

Powerpoints of presentations: Opening plenary session and parallel sessions

FAO International Symposium on
“The Role of Agricultural Biotechnologies in Sustainable Food Systems and Nutrition”
15- 17 February, 2016

The international symposium will explore how the application of science and technology, particularly agricultural biotechnologies, can benefit smallholders in developing sustainable food systems and improving nutrition in the context of climate change. The symposium takes a multisectoral approach, covering the crop, livestock, forestry and fishery sectors. It also aims to cover the wide spectrum of available biotechnologies, including microbial food fermentation, tissue culture in plants, reproductive technologies in livestock, use of molecular markers, genetic modification and other technologies.

The symposium takes place over two and a half days, with keynote speakers addressing the opening plenary session on 15 February. A high-level ministerial segment will take place on 16 February. Three parallel sessions will also be held each day and the symposium will close on 17 February 2016 with a final plenary session where outcomes from the parallel sessions will be reported.

All parallel session speakers and opening plenary speakers have been asked to provide the powerpoint slides accompanying their speech. **This document contains these slides.**

The agenda for the keynote speeches and parallel sessions is provided below with hyperlinks to the powerpoint slides. When a speaker's slides become available, a hyperlink is added to the title of the talk (*indicated by blue text*). **CTRL+ Click** on the title to link directly to these slides.

Please note that four speakers did not use slides in their presentations and will not have hyperlinks (Fresco, Ejeta, Kastler and Glover).

This document will be updated to include new speaker powerpoints. Please see the symposium website (<http://www.fao.org/about/meetings/agribiotechs-symposium/en/>) for the latest version.

Monday 15th February 2016

09.30-12.30: Plenary Session, Green Room

Welcome address by José Graziano da Silva, Director-General, FAO, Rome, Italy

Keynote addresses:

1. *The state of knowledge in biotechnology*, by **Louise Fresco**, President, Executive Board of Wageningen UR, Wageningen, the Netherlands
2. *Towards ending the misplaced global debate on biotechnology*, by **Gebisa Ejeta**, Distinguished Professor, Purdue University, West Lafayette, United States of America
3. *Biotechnologies in action in Brazil*, by **Maurício Lopes**, President, Empresa Brasileira de Pesquisa Agropecuária, Brasília, Brazil
4. *Breakthroughs in resource productivity*, by **Gunter Pauli**, Founder, Zero Emissions Research and Initiatives Network, Japan

14.00-17.00: Parallel Sessions

Sheikh Zayed Centre	Red Room	Green Room
1.1 Facing the challenges of climate change: Adaptation in the crop and forestry sectors Chair: Chittaranjan Kole Jacob School of Biotechnology & Bioengineering, Allahabad, India <i>Introductory Remarks (5')</i> Chittaranjan Kole	2.1 Improving productivity through enhanced resource use efficiency Chair: Sergio Feingold Instituto Nacional de Tecnologia Agropecuaria, Buenos Aires, Argentina Co-chair: Thuy Nguyen BioSciences Research Division, Melbourne, Australia <i>Introductory Remarks (5')</i> Thuy Nguyen	3.1 Social and economic impacts of agricultural biotechnologies for smallholders: Taking stock of the evidence and prioritizing future assessments Chair: Sachin Chaturvedi Research and Information System for Developing Countries, New Delhi, India Co-chair: Eduardo Trigo Ministry of Science, Technology and Productive Innovation, Buenos Aires, Argentina <i>Introductory Remarks (5')</i> Sachin Chaturvedi <i>Introductory Remarks (5')</i> Eduardo Trigo
1.1.1 Abdelbagi Ismail <i>Developing rice varieties with enhanced adaptation to lowland farming systems: Case studies from South Asia (20')</i>	2.1.1 Sibin Yu <i>Resource use efficiency in crops: "Green Super Rice" to increase water and nitrogen use efficiency of rice (25')</i>	3.1.1 David Spielman <i>Evidence-based policy-making: The role of impact assessment studies and their implications for agricultural biotechnologies (25')</i>
1.1.2 Yoseph Beyene <i>Harnessing agricultural biotechnology for resilience to climate change: A lesson from water efficient maize for Africa project (20')</i>	2.1.2 Sean Mayes <i>Resource use efficiency in vegetables: Application of molecular breeding to bambara groundnut, an underutilised crop for low-input agriculture (25')</i>	3.1.2 Andrea Sonnino <i>Lessons learned from case studies of applying biotechnologies for smallholders (15')</i>
1.1.3 Douglas Cook <i>Molecular breeding in legumes for resource-poor farmers: Chickpea for Ethiopia and India (20')</i>	2.1.3 David Penman <i>Resource use efficiency in fish: Application of biotechnology in genetic improvement in tropical aquaculture (25')</i>	3.1.3 Jikun Huang <i>Evidence at work: Country experience in the use of evidence in policy-making on agricultural biotechnologies (15')</i>
1.1.4 Ciro De Pace <i>Genomic approaches for dissecting fitness traits in forest tree landscapes (20')</i>	2.1.4 Denis Mujibi <i>Resource use efficiency in livestock: Bridging the biotechnology-livestock productivity gap in East Africa</i>	3.1.4 Narayan Hegde <i>Factors that determine whether biotechnologies can have positive impacts on the livelihoods of smallholders: Examples from India (15')</i>
1.1.5 Sally Aitken <i>Use of genomics for understanding and improving adaptation to climate change in forest trees (20')</i>	2.1.5 Judy Loo <i>Resource use efficiency in forestry: Utilisation of tree genetic resources (25')</i>	
<i>Discussion (70')</i> moderated by Chittaranjan Kole <i>Closing Remarks (5')</i> Chittaranjan Kole	<i>Discussion (45')</i> moderated by Dominic Glover Institute of Development Studies, Brighton, United Kingdom <i>Closing Remarks (5')</i> Sergio Feingold	<i>Discussion (95')</i> moderated by Eduardo Trigo <i>Closing Remarks (5')</i> Sachin Chaturvedi

Tuesday 16th February 2016

09.30-12.30: Parallel Sessions

Sheikh Zayed Centre	Red Room	Green Room
1.2 Facing the challenges of climate change: Adaptation in the livestock and fishery sectors	2.2 Post production value addition and food safety (2 sub-sessions)	3.2 Public policies, strategies and regulations on agricultural biotechnologies
Chair: Shadrack Moephuli Agricultural Research Council, Pretoria, South Africa	Chair sub-session 1: Sergio Feingold Instituto Nacional de Tecnología Agropecuaria, Buenos Aires, Argentina	Chair: Vimlendra Sharan
Co-chair: Thuy Nguyen BioSciences Research Division, Melbourne, Australia	Chair sub-session 2: Delia Grace International Livestock Research Institute, Nairobi, Kenya	<i>Introductory Remarks (5')</i> Vimlendra Sharan
<i>Introductory Remarks (5')</i> Thuy Nguyen	Sub-session 1: Enhancing value in the post-production phase	3.2.1 Rodrigo Sara <i>The role of intellectual property rights in enabling or impeding the application of agricultural biotechnologies, with special reference to developing country agriculture (15')</i>
1.2.1 Panya Sae-Lim <i>Fish breeding for future environments under climate change (20')</i>	2.2a.1 Cavaba Srinivas Prasad <i>Use of feed additives generated through fermentation technologies for livestock feed (20')</i>	3.2.2 Adrienne Massey <i>Regulation and intellectual property of agricultural biotechnologies: Perspectives from the private sector (15')</i>
1.2.2 Sandra Adams <i>Development of diagnostic tools and vaccines for aquatic animals (20')</i>	2.2a.2 Eric van de Weg <i>Use of biotechnologies to increase the storability and shelf life of fruit (20')</i>	3.2.3 Guy Kastler <i>Regulation and intellectual property of agricultural biotechnologies: Perspectives from the civil society (15')</i>
1.2.3 Paul Boettcher <i>Biotechnologies for animal breeding and coping with climate change (20')</i>	2.2a.3 Howard-Yana Shapiro <i>Applying agricultural biotechnology tools and capabilities to enhance food security and nutrition from local food crops to stimulate sustainable income opportunities for small holder farmers to reduce poverty. (20')</i>	3.2.4 Eduardo Trigo <i>The challenges of developing national policies and regulations for agricultural biotechnologies: Reflections from cumulative experience (15')</i>
1.2.4 Ulrich Meyer <i>Use of biotechnologies to improve feed quantity and quality: Adaptation to the changing climate from the animal nutrition perspective (20')</i>	<i>Discussion (20') and sub-session closing remarks (5') moderated by Sergio Feingold</i>	3.2.5 Dominic Glover <i>How to ensure that policies, strategies and regulations on agricultural biotechnologies act to benefit smallholders (15')</i>
1.2.5 Jean de Foucauld <i>Livestock vaccines: development and market access</i>	Sub-session 2: Using biotechnologies to ensure the safety of food	
1.2.6 Farai Muchadeyi <i>A landscape genomics approach in unravelling adaptive genetic diversity in goats: A case study of South Africa (20')</i>	<i>Introductory Remarks (5')</i> Delia Grace	
	2.2b.1 Kohei Makita <i>Traditional milk fermentation as a potential tool for sustainable improvement of food safety (20')</i>	
	2.2b.2 Ranjit Bandyopadhyay <i>Aflasafe: a case study for aflatoxin reduction in crops (20')</i>	
	2.2b.3 Flábio Ribeiro de Araújo <i>Diagnostic tools to detect pathogens causing tuberculosis in cattle and prevent their transmission through dairy products to humans (20')</i>	
<i>Discussion (50') moderated by Shadrack Moephuli</i>	<i>Discussion (20') and sub-session closing remarks (5') moderated by Delia Grace</i>	<i>Discussion (80') moderated by Vimlendra Sharan</i>
<i>Closing remarks (5')</i> Shadrack Moephuli		<i>Closing remarks (5')</i> Vimlendra Sharan

Wednesday 17th February 2016

Sheikh Zayed Centre	Red Room	Green Room
1.3 How can biotechnologies contribute to adaptation with mitigation co-benefits?	2.3 Nutrition and food quality	3.3 Investing in biotechnology solutions through capacity development and partnerships
Chair: Olivier le Gall Institut National de la Recherche Agronomique, Auzeville-Tolosane, France	Chair: Maggie Gill Consultative Group for International Agricultural Research and University of Aberdeen, Aberdeen, United Kingdom	Chair: Kongming Wu Chinese Academy of Agricultural Sciences, Beijing, China
<i>Introductory remarks (5')</i> Olivier le Gall	<i>Introductory remarks (5')</i> Maggie Gill	<i>Introductory remarks (5')</i> Kongming Wu
1.3.1 Daniel Sumner <i>Agricultural biotechnology and the economics of food security and climate change mitigation (25')</i>	2.3.1 Anna Lartey <i>Our food, our diet, our health: Where do we go from here?</i>	3.3.1 Helen Altshul <i>Biosciences capacity building in Africa: Lessons learned from Biosciences eastern and central Africa (BecA) (15')</i>
1.3.2 Stephan Weise <i>Bioversity, key to helping farmers adapt to climate change (15')</i>	2.3.2 Melissa Fitzgerald <i>Application of biotechnologies in improving the quality of rice and wheat. (20')</i>	3.3.2 Denis Murphy <i>Case studies of public-private partnerships in agricultural biotechnologies: Lessons learned (15')</i>
1.3.3 Guntur Venkata Subbarao <i>Biological nitrification inhibition (BNI) in plants: Implications for nitrogen-use efficiency and nitrous oxide emissions from agricultural systems (15')</i>	2.3.3 Howarth Bouis <i>Biofortification of Staple Food Crops: Justification, Progress, and Future Activities. (20')</i>	3.3.3 Sarah Evanega <i>Building Partnerships, Empowering Champions: The example of the Cornell Alliance for Science (15')</i>
1.3.4 Henning Steinfeld <i>Mitigation of enteric methane emissions from ruminant animals (15')</i>	2.3.4 Albert Tacon <i>Fish for all: role of biotechnology in improving nutrition (20')</i>	3.3.4 Riccardo Aleandri <i>North-south/west-east cooperation in agricultural biotechnologies: Some lessons from Italy. (15')</i>
1.3.5 Paulo Kageyama <i>Use of biodiversity as a biotechnological tool for carbon sequestration in the tropics (15')</i>		3.3.5 Sachin Chaturvedi <i>Case studies of south-south collaboration in agricultural biotechnologies: Lessons learned (15')</i>
1.3.6 Hervé Saint Macary <i>Carbon sequestration in agricultural soils: The "4 per mil" program (15')</i>	<i>Discussion (80') moderated by Maggie Gill</i>	
<i>Discussion (70') moderated by Olivier le Gall</i>	<i>Closing remarks (5') Maggie Gill</i>	
<i>Closing Remarks (5') Olivier le Gall</i>		<i>Discussion (95') moderated by Courtney Paisley, Young Professionals for Agricultural Development (YPARD), Rome, Italy</i>
		<i>Closing Remarks (5') Kongming Wu</i>

09.00-12.00: Parallel Sessions