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**Research Impact: Yesterday's Achievements,
Tomorrow's Challenges**

**Biotechnology in the CGIAR - Reports from Parallel
Sessions**

Attached are the reports from the parallel sessions on Biotechnology in the CGIAR:

- Report from Parallel Session I - Scientific Issues
- Report from Parallel Session II - Intellectual Property Rights (IPR) Issues

BIOTECHNOLOGY IN THE CGIAR

Report from Parallel Session I -- **Scientific Issues**

Chair: F. Chapparo

Rapporteur: R. Bertram

The Chair opened the session with a challenge to the group to respond to the scientific issues laid out in the morning presentations. He reviewed the opportunity dimension of biotechnology with respect to CGIAR efforts in support of food security, poverty alleviation and environmental sustainability. But he also recognized the challenges that are evident in areas such as risk assessment and management, socio-economic impacts and ethical and cultural considerations. He challenged the Group that the discussion represented an important opportunity to bring its concerns to the panels advising TAC, and in particular, the panel charged with scientific issues.

Role and Place of Biotechnology

That there was broad consensus among the participants that biotechnology represents an important area of endeavor for the CGIAR, and one that is clearly here to stay. Nevertheless, the Group noted that biotechnology is not a new subject for the CGIAR, and that considerable effort had been made in analyzing the opportunities and challenges associated with biotechnology. Concerns were expressed that the biotechnology, although of great interest to the CGIAR, be kept in perspective, as one part of broadly integrated programs of the centers. As with all activities at the centers, trade-offs will occur when choices are made; it is important that these be understood.

The group agreed that biotechnology is highly relevant across a range of CGIAR activities; too often, the focus of discussion appears to be almost entirely on opportunities associated with crop improvement. Yet a major aspect of the CGIAR's work with animals is directly related to applications of biotechnology, often with direct linkage to cutting-edge science. Microbial organisms were also noted in the discussion, particularly with respect to plant-soil relationships and other natural resource management areas.

Several areas were emphasized where the CGIAR has specific responsibilities. There is strong interest in the centers' being proactive in understanding and assessing effects on agro-ecosystems associated with biotechnological innovations. Several speakers also emphasized the need to keep the needs of the poor, and poor farmers in particular, in clear view when considering scientific and related socio-cultural issues.

Operation of the CGIAR Panel

The group welcomed the Panel's emphasis on consultation, and in particular endorsed the Panel's intention to consult broadly within the CGIAR centers, including with scientists coming from activities and disciplines where biotechnology represents one path among several open to researchers. Consultation is especially important because of what argued

to be a narrow composition of the Panel, particularly with respect to inclusion of members from the South and to representation of the social sciences.

After further discussion of the mandate and objectives of the Panel, portions of the framework established for the Panel were read aloud. Their comprehensiveness and thoughtfulness reassured the group, as did the clear stance on broad consultation. Several speakers endorsed the need for the -consultation to encompass the NARS. A member of the Panel noted that the Panel is open to suggestion on its membership and operations.

Centers' Mode of Engagement

A major topic of the discussion was on the strategic stance the centers should adopt in incorporating biotechnology into their programs. Underlying the discussions were concerns associated with costs and the comparative advantage of the centers. Possible engagement strategies emerged as a spectrum, ranging from "laying back while others invest in a potentially relevant technology or methodology", clear through to actual competition with Advanced Research Organizations (AROs) and the Private Sector. There was little for the latter, in particular, although situations might arise where involvement of the centers could help focus the attention of collaborators or competitors.

A clear emphasis on partnerships emerged. A key strength of the centers is their network of research collaborators across wide areas of the world. This provides them with almost unique ability to study, understand and utilize Genotype x Environment interaction, an asset which is of considerable interest to their partners in AROs and the Private Sector. In considering relationships with these and other collaborators, and in judging their engagement stance overall, it is extremely important for the centers to be aware of the implications of intellectual property. Of particular concern is the assurance of "freedom to operate", which in some cases would require astute understanding of the proprietary claims and expectations. In some cases, sharing advances coming from research with intended beneficiaries could require that centers protect their contributions.

Moratorium?

It became evident in the discussion that a range of biotechnologies exists, and that there are many examples of activities that elicit little concern (micropropagation, genetic markers and molecular breeding, fermentations, etc.); other applications, such as genetically engineered organisms, are more controversial. A strong concern was expressed from the Chairman of the NGO Committee: pending the advice on CGIAR guidelines forthcoming from the two Panels and TAC, he suggested that the CGIAR declare a moratorium on releases of transgenics, citing Bt (*Bacillus thuringiensis*) transformed crops in particular. The Chairman invited comment from the Centers' representatives, who urged instead a case-by-case approach on the question of transgenics, recognizing that circumstances and the judgments they lead to vary. It was also emphasized that all work is done in full compliance with legal and regulatory requirements. Concerns were expressed that arbitrary approaches could slow or damage

important research efforts, and that such efforts were usually collaboratively managed, often in conjunction with NARS partners.

Several NARS representatives also commented on the issue of a moratorium, emphasizing the stake of the NARS in continued and unimpeded collaboration with the CGIAR centers. Interest in working with the centers already encompasses many areas of biotechnology, and concerns were expressed that this collaborative work should be accelerated rather than slowed. Nevertheless, it is recognized that continual judgments will have to be made as to what is relevant and appropriate, and that this will require NARS to strengthen their means of developing criteria against which potential investments can be judged, as well as strengthen their risk-assessment capacity.

Concerns from other quarters included whether a moratorium would slow the provision of useful materials and benefits to poor farmers, and what the impacts of such a slowdown would be. A moratorium could be seen as an abrupt deviation from the usual CGIAR mode of deliberate and careful consideration of scientific and policy issues. There was also concern expressed that deployment is an integral part of understanding and anticipating ecological issues.

Capacity Building

Capacity building with respect to biotechnology was emphasized in a broad sense, reflecting the fact that, for many NARS, it was also evident that biotechnology is a major consideration in their strategic research planning. As such, they expressed concerns about the costs of inaction

only research capacity, but research assets that would strengthen their position in collaborating and bargaining with a range of research partners in the public and private sectors. Participating in collaborative research with the CGIAR centers is viewed as an important means of strengthening their ability to engage more effectively with many partners beyond the CGIAR.

Conclusion

The group believed that the above subjects and concerns need to be taken into account by the Panel. However, it also recognized that some of the particularly challenging issues would likely be considered by the entire Group. Those issues include: - make-up of the Panel; - recognition of the different responses to different types of biotechnologies; - moratorium on release of transgenics;

BIOTECHNOLOGY IN THE CGIAR

Report from Parallel Session II -- **Intellectual Property Rights (IPR) Issues**

Chair: Carl-Gustaf Thornstrom

Rapporteur: William Dar

Secretary: Rosina Salerno

The session was well attended and characterized by a large number of interventions (about 40) covering a wide range of stakeholder views. To help guide the deliberations the Chair outlined the evolving CGIAR policy positions on genetic resources and IPR. This was followed by reflections on proprietary science by TAC/IPR Panel Chair, Tim Roberts. The subsequent discussion focused on a range of issues including present access regimes in operation at centers; possible implications, if centers increasingly apply proprietary protection to the products/technology they generate; future access by centers to protected technology; and centers' access to post-CBD material (e.g., landraces/wild relatives) from developing countries. The discussion covered ethical, political, and legal implications on the CGIAR work, showing the complexity and the importance of the issue.

The session identified the following priority issues to be specifically addressed by the TAC-panel:

- 1) The need to take stock of the present situation of IPR among CGIAR centers, especially as regards patents (e.g., ILRI and CIMMYT) including an analysis of centers' experiences in the use of the MTA instrument and the modalities of partnership with the private sector.
- 2) The need to further strengthen the systemwide IPR guidelines while allowing for flexibility at the center level. Different genetic materials/technologies may require different proprietary protection.
- 3) The need for a legal and technical advisory mechanism operating at the system level
- 4) The need for more policy research within the system (by IPGRI and IFPRI) to provide the CGIAR with technically/biologically well informed basis for decision-making..
- 5) The need for the CGIAR to actively engage in shaping up the emerging IPR global system and to further position the CGIAR in the rapidly changing international IPR context.
- 6) The need to further define the CGIAR's role in NARS IPR capacity building.
- 7) The need to define the CGIAR's role in a multilateral agreement for access and exchange of genetic material for food and agriculture.
- 8) The need to support Farmers' rights and to clarify the CGIAR's position in terms of access and compensation. Options for benefit sharing in multiple downstream innovation (e.g. pedigree of a crop variety) need to be explored.