

Proceedings of the FAO International Symposium on the Role of Agricultural Biotechnologies in Sustainable Food Systems and Nutrition





Chapter 8

Final plenary session





8.1 Some highlights of the symposium from a non-FAO perspective

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This has been a very exciting symposium in which I think we have broken some new ground and found a way to bring cohesion to several diverse ideas. I have great hope that this is not the end of a symposium but the beginning of a dialogue between member countries and between different parties; a dialogue in which FAO has to play an important role. I will not try to summarize all the different ideas. Instead I will highlight some unresolved issues or some issues that need attention as we move forward.

One such issue is the risk that we consider biotechnology either in a very wide sense or in a very narrow sense. At times there is a tendency to equate biotechnology to GMO, a narrow view that does not do justice to exciting new precision breeding techniques and which risks paralyzing the debate. The other risk is that we consider it too widely. While it is true biotechnology is a tool in a wider context of developing sustainable production systems and of helping farmers to increase their yields, biotechnology is not everything.

As stated very clearly in this symposium, the biotechnology toolbox needs to be linked to the agroecology toolbox and coordinated in a comprehensive and inclusive fashion. This new linkage will be a real challenge technically as it requires an interdisciplinary approach and it will be necessary for governments to engage many different sectors and not just the ministry of agriculture.

We also have a major set of issues related to intellectual property rights. On one hand, we have the desire for open access which is vitally important to allow farmers, small and medium enterprises, poorer countries and other groups to access the latest developments in science. This needs to be balanced with the justified need to encourage investment in a technology that is still very costly to develop. Here, new precision breeding techniques, such as CRISPR, allow us to speed up the process and to find more location-specific solutions that could be of interest for smaller markets. What is important here is that we move the discussion past the black and white view of patenting versus open access and make sure that small farmers, poor countries and poor consumers do not become the victims of this debate. There is a tremendous potential in these new technologies that combine the heritage of mankind with the newest scientific ideas.

There is also a need for innovative public–private partnerships. There are models in some countries where the private sector and civil society, including NGOs, the governments and science work together well. In the area of biotechnology we need to develop this. Maybe we can consider developing a code of conduct for responsible biotechnology. FAO in particular can help to highlight the best practices and specific cases where this can work.

This brings me to capacity building – another issue that I think is very important. It has been mentioned by many people in the symposium and is at the heart of FAO's mandate. Capacity building is not just a matter of training new scientists. It's also about building science infrastructure in countries, the creation of food safety and biosafety agencies and the involvement of both young and mid-career people, particularly women. It is an enormous area of work but one that we must address urgently if we want to bridge the divide between countries that have this kind of capacity and others that do not.

One issue that was only briefly mentioned during this symposium is that of open data or big data. As genetic data becomes available online we can combine it with climate data and soil data to form an enormously powerful tool to fine-tune research efforts as well as farmers' activities to get the best out of the environments in which they work. However, that data is valuable and so it must be considered in terms of intellectual property rights. How should we deal with this massive data? This an issue that we have barely begun to address.

What does all this mean for FAO? By hosting this symposium, FAO has positioned itself right in the heart of a new debate on biotechnology. This is very different from the old black versus white, pro versus contra GMO debate. It is a debate which goes beyond just talking about small farmers but instead addresses the entire food chain. It also goes beyond science and involves governments, civil society and the private sector.

I think the call for FAO to provide a platform, a neutral place where this debate can be played out is very important. But associated with the platform there is also a need for "friends" – a couple of countries, a couple of scientific institutions and a couple of private sector institutions that want to work in partnership with FAO to make it happen. I think that by having a group of friends it can succeed. Not because the friends will do all the work but because the friends can also help to mobilize resources. It's very important to realize that if FAO and the member countries want to support capacity building or establish a programme to exchange best practices or develop other similar initiatives, it requires a long-term involvement including financial commitments. It will therefore be really important to gather together as a group of friends of the new biotechnology, the new future, the new genetics if you want, for small farmers and for poor consumers.

I think one of the most exciting things that we should retain is the enormous enthusiasm of young people. Given the long time lag between the first experiments in the laboratory and the use of new crop varieties or improved animals in the field, we need to involve the younger generations as they will be the ones who will actually work with farmers, industry and governments to move forward with biotechnology. We should involve young people not just at the level of capacity building but to get their ideas to shape the future of science and to decide the kind of technology and agricultural development we want. Continuing the engagement with the young people, begun here in the symposium, is a very exciting idea.



This is an urgent issue. Many things are going to happen very fast. Countries can be taken unaware, companies can feel unprepared and scientists can feel that they are lagging behind. The sense of urgency has been expressed extremely well by the FAO Director-General in saying we cannot leave any solution untouched or underutilized when it comes to fighting hunger and malnutrition. I think we need to promote a participatory approach to this kind of science and develop something which goes beyond the borders of individual countries and institutions. It is a sensitive issue and a difficult one but since when have we been afraid? We're here to do something!

8.2 Closing statement

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Excellencies; Members of the Podium; Distinguished guests; Ladies and gentlemen; After two and a half days of presentations and deliberations, this International Symposium is coming to an end.

We had the opportunity to hear from representatives of governments, civil society, the private sector, academia, research institutions, cooperatives and others.

For the first time in FAO, a special session with students from different regions was organized to identify and convey key messages from the young generation.

FAO is very proud to have fulfilled its role as a neutral forum for frank and open dialogue among all stakeholders.

This was our objective in 2014, when we organized the Agroecology Symposium. And this has also been our goal with the Biotechnology Symposium.

But by organizing these two events, we have opened ourselves to much criticism.

This is the price of entering the dialogue on issues on which no consensus has yet been reached.

Let me tell you that FAO will not shy away from any issue that is relevant to our mandate of ending hunger and improving nutrition, as well as promoting a shift towards sustainable agriculture development.

As a knowledge Organization, we have provided all interested stakeholders with the opportunity to express their views and concerns.

Knowledge and dialogue are essential to make informed decisions and to build consensus. And if it is not possible to reach an agreement, we should make it clear on what points we disagree.

We want to use knowledge and dialogue to determine whether to advance certain topics, how, and in which direction.



No one single tool, technology or approach will provide a complete solution for all the problems we have.

Responding to the urgent and diverse challenges of the twenty-first century will require a combination of responses.

And our responses will also evolve as our knowledge advances.

Ladies and gentlemen,

We have unlocked the door to discuss and analyse how agroecology and biotechnology can live together and, perhaps, be used as complementary options. This is an outstanding achievement of this symposium.

It opens a window of opportunity for the development of new technologies that could make agricultural sectors more sustainable in the years to come.

We have also agreed that tools and approaches must be useful and accessible for farmers, in particular family farmers.

By launching the Agenda 2030 and the Sustainable Development Goals (SDGs), we have agreed that no one is left behind. This is fundamental for reaching sustainability.

Inclusiveness. This is what the SDGs are all about.

This is why FAO's efforts must always focus on assisting the most vulnerable people, where poverty and hunger are concentrated.

Ladies and gentlemen,

Some presentations made in this symposium highlighted the possible contributions of new biotechnologies, both low-tech and high-tech, that could best serve the interests of farmers, in particular family farmers.

Several presentations also reiterated that agricultural biotechnologies are much broader than genetically modified organisms.

Now FAO has to move forward.

We intend to bring the debate to a regional perspective. We want to hear from governments, farmers and researchers of all regions about their needs and concerns regarding biotechnology.

This will help us to improve our knowledge in order to take the right decisions and move in the right direction.



It will also help us to continue building trust among ourselves in order to achieve some level of consensus in the future.

I am sure that, together, we have started to bridge the gap between biotechnology and agroecology.

I do not think we have solved all the issues. And this was never our intention when we started organizing this symposium.

What I can assure you is that FAO Member States have listened to you with great attention. Your statements have been registered. And they will be the base for new discussions.

I have also taken note of your concerns. For example: regarding intellectual property rights and patents, as well as preserving traditional knowledge. These are also key issues for FAO. Your concerns are legitimate.

Let me also stress that the open and frank dialogue that we began with the Agroecology Seminar, and which has continued with this Biotechnology Seminar, forms the basis of our strategic alliance to promote food security and nutrition for all, based on a more sustainable agricultural production.

I believe in this. And I hope you also do. We need to move together.

Ladies and gentlemen,

My last words are of gratitude.



Thank you once more for attending this event and sharing your knowledge and views.

My thanks go also to the researchers from the best academic circles, who have shared new and fresh ideas.

I would like to express my appreciation to the representatives of the private sector and civil society for having the courage to listen to each other with open minds and to promote a fruitful debate.

Thank you all for believing that dialogue will make us stronger and better able to face the challenges ahead.

I would like also to express my gratitude to all the people who helped make this symposium successful, such as my colleagues Maria Helena Semedo and Ren Wang, Ms Louise Fresco, members of the Advisory Panel, the FAO support team and the interpreters.

Thank you to the students that have interacted with us.

For those who have come from abroad, I wish you a safe journey home. I hope to see you all soon. FAO will count on you to continue this dialogue in different parts of the world.

I declare this FAO International Symposium on Agricultural Biotechnologies closed.

Thank you for your attention.

The FAO international symposium on "The role of agricultural biotechnologies in sustainable food systems and nutrition" took place from 15 to 17 February 2016 at FAO headquarters, Rome. Over 400 people attended, including 230 delegates from 75 member countries and the European Union, as well as representatives of intergovernmental organizations, private sector entities, civil society organizations, academia/research organizations and producer organizations/cooperatives.

The symposium encompassed the crop, livestock, forestry and fishery sectors and was organized around three main themes: i) climate change; ii) sustainable food systems and nutrition; and iii) people, policies, institutions and communities.

The proceedings provide the main highlights of the symposium which covered a broad range of biotechnologies, from low-tech approaches such as those involving use of microbial fermentation processes, biofertilizers, biopesticides and artificial insemination, to high-tech approaches such as those involving advanced DNA-based methodologies and genetically modified organisms.

