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EDITORIAL

It is encouraging to observe that the Consultative Group for International Agricultural Research (CGIAR) has initiated a comprehensive exercise towards 'Renewal of the CGIAR' under the dynamic leadership of Dr Ismail Serageldin. This initiative was taken up during the Mid-Term Meeting held in New Delhi in May 1994. The exercise was completed in ICW95 at Washington in November 1995, following endorsement of the Lucerne Declaration by the high-level delegation of the member-countries and donors. The Lucerne Declaration has reaffirmed faith in International Centres as being the instrument for generating appropriate technologies most relevant for developing countries. The CG system has addressed issues relating to production of food quite effectively in the past and is now aiming to address holistically the issues such as poverty, environment and agriculture.

In the renewal process, the importance of the regional fora has been recognized for strengthening the NARS-CGIAR partnership. These associations, such as the APAARI, could be highly effective in setting regional research priorities and could also act neutrally to foster closer linkages and partnerships among the member-countries as well as with the CG centres. It is in this context, the role of the APAARI has been considered most vital in the process of the 'Renewal of the CGIAR'. It is envisaged that the APAARI would play a positive and catalytic role in drawing attention of the CG centres to most immediate agricultural needs of the Asia-Pacific region.

As per the decision in ICW95, an Expert Consultation on the NARS-CGIAR partnership has been slated by the APAARI on 1-2 February 1996 in New Delhi. This Consultation would, obviously, be a step towards strengthening NARS-CGIAR linkages and would set priority-setting mechanism through mutual consultation in motion. Such initiatives are welcome developments and require full support and endorsement of all the NARS in the Asia-Pacific region.

Editors

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LUCERNE MEETING

FOR DEVELOPING STRATEGY FOR INTERNATIONAL AGRICULTURAL RESEARCH

Renewal of the CGIAR: Sustainable Agriculture for Food Security in Developing Countries' was the theme of the Ministerial-level Meeting of the CGIAR held on 9-10 February 1995 at Lucerne, Switzerland. It adopted a Lucerne Declaration and Action Program outlining international community's strategy for agricultural research aiming to break the vicious circle of poverty, population growth and environmental degradation affecting world's poor.

Thirty-nine delegations attended the Lucerne Meeting – 18 from industrialized countries, 8 from developing countries, and 13 from foundations and international and regional organizations. Delegations from the South included new members, who joined the CGIAR since the reform programme was launched – Colombia, Cote d'Ivoire, Egypt, Iran, and Kenya – as well as established members – India, Indonesia, and the Philippines. Fourteen delegations were represented by ministers and heads of agencies, 15 by deputy ministers and deputy heads of agencies, and 10 by other representatives.

This meeting provided a framework for intensified international collaboration in agricultural research to promote sustainable agriculture for food security.

It endorsed a new orientation, governance and financing arrangement for the CGIAR, the world's largest international agricultural research consortium, supported by some 48 public and private donors and jointly sponsored by the Food and Agriculture Organization (FAO), the United Nations Development Programme (UNDP) and the World Bank. The United Nations Environment Programme (UNEP) participated as one in the group of co-sponsors.

In the meeting, the scientists of the CGIAR centres have been requested to address more forcefully international issues of water scarcity, soil and nutrient management and aquatic resources.

The meeting pursued its aim of rendering research system more open and strengthening links to national research systems in the North and the South. Arrangements will also be made to enter into a dialogue with the private sector in agricultural research.

The following decisions were taken in the meeting.

- A firm commitment to address challenges of promoting a people-centred sustainable development that helps feed hungry, reduces poverty and protects environment.



Dr Balram Jakhar, Minister of Agriculture and President, ICAR, presenting an additional one-time contribution of US \$ 1 million to Mr Ismail Serageldin, Chairman of the CGIAR

- Placed agriculture at the heart of the development paradigm, reaffirming that agriculture is both a catalyst and an integral component of the development.
 - Identified agricultural research as a fundamental precondition for sustainable agricultural development.
 - Recognized the CGIAR, with its proven research capacity and its effective approaches to developing sustainable agriculture, as a valuable and vital contributor to the international development efforts.
 - Endorsed the current emphasis of the CGIAR on natural resources management, twinned to its continuing goal of increased food productivity.
 - Enjoined the CGIAR to continue its efforts to nurture a dynamic South-North partnership; working in the interest of the world's poor and marginalized.
 - Adopted a Declaration and Action Program which defined the mission of the CGIAR as "to contribute, through its research, to promoting sustainable agriculture for food security in the developing countries", and set down guidelines for action in 4 areas: broader partnerships, the research agenda, governance and finance.
 - Encouraged the CGIAR to complete its reforms and renewal process within eighteen-month time-frame.
- The spirit of Lucerne provided the CGIAR with the momentum and impetus to move forward vigorously.

The Lucerne meeting was the highest-level gathering of the CGIAR since the Bellagio Conference of 1971; which led to the establishment of the CGIAR. The legacy of Bellagio sustained the CGIAR for almost 25 years, enabling it to make substantial contributions to food production and food security in developing countries, most notably through the green revolution. In Lucerne, the CGIAR turned to its creators, the international community, once again, seeking reaffirmation of the purpose and guiding principles with which it could respond effectively to a new set of global challenges and a changing world situation.

COUNCIL FOR COLLABORATIVE RICE RESEARCH IN ASIA

To enhance the effectiveness of the various collaborative mechanisms being employed in meeting the challenges of the global rice research system, a Council for Collaborative Rice Research in Asia (CORRA) is proposed. To initiate the process, the IRRI will invite no more than 10 NARS to be the founding-members of the Council. At their first meeting, to be arranged by the IRRI, these founding-members will establish terms of reference, size, and membership of the Council, and elect the first Chairman of the Council.

MAIN OBJECTIVE

The main objective of the Council will be to guide, facilitate, support; and thereby strengthen collaboration and partnership among the NARS in Asia and between the NARS and the IRRI and other IARCs in an effort to meet rice research needs of the Asian region.

SPECIFIC OBJECTIVES

- a) To promote more effective collaborative rice research in Asian region and guide formulation and sharing of responsibility in its implementation.
- b) To guide and promote strong partnership between the NARS, the IRRI and other IARCs; and among the NARS – to strengthen established mechanisms such as research consortia and networks; to promote new initiatives, as appropriate; and to seek donors' support for the collaborative activities.
- c) To harmonize the NARS views and provide feedback to the IRRI, in particular, and to the CGIAR, in general, on the agricultural research needs of the Asian region.
- d) To develop concepts for an ecoregional approach to research in rice and rice-based farming systems that is relevant to Asian region.
- e) To facilitate linkages with advanced institutions, conducting relevant research.

MEMBERSHIP

The Council shall consist of senior officials of the NARS in Asia, selected for the importance of rice

in their national agricultural plans and for their representation of rice ecosystems, and the Director-General, IRRI. The Chair of the Council shall be elected for a fixed term and from among the NARS members.

RELATIONSHIPS AND MECHANISMS

The IRRI Board of Trustees and Management. The roles and responsibilities of the Council vis-a-vis the IRRI Board and Management are as follows.

- The Council's responsibility will be largely of advising the IRRI Management.
- The Council will provide feedback to the IRRI Board to ensure that the IRRI Management responds to the suggestions and recommendations of the Council.
- The Council will facilitate collaboration through the support of the Steering Committees of the networks, research consortia and other collaborative initiatives; and the IRRI Management is accountable to the Board for the outputs.

Steering Committees of Networks and Research Consortia. The Committees will continue to operate within their established terms of reference.

Other International Agricultural Research Centres (IARCs). Partnership with other IARCs, inside and outside of the CGIAR system, will be established as the need arises.

Other Organizations. Representatives of other organizations, including universities, private-sector and NGOs, may be invited as resource persons as the need arises.

FINANCIAL SUPPORT

In country travel and operating costs related to hosting of the Council annual meetings will be met by the respective host-countries.

For the first 3 years, international travel costs of members to attend Council meetings will be borne by the IRRI; afterwards Council members will be expected to pay their own travel expenses.

BAMBOO SHOOTS AS HEALTH FOOD

In Manipur, north-eastern India, bamboo shoots, locally known as 'ushoi' when raw and 'soibum' or 'soijin' in its fermented and processed form, are used to make curries, vegetable soups and pickles. High protein, mineral and vitamin content, less fat, and the belief that a diet of the processed bamboo shoot prevents cancer have made bamboo-shoot dishes very popular in Manipur. It is also an excellent diet for diabetic patients, and is considered effective in treating peptic ulcers.

(Source: INBAR Newsletter No. 4, 1994)

NARS LEADERS' ASSESSMENT OF PRIORITIES OF RICE RESEARCH ACTIVITIES AND THE RELATIVE STRENGTHS OF NARS AND IRRI

The NARS leaders, mainly from the Asian countries, made an assessment of the relative importance of the different research activities and the priorities for the IRRI's research, considering the strength of the NARS.

There was an agreement that the socio-economic research to understand farmers' knowledge, practices and constraints should be strengthened to provide feedback on the priorities for technology development research. Breeding for quality improvement and post-harvest research for value addition were mentioned as the other areas that need strengthening. In general, productivity-enhancement research was considered for higher priority compared to conservation and management of natural resources. For strengthening research capacity, documentation and dissemination of information and training in frontier science and advanced research methodologies should be accorded higher priority than degree training and institution building. It was also agreed that the IRRI should continue its involvement in networks for technology assessment and knowledge sharing, and the NARS should provide scientific personnel and share operational expenses.

The response on the relative strengths of the NARS and IRRI in various activities varied depending on the state of the development of the NARS with respect to scientific and financial resources. On the basis of the majority of the responses, the relative strengths of the NARS were on conventional breeding, farm mechanization, degree training, institution building, and the IRRI's domain was on genetic engineering, ecological and environmental characterization, training in frontier science and research methodologies and documentation and dissemination of information.

In all other areas, collaborative research with partnership of scientists of the NARS and the IRRI was recommended.

The priorities of the rice research activities and the relative strengths of the IRRI and the NARS

Research area	Assessment of the relative importance of the area of research	Mode of conducting research
PRODUCTIVITY ENHANCEMENT		
Pre-breeding activities	+++	Partnership
Genetic engineering	+++	IRRI
Conventional breeding	+	NARS
Breeding for quality	+++	Partnership
Germplasm collection, conservation and evaluation	+++	Partnership
PRODUCTION SYSTEM DEVELOPMENT		
Characterizing farming systems (including socio-economic dimensions)	++	Partnership
Plant nutrition management	+++	Partnership
Plant protection and pest management	++	Partnership
Post-harvest technology	++	Partnership
Farm mechanization	++	NARS
PROTECTION OF ENVIRONMENT		
Ecological and environmental characterization (including GIS, systems' analysis)	++	IRRI
Biology and ecology of pests and useful organisms	++	Partnership
Conservation and management of soil (e.g. productivity decline)	++	Partnership
Utilization of rainfall (rainwater harvesting)	++	Partnership
Efficient use of irrigation water (direct seeding, weed management)	+++	Partnership
SOCIO-ECONOMIC STUDIES AND POLICY RESEARCH		
Studies on socio-cultural organization and gender	++	Partnership
Impact assessment and priority-setting	+++	Partnership
Studies on socio-economic and cultural constraints to adoption of technology	+++	Partnership
STRENGTHENING RESEARCH CAPACITY		
Degree training	++	NARS
Training on frontier knowledge and methodologies	+++	IRRI
Documentation and dissemination of information	+++	IRRI
Institution building	+	NARS
Networks for technology evaluation	++	Partnership

High priority : +++; medium priority : ++; and low priority : +.

FIRST TAMNET PLANNING MEETING

The first Tropical Asian Maize Network (TAMNET) Meeting was held at Cha-am, Phetchaburi, Thailand, from 18 to 19 October 1995. It was attended by the National Co-ordinators from 11 countries and representatives from the International Organizations—CIMMYT, FAO HQ, FAO/RAP, FAO-RAS/89/040 and FAO/APSA. Its main objectives were as follows.

- i. The follow-up on the activities of the TAMNET, particularly, on the results of the TAMNET trials.
- ii. To draw up workplan for the future activities (see p. 6).

ACTIVITIES

Regional Hybrid Maize Trials

In the regional hybrid maize trials, 2 promising hybrids were identified through testing of 20 promising entries (15 hybrids and 5 open-pollinated varieties) from 7 countries at 13 locations in 1993, and 31 hybrids at 15 locations in 11 countries in 1994. Suwan 3701, a single-cross hybrid, and Suwan 3702, a three-way cross hybrid, produced the highest yield across 21 locations. These two hybrids belong to Kasetsart University and their parent-inbred lines, namely Ki 31, Ki 32 and Ki 42, are to be made available to TAMNET member-countries through an FAO grant to Kasetsart University.

Publishing of TAMNET Newsletter

Two issues of the Newsletter have been brought out in 1995. Representatives from all the member-countries have been requested to send articles and profiles of the institutes for inclusion in the Newsletter.

Dr Chamnan Chutkaew (Thailand) has been elected as Chairman, Dr N.N. Singh (India) as Vice-Chairman and Dr Artemio M. Salazar (Philippines) as Rapporteur.



Participants of the first TAMNET meeting at Bangkok, Thailand

RECOMMENDATIONS

The following recommendations were tabled and endorsed by the participants of the First TAMNET Meeting.

- Creation of a pool of consultants, preferably from those of developed programmes in the spirit of the Technical Co-operation among Developing Countries (TCDC).
- A protocol should create a mechanism to share information regarding inbred lines obtained, e.g. on their combining ability etc. Local breeders should accept this responsibility and the information should be included in the Newsletter.

Two TAMNET countries released their first single-cross hybrids of maize



Paras, a single-cross hybrid from India, has been recommended for commercial cultivation in Punjab. This hybrid has shown nearly 20% superiority for yield over the popularly grown hybrids.



IPB 911 from the Philippines has shown tolerance to corn borer and resistance to downy mildew and leaf rust. In 1995, the National Seed Industry Council of the Philippines approved this hybrid for commercial release.

- National Programmes should identify field-staff able to co-ordinate the release of germplasm.
- Monitoring of the TAMNET trials should be intensified to improve quality of testing. This activity is to be carried out through national programmes.
- Data should be analyzed properly and promptly sent to national programmes. The CIMMYT is to assume responsibility for this.
- Focal points for the TAMNET Newsletter should be appointed in all member-countries to procure articles and to distribute Newsletter.
- The Second TAMNET Meeting should be organized in New Delhi, India, prior to the International

Report of the First TAMNET Meeting

Summaries of the Country Reports and the Institutional Reports are presented in the 'Report of the First Meeting of the Tropical Asian Maize Network (TAMNET)', brought out recently by the FAO (RAP publication, 1995/33). This is a comprehensive and concise report of the First TAMNET Meeting. Interested persons may write for copies to the Regional Plant Production Officer (Industrial Crops), the FAO Regional Office for Asia and the Pacific, Maliwan Mansion, Phra Atit Road, Bangkok 10200, Thailand.

WORKPLAN FOR 1996 TAMNET TRIALS

Country	No. of entries *		No. of locations	
	Early season	Full season	Early season	Full season
Bangladesh	—	—	2	—
Cambodia	—	—	1	—
China	1	—	1	—
(Taiwan)	2	1	1	1
India	2	2	2	2
Indonesia	1	1	2	2
Laos PDR	—	—	1	—
Malaysia	—	—	1	—
Philippines	1	2	1	1
Sri Lanka	—	—	1	—
Thailand				
Kasetsart University	3	2+2**	3	3
Department of Agriculture	2	2	2	2
Vietnam	1	1	2	2
Subtotal	13	13	20	13
Check	1	1	—	—
Private Companies	14***	14***	—	—
CIMMYT	2	2	—	—
Grand Total	30	30	20	13

* About 3 kg of seeds of each entry are to be supplied. Only seeds of high germination percentages should be submitted. Package of seeds, together with phytosanitary certificate, should be sent to the FAO/RAP via pouch service of the FAO Representative Office in each country (if available).

** These two entries are the two most promising hybrids from Kasetsart University, namely Suwan 3701 and Suwan 3702, to be used as regional checks.

*** A charge of US \$ 1,000 will be levied for each entry submitted to the TAMNET by private companies.

Crop Science Congress in November 1996. The APSA and the private sector should be invited.

- Information exchange on seed technology, seed production and marketing should be promoted through publication in the Newsletter.
- Regional testing programmes on single-cross hybrids should be strengthened in the near future.
- Regional training programmes on hybrid development, seed technology, winter-maize cultivation, etc. should be organized with the support from the CIMMYT, TCDC (FAO), national programmes, APSA and others.
- Co-operators should prepare guidelines for the TAMNET trials, including critical data to be gathered.
- Co-operation between the public and private sectors should be strengthened.
- Country visits on industrial utilization of maize should be organized; if possible, a field trip to visit maize-utilizing factories during the Second TAMNET Meeting, to be held in India, be included.
- The regional co-operative programme on the conservation of the maize genetic resources of Tropical Asia should be strengthened. For this, support of the International Plant Genetic Resources Institute (IPGRI) should be requested.

SECOND STEERING COMMITTEE MEETING

The Second Steering Committee Meeting of the Underutilized Tropical Fruit Trees in Asia Network (UTFANET) was held in Bangkok from 1 to 2 December 1995.

In all, 9 countries (Bangladesh, Malaysia, the Philippines, Thailand, India, Indonesia, Nepal, Sri Lanka and Vietnam) participated. The Director-General, DOA, Ministry of Agriculture, Thailand, attended the inaugural session and from the FAO, RAP, Bangkok, Dr Minas K Papademetriou, Regional Plant Production and Protection Officer, and Dr Narong Chomchalow participated. Dr Nazmul Haq, the UTFANET co-ordinator of the International Centre for Underutilized Crops (ICUC), University of Southampton, and Mr Peter Groot of Commonwealth Science Council (CSC) were also present in the meeting. Mr Annas K. Jaafar of Malaysia was the Chairman of the Steering Committee for 1995, and Dr S.P. Ghosh has been elected as the Chairman of the Steering Committee for 1996.

Bangladesh, India, Indonesia, Nepal, the Philippines, Sri Lanka, Thailand and Vietnam have formally signed the Memorandum of Agreement for establishment of the regional research network of the tropical fruits in Asia with the Executive Agency (ICUC). The Governments of Malaysia and Myanmar are in the final stages of processing the Memorandum of Agreement for signature.

The Steering Committee took decision on the following important areas.

- Each member-country will compile information on genetic resources, propagation, breeding and production methods, post-harvest, socio-economic and marketing aspects of the priority tropical fruit crops (jackfruit, pummelo, mangosteen). Country Co-ordinator of each country will be

responsible for the job and will submit the report

Two more training programmes on (a) Genetic Resources and (b) Post-harvest Technology will be organized, preferably during 1996. India (ICAR) has been chosen for the Genetic Resource Course

and the Philippines (PCARRD) will hold the course on Post-harvest Technology.

- The third Steering Committee Meeting of the UTFANET will be held in India, and the fourth will be conducted in the Philippines. It has been decided that normally the Steering Committee Meeting will be held in the country from where the

Chairperson has been elected; and the Chairperson will be elected by rotation from among the member-countries on yearly basis.

- Considering limitations of the funds available and non-commitment of the major-donors, the following programme has been identified as the priority project to begin with.



Representatives participating in the UTFANET Second Steering Committee Meeting

THE STEERING COMMITTEE

The Steering Committee is responsible for the governance of the UTFANET and will normally meet once in a year.

Membership of the Steering Committee

- Regular Members: National Co-ordinators nominated by, and representing the participating countries.
- Associate Members: One representative from each of the Support Group Agencies, with no voting rights on the Committee.
- The Network Co-ordinator: An ex-officio member with no voting rights.

ACTIVITIES OF UTFANET IN 1995

The major activities in 1995 include project development in association with national co-ordinators, a short training course on propagation and production of tropical fruits, preparation of an annotated bibliography on priority species, publication of the UTFANET Newsletter and development of methods for information-gathering on priority species.

In addition, work on the following projects had begun during the year.

- Project on "Genetic Diversity and Development of Production Systems of the Underutilized Fruits" was developed in consultation with 5 country-co-ordinators and submitted to the IFAD in September. The Secretariat is awaiting its reply.
- A project has already been discussed with the ADB and the national co-ordinator of the Philippines had a meeting with the Bank to follow-up the project.
- The short course on "Propagation and Production of Underutilized Tropical Fruits" was organized by the national co-ordinator of Thailand in association with the Department of Agriculture, Government of Thailand in Bangkok in July 1995.

The terms of reference for information-gathering has been agreed by the Steering Committee and the fund is available with the Secretariat for each country to gather information on Plant Genetic Resources (PGR), propagation and production, post-harvest handling and processing and marketing of three priority species, jackfruit, pummelo and mangosteen.

The APAARI has agreed to establish a Tropical Fruits Asian Network, based in Malaysia. The new network will work on only major species of Asian fruits that are currently grown and used.

Strengthening collaborative R&D programmes for underutilized tropical fruits (jackfruit, pummelo and mangosteen). Three projects each with jackfruit, pummelo and mangosteen, with major components on genetic diversity, propagation and post-harvest utilization, will be formulated on the matrix basis. While the works on genetic resource inventory, characterization, evaluation, conservation and documentation will be undertaken by all the member-countries, the other activities will be centred around the countries where research/information generation is comparatively better. For example, for jackfruit, Bangladesh will be the lead centre for genetic resources and propagation and Indonesia will act as the lead centre for handling, and the Philippines will be the lead centre for its processing. Each lead

centre will be responsible for providing information generated and assist in germplasm exchange. In pummelo, Thailand will be the lead centre for genetic resources, and Indonesia will be the lead country for mangosteen genetic resource studies. Efforts will be made to introduce mangosteen elite varieties from Indonesia and Malaysia. Descriptors for germplasm of these crops will be developed by the lead centres and information will be collected uniformly by all the participating countries. Documentation of the genetic resources will be done by the UTFANET Secretariat, out of the information provided by the member-countries, and the published documents will be circulated to all. India will collect information on locally available germplasm including land-races for jackfruit and pummelo and will endeavour to introduce improved varieties of mangosteen. To begin with, India may propose a project on inventory and characterization of genetic resources of jackfruit, particularly in eastern India covering Assam, West Bengal and Tripura, where genetic diversity in concentrated areas is expected.

ROLE AND ACTIVITIES OF THE ASIA AND PACIFIC PLANT PROTECTION COMMISSION (APPPC)

The Asia and Pacific Plant Protection Commission (APPPC), established in 1956, covers 25 member-countries in the Region under the auspices of the FAO. Since the inception, 19 sessions of the Commission and 33 meetings of its Executive Committee have been held.

APPPC STRUCTURE

The Commission has (i) Standing Committee on Plant Quarantine, currently chaired by New Zealand; (ii) Standing Committee on Integrated Pest Management, chaired by India and (iii) Standing Committee on Pesticides, chaired by Pakistan.

Under the Standing Committees, several Working Groups have been established, consisting of technical experts and representatives of member-countries.

MEMBER-COUNTRIES OF THE APPPC

1. Australia, 2. Bangladesh, 3. Cambodia, 4. China, PR, 5. Fiji, 6. France, 7. India, 8. Indonesia, 9. Korea, RP, 10. Laos, 11. Malaysia, 12. Myanmar, 13. Nepal, 14. New Zealand, 15. Pakistan, 16. Papua New Guinea, 17. the Philippines, 18. Portugal, 19. Solomon Islands, 20. Sri Lanka, 21. Thailand, 22. Kingdom of Tonga, 23. United Kingdom, 24. Vietnam, 25. Western Samoa.

MAIN OBJECTIVES

- Develop Integrated Pest Management (IPM) practices in major crops of the countries of the Region.
- Support implementation of the International Code of Conduct on the distribution and use of pesticides.
- Develop principles of plant quarantine as related to International Trade.
- Harmonization of plant quarantine procedures.
- Develop guidelines for Pest Risk Analysis (PRA).

IPM PROJECTS

- The FAO regional office (RAP) initiated and established the IPC - Rice project for South-east Asia in 1978, which is in 3rd phase of operation.
- A new regional IPM project 'FAO inter-country programme for the development and application of integrated pest management in vegetable-growing in South and South-east Asia' is operational from 1 October 1995, and is currently joined by 4 countries: Bangladesh, Laos, the Philippines and Vietnam.
The Netherlands as a donor, contributed the total budget amount of US \$ 3,980,000 for 4 years.
- Besides, a new regional IPM project on cotton is in the pipeline, which is expected to be operational by 1997.

ACTIVITIES IN 1996-97

- Regional PIC DNA's Meeting on Transboundary Trade of Banned and/or Restricted Pesticide in July 1996.
- Eighth Global Technical Consultation among the Regional Plant Protection Organizations (RPPOs) in September 1996.
- Regional Expert Consultation on the Application of Biotechnology in the Pest Management in October 1996.
- Expert Consultation on the Strengthening Land Border Plant Quarantine Facilities in Asian Countries in April 1997.
- Thirty-Fourth Executive Committee of the APPPC in April 1997.
- Ninth Global Technical Consultation among the RPPOs in September 1997.
- Twentieth Session of the APPPC in September 1997.
- Expert Consultation on the Development of Biopesticide Use in Pest Management in October 1997.
- Training Course on Pest Risk Analysis in 1996-97.



JIRCAS main building

JAPAN INTERNATIONAL RESEARCH CENTRE FOR AGRICULTURAL SCIENCES

The Japan International Research Centre for Agricultural Sciences (JIRCAS) is one of the 29 research institutes belonging to the Ministry of Agriculture, Forestry and Fisheries (MAFF), the Government of Japan.

JIRCAS

JAPAN

The JIRCAS, formerly Tropical Agriculture Research Centre, was established on 1 October 1993 to implement research programmes in collaboration with various organizations and institutions located in all the developing regions to achieve sustainable development of agriculture, forestry and fisheries, compatible with the preservation of environment on a global scale.

The Institute is currently implementing programmes to invite researchers and administrators from co-operating institutes and organizations to promote exchange of information and opinion and strengthen relations with various national and international research organizations. The fellowship programmes aim at training researchers from the developing

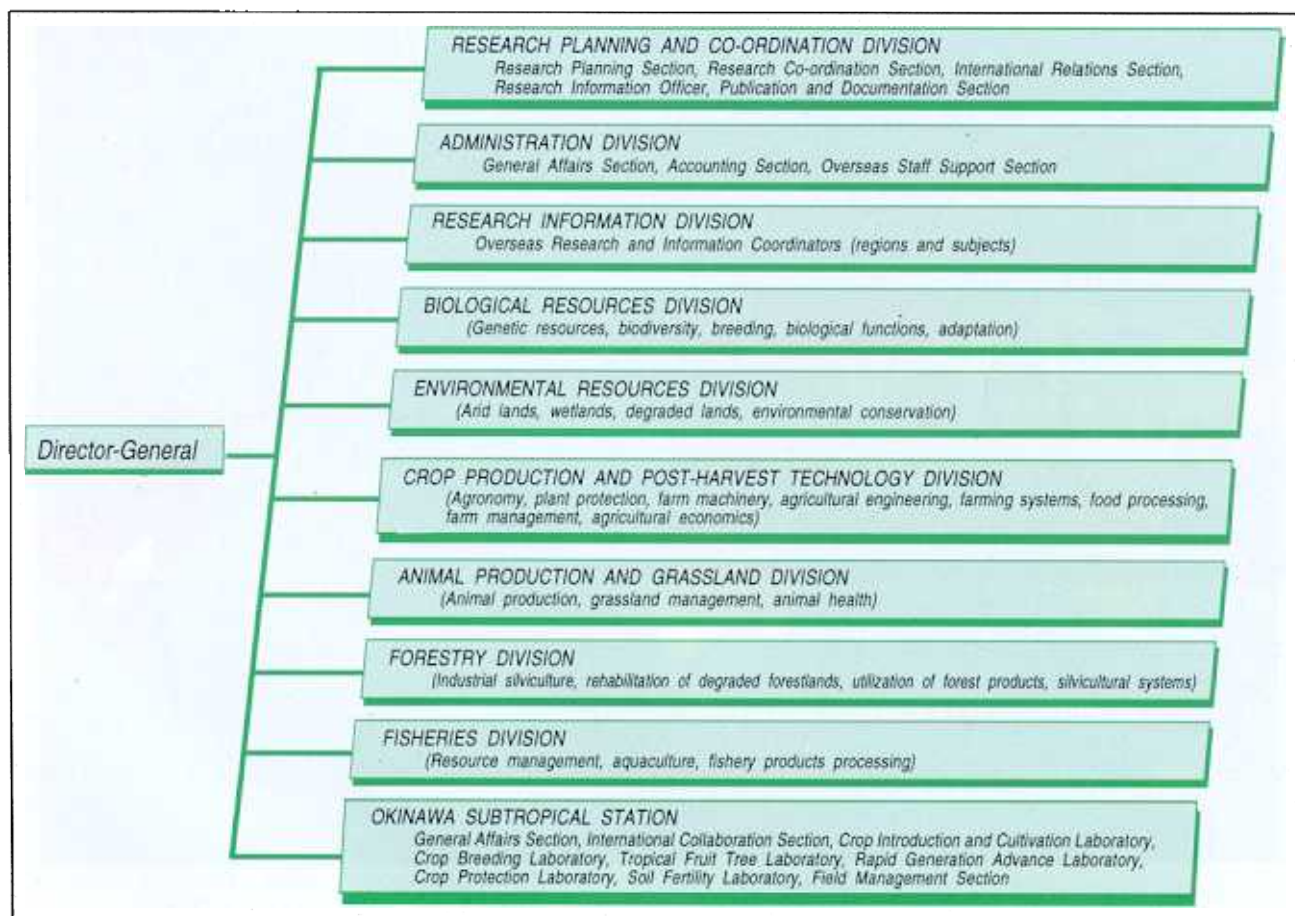
regions to address problems confronting the regions, including sustainable food production and preservation of environment.

Besides, Research Planning and Co-ordination Division and Administration Division, the Centre has 7 Research Divisions and an Okinawa Subtropical Station.

Research Information Division. It conducts surveys and systematically collects information. This helps to identify research priorities and to formulate research strategies.

The Division also develops information-processing technologies, including preparation of databases for promoting information dissemination and utilization.

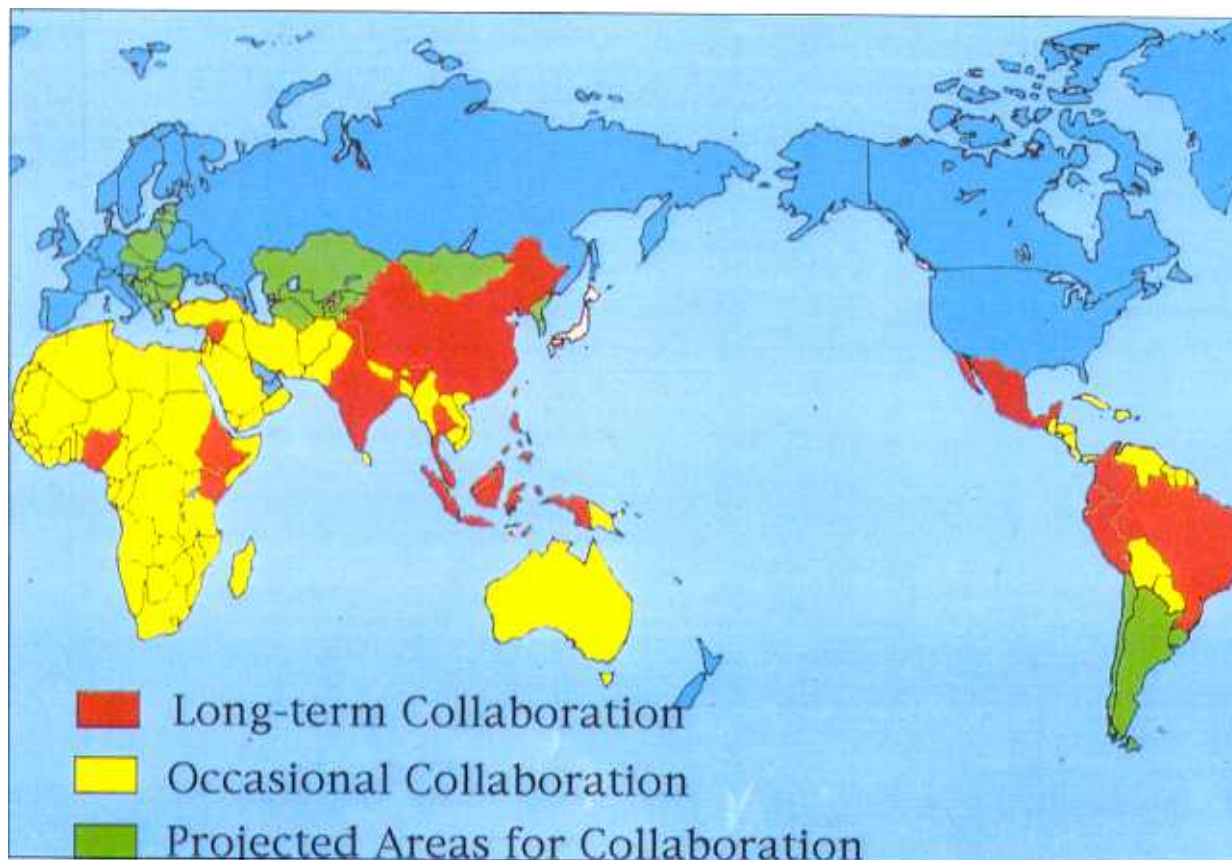
The Centre holds an international symposium once a year on subjects related to the development of technology for agriculture, forestry and fisheries in the developing countries



Organizational chart

On-going collaborative research projects between CGIAR research centres and JIRCAS

- | | |
|--------------------|--|
| IRRI (Philippines) | • The development of stabilization technology for rice double-cropping in the tropics |
| ICRISAT (India) | • Sustainable cultivation of upland crops in semi-arid tropics
• Analysis of environmental changes in agricultural land after forest clearing in tropics and development of sustainable land-use systems |
| CIMMYT (Mexico) | • Improvement of high-yielding wheat varieties through biotechnological procedures |
| IITA (Nigeria) | • Studies on eco-physiological characteristics of cowpea in the savanna area of West Africa |
| CIP (Peru) | • Characterization, evaluation and utilization of genetic resources of local andean root and tuber crops |
| ILRI (Kenya) | • Biochemical characterization of membranes of lymphocytes infected with <i>Theileria parva</i> schizonts |
| CIAT (Colombia) | • Eco-physiological studies on upland rice roots in relation to adaptability to savanna soil in South America
• Eco-physiological studies on the persistency of tropical pasture plants in the savanna of Latin America |



Areas targeted for research collaboration

Biological Resources Division. It collects, preserves and utilizes plant and microbial genetic resources. The biological and physiological functions of some of the materials are also being analyzed for developing improved crop varieties resistant to diseases and adapted to a wide range of adverse environments. Advanced studies required for the use of biotechnology procedures are also promoted.

Environmental Resources Division. It carries out studies for conservation of soil, water and meteorological resources and prevention of environmental degradation through conventional and advanced techniques, including analysis of weathering of rocks, monitoring of land degradation through satellite imagery and

On-going collaborative research projects between JIRCAS and AIT, ICIPE

- AIT (Asian Institute of Technology, Thailand) Mechanical properties of typical soil in north-east Thailand for construction of irrigation facilities
- ICIPE (International Centre of Insect Physiology and Ecology, Kenya) Biorational approaches to long-term and sustainable management of desert locust

Major collaborative research projects between JIRCAS and national agricultural research organizations

- Comprehensive studies on sustainable agricultural systems in North-East Thailand (Thailand)
- Productivity and sustainable utilization of brackishwater mangrove ecosystems (Malaysia)
- Integrated research on farming systems combining agriculture, animal husbandry and fisheries in the Mekong delta (Vietnam)
- Development of agropastoral systems in the subtropical area of Brazil (Brazil)
- Econometric analysis of the structure of supply and demand in South-East Asia (Thailand, Malaysia, Indonesia) and China
- Development of methods of control of biotic agents injuring rice plants under direct seeding culture in Malaysia (Malaysia)
- Breeding of varieties resistant to diseases (China)
- Development of technology for the evaluation and utilization of soybean genetic resources in North-East China (China)
- Rehabilitation of degraded forest lands (Malaysia)
- Development of sustainable aquaculture technology in South-East Asia (Thailand)

computer simulation. The Division is also involved in developing methods of rehabilitation of degraded lands and in reducing generation of polluting substances.

Crop Production and Post-harvest Technology Division. Its emphasis is on the various steps of the sequence of the foodchain from production to marketing of food products, including identification of cropping systems, methods of cultivation adapted to local conditions, and crop-protection measures compatible with the preservation of the ecosystems, development of field infrastructure and farm mechanization, post-harvest technology with emphasis on preservation and processing of agricultural products, and farm-management technology, tailored to socio-economic conditions.

Animal Production and Grassland Division. Its target is to achieve a sustainable increase of animal production, including improvement of genetic potential and nutrition of animals, development of feed resources either by improvement of grasslands or utilization of agro-industrial by-products, and control of animal diseases.

Forestry Division. It promotes research on developing methods for rehabilitation of degraded forest-lands, besides development of agroforestry systems, methods for control of pests and diseases of forest trees, methods of utilization of forest products and silvicultural technologies.



Inspecting rice seedlings resistant to adverse environment under the JIRCAS visiting research fellowship programme at Okinawa Subtropical Station

Fisheries Division. It was established on 1 October 1993 and carries out researches on preservation of aquatic ecosystems, development of methods of marine and freshwater aquaculture, resources management and processing and utilization of fishery products.

Okinawa Subtropical Station. It is located on the Ishigaki Island and is engaged in studies for utilization of environmental resources in subtropical zone and of biological resources introduced from tropical and subtropical regions as well as from the temperate zone of Japan, including acclimatization process, methods of cultivation and mechanisms of tolerance to heat and high-salt concentration.

WORLD FOOD SUMMIT

The World Food Summit, to be held at the FAO Headquarters in November 1996, has the following focus.

Universal food security through sustained reduction in chronic malnutrition and improvements in nutritional well-being for an ever-increasing population.

The Summit, proposed by the FAO Director-General, Jacques Diouf, shortly after assuming office, has gained the unanimous support of the member-nations as well as of a great many regional and inter-governmental organizations.

The Summit will serve as a forum at the highest level and as a means for marshalling the necessary global consensus and commitment to redress one of the humankind's basic problems—food security.

A "policy document" and a corresponding "plan of action" for achieving universal food security are being crafted by the FAO Secretariat for preview by the Committee on the World Security and for the biennial FAO Regional Conferences, prior to their submission to the Summit.

A paper on the role of research in food security is being jointly prepared by the CGIAR and FAO for the Summit.

CONFERENCE OF PARTIES – SECOND ANNUAL MEETING

The Conference, better known as COP, conducted its second annual meeting (COP2) in Jakarta, Indonesia, from 1 to 17 November 1995. The 1992 Convention on Biological Diversity (CBD) had established COP. The purpose of the COP is to keep under review the implementation of the Convention.

A number of decisions taken by the COP 2 are of interest to the CGIAR. An important administrative decision was to locate the Secretariat of the CBD in Montreal, Canada. The Secretariat had been operating from Geneva, Switzerland, on an interim basis. Two new Secretariat positions were announced: one with the responsibility for agrobiodiversity, to be seconded by the FAO, and the other with the responsibility for marine biology, to be seconded by the UNESCO.

The Conference examined question of funding mechanisms and recommended that no changes be made at present. The Global Environment Facility (GEF) continues as an interim mechanism for funding activities relevant to the CBD. The permanent funding mechanism will be decided next year.

The Conference requested the Subsidiary Board on Scientific, Technical and Technological Advice (SABSTTA) for developing a state of the world report

on biodiversity ("The Global Biodiversity Outlook Report"), including information on endangered species and ecosystems needing priority action. The CGIAR will be requested to contribute to this report. The thorny issues of agrobiodiversity and access will be dealt with by the SABSTTA in preparation for the

COP3. Discussions are progressing on these issues and the Secretariat will consult with the CGIAR, particularly on the question of access. In an intervention to the plenary, the CGIAR Chairman, Ismail Serageldin, offered to make available to COP a study on the options for developing a multilateral system governing access. The study is being undertaken by the IPGRI at the request of the FAO Commission on Plant Genetic Resources, and should be completed by the early 1996.

The Conference endorsed the efforts of the FAO Commission to revise the Undertaking on Plant Genetic Resources to bring it in line with the Convention. The FAO Fourth International Technical Conference on Plant Genetic Resources—scheduled for June 1996 in Leipzig, Germany—was also

endorsed by COP2. Delegates voiced the expectation that outputs of the Technical Conference, a state of the world report and costed global plan of action, would be in full harmony with the Convention.

"CGIAR Maintains World's Largest Collection of Agrobiodiversity" states

Dr Ismail Serageldin

The CGIAR, through its network of the international agricultural research centres, maintains the world's largest international *ex-situ* or genebank collections of agrobiodiversity, comprising about 500,000 accessions.

These collections not only aim to ensure safe conservation, but also have great added value in that the materials within them have been well characterized, evaluated and documented. They are also the basis of the CGIAR's plant improvement activities.

The centres distribute each year more than 120,000 samples from the collections as well as over a half million samples of genetically enhanced material resulting from their breeding efforts. These samples are sent primarily to scientists and institutions in developing countries where they serve as the major source of plant diversity for many national crop improvement programmes.

The CGIAR, through the IPGRI, has also assisted over 100 countries to develop their national genebanks.

Economic Benefits of Conservation

Studies indicate that conservation and use of crop genetic resources can pay significant dividends. For example, rice production in Asia increased by 42% from 1968 to 1981, following introduction of high-yielding varieties improved through breeding; an increase in yield of about 110 million tonnes per year. At a price of US \$250 per tonne, this increase has a value of US \$27,500 million per year, which is several thousand times greater than the investment on the conservation of rice genetic resources world-wide. The varieties that made this possible were based on landraces and breeding material from more than 20 countries in Asia. It is only through conservation and use of such resources that we can guarantee availability of genetic material which is essential to ensure future advances in plant improvement. (Source : IPGRI, 1994. In *Defence of Diversity*)

THE FOURTH GENERAL ASSEMBLY OF THE APAARI

The Fourth General Assembly Meeting of the APAARI is to be held at New Delhi, instead of the already decided venue in Iran. This is in view of the 2nd International Crop Science Congress, which is being organized in November 1996 at New Delhi, India. This would give a good opportunity for the NARS leaders' from all the countries in the region to participate in this important international event, to be held for the first time in a developing country. The APAARI will also organize a Satellite Meeting along with the General Assembly on Research Priority Settings.

Satellite Meetings* at the time of the 2nd International Crop Science Congress (to be held at New Delhi from 17 to 24 November 1996)

DATE	SPONSORS	TOPIC
Pre-Congress		
Nov. 14-16	ICAR/IRRI	Third International Conference on Hybrid Rice
Nov. 15-16	UNDP/FAO/NARS	Farmer-Centred Agricultural Resource Management for Rainfed Farming Systems
Nov. 15-16	USDA/DBT	Biotechnology and Biodiversity : Scientific and Ethical Issues in Agriculture
Congress		
Nov. 18	CIMMYT/FAO	Tropical Asian Maize Network
Nov. 19	Rockefeller Foundation	Rice Biotechnology
Nov. 21	IPGRI/UNEP/FAO/ World Bank	Crop Biodiversity and Sustainable Agriculture
Nov. 22	IIM	Farmers' Innovations for Sustainable Crop Production : Linking Formal and Informal Science
Nov. 22	CIP	Participatory Plant Breeding
Nov. 23	ICARDA/ICRISAT	Management of Drought
Post-Congress		
Nov. 25-26	APAARI/FAO/ISNAR/ NARS	Expert Consultation and General Assembly of the Asia-Pacific Association of Agricultural Research Institutions
Nov. 25-26	IRRI/CIMMYT/World Bank/NARS	Sustainability of Rice-Wheat Systems

* Venue New Delhi, except for programme no. 1, Hybrid Rice, which will be held at Hyderabad.

WHAT'S NEW WITH BAMBOO/RATTAN

Bamboo and Rattan are among the most adaptable and widely used materials in the world. Millions of farmers depend on them to make houses, furniture, domestic utensils, agricultural tools and handicrafts for personal use, as well as to earn income. However, over-exploitation and loss of tropical forest habitats are threatening the supply of bamboo and rattan and eroding the genepools. Concerned researchers, foresters and user groups have formed a collaborative network to promote the conservation and use of these invaluable genetic sources. The International Network for Bamboo and Rattan also undertakes socio-economic research aimed at increasing accessibility, improving production and expanding employment opportunities in rural areas, especially for women.

(Source : Geneflow, 1994)

APAARI NEW PUBLICATIONS

1. Report of the Third General Assembly of APAARI and Expert Consultation on NARS Vision towards Future Challenges and Opportunities for Sustained and Enhanced Productivity and Food Security in the Asia-Pacific Region (APAARI Publication: 1995/3)
2. APPARI Perspective Plan (APAARI Publication : 1995/4)
3. Agricultural Research Systems in South Asia (by H.K. Jain) (APAARI Publication : 1995/5)
4. Support for Agricultural Research System in South-East Asia—Impacts on Growth and Development (by William D. Dar) (APAARI Publication: 1995/6)

FUTURE CONFERENCES

1. Title: Fifth International Symposium on Grapevine Physiology
Venue: Mount Scopus Campus of the Hebrew University, Jerusalem, Israel
Period: 2-7 June 1996
Contact: Mrs Sara Sher, Division for Development and Public Relations, The Hebrew University of Jerusalem, Mount Scopus, Jerusalem 91905, Israel
Telephone: 972-882817
Fax: 972-2-322556
E-Mail: Internet:Bravdo@AGRI. HUJI.AC.IL
2. Title: Fifth International Mango Symposium
Venue: The Dan Panorama Hotel and Convention Centre, Tel Aviv, Israel
Period: 1-6 September 1996
Contact: 5th International Mango Symposium, P.O. Box 29041, Tel Aviv 61290, Israel
Telephone: +972-3-5175150
Fax: +972-3-5175155
3. Title: Third Asia-Pacific Conference on Agricultural Biotechnology
Venue: Melia' Hua Hin Hotel
Hua Hin, Prachuab, Thailand
Period: 10-16 November 1996
Contact: Dr Sutat Sriwatanapongse, National Centre for Genetic Engineering and Biotechnology, National Science and Technology Development Agency, Ministry of Science, Technology and Environment Building, Rama VI Road, Bangkok 10400, Thailand
Telephone: (66-2)-245-7374, 245-7185-6
Fax: (66-2)-246-4850
E-Mail: sutatsr@nwg.necfec.or.th
4. Title: Third International Symposium on Hybrid Rice
Venue: Hotel Holiday Inn Krishna, Hyderabad, India
Period: 14-16 November 1996
Contact: Dr M. Ilyas Ahmed, Hybrid Rice Programme, Directorate of Rice Research, Hyderabad, (Andhra Pradesh) 500 030, India
Telephone: 040-245036
Telex: 0425-6739
Fax: 040-245308
5. Title: Second International Crop Science Congress
Venue: Vigyan Bhawan, New Delhi, India
Period: 17-24 November 1996
Contact: Prof. R.B. Singh, Secretary-General, 2nd ICSC National Academy of Agricultural Sciences Avenue II, Indian Agricultural Research Institute Pusa, New Delhi 110 012, India
Fax: 91-11-5753678, 91-11-5766420
Telephone: 91-11-5754595, 91-11-5753677, 91-11-5766286, 91-11-5753713
E-Mail: ICSC@Naasdel.ren.nic.in

RECENT RAP PUBLICATIONS

Some of the important publications brought out recently by the FAO Regional Office for Asia and the Pacific (RAP) are listed below.

1. Food and Agro-Industries Curriculum Development in Asia (RAP Publication : 1995/15)
2. Fodder Production from Tropical Forests in Asia and the Pacific Region (RAP Publication : 1995/16)
3. Directory of Farming Systems Research and Development Professionals in the Asia-Pacific Region (RAP Publication : 1995/17)
4. Environments, Women and Population: Inter-related issues in Rural Development in Southeast Asia (RAP Publication : 1995/18)
5. Food and Agriculture Organization in the Asia-Pacific Region (RAP Publication : 1995/19)
6. Regional Expert Consultation of the Asia-Pacific Network for Food and Nutrition on the importance of the Food Industry in increasing Safe Food Supplies (RAP Publication 1995/20)
7. The Royal Chitralada Projects (RAP Publication : 1995/21)
8. Selected Indicators of Food and Agriculture Development in Asia-Pacific Region, 1984-94 (RAP Publication : 1995/22)
9. Cost of Production of Selected Crops in Selected Asian-Pacific Countries (RAP Publication : 1995/23)
10. Animal Quarantine Management in South Asia (RAP Publication : 1995/24)
11. The Yak (RAP Publication : 1995/25)
12. Hybrid Maize in China: A Success Story (RAP Publication : 1995/26)
13. Second Consultation of the Regional Network for the Development of Agricultural Cooperatives in Asia and the Pacific (NEDAC) (RAP Publication : 1995/27)
14. Regional Consultation on People's Participation for Sustainable Development (RAP Publication 1995/28)
15. Statistical Profile of Livestock Development in Asia-Pacific Region 1984-94 (RAP Publication : 1995/29)
16. Royal Gardens for People's Well-being (RAP Publication: 1995/30)
17. Vegetable Research with Special Reference to Hybrid Technology in the Asia-Pacific Region (RAP Publication: 1995/32)
18. Tropical Maize in Asia : Report (RAP Publication : 1995/33)
19. Tropical Maize in Asia: Proceedings (RAP Publication: 1995/34)
20. Plant Genetic Resources in South/Southeast Asia and the Pacific (RAP Publication : 1995/35)
21. Soybean Production in India : A Success Story (RAP Publication : 1995/36)
22. Food for All (RAP Publication : 1995/37)

Note: Copies can be obtained upon request from FAO, RAP, Maliwan Mansion, Phra Atit Road, Bangkok 10200, Thailand