



APAARI

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EDITORIAL

Asia and the Pacific is agriculturally the most vibrant region of the world. It has witnessed higher growth rates for wheat (3%), rice (2.3%) and maize (4.1%) compared to other regions. Spectacular growth rates in the region have also been observed for crops such as cotton, sugarcane, soybean, rapeseed-mustard, oilpalm, potato, fruits, etc. Except for wheat and rice, much of the credit for these successes goes to individual efforts put in by the National Agricultural Research Systems (NARS).

The region has also contributed significantly to technological developments. Examples of hybrid rice in China, hybrid cotton in India, palm-oil in Malaysia, orchids in Thailand and tilapia production in the Philippines could be cited as the best success stories in the world. "Green Revolution" had also occurred in the mid-sixties in South Asia as an outcome of the collaborative research efforts between the NARS and CG centres, especially the CIMMYT and the IRRI. It is this kind of partnership between national and international systems that has sustained Green Revolution for over three decades; thus reducing hunger substantially in the most thickly populated South Asian countries. On the contrary, such interactions in other areas of priority are lacking.

It is in this context, the NARS' need to prioritize their research programmes, which could also be addressed by the International Centres and other donor agencies. As a step forward, the APAARI has initiated efforts towards strengthening of the NARS-CGIAR partnership through a consultative mechanism for regional research priority-setting, so that support in required directions could be ensured in future. We cover some of the details of our first "Expert Consultation" on the subject in this issue and shall keep our readers apprised of the latest developments in this regard. Indeed, we shall welcome useful suggestions relating to our research prioritization exercise in the Asia-Pacific region.

Editors

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EXPERT CONSULTATION ON NARS-CGIAR PARTNERSHIP

FOR SUSTAINING RESOURCE BASE

ENHANCING FOOD SECURITY AND ALLEVIATING POVERTY

The Consultation on the NARS-CGIAR Partnership, co-sponsored by the Indian Council of Agricultural Research (ICAR), the Food and Agriculture Organization of the United Nations (FAO), the International Fund for Agricultural Development (IFAD) and the International Service for National Agricultural Research (ISNAR), was held at the Indian Agricultural Research Institute (IARI), New Delhi, on 1-2 February 1996. It was organized under the auspices of the Asia-Pacific Association of Agricultural Research Institutions (APAARI). Heads of the National Agricultural Research Systems (NARS) of 12 countries (Australia, Bangladesh, India, Iran, Malaysia, Nepal, Japan, Pakistan, the Philippines, Thailand, Western Samoa and Vietnam), the Directors-General of 4 centres of the Consultative Group on International Agricultural Research (ISNAR, CIMMYT, ICRISAT and IIMI), senior representatives of the IRRI and the IPGRI and the high-level officials of the World Bank, FAO and IFAD participated in the Consultation. From India, besides, the Director-General, ICAR, Vice-Chancellors of 3 agricultural universities and other senior officials participated.

As a sequel to the process of renewal of the Consultative Group on International Agricultural Research (CGIAR), an initiative was taken by its Chairman to involve regional fora in the process of priority-setting, partnership, governance and sharing of both knowledge and resources. The International Fund for Agricultural Development (IFAD) had accordingly initiated an action by involving regional fora for finalizing the Action Plan. In ICW95, held at Washington in November 1995, it was decided that the various regional fora should organize separate meetings for priority-setting as well as for preparation of Action Plan. Accordingly, this meeting was organized to discuss the NARS-CGIAR partnership for sustaining environmental base, enhancing food security and alleviating poverty.

In the Consultation, the scope for regionalization was emphasized; recommending specialization of some

institutes in different research areas to make better use of scarce resources and to benefit from networking and better sensitizing of policy-makers. The overall programme has to be both NARS as well as TAC driven, rather than donor-driven.

The Consultation also stressed that strong regional fora and networks are not possible with weak NARS. While moving upstream, the CG system should not lose sight of resource-poor farmers and the needs of developing NARS. It was made clear that much more can be achieved by effective regional collaboration between the NARS themselves, and between the NARS and the CG centres; and the APAARI has a key role to play.

New advances in biotechnology, information, Geographic Information System (GIS) and crop modelling have to be harnessed; and the priorities for improved sustainability will only be achieved through improved co-operation, collaboration and integration of different eco-

regional and regional collaborations.

In the Consultation, it was pointed out that although the Green Revolution had tremendous impact in Asia but the technologies involved for Green Revolution have altered environment to fit high-yielding genotypes. Their focus was mainly on commodities rather than on systems.

The second-generation problems (i) waterlogging and salinization; (ii) soil erosion; (iii) surface and groundwater contamination from agricultural chemicals; (iv) resistance of insects, weeds, pathogens, due to present methods of control using pesticides; (v) plateauing of yields; and, (vi) the irreversible loss of land-races and habitats were also highlighted at the meeting. These need to be solved to achieve sustainable growth.

Besides, the role played by various networks such as TAMNET, CLAN, COGENT was given due importance.

OBJECTIVES OF THE CONSULTATION

- i. Improving NARS-NARS partnership
- ii. Improving NARS-CG system partnership at various levels
- iii. Providing inputs from the region into the TAC global priority-setting exercise for the CG system as a whole
- iv. Initiating priority-setting mechanism for the agricultural research in the Asia-Pacific region

RECOMMENDATIONS

The Consultation concluded with the adoption of the following recommendations by the APAARI.

1. The APAARI believes that the NARS should make a greater input to the CGIAR priority-setting. Currently, the APAARI is largely a forum of public institutions (NARIs), and there is a scope for expanding membership to NGOs, universities and private-sector institutions, as well as to other fora covering forestry and fishery sectors. However, it is a well established and financially secure association of 19 member-countries.
2. An excellent APAARI Vision Statement, prepared by the APAARI Secretariat, which was later adopted by the Executive Committee, reflects the overall views of the Association.
3. The APAARI endorses 3 major objectives of the CGIAR for agricultural research within the Asia-Pacific region—alleviating poverty, enhancing food security, sustaining resource base.
4. The regional forum believes that the capacity to alleviate poverty and to enhance food security through research is greater in the Asia-Pacific region than in other parts of the developing world, because of the considerable strength of the NARS (including research agencies and NGOs). The APAARI also notes the potential for significant spillover benefits from the research in the Asia-Pacific region to other regions. The APAARI argues, therefore, that the Asia-Pacific region may deserve a greater share of the CGIAR resources.
5. In considering priorities, the APAARI has found it helpful to categorize activities as follows.
 - Tasks of importance to all (or nearly all) APAARI members
 - Tasks of importance to some but not all APAARI members
 - Special tasks of importance for only one or few APAARI members

The APAARI recognizes the need for stability in research priorities, particularly, those common to



Participants attending the Expert Consultation on the NARS-CGIAR Partnership held on 1-2 February 1996

all member-countries and those relating to staple food crops. Frequent changes in research priority-setting process by the Technical Advisory Committee (TAC) is viewed with some concern and the APAARI would, therefore, prefer gradual evolutionary process, involving proper consultation mechanism with the NARS and their regional fora.

- Research on agrobiodiversity and on the conservation, enhancement, distribution and use of genetic resources is of central importance to all member-countries. The CGIAR system is well placed to strengthen research capabilities on these issues at both the national and regional levels; and funding support to these activities be enhanced and made sustainable in future.
- The forum has already recognized the importance of network programmes in the region, as per its Perspective Plan, and has reaffirmed the establishment of relevant networks on

sustainable basis in partnership with the CGIAR and other donors. The APAARI endorses that such networks be prioritized in consultation with the NARS and strategies be devised jointly by the APAARI and the CGIAR for required technical and funding support on sustainable basis.

- The IARCs can play a major role in promoting and facilitating the information flow among and within the NARS and the IARCs. The CGIAR experience is highly relevant, and in particular, ISNAR could play a supportive role by making its information resources available to the APAARI and its member-countries.
 - Biotechnology will clearly play an important role in the agricultural research in future, and the NARS currently are not all well-placed to benefit from the advances that are often made in commercial or university sectors. The CGIAR centres need to move forward in this regard to meet the expectations of the NARS by expanding the area of research, and several issues relating to intellectual property rights need to be resolved.
6. The APAARI recognizes the need for a continued emphasis on the human-resource development in the region and the specific contribution that could be made by the IARCs, particularly, in relation to training in areas of high technology. The APAARI urges the TAC to continue giving high priority to this specific need.
 7. The APAARI believes that well-focussed "public good" research on some of the important commodities/species of the region such as soybean, vegetable crops, cotton and animal/fish research would benefit farmers in the Asian region and would promote all the major CGIAR objectives, provided that suitable technologies were made available by the CGIAR.
 8. The forum also believes that research on root and tuber crops, especially for the Pacific countries require strong support from the CG centres; including institutional and research management support from the ISNAR.
 9. Similarly, a research effort on under-utilized fruit trees from the region might be considered.
 10. The APAARI recognizes the importance of the eco-regional and system-wise research initiatives,

each of which may be relevant to some, but not to all member-countries. The portfolio of such existing and planned initiatives has been noted and the key role of the NARS in their development and effective implementation has been emphasized. In recognizing the need for greater involvement of the NARS in identifying and prioritizing such initiatives both individually and collectively through regional fora such as APAARI, the difficulty of the NARS from small island countries in providing required input is understandable. Greater involvement of social scientists in identifying and implementing such eco-regional initiatives is needed.

11. Eco-regional and system-wide initiatives impose significant cost burdens on the NARS, because scarce national research resources must be allocated to such initiatives, if they are to be effective. There is an opportunity cost associated with them if resources are diverted from other activities. The APAARI notes that such opportunity costs will be minimized as the NARS become more actively involved in identifying and prioritizing these initiatives, because the initiatives will then be more closely aligned to the priorities of the NARS. Hence, efforts are needed jointly by the NARS and the CGIAR to put consultative mechanisms for priority-setting in place by effective involvement of regional forum such as the APAARI. Closer co-operation in a strong regional thrust involving the APAARI and the CGIAR might yield valuable advances in applications of biotechnology or Integrated Pest Management.
12. The APAARI recognizes the need for continued improvement in the framework and criteria for allocating resources to research priorities, both by the CGIAR and by the NARS. The APAARI notes the need for enhanced determination of national research priorities by the NARS and the need to translate these into regional priorities. The appropriate methodologies could accelerate and facilitate these processes, where the ISNAR could play an important role in partnership with the APAARI.
13. The APAARI also appreciated the support to its activities by the CGIAR, FAO, World Bank and IFAD and reaffirms the need for similar continued support with these organizations and other donors, including the ACIAR in the region, for sustained priority-setting mechanism and needed collaboration for the regional programmes.

THIRD EXECUTIVE COMMITTEE MEETING OF THE ASIA-PACIFIC ASSOCIATION OF AGRICULTURAL RESEARCH INSTITUTIONS

The Third Executive Committee Meeting of the Asia-Pacific Association of Agricultural Research Institutions (APAARI) was organized jointly by the Indian Council of Agricultural Research (ICAR) and the APAARI Secretariat at the Indian Agricultural Research Institute (IARI), New Delhi, India, on 3 February 1996. It was held in conjunction with the Consultation on the NARS-CGIAR Partnership held at the same venue on 1-2 February 1996. The members of the Executive Committee of the APAARI, a few additional invited members of the APAARI and observers from the World Bank, CG system and from the Indian NARS participated in the meeting. Dr William D. Dar (Executive Director, PCARRD, the Philippines), Chairman of the APAARI Executive Committee, chaired the meeting and Dr R.S. Paroda (Director-General, ICAR, India), Executive Secretary of the APAARI, represented the APAARI Secretariat.

Dr R.S. Paroda, on behalf of the ICAR and the Government of India as the host as well as on behalf of the APAARI, welcomed the participants. He specially welcomed representatives from Australia, Japan and Vietnam who have recently joined the APAARI; with effect from 1 January 1996. Dr Paroda had special words of welcome for Dr Bonte-Friedheim (Director-General, ISNAR), Dr Michel Petit (Director, Agricultural Research, World Bank), Dr (Ms) Uma Lele (Advisor, Agricultural Research and Education, World Bank) and Dr R.B. Singh, the Founder Executive Secretary of the APAARI. He expressed that continued commitment of Dr Singh to the APAARI has been gratifying.

Dr William D. Dar emphasized that the APAARI is now the most important forum in the region for renewing, enhancing and establishing collaboration and partnership among the NARS and between the NARS and the CGIAR as well as other regional and international organizations for promoting agricultural research. With increased visibility of its effectiveness, 'the APAARI has a new challenge to serve the Asia-Pacific NARS and thus must develop a new perspective'. He further said that now the APAARI has all

its elements in place, and he called for broadening of its horizons and making it more responsive and proactive in strengthening NARS capacities in research management and priority-setting.

The Committee urged all the members and associate-members to ensure regular flow of information to the Secretariat so that the Newsletter could be brought out on time with wider coverage of the NARS. It also greatly appreciated the success stories brought out by the APAARI. The success stories will not only help in promoting the Technical Co-ordination

among Developing Countries (TCDC), but would also sensitize the CGIAR and other such systems to readjust their priorities and programmes and even devolve some of their responsibilities to the NARS. The Committee desired that the future success stories should also include critical comparisons between successes and failures, particularly highlighting elements behind these successes.

The Committee greatly appreciated excellent work done by the Executive Secretary. It also recognized

pioneering and long-sustained support provided to the APAARI by the FAO headquarters, the FAO Regional Office for Asia and the Pacific, Bangkok, and recently, from the FAO Office in New Delhi. The Committee urged the FAO to continue to provide strong support to the APAARI. Particularly based on the success of the Consultation held on 1-2 February 1996, the Committee noted the positive wish of the CGIAR system to strengthen APAARI and other such regional fora, and desired that this trend should be further fortified.

Some of the members felt that the additional funds and resources will be needed to make APAARI still more effective in strengthening manpower and other capabilities in some of the less developed NARS and for strengthening information networks and linkages between the IARCs and the NARS. Dr Michel Petit (World Bank) observed that regional organizations like APAARI must be strengthened financially. But under the existing mechanisms, the Bank is not in a position to help APAARI. He referred to COAF,

- The Committee recommended that the APAARI may help to establish a new network called TROFANET (Tropical Fruits Asian Network), whose Secretariat could be provided by MARDI, Malaysia. The Director-General, MARDI, was requested to take initiative in this regard.
- The Committee recommended that FLCGNET and CLAN should be merged, and for the time being its Secretariat may be provided by the ICRISAT. The Committee emphasized that in addition to the crops that CLAN was presently handling, soybean and mungbean may also be included under the reconstituted CLAN. Also lentil could be added in collaboration with the ICARDA.
- The Committee suggested that Wheat-Cotton Network and Asia-Pacific Root and Tuber Crops Network should also be established.

a regional consortium in Africa, involving various donors from within and outside the region such as the World Bank, GTZ, European Economic Community, and observed that such a regional consortium could be a new model for lending financial support for regional activities by a group of countries. The Committee requested that the World Bank authorities should provide more details and technical advice to the APAARI Secretariat on this initiative.

MEMBERSHIP

The Committee noted with great appreciation that Australia (Australian Council for International Sciences - ACIAR), Japan (Japan International Research Centre for Agricultural Sciences - JIRCAS) and Vietnam (Ministry of Agriculture and Rural Development) have become members of the APAARI with effect from 1 January 1996. The Committee recommended that the Chairman, the Executive Secretary and other members of the APAARI should undertake a vigorous membership drive to ensure all countries in the region to become members of the APAARI.

Categories of Members and Membership Fee

In line with the Constitution of the APAARI, the Committee has recognized the following 3 categories of members.

- (i) Full members, paying the membership fee.
- (ii) Associate-members including, public-sector institutions, universities, private-sector institutions and the NGOs, who will be non-paying.
- (iii) Forum of partners such as CG centres, World Bank, ADB, South Pacific Commission, etc. who would join as the non-paying members.

It was reiterated that only the full members shall have the voting rights.

The Committee has agreed to recommend to the General Assembly, the following membership fee for the 3 categories.

Category I : US \$ 10,000 (Australia, China, India, Japan, New Zealand, Republic of Korea and possibly Malaysia, Thailand and the Philippines)

Category II : US \$ 6,000 (Bangladesh, DPR Korea, Indonesia, Iran and Pakistan)

Category III: US \$ 3,000 for remaining countries in the region

The grouping is only suggestive in nature and the countries in Category II and III can move up to higher categories.

Payment of Membership Fee

Most of the member-countries have paid their dues up to 1995, except New Zealand, Papua New Guinea

and Western Samoa. With China, the matter needs to be pursued, as it has been a member ever since the inception of the APAARI, but has not paid the membership fee. At present the total member-countries of the APAARI stands at 19.

FINANCIAL STATUS

The Committee reviewed the audited accounts for 1994 and 1995.

The Committee felt that the APAARI, as a policy, should not extend support to networks that are not located in the region and are not handled by the NARS/CG centres within the region.

The Committee approved the budget of US \$ 105,000 for 1996, and opening balance of the APAARI for the year comes to US \$ 231,708. The Committee observed that the funds which were provided by the FAO headquarters will be utilized by the APAARI for organization of the Expert Consultation on "Mechanisms for Research Priority Setting in Asia-Pacific Region", planned in conjunction with the Second International Crop Science Congress, to be organized in November 1996 at New Delhi. The Committee greatly appreciated the ISNAR and the ACIAR for lending their support to this Expert Consultation.

PROGRAMME OF WORK

The Committee approved the following programme of work for 1996.

- Continuation of the Newsletter.
- Preparation of a selected mailing list of agricultural research institutions and other clients for receiving various APAARI publications in different member-countries and also for the exchange of Annual Reports and other publications among the NARS directly.
- Support to TAMNET, UTFANET, FLCGNET-CLAN and Rice-Wheat Consortium
- Success Stories on
 1. Orchids in Thailand
 2. Cotton production in Pakistan
 3. Research and extension linkages in South Korea
 4. Wheat production in Iran
 5. Direct-seeded rice in irrigated conditions in Malaysia
 6. Agro-tourism in Australia

The Committee desires that the Success Stories should be shared widely and recommended that in addition to the hard copies currently being distributed, the information could be entered into the Internet and the other compatible databases, to be accessed by all nations. The ISNAR was requested to help in this process.

THE IRRI-APAARI PARTNERSHIP ESTABLISHES CORRA

During the IRRI-NARS Dialogue that convened at the IRRI headquarters in Los Banos, Laguna, Philippines, the Council for Partnership on Rice Research in Asia or CORRA was formally established on 29 March 1996. Spearheaded by the IRRI, the founding-members consist of 10 Asian countries – Bangladesh, China, India, Indonesia, Republic of Korea, Malaysia, Myanmar, the Philippines, Thailand, and Vietnam. Representing these countries are the following NARS heads – Dr M.S. Choudhury, Executive Vice-Chairman, Bangladesh Agricultural Research Council, Bangladesh; Prof. Ying Cui Shan, Director-General, China National Rice Research Institute, China; Dr E.A. Siddiq, Deputy Director-General (Crop Sciences), Indian Council of Agricultural Research, India; Dr Faisal Kasryno, Director-General, Agency for Agricultural Research and Development, Indonesia; Dr Eung Jong Lee, Director-General, Research Management Bureau, Rural Development Administration, Republic of Korea; Dr Tuan Embi B. Yusof, Deputy Director-General, Research for Development Support Services, Malaysian Agricultural Research and Development Institute, Malaysia; Dr Mya Maung, Director-General, Department of Agricultural Planning, Ministry of Agriculture, Myanmar; Dr William D. Dar, Executive Director, Philippine Council for Agriculture, Forestry and Natural Resources Research and Development, Philippines; Dr Prasoot Sittisuang, Deputy Director-General, Department of Agriculture, Thailand; Dr Nguyen Huu Nghia, Director, Vietnam Agricultural Science Institute, Vietnam.

The IRRI's conception of the CORRA is based on the fact that more than 90% of the world's rice is grown and consumed in Asia; which is the home for more than half of the world's poor and more than 90% of the world's rice-farmers. Further, the world's population increases by almost 100 million people annually. With that, the world's annual rough rice production will have to be increased by almost 70% over the next 35 years, keeping up with the population growth and income-induced demand for food. Moreover, there has been an impressive improvement in the strength of rice research institutions in Asia. But, to meet the new challenges in rice, one organization alone cannot design and implement all the needed research.

The work needs to be planned and carried out in close collaboration with the institutions that already play major roles in defining issues, setting research agenda, and implementing research activities. The IRRI and the NARS are already effectively collaborating in two consortia in Lowland and Upland Rice, and several networks, including the International Network on the Genetic Evaluation for Rice (INGER), the Integrated Pest Management Network (IPMNET), the Crop Resources Management Network (CREMNET), the Asian Rice Biotechnology Network (ARBN) and the Simulation and Systems Analysis for Rice Production (SARP). And with the emerging importance of the regional networks, involving NARS and CG centres, the APAARI believes it could be actively involved.

The APAARI envisions that the networks should be sustainable and not donor-driven. The APAARI will play a catalytic role by providing need-based support and the CG centres could extend facilitation role. Initiative of the Council by the IRRI is a good mechanism by which effective participation/involvement of NARS leaders in CG centres' priority-setting process could be ensured.

The APAARI believes that the NARS should make a greater input to the CGIAR priority-setting and the APAARI can provide a suitable forum at which member-countries in the Asia-Pacific region can develop a shared view on the regional priorities for consideration by the CGIAR.

To establish CORRA is one way to further enhance effectiveness of the various collaborative mechanisms being employed in meeting challenges of the global rice research system as well as in achieving the APAARI's vision for CGIAR-NARS partnership.

The Council agreed to meet annually. The Chair of the Council shall be elected for a fixed term of two years, and from among the NARS members.

Planning and consultation among the NARS and the IRRI are in progress for holding the first CORRA meeting at the IRRI.

Super rice-plant not yet available to farmers

Seeds of the new rice plant, popularly known as 'super rice', are not yet available for planting in farmers' fields. What the International Rice Research Institute (IRRI) in Los Banos developed and harvested are the prototype breeding lines of the rice, which are currently being field-tested at the IRRI.

Dr Gurdev S Khush, IRRI's principal plant breeder, has clarified that the new plant type, as it is now, is still susceptible to diseases and insects; and the new plant will not be available to farmers for another 5 years.

'Scientists at the IRRI are attempting to breed resistance to pests and diseases into it while further research by scientists in the national research institutions like the Philippine Rice Research Institute (PhilRice) in the Philippines, will then incorporate other desirable characteristics—such as those specific to taste—to meet individual country requirements', Dr Khush added. 'When finally made available to farmers and coupled with promising fertilizer management technology, the new rice plant will produce on the same amount of land with the same amount of fertilizer—under ideal conditions—25% more grains than the current high-yielding varieties', Dr Khush said.

(Source: News about Rice and People, IRRI)

SOUTH ASIAN VEGETABLE RESEARCH NETWORK (SAVERNET)

JOINT PLANNING MEETING

The final workshop of the Phase I and the Joint Planning Meeting for the follow-up of the activities of the SAVERNET were held from 23 to 28 January 1996 at Kathmandu, Nepal. The participating countries were Bangladesh, Bhutan, India, Nepal, Pakistan and Sri Lanka.

The SAVERNET was established with the signing of the Technical Assistance Agreement between the Asian Development Bank (ADB) and the Asian Vegetable Research and Development Centre (AVRDC). The implementation of the project com-

OBJECTIVES OF THE FINAL WORKSHOP OF PHASE I

- Discuss and exchange final results of the SAVERNET activities in the past 3 years.
- Understand issues arising during implementation of the project and to ascertain ways to alleviate and remedy the situation during the second phase.
- Determine the impact made by the project in terms of innovative technology developed and transferred to farmers, and in terms of developing



Participants at the Final Workshop of the SAVERNET

menced in November 1991 and the AVRDC, Taiwan, provides the co-ordination of the network.

The main objective of the SAVERNET is to strengthen vegetable research and development in member-countries by organizing collaborative research activities. The network provides a framework for research partnerships among the national agricultural research systems (NARS) to strengthen their research capabilities. The network activities are divided into 2 subnetworks—Subnetwork I covers exchange and evaluation of elite varieties, and Subnetwork II is concerned with crops and pest management research.

and promoting regional collaborative spirit in vegetable research.

- Identify research outputs that deserve field applications.
- Develop a master workplan that is aimed at developing strategies that would facilitate translation of research outputs into farmers' fields.

Dr K.L. Chadha, Deputy Director-General (Horticulture) as the Chairman of the Steering Committee of the SAVERNET welcomed participants in the inaugural session on 24 January 1996.

Varieties of Indian origin which performed well in other countries

Tomato	: Pusa Sheetal (Bhutan; Arka Vikas (Nepal); Pant Bahar, Pusa Ruby and Punjab Chhuhara (Pakistan)
Onion	: Arka Niketan and Agrifound Dark Red (Bangladesh); Arka Niketan and Pusa Red (Sri Lanka)
Brinjal	: Pusa Kranti, Pusa Purple Long and Pant Rituraj (Bangladesh); Pant Samrat (Pakistan and Sri Lanka)
Cauliflower	: Pusa Snowball K1 (Bhutan)
Muskmelon	: Pusa Madhuras (Pakistan)
Watermelon	: Arka Manik (Pakistan)
Okra	: Parbhani Kranti (Pakistan)
Cabbage	: Pusa Mukta (Pakistan)

Varieties from other countries which performed well in India

Tomato	: Monprecus and Nozimi
Cucumber	: Shabi Ghenchu
Chillies	: MI 1, MI 2

It was followed by Session on Subnetwork I, which was Chaired by Dr K.L. Chadha, and Co-Chaired by Dr D.P. Singh, Assistant Director-General (Vegetable Crops) of India and Dr Mansab Ali of Pakistan. Six countries presented their final reports.

India received 79 varieties of 11 vegetable crops and evaluated these at the Indian Institute of Horticultural Research, Bangalore, the Project Directorate of Vegetable Research, Varanasi, and the Indian Agricultural Research Institute, New Delhi, and supplied seeds of 49 varieties to other countries.

The closing session was Chaired by Drs S.C.S. Tsou and K.L. Chadha. Dr Tsou informed that achievements of Phase I had been very good in the region. He announced the decision of the Steering Committee to re-elect Dr K.L. Chadha as its Chairman for one more year. Dr Mansab Ali (Pakistan) has been elected as Vice-Chairman.

In the second phase, the following activities will be taken up subject to availability of a donor of fund.

1. Farmers' fields trials on tomato, chilli, brinjal and onion.
2. Development of F_1 hybrids in tomato, chilli and brinjal.

INDIAN VARIETIES WHICH PERFORMED WELL IN OTHER COUNTRIES



Arka Niketan onion (Bangladesh and Sri Lanka)



Pusa Snowball K1 cauliflower (Bhutan)



Arka Manik watermelon (Pakistan)

3. Off-season vegetable production in tomato, chilli, capsicum and cucumber.

Participants from all countries expressed satisfaction about the implementation of the SAVERNET programme. Dr Tsou, Director-General, AVRDC, said that "let us make this network a driving force".

RENEWAL OF THE CGIAR

The renewal programme of the CGIAR was launched in response to a major crisis that confronted the group in 1994. The most visible manifestation of the crisis was a significant decline in funding for the agreed CGIAR programmes to projects outside the agenda since 1992. The decline was expected to persist in 1994 and 1995, thereby threatening continuity, integrity and effectiveness of the research at the CGIAR centres. Behind the financial factor, however, there were a number of other uncertainties that reached deep into the vision, programmes, governance and approach of the CGIAR system. While the strengths of the system remained firmly in place, weaknesses threatened. Renewal programme was aimed to clarify vision, refocus research agenda, create greater openness and transparency, strengthen partnerships, ensure efficiency and effectiveness, and tighten governance and operations.

Perhaps the most notable feature of the renewal programme has been that the CGIAR got transformed from an aggregation of members whose vision and generosity supported agricultural research for food abundance in the South to a fully integrated South-North enterprise, based on a shared vision. Fourteen developing countries are now CGIAR members. There were none at the founding of the CGIAR. At ICW95, the CGIAR welcomed its first member from Europe also – Romania.

An eighteen-month programme of the renewal was launched at New Delhi in Mid-term Meeting of the CGIAR in May 1994, which culminated at the International Centres Week 1995, when a revitalized CGIAR system prepared itself to confront new and complex challenges. The high point for renewal was the Lucerne Meeting, in which groundwork was put in place for broad revitalization. In the Lucerne Meeting, Action Programme was drawn.

LUCERNE ACTION PROGRAMME for Broader Partnership

In the light of its position within the global agricultural system, the CGIAR is encouraged to continue its efforts to develop a more open and participatory system with full South-North ownership.

Accordingly, the CGIAR is encouraged to:

1. Continue to broaden its membership by including more developing countries as active members who participate fully in the CGIAR deliberations.
2. Convene a committee of the non-governmental organizations (NGOs) and a committee of the private sector as a means of improving dialogue among the CGIAR, the private sector, and the members of the civil society who are interested in the same issues as the CGIAR.
3. Accelerate the process of systematizing participation by the national agricultural research systems (NARS) of developing countries in setting and implementing the Group's agenda.

4. Complete its transition from a donor/client approach to equal partnership of all participants from the South and North within the CGIAR system.

Research Agenda

The mission of the CGIAR is to contribute, through its research, to promoting sustainable agriculture for food security in the developing countries.

Therefore, the CGIAR is urged to:

1. Conduct strategic and applied research, with its products being international public goods.
2. Focus its research agenda on problem-solving through interdisciplinary programmes implemented by one or more international centres, in collaboration with a full range of partners.
3. Concentrate on such programmes as increasing productivity, protecting environment, saving biodiversity, improving policies, and contributing to strengthening agricultural research in developing countries.
4. Address more forcefully the international issues of water scarcity, soil and nutrient management and aquatic resources.
5. Pay special attention to Sub-Saharan Africa and South Asia, which face the greatest challenges in eradicating poverty and malnutrition.
6. Ensure that research programmes address problems of the poor in less-endowed areas, in addition to continuing its work on high-potential areas.
7. Reinforce series of notable actions already taken to protect human heritage of genetic resources, viz;
 - a. Placing the plant genetic resources collections of the CGIAR centres under the auspices of the FAO Commission on plant genetic resources.
 - b. Create system-wide programme on genetic resources.
 - c. Establishing a committee of experts to provide the CGIAR system with support and advice on all aspects of plant genetic resources policy.
8. Work in closer partnership and collaboration with public and private research organizations in the South, including farmers' groups, universities, NGOs, and international institutions to design and conduct research programmes.
9. Work in closer partnership and collaboration with public and private research organizations in the south, including farmer groups, universities, NGOs, and international institutions to design and conduct research programmes;
10. Ensure that the setting of its research agenda reflects the views and goals and regional forums on agricultural research.

MILESTONES OF RENEWAL

1. The New Delhi Consensus, Mid-term Meeting, 23-27 May 1994
2. International Centres Week, Washington DC, 24-28 October 1994
3. Ministerial-Level Meeting, Lucerne, 9-10 February 1995
4. Mid-term Meeting, Nairobi, 22-26 May 1995
5. International Centres Week, Washington DC, 30 October-3 November 1995.

NATIONAL BUREAU OF PLANT GENETIC RESOURCES NBPGR, INDIA

The National Bureau of Plant Genetic Resources (NBPGR) is a leading national plant genetic resources (PGR) organization in India, dealing with biodiversity, particularly plant genetic resources. It is a nodal organization with assigned responsibilities and mandate to undertake germplasm exchange, plant quarantine, exploration/collection, germplasm evaluation, field maintenance, documentation and germplasm conservation.

The NBPGR is a constituent institute of the Indian Council of Agricultural Research under the Department of Agricultural Research and Education (DARE), Union Government of India. It is organized at the Headquarters in 5 distinct divisions, each responsible for specific activities.

I. Germplasm Exchange. This division is responsible for exchange of germplasm (import/export) of agri-horticultural crops, plantation crops and other materials of agricultural relevance. The NBPGR exchanges germplasm from well over 80 countries of the world on the bilateral basis and under the protocols and also introduces material into India from major CGIAR centres. In addition, the division issues Import Licence for scientific material.

II. Plant Quarantine. This division exercises quarantine control with its well-established laboratory of seed pathology, virology, entomology, nematology and controlled greenhouse facilities at 4 locations (New Delhi, Bhowali (Uttar Pradesh Hills), Indian Institute of Pulse



NBPGR – Main building

An Institute Profile

Research, Kanpur and Hyderabad) for safe introduction of germplasm and also for keeping a check on the entry of new pests and pathogens in India. It issues phytosanitary certificate for materials meant for export.

III. Plant Exploration/Collection. This division plans, organizes, conducts, co-ordinates and undertakes all germplasm-collection activities in India and abroad. All

foreign expeditions in India are also co-ordinated by the division. It has a national Herbarium of Cultivated and Wild Plants and a Seed Museum under its control. This division draws technical programme and implements it in collaboration with co-operative centres, through its own network, SAUs

and other organizations for collecting germplasm.

IV. Germplasm Evaluation. This maintains, evaluates, characterizes, documents and catalogues a large number of agri-horticultural crops at headquarters, Issapur Farm, and at 10 regional centres, located in different phytogeographic regions.

V. Germplasm Conservation. It maintains a long-term storage Genebank (-20°C), and presently holds well over 150,000 accessions; ranking third in collection of accessions in the world.

At the NBPGR, National Genebank, National In-vitro Repository and a Cryobank, all operate under its direct control. The national database and information system is also located at its headquarters at New Delhi and is



Kiwi plant (*Antinidia chinensis*) — introduced and popularized in India by the NBPGR



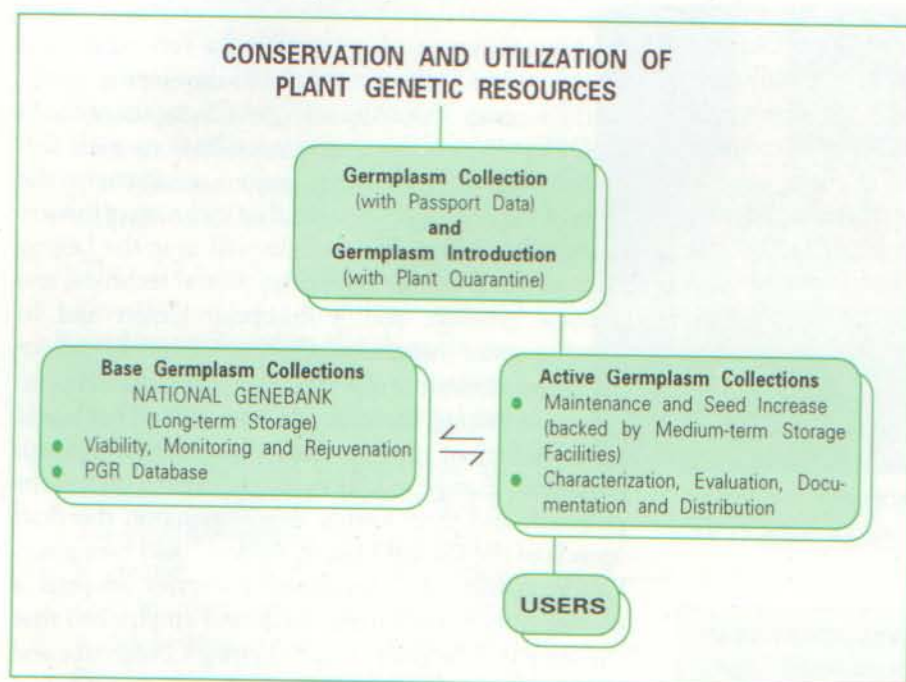
Field maintained rice germplasm at the NBPGR Regional Station, Thrissur

NATIONAL PLANT GENETIC RESOURCES SYSTEM IN INDIA

The NBPGR has currently 10 regional centres/base centres located in different phytogeographic regions of India. These centres are located in temperate Himalaya (Shimla); arid region of Rajasthan (Jodhpur); semi-arid region of Central India and Deccan Plateau of Maharashtra (Akola/Amraoti); humid tropical region of Kerala (Thrissur) and sub-humid region of north-eastern region of India (Shillong). Besides it has 10 base centres for plant exploration and collection activities; 6 of these are located in the existing regional centres and rest are located at Cuttack (Orissa), Ranchi (Bihar), Bhowali (Uttar Pradesh Hills) and Hyderabad (Andhra Pradesh). Besides, the Bureau is linked with 30 major crop-based institutes, national research centres, project directorates and State Agricultural Universities



New encapsulation and dehydration technology for shoot apices for long-term conservation of germplasm



(SAUs), which acts as its co-operative centres with respect to field germplasm maintenance, active germplasm storage, regeneration, critical field evaluation and germplasm supply for utilization of potential diversity.

The National Genebank has long-term, medium-term and short-term storage facilities. The existing long-term storage facility is of 250,000 accessions and it presently holds over 150,000 accessions of cereals, grain-legumes, oilseeds, millets, vegetables, medicinal and aromatic plants and several other miscellaneous crops. These samples are dried appropriately between 5 and 8% seed-moisture and hermetically sealed in 3-layered aluminium foil. Linked with genebank is the *National Plant Tissue Culture Repository* and a *Cryobank* (storage of germplasm in liquid nitrogen at -196°C). These conservation facilities are well connected with the clonal germplasm repositories at different centres/locations for strengthening acquisition, conservation and use of crop-germplasm.

A Policy Planning and Advisory Committee and several Crop Advisory Committees constituted by the ICAR/DARE render advice and guidance to the activities of the Bureau. Thus, under the existing set up, the NBPGR co-ordinates and collaborates with all institutions in collection, germplasm exchange, post-entry quarantine, conservation, field evaluation, regeneration, documentation, dissemination and international co-operation. Since 1976, the NBPGR has been engaged in international exchange of seeds and plant propagules.

In order to augment its capabilities, the Bureau has built up new and most modern genebank facilities with an enhanced capacity of one million accessions to be preserved at -20°C . There are 12 long-term storage (LTS) and one medium-term storage (MTS) modules and its Cryobank facilities ensures conservation of quarter million samples of small-seeded crops, pollen, embryos, embryonic axes and shoot apices. Further to modernize its operations, a computerized information system is being further strengthened. In future, this Centre will strengthen national, regional and international co-operation on germplasm collection, exchange, conservation and utilization of germplasm. Training on medium- and short-term at the national, regional and global levels on PGR activities would be one of the main feature of the NBPGR. Its new Genebank can offer its facility for long-term conservation of germplasm in the region and even safe duplication of germplasm-holding of the International Agricultural Research Centres. Thus, the NBPGR aims to become a leading regional and international germplasm centre for tropical and subtropical crops among the gene-rich countries of the world.

FAO-PLANT GENETIC RESOURCES (PGR) COMMISSION

MEETING ON GLOBAL PLAN OF ACTION

Following the recommendations of the Convention on Biological Diversity (CBD) in June 1992, Rio, Brazil, the Conference of Parties (COP) at Nairobi, November 1993, requested the FAO Commission on Plant Genetic Resources for Food and Agriculture to review, revise and negotiate FAO undertaking on Plant Genetic Resources to harmonize it and to make it a protocol to the Convention on Biological Diversity (CBD).

Consequently, the FAO held 11 meetings of its FAO Working Group comprising 23 members-countries, based on the regional representatives. Since then, 6 meetings of the FAO Commission on Plant Genetic Resources have already been held at Rome, Italy, and since last two years negotiation are on substantive issues of Scope, Access to Plant Genetic Resources and Benefit-sharing out of the use of plant genetic resources. It implies recognition of **Farmers Rights'** practices, innovations and traditional knowledge associated with farmers' varieties and ethnic knowledge and life-style of traditional indigenous communities.

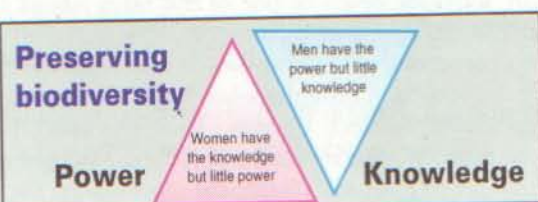
During the VIth meeting of the Commission, the Access to Plant Genetic Resources was approved by the Asian group, and Farmers' Rights has already been cleared by the G 77 Group of Nations, which comprises 103 member-states. Both these proposals are before the FAO Commission for further negotiations in the inter-governmental meeting.

Dr R.S. Paroda, Director-General (ICAR) and Secretary, DARE, Government of India, has been elected as a new Chairman of the FAO Working Group on Plant Genetic Resources

Realizing high priority and urgent need, the FAO Commission on Plant Genetic Resources (PGR) has initiated the country- and region- driven surveys and meetings to prepare first report on the State of World Plant Genetic Resources for providing basis for implementation of Global Plan of Action. One such regional meeting for South, South-East Asia and the

Pacific Region was held at Bangkok in November 1995.

The Extraordinary meeting of the FAO Commission for Food and Agriculture was held recently at FAO, Rome, Italy, from 22 to 28 April 1996. The meeting could not make much headway due to insistence of the member-states of the European Union (EU) and the OECD group that forestry may also be included in the Leipzig Declaration as well as in the Draft Report of the Global Plan of Action. This statement stalled the proceedings of the Commission considerably and at one stage, it appeared as if the whole exercise may go waste. The negotiations took a tough and a very rigid stand on the part of both developed and developing (generich) countries. Consequently, the Chairman of the G 77 Group (Venezuela), after consultations with delegates of the G 77 countries, made a statement on the Floor of the FAO Commission that inclusion of forestry in the Global Plan of Action as well as in the Leipzig Declaration is not acceptable on several technical and political grounds, and if European Union and its member-states insists then G 77 group would call for the postponement of the IV Technical Conference to be held at Leipzig, Germany, in June 1996. That would permit sufficient time for further negotiation. On this statement, European Union immediately withdrew its proposal, and then further negotiations on the draft agenda of the Global Plan of Action could take place. Unfortunately, the developed countries adopted a posture of not committing funds and emphasized that the same may be postponed to Leipzig Conference and to subsequent meetings. There also existed a lot of disagreement on priorities and funding allocation on different activities to be undertaken for implementation under Global Plan of Action. Several member-countries, including India, expressed their apprehensions and reservation for imbalance in Global Plan of Action. Considerable solidarity existed between the countries of South, South-East Asia, Pacific Island, Africa and Latin America. It seems Leipzig Conference is going to face tough time relating to negotiations.



How can biodiversity be saved if most knowledge about how to maintain it in a particular setting is vested in women at the bottom while most prestige and policy-making power rests with men at the top?

(Source : *Geneflow*, 1992)

THE APAARI MEETS WITH CGIAR-TAC 69

Members of the Asia-Pacific Association of Agricultural Research Institutions (APAARI) and other heads of the national agricultural research systems in Asia held a dialogue with the Technical Advisory Committee of the Consultative Group on International Agricultural Research (CGIAR-TAC), from 25 to 30 March 1996, during the 69th Meeting of the CGIAR-TAC (TAC 69) at the International Rice Research Institute (IRRI) headquarters in Los Banos, the Philippines.

Dr William D. Dar, the Executive Director of the Philippine Council for Agriculture, Forestry, and Natural Resources Research and Development (PCARRD) and the Chairman of the Asia-Pacific Association of Agricultural Research Institutions, presented the outcome of the Consultation on the NARS-CGIAR Partnership at the CGIAR-TAC 69.

Dr Dar reiterated that the, 'APAARI is now the most important forum in the region for renewing, enhancing, and establishing collaboration and partnership among the NARS and between the NARS and the CGIAR as well as other regional and international organizations for promoting agricultural research'. Establishment of the APAARI has paved way for fostering closer linkages between and among the NARS in the region and worldwide and with the international agricultural research centres (IARCs) such as the IRRI. The NARS and the CG system have very much related ongoing research and their goals and priorities are for ensuring food security through increased food production without harming environment.

Dr Dar also presented some significant successes in the NARS research that are relevant and are in partnership with the CGIAR research. These are Green Revolution in South Asia, hybrid rice in China, palm-oil in Malaysia, hybrid maize in China, dairy production and true potato seed in India, cotton production in Pakistan, transplanted maize in Vietnam, and 'tilapia' farming in the Philippines, to name a few.

He also presented recommendations of the APAARI to the CGIAR-NARS partnership. He enumerated APAARI's action plan on the NARS-CGIAR partnership. The Plan includes regional representation,



Members of the APAARI and heads of the NARS at the 69th Meeting of the CGIAR-TAC, held at the IRRI headquarters

PARTICIPANTS

- ❖ **Dr M.S. Chowdhury**, Executive Vice-Chairman, Bangladesh Agricultural Research Council, Bangladesh
- ❖ **Prof Ying Cun Shan**, Director-General, China National Rice Research Institute, China
- ❖ **Dr E.A. Siddiq**, Deputy Director-General (Crop Sciences), Indian Council of Agricultural Research, New Delhi, India
- ❖ **Dr Faisal Kasryno**, Director-General, Agency for Agricultural Research and Development, Indonesia
- ❖ **Dr Eung Jong Lee**, Director-General, Research Management Bureau, Rural Development Administration, Republic of Korea
- ❖ **Dr Tuan Embi B. Yusof**, Deputy Director-General, Research for Development Support Services, Malaysian Agricultural Research and Development Institute, Malaysia
- ❖ **Dr Mya Maung**, Director-General, Department of Agricultural Planning, Ministry of Agriculture, Myanmar
- ❖ **Dr Prasoot Sittisuang**, Deputy Director-General, Department of Agriculture, Thailand
- ❖ **Dr Nguyen Huu Nghia**, Director, Vietnam Agricultural Science Institute, Vietnam

establishment and support to networks, regional training/workshops, sharing of information/networking, prioritization of R&D agenda, regional research collaboration (through consortia), guidance/support to developing NARS, instituting case-studies, and support for non-mandate crops/activities.

The discussion mainly evolved on how the NARS could be better represented in the CGIAR and how the CGIAR research focus could be in-line with that of the NARS, particularly in the Asia-Pacific region. While the NARS in all countries are, or can be, very important constituents of the CGIAR system, they are not always sufficiently aware of their prospective roles and potential benefits from such a partnership.

The outcome of the NARS meeting with the CGIAR-TAC 69 gave the latter valuable insights for considerations on making priorities and strategies of the CG system. Likewise, the NARS gained information on how to align their priority-setting with the CGIAR research focus and other research priorities that the Asia-Pacific region could consider.

APAARI PUBLICATIONS (1996)

1. Consultation on NARS-CGIAR Partnership-Proceedings
2. Directory of Agricultural Research Institutions
3. Asia-Pacific Association of Agricultural Research Institutions Executive Committee Meeting-Proceedings

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. Soybean Processing and Utilization in Asia-Report 1996 (RAP Publication : 1996/1)
2. Soybean Processing and Utilization in Asia-Proceedings 1996 (RAP Publication : 1996/2)
3. Report of the 13th Session of the FAO Regional Commission on Farm Management for Asia and the Far East, Bogor, Indonesia, 21-24 November 1995 (RAP Publication : 1996/3)
4. Farm Management Know-How and Information Tools (FARMKIT) (RAP Publication : 1996/4)
5. Inbred Maize in Thailand (RAP Publication : 1996/5)
6. Non-Wood Forest Products in Bhutan (RAP Publication: 1996/6)
7. Assessment of the Status of Human-Induced Soil Degradation in South and Southeast Asia (ASSOD): Progress Report; Proceeding of the Expert Consultation of the Asian Network on Problem Soils, Manila, Philippines, 23-27 October 1995 (RAP Publication: 1996/7)
8. Tropical Maize in Asia-Proceedings (RAP Publication: 1996/8)
9. Hybrid Maize in Thailand (RAP Publication : 1996/9)
10. Rural Families and Household Economies in Asia and the Pacific (RAP Publication : 1996/10)
11. APFIC and the Sustainable Development of Southeast Asian Fisheries (RAP Publication : 1996/11)
12. Supporting Fisheries Management in Asia : An APFIC Information Network (RAP Publication : 1996/12)

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

APAARI NEW MEMBERS

The APAARI welcomes Japan, Vietnam and Australia who have joined the regional forum recently. We felicitate their joining APAARI.

FUTURE CONFERENCES

1. Title: Global Agricultural Science Policy for the Twenty-first Century
Venue: Melbourne, Australia
Period: 26-28 August 1996
Contact: Conference Secretariat
C/o ICMS Ply Ltd.
84, Queensbridge Street
Southbank, Melbourne
VIC 3006, Australia
Telephone: + 61 3 9682 0244
Facsimile: + 61 3 9682 0288
2. Title: National Rice Biotechnology Network
Venue: Indian Agricultural Research Institute
New Delhi, India
Period: 13-16 November 1996
Contact: Dr S.K. Raina
National Research Centre on Plant Biotechnology
Indian Agricultural Research Institute
New Delhi-110 012, India
Telephone: (91-11) 578 8783
Fax: (91-11) 576 6420
E-mail: guest%bic-iari@dbt.ernet.in
3. Title: XIV International Symposium (WAVMI) on Salmonellosis-Brucellosis as World Health Problems in Humans and Animals
Venue: Limassol, Cyprus
Period: 23-28 March 1997
Contact: Veterinary Public Health Institute
K. Polydorou
P.O. Box 284
Telephone: 453121
Fax: 453121
4. Title: Fifth International Congress of Plant Molecular Biology
Venue: Singapore
Period: 21-27 September 1997
Contact: Nam-Hai Chua of Rockefeller University
or
Robert Haselkorn of the University of Chicago
C/o International Society of Plant Molecular Biology, Biochemistry and Molecular Biology Department
University of Georgia
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