

European Commission Programme Conference organised by EPSO

Crop genetic improvement technologies for
a sustainable and productive agriculture
addressing food and nutritional security,
climate change and human health

14 July 2015

CNR lecture theatre, Milano

First impressions



MILANO 2015
FEEDING THE PLANET
ENERGY FOR LIFE



European Union

Official Participant



European Plant Science Organisation
www.epsoweb.org

On Tuesday, 14 July, expert speakers and an audience of 120 people contributed to a high quality and open discussion on Crop Genetic Improvement Technologies at the World Expo Milano 2015. The conference was organized by EPSO on behalf of the European Commission and hosted at the CNR headquarter in Milan.

The EXPO theme “Feeding the Planet, Energy for Life” provided a unique opportunity to discuss plant breeding at a global event.

Session 1 started with Uli Schurr, who presented the challenges that Plant Breeding can help to address. Among these ‘Grand Challenges’ are:

- Food and nutritional security
- Scarcity of natural resources and environmental footprint (water, nutrients, arable land)
- Mitigation and adaptation to climate change
- Bio-based industry – renewable bio-resources

Uli highlighted the key role of innovation in the 21st century, which has provided the majority of recent output growth in agriculture.

A brief history of crop improvement technologies was provided by Bernd Mueller-Roeber, from the start of agriculture right up to the present day. The very latest technologies were introduced, and the advantages / disadvantages of each were highlighted.

Session 2 provided a series of excellent case studies of how plant breeding technologies can solve problems for society at large. The success stories from EPSO member institutes included:



European Landowners @EULandownersOrg · Jul 14

In the 21st century, more innovation leads the way, not more input! We're on #ExpoMilano2015 #expocrops @EuropaBio



RETWEETS
7

FAVORITES
2



- Johnathan Napier spoke about his work producing a sustainable source of Omega-3 fish oils for fish farming and human nutrition, proven to protect against cardio-vascular disease, in plants.
- Joachim Schiemann presented the production of sustainable rubber from dandelions that has been successfully used to manufacture car tyres tested by Continental, avoiding enlargement of rubber tree plantation area.
- Richard Visser explained his work on producing potatoes with resistance to late blight, a disease that causes major economic losses worldwide, supporting food security.
- George Coupland introduced work on switching annual crops to perennials, which have marked advantages on marginal land contributing to environmental benefits and food security.
- Michele Morgante demonstrated how new breeding technologies could help preserve traditional grapevine varieties in Europe. Grapevine cultivation currently represents 65% of the fungicides used in Europe.

Session 3 discussed how to increase Europe's competitiveness and ability to address societal challenges. Speakers came from a variety of stakeholders:

- Thor Kofoed from CopaCogeca represented farmers.
- Garlich von Essen of the European Seed Association represented industry.
- Caroline Mahr of the European Landowners Organisation gave the view from an NGO.
- Annette Schneegans of the European Commission spoke about Horizon 2020 and science funding.
- Wayne Powell of CGIAR (Developing countries' research centers) and Ruth Bastow of the Global Plant Council introduced the global dimension of food and nutritional security.

Each brought important insights with a common theme being the critical role of plant breeding in their respective areas.

Session 4 was a discussion between the audience and speaker panel which was also open to questions from social media.

Presentations will be made available online next week, a full report of outcomes will be published after the summer break, and speakers are invited to contribute to a booklet summarizing the topics discussed at the conference to be published online before the end of the year.



All participants were encouraged to continue the discussion with their colleagues and policy makers based on the discussion at the conference and the material published from it.