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STATEMENT

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Public Hearing at the German Bundestag (BT)

Committee on Economic Cooperation and Development (AWZ)

Topic: "Instruments for the Promotion of Rural Development"

THE OPPORTUNITIES AND RISKS OF AGROBIOTECHNOLOGY
AND OTHER AGRICULTURAL TECHNOLOGIES / AGRICULTURAL
RESEARCH CONCEPTS

THE PERSPECTIVE OF THE INTERNATIONAL FUND
FOR AGRICULTURAL DEVELOPMENT (IFAD)

1. Before I address the specific question of agro-biotechnology, let me offer a definition.

2. The **Convention on Biological Diversity** defines biotechnology as:

“any technological application that uses biological systems, living organisms or derivatives thereof, to make or modify products or processes for specific use”

3. To the wider public, biotechnology is often simply equated to the production of GMOs. This, of course, is not the case. **Genetic modification** of organisms is just one of many biotechnological techniques.

4. As we can see from the CBD’s definition, biotechnology goes well beyond only the new DNA techniques of gene manipulation, gene transfer and cloning of plants. Indeed, **it covers many of the tools and techniques that are conventional in agriculture and food production**. It extends to techniques that cover a range of molecular biology and reproductive technological applications, which can assist in breeding, in propagation of good planting material and in diagnostics.

5. Bio-technological techniques are able to develop varieties of food crops that cater specifically to the needs of poor rural people, especially in areas where soils are infertile, where rainfall is uncertain and where drought is a constant threat.

6. For example, **tissue culture** biotechnology has enabled scientists to **remove yield-reducing disease viruses and bacteria from food crops such as cassava, potatoes, yams, bananas and plantains**. The technique involves “cleansing” the preferred crop varieties of disease organisms and then reproducing them by the thousands, using **rapid propagation**, before distributing them back to the farmers.

7. Biotechnology aids have taken much of the costly “hit or miss” guesswork out of traditional plant breeding. Once upon a time, farmers had simply to hope that desirable traits such as yield, quality and pest resistance would be transferred from selected plant parents to their offspring. Now **genetic markers** are used to make sure that the desirable genes, such as those affecting drought tolerance, are first of all present in the parent and then transferred to the progeny.

8. And **diagnostics and vaccines** are helping both to improve the identification of pathogens and to produce vaccines for humans and livestock – advances which are to be welcomed without reservation.

9. But we can't ignore the elephant in the room. There is a widely-publicised global debate going on about the merits and demerits of **genetic modification**. And unfortunately this particular biotechnological technique is stirring up such controversy that it risks undermining the credibility of the entire complex field of biotechnology.
10. There is no doubt about the potential that **genetic modification** offers to rural communities in developing countries. By 2020, we shall need to be able to feed a global population of eight billion – two billion more than at present. Techniques that can support, enhance or even replace traditional plant breeding, and produce higher yields, have to be used.
11. GM crops now occupy a land area of approximately 114 million hectares. Twenty-three countries – 12 of them classified as “developing” – currently grow mainly first-generation GM crops, including maize, soya-bean, cotton and oilseed rape or Canola.
12. If scientists could shorten the growing season of maize by a few weeks; or make sorghum and millet even more drought tolerant; or enable rice to tolerate higher levels of salinity; or prevent insect damage to legume crops like cow-pea and pigeon peas; or produce crops that are nutritionally superior, with more protein, more vitamins and fewer toxic elements, such as cyanide in cassava, then the lives of poor farmers and their families in sub-Saharan Africa and the Indian subcontinent would be enormously improved.
13. But the fact is that the focus for 80 per cent of GMO crops is herbicide resistance. Genetic modification is also being used to address product shelf-life. These and some other developments are of limited relevance to the lives and welfare of poor rural people. This is largely because most GMO development has been in the hands of the private sector, and focused on larger commercial farms which provide the best market for such products. Because of public aversion to GMOs in many countries, little public research has been undertaken.
14. There is also a question of safety that needs to be addressed. We share the concerns of our sister agency, FAO, about the possible adverse effects of GMOs on food and feed, as well as the possible threat to bio-diversity through the “flow” of exotic genes into wild and cultivated species.
15. FAO has called the existing international policy and regulatory framework for bio-security “disjointed and incomplete”. The FAO and WHO recently agreed on the first global principles for the safety assessment of genetically modified foods. This move responds to wider concerns about bio-security and is to be welcomed. But the international community needs to build on this – and in particular support technical assistance to developing countries to help them establish, rationalise and optimise their national capacity for bio-security, while at the same time developing research capacity.

Conclusion

16. Agricultural research is fundamental to rural development. The Green Revolution in Asia was driven by agricultural research. Agricultural research has been shown to deliver rates of return in excess of 40 per cent.
17. That is why supporting agricultural research, including agro-biotechnology – has formed such an important part of IFAD's work over the past three decades. And why IFAD is one of the major financial supporters of the CGIAR system and is now helping to review the system and reorient it to the new research agenda of today.
18. There are other important research organisations out there, in addition to the **CGIAR**, who are able and willing to take forward pro-poor research. The likes of the **GFAR** (Global Forum for Agricultural Research), the **FARA** (Forum for African Agricultural Research Associations), and the **APAARI** (Asia and the Pacific Association of Agricultural Research Institutions).
19. The work of these bodies will be particularly important in meeting the challenges we face today from climate change. A disastrous combination of rising temperatures, climate variability, uncertain growing seasons, decreased water availability, new pests and diseases, and decreasing biodiversity has the potential to reverse recent progress in reducing poverty in many parts of the world.
20. Their work will also be important in meeting the challenges we face today from a growing population, demanding more food and a more varied diet, while the pressure on productive land availability becomes more intense.
21. As I said earlier, partnership is key. IFAD's work in supporting pro-poor agricultural research has benefited immensely from the generous support we have received over the years from the German Government. You are a pillar of our organisation – not only in terms of your financial contribution, but also in terms of your commitment to and involvement in our mission.
22. You have set the standard. For that, I thank you.