February 2010

منظمة الأغذية والزراعة للأمم المتحدة | 联合国粮食及农业组织 | Food and Agriculture Organization of the United Nations | Organisation des Nations Unies pour l'alimentation et l'agriculture | Продовольственная и сельскохозяйственная организация Объединенных Наций | Organización de las Naciones Unidas para la Agricultura y la Alimentación

FAO International Technical Conference

Agricultural biotechnologies in developing countries: Options and opportunities in crops, forestry, livestock, fisheries and agro-industry to face the challenges of food insecurity and climate change (ABDC-10)

Guadalajara, Mexico, 1 – 4 March 2010

PROVISIONAL ANNOTATED AGENDA AND TIMETABLE

Monday, 1 March 2010

Morning: 9:00 hours

I. OPENING AND ORGANIZATIONAL MATTERS

1. Opening of the conference

2. Election of the Chairperson and Vice-Chairpersons

3. Adoption of the Agenda and Timetable

The present document contains the Provisional annotated agenda and timetable (ABDC-10/2), for the consideration of the Conference.

4. Appointment of the Rapporteur

5. Introductory remarks by FAO and the Government of Mexico

6. Keynote address

"Biotechnology and shaping the future of food security": Message from Professor M.S. Swaminathan, M S Swaminathan Research Foundation in Chennai, India, Honorary Chair of the ABDC-10 Steering Committee. Document ABDC-10/Swaminathan.

II. PLENARY SESSION 1

7. Targeting biotechnologies to the poor
   a) Developing national biotechnology policies
   b) Governance structures and organization
   c) Priority setting for research and development in biotechnology

Relevant background information is contained in Section A of the background document *"Policy options for agricultural biotechnologies in developing countries"* (ABDC-10/8.1[1]; its synthesis is provided in document ABDC-10/8.2). Section A is entitled "Targeting agricultural biotechnologies to the poor" and it comprises four main sections:
- Agricultural and national development policy contexts;
- National biotechnology policy/strategy frameworks;
- Governance structures and organization; and
- Setting priorities for research and development (R&D).

Afternoon: 14:00 hours

III. PARALLEL SESSIONS (presentation and discussion of sector-specific background documents on the current status and options from biotechnologies in developing countries)

FAO has prepared five sector-specific documents, covering the current status and options for biotechnologies in developing countries in crops, livestock, forestry, fisheries and aquaculture and, finally, in food processing and food safety. Each of the sector-specific documents is organized in two parts, the first focusing on learning from the past and the second on preparing for the future. The first part documents the current status of application of biotechnologies in developing countries in the specific sector and analyses the reasons for success or failure, presenting also relevant case studies. The second part of each document deals with key unsolved problems in the sector where biotechnologies could be useful; identifies options for developing countries to assist them in making informed decisions about adoption of biotechnologies; and presents a set of Priorities for Action for the international community (FAO, UN organizations, NGOs, donors and development agencies). The documents are quite extensive and available in English. For each one, an easy-to-read synthesis has also been prepared.

These parallel sessions are dedicated to the presentation and discussion of these documents. The structure of each session is as follows:
- Presentation of the document, 15 mins
- 'Reflections on the document' by discussants, 10 mins each
- Open discussion, with a facilitator – 70 mins

a) Crops

The relevant background document is ABDC-10/3.1 (its synthesis is provided in document ABDC-10/3.2).

b) Livestock

[1] All documents prepared by FAO or by other organizations for ABDC-10 can be downloaded from http://www.fao.org/biotech/abdc/backdocs/

The relevant background document is ABDC-10/5.1 (its synthesis is provided in document ABDC-10/5.2).

c) Forestry

The relevant background document is ABDC-10/4.1 (its synthesis is provided in document ABDC-10/4.2).

d) Fisheries and aquaculture

The relevant background document is ABDC-10/6.1 (its synthesis is provided in document ABDC-10/6.2).

e) Agro-industry

The relevant background document is ABDC-10/7.1 (its synthesis is provided in document ABDC-10/7.2).

IV. PARALLEL ROUNDTABLES (presentation and discussion of sector-specific case studies of successful applications of biotechnologies in developing countries)

As part of the 'learning from the past' exercise in ABDC-10, the sector-specific roundtables include the presentation of a small number of case studies of successful application of biotechnologies in developing countries, followed by a facilitated discussion. They provide an opportunity to evaluate the key factors responsible for the successful application of biotechnologies in developing countries and assist developing countries to learn from the past and empower them to implement appropriate biotechnologies more successfully in the future. Several of the case studies presented have been described in the Case Studies section of the FAO documents prepared for ABDC-10.

The structure of each session is as follows:
- Introduction by the Facilitator, max 5 mins
- Case studies of successful use of biotechnologies in the sector – 10 mins each.
- Open discussion, with a facilitator – 70-80 mins

a) Crops

b) Livestock

c) Forestry

d) Fisheries and aquaculture

e) Agro-industry

Evening: 18:15 hours

Knowledge share fair

The Knowledge Share Fair will take place in the foyer of the Conference rooms in the Hilton Guadalajara Hotel on the evenings of 1-3 March. Its purpose is to promote good knowledge sharing practices in the field of agricultural biotechnologies (for crops, forestry, livestock, fisheries and aquaculture, agro-industry) for rural development and food security. This event will offer ABDC-10 participants a place to meet informally, discuss and share ideas, experiences, and

information. There are 20 information booths available, 20 boards for posters and 20 tables for information materials (leaflets, brochures, publications etc). There will also be limited opportunity for 'Open Space', a method for suggesting an idea/theme and then convening small groups around a specific question, task, or area of importance. The groups thus formed would create their own agenda and examine the issues on hand. Proposals for Open Space initiatives can be submitted directly during the conference in Guadalajara.

Tuesday, 2 March 2010

Morning: 09:00 hours

V. PLENARY SESSION 2

8. Summary - output of Day 1

Presentation of short reports summarizing results of the ten sector-specific parallel sessions and roundtables held on 1 March.

9. Investing in agricultural research and agricultural biotechnologies (International Fund for Agricultural Development [IFAD] presentation)

Speaker: Rodney Cooke (Director, Technical Advisory Division, IFAD)

10. Biotechnologies in international agricultural research centers (Consultative Group on International Agricultural Research [CGIAR] presentation)

Speaker: Thomas Lumpkin (Director General, the International Maize and Wheat Improvement Center (CIMMYT), Mexico)

11. Enabling research and development in agricultural biotechnologies
- a) Capacity development
- b) Funding
- c) Regulation

Relevant background information is contained in Section B of the background document "*Policy options for agricultural biotechnologies in developing countries"* (ABDC-10/8.1; its synthesis is provided in document ABDC-10/8.2). Section B is entitled "Enabling policies for agricultural biotechnologies" and it comprises three main sections:
- Building scientific, technical and innovation capacities
- Funding: Instruments and options
- Regulation

Afternoon: 14:00

VI. PARALLEL SESSIONS (Cross-cutting issues)

For these parallel sessions, FAO invited relevant intergovernmental and non-governmental organizations to organize parallel sessions on a specified issue of cross-sectoral importance. For each one, the programme for the session was developed by the organizers, with guidance from FAO. The structure that FAO suggested for each session to the organizers was one with 2-3 speakers/panellists, each of whom would speak for 15 minutes (providing a brief background on the topic and setting the scene) followed by an open discussion moderated by a facilitator. The organizers were also invited to contribute an Issue paper, focusing on the key topics to be

discussed during the session, as well as an abstract describing the session content. An abbreviated version of the abstract is provided below.

a) Genomic applications (in collaboration with the Consultative Group on International Agricultural Research (CGIAR))

(i) Development of genomic resources: Current status and future prospects

This session will start with a few lead presentations that would provide an overview on current status as well as future prospects of genomic resources in crop, livestock and forest tree species. Subsequently, the session will have general discussions among participants to assess the current stocks, constraints as well as well as future prospects on availability/development of genomic resources in a range of agricultural species, especially in context of several major genomics initiatives and second generation of sequencing and genotyping technologies, so that agriculture community have access to genomic resources for applying them in breeding programme.

(ii) Genomic application: Molecular breeding in developing countries

Molecular Breeding (MB) is the generic term used to describe several modern breeding strategies including: marker-assisted selection – the selection of specific alleles for traits conditioned by a few loci; marker-assisted backcrossing – the transfer of a limited number of loci from one genetic background to another, including transgenes, more recently, marker-assisted recurrent selection and probably soon genome wide selection. Access to technology, capacity building, cost and potential impact of MB in developing countries for both crop and animals will be discussed, among others.

b) Enhancing human capacities: Training and education (in collaboration with the International Centre for Genetic Engineering and Biotechnology [ICGEB])

The session, which foresees an active interaction between the facilitator, speakers and participants, will be articulated along specific broad and intra-sectorial themes such as:
- re-positioning the younger generation of scientists in a changing world;
- new strategies to be adopted by the international scientific community to take into account the influence of some "developing" countries;
- changes in the relationship of science and society;
- the need to develop new PhD curricula that take into account the above-referred changes, as well as the relationship between research centers and universities and the requirements of interdisciplinary training;
- teaching students in assessing the reliability and quality of the data produced and/or analysed;
- teaching the teachers: prepare for curricula changes at all levels;
- the need to consider the development of science managers and entrepreneurs in the biotechnological industry;
- the role of biosafety considerations to effect regulatory oversight and market entry.

c) Ensuring equitable access to technology, including gender issues (in collaboration with Oxfam International)

In many farming communities world-wide, quite simply, no seeds mean no food. This session looks at the stress and resilience of farmer seeds systems in three instances, one with the introduction of Bt cotton in Colombia; two, the up-scaling and mainstreaming of participatory plant breeding of rice in Asia; and three, how Farmers Rights, especially focused in Africa, can help capture the policy space for ensuring farmers access and control of technology. The session will specifically look at the perspective of women, starting from their position of strength and agency: as managers of biodiversity and their role in ensuring food security.

d) Empowering public participation in informed decision-making (in collaboration with the International Union for Conservation of Nature [IUCN])

The session, organized by the IUCN Commission on Education and Communication (IUCN-CEC), will explore a variety of strategic communication strategies that work to empower stakeholders throughout the technology innovation and implementation cycles. These strategies will include moving beyond the jargon that serves as a barrier to the widespread understanding of the key scientific issues, to the application of integrated communication, education and public awareness (CEPA) strategies that have been extensively and successfully deployed across a wide range of developing country sustainable natural resource management programs, to the utilization of role-based knowledge management and decision support tools in international plant disease and monitoring, to web-based tools for creating opportunities across the agricultural supply chain for continuous improvements in productivity, environmental quality, and human well-being. The communication strategies to be discussed are critical if we are going to achieve a “bottom-up" demand driven approach to research and development that will meet the needs of the greatest cross section of stakeholders in agricultural, forestry and fisheries communities throughout the developing world.

e) Prioritising the role of the farmer (in collaboration with the International Federation of Agricultural Producers [IFAP])

This session will bring together a multi-stakeholder panel to discuss the place of agricultural biotechnologies in agricultural development in developing countries. It will also examine actions to face the challenges of food insecurity and climate change through the use of biotechnologies, including through public-private partnerships and other innovative methods of collaboration. The session will also look into implications of these technologies on improving the sustainable livelihoods of farm families.

Evening: 18:15 hours

Knowledge share fair

Wednesday, 3 March 2010

Morning: 09:00 hours

VII. PLENARY SESSION 3

12. Summary - output of Day 2

Presentation of short reports summarizing results of the parallel sessions on cross-cutting issues held on 2 March)

13. Ensuring access to the benefits of research and development
    a) Intellectual property rights
    b) Public awareness and participation
    c) Extension

Relevant background information is contained in Section C of the background document “*Policy options for agricultural biotechnologies in developing countries”* (ABDC-10/8.1; its synthesis is provided in document ABDC-10/8.2). Section C is entitled “Ensuring access to the benefits of agricultural biotechnologies” and it comprises three main sections:
- Intellectual property rights
- Public awareness and participation
- Agricultural extension

14. South-South collaboration

Afternoon: 14:00 hours

VIII. PARALLEL SESSIONS (Region-specific discussions)

For these parallel sessions, FAO invited relevant regional organizations to organize parallel sessions for their region. The scope of each regional session is to address the potential role of biotechnologies for agricultural development in the region and to cover the entire range of biotechnologies across all the food and agricultural sectors. In addition, FAO suggested that it would be important to address both cross-sectoral and sector-specific themes and that, in this context, the SWOT analysis method would be utilized to evaluate the Strengths, Weaknesses, Opportunities, and Threats (SWOT) related to the generation, adaptation and adoption of appropriate biotechnologies in the region, with both technical and policy issues being addressed. Based on the SWOT analysis, the expected outputs from each session will be to formulate regional/sub-regional priorities (taking into account the existing capacities), that could feed into and be considered while dealing with discussions on options for developing countries and on Priorities for Action for the international community on the last day of the conference.

The organizers of each session were invited to contribute an Issue paper providing an overview and potential analysis of the current strengths, weaknesses, opportunities and threats for the generation, adaptation and adoption of appropriate biotechnologies for food and agriculture in the region, to facilitate the discussions during the session. They were also invited to provide a short abstract describing the session content. An abbreviated version of the abstract is provided below.

The structure that FAO suggested for each session to the organizers was one with 1-2 speakers/panellists, each of whom would speak for 10 minutes (providing a brief background on the topic and setting the scene) followed by an open discussion moderated by a facilitator.

a) Latin America and the Caribbean (in collaboration with the Inter-American Institute for Cooperation on Agriculture [IICA] and the Technical Cooperation Network on Plant Biotechnology in Latin America and the Caribbean [REDBIO])

The session is entitled “Generation, adaptation and adoption of appropriate biotechnologies in the Latin America and the Caribbean Region: concrete actions for the near future”. It is expected, that in a short but active session, with the help of a facilitating mechanism and counting with the experience of national R&D, academics, private and NGO experts and the proactive role of networks as REDBIO/FAO and of IICA, a set up of initiatives will start to be defined with proper and responsible follow up.

b) Near East and North Africa (in collaboration with the Association of Agricultural Research Institutions in the Near East and North Africa [AARINENA])

This session is entitled “Developing priority actions for agricultural biotechnology in West Asia and North Africa (WANA) to face the challenges of food insecurity and climate change”. Its aim is to achieve a shared understanding among various stakeholders on:
- The strengths, weaknesses, challenges and opportunities for agricultural biotechnology in the WANA region
- The priority actions required, addressing priority research themes, policy-issues, institutional and human resources development.

The WANA region is characterized by high water scarcity, high vulnerability to climate change and growing food insecurity. Hence, the generation, development, application and scaling-up of agricultural biotechnology improvements will be crucial for adapting to climate change and improving food security. The participants of the session are expected to represent various stakeholders, such as the research and extension community, policy makers and government institutions, farmer organizations and regional and international organizations and the private sector. The session will draw on an Issue Paper, prepared by the AARINENA biotechnology network (document ABDC-10/AARINENA). The speakers will briefly present the Issue Paper,

which includes a SWOT-analysis for agricultural biotechnology in WANA region as well as suggestions and recommendations for priority actions.

c) Sub-Saharan Africa (in collaboration with the Forum for Agricultural Research in Africa [FARA])

This session is entitled “Harnessing biotechnology for agriculture in sub-Sahara Africa in the era of climate change: challenges and options”. It will examine the strengths, weaknesses, opportunities and threats associated with the deployment of the various tools of biotechnology, spanning conventional techniques to molecular/GM techniques, and assist in the development of priority actions to harness biotechnology for food security in sub-Sahara Africa in the era of climate change. Relevant documentation is the Issue Paper, ABDC-10/FARA, prepared for this session by FARA.

d) Asia and the Pacific (in collaboration with the Asia-Pacific Association of Agricultural Research Institutions [APAARI])

This session is entitled “Harnessing biotechnologies for food security in the Asia-Pacific region”. It will address the potential of entire range of conventional and modern biotechnologies in agricultural development of the Asia-Pacific region. Two brief presentations, one on crops and forestry and another on livestock, poultry, fisheries and aquaculture will provide the background and set the scene for ensuing discussion. The objective will be to review the progress in application of biotechnology highlighting some successes and failures, and evaluate the policy and technical strengths, weaknesses, opportunities and threats (SWOT) related to the generation and adoption of biotechnologies in the region. Following discussion on the identified issues, regional and sub-regional priorities will be identified that would feed into the discussions on options for developing countries and on Priorities for Action for the international community on the last day of the conference. Relevant documentation is the Issue Paper, ABDC-10/APAARI, prepared for this session by APAARI.

e) Eastern Europe and Central Asia

This session is entitled “Agricultural biotechnologies in Europe and Central Asia: new challenges and opportunities in a view of recent crises and climate change” and is organized by the FAO Regional Office for Europe and Central Asia. It will address first the potential of biotechnologies for agricultural development in Europe and Central Asia (ECA) by covering the entire range of biotechnologies across the food, agriculture, fisheries and forestry sectors against the background of the new challenges posed by recent crises and climate change and highlighting the biotechnology applications developed locally and adapted to prevailing and expected conditions in the region. An emphasis will be given to biotechnology applications in the countries with economies in transition in ECA. Further, the cross sectorial issues as capacity-building, information and knowledge-sharing and networking, as well as policy and regulatory frameworks development and implementation, including co-existence will be addressed in the context of several examples from EU and the ECA region as a whole.

IX. PARALLEL SESSIONS (Cross-cutting issues)

For these parallel sessions, FAO invited relevant intergovernmental and non-governmental organizations to organize parallel sessions on a specified issue of cross-sectoral importance. For each one, the programme for the session was developed by the organizers, with guidance from FAO. The structure that FAO suggested for each session to the organizers was one with 2-3 speakers/panellists, each of whom would speak for 15 minutes (providing a brief background on the topic and setting the scene) followed by an open discussion moderated by a facilitator. The organizers were also invited to contribute an Issue paper, focusing on the key topics to be discussed during the session, as well as an abstract describing the session content. An abbreviated version of the abstract is provided below.

a) Policy coherence at the regional level (in collaboration with the United Nations Conference on Trade and Development [UNCTAD])

This session is entitled “Policy coherence and the status of biotechnology policy-making, regulations and development. The experience of COMESA, ASEAN and CARICOM regions”. It presents the experiences of the ASEAN (Association of Southeast Asian Nations), CARICOM (Caribbean Community and Common Market) and COMESA (Common Market for Eastern and Southern Africa) regions in developing and implementing regional and national biotechnology policies in agriculture. The session identifies steps taken to develop regional guidelines and a road map to assist national action. It identifies gaps and highlights critical areas for: enhancing the capacity of regional groupings to present and advocate policies, regulations, procedures, and guidelines for national consideration in order to make informed decisions; and effectively deal with policy challenges and promote policy coherence related to the handling and managing of biotechnologies in the areas of agriculture, trade and emergency food aid.

b) Biosafety in the broader context of biosecurity

This session is organized by the FAO Nutrition and Consumer Protection Division. Biotechnology based processes are aiding the production of food products as well as the detection of potential hazards in food. Adoption processes for developing countries are becoming simpler due to technological advances and cost reductions. However, the evolution of biotechnologies and the evaluation of their biosafety need to go hand in hand. Biosecurity is a multi-sectoral scientific discipline with a case by case approach to regulation. It promotes robust risk/safety evaluation of all aspects related to human, plant and animal health as well as the environment. Success stories from developing countries in utilizing biotechnologies for food and environmental safety will be highlighted.

c) Intellectual property rights in agricultural biotechnology (in collaboration with the World Intellectual Property Organization [WIPO])

This parallel session is expected to address the following questions:

- What are the elements of a legal framework for innovative products and processes in the area of agricultural biotechnology that fosters food security? (Conventional Intellectual property (IP), *sui generis* plant variety protection, protection of traditional knowledge?) How does the IP system interact with systems that regulate access to genetic resources, biodiversity conservation and health and environmental safety?
- To what extent are certain technologies protected? How can the ability to assess the freedom to operate in developing countries be enhanced?
- How can the ability of public sector researchers to access protected technology be improved? (e.g. through agreements with the private sector?)
- What strategies of protection can be used to maintain a say over how research results will be used in a way consistent with the strategic goals and to attract new partners from the private sector?
- What are best licensing practices for IPR owners that allow wide diffusion of agricultural biotechnologies?
- What are elements of agreements between the public and the private sector that favour the development of technologies for the benefit of society?

d) Development of high added value agricultural products for medicinal and industrial use (in collaboration with the United Nations Industrial Development Organization [UNIDO])

This session is entitled “Utilisation of plants for non-food uses: Challenges and perspectives”. During this session the utilisation of biodiversity and crops for non-food applications will be discussed. Major examples of industrial biotechnology for biomass crops will be highlighted and awareness generated on technological, regulatory and socio-economic opportunities and challenges posed by the emergence of bio-based industries. Furthermore, mechanisms will be

discussed how developing countries could better access technological known-how through partnerships, the engagement of small and medium sized enterprises (SMEs) in such partnerships and, whenever necessary, strengthening their capacities in research, regulatory compliance and technology management.

e) Conservation and sustainable use of genetic resources for food and agriculture (in collaboration with the CGIAR)

The session will discuss the status of the global collections of important plant and animal genetic resources, efforts to effectively characterize these and how modern molecular methods enhance their use in breeding programs. Special attention will be given on how to better enable the use of genetic resources in research and breeding programs in developing countries.

Evening: 18:15 hours

Knowledge share fair

Thursday, 4 March 2010
Morning: 09:00 hours

X. PLENARY SESSION 4

15. Summary - output of Day 3

Presentation of short reports summarizing results of the 10 parallel sessions held on the afternoon of 3 March

16. Moving beyond business-as-usual: Options for developing countries

Relevant background information is contained in Section 2 of the background document "*Agricultural biotechnologies for food security and sustainable development: Options for developing countries and Priorities for Action by the international community"* (ABDC-10/9), which synthesizes the lessons learned and options available to developing countries for making informed decisions regarding adoption of agricultural biotechnologies within their national food security and rural development plans and policies.

17. Moving beyond business-as-usual: Priorities for Action for the international community

Relevant background information is contained in Section 3 of the background document, *Agricultural biotechnologies for food security and sustainable development: Options for developing countries and Priorities for Action by the international community* (ABDC-10/9), which presents a set of Priorities for Action for the international community regarding agricultural biotechnologies for food security in developing countries. The Priorities for Action are organized in three categories covering: priorities for policy-level decision-making; capacity development; and financing mechanisms and coordination options. In the context of ABDC-10, the term "international community" encompasses FAO and other United Nations (UN) organizations and bodies, non-UN intergovernmental and non-governmental organizations, international and regional organizations, including donors, development agencies, the private sector, philanthropic foundations and academic or scientific institutions

Afternoon: 14:00 hours

18. Adoption of the conference Report

19. Closing remarks

20. Closure of the conference