Workshop report on
'Increasing Competitiveness and Market Access for Tropical Fruit through Quality Assurance and Value Chain Improvements in Asia'

27-29th October 2010
Bandung, Indonesia

CONTENTS

Page

Acknowledgements

International Tropical Fruits Network and the Office of the Directorate General of Horticulture as joint organizers of the Workshop would like to express their gratitude and thanks to the following for their contribution and support:

- The Director General of Horticulture, Ministry of Agriculture, Indonesia
- Head of West Java Regional Agriculture and Food Crop Services
- Regent of Subang District, Bandung
- All Sessions Chairmen, speakers and workshop participants
- Staff of Directorate General of Horticulture, Ministry of Agriculture, Jakarta, Indonesia
- Management, Topas Galeria Hotel, Bandung, Indonesia

SUMMARY

The workshop identified that the common issues associated with small farmers are:
a. knowledge of current production technologies, including concepts of quality assurance and certification programs. This is partly due to the lack of standards for implementation and dissemination of the established standard documents.
There is also the lack of awareness in producing quality fruits, because, of the prevailing market system, where the middle man buys all produce.
The delivery system or extension seem to be ineffective in some countries, due to institutional constraints.
b. Farmers Associations that are not active – Even though the small farmers are members of farmers associations, they find that they are not effective to improve their income. This may be due to the lack of a 'champion' or committed member.
c. Lack of access to credit facilities – this issue is a problem in most of the developing countries, where it is difficult for small farmers to obtain credit from banks
d. Access to market information is limited, therefore, market system still traditional where the farm price of produce is dictated by middlemen or traders.
e. High certification costs are a constraint to farmers who want to export their produce.
f. The organization of the total value and supply chain including logistics which causes high postharvest losses.
In all these challenges, there has to be a concerted effort to integrate all activities in the value chain with the support of 'actors' to identify specific deficiencies and prescribe specific recommendations. This has to be supported by advising farmers on best cultivars, current production technologies, pest and disease management, quality standards and reducing post harvest losses. Standard operation procedures for some of the recommended practices to produce quality produce has to be disseminated.
The involvement of the private sector can improve the market link between farmers and retailers or supermarket. This will also encourage the farmers to put extra effort in ensuring he produces quality and safe produce.
'Champions' should be selected and nurtured to make the farmers' groups, cooperatives or associations functional and who can guide and improve the welfare of their members.

INTRODUCTION

The major tropical fruits are bananas, mangoes, pineapples, papayas and avocado represent an estimated 90% of total tropical fruit production. The other 10 % are minor tropical fruits which include durian, rambutan, litchi, longan, jackfruit, pitaya* and mangosteen. Banana is the dominant tropical fruit produced with an estimated production of 90.7 million tonnes in 2008. The other main tropical fruits produced were mango which was produced at 31.5 million tonnes or 40% of total world production, pineapples at 25% followed by papaya at 10% and avocado at 4%. The largest tropical fruit producing region is Asia, followed by Latin America and the Caribbean, Africa and Oceania. In 2008 Asia dominated as the largest mango and pineapple producer at 74% and 49% respectively. Latin America and the Caribbean region accounted for an estimated 68% of avocado production and 39% of papaya production.

Although production has been gradually increasing, the issues of quality, safety and market access continue toimpact the development of the fruit industry in some developing countries. For the export market for tropical fruits, it is generally recognized that there is a need for growers to improve quality; food safety procedures at the same time comply with international trade requirements to be competitive. This involves adopting appropriate production technologies including better varieties, pest and disease control and recommended post harvest operations along the value chain to reduce losses. The growers also need to be well informed and trained to understand the demands of the importing countries. Besides this, the empowerment and enhancement of the roles of the small growers through intervention along the tropical fruit value chain are important steps to link the growers to the market.

Aware of the importance of value chain enhancements and quality assurance to gain market access a workshop was jointly organised by International Tropical Fruits Network (TFNet) and The Directorate General of Horticulture, Indonesia on 27 – 29 October 2010 in Bandung, West Java, Indonesia.

The workshop entitled ‘Increasing competitiveness and enhancing market access for tropical fruit through quality assurance and value chain improvements in Asia’, was attended by 30 participants and resource persons from 8 countries, namely Bangladesh, Cambodia, Fiji, Indonesia, Philippines, Thailand and Malaysia. Most of the participants were from the host country. The participant list is in appendix 5.4.

The objectives of the workshop were:

a. Provide an overview to participants on the current trends and developments in the tropical fruit industry
b. Assess issues, challenges in linking tropical fruit growers to the market in participating countries
c. Explore the various options to develop the export market for popular minor crops in Asia.
d. Provide information to participants on the importance of cooperatives and farmers groups involvement in overcoming constraints along the tropical fruit value chain
e. To strengthen the capacity of participants on the need to address issues dealing with quality assurance, post harvest losses, food safety, SPS and Good Agricultural Practices in the marketing of tropical fruits.
f. Develop a strategy and action plan to enhance the marketing of tropical fruits by small growers

2.0. PAPER PRESENTATIONS

2.1. 'Global Trends in Tropical Fruit Production and International Trade' by Mr.Yacob Ahmad, Chief Executive Officer, International Tropical Fruits Network (TFNet)

The TFNet CEO presentation highlighted the global trends in tropical fruit production and International trade. The major tropical fruit traded were bananas, mangoes, pineapples, papayas and avocado which represented an estimated 90% of total tropical fruit production in the world in 2008. The other 10 % were minor tropical fruits which included durian, rambutan, litchi, longan, jackfruit, pitaya and mangosteen. For bananas, which was the dominant tropical fruit, an estimated 90.7 million tonnes were produced in 2008.

He also mentioned that most of tropical fruits are produced in developing countries, where an estimated 85 % are consumed domestically, while 10% are internationally traded and 5% traded as processed products. The estimated total value for tropical fruits produced in 2008 was at USD 43.0 billion. In International trade, the total value of fresh tropical fruits exports was USD 4.5 billion, compared to USD 7.5 billion for bananas, 6.2 billion for apples and USD 3.3 billion for oranges, and USD 1.9 billion for processed tropical fruit products.

He added that the tropical fruit production and trade is expected to increase due to increasing population, changing consumer trends, expanding middle class, increasing trend in budget travelling and increased Asian presence in developed countries. In spite of an

expected increase in demand, quality, food safety, minimum residual levels and market access are some issues that need to be resolved in developing countries.

Comments and Discussion

Q: Dr.Rajan, enquired on the variety of mango that generally has high in demand?

A: It varies according to region and consumers. The red skin variety is usually found in EU and US markets. India has many local varieties and only 2-3 varieties being exported. But for Indonesia, Harum Manis is the variety both for the domestic and exported while others are consumed locally. Nam Dok Mai is the variety commonly grown and exported in Thailand, while Chok Anan is popular domestic variety in Malaysia.

Q: Dr.Rajan requested TFNet should provide more information on minor fruits especially on acreage and production.

A: Information on minor crops is not available even in FAO Statistics. TFNet can be the platform for future data's on minor crops if member counties could help us to collect the data.

2.2. 'Implementation of Indo GAP – Increasing the Competitiveness of Indonesia Tropical Fruits' by Mr. Winny Wibawa, Directorate of Horticulture, Indonesia

Mr. Winny Wibawa discussed on the implementation of Indo-Gap in Indonesia. Implementation of Indo-GAP began in 2006 focusing on fruits and in 2009,itwas extended to vegetable farms. At present, there are 4788 fruit farms registered under Indo GAP which includes 21 commodities in 15 provinces. So far there are 229 standard operating procedures for 24 commodities established for the implementation of Indo-GAP.

Theimplementation of Indo-GAP are grouped into three levels having 14 critical control points based on the following characteristics:

a. Level 1 for Food Safety

b. Level 2for Food Safety and Product Quality

c. Level 3 for Food Safety, product quality and evironmental management

(Worker health, safety and wefare are integrated in every activities)

He further explained that in Indonesia, majority of farms are dominated by community farms characterized by small size, scattered, having unstructured supply chain which led to the difficulty in GAP implementation.He added that without price incentives which is related to

certain market/partnership, farmers are reluctant to implement GAP. However, an integrated strategy is implemented, which is not only focus on GAP implementation but also on improving farmers institutions, private sectors and, researchers/academics involvement, , building partnerships and improving supply chain has accelerated the implementation of GAP. Indirectly it has increased the marketability of the products. Up till now, there are 4728 registered farms with destination markets mainly for export and modern retail outlets.

He added that Indonesia is successfully exporting mangoes to Hong Kong, Singapore, Brunei, China, France, Germany, South Korea, Malaysia, Taiwan and Middle East.
Indonesia is continuously focusing on main production centers (community orhards) by run by farmer groups with the improvement of supply chain (empowerment of traditional supply chain) as the main focus. The involvement of the private sector further accentuates the Commodity Consortium status.

Comments and Discussion

Q: What is the reason for small farmers reluctant to participate in the Indo-GAP

A: Farmers yet to see the advantage of having Indo-GAP and the process is a bit tedious and no price incentive. We anticipate more farmers will join Indo-GAP after knowing the benefits.

2.3. 'Options for supporting the formation of smallholder organizations, quality Improvements and credit availability to enhance smallholder contribution to value-addition along the tropical fruit value chain – Philippines experience'
by Dr. Lorna E. Herradura, Bureau of Plant Industries, Philippines

Dr. Lorna explained that in the Philippines, the supply chain is industry based and usually supports commodities that are export winners. She also informed that fruits grown in large commercial plantations for export market are banana, pineapple, and calamansi. Philippines produced 4.5 million tons of banana 1.1 million tons respectively for the first half of 2010. Production of mango was 0.7 million tons for the first half of 2010.

There are many mango downstream industries producing various processed products, which are grown mainly by smallholders ie 70% of farmers, have farms of less than 3 hectares.

She also discussed on the factors that affect quality improvement and availability of credit schemes for the improvement of the fruit processing industry especially mango processors who consist of single proprietors operating ascottage and small

industries. There are also large local companies involved in the processing of mango. The range of products produced aremango puree,juice, dried mangoes, concentrates, frozen mangoes, glaze, edible parts, mango in brine and mango preserves. She added that 40 % of the mango is processed, which is one of the country's export winners.

In Philippines,the smallholders were encouraged to form associations, cooperatives, confederation and foundation to address the issues / concernsfaced by the industry, lobby for government action or intervention, seeking assistance and also to meet the demand volume requirements and negotiate for prices. One of the examples is Mango Producers Exporters Association and Mango Producers and Exporters Confederation (MPEC).

These associations and cooperatives helped in setting up of product grades and standards including grading, sulfur dioxide residue, moisture content, packaging, requirements (total soluble solids, acidity and microbial count), sampling, methods of analysis and labeling, to facilitate trade with the help of Bureau of Product Standards (BPS).Sheconfirmed that through the formation of associations and cooperatives, growers are able to improve product quality and gain market access for their products.

2.4. 'MInimising post harvest losses and enhancing farmers role in the value chain of tropical fruits' by Mr. Togar Napitupulu, AMARTA, Indonesia

Mr.Togar introduced Agribusiness market and Support Activity (AMARTA), as a project funded by USAID in 5 provinces in Indonesia since 2007 and will end in April 2011.

In Indonesia, AMARTA had been involved in various projects related to value chain interventionsincluding banana cultivation in Deli,Serdang, Citrus cultivation in Karo, both in North Sumatra andstrawberry and pineapple cultivation in Bandung. West Java.

Interventions were recommended based on gaps or constraints in the value chain such as difficultyin obtaining inputs such as high quality and demanded varieties, small farm size, excessive use of pesticide, unorganized farm management and lack of knowledge in Good Agriculture Practice, correct maturity index and appropriate time of harvest. Other limiting factors are harvesting methods,lack of packaging and storage facilities, poor handling, pre-cooling, cold chain, and poor logistics.

AMARTA also identified institutional weaknesses such as lack of market information and marketing options at the farm gate, limited working relationship between farmers and buyers, weak bargaining power, non-condusive agribusiness climate and policy issues.

Mr.Togar, explained that in implementing the project, interventionsat various production stages greatly helped in minimizing postharvest losses. Simple postharvest handling also was introduced such as establishment of packing houses. In enhancing the role of farmers, they were advised to form groups and alliances, not only to enable them to achieve economies of scale, but also to provide policy advocacy to the relevant government agencies and parliament in improving agribusiness climate.

At the institutional level the Regional Agribusiness Competitiveness Alliance (RACA) was established to assist and facilitate the stimulation of the agribusiness environment.

Mr.Togar also highlighted that strategising the production with major distributors by focusing on markets that has high demand has helped improve the farmer's income. He stressed that the overall approach is market driven rather than production driven.

The project had been considered successful considering the benefits obtained by small farmers within the short time of implementation.

Comments and Discussion

Q: How about the sustainance of the projects in the future without the support of AMARTA?

A: This project is basically empowering the growers to make decision and improve the production system including use of quality seeds. Quality seed production and supply will be required for improving the value chain.

Q: How many farmers involved in AMARTA progammes in Indonesia?

A: So far 29,200 farmers have been involved in AMARTA projects and also linking farmers with traders is the main focus.

2.5. 'Improving the value chain and linking the market for fruit growers in Bangladesh' by M. A. Rahim, K. S. Islam[1], M. S. Alam[2], F. Islam[3], N. Naher[1], K. Fatema[1], M. Rahman[1]Department of Horticulture,Bangladesh Agricultural University, Mymensingh 2202, Bangladesh, [1] Interco-operation, [2]BAU-GPC,[3]BARI

Prof M.A. Rahim, described poverty as the main challenge in developing the agriculture industry. He discussed on the importance of farmers involvement in the value chain to improve the quality of fruits and linking farmers to traders. He also mentioned that insufficient processing capacity, the lack of a functioning cold chain, and good transportation are significant constraints to develop the tropical fruit industry in Bangladesh.Furthermore, there is a big challenge ahead in improving quality and safety standards and in accessing the export market. Some of the major fruits of Bangladesh have limited processing for value addition but most of the minor fruits are not processed.

He highlighted that although a number of agro-processing industry has been established lately, Bangladesh farmers still lack adequate knowledge on value addition as well as processing facilities.

Dr. Rahim proceeded to introduce the national fruit, the jackfruit and the various efforts done to select and improve its quality and market. He also described the tropical fruit germplasmcenter with varieties of mango, jackfruit and other fruit types from around the region, which has been established at the Bangladesh Agricultural University for evaluation and as a source of planting materials.

Comments and Discussion

Q: The colour of mango is green and sometimes the market prefers yellow or others.

A: Generally this variety is green skin and it is sweet even though still looks green. But needs aggressive promotion to market in overseas countries.

Q: Howdo the farmers organsiations help in the marketing?

A: Generally middleman or traders who buy the mangoes and sometimes Hortex (Horticultural Export Development Foundation) provides funds for the traders te market the fruits.

Q: When are the mango production seasons in Bangladesh?

A: The main season is June to August

2.6. 'Potential of minimal processing of tropical fruits'

by Ms. Latifah Mohd Nor, Horticulture Research Centre, Malaysian Agricultural Research and Development Institute (MARDI) , P.O. Box 12301, 50774 Kuala Lumpur, Malaysia

Ms Latifah discussed on the potential of minimally processed tropical fruits and its advantages in the keeping quality,storage and marketing of fruits. She highlighted the advantages of such 'ready to eat' processing method which retains the organoleptic characteristics of normal fruits in terms of aroma, flavor, taste, colour and texture.

She cited an example with jackfruit where minimal processing is preferred due to fruit handling especially the size, presence of latex, cumbersome fruit extraction and rapid quality deterioration after opening. Besides this minimal processing also reduces the problem of fruit waste disposal and cuts down on transportation cost.

The other advantages of minimally processed fruits are that freshness is retained, longer shelf life, sufficient time for market distribution and consumption, product safety assured, product is more visible and it is possibleto mix load with other commodities.

Ms. Latifah emphasized that a suitable preparation and handling system is required to maintain a high sanitation environment. She also highlighted that the technology for handling minimally processed durian, jackfruit and pineapples has been successfully developed and ready for commercialization in Malaysia.

Trials with pineapple and jackfruit have proven that minimally processed products can be stored for 2-3 weeks at 2°C. An effective quality assurance program needs to be incorporated in the technology development to ensure that food safety is not compromised.

Comments and Discussion

Q: How long does it take to reach Rotterdam from Malaysia?

A: Generally it take about 20 days for sea freight and 12 hours for air freight. For mimimally processed fruit, it is advisable to send by air freight so that it can be longer in the shelf at the supermarket.

Q: What is the price for minimally packed jackfruit in Rotterdam?

A: The average price is about Euro 4.50/500g

Q: How it is packed especially for air freight?

A: Usually it is packed with frozen gel to extend the shelf life.

2.7. 'Empowering of small farmers in markets'
by Dr. Juejan Tangtermthong, Agricultural and Food Marketing for Asia and the Pacific (AFMA), Bangkok
Thailand

Dr. Juejan began by discussing issues of small farmers which, due to small size of land and low production are faced with disadvantages such as higher production cost and consumers preferences for better quality products.
She noted that there are small farmers who have gained access to high end market which could be useful learning experience for other farmers. According to a study by AFMA, on small farmers carried out in 2007-2008, the success factor depends on how best the small holders can link themselves with companies to market their products. By way of linking with companies, they were able to identify the niche markets and produce according to the demands. Values addition by having approved certificate such as GAP and Halal have helped the small farmers to market their products. She also highlighted on the formation of farmers groups to interact, gather market information and to attract traders or venture into new initiatives that will give them new opportunities. Some of the small farmers were able to establish networks with traders and wholesalers for long term mutual benefits. She also indicated farmers who had focused seriously on their farm activities were able to run business effectively and make it more competitive.
She added that government agencies should help by providing farmers, buyers, marketeers with appropriate services and information and avoid giving free inputs thus making them weak.

2.8. 'A Prospect for China's Potential Market of Tropical Fruit '
by Dr. Tan Yan Wen, South China Agricultural University, Guangzhou, China

This paper discussed on theeconomic effects of China's tropical fruit trade with ASEAN since the establishment of Free Trade Area between China and ASEAN countries. The zero tariff policy since 2006 has significantly contributed to the rapid growth of China's imports of tropical fruits and processed products.

Dr. Tan further explained that China is losing its competitiveness in the production of tropical fruits due to increase cost of production and coupled with the increasing value of Chinese currency. Generally the import of tropical fruit has been increasing since 2004 and 98% of the imports are coming from ASEAN countries. This gives an advantage to ASEAN countries to further explore the China market for their exports. Moreover, the technological

development of preserving freshness of tropical fruits and reduction in tariff on sensitive products has facilitated the export of fruits to China more competitively.

He also highlighted that banana import showed a marked increase to 491,130 tonnes in 2009 as compared to 387,800 tonnes in 2006, ie, an increase of 30%.The import of durian was 196,100 tonnes in 2009 as compared to 85,200 tonnes in 2006, an increase of more than 100%. Similar trends were observed in the import of dragon fruit, pineapple and mangoes although the total volumes are much lower.

He also suggested that further improvement in quality through value addition by the growers will facilitate market access of more products to China.

Comments and Discussion

Q: What is the procedure to export fruit to China?

A: Negotiation on sanitary and phytosanitary requirements for a particular fruit crop has to established between both countries and then exporting country need to comply to the agreed quarantine requirements.

3.0. GROUP DISCUSSION AND RECOMMENDATIONS

Following presentation of welcoming notes and resource papers, group discussion was organised to arrive at the appropriate recommendations. The main objective of the workshop is to formulate strategies to enhance smallholder participation in the value chain.

The participants were divided into two groups. The groups were assigned the task to deliberate and discuss on two different components as follows:

GROUP A: TOPIC OF DISCUSSION

1. The implementation of policies to address the concern of smallholders and processors including access to credit, formation or association to empower small growers
2. The development of quality standards and certification program
3. The development and adoption of appropriate technology to improve productivity and quality at the pre and postharvest stages to meet market requirements

For each component,

- Identify other issues in each component
- Identify the constraints in each component or issue

- Strategies to minimize or overcome each constraint
- Implementation plan for each strategy-players, flow chart

The compositions of the group along with their presentation (revised in the light of discussion) are presented below:

No.	Name / Email	Position	Agency/Institution
1	Dr.Winny D. Wibawa	Director of Fruits	D. G. Of Horticulture
2	Mr.Sukarman	Deputy Director of Herbaceous Plant	Directorate General Of Horticulture
3	Ms.Susiami	Deputy Director of Tree Fruit Plant	Directorate General Of Horticulture
4	Mr.Widodo Heru	Head of Technology Division	Directorate General Of Horticulture
5	Mr. Tommy Nugraha	Head of Business Development Section	Directorate General Of Horticulture
6	Dr.EndangSuhendar	Head of West Java Agricultural Service	West java Agricultural Service
7	Dr.Sobir Rizwani	Head of Tropical Fruit Research	Bogor Institute of Agriculture
8	Dr. Made Utama	Head of Horticultural Research and Dev. Centre	University of Udayana, Bali
9	Dr.Catur Hermanto	Researcher	Tropical Fruit Research Centre, AARD
10	Mr. Alan Rahmat	Reseracher	West java Agricultural Technology Assessment Centre
11	Dr.Yusdar Hilman	Head of Horticultural Research and Dev Centre	Agricultural Research and Devt Agency
12	Dr. Mohammad Abdur Rahim *marahim1956@yahoo.com*	Professor / Head of Department	Department of Horticulture Bangladesh Agricultural University, Bangladesh
8	Salina bt. Main *salina@doa.gov.my*	Assistant Director	Department of Agriculture, Putrajaya,Malaysia

Discussion and Recommendations

3.1. Small Growers Empowerment

The group identified that small scale growers and processors do not meet the economic scale of the farm activities. They also lack of capacity on resources, knowledge and motivation. The following are the summary of findings:

Lack of Knowledge and Market Information - the challenges are:

- Information delivery system improvement
- Linkages to business communities, government and academicians

Weak Farmers Associations - the challenges are:

- Encouraging your entrepreneurs in farming and less depend on aging farmers
- Establishment of associations based on product and market

Lack of funding access - the challenges are;

- Establishment of Micro Credit System for small loans

Outcome: Developing Champion Empowerment

3.2. Quality Standards and Certification Program

The group also identified that overall lack of capacity on resources, knowledge and motivation for the poor implementation of certification program in Indonesia. Thefollowing are the summary of findings:

Lack of Standards for Implementation- the challenges are:

- Establishing and dissemination of national standards

Lack of awareness on Quality- The challenges are:

- Needed government assistance for infrastructure development

Low incentives for certification-The challenges are:

- High cost involved in the certification process
- Registration of farmers groups takes time
- Lack of market access for certified farms and produce
- Incentives for certified farms

3.3. Adoption of Appropriate Technology

The group identified that small scale growers and processors does not meet the economic scale of the farm activities due to low technology dissemination and adoption of appropriate technology. The following are the summary of findings.

Limited ready to use technology- the challenges are:

Providing the updated package technology and participatory research approach

Limited access to Technology-the challenges are:

Encourage better linkages among stakeholders

Further strengthening the farmer-market-industry linkages

Lack of Agriculture Extension Capacity- the challenges are:

Lack of support for technology adoption (farm resources)

Improve extension orientation and capacity

Need farmer driven extension

Need group training approach

3.4. Availability of Credit for farm expansion

The group summarized their findings that all parties involved in the agriculture development programmes including government agencies, university and research organisations, banks, farmers organisations and industries need to foster the linkages and work towards small farmers empowerment and improve their livelihood.

GROUP B: TOPIC OF DISCUSSION

1 Meet the sanitary and phytosanitary requirements of import markets
2 Improvement of the market system including transparency through regular dissemination of market information (eg. IT, hand devices), 'readjusting' the traditional market system, logistics
3 Involvement of the private sector in assisting farmers to gain market access including contract farming, direct linkage to supermarkets

For each component, identify the

- Identify other issues in each component
- Identify the constraints in each component or issue
- Strategies to minimize or overcome each constraint
- Implementation plan for each strategy-players, flow chart

The compositions of the group along with their presentation (revised in the light of discussion) are presented below:

Members:

No.	Name / Email	Position	Agency/Institution
1	Dr.PrumSomany *prumsomany35@yahoo.com*	Deputy Director General,	Department of International Cooperation (DIC) Ministry of Agriculture, Forestry and Fisheries (MAFF), Cambodia
2	Mr.AmenaDaunidrakiNatadra *amenabanuve@yahoo.com*	Senior Research Officer	Ministry of Agriculture, Sugar & Land Resettlement Republic of Fiji Islands
3	Dr.JuejanTangtermthong *Juejan.tangtermthong@afmaasia.org*	Executive Director	Agricultural and Food Marketing Association for Asia and the Pacific (AFMA), FAO Regional Office, Bangkok, Thailand
4	Dr. Lorna E. Herradura *lorna_herradura@yahoo.com*	Agriculture Center Chief IV	Bureau of Plant Industry – DNCRDC,Davao City, Mindanao Philippines
5	Latifah Md. Nor *lmn@mardi.gov.my*	Senior Principal Research Officer	Malaysian Agricultural Research and Development Institute, Serdang, Selangor,Malaysia
6	Dr. S. Rajan *drsrmarch@gmail.com*	Assistant Director General(Horticulture)	Indian Council of Agricultural Research (ICAR), New Delhi, India
7	Palasuberniam. K. *(pala@itfnet.org)*	Technical Officer	International Tropical Fruits Network (TFNet), Malaysia
8	Dra. Louise RatnaSiregar 08129581834	Head of Non GovernmentalIns. Sub.Divi.	Bureau of International Cooperation, Ministry of Agriculture (MoA)
9	Mr.HeruWahyupraja	Head of Export and Inter Area Plant Quarantine	Agricultural Quarantine Agency
10	Sugiyono 08128904403	Field Coordinator	Bogor Institute of Agriculture
11	Mrs. Louise Ratna Siregar		Bureau of International Coopearation
12	Mr.Mulyadi Chandra marketing1@alamandautama.com 085861982281	Research and DevtManager	PT. AlamandaSejatiUtama
13	Rully Hardiansyah. sapijitu@yahoo.com	Manager of Fruit Sourcing	PT. Mulia Raya
14	Mr.Iwan G. Rory	Manager	PT. Sewu Segar Nusantara

3.5. Discussion and Recommendations

Issues / Constraints

I. Lack of Quality
II. Access to technology
III. Lack of market information
IV. Organization of supply chain, logistic and handling of perishable product

Strategy

Lack of Quality- the challenges are:

- Raise of awareness to the farmers on the benefit of Quality
- Implementing GAP &SOPat farm level
- Make available quality inputs (seeds, pesticides, etc)

Accesses to Technology-the challenges are:

- Focused Farmers training
- Provide the know how in local language
- Collaborate extension worker, researcher, farmers and private sector
- Access to visual media

Lack of market information- the challenges are:

- Government agency/institution should gather market information and disseminate it
- Provide up to date information by private industry

Organization of supply chain, logistic and handling of perishable product-the challenges are:

- Set up incubator agency
- Formation of group (association, cooperative, federation) of farmers, processors, traders, packers and retailers
- Better transportation and proper storage

3.6. Implementation Plan

Lack of Quality

- Raise of awareness to the farmers on the benefit of quality
- On farm training / In house training → researcher to farm
- Provide local language know how
- Provide visual media
- Use simple communication techniques to convey the messages
- Promote farmer to farmer interaction
- Developing demonstration plot / pilot project of GAP
- Bring farmer to see the success farmer / Study tour

Implementing GAP & SOP

- Follow the guideline
- Provide incentive, market guarantee

Make quality seeds available

- Strengthening local seed production program
- Improve of locally establish varieties
- Exporter provides better quality seeds

Accesses to Technology

- On farm training / In house training → researcher to farm
- Provide visual media
- Use simple communication techniques to convey the technology
- Promote farmer to farmer interaction

Lack of market information

- Using mobile phone,
- Video conferencing
- Business directory
- User friendly online data information network

3.7. Coordination between the players in the supply chain

- Government should provide incentive for pilot integrated treatment center
- Prioritize perishable product handling at the export port

- Setup event or workshop people with different expertise can come and interact

4.0. CONCLUSION

The workshop identified that the common issues associated with small farmers are:

a. knowledge of current production technologies, including concepts of quality assurance and certification programs. This is partly due to the lack of standards for implementation and dissemination of the established standard documents.

There is also the lack of awareness in producing quality fruits, because, of the prevailing market system, where the middle man buys all produce.

The delivery system or extension seem to be ineffective in some countries, due to institutional constraints.

b. Farmers Associations that are not active – Even though the small farmers are members of farmers associations, they find that they are not effective to improve their income. This may be due to the lack of a 'champion' or committed member.

c. Lack of access to credit facilities – this issue is a problem in most of the developing countries, where it is difficult for small farmers to obtain credit from banks

d. Access to market information is limited, therefore, market system still traditional where the farm price of produce is dictated by middlemen or traders.

e. High certification costs are a constraint to farmers who want to export their produce.

f. The organization of the total value and supply chain including logistics which causes high postharvest losses.

In all these challenges, there has to be a concerted effort to integrate all activities in the value chain with the support of 'actors' to identify specific deficiencies and prescribe specific recommendations. This has to be supported by advising farmers on best cultivars, current production technologies, pest and disease management, quality standards and reducing post harvest losses. Standard operation procedures for some of the recommended practices to produce quality produce has to be disseminated.

The involvement of the private sector can improve the market link between farmers and retailers or supermarket. This will also encourage the farmers to put extra effort in ensuring he produces quality and safe produce.

'Champions' should be selected and nurtured to make the farmers' groups, cooperatives or associations functional and who can guide and improve the welfare of their members.

5.0. APPENDIX

5.1. Field Visit

On 29th October, the workshop participants visited the Pineapple Plantation Village Bumihayu and Pineapple Processing Mekar JalanCagak District. The participants were briefed by the village head on their history and the agricultural development program. TheSubang Regency consist of 20 districts with a population of 1.4 million covering 205,176.97 hactares.

The area of pineapple plantations in JalanCagak covers an area of 1371.5 hectares and is the largest pineapple growing area in Bandung when compared with the existing pineapple plantation in District Ciater, Kasomalang and Cijambe.

Pineapple farms in Jalancagak are generally run by people who are members of farmers' groups. There are altogether 7 groups, each group consisted of between 14-117 people. The fruits produced in the area has a specific size and distinct flavour, which is favoured by the domestic and export market.
Pineapple cultivation in Subang district is planted both as a polyculture system and a monoculture. Plant multiplication is done by using a system of crown development, stem buds, shoots and root buds.

The participants had the opportunity to visit one of the farm owned by Mr. H. Odon, planted with Smooth Cayenne variety. The production here averages about 30 tons/hectare. The pineapple fruits are exported to Korea, Middle East, Netherlands and Singapore through an exporter.

The Subang District Authorities are making efforts to improve the pineapple production through various programmes such as pineapple commodity development, marketing development, improvement of facilities and infrastructure, as well as educational assistance and training.

Workshop participants also had the opportunity to visit a home pineapple processing center operated by women of the community. The leader of the group explained that they produce pineapple based products such as dodol, wajik, chips and jams under the brand name of ‘Mekar Sari’. This center employs 10 women workers.

5.2. Welcome and opening addresses

The workshop welcome address by delivered by CEO of TFNet, Mr.Yacob Ahmad followed by the Head of West Java Regional Agriculture and Food Crop Services, Dr. Ir. H. Endang Suhendarwas.

During his welcoming address, the Chief Executive Officer of TFNet, highlighted the important role played by the network in developing human resource through organizing workshops for small and medium agribusiness enterprises, agribusiness stake holders, government and non-governmental stakeholders involved in tropical fruit production and trade. This workshop with the collaboration with Directorate General of Horticulture, Ministry of Agriculture, Indonesia, was also one of the efforts to involve country members of TFNet in capacity building programs.He also expressed his gratitude for the participation of resource persons from Bangladesh, China, Indonesia, Malaysia, Philippines and Thailand for sharing their experiences.

Welcoming of the delegates of the workshop, Mr.Dr. Ir. H. Endang Suhendar, MS.Head of West Java Regional Agriculture and Food Crops Service, West Java Province, expressed his thanks for selecting Bandung as a venue for the workshop. He also highlighted that besides being a popular tourist destination, Bandung and West Java was also an agricultural production area, with major growing areas of mango and pineapple.

In his opening address, the Directorate General of Horticulture, Ministry of Agriculture, Indonesia, Dr. Ahmad Dimyati,gave a brief background on the fruit industry in Indonesia as the 4th largest tropical fruit producing countrywith exports mainly to Singapore, Thailand and Malaysia.

He also highlighted the formulation of the newly enacted Horticulture Law by the government of Indonesia which will form the backbone for the overall development of the horticulture industry.

He emphasized on six pillars or strategies adopted by the Ministry to improve competitiveness of small scale farms. The six pillars are, the development of consolidated fruit belt areas,, improvement of quality through GAPimplementation, improving existing supply chain, empowerment of farm institutions, integrated stakeholders management involving consortium of private sectors, researchers and community and acceleration of export as well as increase in domestic consumption. This integrated strategy, would assist smallholders to produce quality products that are able to penetrate the global market. The horticultural sector, he continued, provides employment, commercialises the rural economy and creates spill-overs into the services industries.

Dr. Dimyati further highlighted the relevance of the workshop and encouraged the participants of the workshop to actively engage in the discussions as well as establishing further networking contacts among participants, before he formally officiated the workshop.

At the pineapple farm, during the field, participants were met by the villagers and the Regent of the District H. E. EepHidayat**,** who gave a welcoming speech. He also briefed on the history of the village and how pineapple became a mainstay of income for them.

5.3. Workshop Program

Date	Time	Programme
26.10.2010 (Tuesday)		Arrival of Participants – Check in Hotel
DAY 1		
27.10.2010 (Wednesday)	0900 - 0930	Registration of Participants Introduction of Participants and Workshop Coordinators
	0930 - 1000	Workshop Official Opening - Welcome address by TFNet - Welcome and opening address by Representative, Ministry of Agriculture, Indonesia
	1000 - 1030	Tea / Coffee
	1030 - 1100	Paper 1: Global Trends in Tropical Fruit production and International Trade – Yacob Ahmad, TFNet
	1100 - 1130	Paper 2: Implementation of Indo GAP – increasing the competitiveness of Indonesia tropical fruits -Mr. Winny Wibawa, Dept. of Horticulture, Indonesia
	1130 - 1200	Paper 3:Options for supporting the formation of smallholder organizations, quality improvements and credit availability to enhance smallholder contribution to value-addition, along the tropical fruit value chain – the Philippines experience - Dr. Lorna E. Herradura, BPI, Philippines
	1200 - 1230	Paper 4:Minimising post harvest losses and enhancing farmers role in the value chain of tropical fruits - Mr. Togar Napitupulu, AMARTA, Indonesia
	1230 - 1300	Paper 5: Improving the value chain and linking the market for fruit growers in Bangladesh - Dr.M.A.Rahim, Bangladesh Agricultural University, Bangladesh
	1300 - 1400	Lunch
	1400 - 1430	Paper 6: Potential of minimal processing of tropical fruits -Ms. Latifah Md. Nor, MARDI, Malaysia
	1430 - 1500	Paper 7: Empowering of small farmers in markets - Dr. Juejan Tangtermthong, AFMA, Thailand
	1500 – 1530	Paper 8: Consumption trend, demand and market access for tropical fruits in China' - Dr. Tan YanWen, South China Agricultural University, Guangzhou, China
	15.30 - 1615	Group Discussion Guidelines
	1615 – 1700	Tea / Coffee
DAY 2		
28.10.2010 (Thursday)	0830 - 1000	Workshop Session - Group Discussion
	1000 - 1030	Tea /Coffee
	1030 - 1230	Workshop Session - Group Discussion
	1230 - 1400	Lunch
	1400 - 1630	Group Presentations and Recommendations
	1630 - 1700	Tea / Coffee
	1900 - 2230	Workshop Dinner
DAY 3		
29.10.2010 (Friday)		Study Visit to fruit growing areas around Bandung
DAY 4		
30.10.2010		Depart Bandung

5.4. List of Participants

No.	Name / Email	Position	Agency/Institution
1	Dr.PrumSomany *prumsomany35@yahoo.com*	Deputy Director General,	Department of International Cooperation (DIC) Ministry of Agriculture, Forestry and Fisheries (MAFF), Cambodia
2	Dr. Mohammad Abdur Rahim *marahim1956@yahoo.com*	Professor / Head of Department	Department of Horticulture Bangladesh Agricultural University, Bangladesh
3	Mr.AmenaDaunidrakiNatadra *amenabanuve@yahoo.com*	Senior Research Officer	Ministry of Agriculture, Sugar & Land Resettlement Republic of Fiji Islands
4	Dr. Tan YanWen *tanyw@scau.edu.cn*	Professor	Economics and Management College, South China Agricultural University,Guangzhou, China.
5	Dr.JuejanTangtermthong *Juejan.tangtermthong@afmaasia.org*	Executive Director	Agricultural and Food Marketing Association for Asia and the Pacific (AFMA), FAO Regional Office, Bangkok, Thailand
6	Dr. Lorna E. Herradura *lorna_herradura@yahoo.com*	Agriculture Center Chief IV	Bureau of Plant Industry – DNCRDC,Davao City, Mindanao Philippines
7	Latifah Md. Nor *lmn@mardi.gov.my*	Senior Principal Research Officer	Malaysian Agricultural Research and Development Institute, Serdang, Selangor,Malaysia
8	Salina bt. Main *salina@doa.gov.my*	Assistant Director	Department of Agriculture, Putrajaya,Malaysia
9	Dr. S. Rajan *drsrmarch@gmail.com*	Assistant Director General(Horticulture)	Indian Council of Agricultural Research (ICAR), New Delhi, India
10	Yacob Ahmad *(yacob@itfnet.org)*	Chief Executive Officer	International Tropical Fruits Network (TFNet), Malaysia
11	Palasuberniam. K. *(pala@itfnet.org)*	Technical Officer	International Tropical Fruits Network (TFNet), Malaysia
12	Dra. Louise RatnaSiregar 08129581834	Head of Non GovernmentalIns. Sub.Divi.	Bureau of International Cooperation, Ministry of Agriculture (MoA)
13	Dr. Ir. YusdarHilman 08129581834	Head of Horticultural Research & Development Center	Horticultural Research and Development Center, MoA
14	Dr. Sri Yuliani 081380104995	Head of Cooperation Section	Board of Agriculture Post Harvest Research and Development
15	Dr.RidwanRachmat 081316932679	Head of Researcher Group	Board of Agriculture Post Harvest Research and Development
16	YuliawatiRohmah, SP 08567733062	Staff	Directorate of International Marketing, MoA
17	Sugiyono 08128904403	Field Coordinator	Bogor Institute of Agriculture
18	Dr. M. Rahmad S081513259133	Sekretaris PKBT - IPB	PKBT – IPB
19	Dr. Ahmad Dimyati	Director General	D.G Horticulture
20	Ms. Sri Kuntasih	Secretary of D.G.	D. G. Of Horticulture

		Horticulture	
21	Dr.Winny D. Wibawa	Director of Fruits	D. G. Of Horticulture
22	Mr.Sukirno	Director of Horticultural Plant Protection	Directorate General of Horticulture
23	Dr.Suryadi Abdul Munir	Director of International Marketing	Directorate General of Agricultural Product Processing and Marketing
24	Prof.SumeruAshari (tel:081334682243)	Head of Durian Research Center,	Durian Research Center, University of Brawijaya
25	Mr.Sukarman	Deputy Director of Herbaceous Plant	Directorate General Of Horticulture
26	Ms.Susiami	Deputy Director of Tree Fruit Plant	Directorate General Of Horticulture
27	Ms.GabrriellaSusilowati	Head of Cooperation Sub Division	Directorate General Of Horticulture
28	Mr. Anton Awusi	Head of Seed Section	Directorate General Of Horticulture
29	Mr. Edi TotokWidodo	Head of Technology Divison	Directorate General Of Horticulture
30	Mr.HeruWahyupraja	Head of Export and Inter Area Plant Quarantine	Agricultural Quarantine Agency
31	Mr.WidodoHeru	Head of Technology Division	Directorate General Of Horticulture
32	Mr. Tommy Nugraha	Head of Business Development Section	Directorate General Of Horticulture
33	Dr. M. Rahmad S.	Lecturer	Bogor Institute of Agriculuture
34	Dr. Sri Yuliani	Head of Cooperation	Post Harvest Research Centre
35	Dr.Ridzwan Rahmat	Head of Researcher Group	Post Harvest Research Centre
36	Mrs. Louise Ratna Siregar		Bureau of International Coopearation
37	Dr.Endang S uhendar	Head of West Java Agricultural Service	West java Agricultural Service
38	Dr.Sobir	Head of Tropical Fruit Research	Bogor Institute of Agriculture
39	Dr. Made Utama	Head of Horticultural Research and Dev. Centre	University of Udayana, Bali
40	Dr.CaturHermanto	Researcher	Tropical Fruit Research Centre, AARD
41	Mr. Alan Rahmat	Reseracher	West java Agricultural Technology Assessment Centre
42	Dr.YusdarHilman	Head of Horticultural Research and Dev Centre	Agricultural Research and Devt Agency
43	Mr.Mulyadi Chandra marketing1@alamandautama.com 085861982281	Research and DevtManager	PT. AlamandaSejatiUtama

44	Rully H. sapijitu@yahoo.com	Manager of Fruit Sourcuing	PT. Mulia Raya
45	Mr.Iwan G. Rory	Manager	PT. Sewu Segar Nusantara
46	Dr.Sanath K. Reddy	Senior Economic Growth Advisor	U.S. Agency for International Development Economic Growth Office American Embassy, Jakarta
49	Dr. William Levine	Chief of Party USAID Contractor AMARTA	Agribusiness Market and Support Activity, Jakarta
50	Dr.TogarNapitupulu	Senior Agricultural Economic Advisor USAID Contractor AMARTA	Agribusiness Market and Support Activity, Jakarta
51	Ir. HasanJohnyWidjaja	Chairman	Fruit and Vegetable Exporter Association, Indonesia
52	Mr.Yudiman	Business Development	JL. Panorama, Lembang , Bandung


Workshop on
Increasing Competitiveness & Market Access for
Tropical Fruit Through Quality Assurance and
Value Chain Improvement in Asia
Directorate General of Horticulture, Ministry of Agriculture and
Tropical Fruits Network (TFNet)
Bandung, October 27-29, 2010

PRESENTATIONS