Introduction

THE VAST MAJORITY of the world's poor live in the Asian and Pacific rural areas, and research shows that agricultural growth, especially if focused on small farmers, is one of the most important engines for the creation of employment and income for the poor.

FFTC is committed as ever to do its share in promoting agriculture and rural development in the region, believing in the importance of agriculture in fueling the development of national economies. Towards a food-secure and prosperous Asian and Pacific region, we reach out to our strategic partners, re-doubling our efforts in pursuit of information and technological exchanges to better serve our small-scale farmers and rural communities.

Our Center's mechanism of collecting, exchanging, and disseminating information on improved and advanced agricultural technology constitutes a systematic institutional cooperation and complementation among the Asian and Pacific countries, bridging the technological and economic gap between the rich and poor nations. Through our various activities like seminars, training courses and workshops, thousands of scientists, administrators, policymakers and extension workers in the region are given the opportunity to share and exchange technological innovations and practical information in agriculture.

The year 2005 is another milestone. In the face of all the profound changes in the structure of the region's agriculture in the past decades amid globalization trends, we believe that our work program and activities in 2005 have made significant marks in contributing to the attainment of sustained agricultural development, improved production of more food of better quality, and increased incomes and better livelihood opportunities for our small-scale farmers.

Newly developed innovative technologies for soil and water conservation

The widespread concern over the degradation of soil and water resources has led to great efforts by governments and scientists in the Asian region to develop technologies appropriate for small-scale farmers. However, while some developed countries have gained technological advancement in soil and water conservation, even using information technology (IT) following modern consumer-oriented agriculture, other developing countries have yet to achieve appropriate measures in maximizing soil and water supply capacities to increase their agricultural produce.

Innovative techniques or solutions must be extended to create learning and sharing environments, and to improve the transfer of scientific and technological advancement to the users. There are now sufficient information, knowledge, and experiences to share among countries in the region on the conservation of soil and water resources in the agricultural natural environments. The transfer and dissemination of these new innovative technologies, which are deemed vital in improving agricultural production, providing better livelihood opportunities to resource-poor farmers, and preventing further degradation of the natural resource base for agriculture, must be a priority concern in the region.

Small farm mechanization systems development, adoption and utilization

Farm mechanization plays a significant role in every nation’s economy. However, it is often misconstrued to mean modernization, beneficial only to industrialized countries with highly mechanized agriculture. Developing countries often have to rely on a variety of imported farm machines, which are seldom appropriate for small farms.
This international workshop challenged conventional notions by addressing issues concerning the development and utilization of small farm mechanization systems and technologies for the greater benefit of small-scale farmers. The activity provided a venue for the sharing of practical application of existing systems and technologies, as well as of strategies that will be most effective in tackling the very complex socioeconomic and environmental factors influencing the adoption and utilization of small farm machineries. Topics included: status and directions of small farm mechanization in the Asian and Pacific region; factors influencing the successful development, adoption, and utilization of small farm mechanization systems and technologies; problems, issues, and constraints in developing and introducing small farm mechanization systems and technologies to the end users; and recommendations to enhance small farm mechanization development and adoption, particularly in less-developed countries.

**Whitefly management and control**

Along with the rapidly advancing technological development in horticulture worldwide, a single group of insect species has turned out to be its gravest threat — the whitefly, particularly the *Bemisia* sp. Whiteflies pose a high pest status on a wide range of host plants and the damages it currently inflicts globally are incalculable. Crop losses, noticeably in greenhouse or protective cultivated horticultural crops, ornamentals and flowers, as well as crops grown in open fields, are caused through direct feeding damage or through transmission of decimating plant viruses. With increasing movement of plant material and produce among countries, there are unavoidable risks for whitefly and associated viruses to spread to new areas.

This international seminar was organized to create opportunities for the advancement and sharing of information to enable the crop protection sector to effectively keep track and control whitefly pest species and plant diseases from spreading to new crops and locations.

**Effective methods of disseminating new technology considering the viewpoint of farmers**

One of the major concerns in the technology transfer process is how to effectively disseminate new technology considering the viewpoint of farmers, particularly in addressing the questions of where, how, and what technologies are appropriate and available to them.

This international workshop was organized to give due emphasis on the "human aspect" of the technology transfer process. The activity served as a venue for the sharing and exchange of knowledge and experiences on effective methods of technology dissemination considering the compatibility of the technology as well as the transfer process with the abilities and limitations of the farmers and their working environment. New ways to promote acceptable and efficient interaction between humans, the technology or equipment they use, and the environment in which they operate in were explored. Innovative methods of disseminating new technology considering the human-technology-environment interaction were also presented and discussed.

**Technology development for Good Agricultural Practice (GAP) in Asia and Oceania**

The onset of the 21st century brought about a multitude of agricultural issues and concerns that all nations must face. These include the rapid exploitation of natural resources which is threatening the sustainability for higher agricultural productivity and incomes, free trade which has made small-scale farmers’ livelihood vulnerable, and the increasing global interest on food safety and traceability not only among consumers who demand safe and reliable food, but also among producers and traders who recognize the critical need for ecologically sound agricultural practices.

This international seminar on GAP and food traceability was organized in view of the common goal among countries in the region to promote the
adoption of innovative technologies and production schemes resulting in safe and healthy food and other agricultural products while taking into account the attainment of economic, social, and environmental sustainability.

**Improving total farm efficiency in swine production**

Trade liberalization has dramatically brought about structural changes in the swine industry, such that less competitive countries are under increasing pressure from imports by more efficient countries with lower costs of production. The real possibility is that, highly efficient countries may soon dominate the world swine market, and that small inefficient swine operations will disappear at an increasing rate, unless they improve their total farm efficiency.

This international workshop aimed to promote overall farm efficiency in swine production amid global trends and developments. Primarily, the workshop served as a venue for the exchange and sharing of innovative technologies, approaches or strategies to: improve swine reproductive efficiency; improve nutrient utilization; minimize the impact of the production system on the environment; improve
the well-being and reduce animal stress; reduce the prevalence of pre- and post-food safety pathogens in meat; improve disease prevention and control; and meet consumer satisfaction and preferences for value-added pork products.

Health management in the production and cultivation of pathogen-free citrus and banana seedlings

Citrus and banana are extremely important crops in Asia, especially for millions of the region’s rural poor. However, the spread of systemic greening and virus diseases is now seriously threatening the citrus and banana industries in the region, considerably damaging fruit yield and quality, and causing tremendous economic losses.

This workshop was organized to facilitate the exchange of information on how to combat these diseases. It served as a venue for the participants to share recent technologies and experiences particularly in the cultivation of pathogen-free seedlings, management of insect vectors, and disease diagnosis, toward the complementation of control strategies among Asian countries.

Establishment of farmers’ self-help agricultural marketing units in Indonesian farming villages

Marketing system for agricultural produce remains to be a problem in the areas of Malang, Mojokerto, Boyolali and Sleman provinces, in Eastern and Central Java, Indonesia. Hence, farmers need to be empowered in setting up efficient marketing units and self-help marketing organizations to give them a direct economic role in the society, and thereby improve their income and livelihood opportunities.

Co-sponsors of FFTC Programs in 2005

<table>
<thead>
<tr>
<th>Country</th>
<th>Co-sponsors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>NARC, NIFTS</td>
</tr>
<tr>
<td>Korea</td>
<td>RDA, NACF</td>
</tr>
<tr>
<td>Philippines</td>
<td>PCARRD, DA-BAR</td>
</tr>
<tr>
<td>Taiwan ROC</td>
<td>COA, ARI, BAPHIQ, Hualien DARES, LRI, NTU, ICDF</td>
</tr>
<tr>
<td>Thailand</td>
<td>AIT</td>
</tr>
<tr>
<td>Vietnam</td>
<td>SOFRI</td>
</tr>
</tbody>
</table>

This project aimed to establish farmers’ self-help agricultural marketing units in Indonesian farming villages by defining problems to be addressed, finding suitable extension technologies, and providing specific suggestions by first conducting a survey, and then organizing a training-workshop. This special project focuses on the
organizational structure for enhancing the marketing potentials in the rural agricultural landscape of Indonesia.

**Evolution of citrus greening pathogen (HLB) strains in ASPAC (Year 1)**

In recent decades, citrus greening disease (HLB) has been devastating citrus orchards in the Asian and Pacific region, and causing serious losses to the citrus industry in these areas. Basic information on the evolution of HLB strains in terms of pathogenicity and disease resistance is primarily important in formulating adequate measures for controlling the HLB disease. This two-year FFTC/NIFTS international collaboration project shall focus on the investigation of pathological and epidemiological natures of HLB pathogen strains in Taiwan and in other countries in the ASPAC region.

**Publications and information technology**

FFTC is committed to ensure that the dissemination of agricultural information is focused on the right problem, is relevant and useful, is involving the right users, and is not duplicating the information disseminated by other organizations. The most recent and relevant agricultural technology and information collected by the Center through its various activities are documented and published in the forms of technical and extension bulletins, book series, newsletters, and a yearly publication on statistical agricultural indices in the region.

In 2005, the Center published 4 issues of its newsletter, 20 extension and technical bulletins, an annual report, 1 statistical book, 1 manual on compost production, and 27 practical technology leaflets. All these publications were made available free of charge on the Center’s website and database, which had more than three million “hits” during the year. The FFTC website/database has now become an important information resource on Asian agriculture, particularly by the national extension systems of the region.

**Giving new hope and opportunities to small-scale farmers**

For the last 35 years, FFTC as an agricultural information center in Asian and the Pacific has contributed in its own little way to the attainment of food security, as well as in the preservation and sustainability of the natural resource base for agriculture. We are confident that our programs and activities in 2005 have, likewise left a significant mark in terms of contributing to the overall attainment of sustainable agricultural development, as well as in giving new hope and opportunities to small-scale farmers in the region.

The completion of the Center’s more than three decades of service and its dedication to the achievement of its goals has been realized through the works of hundreds of people from its member countries and partner institutions. It is their generous support and boundless cooperation, which have helped countless farmers and extension specialists in terms of benefiting from information and technological complementation toward the continuous and sustainable growth of the Asian and Pacific agriculture.