

# FAO in Asia and the Pacific

2002–03

Regional highlights



The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

All rights reserved. Reproduction and dissemination of material in this information product for educational or other non-commercial purposes are authorized without any prior written permission from the copyright holder provided the source is fully acknowledged. Reproduction of material in this information product for resale or other commercial purposes is prohibited without written permission of the copyright holders. Applications for such permission should be addressed to the Meetings and Publications Officer, FAO Regional Office for Asia and the Pacific, 39 Phra Atit Road, Bangkok 10200, Thailand or by e-mail to [RAP-publications@FAO.org](mailto:RAP-publications@FAO.org)

© FAO, 2004

**For copies write to:** Meetings and Publications Officer  
FAO Regional Office for Asia and the Pacific  
Maliwan Mansion  
39 Phra Atit Road  
Bangkok 10200  
THAILAND  
Tel: (662) 697-4000  
Fax: (662) 697-4445

# FAO in Asia and the Pacific

RAP PUBLICATION 2004/08

**2002–03**

**Regional highlights**

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**  
Regional Office for Asia and the Pacific

# Contents

Foreword	v
Introduction	vii
Section 1: Natural resource management and food production	1
❖ Land and water management	3
❖ Plant production and protection	7
❖ Animal production and health	11
❖ Fisheries	15
❖ Forestry	19
❖ Agricultural support systems	23
Section 2: Access to food and rural livelihoods	27
❖ Food security and nutrition	29
❖ Sustainable rural development	33
Section 3: Policy and project services	37
❖ Policy assistance	39
❖ Project services	43
❖ Support to agricultural investment	47
Annexes	49
❖ Publications in 2002 and 2003	50
❖ Meetings in 2002 and 2003	52
Indexes	55
❖ Countries	56
❖ Organizations	57

# Foreword

In the spirit and principle of solidarity and shared responsibility among countries, civil society organizations, the United Nations and other international development partners, world leaders agreed on a set of time-bound and measurable goals for fighting hunger and poverty at two world food summits held in Rome in 1996 and 2002. This commitment to halve the number of undernourished by 2015 was reaffirmed at the 2000 UN Millennium Summit. Since then, achievement and progress in reducing hunger was rapid in a few countries of the Asia-Pacific region, painfully slow in some, and non-existent or negative in most of the other countries.

As the largest UN specialized agency with a mandate to fight hunger and rural poverty, FAO provides its expertise in rural development and food production, safety and distribution to countries, working hand-in-hand with its members, development partners and civil society.

The first in a new series of biennial reports, this publication describes FAO priorities and programmes in the Asia-Pacific region during 2002 and 2003. It gives an account of FAO activities in areas ranging from natural resource management (land, water, plants, animals, fisheries and forestry) to providing access to food and developing rural areas. Policy guidance and capacity building are described and examples are provided of regional and national projects.

FAO's decentralized structure and multi-disciplinary teams – in the Regional Office for Asia and the Pacific, the Subregional Office for the Pacific Islands, country offices and numerous projects, supported by colleagues based in headquarters – have and will continue to promote an international alliance against hunger, regional partnerships for food security and sustainable development in the region. Answering this call and challenge, I look forward to implementing our pledges in the service of the people of the region.

He Changchui  
Assistant Director-General  
and Regional Representative for Asia and the Pacific

# Introduction

Despite limited natural resource endowments and its massive, mainly youthful, population base, the Asia-Pacific region has made substantial inroads in eradicating poverty and food insecurity during the last few decades. This progress was underpinned by declining fertility rates, rapid economic growth in the 1990s – sometimes coupled with pro-poor policies, among other factors. Since 1945, the region's economy has grown faster than any other region. Literacy rates have increased considerably, and improved nutrition and public health programmes have raised life expectancies by over a generation in only half a century.

Despite this progress, an estimated 503 million people in the region are undernourished, comprising 63 percent of the developing world's ill-fed populace. Rural dwellers, in particular women and children, ethnic minorities and disabled persons, constitute a disproportionately high percentage of the vulnerable. Ensuring access to food for the hungry and poor persists as a major challenge for national leaders, governments, civil society and development partners in the Asia-Pacific region.

Historically, the region has been the centre of many agricultural advances such as the domestication of farm animal and plant species, aquaculture, and the green revolution in rice. Today, over 50 percent of the world's industrial crops are produced in the Asia-Pacific region and production continues to expand. These past achievements form the context for new advances, many in critical development areas: extensive education and agricultural research networks; developments in information and communication technologies; modern biotechnology; social innovations in development, including resource decentralization; direct foreign investment; growing regional and global economic linkages; and international trade.

Broader citizen participation in decision-making and governance is reflected in dynamic non-governmental organizations (NGOs), increased women's suffrage and decision-making processes open to multistakeholder participation. Information flows more freely in the media and within civil societies.

Enabling policy and economic environments have led to many success stories, including unique rural development models: from agro-industrial entrepreneurship, cooperatives and rural financial systems to farmer field schools in integrated pest management (IPM).

Against this rapid regional growth there have been setbacks due to man-made or natural disasters. The El Niño events brought widespread and devastating droughts. The Asian economic crisis slowed growth in several countries and affected the livelihoods of millions of people. The severe acute respiratory syndrome (SARS) epidemic in 2003 and the avian influenza outbreaks in Asia since 2002 have caused enormous economic losses and threatened human health.

Despite sufficient food production to feed all people, many factors in the region affect its ability to achieve general and sustainable food security. Although the direct link between population and poverty remains strong, especially among the most deprived, other demographic trends play important roles such as the outmigration of young males and the skilled, the greying and feminization of farms and fishing villages – rural communities peopled mainly by the elderly and women. Population dynamics thus remain a key factor in vital developmental and environmental issues, including formal education, HIV/AIDS and rural health, migration, urbanization and unemployment.

Important trends in the agricultural sector that are having the greatest impact on the achievement of sustainable agriculture and rural development are outlined below.

***Subsistence-oriented agriculture is in transition*** as industrialization and commercialization increase. The needed growth in agricultural production must come from intensification and wider use of modern technology. Capacity building and investment in natural resource conservation and technology transfer are, as a consequence, rising in priority. These realities shape FAO's intervention strategies. Requests from member states for assistance are likely to increase, especially in biotechnology, efficient water use, IPM, nutrient and weed management, food safety, on-farm diversification, agribusiness and marketing.

***Asian agriculture remains highly labour intensive***, but the spread of industries and commerce is drawing the talented and trained to urban centres, leaving the unskilled in rural areas. The employment and integration of (surplus) rural workers into modernizing economies will require sustained skill development built around comprehensive human resource development programmes.

***A livestock revolution is reshaping the industry***. Asia and the Pacific account for the largest farm animal population worldwide. The region also possesses the biggest pool of farm animal genetic resources. Owing to consumer-driven demand, meat and milk production grew at 5 percent while egg output expanded at 7 percent *per annum* in the 1990s. This contrasts with 1.4 percent and 0.9 percent respectively for the rest of the world. This accelerated livestock production, though, may result in serious environmental degradation stemming primarily from the faulty application of new technologies, particularly in intensification, feeding and disease control. Moreover, expanding international trade of livestock and livestock products and growing international travel have sharply increased the risk of disastrous pest outbreaks and transboundary diseases, including zoonotic diseases. Effective prevention and progressive control of transboundary animal diseases at regional and international levels are urgently needed.

The ***high pressure on forest resources remains a concern***. "In the region's tropical countries, loss of natural forests continued at a rate of around 2.5 million hectares annually between 1991 and 2000." Deforestation is not primarily due to timber harvesting. Today about 28 percent of the region's land area retains forest cover, equivalent to only one-quarter of a hectare of wooded land per person – the lowest rate for any region. One of the most significant trends has been the shift from exploitation of natural forests towards the development and use of forest plantations. Asia and the Pacific lead the world in forest plantation development. During the 1990s, the forest plantation area increased by 3.5 million hectares annually, which is equivalent to 79 percent of the global growth rate.

Similarly, ***aquatic resources are under intense pressure***. Asia and the Pacific account for 55 percent of the world's fish catch, but a worldwide decline in fisheries' production has had apparent negative trends in Asia and the Pacific. Almost two-thirds of the major fish species are either fully exploited or overexploited. Aside from destructive fishing, like the use of dynamite and poison, El Niño and other weather aberrations affect the industry. High technology gear is efficient but can, if not effectively regulated, damage fishing grounds severely.

Conversely, the region produces 90 percent of the world's aquacultural output, representing the greatest diversity of species and systems. The growing global trade in fisheries' products makes this a growth area, but problems are emerging owing to environmental impacts and increasing trade barriers.

***Water scarcity and land degradation are worsening***. Over 20 percent of the landscape under human use is severely degraded. Overexploitation of water and land degradation is aggravated by the lack of clearly defined property rights and vague institutional arrangements. Increasing cropping intensity in agriculture, livestock and aquaculture intensification, and industrialization have also led to land degradation, pollution and the compounded risk of pests and



diseases. This stress is reflected in other problems: from widespread topsoil erosion and desertification, waterlogging, salinization of aquifers, agricultural pollution of aquifers and waterbodies to eutrophication from high levels of nitrogen use and even loss of biodiversity.

***Information and communication technology is underutilized.*** Agriculture's ability to respond to the demand for sustainable production will rely increasingly on its growth as a science and the information-based sector. Tapping such potentials will depend on strengthening currently limited capacities in information and communications technology (ICT). Failure to act decisively may further widen the digital divide between rural and urban populations, as well as the so-called molecular gap between the South and North. Most public sector agencies still neglect adapting ICT to disseminate the results of research and development more rapidly and widely.

***The institutional infrastructure to support production, consumption and trade is underdeveloped.*** Globalization is reshaping the region's trade and investment landscape and governments are called upon to facilitate an enabling environment for the whole agricultural production and marketing chain to encourage much-needed investments in rural areas. As market integration across countries advances, food safety and nutrition standards will require increased attention. Amidst rapid change, national governments need to revise development strategies and policies, and restructure agriculture towards market-driven production with due attention to farmers' organizations, rural credit and finance, and marketing systems.

***Free trade? fair trade?*** International organizations are pressed in various fora to increase efforts to help create a level playing field for developing countries in agricultural trade. The need for concerted action at subregional and regional levels – for instance, for the conceptualization and conclusion of bi- and multilateral free trade agreements – further evidences the need to develop the institutional infrastructure for sustainable agriculture and rural development. This trend will impose significant changes in the roles of government, NGOs, civil society organizations and farmers' organizations, as well as in the mechanisms used by international organizations as service providers.

Partly as a result of the aforementioned trends in the agricultural sector in Asia and the Pacific, there is growing inequity among countries in the region as well as at national and local levels. While productivity gains and commercialization of agriculture have contributed to rural incomes, often inappropriate policies have favoured large producers.

Failure to consider equity in development and governance – including issues raised by decentralization, globalization and trade liberalization – will further marginalize vulnerable groups, especially women, small producers and landless farmers. Some countries can no longer delay the formidable task of comprehensive agrarian reform.

Food security for children and women, in particular adolescent girls who are future mothers, should constitute the key factor in drawing up future policies. There is no shortage of models for pro-poor and pro-environment policies and special programmes for food security.

Effective rural education systems and health and social welfare schemes can increase the incomes of the poor. They also create an enabling environment for marginalized groups to work their way to more humane standards of living and ensure sustained production and social harmony so essential for progress.



# Section 1

Natural resource management  
and food production



*Photograph: G. Bizzarri*

### Land and water management

Two of the most important agricultural resources, land and water, are crucial for the well being of the Asia-Pacific region, which is home to nearly three-fourths of the world's agricultural population. However, Asia-Pacific tillers have to depend on about 28 percent of the world's cropland with the land available per person for cultivation being just one-sixth of the average in the rest of the world.

A growing population is adding to pressure on arable land. To meet its increasing food needs, the region will have to produce more food largely from the existing farmlands because there is very little land available for physical expansion. This can be done only by increasing crop yields and stepping up cropping intensity.

While new farm technologies can bring about dramatic gains in crop yields, much depends on the state of land and water resources. A major problem is land degradation, which is caused in the region largely by water and wind erosion. A joint study of land degradation in South Asia by FAO, the UN Development Programme (UNDP) and the UN Environment Programme (UNEP) found that water and wind erosion respectively damage 25 and 18 percent of the subregion's total land. Latest estimates show that in China water erosion affects 34 percent of the total cultivated land and wind erosion a further 2 percent. In Thailand, approximately 34 percent of the total land area is affected by water erosion.

Deforestation, excessive use of chemical fertilizers, soil erosion and excessive extraction of groundwater are major causes of land degradation in the region.

With more than half of the world's 30 largest cities located in the region, rapid industrialization and urbanization are also responsible for swallowing up and affecting arable land.

Farms in the Asia-Pacific region account for more than half of the world's agricultural water use with 60 percent of the world's water being consumed by the region in 2000. The region has some of the wettest and driest spots on earth. The average annual per capita water availability of about 3 800 m<sup>3</sup> – slightly more than half the global average – varies from about 1 500 m<sup>3</sup> in the Indian subcontinent to over 9 000 m<sup>3</sup> in Southeast Asia and nearly 16 000 m<sup>3</sup> in the Pacific island nations. Moreover, a large part of the region's water comes from the annual monsoon rains, with almost 80 percent of the water flow in the major rivers of South Asia and China being confined to a few months of the year.

Irrigation systems are not only costly, but they are also inefficient. It is estimated that up to 60 percent of the water diverted or pumped for irrigation is not used for plant production. The region must give priority attention to modernizing water delivery and irrigation systems.

Countries in the region need conservation techniques to combat land degradation. Integrated watershed management is one of the best ways of developing rainfed areas. This has conservation and development aspects, arresting and reversing land and ecological degradation while producing material benefits to local communities in the form of food, fodder and forest and livestock products.

Appropriate technologies should also be adopted to reduce and prevent soil erosion, which is a serious problem in hilly areas. These include correct tillage practices, land formation techniques and stabilization structures. The Integrated Plant Nutrition System (IPNS) to increase soil fertility can also help in reducing soil erosion.



## Land and water management

*Priority areas have been (1) improved management and sustainable use of land and water resources for food security; and (2) enhanced livelihoods, with emphasis on supporting improved irrigation systems, sustainable land management and soil conservation, biodiversity and fertility.*

❖ National round tables on integrated water resources were convened in Lao PDR, Cambodia and Myanmar in partnership with the Economic and Social Commission for Asia and the Pacific (ESCAP). The meetings have contributed to capacity building in the water sector.

❖ In collaboration with national institutions, a workshop and project were carried out to promote land evaluation and land-use planning systems and tools, and to promote sustainable agricultural systems to address land degradation and desertification, biodiversity conservation, carbon sequestration and reduced emissions.

❖ The FAO regional office has launched a new Web site dedicated to the modernization of irrigation systems – visit [www.watercontrol.org](http://www.watercontrol.org). The Web site focuses on design, performance, operation, management and upgrading of medium- or large-scale irrigation systems. Tools for use in the appraisal, benchmarking and upgrading of irrigation systems for modernization and their upgrading are provided as well as training materials and programmes on the operation and management, modernization and benchmarking of irrigation schemes. Training materials can be consulted online and downloaded from the Web site.

❖ Two projects were carried out to promote the development of location-specific standards on nutrient management, and the establishment and implementation of bio-organic fertilizer standards.

❖ *Investment in land and water* (RAP 2002/09) explains the urgent need for arresting and reversing the decline in



investment in land and water development in Asia-Pacific countries. Irrigation needs about one-third of the US\$30.7 billion additional annual investment required in agriculture in developing countries to ensure food security.

❖ FAO contributed significantly to the organization of the World Water Forum held in Kyoto, Japan, from 16 to 23 March 2003. Keynote addresses were delivered at ministerial meetings and a number of papers by FAO staff addressed themes such as Water and Climate; Water Food and Environment; Water, Nature and Environment; Groundwater; and Agriculture, Food and Water.

❖ *How design, management and policy affect the performance of irrigation projects* (RAP 2002/20) is a contribution to an emerging understanding that physical and institutional reforms of the irrigation sector should be combined, and that irrigation management transfer is not only about transferring operation functions but also governance to the irrigation users and a combination of the two at different levels. In making its case,

the document reviews the decades-old debate over the causes of inefficiency in irrigation projects, the role of multilateral lenders such as the World Bank and the Asian Development Bank (ADB) as well as country experiences from China, Egypt, India, Indonesia, Iran, Malaysia, North Africa, Pakistan, Sudan and the United States.

❖ In September 2003, an agreement was signed in Bangkok, Thailand between the Ministry of Agriculture and Cooperatives (MoAC) and FAO for the introduction and demonstration of new techniques for the sustainable use of soils for crop production. The project will introduce appropriate techniques for the rehabilitation and management of problem soils, particularly in rainfed agriculture.

❖ FAO is providing assistance to Pakistan for strengthening the extension capacities for community demand-driven planning for natural resource management in the Azad Jammu and Kashmir region. An agreement to this effect was signed between Pakistan and FAO in 2003. The proposed assistance will contribute to reforming the agricultural extension system to adopt bottom-up planning approaches and to make it more responsive to community demands.

❖ The objective of FAO's ASIACOVER project in Cambodia, China, Lao PDR, Malaysia, Myanmar, Thailand and Viet Nam (2003–2004) is to collect and standardize existing land cover/land-use information, to identify gaps where such information is missing and to develop a strategy to fill these gaps in



the future in the context of the joint FAO-UNEP initiative to establish a Global Land Cover Network. Essential and validated information on land use and land cover will contribute to improved analysis, planning and decision-making with regard to food security and poverty alleviation.

❖ FAO is providing assistance in Uzbekistan from 2003 to 2005 to demonstrate alternative, profitable and sustainable forms of agricultural production for small private farmers in the Autonomous Republic of Karakalpakstan (KK), where water is a scarce and diminishing resource. The project is introducing drought- and salt-tolerant crops and assisting farmers in sharing the available irrigation water in an equitable and efficient manner. Farmers and related government officials are being trained on drainage management and on-farm irrigation, irrigation technology, field levelling, water accounting and modification of local farm machinery for conservation agriculture for small independent farmers in KK.

❖ Emergency assistance has been provided by FAO to flood-affected rice farmers in five districts of Sri Lanka. The May 2003 floods caused severe damage to people, houses and crops. A total of 139 000 families in the target districts were affected. The immediate objective of the project is to provide emergency assistance to 20 750 farm families in the form of rice seed, basal and topdressing fertilizer. It is expected that these farmers will be able to resume rice production on 0.2 ha each.

❖ The Asia Soil Conservation Network for the Humid Tropics (ASOCON) was formed with UNDP/FAO support in 1989 and became a quasi-legal entity in June 1993. The network structure consists of a coordinating unit at the Ministry of Forestry (MOF), Jakarta, and national coordinating committees established by

each member country (China, Indonesia, Malaysia, Papua New Guinea, the Philippines, Thailand and Viet Nam). National coordinators form the Network Consultative Board (NCB), which serves as both the steering committee and the policy-forming body. The network aims to assist its member countries through a programme of information exchange, regional workshops, expert consultations and learning activities to enhance the skills and expertise of those responsible for the development and dissemination of soil and water conservation practices for small-scale farmers. The ultimate objective is to help small-scale farmers use their land sustainably and productively.

❖ The Third International Vetiver Conference was held in Guanzhou, Guangdong Province, in southern China in October 2003. The theme of the conference was "Vetiver System's (VS) application to improve water quality and distribution in the environment". Topics included application of VS for: runoff control, groundwater recharge, erosion control and slope stabilization, pollution control and water quality protection, purification of landfill and mining lactates, earthworks, stabilization, plant production, extension strategies, and other grasses for water and soil conservation. The conference was organized to focus on the needs of users of VS by concentrating on information and site visits to witness applications and generate discussion to help guide the practitioner.

❖ FAO established an Asian Network on Problem Soils in 1989 involving 13 countries. The network is concerned mainly with the rational use, management and conservation of problem soils within the Asia-Pacific region in a sustainable and environmentally sound manner. At the same time FAO, in cooperation with ASOCON, is developing a Framework for Action on Land Conservation in Asia and the Pacific (FALCAP).

❖ A Regional Workshop on Agro-ecological Zoning (AEZ) and GIS Applications in Asia with special emphasis on Land Degradation Assessment in Drylands (LADA), was conducted in Bangkok, Thailand in November 2003. The workshop was organized by FAO in collaboration with the Land Development Department of Thailand. The purpose of the workshop was to promote AEZ/GIS and its application in the assessment, mapping and monitoring of rural land use and land degradation in relation to food security in Asian countries, and to develop more applied knowledge, policy instruments, national capacities and technologies, which would aid in developing more efficient and sustainable management of land resources, especially in drylands. Senior land resources and land degradation specialists from 15 Asian countries attended the workshop.





Photograph: L. Dematteis

### Plant production and protection

Fertile land and favourable weather conditions make the Asia-Pacific region a major producer of cereals (rice, wheat and maize), legumes, vegetables, fruits and industrial crops like rubber, coconut, pepper and oil-palm. The region produces 90 percent of the world's rice, which is Asia's most important food crop and the staple diet for three-fifths of the global population. Rice provides more than half the daily dietary energy of over three billion people in the region.

A number of Asian countries are now self-sufficient in rice production; the current annual harvest of 524 million tonnes is expected to grow to 700 million tonnes by 2025. However, the region is adding 51 million rice consumers to its population annually while the land and water resources that are available for rice farms are declining steadily; increasing numbers of marginal farmers in the Asia-Pacific region are depending on degraded farmlands.

The key to future food security in Asia lies in boosting farm yields without damaging the natural resource base, reducing the rate of population increase and diversifying the food basket. FAO is helping to increase rice outputs in Asian countries where paddy yields are lower compared to the region's efficient rice-farming nations.

Also, FAO is encouraging Asian rice farmers to combine their harvests with new crop types, including hitherto neglected species, vegetables, fruits, herbs and spices, medicinal plants and cash crops. Crop and farming system diversification that includes, *inter alia*, livestock husbandry, will not only increase food variety, but also help to reduce

the environmental, economic and nutritional risks associated with planting only one type of crop.

Expanding rice production has, moreover, reduced profits from paddy farming. FAO advocates farming diversification by rearing livestock, planting higher value horticultural and cash crops and marketing value-added products of all commodities as the best protection against falling farm produce prices. In Asia and the Pacific, higher value crops produce 10 to 15 times the net returns per hectare of rice. The region produces over 50 percent of the world's industrial crops mainly via smallholders. Industrial crops cover about 20 percent of available land in the region.

Effective plant quarantine measures keep farm pests and diseases from spreading. Developing countries in the region have to conform to new international plant quarantine standards being developed under the new world trade rules. While protecting farm harvests from pests and crop diseases, it is important to ensure that the methods used do not cause irreparable damage to the agrarian ecology and human health. The International Code of Conduct for Pesticide Management, revised in 2001, requires countries to stop subsidizing pesticide use. FAO is promoting IPM techniques to eliminate the use of expensive chemical pest killers that are known to be harmful for farms and consumers. In addition, FAO is encouraging organic farming such as organic coffee, pepper, vegetables and fruits.





## Plant production and protection

*For food and horticultural crops, the focus has been on cropping systems that promote high value crops; more effective management of resources in smallholders' cropping systems; higher productivity and sustainable crop production in tropical environments; sustainable intensification of urban and peri-urban agricultural production systems; integrated crop management; IPM; and support to the International Rice Commission. For industrial crops, activities targeted the development of underutilized species; improved cropping systems and crop diversification; IPM; and support to regional institutions.*

- ❖ Continued support was provided to the Asia-Pacific Coconut Community and a new project for controlling the devastating effects of coconut beetle was initiated in Nauru. The objective of the project is to establish classical biological control of coconut leaf beetle. It includes the search, collection, identification and rearing of *Brontispa* parasitoids in Samoa, where sustainable biological control has been achieved, and the introduction of these natural enemies to Nauru. A technically sound, environmentally friendly and farmer-focused IPM strategy with corresponding participatory training activities will be developed and implemented.



fertilizer standard has been established in Lao PDR, contributing to better quality fertilizer for farmers.

- ❖ An on-farm grain storage project was formulated for Timor-Leste with the support of UNDP/EU. Support was also provided in reviewing the prospects for industrial crops, the formulation of a coconut oil project and a feasibility study for palm oil production.
- ❖ Technical assistance was provided to China, Thailand, Viet Nam, Indonesia and other countries on diversification and farming systems' development. This assistance has brought about a shift from the production of cereals and traditional non-food crops (rubber, jute and cotton) into high value commodities such as fruits, vegetables, herbs and spices, medicinal plants, livestock and aquaculture.
- ❖ An upgraded soil analysis facility for rice and maize production in the Democratic People's Republic of Korea (DPRK) has resulted in cost-effective fertilizer use recommendations. A bio-organic

- ❖ *Rural Asia-Pacific: Inter-disciplinary strategies to combat hunger and poverty. The rice-based livelihood-support systems* (RAP 2002/12) identifies sustainable strategies to yield more food, incomes and livelihoods in line with the vision of eradicating hunger and rural poverty in the Asia-Pacific rice lands over the next three decades. The publication examines the potential of the wide range of rice-based farming systems in the region to meet the food and livelihood security demands that will be made on them in the coming decades. It outlines a menu of interdisciplinary strategies and interventions to enable the rice-based systems to live up to the challenge and the role that FAO can play.

- ❖ *From farmer field school to community IPM: Ten years of IPM training in Asia* (RAP 2002/15) is a comprehensive account of IPM as a farmer-centred and local needs-responsive approach, which was developed on the rice farms of Southeast Asia to tackle the risks arising from excessive pesticide use promoted by the green revolution. The publication includes step-by-step instructions on organizing and running farmers' field schools along with detailed case studies

of farmers' field schools in Southeast Asia as well as several personal experiences of farmers who gained from the programme. A separate section outlines the IPM programme activities in Bangladesh, Cambodia, China, Indonesia, Nepal, Sri Lanka and Viet Nam.

- ❖ *The lychee crop in Asia and the Pacific* (RAP 2002/16) provides a comprehensive account of the origin, distribution, production and trade of different species of this commercially important fruit crop that is cultivated mainly in Bangladesh, China, India, Nepal, Thailand and Viet Nam. These countries produce more than 1.8 million tonnes of the about two million tonnes of lychee crop cultivated annually in Asia, which accounts for over 95 percent of the world lychee harvest.
- ❖ The Technical Consultation on Biological Risk Management in Food and Agriculture met in Bangkok, Thailand in January 2003. The aim was to consult governments on the possibilities to harmonize, where appropriate, methods of risk analysis to enhance capacity building, where needed, particularly in developing countries and countries with economies in transition and to establish an official information exchange system on biological risk management in food and agriculture ("biosecurity"). FAO has established a Priority Area for Interdisciplinary Action on Biosecurity to coordinate this process within the organization.

❖ The first regional consultation of the FAO project *Capacity building in biosafety of genetically modified crops in Asia*, which was convened in Bangkok in July 2003, identified country-specific strengths and weaknesses relating to national capacities, including legislation, regulations and policies for the biosafety of GM crops. It also addressed the prioritization of the support needed in enhancing the biosafety capacities of the participating countries.

❖ *Pacific PestNet: Meeting plant protection needs in the 21<sup>st</sup> century* (2003–2005): The objective of the project is to develop and promote an effective e-mail network ("PestNet") among Pacific Island countries (PICs) by effectively addressing farmers' plant protection needs and enhancing

delivery of pest diagnoses, quarantine information and advice to farmers. PestNet will facilitate the identification of pests and diseases by means of digital photos, which are to be linked to existing databases such as EcoPort. Relevant training on pest identification and database management will be provided and a participatory rural appraisal (PRA) survey will assess farmers' perceptions and needs in the participating countries. FAO's assistance will contribute to improving plant protection decision-making at the farm level through better access by farmers to demand-driven services for the identification and control of crop pests and diseases.

❖ The 7<sup>th</sup> international IFOAM organic trade conference and the seminar on

production and export of organic fruit and vegetables in Asia (jointly convened by FAO, IFOAM [International Federation of Organic Agriculture Movements] and Green Net from Thailand) were conducted from 1 to 10 November 2003 in Bangkok. The plenary sessions, workshops and seminars addressed a broad spectrum of important themes necessary for the further development of organic markets. In addition to numerous presentations and discussions surrounding the Organic Guarantee System and the movement's efforts to harmonize standards and certification, the conference also emphasized the importance and benefits of interlinking fair trade and organic agriculture.





