

PROGRESS IN INTEGRATED PEST MANAGEMENT (IPM) IN THE ASIA AND PACIFIC REGION (Agenda Item 8)

The delegates of the 24th Session of the APPPC, while reviewing the past efforts, recalled various challenges for the region which were pointed out at the 23rd Session of the APPPC:

1. Consumer education on IPM and IPM Produce
2. Premium on crops grown through IPM practices
3. Policy makers role in creating enabling environment for IPM through organizational and policy support
4. Demonstrating FFS-IPM approach as an instrument of Community development
5. Developing guidelines for applicability of FFS-IPM approach to all main cropping systems in the depressed ecologies in the region
6. Developing and mobilizing plural support mechanisms for post-FFS farmer groups
7. Further research on the role of GMOs in IPM.

Regional and National Programmes of the APPPC member countries directed their efforts to realize objectives that meet these challenges. FAO-EU Programme for cotton in Asia and FAO Regional Vegetable Programme played the key role in these efforts.

FAO-EU IPM Program for Cotton in Asia

During its five-year implementation that ended in December 2004, the Program promoted more ecological production methods in its member countries, where over 50% of the world's cotton is grown. The member countries included Bangladesh, China, India, Pakistan, Philippines and Vietnam.

Implemented by FAO with a total budget of 12 million Euro and funded by EU, the program was established with the purpose of responding to the needs of cotton producing countries to tackle rising production costs, increasing pollution of the environment due to excessive pesticide use, deteriorating health of farmers and increase in poverty.

The Program succeeded in showing that farmer education through the Farmer Field School (FFS) approach is crucial for encouraging more sustainable agricultural production. The FFS approach was an effective method of empowering and mobilizing farm families and of developing the enhanced management skills necessary for a sustainable pro-poor and environmentally-friendly agricultural and rural development. The experiences gained from this Program may benefit many ongoing and future endeavors to reduce poverty and conserve precious natural resources.

Of its six member countries, the Program most likely left a sustainable impact in India, Pakistan, and China.

In India, it had a remarkable impact in the States of Karnataka and Maharashtra where FFSs were recognized as the model for government-farmer interaction, and state funds are allocated to continue and expand project activities. In Pakistan, although the country did not have previous experience with IPM field schools, as of 2004, the provinces of Sindh and Punjab already embraced FFSs as the dominant interface between government and farmers. FFSs filled the need that regular extension had not been able to satisfy. Importantly, in order to sustain the IPM activities, the Pakistan National Programme organized the 5th IPM Farmer Congress at Sukkur, Sindh from 23-25 April 2005 for providing a platform for sharing the progress of IPM projects. The congress reviewed the IPM activities carried out during the past cotton season and farmers shared their experiences. Main outcome of the congress was the formation of Sindh Agriculture Development Organization (SADO) and the action plan of

SADO for 2005. The organization will work as an IPM network of all district and village organizations in Sindh. A national congress has been proposed to be held at the end of 2005 to integrate IPM farmer organizations at the national level. In China, in the Provinces of Anhui, Hubei and Shandong and some areas in Henan and Sichuan, the Program succeeded in establishing a strong team of young and gender-balanced facilitators. Farmer education in IPM helped cut pesticide applications from an average of 12 to 7 per season.

During its five-year period, the Program organized 25 Training-of-Facilitators (ToF) courses for 794 facilitators in the six member countries. Overall, the number of facilitators exceeded the target of a capacity to educate 50,000 farmers per year. The success of an IPM enabling policy support in some countries and the encouraging impact assessment results have created an conducive environment for addressing policy implications of IPM in member countries. During the period, the Program organized 2,114 FFSs for 53,725 farmers. The impact assessment results showed that FFS alumni increased their income by 25%, and reduced pesticide use by more than 40% as compared to the control sample .

FAO Regional Vegetable IPM Program in Asia

The misuse and overuse of pesticides in vegetable production in tropical Asia provides the rationale for the establishment of the Program. Since 1996, the program has worked with governments and NGOs in its seven member countries to develop robust national programs aimed at carrying out applied research, extension and farmer education activities. This is to promote and support Integrated Pest Management (IPM) in vegetables by Asian smallholder farmers.

During its first phase, the Program focused on enhancing the governments' and NGOs' capability to implement training programs in its member countries using the 'Training of Trainers (TOT)' and 'Farmer Field School (FFS)' approaches. More than 600 trainers and 30,000 farmers have been trained since the beginning of the first phase.

The achievements in the first phase led to the second phase (2002-7) which was financed by multiple donors including Netherlands, Australia, and Norway with contributions worth US\$7.5 million. Placing emphasis on vegetable IPM farmer participatory training and research with a shaper focus on major crops and pests, the second phase covers Cambodia, Lao PDR, Thailand, Vietnam, and Yunnan Province of China P.R. in the Greater Mekong Sub-Region.

At the ir 5th bi-annual meeting in Luang Prabang, Lao People's Democratic Republic, from 27-29 April 2005, representatives of the Program's Greater Mekong Sub-region member countries shared and discussed their country progress and experiences during the first phase, as well as program strategies and implementation plans until 2007. To address diversity among the country programs in terms of program development, each country analyzed constraints faced, needs, as well as challenges and opportunities. The meeting was also attended by resource persons, representatives of NGOs, FAO-IPM staff from each member country as well as donor representative s.

Noteworthy is the fact that the government of Vietnam is putting significant resources into work towards safe vegetables and development of related standards; in Thailand, the Department of Agriculture has established standards for Good Agriculture Practices (GAP) while the Department of Agricultural Extension is organizing activities to train farmers on these standards. The on-going process of decentralization related to government budget allocations to the provincial level has created a unique potential for IPM FFS training, particularly where local governments favor such farmer training.

There is a need for the member countries to formulate strategies for continued vegetable IPM training implementation beyond the completion of the current Phase II in 2007.

New Proposed Initiatives:

i. ASEAN-FAO Program on Quality Farmer Education for Poverty Alleviation and Market Competitiveness (ASEAN-FAO QFarmED)

Building on the achievements of the FAO-EU IPM Program for Cotton in Asia, FAO is proposing the ASEAN-FAO Program on Quality Farmer Education for Poverty Alleviation and Market Competitiveness. In line with the Hanoi Plain of Action (1999-2004) and the Vientiane Action Plan (2004-2010), the proposed technical assistance development program provides for concerted efforts at reducing poverty among small farmholders in ten Southeast Asian countries through quality farmer education aimed at promoting efficient and sustainable crop management in increasingly liberalized markets. These countries are Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam.

The program proposes to provide technical assistance in the promotion of quality farmer education through farmer-led IPM Farmer Field Schools (FFS) in the ASEAN region. The quality farmer education through FFS will focus on the development of farmers' skills including management and decision-making skills, leadership skills and other necessary critical skills that enable farmers to identify and analyze problems as well as to organize community action, information networks and other village-based programs.

ii. SAARC Rural Education Enhancement Program

Building on successful experiences of previous regional IPM programs, FAO has formulated a technical assistance development program aimed at SAARC countries of Bangladesh, Bhutan, Cambodia, India, Nepal, Pakistan, Sri Lanka and possibly Maldives.

Being considered by potential donors, the proposed program represents a concerted assault on the poverty endemic among smallholders farming ecologically depressed land in the region by promoting efficient crop management practices in an increasingly free market context.

The Program will provide the SARRC member countries with technical assistance in promoting participatory IPM as the entry point for the installation of farmer-led extension modalities in the region. It will also help scale up quality rural education programs to reach substantial numbers of beneficiaries by increasing the size of current interventions, by shifting to holistic approach of cropping systems.

ASIA-PACIFIC FOREST INVASIVE SPECIES NETWORK WORKSHOP

In cooperation with Asia Pacific Association of Forestry Research Institutions (APAFRI), APPPC provided technical support to facilitation of the Asia-Pacific Forest Invasive Species Network Workshop which was held in Ho Chi Minh City, Viet Nam, from 22 to 25 February 2005.

APPPC member countries closely cooperated in building a bridge between the Forestry section and Agriculture section to deal with invasive species management in the region.

The experiences and successes of handling the outbreaks of *Brontispa longissima* (coconut leaf beetle) provide valuable lessons for multidisciplinary approaches to managing invasive species whether in agriculture or forestry. It is increasingly evident that activities, whether

with forestry or agriculture, are intimately connected and have profound effects on each other -- whether with the movement of invasive species into an area, or solutions to the problems. This reinforces the view that such problems cannot be solved without the active collaboration of both sectors.

During the workshop, the forestry and agriculture specialists shared with the attendants their experiences in handling invasive species. The meeting jointly developed an Asia-Pacific strategy to work in a multidisciplinary manner to address the invasive species management.

Coconut Beetle Outbreak in APPPC Member Countries

The Expert Consultation on Coconut Beetle Outbreak in APPPC Member Countries was held by the FAO Regional Office for Asia and the Pacific in Bangkok from 26-27 October 2004. It was attended by representatives from 11 countries including Cambodia, China, Indonesia, Lao PDR, Malaysia, Maldives, Myanmar, Pakistan, Sri Lanka, Thailand and Viet Nam. An international consultant from Fiji joined FAO technical officers to facilitate the expert consultation. The objective was to exchange experiences and lessons learned among the member countries that were facing the outbreaks.

According to the country reports presented at the Consultation, there were coconut beetle outbreaks in nine countries with moderate to serious infestation (up to almost 60% of the planted areas attacked). Following recommendations emerged from the expert consultation:

Outlook and Recommendations:

In addressing the pest outbreaks, it is often unsustainable to rely on chemical insecticides. A better approach is to introduce effective biological control agents that attack only the coconut beetle and do little harm to the environment, thus restoring the balance that contributes to sustaining a sound coconut ecosystem.

Brontispa longissima is one of the most serious pests of coconut in Asia and the Pacific. If left untreated, the pest could cause costly damages to the coconut industry. In Vietnam, the damages could have been in excess of one billion US\$ over a 30-year period.

Brontispa could be managed successfully in sustainable and environment-friendly way through classical biological control.

It is of concern that the economies of many countries in Asia and Pacific are threatened due to the serious outbreak of the pest. The invasive species demonstrates the need for strengthening the technical information base, quarantine and IPM capabilities within the countries in the region.

The Consultation further recommends that individual countries should strengthen their own database of crop pests and natural enemies, conduct independent impact assessments to facilitate an enabling environment for both biological control and IPM and further strengthen the regulatory framework of plant quarantine, as well as compliance with the guidelines of the ISPM #2 and #3, and pesticide management with concurrent activities for enhancing capacity of extension staff.

Other Activities:

FAO supported TCP projects in Thailand, Viet Nam, Nauru, and Maldives. The Vietnam project showed a return on investment of US\$3,000 for every dollar ? invested by FAO in this project.

Under TCP/THA/3003, FAO provided technical backstopping to Coconut FFS Curriculum Development Workshop in Ranong, Thailand, from 16-18 March 2005. The workshop was attended by representatives from DOA, DOAE, and farmer representatives. They shared their experiences in research and application of bio-control measures, using farmers' practice to develop an operational FFS curriculum. The two government agencies were working together to seek funding from national and local governments to ensure sustainable biological control of *Brontispa* and to improve livelihood of coconut farmers.

In the last two years, IPM activities were funded by DANIDA in Bangladesh, Cambodia, Thailand and Vietnam. The EU supported an IPM-FFS programme in the Wang Watershed Management Project in Bhutan. A bilateral IPM programme supported by Norway was initiated in Nepal. The Asian and Pacific Coconut Community based in Jakarta has initiated an IPM programme in coconut with funding support from Common Funds for Commodities in which IPM-FFS was the selected form for educating farmers about managing rhinoceros beetle and the imported coconut mite. FAO provides technical support to this programme.

The member countries need to continue to concentrate on the challenges elaborated in the 23rd session.

Action Plan of Standing Committee on IPM for 2005-2007

The meeting was chaired by Dr. Iftikhar Ahmad and was attended by the following:

China	:Dr. Xia Jingyuan, Mr. Zhao Lijun
Indonesia	:Halomoan Lumbantobing
Myanmar	:Ms. Hnin Hnin Naing
Pakistan	:Dr. Iftikhar Ahmad
Srilanka	:Dr. A.A.L. Amarasinghe
Thailand	:Mr. Paisan Ratanasatien, Dr. Turnjit Sattayavirut, Ms. Srisurang Likhitekaraj, Ms. Chanpen Prakongvongs, Ms. Patcharee Menakanit, Ms. Watchreeporn Orar, Ms. Lawan Jeerapong, Ms. Varee Chareonpol, Ms. Areepan Upanisakorn, Ms. Sirada Timprasert

1. Review of the Progress in Integrated Pest Management

The country delegates highlighted the key achievements in IPM, the details of which had already been presented in the general meeting under agenda item 8.

Delegates also reviewed the progress made against the recommendations proposed in work plan of 2003-2005 of the 23rd session of the APPPC. In most countries, the achievements had been in line with the proposed work plan of the 23rd APPPC.

The delegates while reviewing the past efforts recognized the achievements of the IPM implementation in the APPPC Region using FFS approach and pointed out various challenges for the region:

- i. Safe food
- ii. Increased farmers' income
- iii. Protection of the environment
- iv. Developing guidelines for applicability of FFS-IPM approach to all main cropping systems
- v. Regional research on the role of GMOs in IPM
- vi. Linking IPM and Good Agricultural Practices (GAP)
- vii. IPM for invasive species
- viii. Awareness about IPM and GAP
- ix. Increased use of Biological Control in IPM and GAP
- xi. GAP Standards
- xii. Regional cooperation on monitoring and management of major migratory pests

2. Proposed work plan (2005-2007)

The Group recommended:

- i. Developing programmes in participating countries to link IPM and GAP
- ii. Research on GAP Standards according to relevant needs of countries in the region
- iii. Organization of yearly workshop by APPPC Secretariat to share experiences of implementing GAP in member countries
- iv. Approval of the FAO-ASEAN and FAO-SAARC initiative on Farmer Education in IPM and GAP
- v. Introducing HACCP in horticulture
- vi. Evaluation of the impact of GMOs

3. Discussions on the presentation

Position of Transgenic Crops in APPPC

The convention duly noted the growing interest in transgenic crops, and would study its position in APPPC.

Regional Standards for GAP

The delegates were informed that there was no forum to establish regional standards for GAP.