

**Meeting on the Establishment of Asia-Pacific Consortium on Agricultural
Biotechnology (APCoAB)
(April 4, 2003)**

Venue: FAO Regional Office for Asia and the Pacific (FAO-RAP), Bangkok

PROCEEDINGS

Background

In March 2002, FAO Regional Office for Asia and the Pacific (FAO-RAP) and Asia-Pacific Association of Agricultural Research Institutions (APAARI) jointly organized an expert consultation on the status of biotechnology in the Asia-Pacific region to primarily assess the potential of agricultural biotechnology for increasing both productivity and profitability, and to address concerns for adoption of this technology for the benefit of both the farmers and consumers. The expert consultation, attended by about 50 participants representing region's NARS, IARCs, CG Institutions, NGOs, foundations, and the private sector, recognized that application of biotechnology will be a key factor to ensure sustainable food and nutrition security in the future. The participants also felt that application of biotechnology at present is both knowledge and cost intensive, and needs alliances between both public and private institutions engaged in biotechnology activities. It was also realized that national research systems of developing countries need right institutions in place, right human resource, enabling environment, access to right knowledge and suitable inter-institutional, inter-regional and international linkages. The consultation also took cognizance of the fact that all the National Agricultural Research Systems (NARS) and agricultural research institutions in the region differ in their capacity to apply biotechnological tools for productivity improvements in the crop, livestock, and fisheries sectors and also to deal with testing and release procedures. It was also recognized that the progress in biotechnology research and promotion of biotechnologies for the ultimate benefit in the developing countries is faced with certain impediments such as lack of clear priorities and how best to integrate research results with broader objectives set for agricultural development, and how to deal with concerns for the widely publicized issues of bio-safety and bioethics. The expert consultation participants, therefore, unanimously recommended for the establishment of an Asia-Pacific Consortium on Agricultural Biotechnology (APCoAB) involving the key stakeholders in the region to pool their synergies, harness comparative advantages and ensure judicious use of limited resources to promote application of biotechnology for the sustainable agricultural development in the region.

In December 2002, APAARI organized an "Expert Consultation on Strengthening of Research Partnerships Through Networks and Consortia" simultaneously with its "Seventh General Assembly Meeting" in Penang, Malaysia. These two meetings were attended by the leaders of the regional NARS, international ARD organizations, regional research networks, and consortia. Both these meetings endorsed the need to establish an Asia-Pacific Consortium to promote adoption of agricultural biotechnologies in the region. Involvement of private sector and major input from stronger NARS in the region

was considered essential for the success of the consortium. The participants of the meetings recommended that:

- APAARI should enlarge the mandate of the consortium to address issues of policy, IPRs, capacity building, partnerships; and
- APAARI should facilitate inception of consortium in partnership with FAO and ISNAR and with active involvement of the private sector.

As a follow-up of the recommendations of the above expert consultations and APAARI's Seventh General Assembly Meeting, FAO-RAP and APAARI organized a meeting on establishment of Asia-Pacific Consortium on Agricultural Biotechnology (APCoAB) on April 4, 2003 at Bangkok as per the attached program (Annexure-I). There were about 25 participants (Annexure-II) representing regional NARS, IARCs, CG Institutions, NGOs, foundations, and the private sector. A brief report of the deliberations, conducted during the four different sessions, is presented here.

Session I: Opening Session

Chair: Dr. Takahiro Inoue

Co-Chair: Dr. He Changchui

Dr He Changchui, FAO Regional Representative for Asia and the Pacific, delivered the welcome address (Annexure-III). Dr. Changchui, as a co-host of the meeting, welcomed the participants on behalf of the organizers. In his address, Dr. Changchui presented an overview of the opportunities and risks associated with agricultural biotechnology and stressed the need for a collaborative approach in dealing with them. Dr. Changchui reiterated FAO's commitment to continue working with APAARI in several areas, including establishment of APCoAB, relating to the use of agricultural science to reduce hunger and poverty in the region. He was pleased that APCoAB is an outcome of earlier joint FAO-APAARI Expert Consultation on the subject held during 2002.

Following the welcome address, Dr R.S. Paroda outlined the objectives of the meeting, extended a warm welcome to the participants, and explained the absence of several confirmed participants who despite keen interest in the meeting could not join due to last minute travel advisories issued by several international and national organizations in view of the outbreak of Severe Acute Respiratory Syndrome (SARS) virus in the east and southeast Asia. In his presentation, Dr. Paroda explained the relevance of biotechnology to the socio-economic conditions in the agriculture sector of the region and presented a framework for establishing the APCoAB as a neutral platform and a functional mechanism to promote further collaboration among various agricultural biotechnology stakeholders, including NARS, IARCs, CG Institutions, NGOs, foundations, and the private sector. The framework, based on a concept note (Annexure-IV) prepared and earlier circulated by APAARI, included details of the mission, goals, objectives, activities, management structure, and funding strategies of the proposed APCoAB. Dr. Paroda, envisioning APCoAB as a facilitator of interactions among various stakeholders to address common issues related to agricultural biotechnology education, research, development, and commercialization, urged the participants to evolve a set of specific recommendations that will result in a time-bound action plan for establishing the

proposed APCoAB while, at the same time, addressing the concerns of diverse group of stakeholders.

Dr. Takahiro Inoue, the APAARI Chairman, delivered the chairman's opening address, welcoming the participants and highlighting the sustained efforts of APAARI to strengthen NARS and other stakeholders in dealing with the emerging ARD issues. Dr. Inoue also expressed gratitude to FAO-RAP for being a co-host of the meeting and providing various facilities to APAARI since its inception in 1990. Dr. Inoue emphasized that the novel ARD partnerships are the need of the hour to fully utilize the benefits offered by new technologies for strengthening food, health, and livelihood security system in the region, particularly in the current climate of declining public investment in ARD.

Mr P.K.Saha, FAO technical officer and Liaison Officer for APAARI proposed the vote of thanks and wished all participants success for the outcome of the meeting.

Session II: Stakeholders' Response

Chair: Dr. Patricio S. Faylon

International Organizations

ISNAR

Dr. Ajit Maru, representing ISNAR, fully supported the APCoAB initiative. He informed the audience about ISNAR's work on agricultural biotechnology regulatory framework, and identified information networking and capacity building as some of the possible areas where ISNAR could play a role in APCoAB. He also stated that ISNAR had been an active associate member of APAARI and would like to work in partnership in the area of biotechnology as well.

FAO

Dr. Malcolm Hazelman, Senior Extension, Education, and Communication Officer, reiterated the FAO support to APCoAB, particularly in the areas where FAO has its own interdepartmental working groups on agricultural biotechnology. He was of the view that the APCoAB could be based on sharing the efforts of the partners with a common goal of ensuring the benefits to resource-poor farmers of the region. He was particularly pleased that the recommendations of earlier FAO-APAARI consultation are being pursued further for the establishment of APCoAB. He also highlighted the efforts of FAO in this field.

Dr. Susumu Kawabe, Plant Biotechnology/Biosafety Specialist, informed the audience about FAO project on biosafety of GM crops, based at FAO-RAP, and invited APAARI to participate in the project's upcoming expert consultation in May 2003 for further collaboration. He was pleased to see the support of various participants for APCoAB and looked forward to work with it, once established.

ICRISAT

Dr. K.K. Sharma, Biotechnology Scientist, briefly described the ICRISAT initiative on Agri-Business Incubator facility for the deployment of agricultural biotechnology in India. He confirmed ICRISAT's commitment to APAARI activities and was of the opinion that APCoAB could be of significant help in the implementation of ICRISAT's biotechnology initiatives in other countries of the region.

AVRDC

Dr. Meisaku Koizumi, Assistant Director General of Asian Vegetable Research and Development Center (AVRDC) identified gaps among countries in the region (Thailand vs. Lao and Cambodia) in terms of biotechnology and potential of APCoAB-AVRDC collaboration on capacity building in the region. He fully endorsed the idea of APCoAB and desired stronger linkages of ARIs and IARCs in such an initiative.

NARS

Dr. Manju Sharma, Secretary, Department of Biotechnology, Government of India, gave a comprehensive presentation of various activities and initiatives of her department in the field of agricultural biotechnology. She described the APCoAB as a novel concept and affirmed her department's support to it. Capacity building was considered to be an area of future cooperation with APCoAB. She also indicated that India would be willing to be a member of APCoAB, and would like to have this initiative further strengthened.

Dr. P.S. Faylon, Executive Director of Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD), presented various initiatives taken by the Philippine government in the area of agricultural and forestry biotechnology. Citing his government's several initiatives in the biotechnology area, he was optimistic about a very active participation of PCARRD in the proposed APCoAB, and considered this to be an important initiative in right direction.

Dr. Morakot Tanticharoen, Director of National Center for Genetic Engineering and Biotechnology (BIOTEC), Thailand, informed the participants about Thailand's biotechnology policy to be published within next 6 months and supported the idea of APCoAB. She emphasized that the forums like APCoAB should also focus on facilitating partnerships in the private sector for biotechnology commercialization. She also expected that the Private Sector would come forward to support this initiative.

Dr. Prapaisri Pitakpaivan, Deputy Director General of Department of Agriculture (DOA), Thailand supported the concept of the APCoAB. However, she mentioned that a formal decision can only be taken by the Thai government cabinet regarding funding/membership support, once a formal request is made.

Private Sector

Dr. Dilip Gokhale of Syngenta, a multi-national seed company, presented his company's view that the farmers and consumers have to be the partners of the private sector for the industry to pass on the benefits to them. He used the examples of computer and polyester industries which demonstrated exponential decline in prices of their products over the last

few decades because of the acceptance of their technologies by the consumers. Similarly, he argued, the biotechnology industry cannot survive without passing on the benefits to the farmers and consumers. He urged the regional governments to open up the markets and streamline biotechnology regulations to accelerate the process of further technology adoption. He expressed Syngenta's willingness to contribute in the establishment of the proposed APCoAB and suggested to keep APCoAB both simple in structure and operation. He also expressed the urgency of moving forward since time is otherwise running out and we all need such a neutral platform to move forward. He also wanted to know as to how much budget would be needed for the first five years.

Dr. Partha R. Dasgupta, also representing Syngenta, pointed out that there was weak public sector research support to biotechnology and the regional NARS need to be more proactive in this area. He mentioned the need for harmonization of regulatory systems in the region following an open debate among the stakeholders. In his view, proposed APCoAB is a step in the right direction at the right time through which diverse stakeholders can play a positive role for common good. He felt that involvement of FAO and APAARI was very critical for the future sustainability as well as success of APCoAB.

Dr. B. R. Barwale, Chairman of Maharashtra Hybrid Seeds Company (Mahyco) Limited, strongly supported the idea of APCoAB for the benefit of all stakeholders. He used the example of India where Bt cotton has been shown to provide significant benefits to the farmers. He also stressed the urgent need for harmonizing the regulatory processes within the Asia-Pacific region to speed up the adoption of biotechnology. Other critical areas, identified by him, requiring immediate consideration of the stakeholders, included the national policy on biotechnology commercialization, human health issues, and biosafety. He also desired to know the framework of priority activities and the budget needed to have this initiative moved forward quickly.

NGOs

Dr. Malee Suwana-Adth from SVITA Foundation discussed the management aspects of biotechnology, and emphasized the need for a long-term perspective and greater cooperation between the NGOs, and the government as in the case of Thailand. According to her, in principle, everybody recognizes the benefits of agricultural biotechnology, but methodologies need to be agreed upon by various groups. She also mentioned that the needs of small, resource-poor farmers of developing countries require a different approach than the large farmers of the developed countries when it comes to the adoption of agricultural biotechnology. In her view, APCoAB should play an advisory role for the governments, private sector, and the other groups. However, it should not be in the area of licensing the biotechnology. To further improve APCoAB framework, its vision needs to be defined in collaboration with different groups. According to her, NGOs find networks more favorable than consortia due to their flexibility, yet she had no specific reservation if all feel that consortium approach is more acceptable.

Mr. Roel Ravanera, Director of Asian NGO Coalition for Agrarian Reform and Rural Development (ANGOC), stated that some NGOs have strong position against biotechnology due to factors such as ethical concerns, food and environmental safety,

corporate control over the technology, and insignificant impact on poverty reduction; while others are undecided due to lack of information. He identified the need for greater public awareness and forums for discussion and debate on agricultural biotechnology as critical issues from NGO point of view. With regard to APCoAB, its organization, functions, and composition need to be further detailed out but in principle he endorsed the idea and would like a neutral forum to come forward involving all stakeholders, especially CSOs. He also wished active involvement of APAARI, GFAR and FAO in this initiative.

Foundations

Dr. John O'Toole, Associate Director of Food Security at The Rockefeller Foundation, summarized the foundation's activity in agricultural biotechnology area, particularly on the intellectual property issue involving public and private sectors separately. He mentioned that the foundation's current focus is on Africa and African crops and it has partially funded the design and start-up of the African Agricultural Technology Foundation. He recognized the meeting discussions as a very important exercise in finding a suitable structure for APCoAB with a focus on viable functions. In order to have the results of biotechnology become International Public Goods, need for establishment of APCoAB is justified at this juncture.

Dr. B. R. Barwale, representing Mahyco Research Foundation, described the support of the foundation for hybrid rice in India. Mahyco provided a large grant for hybrid rice research over a period of 3 years which resulted in the establishment of a modern laboratory facility for agricultural biotechnology research and training of about 30 scientists in identifying genetic markers. The foundation's current focus is on development of high-protein sorghum in collaboration with Purdue University. From Foundation's perspective, he thought that idea of APCoAB was quite innovative and should be pursued further without delay.

Dr. J. S. Sindhu, Director of the Asia-Pacific Seed Association (APSA), described the structure of APSA and its membership and expressed APSA's willingness to participate in APCoAB. He identified the need to incorporate the available agricultural biotechnology in a commercial package form for ease of adoption and a well defined regulatory framework to encourage MNCs to bring technology to the developing world.

Dr. Dilip Gokhale, representing Syngenta Foundation for Sustainable Development, described its activities such as sponsoring workshops and suggested the proposed APCoAB should forge a constructive relationship with their Foundation.

Session III: Roundtable Discussion on Establishment of APCoAB Consortium

Chair: Dr. Manju Sharma

Co-Chair: Dr. John O'Toole

Dr. Manju Sharma, the Session Chairperson, outlined the parameters for the proposed APCoAB establishment including its management aspects and donor support group, and asked the participants to focus their discussion on these parameters. Dr. Paroda provided further clarification of the APCoAB concept by stating that: APCoAB is envisioned as a

simple framework/model on which public and private sector can work together; and it is expected to start with some achievable objectives with primarily acting only as a facilitator to provide a common platform. He cited the example of multi-national biotechnology company Monsanto's willingness to share its Bt technology for transfer in pulse crops in India, but due to lack of a common platform and further opportunities for negotiations with the governmental agencies, the process could not proceed further and the project was shelved. Also such a platform was critical to involve CSOs to ensure safeguard of their concerns on scientific grounds and simply not on certain presumptions.

Dr. Malee preferred a network approach initially, as according to her, Thailand needs more time to study the APCoAB concept. Dr. Paroda clarified that it was often difficult to generate funds for establishing a network. This aspect was discussed earlier during the APAARI Expert Consultation on ARD Networks and Consortia held in December 2002 in Penang, Malaysia and all members of APAARI felt more convinced to establish a Consortium with active involvement of stakeholders.

Dr. Kiran Sharma suggested to have some very specific goals for the APCoAB as Dr. Satoru Miyata from JIRCAS pointed out that the concept was too broad. Dr. Faylon urged the participants to focus on the concept note document to further improve it, rather than discussing some general abstract aspects of agricultural biotechnology.

Dr. Dasgupta supported the APCoAB concept with expectations that there will be enhanced cooperation from FAO to promote APCoAB. Dr. Hazelman of FAO reiterated that FAO supported the idea in principle and would be willing to consider the recommendations of this group for needed support to move forward.

Mr. Ravanera mentioned that from NGO point of view a biotechnology forum is preferred over consortium for better public participation and awareness. Dr. Paroda clarified that the Consortium's main objective is to provide a Forum function with specific group of Consortium members to lend needed financial support to move forward with the concept of pragmatism and neutrality. Mr. Ravanera was comfortable with this approach and desired more involvement of NGOs and farmers in this initiative.

Dr. Gokhale, citing examples of acceptance of Bt cotton in India and China, maize in Philippines, and four types of corn in Spain, remarked on the urgency of time and the need for constructive support from NARS and the NGO's of the region.

Dr. Koizumi suggested that the negative public opinion on biotechnology was due to lack of public institutions dealing with biotechnology and this situation could be mitigated more effectively by a focused consortium than by a network or forum approach which focuses more on debate and less on action. He, therefore, felt that present Consortium approach for APCoAB is in the right direction.

Dr. Prapaisri remarked that for Thailand it may be rather difficult to provide financial support in view of their existing APAARI and CG Group membership contributions. However, NARS be seen as active partners in APCoAB and be approached for their support as well as for both in kind and financial support.

Dr. Manju Sharma felt that a core fund of about USD100,000-500,000 annually may be needed to start APCoAB having mainly an advisory role to facilitate harmonization of various view points that can be presented to national governments for better policy formation on biotechnology. According to her, the Private Sector and Foundations could help in moving forward and eventually NARS could be approached to lend their support to this novel idea.

Dr. O'Toole cautioned about the legal status of APCoAB as it will affect the credibility of APCoAB. He desired involvement of APAARI, FAO, CGIAR and GFAR, beside Private Sector and Foundations as possible support group to move forward.

Dr. Bhumiratana identified some potential difficulties for the functioning of APCoAB, including lack of consensus among diverse stakeholders, public awareness, and human resources in the biotechnology area and suggested that Asia-Pacific is too broad a region for any one entity. However, to move forward and address these concerns, perhaps APCoAB is positive step in the right direction.

Responding to above remarks, Dr. Paroda drew attention to the goals outlined in the APCoAB concept note, which were reiterated by several presenters earlier in the day. He indicated that the priorities are already very clear and have been specified in the three main goals. As we move forward, these could further be refined keeping in view the comments of the participants and availability of funding support and involvement of stakeholders. He further suggested there was no immediate need for official endorsement since this meeting is for simply exchanging views on how to move forward with the APCoAB initiative, which is likely to be supported by APAARI, GFAR, FAO and also CGIAR. He identified need for having a co-sponsor group; and according to him, once the formation of consortium is agreed, funding opportunities and donor groups could be explored. He further suggested that APCoAB initiative can start with one full time Facilitator and some logistic support could be extended both by APAARI and FAO at its regional office in Bangkok, so that public awareness and capacity building activities can be pursued, on priority.

Session IV: The Way Ahead – Action Plan and Recommendations

Chair: Dr. R. S. Paroda

From the various presentations and the round-table discussions held earlier, the following specific recommendations emerged that were endorsed by the participants:

- The participants recognized the efforts of both FAO and APAARI for having developed the APCoAB concept through an expert consultation involving various stakeholders, and they further appreciated the initiative of APAARI in putting together a very good Concept Note on APCoAB and for having organized this meeting jointly with FAO Regional Office, Bangkok;

- APCoAB should move ahead as a neutral platform for the stakeholders to exchange views, ideas and knowledge in the field of agricultural biotechnology;
- Initial focus should be on some achievable objectives after further prioritization of APCoAB activities;
- The comments of the participants for improvement, if any, in the APCoAB concept note be received by APAARI within next 15 days;
- Beside APAARI, active support of FAO, CGIAR (ISNAR), GFAR, ADB, World Bank, the private sector, prominent foundations, and other key global donor agencies be sought for the establishment of APCoAB. Subsequently, NARS could also be approached for their support as well in the form of membership contributions;
- Initially, a small secretariat with an annual core funding support of actively involved Private Sector biotechnology companies and foundations could be sought in the range of USD200,000 – 500,000 for a 3-5 year time lag commitment and FAO and APAARI be approached to provide their logistic support to house the Secretariat in their premises at FAO-RAP Bangkok;
- An APCoAB Steering/Advisory Committee, consisting of one representative from each APAARI, FAO, NARS, CG Centers, the Private Sector, NGOs, and the Foundations should be formed that can guide on pragmatic constitutional and legal structure of the Consortium;
- Recommendations and proceedings of the meeting should be sent to all NARS associated with APAARI, who approved the APCoAB idea during APAARI Expert Consultation on ARD Networks and Consortia, held in Penang, Malaysia in order to apprise them of these further developments; and
- Finally, APAARI should continue with its efforts to move forward in establishing APCoAB and take up the matter further with all concerned organizations.

The meeting ended with Dr. Paroda thanking all the participants for sparing their time in attending the meeting and invited everyone for an APAARI hosted dinner.

On the behalf of the participants, Dr. Manju Sharma thanked profoundly Dr. Paroda, Executive Secretary, APAARI and all the Secretariat staff for the excellent meeting arrangements and also thanked FAO Regional Representative for extending all facilities and support to this initiative.

ANNEXURE – I: Meeting Agenda



Meeting on Establishment of Asia-Pacific Consortium on Agricultural Biotechnology (APCoAB) 4 April, 2003

Venue : *FAO-RAP, Bangkok*

Agenda

April 4, 2003 (Friday)

09:00 – 10:00

Registration

Session I : Opening Session

Chair : Dr. T. Inoue

Co-Chair : Dr. He Changchui

10:00– 10:10

Welcome Address

Dr. He Changchui
FAO-Regional Representative

10:10 – 10:30

Objectives of the Meeting
and Presentation of Concept
Note on APCoAB

Dr. R.S. Paroda
Executive Secretary

10:30 – 10:40

Chairman's Address

Dr. T. Inoue
Chairman, APAARI

10:40 – 10:45

Vote of Thanks

Mr. P.K. Saha
Technical Officer, FAO-RAP

10:45 – 11:15

Coffee Break and Group Photograph

Session II : Stakeholders Response

Chair : Dr. Patricio S. Faylon

11:15 – 13:00

International

Organizations: ISNAR
FAO

Dr. Ajit Maru
Dr. Malcolm Hazelman
Dr. Susumu Kawabe

ICRISAT
AVRDC

Dr. K. K. Sharma
Dr. M. Koizumi

NARS	: India Philippines Thailand	Dr. (Mrs.) Manju Sharma Dr. Patricio S. Faylon Dr. Morakot Tanticharoen Dr. Prapaisri Pitakpaiwan
Private Sector	: Syngenta Mahyco	Dr. Dilip Gokhale Dr. P. R. Das Gupta Dr. B. R. Barwale
NGO	: Thailand Philippines	Dr. Malee Suwana-Adth Mr. Roel Ravanera
Foundations	: Rockefeller Mahyco APSA Syngenta	Dr. John O'Toole Dr. B. R. Barwale Dr. J. Sindhu Dr. Dilip Gokhale

13:00 – 14:00	Lunch
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Session III : Round Table Discussion on Establishment of Consortium

Chair : Dr. (Mrs.) Manju Sharma
Co-chair : Dr. John O'Toole

14:00 – 16:00	Discussion
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16:00 – 16:20	Coffee Break
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Session IV : The Way Ahead – Action Plan and Recommendations

Chair : Dr. R.S. Paroda

16:20 – 18:00	Finalization of Recommendations
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19:00	Dinner hosted by APAARI
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ANNEXURE – II: List of Participants



ASIA-PACIFIC CONSORTIUM ON AGRICULTURAL BIOTECHNOLOGY (APCoAB)
FAO Regional Office
Bangkok, Thailand

4 April 2003

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ANNEXURE-III: Welcome Address



WELCOME ADDRESS

by

He Changchui
FAO Regional Representative for Asia and the Pacific

for the

MEETING ON ESTABLISHMENT OF THE ASIA-PACIFIC CONSORTIUM ON AGRICULTURAL
BIOTECHNOLOGY (APCoAB)

4 April 2003

FAO Regional Office for Asia and the Pacific, Bangkok, Thailand

Dr Inoue, President of JIRCAS, Japan and Chairman of APAARI

Dr Pitakpaiwan, Deputy Director General, Department of Agriculture, Thailand

Dr Sharma, Secretary, Department of Biotechnology, Government of India

Dr Paroda, Executive Secretary of APAARI

Representatives of International Agricultural Research Institutes, the private sector, non-governmental organizations, distinguished participants, my colleagues from FAO, ladies and gentlemen

It is indeed a great pleasure for me to be invited to address this important meeting and, more particularly, to be a co-host of such a gathering of distinguished experts. First of all, I should like to welcome all of you on behalf of the FAO Director-General Jacques Diouf and on my own behalf, to this meeting at the FAO regional office in Bangkok. As most of you are aware, the Asia-Pacific Association of Agricultural Research Institutions – in short APAARI – was established and had its beginnings in this very office where your meeting is held. Since its inception, FAO has remained a close associate and naturally we are happy to see that your important meeting is taking place here.

Exactly one year ago, APAARI and FAO jointly implemented an *Expert consultation on the status of biotechnology in agriculture in Asia and the Pacific*. This consultation recommended the establishment of a consortium to promote biotechnologies in agricultural development in the region. We are thus thankful to APAARI for the initiatives taken to follow-up on this recommendation which is the focus of today's meeting. I noticed that several participants who attended the previous consultation are also here today. We consider their

presence a reflection of their personal interest and commitment, as well as that of the organizations they represent, to be partners in the development of agriculture in the region.

The concept of a “consortium on biotechnology” is a most opportune reflection of the need for a functional mechanism for cooperation among various stakeholders such as farmer communities, the public and private sectors, other segments of civil society, and regional and international agencies and institutions. It certainly acknowledges the importance of the role and input of all stakeholders regarding biotechnology matters.

It is widely acknowledged that biotechnology provides powerful tools for the sustainable development of agriculture, fisheries and forestry, as well as the food industry. When appropriately integrated with other technologies for natural resource conservation and food production, biotechnology may provide the means to overcome constraints to further increase agricultural production and may also have an impact on poverty alleviation.

While there is little controversy about many aspects of biotechnology and its application, genetically modified organisms (GMOs) have become the target of a very intensive and, at times, emotionally charged debate. FAO recognizes that genetic engineering has the potential to help increase production and productivity in agriculture, forestry and fisheries. It could lead to higher yields on marginal lands in countries that today cannot grow enough food to feed their people. There are already examples where genetic engineering is helping to reduce the transmission of human and animal diseases through new vaccines. Rice has been genetically engineered to contain pro-vitamin A (beta carotene) and iron, which could improve the health of many low-income communities.

However, FAO is also aware of the concern about the potential risks posed by certain aspects of biotechnology. Thus caution must be exercised in order to evaluate and reduce the risks involved to human and animal health and the environmental consequences.

As a result, FAO supports a science-based evaluation system that would objectively determine the benefits and risks of each individual GMO. This calls for a cautious case-by-case approach to address legitimate concerns for the biosafety of each product or process prior to its release. The possible effects on biodiversity, the environment and food safety need to be evaluated, and the extent to which the benefits of the product or process outweigh its risks assessed. The evaluation process should also take into consideration experience gained by national regulatory authorities in clearing such products. Careful monitoring of the post-release effects of these products and processes is also essential to ensure their continued safety to human beings, animals and the environment.

FAO's programmes dealing with biotechnology are coordinated by an internal inter-departmental working group. FAO has three major and mutually reinforcing roles in assisting its members and their institutions in making decisions at all levels on biotechnology and related issues. One of these roles is to provide a neutral forum where all countries can meet to discuss and formulate international agreements such as the International Plant Protection Convention and the International Treaty on Plant Genetic Resources for Food and Agriculture. FAO's second role is to provide development assistance which can range from helping countries in strategic policy-making to advocating and supporting the deployment of particular biotechnological methods and products. Modalities of such assistance range from technical assistance projects that provide equipment, training, and/or specialist services; to coordinating networks that integrate specific biotechnological methods and products in national research and development programmes; as well as developing a variety of decision-

support tools for policy makers. FAO's third role is to collect, analyze, and disseminate information relating to biotechnology in food and agriculture.

Ladies and gentlemen,

Allow me to elaborate on my personal views and opinions for the priority policy directions for the work of the consortium. There are two points which I should like to emphasize. One, current investment in biotechnological research tends to be concentrated in the private sector and oriented towards agriculture in higher-income countries where there is purchasing power for its products. I consider that efforts should be made to ensure that developing countries, in general, and resource-poor farmers, in particular, benefit more from biotechnological research, while continuing to have access to a diversity of sources of genetic material. FAO proposes that this need be addressed through increased public funding and dialogue between the public and private sectors. Secondly, the agricultural sector as a whole still lacks a unifying framework that can guide national action on the policies and methods needed to achieve sustainable agriculture. FAO's initiative for Good Agricultural Practices presents basic principles of good practice in areas such as soil and water, crop and animal production, on-farm processing, energy and waste management, human welfare, and wildlife and landscape. I trust that the focal points for the different stakeholder groups of the consortium will refer to this framework.

In conclusion, I should like to reiterate that FAO will continue to work with partners like APAARI to address issues relating to the use of agricultural science to reduce hunger and poverty, including organic farming, traditional plant breeding, new farming technologies and biotechnology. It is within this context that FAO wants to be a partner in this consortium and would be willing to provide assistance to this new initiative within its means and resources.

I wish once again to welcome all delegates and thank them for their encouraging response to our request for participation. Allow me however to express special thanks to Dr Paroda, Executive Secretary of APAARI, for organizing this important meeting.

I wish you a successful meeting and a pleasant stay in Bangkok.

ANNEXUR-IV: APCoAB Concept Note

Asia-Pacific Consortium on Agricultural Biotechnology (APCoAB)¹

(A Strategic Initiative for Agricultural Development in the Asia-Pacific Region)

(A Concept)

Background

An Expert Consultation on the status of Biotechnology in Asia and the Pacific was organized jointly by FAO and APAARI in Bangkok from March 21 to 23, 2002, to assess the potential of agricultural biotechnology for increasing both productivity and profitability in the region, and to address concerns for adoption of this technology for the benefit of both the farmers and consumers. The meeting recognized that application of biotechnology will be a key factor to ensure sustainable food and nutrition security in the future. The participants also felt that biotechnology at present is both, knowledge and cost-intensive, and needs alliances between both public and private institutions engaged in biotech research. It was also realized that each developing countries national research system needs right institutions in place, right human resource, enabling environment, access to right knowledge and also the required inter-institutional, inter-regional and international linkages. The meeting also took cognizance of the fact that all the National Agricultural Research Systems (NARS) and agricultural research institutions in the region differ in their capacity to apply biotechnological tools for agricultural productivity (crop/livestock/fisheries) improvement and also to deal with testing and release procedures. It was also recognized that the progress in biotechnology research and promotion of biotechnologies for the ultimate benefit in the developing countries is faced with certain impediments such as lack of clear priorities and how best to integrate research results with broader objectives set for agricultural development, and how to deal with concerns for the much hyped issues of biosafety and bioethics. The meeting, therefore, unanimously recommended for the establishment of an Asia Pacific Consortium on Agricultural Biotechnology (APCoAB) involving the key stakeholders in the region to pool their synergies, harness comparative advantages and ensure judicious use of limited resources to promote application of biotechnology for sustainable agricultural development in the region.

Introduction

The population of Asia-Pacific region, from the present 3.2 billion (approximately 55% of world's population) is expected to reach 4.1 billion by the year 2010. Nearly, 57% of this population derives its livelihood from agriculture, cultivating around 32% of the global agricultural land, comprising of small farm holdings of less than an acre. The other limiting factors in agriculture include, unfavourable land / farmer ratio; deteriorating natural resources; vast risk prone areas; diverse farming systems; conversion of agricultural land to non-agricultural uses; fragmentation of land holdings; inadequate support services-markets, credit, extension, and post production facilities/technologies.

Further, as per IFPRI estimates, the demand for food in the sub-regions of East Asia and South Asia is likely to be 27.27 and 19.12 per cent, respectively of the increased global demand of 957 mt for cereals. Obviously, a second green revolution is needed to increase food production to match the needs of burgeoning population. Agricultural research also needs to address the challenge of improving the livelihood of rural poor in order to ensure the increased availability of nutritious food at affordable prices for the urban poor. Since agriculture in the region is seriously constrained by several factors, the increase in food, feed, fuel and fiber production will have to come mainly through increase in productivity and improved efficiency of production systems.

Biotechnology applications integrated into traditional systems hold a great potential to augment conventional agricultural production and productivity in a sustainable manner. Recent advances in classical genetics and plant molecular biology have opened new ways for dramatic modification of crop plants for agricultural and consumer needs. These developments have added a new dimension of biosafety to human and animal health as well as the environment in the deployment of biotechnology. Many societies in this region find themselves at cross roads with these technologies, often due to the lack of information, and more often, due to mis-information. On the whole, the regulatory systems currently in force do not

¹ A draft concept note prepared by APAARI Secretariat for discussion among all key stakeholders with regard to the possibility of establishing APCoAB to promote agricultural biotechnology in the Asia-Pacific region.

favour an easy spread or popularization of agri-biotechnology. Promoting the use of biotechnology will call for some important changes in the policy framework and also general public attitude which could be possible through general public awareness concerning technological, health, environmental and socio-economic considerations. Considering the new options and opportunities that this new science offers, we need to move aggressively to address all concerns and be got convinced either to or not to reap the likely benefits for the advancement of society.

Since, the coming decades will see a greater role of biotechnology in agriculture, the societies need to be educated and better informed to make right judgments for themselves. Equitable distribution of benefits from biotechnology will require global access and adoption of the technology and the support and participation of all the key players involved. Major challenges associated with these technologies are that these are often patented and are under the domain of private sector mainly. The multi- dimensional issues of biotechnology are scientific and ethical, and those concerning biosafety and environmental safety, partnerships, economics, intellectual property and trade. The challenge is for the public and private sector, in both industrialized and developing countries, to work together in new and creative partnership towards common goals of food security, poverty alleviation and a better quality of life.

In reviewing the capacity and capability of biotechnologies in developing countries, vis a vis developed countries, a vast technological divide appears evident which is quite difficult to bridge. The lack of trained human and financial resources coupled with poor infrastructure and congenial research environment are the impediments in application of biotechnology. Therefore, bi- or multi-lateral partnership arrangements, among the countries to share the individual strengths of NARS/Institutions and the Private Sector could prove to be a viable mechanism in the development and popularization of agricultural biotechnologies in the region. Under these circumstances, formation of a consortium by the stakeholders can provide common platform to facilitate identification of policy issues, problems and opportunities, strategic planning and implementation of programmes for the larger benefit of all concerned.

As a neutral facilitator and integrator, APAARI and FAO could catalyze the key partners engaged in biotechnology to join hands in establishing an Asia-Pacific Consortium on Agricultural Biotechnology (APCoAB) by bringing together countries of the Asia-Pacific, the universities, the bioscience industry, civil society organizations, foundations, and non-profit public interest organizations of the farmers and NGOs. Once formed, APCoAB will serve as a neutral platform and catalysts for forging new alliances providing policy guidance, addressing public concerns and above ensuring benefits of new technologies for the farmers and consumers alike.

Mission

The **Asia-Pacific Consortium on Agricultural Biotechnology (APCoAB)** will act as a neutral platform to promote the required scientific interactions and partnerships among the institutions/organizations to achieve the following mission:

“To harness the benefits of agricultural biotechnology for the advancement of society in the Asia-Pacific region.”

Goals

The major goal of the **APCoAB** is to enhance the benefits of biotechnologies for the sustainable agricultural development in the Asia-Pacific region, through greater stakeholder partnerships, improved policy environment, enhanced capacity building and greater public awareness.

Objectives:

- To serve as a neutral forum to bring together the key partners engaged in research, development, and commercialization of agricultural biotechnology in the Asia-Pacific region.
- To facilitate and promote the process of greater public awareness and understanding relating to important issues of IPRs, *sui generis* systems, biosafety, risk assessment and benefit sharing in order to set at rest various concerns and doubts relating to adoption of agricultural biotechnology.
- To encourage development of competent human resource for meaningful application of agricultural biotechnologies for improved crop productivity and income for small scale farmers.
- To promote and harness novel biotechnologies for the benefit of resource poor farmers in the developing countries.

Table 1. Summary of the goals and benefits of APCoAB

<u>Goals</u>	<u>Benefits</u>
<p><i>Research:</i></p> <ol style="list-style-type: none"> 1. Be a service-oriented focal point to promote biotech research and development in the Asia-Pacific 2. Research prioritization exercise involving all stakeholders 3. Provide extended research opportunities for NARS personnel/institutions in the region 4. Facilitate the access to and promotion of new agricultural biotechnology innovations through strong partnership initiatives 	<ul style="list-style-type: none"> -Access to new technology - Problem-solving research to enhance productivity and profitability - Create new partnership opportunities for biotech research between public and private institutions
<p><i>Education:</i></p> <ol style="list-style-type: none"> 1. Facilitate public awareness and conduct of short-courses, workshops and conferences on: <ol style="list-style-type: none"> (i) Biosafety related issues, (ii) Institutional capacity to deal with issues of Intellectual Property Rights, patenting, and benefit sharing 	<ul style="list-style-type: none"> -Proper understanding regarding benefits and concerns about adoption of agricultural biotechnology
<p><i>Policy Advocacy:</i></p> <ol style="list-style-type: none"> 1. Convince national policy makers and planners on bio-safety issues of Genetically Modified Organisms and other biotech products 2. Disseminate science-based information concerning agricultural bio-technology - Enlighten public on bio-safety issues of Genetically Modified Organisms and other agricultural products 	<ul style="list-style-type: none"> - Promote use of agricultural biotechnology by the society. - Amplify the voice relating to benefits of biotechnology in various public fora.
<p><i>Technology Dissemination:</i></p> <ol style="list-style-type: none"> 1. Effective technology transfer 	<ul style="list-style-type: none"> - Facilitate transfer of proven biotechnologies backed by adequate biosafety, awareness and adoption measures

Programme strategy

Research: APCoAB will serve as a facilitator for biotech researchers in the regional NARS/Institutions, both private and public, to share facilities and expertise in relevant subject matter and technologies. An Advisory Steering Committee will provide recommendations on critical research, human resource development and education needs in agricultural biotechnology for the countries in the region. In addition, by sponsoring symposia and workshops, the APCoAB will identify researchable issues in agricultural biotechnology relevant for the region. The APCoAB will assist the countries in organizing consortia to tackle more complex or long-term projects. In plant biotechnology research, where IP issues often govern the access to proprietary technologies, APCoAB will strive to bring together the owners of technologies and the users on amicable terms to develop and deploy technologies for the benefit of the general public. The APCoAB will seek mutually beneficial licensing agreements with the plant biotechnology industry.

Education: The APCoAB will cooperate with the universities and other institutions in the region to promote short courses and workshops on relevant topics, such as bioinformatics, new molecular techniques, biosecurity, benefit sharing etc. Short courses in these areas will expand the knowledge of researchers, development officials and the farmers. As this technology is becoming more complex, the APCoAB will work with stakeholders to keep them updated on latest advances and developments.

Public Service: The APCoAB will educate the general public about benefits of agricultural biotechnology. It will work with NGOs, farmers and organizations such as ISAAA, IARCs, GFAR, ARIs and Foundations interested in promoting biotechnology and organize in developing countries public fora and workshops/seminars and debates. The APCoAB will try to organize a biennial symposium to bring together all key national and international players in the field of agricultural biotechnology.

Technology transfer: The APCoAB will facilitate systematic dissemination and adoption of agricultural biotechnology through creation of awareness and understanding among producers and consumers of products.

Funding strategy

Funding for administrative/operations will come from the member countries and if possible with a startup grant from UN organizations like FAO, UNDP, Banks such as World Bank, ADB, IFAD etc. and Foundations such as Rockefeller, Ford, UN Foundation, Syngenta, Sasakawa, Aga Khan TATA, Crawford etc. and Private Sector organizations such as Monsanto, Syngenta, Pioneer, MAHYCO, etc. In addition, funding for grants and alliances will be generated from a variety of sources including member countries, development banks such as the World Bank and Asian Development Bank, CGIAR's Challenge Programme initiative, GFAR, private seed and biotechnology sectors, charities, trusts and foundations. It is proposed that the APCoAB will develop its own funding programme that can be used to support the agreed activities through Networks/Consortia and bilateral/multilateral partnerships initiatives. The APCoAB will manage these funds according to guidelines devised and agreements with the donors/grantors.

Expected outcome

Biotechnology is both inter- and multi-disciplinary as also inter-institutional. Also both public and private sector institutions are the key players. APCoAB will play a critical role in unifying efforts of these organizations. APCoAB can serve as a unifier and promoter since the knowledge so gained can be applied for improving both the products and profits, and ultimately benefit the general public with a better quality of life.

Implementation strategy

Year 1

1. APAARI to play a proactive role to organize a meeting of likely stakeholder institutions and also solicit their consent to establish the consortium.
2. APAARI to survey and analyse existing activities relating to the consortium and identify the missing or lacking activities which might be incorporated into the consortium.
3. Initiate organizational tasks for the consortium.
4. Establish Steering Committee and coordinate its meetings.
5. Gain acceptance of potential members through scientific consultations, symposia and workshops.
6. Prepare a long-term strategy for functioning of the network/consortium.
7. Ensure some funding support for the initial operations of the network.

Year 2 and 3

1. Complete establishment of the secretariat of the consortium and begin operations.
2. Prepare an action plan for fostering linkages between members to address specific issues emanating from workshops with member countries.
3. Prepare work plans for various aspects including capacity building, human resource development, public awareness and transfer of technology, policy on related issues of GM crops, biosafety, and intellectual property rights etc.

Organization and management of the APCoAB

The APCoAB will be an autonomous body steered by members or nominees of the APAARI or a Network/Consortium Board, and will be based in one of the member countries. International organizations such as ICRISAT, IPGRI, IRRI, ILRI, ISNAR, FAO, and ICGEB will play a pivotal role in assisting the network to accomplish its goals. The APCoAB will be managed by a secretariat that will be headed by a Facilitator and will be responsible to the APCoAB Steering Committee. The Facilitator will be appointed through a competitive process who will also act as a member secretary of the Steering Committee. The Advisory Committee will engage in a series of meetings of members for information gathering, surveying of capabilities and strategic planning. The Consortium will be tailored to provide general long-term benefits to the members by establishing strong interactions and to address the specific needs of the member countries with stressed economies, in particular. An organogram proposed for APCoAB is given in Fig.1.

APCoAB

MANAGEMENT STRUCTURE

