



APAARI

NEWSLETTER



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EDITORIAL

Asia-Pacific region has some of the most highly developed National Agricultural Research Systems in comparison to other regions of the world. The NARS have made impressive impact towards increased household food security and the enhanced farmers income in the region. In the process, many NARS have gained valuable experiences in establishing and operating their research systems suiting to varying diverse socio-economic/cultural, political, and agro-ecological conditions. Some significant agricultural breakthroughs viz. Hybrid Rice in China; Oilpalm in Malaysia; Tilapia Production in Philippines; Cotton, Pearl Millet and Castor Hybrids and also Milk Production in India; Baby Corn in Thailand; to cite a few, have taken place in the region mainly on account of individual national research and development efforts. Many of these have great relevance for others in the region. It is often realized that the spread of technologies to other countries of the region has been restricted not so much for the geographical reasons but mainly for want of knowledge sharing and effective collaborative mechanisms. Linkages and communications among the countries are often weak and the NARS are invariably faced with shortages of funds, human resource, institutional facilities and lack of research strategies and regional collaboration.

The concept of networking of research activities in agriculture is finding better acceptance both within and among NARS in the Asia-Pacific region. It has also been increasingly felt that learning from each other's experience in the region through collaborative research and human resource development can be highly rewarding and cost effective.

To start with, the Networks could be most effective in crops and areas which cut across countries and on problems of wider interest to NARS. Hence, there is now the need to evolve suitable mechanisms and the modalities for coordination, financial arrangements, resource and credit sharing etc. A large number of such networks are operating presently in the region. Some are quite effective, whereas sustainability is a major concern for others. It is in this context that APAARI has decided to play a catalytic role in order to facilitate their effective functioning and coordination. An Expert Consultation held exclusively in this aspect recently in Iran by APAARI is an affirmation of this commitment towards strengthening of partnership among NARS. APAARI would pursue this approach so that benefits of regional research collaboration are available to our resource poor farmers. Obviously, all this will be accomplished only through the active involvement of NARS.

Editors

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FOURTH EXECUTIVE COMMITTEE OF APAARI AND EXPERT CONSULTATION ON MANAGEMENT AND STRENGTHENING OF REGIONAL RESEARCH NETWORKS IN THE ASIA-PACIFIC REGION AT TEHRAN, IRAN DURING OCTOBER 19-21, 1997

The Fourth Executive Committee Meeting of the Asia Pacific Association of Agricultural Research Institutions (APAARI) was held in Iran from 19-21 October 1997 in conjunction with the Expert Consultation on Management and Strengthening of Research Networks in the Asia-Pacific Region.



Dr. Kalantari, Agriculture Minister, Iran inaugurating the Expert Consultation

The consultation was supported by APAARI/FAO/ISNAR and ACIAR and was attended by the majority of the 19 members of APAARI i.e. Australia, Bangladesh, Fiji, India, Iran, Malaysia, Nepal, Pakistan, Philippines, Republic of Korea, Sri Lanka, Thailand, Western Samoa and by senior level representation from associated member organisations, e.g. ICRISAT, ISNAR, AVRDC, IFAD, ICARDA, IPGRI, CABI.

MEMBERSHIP

The Committee felt that an all-out effort should be made to enrol China, Indonesia and New Zealand as members of APAARI.

The respective countries have been approached and it is hoped that the present membership of APAARI would soon be enhanced from the existing 19 to make it more representative of the Asia Pacific region.

APAARI PUBLICATIONS

The following publications have been published during the reporting period:

- Success Story on Orchids in Thailand by Dr. Kanchit Thammasiri.
- Success Story on Cotton Production in Pakistan by Mr. Badaruddin Soomro and Mr. Parvez Khaliq.
- Success Story on Wheat Production in Iran by Mr. Abbas Keshavarz and Mr. Mohammad Javad Mirhadi.

- Directory of Agricultural Research Institutions in the Asia-Pacific Region (Southeast Asia).
- Proceedings of the Expert Consultation on Research Priority Setting by NARS in the Asia-Pacific Region and Fourth General Assembly of APAARI, November 25-26, 1997 in New Delhi.

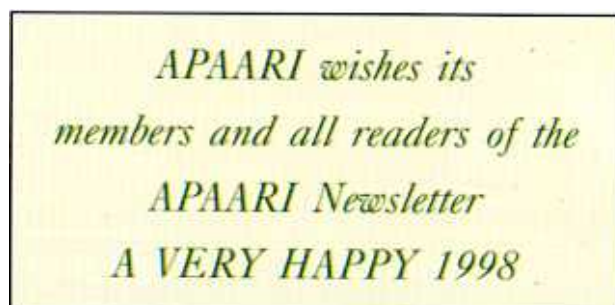
- Agricultural Research Priorities in the Asia-Pacific Region – An APAARI Overview.

IN FUTURE FOLLOWING PUBLICATIONS ARE CONTEMPLATED

- Success Stories on Agro-Tourism in Australia, Direct Seeded Irrigated Rice in Malaysia and Oilseeds in India.
- Proceedings of The Fourth Executive Committee Meeting of the Asia Pacific Association of Agricultural Research Institutions (APAARI) which was held in Iran from 19-21 October 1997.

ACTIVITIES DURING 1997-98

- Continuation of the Newsletter - All members and readers have been requested to send relevant and interesting inputs to the APAARI Secretariat at FAO, New Delhi, for review and subsequent inclusion in the Newsletter.
- Success Stories on Orchids in Thailand and Wheat Production in Iran have been published.



Reviewed and awaiting publication are Agro-Tourism in Australia, and Success of Direct Seeded Irrigated Rice in Malaysia.

In line with the decision of the Executive Committee, a Committee will be appointed to review and prioritise the suggestions received for the publication of success stories in future.

- The Directory for South East Asia has been printed and circulated. A Directory for East Asia will be processed once China joins APAARI since all the other countries are already included in the South East Asia Directory.

While appreciating the existence of a number of research networks in the region, APAARI recognized the importance of such networks for strengthening regional co-operation as well as for dissemination of technologies to the stakeholders. It was felt that only need based important networks in different sectors of agriculture be encouraged which could be sustained through active involvement and resource sharing by member countries. In future, these networks should adopt a "System Approach" rather than confining only to commodities. Also inter-network linkages could yield much better dividends.



Participants attending the Expert Consultation

- The creation of a Web Page on the Internet, with ISNAR support, has been endorsed. As a first step, it will cover details regarding the introduction of APAARI, the Charter, APAARI's mission, its activities and its publications.

It is proposed to connect the APAARI Web Page to the other members who already have a Home Page such as ICAR, JIRCAS, MARDI, etc.

NETWORK SUPPORT

The recommendation for the Establishment of a Fisheries Sub-Group for Aquaculture by ICLARM in a partnership mode with APAARI was appreciated and endorsed. It was also decided that APAARI would henceforth be more active in providing need-based, critical support to the approved activities.

The role of APAARI in supporting some of the important networks in the region was considered crucial for their sustainability in long run. As such, it was resolved that APAARI should play pro-active and facilitator's role.

Dr. EMILE FRISON, Director, Regional Banana Research Network (ASPNET) has recently desired to have a Memorandum of Understanding (MoU) with APAARI for strengthening Banana Research & Development in the Asia-Pacific Region. The Fourth Executive Committee of APAARI, in its meeting held recently at Tehran, Iran, endorsed this initiative as one of the Network support activities of the Association.

APAARI resolved that Information Network is of considerable priority and hence be established soon in collaboration with ISNAR and CABI. Other networks which could be supported are: Rice-Wheat Consortium supported by the World Bank, the Netherlands, IFAD etc., Cereal Legume Asia Network (CLAN) of ICRISAT, Tropical Asian Maize Network (TAMNET), Mungbean Network of AVRDC, INIBAP of IPGRI, and SAPPARD (now ASPRAD) of CIP.

Some new networks on lentil by ICARDA, genetic resources by IPGRI, root and tuber crops in Pacific Island countries by ACIAR and aquaculture network by ICLARM were also considered important and APAARI planned to support their establishment in the region.



A view of Expert Consultation in Session

FUTURE APAARI MEETINGS

The Republic of Korea has agreed to host the Fifth General Assembly in September/October 1998. An Expert Consultation on Research Management Mechanisms of NARS will be held in conjunction with this forum.

New Chairman

Mr. Zafar Altaf has taken over the Chairmanship of APAARI.

Mr. Altaf, the new Chairman of the Pakistan Agricultural Research Council, succeeds Mr. M.A. Akbar who has been promoted to Director General of PARC.

APAARI congratulates both colleagues and wishes them success in their new positions.

BUDGET (BIENNIUM 1998 TO 1999)

The Executive Committee approved the budget proposed for the biennium 1998 to 1999. It was decided to allocate more need-based support for activities falling within the mandate of APAARI.

STRENGTHENING OF APAARI SECRETARIAT

APAARI's emerging role as a facilitator of agricultural research of the region and the consequent enhancement of its activities necessitates a better equipped secretariat.

The Executive Committee discussed several options the most viable being to strengthen the Secretariat housed in FAO, Bangkok, with a full-time professional staff member. ISNAR has been approached in this connection to review the possibility of locating one of their outposted staff to also support APAARI activities.

In the meantime, the APAARI Secretariat housed in FAO, Delhi since 1995, will continue to assist the Executive Secretary with all day to day activities of APAARI. As in the past, FAO, Bangkok will continue to provide the needed support to APAARI.

Dr. R.S. Paroda elected Fellow of TWAS

Dr. R.S. Paroda, Director-General, Indian Council of Agricultural Research (ICAR), and Secretary, Department of Agricultural Research and Education, has been elected Fellow of the Third World Academy of Sciences (TWAS) for his significant contributions to the field of agriculture.

TWAS is an Internationally known Academy, which promotes excellence in science, especially in developing countries in the South.

Dr. Paroda is also currently the President of the National Academy of Agricultural Sciences (NAAS) and the Chairman of the ICRISAT governing board, Paroda has over 10 books and 200 research publications to his credit and is the recipient of many prestigious scientific awards, including the Rafi Ahmed Kidwai Memorial Prize, the FICCI Award, the Om Prakash Bhasin Award, the ICAR Team Research Award and the Asia Pacific Seed Association Award.

A SHORT SUCCESS STORY

THE PHILIPPINE CARABAO :

NOW MORE THAN JUST A BEAST OF BURDEN!

In the '70s, the carabao was viewed solely as the lowly farmer's obedient and industrious partner in his farm work. The best it could do was provide draft power, for its meat was inferior in quality and its support of milk too little to be competitive in the milk market. Although it has been crossed with the Murrah buffalo imported from India, crossbreeding was not systematic. Hence, according to a 1985 FAO report, its population remained comparatively low, up to the '80s, contributing only about 0.22% to the world buffalo supply. Along with this, the declining performance of the carabao due to inbreeding, and the alarmingly high slaughter rates were increasing the threats to the maintenance of genetic diversity and animal inventory.

INITIAL EFFORTS AT CARABAO DEVELOPMENT

Aware of the carabao production problems, PCARRD created in 1975 a national carabeef commodity to accelerate R&D activities on carabao.

In 1978, UNDP/FAO approved the project "Strengthening of the Philippine Carabao R&D Center (PCRDC)". This was coordinated by PCARRD until 1991. During this time, improvement of the native carabao with emphasis on reproduction and breeding was carried out throughout the Philippine Carabao R&D Network. This was specifically through artificial insemination and estrus synchronization. For 11 years, the scientists of PCRDC have diligently worked to reproduce Philippine Carabaos that are superior not only in draught power but also in milk and meat production. These were made possible through the linkages with other CGIAR- member agencies such as India's ICAR and Pakistan's PARC which provided expertise and genetic materials for carabao upgrading.

Over the decades, the holistic view of the carabao has been studied, including the socio-economic aspect of its production under small holdings.

To verify the findings of the FAO/UNDP project on-farm, PCARRD implemented the Carabao Action Programme (CAP) in selected milk shed areas of the country from 1985 to 1991. Analysis of the impact of CAP showed that estrus synchronization followed by artificial insemination on water buffaloes was technically under field conditions. It was thus recommended as a strategy for the National Upgrading Programme.

Hence, during these 11 years, more crossbreeds were produced and more farmers benefited from its improved genetic make-up. From just a draught

animal, the new breed of carabao (i.e. the crossbreeds) was seen to be milking animal capable of giving 3-4 times more milk than the Philippine Carabao. It grows 40% faster and can calve at three years of age.

EFFORTS TO SUSTAIN THE GAINS OF PCRDC

By end of 1987, the implementors of PCRDC were already probing on the possibility of institutionalizing the Programme. For five long years, PCARRD and PCRDC have been dialoguing with Secretaries of appropriate Departments of the national government and members of the lower and upper house of Congress, lobbying for the creation of a National Carabao Center.

The Philippine Carabao Center (PCC) was created as an attached agency to the Department of Agriculture, taking momentum from the gains and achievements of the earlier Programmes.



The Philippine Carabao

THE PCC THROUGH THE YEARS

Today, four year after its creation, PCC stands tall as the premier institution promoting profitable and sustainable carabao-based enterprises designed to improve the income and nutrition of rural farming communities.

Through Carabao Development Programme (CDP), the PCC addresses the national concerns on poverty alleviation, nutritional upliftment, income equity, and people empowerment. This CDP is a continuous and organized effort to increase the genetic potential of the native carabaos for meat, milk, and draught.

Young as it is, PCC has earned laurels for its efforts. Just recently, it has perfected a technology on *in vitro* maturation and fertilization and successfully produced the first two test-tube carabaos, which is a distinctive technological achievement in the country's effort to develop superior breeding animals.

PCC has also started importing Murrah buffaloes from Bulgaria and USA. These form part of the elite herd in the PCC genepool that serve as source



A Philippine farmer with Carabao

of germplasm for crossbreeding/upgrading of Philippine carabaos.

With 13 centres to implement the CDP, soon PCC will not just be serving the Filipino farmers but other Asian farmers as well. Through continuous build-up, it will not be long before the Philippines becomes the center for buffalo development in the region.

FIRST INTERNATIONAL AGRONOMY CONGRESS AGRONOMY, ENVIRONMENT AND FOOD SECURITY FOR 21ST CENTURY November 23-27, 1998, New Delhi

Theme

The theme of the International Agronomy Congress will be Agronomy, Environment and Food Security for 21st Century. Tentatively there will be following sub-themes; these will also be the topics for the symposia :

- I. Food Production and nutritional security.
- II. Sustaining agriculture through resource conservation.
- III. Agro-inputs and environment.
- IV. Farming systems.
- V. Diversification and commercialisation of agriculture.
- VI. Globalization of Agriculture and Policy imperative.
- VII. Research-education-extension linkages.

A Poster Session alongwith Working Groups will be organised on the following topics:

- I. Human Resource Development in agronomy to meet future challenges.
- II. Technical co-operation to face future challenges of sustainable agriculture.

For further information please contact:-

Secretary, Indian Society of Agronomy
Indian Agricultural Research Institute, New Delhi 110 012, India.
Fax: 091-11-5742283

BANGLADESH AGRICULTURAL RESEARCH COUNCIL (BARC)

BANGLADESH

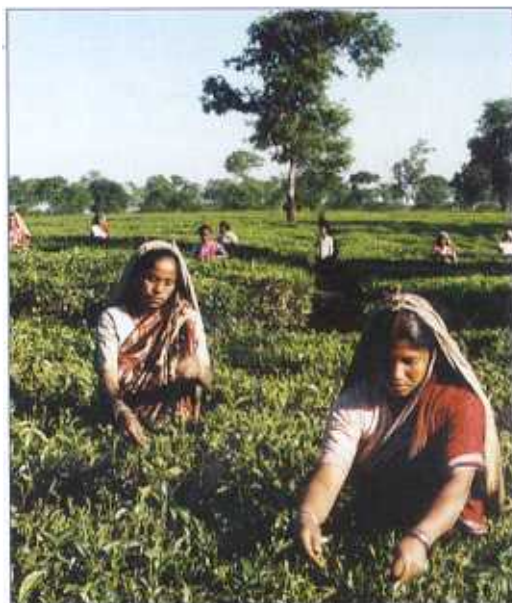
The economy of Bangladesh draws its strength and stability mostly from agriculture. With the rapid increase in population and very high pressure on land in Bangladesh, which is one of the thickly populated countries of the World, the traditional farming system has to evolve into an intensive system of production.

Keeping the national priorities in view, BARC was established in 1973.

BARC is organised into three main bodies:

- (1) The Governing Body
- (2) The Executive Council
- (3) The Secretariat

The Secretariat has in it a number of support service units such as computer center; agriculture information center consisting publication, documentation, library and reprography units; training cell; nutrition cell; and technology transfer and monitoring unit.



Tea plucking in the Tea Research Institute, Srimangal

To be responsive to the needs of the time, agricultural research has to be very effectively managed and directed to the pressing problems confronting the society. The primes of bountiful harvests from agriculture is realized only if research is well planned and well managed. The application of management concepts to research involves close coordination and intensification of research and research related activities. These are even more vital to a country like Bangladesh dealing with the precarious balance between food/energy and population growth.

BARC is at the helm of the national agricultural research system. It has the responsibility to strengthen the national agricultural research capability through planning and integration of resources. This involves cooperative activities in several government ministries (Agriculture, Forests, Livestock and Fisheries, Education, Industries and Commerce) under which the entire Bangladesh Agricultural Research effort is now coordinated. BARC is also supported by Bangladesh Council for Scientific and Industrial Research (BCSIR) and the Bangladesh Institute of Development Studies (BIDS) which are involved *inter alia* in research related to agriculture.

FUNCTIONS AND RESPONSIBILITIES

- Planning, developing and funding agricultural research programmes
- Establishing a system of priorities for agricultural research and providing mechanisms for updating these priorities
- Providing the mechanism for assessment of progress and updating the programmes
- Coordination and evaluation of agricultural research programmes
- Studying the human resources position in agricultural research and developing appropriate training programmes
- Liaison with other countries in matter of scientific research
- Holding national and international conferences, seminars and workshops
- Publication and dissemination of scientific information, and
- Transfer of technology and monitoring

Each of the primary institutions in the Bangladesh Agricultural Research system has a specific mission and is involved in a wide range of applied and adaptive research activities. These are complemented by educational support in the form of workshop and seminars for scientific personnel, in-service training for supporting staff and field-days and related efforts to communicate research recommendations to extension agents, farmers and other users of information. Bangladesh Agricultural Research Institute (BARI) is the largest and most diversified of the research agencies. It has primary responsibility for research in oilseeds, pulses, wheat, tobacco, cotton, citrus, maize and other coarse grains, potatoes and a wide range of vegetables and horticultural crops. Commodity specific research institutions serve as the major commodities on Rice, Jute, Sugarcane, Livestock, Fisheries, Forest and Tea. The Bangladesh Institute of Nuclear Agriculture (BINA) is a part of world wide system established by the International Atomic Energy Agency.

Another innovation during the past decade has been the strengthening/ establishment of the network of regional research stations and sub-stations under these institutions that work on regional and local problems, and also carry out studies on the adaptation of new technology in different agro-ecological areas. A related development is the expansion of the on-farm trial procedures in which researchers work with local farmers who try out new practices under actual farming conditions. This ensures that new technology is practical for adoption by farmers. The on-farm trials help to bridge the gap between theory and reality. Researchers pass new findings through the extension network to reach farmers who can put them to practice. In turn, farmers can use the extension network to help researchers become more aware of the real problems they are facing.

Agricultural Research Plan :- One of the important functions of the Bangladesh Agricultural Research Council is to prepare a national agricultural research plan. Such a plan generally identifies the areas of research for the next 5-20 years, with scope for

updating periodically. It contains the guidelines for all research activities in agriculture and defines the goals, priorities and scope of national research, assuring support to the national development plans.

Human Resource Development :- BARC makes periodic study of manpower position in agricultural research and based on this, initiates manpower development Programme both degree and short-term training for agricultural research workers, abroad and within the country, sponsors visits to research institutes and laboratories where outstanding work is being conducted or to attend conferences abroad.

Research Management :- The research management aspect is aimed at effectively supporting Programmes implementation, and manpower and infrastructure development activities. It is achieved through execution of research evaluation, monitoring and planning system; improvement of accounting; auditing and budgeting policies and guidelines as related to research; and promotion of member agencies in the research network to work together.

Effective flow of technology for its timely utilization in the field is a critically important element in the activities of BARC.

Transfer of Technology :- The BARC Act recognizes this by designating establishment of linkage between research institutions

and agencies propagating the results of research as one of its functions. A Technology Transfer and Monitoring unit established within BARC secretariat, closely follows up all activities relating to transfer of technology, and help establishing continuing links between research institutions and extension agencies.

PROJECT DEVELOPMENT

The Programme – areas in which BARC's projects are developed generally include Crop Improvement; Soil and Water Management and Land Use; Plant Protection; Plant Nutrition; Animal and Fish Production; Animal Health; Farming System; Post Harvest Technology; Forestry; and Socio-Economics.



Scientists at work in the laboratory

FINANCIAL RESOURCES

Government financing is generally the regular source of funds that BARC receives for the implementation of its various Programme activities. Outside sources, such as bilateral country aids and grants, foundation supports and loans from the World Bank, the Asian Development Bank etc. are also tapped/received.

BARC spends its funds on contract research project grants to research institutes, equipment, books and journals, minor capital works and services, scholarships, seminars and salaries and general running expenses.

REPORTING RESEARCH RESULTS

BARC publications include scientific monographs, bulletins, technical papers, annual reports and technical directions. BARC also publishes the Bangladesh Journal of Agriculture.

ACHIEVEMENTS

Over the years, BARC has gradually expanded its activities. It has been successful to consolidate, through a process of evolution, a highly fragmented research apparatus into a single agricultural research community. The council has now the authority and ability to coordinate all agricultural research work, resulting in efficient distribution and use of research

resources. Several existing research institutes and experiment stations have been recognized and strengthened. Two national research institutes, namely, the Bangladesh Livestock Research Institute and the Fisheries Research Institute were established in 1985, removing a long time neglect in livestock and fisheries research in Bangladesh.

LINKAGES

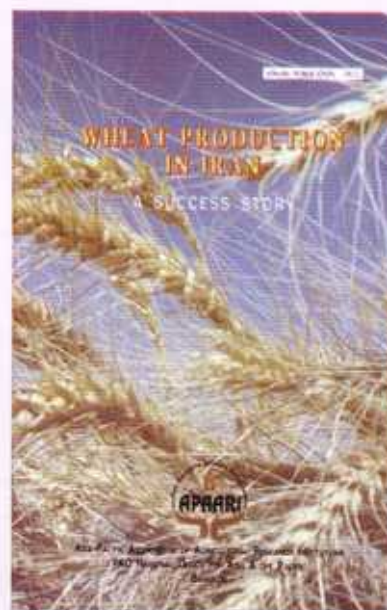
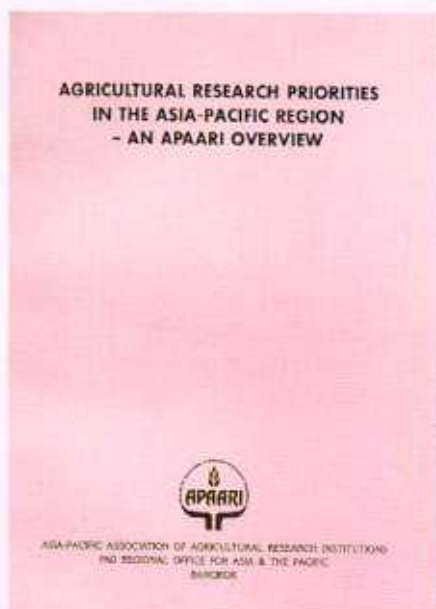
At present, BARC maintains formal working relations with a large number of national and international research institutions which facilitate exchanges in research findings, methodologies, germplasm and more importantly, the transfer of appropriate technology.

BARC will continue to expand its international linkages to include as many national and international institutions as possible, which gives accesses to new materials, technology and training.

The Council has prepared a research plan upto 2010 AD. The risks of looking as far ahead as 20 years are obvious but worth taking, hoping knowledge will continue to grow to solve problems.

The task ahead is large and difficult, but ambitious vision, dedication and innovative approach of scientists, will make it possible to face the challenge of tomorrow's agriculture.

APAARI PUBLICATIONS



"The estimated world population of 5.25 billion in 1991, with life expectancy of 66 years, has led to the projections of world population at 6.17 and 8.35 billion by 2000 and 2025 AD. This is believed to bring resources under further pressure. Presently, 800 million people in the developing world and 15% of the total world population are insecure on food front. Even the optimistic projections AD 2020 indicate that about 100 million pre-school children would remain protein-energy malnourished. More than half of the world's protein-energy malnutrition problem is in South Asia, and reasonably large number are estimated to remain malnourished even by 2020 AD, despite increase in production, growth in income and reduction in population growth rate.

The world cereals production, which constitute the major staple food, has shown a compound growth rate of 3.9% during 1966-90. Although, the developed economies produced bulk of the world cereals, their share decreased from 54% in 1966 to 46% in 1990. But, Asia's share increased from 33% in 1966 to 41% in 1990. An FAO study indicates that the trade in agricultural products would increase if there was 1.0% higher growth in incomes of the developing countries, and their cereal consumption would increase by 20 million tonnes, with net imports rising by 8 million tonnes in 2001. Raising food output in the developing countries is, therefore, a key priority issue which must be addressed appropriately in future.

The development of agriculture in a given environment entails a skillful management of the basic production assets, i.e. land, water, biodiversity, climate and sunshine. Manipulation of biodiversity involves domestication of plants and animals, selection of superior genotypes on to crossbreeding for incorporation of alien genes and finally application of most sophisticated biotechnological and genetic engineering techniques.

In the scenario, the contemplated eco-regional planning will have to aim at enhancing agricultural productivity and production on a sustainable basis. This would call for an effective collaborative mechanism, i.e. responsibility for a higher level of integration in research and development efforts. Thus, a lucid distinction of collaborative mechanism and a clear distinction between priority setting at the eco-regional level and its effective execution at the local levels would be essential. The conceptual model of deriving the best out of the vast resources – scientific, technical, ecological and environmental – will have to be judiciously used and managed in a way that these resources are in harmony with the environment. The agricultural research institutions will be called upon to develop closer links with agri-business and with private sector, in general, and the National Agricultural Research Systems (NARS) would be required to assess ground realities for better

functioning on a "Switch On" and "Switch Off" mechanism to respond to changing needs.

Under the given circumstances, a well-thought-of research and development programme in a matrix-mode with streamlined priorities, appropriate strategies and consciously thought-of approaches would be absolutely essential. Thus, the contemplated sustainability would hinge on enhanced productivity, profitability, equity, protection of environment and natural production base, efficiency, effectiveness, competitiveness, market-oriented and demand-driven production to consumption system. This would require synergies of action, reaction and interaction so that the desired results are in tune with the comprehensive policies, priorities, and resource allocation/deployment, at the national, regional and international levels. Addressing the research agenda in future at the regional and international levels is likely to be more rewarding.

With reorientation of the national, regional and CG system's agenda, research programmes will have to be readjusted with appropriate financial arrangements, governance, implementation and monitoring mechanisms. For each of the missions, so identified, the principle strength of the participating NARS would determine the success of the Programme. A strong regional fora and networks cannot be thought of with weak NARS. Similarly, the eco-regional orientation, regional fora and regional networks would determine the regional strength and relevance of the Consultative Group on International Agricultural Research (CGIAR) in future. Hence, partnership and catalytic role of the CGIAR assumes far more importance than ever before. In fact, essence of co-operation with removal of apprehensions would be mutually beneficial for all the reasonable players as partners. Thus, effectiveness of the CGIAR would also depend on the simultaneous growth of the regional fora like the Asia-Pacific Association of Agricultural Research Institutions (APAARI) and the various NARS. Some of the recent initiatives in this regard are likely to be rewarding in future.

While moving "up-stream", the system should not lose sight of the resource-poor farmers. In this endeavour, establishment of both the centres of excellence and required networks would be the priority areas in future, where sharing by all concerned will be the cardinal principle. In doing so, it must be realized that problem-oriented commodity centres and resource centres in research are not mutually exclusive. The commodity research must centre around appropriate resources and resources are to be effectively managed for enhancing farm productivity. Cutting across the corps and the commodities to enhance competitiveness and market access, researches on processing, product development and value addition should also receive much needed funding and policy support in future.

(ICAR News, Oct-Dec '95)

2ND ASPRAD COORDINATING COMMITTEE MEETING

AUGUST 25-26 1997, LOS BAÑOS, LAGUNA, PHILIPPINES



*2nd ASPRAD Coordinating Committee Meeting
August 25-26, 1997, PCARRD, Los Baños, Laguna, Philippines*

ASPRAD successfully held the 2nd Coordinating Committee meeting last August 25-26 1997 at PCARRD, Los Baños, Laguna, Philippines. The meeting aimed to review the status of sweet potato and potato R&D Programmes of the different member countries. Another objective of the meeting was to formulate plans and Programmes for ASPRAD beyond its transition phase.

HISTORICAL BACKGROUND

Since it started more than a decade ago, ASPRAD Programme (formerly the Southeast Asian Programme for Potato Research and Development or SAPPRAD) has been hosted by the Philippine Council for Agriculture Forestry and Natural Resources Research and Development (PCARRD). The Programme mostly got financial support for its operation as well as for its R&D activities from the Australian Center for International Agricultural Research (ACIAR). Funding support was then concluded in December 1996. However, ASPRAD continued its networking activities with the member countries. It entered into a new arrangement under the auspices of the Asia-Pacific Association of Agricultural Research Institutions (APAARI) which provided a modest financial support for the R&D activities of ASPRAD, especially in the technology transfer and support to need-based training. The Philippine NARS, through PCARRD is now hosting and enhancing the ASPRAD activities. This is being done in coordination with the national programmes of the member countries.

HIGHLIGHTS OF THE MEETING

After each representative briefly presented a status of R&D Programmes in his country, plans to enhance collaboration were discussed (different R&D concerns were identified). Each member country was assigned an area for research that it would lead or co-lead in the preparation of a proposal on technology package for promotion. Tasking was done based on the expertise and resources of each member country. Technologies to be packaged include promotion, verification and adaptability evaluation of the technologies developed in the region.

In addition, ASPRAD also aims to re-tool and re-structure some of the technologies it has already developed to ensure high and efficient adoption by members and at the same time taking into consideration basic researches of both crops.

Also discussed in the meeting were guidelines in accepting countries for membership as the programme seeks to continue networking in the region. Foremost of the guidelines generated was that a prospective member-country should have potential for strategic partnership and that sweet potato and potato are of high international agenda. The partnership mode shall also prevail meaning a prospective member-country should have the minimum capability to provide resources to implement responsibilities particularly for national activities.

Based on current status of potato and sweet potato in each member-country, R&D concerns were identified. Generally, Philippines will take the lead

for the seed system in potato including the exchange of advanced lines for regional trials, with Papua New Guinea as co-lead. India together with China will lead and co-lead potato varieties for processing especially for fries and chips while Indonesia will lead in the IPM to be assisted by the Philippines. For sweet potato R&D activity lead shall be provided by China and Vietnam in the seed system, Sri Lanka in IPM and Philippines in the exchange of advanced lines for regional trials.

On the role of the International Potato Center (CIP), Dr. Gordon Prain, Regional Coordinator for the East South East Asia Pacific, acknowledged the need and importance of establishing research partnership in the region as countries need to efficiently interact with each other. CIP committed a limited role in communication maintenance among members and would-be member countries. CIP continually wants to maintain a low level of coordinating function especially when it comes to financial support for collaborative researches. A mechanism to generate funds for meetings and other networking activities, including collaborative research among the countries involved should be formulated.

ASPRAD TRANSITION PHASE ACCOMPLISHMENTS

With regard to ASPRAD transition phase accomplishments, foremost of these is the publication of a potato book entitled "The Potato in Tropical Asia" by E.T. Rasco *et al.* The book tackles potato production in its third frontier which is the lowland tropics. It gives scientific views as well as experiences of growing potatoes from the river flooded plains of

Cagayan Valley from the Philippine experience, to the post paddy-rice area of Chandmai, Thailand, to the low elevation sandy soils of Sri Lanka down the Red river Delta of Vietnam. The authors attempted to explain the complexity and challenges of raising the crop to its new agroecological niche in both technological and economical point of view.

A draft of "Abstract-Bibliography of Sweet Potato and Potato Research and Development Activities" was also distributed to different member countries for comments and suggestions before publication. The publication presents abstracts of research and development activities conducted by different researchers as research coordinators since the creation of the Programme in 1982. The Abstract-Bibliography would be an invaluable guide for researchers and interested groups who would like to indulge in advance work on potato as food commodity for further R&D.

The conduct of coordinating committee was itself an accomplishment as communication among member countries has been maintained. As a matter of fact, India has been instituted to be the newest member in the network.

FUTURE PLANS

Future plans include inter-country training for seed system which will focus on bacterial disease management and cross-country monitoring of R&D activities which aims to assess the impact of technologies already generated and applied. Proceedings of the meeting and a newsletter will also be released early next year.

PRO-MUSA – A GLOBAL INITIATIVE FOR MUSA IMPROVEMENT

Pro-Musa is a global Programme for the Musa improvement, which was launched in March, 1997, by the International Network for the improvement of Banana and Plantain (INIBAP) and the World Bank in a joint meeting held in Guadeloupe. Pro-Musa is a new global initiative focusing on Musa improvement involving all the major players in Musa improvement research. The Programme is an innovative mechanism to bring together research carried out both within and outside the CGIAR, creating new partnerships between NARS and research institutes in both developing and developed countries. The information of such partnerships will also contribute to strengthening the capacity of NARS to conduct Musa related research. Participation in Pro-Musa is based on the capacity to contribute through a high scientific capability in Musa research and on comparative advantage.

Pro-Musa operates as a consortium and relies on a range of funding mechanisms. Partners in the Programme are expected to contribute in kind their own research and, in addition, the Programme seeks further resources in order to address priority research needs, as identified by the Programme partners.

The major thrust of Pro-Musa is to develop a wide range of new banana hybrids suitable for production by banana growers worldwide. The Programme brings together conventional breeding based on hybridization techniques with genetic engineering and biotechnological breeding approaches. This broad-based genetic improvement effort is supported by research being carried out on specific pests and diseases within the various Pro-Musa working groups. An efficient mechanism for evaluating new varieties produced within the framework of Pro-Musa is also an essential component of the Programme.

THE NETWORK OF AQUACULTURE CENTRES IN ASIA-PACIFIC (NACA)

NACA is an intergovernmental organization of a coordinated and interlinked system of aquaculture and related institutions working in close cooperation on the development of technology, manpower and information required to (a) increase the contribution of aquaculture to national development goals and (b) expand aquaculture development in the Region. The Organization approaches aquaculture development from a holistic viewpoint, by integrating issues on environment, resource management and sustainability, and socio-economics in its Programme of Work. It is cross-sectoral and it views aquaculture as an integral part of the fisheries sector rather than as an isolated sub-sector. The Network operates under the principle of Technical Cooperation among Developing Countries (TCDC).

OBJECTIVES

NACA aims to promote expanded development of aquaculture to increase food production, improve rural income and employment, diversify farm production, and increase foreign exchange earnings and savings.

To achieve its objectives NACA, through its linked aquaculture centres, conducts interdisciplinary research on selected farming systems; trains core personnel for national aquaculture development; and operates a regional information system for development planning, research and training. Through TCDC, and networking among its regional lead centres, national aquaculture centres and associated national institutions, the national resources are pooled and responsibilities shared for a cost-effective implementation of regional activities.

BRIEF HISTORY

NACA began in 1980 as an UNDP/FAO regional project with Headquarters at Bangkok aimed at expanding aquaculture development through regional cooperation. NACA became an intergovernmental organization in 1990. The project for the establishment of NACA was proposed in response to the recommendations of the Regional Workshop on Aquaculture Planning in Asia held in Bangkok in 1975 and endorsed by the FAO Technical Conference

on Aquaculture held in Kyoto in 1976 as a component of the Kyoto Strategy. The project had 11 participating governments: Bangladesh, China, Hong Kong, India, Indonesia, Malaysia, Nepal, Philippines, Singapore, Sri Lanka and Thailand.

RATIONALE FOR A NETWORK ORGANIZATION

There are three basic reasons the Kyoto Conference considered in recommending a network organization to carry out the task of regional aquaculture development.

Diversity : Asia has vast and varied aquaculture resources and farming systems. The countries in the region are at different stages of aquaculture development and have different priorities related to the types of farming systems and fish species.

R&D for 'fish' : This diversity would make it extremely difficult and quite expensive to be tackled



"NACA Headquarters" in Bangkok



Fresh Water Aquaculture in India

effectively under one R&D centre as "Fish" covers aquatic food organisms in the plant and animal kingdoms with the latter comprising the vertebrates and invertebrates.

Pooling of resources, sharing of responsibilities : As no national aquaculture institution in Asia has all the facilities and manpower to carry out the essential activities, the need to set up a network of regional aquaculture centre to share these responsibilities was recommended at the Kyoto Conference.

THE NACA MECHANISM

The NACA structure consists of the Governing Council, Technical Advisory Committee and the Secretariat.

Governing Council: The Council, supreme policy making body of the Organization, is composed of representatives of member governments. The FAO is represented in the Council but without voting powers.

Technical Advisory Committee: The Committee advises the NACA Governing Council on technical aspects. Its mandate is to assess the priority needs of aquaculture development in the Asia-Pacific Region, and identify areas in which technical cooperation among the member countries and specialized institutions could make significant contributions to these needs; formulate technical programmes of work to be carried out by the Network directly or under its umbrella, and recommend appropriate strategies for their implementation. The TAC consists of an expert each from member governments, nominated in an individual capacity for his or her expertise, and an FAO representative.

Secretariat. The Secretariat, headed by a Coordinator, is the coordinating body. It consists of core professional staff in appropriate fields, associate professional officers assigned to NACA by collaborating agencies, seconded staff from governments, and the administrative support staff whose services are provided by the host government.

NETWORK MECHANISM

To implement its Programmes, NACA when it was still a project had designated and strengthened four national aquaculture research institutions to serve as Regional Lead Centres (RLCs) to share the responsibility for overall aquaculture development without each centre deviating much from the host country's priorities. These four RLCs, located in China, India, the Philippines and Thailand, formed the nucleus of the Network. Five national centres, located in Bangladesh, Indonesia (with 2), Nepal and the Philippines, were also designated and developed for linkage with the RLCs. A number of associated national R&D Institutions including universities have since participated in various regional activities. The regional lead centres have common function in research, training and information exchange. Each RLC focuses on the species and farming systems of national and regional importance while the national

centres adapt to local conditions the technologies developed by the lead centres.

NACA has absorbed the UNDP/FAO seafarming project activities. The seafarming project earlier operated in China, India, Indonesia, the two Koreas, Philippines, Singapore and Thailand. Under NACA, the seafarming regional programme expanded to 17 centres in 10 countries covering all the major aquatic environments.

CO-ORDINATED IMPLEMENTING STRATEGY

All of NACA's regional project activities involve the participation of senior level planning and technical personnel. The National Coordinators play a vital role in the planning and implementation of the studies and in the follow-up action to recommendations. The strategy has enabled a close and wider participation of governments.

Besides contributing in-kind services of their national experts and aquaculture facilities for TCDC activities the member governments collectively bear the cost of core activities, through their obligatory



Ad hoc Training Courses

contributions to a common fund. Under the NACA Agreement each government contributes at a rate ranging from a minimum of \$10,000 to a maximum of \$60,000 annually.

NACA is structured to collaborate with various agencies and organizations. There is also provision for funding agencies and donor governments to be represented in the Council as associate members.

REGIONAL WORK PROGRAMME

NACA Work Programme for regional aquaculture development was adopted that reflects regional priorities and national needs including the issues of poverty alleviation, food security, rural development, environmental sustainability, and responsible aquaculture practices. The emphasis has also been

placed on the environmental and socio-economic aspects of aquaculture development.

The second five-year Programme began to be implemented in 1996, with aquaculture sustainability as its theme.

COLLABORATING AGENCIES

The regional activities are mainly carried out through TCDC, but often with catalytic assistance from donor governments and agencies and the collaboration of other development organizations including NGOs. Among the agencies and organizations that NACA has had collaborative activities, or entered into agreement for cooperation, are ACIAR, AIMS, Aquatic Animal Health Research Institute (AAHRI) of Thailand which has a regional disease control programme, ADB, AIT, China's Center for Marine Biotechnology which is a UNESCO regional resource centre, DANCED, EU, FAO, ICLARM, IFREMER,

Mekong River Commission, ODA, OIE or World Animal Health Organization, SEAFDEC, UNOPS, UNDP, WHO and the World Aquaculture Society. NGOs include PADEK, CIDSE and SAMADHI-Geres which are Cambodian-based, and the Global Aquaculture Alliance.

REGIONAL AQUAFARMERS NETWORK

Finally, NACA has been requested by farmer representatives to assist in the establishment of a regional aquafarmers network. A survey of national farmers' organizations has been launched which has so far received responses from more than 190 organizations, groups and farmer communities in 12 countries with a membership of more than 100,000. The first of a TCDC-like arrangement has been made, facilitated by NACA, in which the Jessore (Bangladesh) fish farmers association hosted a 1-week study tour in Jessore of seven Cambodian aquaculture technicians.

Should Government be Getting out of Agricultural R&D ?

Around the globe, agricultural research institutions and policies are at a pivotal point. After decades of sustained growth, the rate of increase in real spending on agricultural research is slowing dramatically and even shrinking for some countries. At the same time, the share of private investment in total agricultural research and development (R&D) is rising. In developed countries, it now accounts for about half of all agricultural research spending although it is still a negligible share of the total in many developing countries. In all countries, the government's role in agricultural R&D is undergoing profound change, diminishing in some areas and growing in others. But what should be the government's role?

According to some observers, it is not obvious that governments should invest in agricultural R&D at all, and indeed, worldwide, the growth of public investments in agricultural research is falling sharply. In developing countries, growth in public investments in agricultural research fell from 6.4 percent a year in 1971-81 to 3.8 percent in 1981-91, and in developed countries from 2.7 percent to 1.7 percent a year in the same period. But these declines could be counterproductive, because agricultural R&D offers the prospects of large payoffs in terms of increased food production and incomes. Many studies report rates of return to agricultural research investments in excess of 20 percent per year. The evidence remains convincing that returns from agricultural research are comparatively high - certainly high enough to justify past investments. And there is every reason to expect returns to continue to be substantial. Ongoing gains from established scientific practices combined with new developments in biotechnology and information technologies point to a real potential for important achievements in agricultural research, possibly on the scale of the Green Revolution, with enormous benefits for both poor and rich countries.

Given that governments should continue to invest in agricultural research, what exactly should they invest in? The short answer is that, in principle, governments should fund research that would not be privately funded and that offers convincing expectations of a positive social payoff. This includes not only basic research but also applied R&D whose benefits are difficult to appropriate because, for example, they spill across different areas of agriculture. It also includes research on ameliorating the negative environmental effects of agriculture.

This is not to say that private research is unimportant or unnecessary. Without private investment, overall investment in agricultural research

would be much lower, especially in developed countries. Also, private firms tend to focus on aspects of commercial agriculture such as chemical and mechanical inputs, as well as food processing and other postharvest research. So it is important that public investment in agricultural research not crowd out private investment, but rather let private agencies conduct the kind of research they do best.

Government also has a role in agricultural research beyond investment. One of its most important tasks is the establishment of intellectual property rights over the results of agricultural research. All countries who signed the General Agreement on Tariffs and Trade have pledged to put in place such property rights by 2005. Such rights will make it possible to appropriate more of the benefits of research, thus encouraging more private participation.

Another role for government is to make institutional innovations that will encourage public-private partnerships not only in performing agricultural research, but also in funding and managing it. Already, public and private agencies are jointly funding applied research, public agricultural research institutions are being privatised, and competition among researchers is being introduced to increase productivity and help allocate research resources.

The pace of change in agricultural research has picked up considerably in recent years. The nature of that change has also been transformed by the possibilities offered by biotechnology, by increased trade in agricultural goods and services, and by changes in government policy towards agriculture in general. In addition, consumers have had an impact on agricultural research through their demands for greater food safety, quality, and convenience. A new emphasis on the environmental sustainability of agriculture has also broadened the research agenda. Certainly a scaling back of public funding for certain types of agricultural R&D may be warranted, but increasing investments in other areas may be justified. There is a compelling case that governments should continue to play a role in agricultural research, but that role is, or ought to be, changing in ways that reflect the new and rapidly evolving realities of the agricultural sectors they serve.

PHILIP G. PARDEY

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INTERNATIONAL TRAINING COURSE ON “MANAGEMENT AND UTILIZATION OF FODDER TREES/SHRUBS IN SUBTROPICAL AND TEMPERATE HIMALAYA”

The FAO sponsored International Training Course on “Management and Utilization of Fodder Trees/Shrubs in Sub-Tropical and Temperate Himalayas” was held at IGfRI, Jhansi during September 22-30, 1997. Ten participants, including two from Nepal and one from Bhutan, attended this training course.

The training course was organized into a series of lectures and practical demonstrations besides panel discussions, field visits and a study tour.

LECTURES

- distribution and adaptation of diversity and conservation of fodder trees/shrubs;
- genetic improvement, diversity and management and conservation of fodder trees and shrubs;
- establishment, management and utilization of fodder trees/shrubs;
- hill farming systems based on fodder trees/shrubs;
- livestock production in fodder tree based pastoral systems;
- diagnosis and design exercise for farmers and other clientele and R&D issues in fodder;
- trees/shrubs research in Himalayan region.

PRACTICAL DEMONSTRATION SESSIONS:

- species identification and herbarium techniques;
- seed treatment and germination;
- nursery techniques;
- canopy management;
- estimation of antiquality factors in trees/shrubs; and
- growth and production modelling of fodder

Two field visits were organized to expose the participants to the current research activities in the area of fodder trees/shrubs, showing the research activities pertaining to fodder tree/shrub research at IGfRI and NRCAF, Jhansi and the Orcha and Panna forest areas to present the development activities of the Institute. The participants presented an account of work being conducted by them or their respective institutions in the area of fodder trees/shrubs and a panel discussion of fodder trees/shrubs was held.

In addition four day study tour was conducted (Jhansi-Palampur in Himachal Pradesh) to provide an opportunity to the participants to visit a number of activities pertaining to various aspects of fodder



A view of Inaugural Session of Training Course

trees/shrubs, especially for the Himalayan region. The participants were shown the soil and water conservation techniques for raising the fodder trees/shrubs for difficult sites at Datia (Madhya Pradesh); the farm and social forestry plantations developed by Social Forestry Wing of Madhya Pradesh Forest Department at Gwalior; activities related to fodder trees/shrubs in farmer's fields on way to Palampur; experimental farm of HPAU, Palampur; research farm of IGfRI regional station at Palampur; farmer's fields at Palampur and Indian National Gene Bank Facility at the NBPGF, New Delhi.

The closing and certificate distribution ceremony of this training course was held in New Delhi. Dr. R.S. Paroda, Secretary, Department of Agricultural Research and Education and Director General, ICAR, distributed certificates to the participants and addressed the audience on this occasion. He stressed the need for establishment of a network among various countries of the Himalayan region for exchange of information in the area of fodder trees/shrubs. Mr. Peter Rosenegger, FAO Representative in India and Bhutan, expressed his appreciation of the role of IGfRI in organizing this training and suggested for developing future linkages between IGfRI and FAO.



The participants assessing the genetic variability

SEVENTH REGULAR SESSION OF THE FAO COMMISSION ON GERMPLASM RESOURCES FOR FOOD AND AGRICULTURE (CGFRA) ROME, 15-23 MAY 1997 – A SUMMARY REPORT

The progress of global system on conservation and sustainable use of PGRFA in the seventh regular session of the FAO Commission on Genetic Resources for Food and Agriculture (CGFRA) at Rome during 15-23 May, 1997 may be summarized with the following salient points.

A multi year work programme on agricultural bio-diversity established as per decision III/11 of COP shall be pursued by the FAO Commission and CBD Secretariat through cooperation. Also, the FAO's monitoring/reporting on agricultural bio-diversity shall be consistent with CBD, other relevant inter-governmental bodies and world food summit' Plan of Action.

CBD through its decision II/5 has requested GEF to give priority support to efforts for conservation and sustainable use of agro-biodiversity. Many countries stressed the need to have separate funding. The FAO Commission requested FAO to provide assistance and guidance to countries on request in implementation/monitoring of GPA. Further, monitoring of GPA and updating/reporting on the state of world's PGR were held as complementary activities which do not need separate reports (i.e., need single report) by each country.

No changes in the CCGCT (code of conduct for germplasm collecting and transfer) or any further work on code of conduct for Biotechnology were recommended, till the revision of IUPGR. However, a decision guide on regeneration of accessions in seed collections, prepared by IPGRI, has been made available to the FAO commission for comments by members. The existing arrangements between FAO and the 12 CGIAR centers shall continue, pending the revision of IUPGR.

Statutes of the inter-governmental technical working group of AGR (Animal Genetic Resources) and PGR were presented. Both working groups have 5 members each for Asia. The AGR were specifically addressed in view of the broadened mandate of the Commission and to facilitate integrated approach to agro-biodiversity.

The IPGRI informed the Commission in a summary statement that 0.5 million accessions were now covered under the FAO-CGIAR agreements with the designation of 50,000 new accessions under this agreement.

INTER-FACE WITH CBD

The summary statement presented by the CBD Secretariat observed that at least *three decisions of the COP, Buenos Aires, Nov., 1996, were of direct relevance to the ongoing negotiations for revision of IUPGR, namely,*

- (1) Decision III/11 - Conservation and Sustainable use of agro-biodiversity
- (2) Decision III/15 - Access to Genetic Resources, and
- (3) Decision III/17 - Intellectual Property Rights.

The COP-III noted the narrow options for legal status of revised International Undertaking, as being, i) a voluntary agreement, ii) a binding instrument, and iii) protocol to CBD. It encouraged parties to implement GPA at national levels. Pollinators and soil-micrograms in agriculture needed special attention (as bioindicators) and comprehensive reporting by countries to Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA)/Conference of Parties (COP) of the CBD to help instrument early warning mechanisms.

Decision III/11 - Conservation and Sustainable Use of Agro-Biodiversity : A need for appropriate mechanisms at national level was asserted to ensure that agricultural bio-diversity activities and plans will be effectively integrated into the national bio-diversity strategies, plans or programmes that parties have been requested to prepare, and report on to COP-IV, as a priority activity in line with Article 6 of the convention.

It was clearly noted that whereas the CBD and GEF focal points tend to be located in the Ministries of Environment, the programmes and plans for the agriculture sector were covered in the Ministries of Agriculture. The decision III/11 of COP and recommendations of GPA clearly emphasised on the need to liaison and effective integrated approaches for the conservation of agricultural bio-diversity.

GEF guidelines referred the parties to the 1995 WRI/IUCN/UNEP national bio-diversity planning guidelines and that to date there were no specific guidelines on agricultural bio-diversity. It was clearly noted that *attention/funding on national activities on agricultural bio-diversity need to be increased* as a priority in line with the request of the COP.

WORKSHOP ON NATIONAL CONCERN FOR AGRO-BIODIVERSITY 15-16 October, 1997

The National Academy of Agricultural Sciences (NAAS), New Delhi, and the National Bureau of Plant Genetic Resources (NBPGR) organised the first systematic, country-level workshop on concern for management, conservation and use of agricultural biodiversity during 15-16 October, 1997 at the Central Potato Research Institute, Shimla. The agenda included endorsing the Convention of Parties (COP-III)'s recognition to agro-biodiversity as a separate entity and to deliberate upon issues concerning national policy, legislative measures and Action Plan. The two-day workshop was well attended, by over 125 stakeholders, including scientists/experts, representatives from government/non-governmental organisations, universities and others.

The workshop laid emphasis on recognising the added importance of agro-biodiversity in the global, regional and national scenario. Several ambitious recommendations that emerged unanimously, included the need to formulate



Dr. R.S. Paroda addressing the delegates

a National Action Plan on agro-biodiversity conservation, management, registration and use, plant genetic resources (PGR) awareness/literacy/human resource development, access to PGR and benefit sharing, and the national PGR policy. The latter included, (i) constituting a National Policy Advisory Committee to act as a statutory body of the Central Government on matters concerning agro-biodiversity conservation, management and use, (ii) developing a national legislation on agro-biodiversity/genetic resources so that effective instruments are made available for national action plan, (iii) instituting a separate National Authority on Agro-biodiversity to deal with *inter alia* matters related to access and benefit sharing, (iv) establishing a National Fund for effective resource mobilisation towards PGR conservation and compensating the on-farm conservers, (v) allocating business on national action points in conformation with the capacity of the target area and expertise available, and (vi) considering scientists specialised in plant genetic resources for postings in Indian Embassies abroad.



Participants attending the workshop

TRAINING COURSE ON THE "DETECTION AND ESTIMATION OF AFLATOXINS UTILIZING IMMUNOCHEMICAL METHODS" HELD FROM 17-19 NOVEMBER 1997 AT ICRISAT ASIA CENTRE, ANDHRA PRADESH

To provide "hands on" training on the detection and estimation of aflatoxins using a competitive ELISA procedure, the procedure is adaptable to situations in developing countries.

OBJECTIVES

To provide theoretical background in

- Health and economic significance of aflatoxins;
- Principles of immunochemical and analytical methods;
- Sampling methods for estimation of concentration of aflatoxins.

The most widely used analytical methods which include TLC and minicolumns were demonstrated. Scientists and Senior Technical Staff from NARS in Asia, currently involved in the estimation of aflatoxins in groundnut-based products were targeted through this training and India, Indonesia, China, South Korea, Vietnam, Pakistan, Philippines and Thailand were invited to nominate participants.

NEWS FROM OUTSIDE THE REGION

CGIAR AT A GLANCE

The CGIAR, created in 1971, is an informal association of fifty-six public and private sector members supporting sixteen international agricultural research centres. The World Bank, the Food and Agriculture Organization of the United Nations (FAO), the United Nations Development Programme (UNDP), and the United Nations Environment Programme (UNEP) are cosponsors of the CGIAR.

The CGIAR system is a loosely connected network that consists of the Consultative Group (the Chairman, cosponsors, and other members), CGIAR committees (standing, advisory, impact evaluation, partnership, and ad hoc), international agricultural research centres and center committees, and a central service unit, the CGIAR Secretariat.

The mission of the CGIAR is to contribute, through its research, to promoting sustainable agriculture for food security in the developing countries. Productivity research to help alleviate poverty, and natural resources management, are the twin pillars of CGIAR research on food crops, forestry, livestock, irrigation management, aquatic resources, and policy; and in its services to national agricultural research systems in developing countries.

The CGIAR is characterized by the following:

Informality. The CGIAR has no constitution, no statutes, no regulations, and no membership laws. The Group meets twice a year to review policies, assess the impact of research, exchange views with centres and partners, adopt a research agenda for the following year, and pledge funds in support of that agenda. It reaches decisions by consensus, not by voting.

Leadership. The CGIAR Chairman, a Vice President of the World Bank, provides the system with intellectual and managerial leadership, helps to harmonize policies and programmes among multiple actors within the system, and fosters linkages between the system and its partners.

Autonomous centres and supportive members. CGIAR centres are autonomous institutions, each with its own charter, international board of trustees, director, and staff. Center scientists are drawn from all over the world. Centres are supported by CGIAR members whose contributions are entirely voluntary. Members contribute because they are dedicated to fulfilling the mission of the CGIAR. Each member contributes to the centre(s) of its choice. All contributions are grants.



The CGIAR stresses a pro-poor, pro-conservation strategy based on increasing agricultural productivity. Particular emphasis is placed on an integrated approach to agricultural production and environmental conservation, increased conservation, increased collaboration among centres and with partners, and a bottom-up, participatory approach

Public goods. The products of CGIAR-supported research are international public goods, unconditionally available to poor farmers and other users.

Focus. The CGIAR agenda is totally focused on agricultural research. Coupled with this is a commitment to hold fast over the long-term, recognizing that it can take up to twenty years to move a research result from laboratories to farmers' fields.

Excellence. Scientific excellence is the hallmark of the CGIAR system. The quality of work at the centers is maintained by the commitment to excellence of center scientists, by the strategic guidance of a Technical Advisory Committee, as well as by regular external reviews and impact assessment. Special awards for scientific excellence were inaugurated in 1996 to encourage young scientists and the research partners of CGIAR centers.

Impact. The impact of CGIAR-supported research is widely recognized. Norman Borlaug, the originator of the high yielding wheat that sparked the green revolution, is a Nobel laureate. The CGIAR as a whole was awarded the King Baudouin International Development Prize. Six out of ten World Food Prize laureates are from the CGIAR. An Impact Assessment and Evaluation Group keeps the impact and potential impact of CGIAR research under continuing assessment.

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. Report of the Second Tropical Asian Maize Network (TAMNET) Meeting (RAP Publication : 1997/1)
2. Approaches to the Development of Simple and Practical Diagnostic Tools for Integrated Soil and Plant Nutrition Management Usable by Farmers and Extension Officers (RAP Publication : 1997/2)
3. Forests and Forest Management in Mongolia (RAP Publication : 1997/4)
4. Proceedings of the First Asian Symposium on Industrial Utilization of Medicinal and Aromatic Plants (RAP Publication : 1997/5)
5. Proceedings of the Regional Expert Consultation on the Asian Network on Medicinal and Aromatic Plants (RAP Publication : 1997/6)
6. Report of the Sixteenth Session of the Asia and the Pacific Commission on Agricultural Statistics (RAP Publication: 1997/8)
7. Proceedings of the Workshop on Systematic Improvement of the Efficiency of Public and Private Livestock Services in Asia (RAP Publication : 1997/9)
8. Report of the Regional Expert Consultation on Strengthening Land Border Plant Quarantine Facilities in Asian Countries (RAP Publication : 1997/11)
9. The KAVA Crop and its potential (RAP Publication : 1997/12)
10. Report of the Expert Consultation on Strengthening Farming Systems Education at Colleges and Universities of Agriculture in Asia (RAP Publication : 1997/14)
11. Report of the Expert Consultation on Cut Flower Production and Development in Asia (RAP Publication: 1997/15)
12. Report of the Regional Expert Consultation on Research and Development Priorities for Oil Palm in Asia (RAP Publication : 1997/18)
13. Proceedings of the Regional Expert Consultation on Research and Development for Oil Palm in Asia (RAP Publication : 1997/19)
14. Report of the Twentieth Session of the Asia and Pacific Plant Protection Commission (RAP Publication : 1997/20)
15. Modernization of Irrigation Schemes : Past Experiences and Future Options (Proceedings of the Expert Consultation) (RAP Publication : 1997/22)
16. Selected Indicators of Food and Agriculture Development in Asia-Pacific Region, 1988-1998 (RAP Publication : 1997/23)
17. Asia-Pacific Commission Structure, Functions and Directory of Its Subsidiary Bodies (RAP Publication : 1997/27)
18. Proceedings of the Workshop on Small Pelagic Resources and Their Fisheries in the Asia-Pacific Region (RAP Publication : 1997/30)
19. Expert Consultation on Integrated Production Practices in Cashew in Asia (RAP Publication : 1997/36)

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

FUTURE CONFERENCES

1. Title : 24th International Cotton Conference
Venue : Bremen Town Hall, Bremen
Period : 11-14 March 1998
Contact : Ms. D. Konnecke, Faserinstitut
Bremen e.V., P.O. Box 10 58 07
D-28058, Bremen, FRG, Germany
2. Title : Feed Science and Technology-Enhancing Food Security
Venue : Palace of the Golden Horses, Kuala Lumpur, Malaysia
Period : 14 & 15 April
Contact : The Secretariat
Regional Conference on Animal Feed
c/o Technical Services Centre
MARDI, GPO Box 12301
50774 Kuala Lumpur, Malaysia
Phone : 603.943.7447/7041
Fax : 603.948.2216
Email : miramlah@mardi.my or noli@mardi.my
3. Title : International Floriculture Conference and Exhibition Floriculture: Enhancing Opportunities through Sustainable Production
Venue : Kuala Lumpur, Malaysia
Period : 7-12 July 1998
Contact : The Secretariat
The International Floriculture Conference & Exhibition
Technical Services Centre
MARDI, GPO Box 12301
50774 Kuala Lumpur, Malaysia
Phone : 603.943.7447/7041
Fax : 603.948.2216
Email : miramlah@mardi.my or noli@mardi.my
4. Title : The Seventh International Congress of Plant Pathology.
Venue : Edenberg, Scotland
Period : 09-16 August 1998
Contact : Congress Secretariat
c/o Meeting Makers Ltd.
50 George G1 IQE
Scotland
Phone : +44.141.5531930
Fax : +44.141.5520511
Email : iccp98@meeting makers.co.uk
5. Title : The Fourth Global Conference on Conservation of Domestic Animal Genetic Resources
Venue : Birendra International Convention Center
Baneswor
Kathmandu, Nepal
Period : 17-21 August 1998
Contact : Dr. Nanda Pd. Shrestha
Animal Breeding Division
Nepal Agricultural Research Council
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