruit sector

Yellow: coherence and cooperation	
Abstract: <u>Yellow</u> represents an arena where actors seek their long term solution in cooperation with people in the chain and have a strong market orientation.	
<i>Participant</i>	<i>Strategic track</i>
Mr. Prawit	“Collect and share market information between public and private sector by installing a forecasting system on supply and demand”
Mr. Tawatchai P	“Create network for producers of high quality products through better remuneration and information sharing on price differentiation”
Mr. Eggers	“Improve competencies of Thailand through training of technical staff and inspection of suppliers and quality”
Mr. Viton	“Promote organic agriculture and find marketing strategy for organic fruit”
Mrs Maream	“Establish processors association” and “design product specification for consistent quality”
What they have in common: These strategic tracks are all market oriented and mention the establishment of cooperations and associations or training and information sharing: issues that thrive well by chain cooperation.	

Green: rules and institutions

Abstract: In the green area, actors seek solutions to their problems in rules, regulations and new policies set by the government or other public institutions.

<i>Participant</i>	<i>Strategic track</i>
Mrs. Rabeab	"Regulate supply of growth of the fruit sector in regions"
Mrs. Somsri	"Government agencies control and regulate quantities produced by allocating production volumes to assigned production zones"
Mrs Umaporn	"Cooperation among agencies and common system for standard setting"
Mr. Sanit	"Appropriate R&D for fruit products and innovation with focus on storage and packaging and intellectual property rights"
Mr Niti	"Create a network for information sharing and exchange knowledge on GAP".

What they have in common:

What these strategic tracks have in common is that they all call for more interference by the public sector either by regulating supply and demand (per region); according to volumes or by setting up standards or installing monitoring systems.

Red: knowledge and information

Abstract: The red box entails people who seek their strategic solution in research and knowledge generation and they consider research as a public good.

<i>Participant</i>	<i>Strategic track</i>
Mrs. Semsuk	"Upgrade farmers' knowledge through mobile information centers on production and marketing"
Mrs. Buri	"Information exchange and experiments with reducing pesticides"
Mrs. Khoo	"Prevent abundant use of SO ₂ through monitoring of performance in the chain and determination of tolerance levels"
Mrs. Sagunshi	"Install modern production technology through research on fruit processing and production technology"
Mrs Amornrat	"Improved cooperation and information sharing amongst farmers on technology development and experiment with biological control of pests and diseases"

What they have in common:

These strategic tracks mention either research or improvement of farmers knowledge or tailor made experiments as possible solutions to the identified problem.

Blue: product development and innovation	
Abstract: People in the blue box believe in a long term solution that focuses on technological innovation in the production process or in product development while staying close to the market.	
<i>Participant</i>	<i>Strategic track</i>
Mr. Chowalit	“Meet international standards through introduction of technology for better products and information sharing”
Mr. Tawatchai K	“Meet international standards through new technologies and improvement of farmers’ knowledge.
Mr. Wichien	“Continuous research on suitable packaging and modified atmospheric pressure”
Mrs. Nucharin	“Meet international standards and develop unique products through improved technology and logistic management”
Mrs. Mayoree	“Integrated crop system and implementation of Good Agricultural Practices.”
What they have in common: Technology or practical innovations in order to live up to international standards or the development of new products for potential markets are prevalent in this matrix.	

5. Living “chess-play”

Exercise

In the living chess play the mindsets came to life. The participants were positioned on a “chess-board” set out on the floor according to the strategic track they described in the questionnaire. The chess-board was based on the 4 quadrants shown in figure 9.

The aim of the chess-play was that participants would be able to meet people with similar long-term ideas. Most participants with the same view were positioned near each other on the chessboard: either in the same box or in another box but nearby the axis.

Theoretically, neighbors were people with whom it would be fruitful or may even be necessary to cooperate in order to achieve long term aims. But, participants might also realize that they have to cross institutional border to achieve their strategic goals.



It might occur that participants feel to be out of place in the position where they were put. During the chess play, everybody was allowed to move, but before doing so, they were asked to motivate their change of position so that all other participants were able to understand the strategic implications.

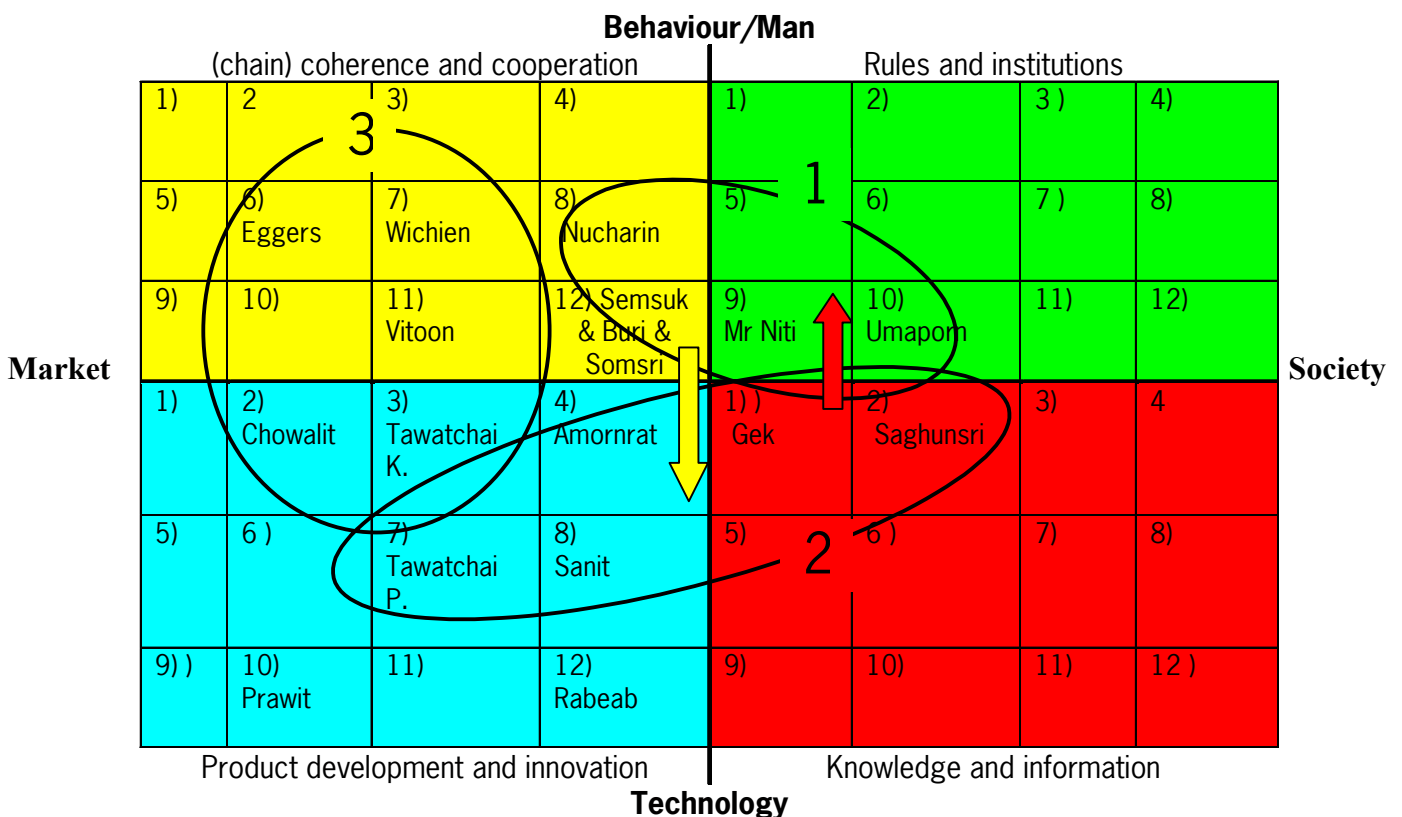
Result

In accordance with the individual mindsets, participants were positioned in one of the boxes. Most people instantly decided to move. Some participants clearly disagreed with their original position on the chess board; for example Mr. Tawatchai, wholesaler, wanted to move from the yellow chain-cooperation box to the blue technology and innovation box because he thought that in order to reach higher production standards he needed new technology. However, when the game evolved many participants tended to forget their original strategic track, specified in their individual mind sets, and moved closer to the middle because “everybody was moving there” (figure 10 and box 1).

In the end, three groups were formed based on the idea that these participant might have a common focus area in the Thai fruit sector.

1. Policy and information group
2. Practice and technology group
3. Trade and logistics group

Figure 10: End position of the living chess game



Conclusion

To enhance strategic insight it is essential to stimulate actors to think in depth about their strategic choices and the implication for cooperation with partners. In the setting of a game participants were stimulated to consider moving and to explain how their movements relate to their original strategic track. One of the lessons we learn from this exercise is that it is neither easy nor obvious to act out of strategic perspective. As a matter of fact, most participants started to move as a response (symptoms combating) to what was happening during the play. They did not seem to think anymore about what they wanted to achieve, with what strategy and with which partners. In the case of this game this might also be due to the fact that the participants had little time to study their own mindsets and there was little time to discuss the movements. Apparently the construction of a strategic path still needs a lot of effort and patience, because it seems more obvious to out of tactic track or prejudice.

The game also was a first step towards forming coalitions or alliances between actors in the supply chain. When everybody finished moving, the workshop facilitators composed three groups, based on the end positions in the chess play (figure 10), although the actual end positions were not yet conclusive. Consequently, groups were separated partly based on their position on the chessboard (their strategic path) and based on their professional or institutional position: policy and information, practice and technology, trade and logistics. The three groups discussed the next steps for their focus areas (table 1, last page)

Looking back at the chess game and the individual mind sets, it may be possible to compose a preliminary common mind set for the Thai fruit sector. Despite the differences in positions and strategic tracks apparent in the group, seasonal oversupply was considered by many participants as one of the most relevant issues. At all levels in the supply chain there are opinions about how to deal with oversupply or related problems. On the one hand the solution is sought in interventions by the public sector. Participants suggested that regulation and protection of markets through allocation of production and patents on processed

BOX 1: Movements in chess game

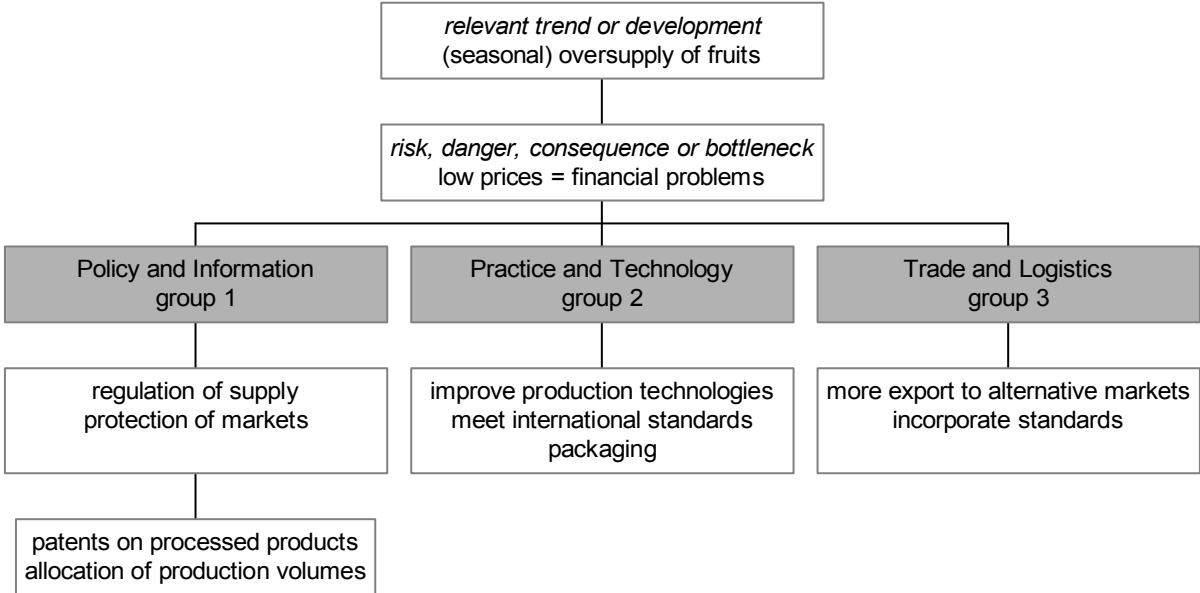
“Every move you make, every step you take”

Play	Participant and Motivation
Y3-B3	Mr. Tawatchai P. wants to move because according to him fruit quality is the main problem and technology is needed to resolve
Y7-Y6	Mr Eggers, feels comfortable where he was placed, but wants to move to the middle (Y-12) to shake hands with everybody and afterwards he wants to move further back, possibly even to Y1
R12-R2	Mrs Saghunsri, wants to move to the middle because she feels a bit left out
B10-Y7	Mr Wichien, admits that he finds packaging technology very important, but he wants to built clusters and cooperate. His product development depends on the market, on the products destination
R10-B4	Mrs Amornrat, needs to teach her fellow growers and wants to meet them, research is important but cooperation too, therefore she chooses a point –in between-
R7-Y12	Mrs Buri, wants to be closer to the middle
B12-B7	Mr Tawatchai K, wants to cooperate more and wants to know what others need
R4-R1	Mrs Khoo, want to cooperate more (in the middle)
B11-Y8	Mrs Nucharin, says production technologies are important but she also wants to built alliances and learn about market needs
G7-B8	Mr Sanit, needs to be competitive and needs technology to achieve that
G2-B8	Mrs Rabeab, wants to prevent risk...but she simply just not want to be where she is at now. She needs technology to reduce risk
Y2-B10	Mr Prawit, knows the market already and likes technology
B6-B2	Mr Chowalit, feels he needs to be closer to the market, but he is also confused, because he also realizes that he needs innovation for export. Therefore he wants to move one step closer to the market

Y= Yellow, G= Green, B= Blue, R= Red

products. This could be an issue for the policy and information group. On the other hand, seasonal oversupply can also be addressed by the private sector by looking for alternative (foreign) markets. Coping with oversupply might imply that the private sector has to deal with high quality standards and other market demands. These issues would be relevant for group 3, trade and logistics, while group 2 could focus more on the production side of complying with standards. How are actors in the chain going to deal with this? Who do they need to cooperate with and how will they proceed? Although the three groups have their own focus areas in which people cooperate based on shared strategic outlooks, a common mind set may encourage linkages between the different groups and it may bring a strategic focus in cluster development and chain formation. In this sense, the workshop was a first step towards defining a strategic direction for the Thai fruit sector.

Figure 11: Common mind set on cluster development in the Thai fruit sector
(composed by reporters based on mind sets, chess game and discussions)



Colophon

The brochure is a summary of the outcomes of the 3-days strategic thinking workshop ‘Building linkages in the Thai fruit sector’ (November 2004), organized by Wageningen University and Research Center, the Netherlands, and the National Food Institute, Thailand. It is a result of the DLO research program International Cooperation executed through a grant from the Netherlands Ministry of Agriculture, Nature and Food Quality by Wageningen UR. We thank the participants for sharing their views and experiences and mr. Kongkiti Phusavat, Kasetsart University Thailand, for facilitating the process.

Text: Sietze Vellema, Linda Admiraal and Jan Buurma
Wageningen University and Research Centre
© Agrotechnology & Food Innovations B.V.
P.O. Box 17, NL-6700 AA Wageningen, the Netherlands
E-mail: sietze.vellema@wur.nl
Internet: www.north-south.nl

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Table 1: next steps for the three groups: (1) practice and technology, (2) trade and logistics, (3) policy and information

Practice and Technology group					
Focus Area	Justification	Expected Result	Ownership	Unsolved issue	Next Step
Direct sales by growers instead of passing through middlemen Capability to set price instead of middleman setting price	Low product price, sometimes price is even lower than production cost	Higher price – Higher profit	Fruit growers	Social culture (Southern people usually do not want to participate in cluster unless they respect the leader)	Fruit grower plans to invite neighbors to form group and to request provincial agricultural officer to help them with acquiring information and knowledge
Guidelines on product standards and regulations Capacity building through training	New standards and regulations are too complex for small farmers and processors to understand and implement	Small farmers and processors can produce quality and safe products that comply with standards and regulations	Ministry of Agriculture and Cooperatives National Food Institute	Insufficient financial resources and access to information and implementation guidance	National Food Institute will facilitate farmers training and coordinate with the government sector
Product differentiation development	Food products from small producer have no unique selling points	Innovative and marketable food products (more profit)	Processors	Insufficient market information (consumption and consumers' preference trends)	Small processors include consumers preference and market trends in product development
Trade and logistics group					
Meeting market requirements including: legal requirements such as safety market driven requirements such as quality, packaging and GMO-free	To gain market access and be competitive, products must comply with safety requirements, quality and packaging and other consumers' concerns, e.g. GM contamination.	Compliance with safety requirements, market expansion based on quality, incl. good packaging (functional and tailored to import markets)	Supply chain players but major holders are the exporters and importers	1. Information access (availability and relevance) 2. Chain management software to get production information from farmers	Setting up a supply chain and keeping it alive (howwas not discussed)
Policy and information					
Build/enhance competence of small farmers through cluster development	60% of the farmers are small farmers, who have limited resources to cope or comply with legal and market requirements	Mutual cooperation among stakeholders of the Thai fruit supply chain from small farmer producers to exporters	Ministry of Agriculture and Cooperatives Ministry of Commerce Ministry of Industry Ministry of Science and Technology Ministry of Foreign Affairs	Inadequate Good Agricultural Practice (GAP) Insufficient knowledge of financial management Link production to market demand and avoid over-supply	<u>Short Term:</u> Farmer Competence Building and Model Cluster Development Pilot Project <u>Long term:</u> Apply model to other Thai agricultural food sectors