



Tuesday March 10, 2009
9:00 to 10:30

Lyon Convention Center
France

CROPS OF THE FUTURE

Moderator

- **Ioan Negrutiu**, Professor of Biology, Ecole Normale Supérieure (ENS) de Lyon, France

Speakers

- **Janet Cotter**, Senior Scientist, Greenpeace International, Science Unit, University of Exeter, UK
- **Willy de Greef**, Secretary General, Europabio, Belgium
- **Marion Guillou**, Chairman and CEO, Institut National de Recherche Agronomique (INRA), France
- **Piet Van Der Meer**, Executive Secretary, Public Research and Regulation Initiative, PRRI, Belgium
- **Michiel van Lookeren Campagne**, Vice President of Research, Bayer CropScience, France

Summary

- Agriculture is the main issue, if we want to know, where our civilization is going
- Actual ongoing economic crisis shows, that there are very complex issues, which can be simplified, if we would start with agriculture
- We are actually counting on four major crops (maize, rice, soy and wheat); is this a sustainable basis for the challenges of the future?
- In recent years the agricultural productivity increased significantly and it has to increase in the future facing
 - Climate change, which can already be seen influencing yields
 - Reduced soil quality, which has to be protected, as former productivity increase came at the cost of environmental burden
 - Unpredictable growing conditions, whereas farmers in the globalised economic network need stability and predictability to take part on the market and leave poverty cycles
 - Complex economic and social environment
- To increase agricultural productivity a number of different approaches are necessary as none of them can solve the problems alone
 - Correct balance of organic agriculture and industrial agriculture
 - Balance of transgenics, genetically assisted breeding and crops developed by classical cross breeding, whereas biotechnology plays a vital role in all approaches



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- There are now contradiction between low impact agriculture and biotechnologically based plants
- The major need is in using the potential of crop traits nature is providing us with
 - New genomic approaches analyzing the nature of polygenic traits are to be used extensively
 - More funding is needed to explore the globally available seed collections for traits beneficial for future crops, as we are currently just scratching the surface
- Discussing crops of the future we must not forget the non-food use of plants with high potential on optimization
 - More land is being used for growing wool fiber on than for growing maize
 - Often very little of the usable energy potential of plants is explored when using them as energy source
- There is a lot of effort needed to boost the innovations needed for developing crops of the future allowing sustainable agriculture
 - As a strong message to politicians the panel agreed on the need of substantial funding for the thousands of researchers in public organizations, especially in developing countries
 - IP-protection is essential for new innovations, when at the same time basic research is not contradicted

Quotes

"Tell me what the crops of the future are and I will tell you what the world will look like."
Ioan Negrutiu

"Will the plants that we are going to use in future be suitable for the changing climate conditions ?"
Marion Guillou

"The successful crops of today are already of multiple uses and widely accepted, they are of proven productivity and we know their unused potential as well as their weaknesses."
Willy de Greef

"Over the last hundreds and thousands of years we changed the environment to the needs of the crops, but it would be better to change the Crops to the need of the environment."
Piet Van Der Meer

"There is actually enough food to feed the population, but we do not have the right food at the right place for the right people"
Janet Cotter

"I grew up on a farm and I cannot remember a year which has been normal. It was either too hot or too cold, either too wet or too dry."
Willy de Greef

"Industry will only invest in R&D, if there is a financial benefit, therefore there is a lack of innovation in countries with little IP-protection."
Michiel van Lookeren Campagne



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BioVision 2009 session reporting

"Biotechnology is not the silver bullet. It is just one of a number of technologies to solve our problems."

Piet Van Der Meer

"Transgenic is only one aspect of biotechnology in crop development."

Marion Guillou



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