

Report

**REPORT OF
THE SEMINAR ON NETWORKING OF
THE AGRICULTURAL TECHNOLOGY TRANSFER AND TRAINING**

Jakarta and Bogor, Indonesia, 28 November – 1 December 2005

Introduction

The Asia Pacific Economic Cooperation (APEC) Seminar on Networking of the Agricultural Technology Transfer and Training was conducted on November 28 – December 1, 2005 at Grand Hyatt Aryaduta Hotel, Jakarta and Salak Hotel, Bogor. The Seminar has discussed 10 invited papers, and was enriched with field visits to observe and exchange information with farmers, farmers' group, women farmers group, entrepreneurs, extensionists and researchers in mobilizing resources and promoting agribusiness and in developing networking systems.

The Seminar was attended by 40 participants from APEC member economies: Chinese Taipei, Japan, South Korea, Thailand, Malaysia, Peru, Philippines and Indonesia. There were 10 farmers from Indonesia attended the Training Workshop, and many other farmers, including Women Farmers Group, actively provide and share information and experiences with the participants during field visits.

Opening Session

The Secretary of the Indonesian Agency for Agricultural Research and Development (IAARD) as the Project Overseer of ATT&T delivered the welcome address by saying warm welcome and expressing his deep appreciation to all participants from the APEC member economies that attended in this seminar. In this opportunity, he apologized for delaying the Seminar that planned to be conducted in August 2005. He mentioned that this seminar is the fifth gathering of APEC member economies in Indonesia after the first Workshop in Jakarta, on January 2000, the second Seminar in Yogyakarta, on February 2001, the third Seminar held in Denpasar, Bali on July 2003, and the fourth Training Workshop in Bandung on July 2004. Those previous seminars recognized the importance of sharing experiences, methods and strategies on mobilizing and promoting agribusiness as well as developing networking on agricultural technology transfer and training. The Seminar discussed deeply this important recognition during plenary session and group discussion session.

The Director General of IAARD in his opening remark pointed out that this Seminar is very important and really in line with the government of Indonesia recently launched the blue print for the revitalization of agriculture, including fisheries and forestry. Different from past agricultural development policies that were very much piecemeal, the new integrated five-year policy is being designed to address all of the problems that directly and indirectly affect the sector. The concept is essentially embodied in the broad objectives of empowering the farm economy and rural communities through the development of rural and farm infrastructure. In this context, IAARD has started the program, which is called Prima Tani. The main aims of the program are mobilizing resources and promoting agribusiness, and also disseminating the technologies by providing more information closer to the farm. This is really in line with and justifies the objectives of the seminar. Therefore, this seminar is very important for us. He closed his speech by expressing thanks to Dr. Se-Ik Oh, The ATCWG Lead Shepherd and Mr. Yasumasa Maeda, the Co-Shepherd from Japan, APEC Secretariat, the Local Government and Organizing Committee for close cooperation in supporting this seminar.

Mr. Maeda, the co-shepherd from Japan in his keynote address emphasized the important role of the workshop to answer the recommendation raised during the previous seminar. As the new co-shepherd replacing Dr. Takeo Makino, he reminded the participants that this occasion is the fifth opportunities for the APEC member economies for gathering here in Indonesia to address potential problems of food shortages. Therefore, he hoped that the seminar would come up with the concrete recommendations and its related action plans to solve those problems. Finally he thanks the Steering Committee and the Organizing Committee for coordinating to carried out the Seminar.

Paper Presentation

The First Paper:

ENVIRONMENTALLY FRIENDLY POST HARVEST HANDLING AND PROCESSING TECHNOLOGY FOR AGRICULTURAL PRODUCT DIFFERENTIATION TO INCREASE FARMERS' INCOME IN KOREA

Ji Gang Kim

(Senior Researcher, Post Harvest Technology Division,
National Horticulture Research Institute, RDA, Korea)

The Korean market for environmentally friendly agricultural products market, including fresh produce and processed foods, has shown strong growth due to consumers' belief that environmentally friendly product is healthier or better for the environment than non-environmentally friendly products. In order to meet growing consumers' demand for food safety and environmental conservation, the Korean government encourages farmers to grow environment-friendly products.

Environment-friendly post harvest handling and processing technology focused on maintaining food safety and quality waste minimization. The combined efforts of production by environment-friendly technology and waste minimization of the product, and utilization of side-products would substantially reduce the amount of waste, as well as enhance food safety of agricultural product industry.

Proper post harvest handling and processing technology to produce safe products and maintain a clean environment can be costly. To ensure recovery of their investment and added cost of production, products with added value must be well differentiated from other commodities. This will allow consumers to easily identify products with superior quality from other commodities in the market.

New developed post harvest technology, which is more environment-friendly is being applied by farmers or their union/group to meet diversifying and changing consumer behavior. However, many farmers, distributors, and processors have not obtained information on new post harvest and processing technology. Therefore, more networking and an active public information system are required to give or exchange information for a more progressive and prosperous farmer and a clean environment.

The Second Paper:

PRIMA TANI: A NEW CONCEPT TO ACCELERATE RESOURCES MOBILIZATION FOR
PROMOTING RURAL AGRIBUSINESS

Kasdi Subagyono, Winarno, A. Abdurachman

(Senior Researchers, Indonesian Agency for Agricultural Research and Development)

Prima Tani is a new concept for accelerating the dissemination process of the agribusiness innovations, developed by the IAARD. It is expected to function as a direct bridging-linkage between the IAARD and both the delivery institutions and the users of the innovations. It is also utilized as a media for participatory assessments of the agribusiness innovations, an implication of *Research for Development*, a new paradigm of the IAARD. The main objective of the Prima Tani is to accelerate and to optimize the adoption level of innovative technologies developed by the IAARD, and also to obtain feedback information from the users. Prima Tani has been developed based on the agro-ecosystem, agribusiness, regional development, institutional based development, and community development. The preparation of Prima Tani was done in 2004 and has been implemented in 2005 in 14 provinces covering 21 locations of the agribusiness laboratories, which expected to be continued for 3 to 5 years.

The strategies of implementation to be developed as the followings:

- Implementing innovative technologies through participatory research and development, based on the research for development paradigm,
- Building a model of innovative-technology-based competitive and sustainable agribusiness by integrating the innovation system and the agribusiness system,
- Promoting the diffusion and replication process of innovative technology depots through expo, field demplot, information technology and dissemination, advocacy, and facility,
- Using two development bases in implementing the program namely the agro-ecological zones (AEZ) and socio-economic conditions of the rural communities.

The Third Paper :

MOBILIZATION OF FARM RESOURCES IN PROVISION OF MORE ON-FARM AND
NON-FARM EMPLOYMENT OPPORTUNITIES AND INCREASE AGRICULTURE
PRODUCTION TO TACKLE LAND SCARCITY IN CHINESE TAIPEI

Ting-Chun Teng

(Consultant, Institute for Information Industry)

At the beginning of 2002, Taiwan finally joined WTO as an official member. Farmers in Taiwan encounter agricultural products with relative lower prices from other countries. Hence, farmers' profits are decreasing and gradually not willing to stay in agriculture. However, as an island country, Taiwan cannot fully rely on imported foods. It still needs to maintain certain level of agriculture production. Therefore, mobilization of farm resources in provision of more on-farm and non-farm employment opportunities and increase agriculture production to tackle land scarcity become important issues in Taiwan. To address the problems the government has set up four strategies as follows: (1) Development of recreational farm, improvement of rural living quality; (2) Training excellent

agricultural human resources; (3) Safe agriculture and healthy life, and (4) Establishing agro-industry value chains.

Facing with strong competition and enhancing environment, farmers need up-to-date as well as complete information to make their investment, production, and sales decisions. The Council of Agriculture (COA) has paid attention to help farmers get relevant information since 1947, and invited related organizations such as farmers' organizations, universities, and research institutes to plan and develop many information systems. Taiwan have succeeded in building many information networking systems to help farmers running their agribusiness smoothly though digital technology. COA has been technically and financially supporting farmers' organizations to build agricultural information infrastructure. Taiwan has launched his agriculture into the Digital Age. However, information technology changes rapidly, it still needs to respond effectively and quickly to face the new challenges.

The Fourth Paper:

CURRENT SITUATIONS AND FUTURE DIRECTION OF AGRICULTURAL EXTENSION
INFORMATION NETWORK SYSTEM IN JAPAN

- FOCUSING ON THE NATIONWIDE EXTENSION INFORMATION NETWORK SYSTEM -

Koichi Fukuda

(Japan Agricultural Development & Extension Association, JADEA)

Japan's experiences managing the systems of extension information activities for about 30 years show that: (1) Closed network system for extension personnel is useful for helping farmers' problem solving. As for the diffusion of innovations, it is very difficult to encourage communication between extension advisors and researchers. However, extension personnel and farmers can access the databases of research findings that are already on the Internet; (2) Due to the introduction of network systems, extension advisors can efficiently receive more information from other prefectures compared to before. Extension advisors shouldn't spend a lot of time on deskwork; their main duties are to conduct extension activities in the field. Therefore, putting "Online Consultants" and preparing enough databases on extension activities in the network systems are helpful for facilitating farmers' problem solving; (3) Before the establishment of network systems, it was not easy for farmers to receive information from other prefectures. Thanks to the network systems for extension advisors, farmers can also receive information in other prefectures through extension advisors. If farmers participate in the network systems themselves, they can directly receive information based on experiences that have never been provided by mass media or Internet, by communicating with the farmers and extension advisors in other prefectures. Besides that, if farmers set up their own home pages, they can inform their farms' cultivation situations of consumers and to sell the farm products through Internet by the direct communication with consumers; (4) the system of sharing extension information activities can be established by using paper and snail mail as shown with Japan's examples. Therefore, before the introduction of network system, the system of extension information activities should be established to some extent; (5) Enrichment of the contents of network system is very important for active usage of the network system so that the recent usage of EI-NET has been drastically improved. On the other hand, organizing users' conditions such as putting "Online Consultants", "EI-NET Correspondents", and board operators can accelerate the usage of network systems. Besides that, it is very significant to check users' needs anytime for active usage of network systems.

In 2006, JADEA is planning to start the “Extension Knowledge System” that extension advisors can more effectively use information based on extension advisors’ experiences. According to the new system, extension advisors’ knowledge will be efficiently accumulated in the host computers of our office, so that extension advisors will be able to search the data very quickly with the high performance search engine.

The Fifth Paper:

NETWORKING INITIATIVES IN PROMOTING CHANGES TO COUNTER THE ADVERSE
EFFECT OF GLOBALIZATION AMONG FARMERS’ ORGANIZATION GROUP

Ahmad Puzi Abu Bakar

(IT Division, Farmers Organization Authority, Kuala Lumpur, Malaysia)

Direct benefit of WTO and AFTA are beginning to be felt everywhere by customers. Nevertheless, there are adverse effects which resulted stiff price competition between local and imported goods; including agricultural products. International trade liberalization with the reduction off all non-tariff barriers will result further product dumping from developed countries. To counter these adverse effects, the Malaysian Government’s current policies program and campaigns, among others, are: (1) National Agriculture Policy 3, 1998-2010; (2) Revitalizing Agriculture Sector as the third engine of Growth in the 9th Malaysian Development Plan (2006-2010) and (3) Campaign theme for 2005 Farmers, Rearers and Fishermen Days “Agriculture is Business”. One of the important implementations is developing networking using internet based technology to help farmers organization groups (FOG).

The benefits that these online performance system initiatives bring to the tasks of traditional FOG are significant, through the lowering of cost and improvement of service level. However, more need to be done on the part of stakeholders and leadership of various Government Agencies to promote and drive more effective cross agency collaboration. Effective collaboration will facilitate a more meaningful benchmarking exercise in selecting good managerial practices and good agricultural practices for a sustainable productivity improvement.

The Sixth Paper:

OPPORTUNITIES OF THE NETWORKING SYSTEM IN PERU:
THE CASE OF WARRANTS FOR RICE PRODUCERS

Alex Giron Cordillo

(Officer of the General Department of Agrarian Planning, Peruvian Ministry of Agriculture)

In Peru, rice is the second crop in importance according to the land extensions destined to its growing and it is also the first labour demander in agriculture sector. As many other sub-sectors, rice production is very sensitive to the influence of foreign prices volatility on local market and the low profitability obtained by producers, among other structural reasons. Demands of producers to generate restrictive policies against imports have forced the Peruvian Governments in order to respect the WTO rules and local legislation- to be more creative and to provide alternatives to this situation. A financial mechanism –warrants- was supported by producer associations as an alternative to low seasonal prices. In such context, one of the most relevant tasks of the Ministry of Agriculture (MINAG) is to provide

all the needed information to producers, in order to make possible the complete use of their right to decide what is better for them. In an *information society*, the use of internet as a tool to reach all producers has been established as the simplest way to provide information to producers.

Local strategies to surpass the low profitability situation in rice sector demands the use and enforcement of networking systems. Even though digital divide is a very deep problem, spontaneous and private strategies have provided low income agents the way to the internet and its information. Despite the main reason why producers have a low profitability and reduced opportunities responds to agricultural problems, producers argue that imports are the main reason of their situation. For that, they constantly request for a political measure that could give them the opportunity to subsist as agricultural producers. At the promotion of warrant as a mechanism to avoid risks, basic information is the basis to bring producers the opportunity to decide. To attend their requests, MINAG has decided to enforce the use of electronic networking systems and in this particular case the conjunction of complex situations has given incentive to exploit internet to fulfill this objective.

The Seventh Paper:

INFORMATION NETWORKING FOR FARMERS AND FARMERS' GROUPS: THE PHILIPPINE STRATEGY

Pamela Mariquita G. Mappala

(Chief, Information and Communication Technology Section, Agricultural Knowledge Management
Division, Agricultural Training Institute, Philippine)s

In the Philippines, Republic Act 8435, or the Agriculture and Fisheries Modernization Act of 1997 (AFMA) mandated the optimal use of information and communication technology (ICT) in improving the delivery of extension services. Hence, the government agencies are mandated to digitize their information and knowledge products for massive dissemination with the use of ICT. With this, the Philippines, together with the rest of the world, is transforming itself into an electronically enabled society where the people live in a world that promotes access to critical information, technologies, quality education, efficient government service, and greater sources of livelihood.

Since farmer-to-farmer approach has proven its effectiveness in technology transfer and adoption, acknowledged outstanding farmers are being tapped to be part of the experts in providing technology and information services. As in the organizational structure of the e-Farm Centers or the so-called Farmers' Information Technology Service (FITS) Centers, the Farmer-Scientists have a very important role in providing advisory services to their fellow farmers. The Department of Agriculture is also applying the farmer-led extension approach – wherein the Regional Field Units of the Department are tapping the farmers to be not just mere receivers of information but they are actively involved in the extension activities. This is based on the fact that farmers tend to listen more to their fellow farmers who have been successful in their ventures.

Improved communication and information access are directly related to social and economic development (World Bank, 1995 as mentioned in FAO, 1997). However, these should be well appreciated by the farmers as end-users for its effectiveness. More importantly, the farmers have a special credibility that most of their fellow farmers trust in them, should they find the technologies effective to them. Therefore, in the information networking, farmers should form part of the network of experts to provide information services to the farmers.

The Eighth Paper:

**ROLE OF FARMERS AND THEIR ORGANIZATION IN PROVIDING AGRICULTURE
INFORMATION FOR NETWORKING SYSTEMS : CASE OF THAILAND.**

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(Department of Agricultural Extension, Ministry of Agriculture and Cooperatives, THAILAND)

The agriculture information networking system can be categorized as the traditional-based and information technology-based. As the experience of Thailand extension, both were applied, in which the effective accessing factor is farmers' participation. Farmers and their organization: the Agricultural Technology Transfer and Service Center, ATSC, able to get the benefit from information networking system by involvement and changing their role instead of being the provider to the information manager. While, their capacity specifically "agriculture and related knowledge warehouse" would be advantage to the network systems. The networking of all stakeholders enables farmers to harness knowledge and information to improve farming and institution as well.

Generally, Thailand information networking system is in the between of the traditional-based and information technology-based. The traditional-based refers to both formal and in-formal information exchange such as the documents among institutions or simply direct communication of stakeholders. While, the information technology-based more emphasizes on the electronic facilitation especially the website of DOAE, Regional Agricultural Extension Office (RAEO), Provincial Agricultural Extension Office (PAEO), District Agricultural Extension Office (DAEO) and other link. With the DOAE efforts to apply information technology has been started at local level which has necessary infrastructure and pre-requisites, in which it was established at the DAEO. While the information technology would not be considered as a replacement of human effort but it is just as a supporting tool.

Trendily, under the DOAE good governance policy implementation, the knowledge management is still on the way of practicing. It aims to be the learning organization of all agencies in line, in which grounded the ATSC and the knowledge society. However, the implementing result of the agriculture information system through the ATSC is still not clearly shown. This implies the support consideration needed as the followings:

- Enable all stakeholders to communicate and exchange information as needed for their activities and as stipulated in their mandate;
 - Enable farmers, farmer organization, local people, LGU and GO staffs to access up to date agriculture information according to their needs;
 - Promote the competency of the steering committee and extension agents in order to manage the ATSC agriculture information system.
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The Ninth Paper:

IMPROVING FARMER ACCESS TO INFORMATION AND NETWORKING
FOR INCREASING FARMERS INCOME AND SELF RELIANCE
(CASE PD HIKMAH, INDONESIA)

Wildan Mustofa

(Operation Manager PD HIKMAH)

The most important question should be asked is “How to deal with information and networking?” The question could be answered by knowing the followings: (1) Business concept, (2) Business process, (3) Organizations and its structures, and (4) Information and Networking media used. In the case of PD HIKMAH, one of the big potato farmers in Indonesia, all of media possibilities used, such as: trial on his own farm, field trip to more advance farmers and research institutions, attending seminar and workshop, carried out promotion, participating and promoting social responsibilities, consultation, reading relevant report and surfing internet as well as develop his own web-site. Use of electronic networking still only limited in a few of big farmers, for the other farmers especially small farmers e-system is a wild animal that should be domesticated.

The Tenth Paper:

COMMUNITY INTEGRATED PEST MANAGEMENT:
LESSONS LEARNT ON STRENGTHENING FARMER ORGANISATIONS
AND THEIR NETWORKS

Nugroho

(Director, FIELD Indonesia Foundation)

Evolution of community-based integrated pest management (IPM) began in 1989 by conducting Farmer's Field School (FFS) on three full seasons training for field workers; and then in 1992 introduced IPM by farmers which were consisted of 4 farmer's activities: Initial Farmer to Farmer training, Farmer IPM studies, Initial Action Research Labs and Initial Farmer Planning; and finally set up community based IPM in 1996 by facilitating Farmers to be: Trainers (Farmers'-led FFS), Researchers (Farmers' Studies & Seminars) and Organizers (Farmers' Forums & Media). All of those activities lead to a strong foundation for developing and strengthening farmer organizations and their network.

Alumni of FFS were able to planning for next season activities, identification of problems with analysis cause and effect, identification of goal based on problem analysis, analysis of alternative solutions and selection of a prime alternative, development of activity plans and implementation of the plans and also to disseminate learning processes and results to other farmers, design and use a variety of local media. Farmer's planning and technical meeting that conducted at sub-district level twice a year has had successfully making farmers able to discuss possible programs for the next season, to share field program results or identification of some local issues and to develop IPM farmers' network at village and sub-district levels. They also have organized and conducted a workshop facilitated by IPM trainers to develop an IPM village since identifying a vision, building strategy to achieve the vision, assessing the resources available and planning activities. Finally, farmers have actively

participated on field study and action research activities to develop: farmer's own knowledge and technologies, capacity to find an answer/proof or test a method, and farmer's capacity on research and its networking with research-related institutions.

Field Visits

Field Visit was arranged during the trip of participants from Jakarta to Bogor by stop by at: (1) Jakarta Agricultural and Forestry Expo in Jakarta, and (2) Taman Anggrek Indonesia Permai (Great Indonesian Orchid Garden), and between paper presentation sessions by visiting: (3) Saung Nirwan Exotic Flowers Garden (4) Colisa Tropical Fishes and Aquatic Plants, and (4) ICALD e-agriculture technology information systems, all located in Bogor. During the field visits, the participants had opportunity to interact, share information and experiences with farmers, including women farmers, entrepreneurs, researchers, extensionists and other interested parties on mobilize and promote agricultural and developing networking. The objects displayed, observed and discussed during the field visits, among others, were:

1. Agriculture and Forestry commodities products;
2. Orchid and ornamental flowers industries;
3. Exported Ornamental Fish Farmers Co-operative;
4. Farmers organization and their activities;
5. Women farmers activities;
6. Existing networking of farmers;
7. Farmer's electronics networking system;
8. Government's Agricultural Information Technology System.

Action Plan

The participants of the APEC Training Workshop endorsed the action plan for 2006 entitle "Training Workshop on Networking of the Agricultural Technology Transfer". Referring to the goal of the most-likely approved **Project Proposal for 2006: Workshop on the Utilization of the ATT&T Networking System** as the followings:

1. Exchange information and experiences on the implementation of the utilization of ATT&T Networking System among member economies;
2. Accelerate the access of farmers to agricultural technology and agribusiness information for the purpose of increasing farmers' income and self-reliance;
3. Strengthen the role of farmers organization in establishing and managing website for sustainability of APEC member economies beyond 2006.

So the proposed Action Plans for 2005 – 2006 could be:

1. Disseminate the results of the Seminar to all stakeholders and interested parties in each APEC member economies;
 2. Contribute to the initial implementation of the ATT&T net working systems;
 3. Sharing experiences on the improvement of the ATT&T networking system;
 4. Conduct a preliminary assessment on effects of farmers' access to technologies and agribusiness information on increasing farmers' income and self-reliance;
 5. Develop training models for:
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- Establishing networking includes farmers' involvement;
- Managing networking includes farmers' participation;
- Capacity building for farmers organization;
- Farmers to farmers training.

The participants, however, suggested the following action plans, which are deeply discussed by 2 groups held in the last session of the Seminar that took place in ICALD. Group A proposed the following action plan:

1. Disseminate the results of this seminar,
2. Carried out initial networking system,
3. To conduct preliminary assessment on effects of farmers access to technologies and agribusiness information,
4. To conduct training models for :
 - Establishing networking among farmers;
 - Improving farmers capacity building;
 - Farmers to farmers training.

Group B proposed action plan as follows:

1. More access for farmers to information;
2. Advocate the policy makers to have commitment and support to information dissemination;
3. Law /regulation for collaboration, coaching, using software (exchange information).

Finally after serious discussion at the last plenary session of the Seminar, chaired by the Directress of ICALD, all participants agree that objectives of the Workshop and the action plan for 2006 are:

1. Objective of the workshop is to exchange information on the implementation of agricultural technology transfer and training among member economies to promote agribusiness
2. Proposes Action Plan for 2006:
 - a. Disseminating the results of the seminar to all stakeholders and interested parties in each member economies,
 - b. Participant from member economies should communicate with respective government to appoint official contact person in establishing network in ATT&T,
 - c. Setting up our networking system to solve the regional problems especially for the end users,
 - d. Strengthening capacity building / training to support networking,
 - e. Respective member economies should make available the required information infrastructures,
 - f. Conducting preliminary assesment on effects of farmers access to technologies and agribusiness information,
 - g. Increasing collaboration with other private and public institution to deal with agribussines sectors,
 - h. Promoting the agribusines in the rural area.

Seminar Conclusion

The active discussion of the most of the participants and the reaffirmed relevance topic to agricultural technology transfer and training in the APEC member economies indicated and manifested the importance of technical cooperation and communication through the Seminar. The Seminar

reaffirmed the importance of the strategies for: (i) mobilizing and promoting agribusiness; and (ii) Developing ATT&T Networking systems. Strengthening extension system by intensive involvement of farmers in accelerating technology transfer and improving training.

The Seminar gleaned a number of “Lessons Learned” from several program experienced and shared through the Member Economy Presentations and group and plenary discussions. There were three important topics discussed and agreed:

1. Environmentally friendly post harvest technology.

- a. Market for environmentally friendly agricultural products has shown strong growth due to consumers’ belief that environmentally friendly product is healthier or better for the environment than non-environmentally friendly products. The combined efforts of production by environment-friendly technology and waste minimization of the product, and utilization of side-products would substantially reduce the amount of waste, as well as enhance food safety of agricultural product industry.
- b. Proper post harvest handling and processing technology to produce safe products and maintain a clean environment can be costly. To ensure recovery of their investment and added cost of production, products with added value must be well differentiated from other commodities. This will allow consumers to easily identify products with superior quality from other commodities in the market.
- c. Many farmers, distributors, and processors have not obtained information on new post harvest and processing technology. Therefore, more networking and an active public information system are required to give or exchange information for a more progressive and prosperous farmer and a clean environment.

2. Mobilizing and promoting agribusiness

- a. Mobilization of farm resources in provision of more on-farm and non-farm employment opportunities and increase agriculture production to tackle land scarcity becomes important issues.
- b. To address the problems the government of Taiwan has set up four strategies: (i) Development of recreational farm, improvement of rural living quality; (ii) Training excellent agricultural human resources; (iii) Safe agriculture and healthy life, and (iv) Establishing agro-industry value chains.
- c. A new concept for accelerating the dissemination process of the agribusiness innovations, as a means of mobilizing resources and promoting agribusiness, has been developed by the IAARD, Indonesia, which is called Prima Tani. The main objective of the Prima Tani is to accelerate and to optimize the adoption level of innovative technologies developed by the IAARD, and also to obtain feed- back information from the users.

3. Developing ATT&T networking system

- a. Facing with strong competition and enhancing environment due to global trade, farmers need up-to-date as well as complete information to make their investment, production, and sales decisions. One important solution is developing a networking system among farmers, extensions and research institutes.
 - b. Since information changes very fast, it still needs to respond effectively and quickly to face the new challenges. Therefore, in the information networking, farmers should form part of the network of experts to provide information services to the farmers.
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- c. The government and recognized farmer organization should have responsibility for enabling farmers, farmer organization, local people, local and central government staffs to access up to date agriculture information (prices, market, technology etc.) according to their needs.

Closing Session

Director General, Indonesian Agency of Agricultural Human Resource Development in his closing remark pointed out that the Seminar has successfully achieved the expected benefit of the Seminar by intensive discussion on 10 invited papers in the classes and during the field visit. We do hope and we propose that this lessons learned' will be followed-up by each participant to disseminate all of the knowledge, skill and shared experiences get from the Seminar. As soon as the completion of the networking seminar, each of the APEC member economies will develop and utilize the networking system and start to share information and experiences through the network. Some problems and weaknesses, and unanticipated results of the networking might be found and faced by some member economies. Those finding would be shared and discussed deeply on the next ATT&T Workshop This proposed workshop to discuss experiences on the adoption of the agreed networking system, therefore, will be conducted in 2006, with the main objective is to assess the strength and weaknesses of the networking system and to find ways to improve the system.

Annex 1
Report Of The Seminar 2005.
Action Plan for 2006

The suggested Agenda for the future has been discussed and come up with the agreed following Action Plan for 2006:

Plan for 2006: Workshop on the Utilization of the ATT&T Networking System

1. Objective

The objective of the workshop is to exchange information and experiences on the implementation of the utilization of ATT&T Networking System among member economies to accelerate the access of farmers on information on agricultural technology and agribusiness for the purpose of increasing farmer's income and self-reliance.

2. Methods

In the workshop exchange of information, experiences, ideas and practices among member economies are directed to identify:

1. The Networking System aspect on the experiences in using the ATT&T Networking System, particularly on:
 - a) The strength of the system in channeling information to farmers and other users as well as prospective customers and potential stakeholders;
 - b) Problems encountered in managing the ATT&T Networking System;
 - c) Ideas to improve the system.
2. The farmers access to information through ATT&T Networking System particularly on how the ATT&T Network could provide benefit to the farmers, through:
 - a) Speedy access of needed information by farmers;
 - b) Obtaining appropriate markets for farmers' products;
 - c) Obtaining information on consumers' preferences for agricultural products.
3. The training aspects particularly on how to provide knowledge and skills to the ATT&T Networking System users and operators, such as:
 - a) Problems in training ATT&T Networking Operators at local level;
 - b) Problems in training farmers and other end-users;
 - c) New training methods in training ATT&T Networking System operators, farmers and other end users.

Expected specific benefits

- Finding new technologies for the senior government officials and farmer leaders to increase agricultural production, developing agribusiness in village, reducing distance between farmers and consumers, and promote value added agricultural products,
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- Finding some strategies to meet farmers' needs and solve their problems influencing specific agricultural technologies,
- Finding new system of training opportunities and education for ATT&T by utilizing farmers organization,
- Finding new ATT&T Networking System to accelerate farmers' access of information on technology, markets of agricultural products, consumer behavior and other information from local, national, regional and international information sources in anticipating negative impacts of globalization.

Expected specific beneficiaries

The primary beneficiaries will be the participants of the workshop. However since the participants are senior government officials and farmers leaders directly involved in ATT&T of the respective APEC member economies, it is expected that they will make use of the results of discussions and some conclusions for their consideration to formulate the policy on ATT&T to increase farmer's income and promote their self reliance.
