



PRESS RELEASE

Climate Change – The Role of Plants

Brussels, 2 December 2015

On December 1, the European Technology Platform 'Plants for the Future' (Plant ETP) in collaboration with Mr Jasenko Selimović and Mrs Anthea McIntyre, both Members of the European Parliament (EP), organised the first event of a series of workshops "*Sustainable growth: Unlocking the potential of plants*". This series of workshops follows a report by former MEP Marit Paulsen on "*Plant breeding: what options to increase quality and yields*" published last year. In light of the 2015 United Nations Climate Change Conference (COP21) in Paris, the first EP-Plant ETP workshop focused on climate change and what plant research and plant breeding can contribute to address this change. A total of 45 high-level representatives of the European Commission, the European Parliament, the Member States and experts from the stakeholder groups of the Plant ETP (industry, academia and farmers) came together and discussed potential contributions of plant breeding to the multifaceted challenges that climate change imposes on agriculture and food production as well as society in Europe.

Plant breeding can develop cultivars through many different techniques, ranging from simply selecting plants with desirable traits in farmers' fields to more complex classical or molecular techniques. To respond to the challenges imposed by climate change, an inclusive approach is recommended that combines manifold practices and technologies for the best possible impact. The EP report from last year thus emphasized that "*EU should play a leading role in the development of sustainable plant breeding techniques and in promoting agricultural and plant breeding research and practice*". Europe therefore needs critical mass investments in plant breeding research and innovation.

The programme of the workshop included three expert speakers selected within the Plant ETP, who provided examples of climate change mitigation by improved crops to reduce greenhouse gas emissions, as well as adaptation of crop plants to emerging and spreading diseases and adaptation to an increased prevalence of drought and flooding.

In her opening speech, MEP Anthea McIntyre underlined the challenge of climate change affecting Europe and the conditions for farming. "*Satisfying the world's demand for food is one of the biggest challenges ahead of us. Shrinking land availability, environmental loss and degradation, shortages of water, and the emergence of new pests and diseases, all as a consequence of climate change, are placing considerable pressure on our natural environment*". She emphasized that "*technological innovation is a vital part of the solution*" and concluded that "*the EU should become a world leader in agricultural technology, innovation and sustainability and develop a wide range of innovations and technologies that will enable our farmers to meet our needs*".

"*Plant science and breeding have a lot to contribute,*" continued Jens Sundström, representing the Chair of the ETP 'Plants for the Future' – Ulrich Schurr, in his introductory speech. "*The ability of crops to use nitrogen more efficiently can reduce emission of greenhouse gases, and a research group in Sweden has recently demonstrated a modified rice with 90 percent less methane emission*". "*The Plant ETP Action Plans on Innovation, Research, and Education are designed to indicate the way forward*" Dr Sundström pointed out.

Wilhelm Gruissem from the Swiss Federal Institute of Technology raised attention to the worrying trend of declining global crop yield increases and decreasing genetic diversity. He presented examples of breeding programmes and agricultural practices which can help to mitigate climate change and he highlighted that *“agriculture is directly responsible for 10-15 percent of total GHG emissions on a global scale, not taking into account land use changes such as deforestation and erosion. An efficient plant breeding may provide us with one of many strategies needed to reduce these GHG emissions”*. In the discussion that followed, Prof Gruissem argued strongly for investments in public research. *“Biodiversity exists in seedbanks, containing potential for 'climate-smart' crops, we must invest in research to unlock this potential”*.

“What if we stop breeding in 2016?” asked Thijs Simons, Senior Advisor at Plantum in the Netherlands, rhetorically. *“Yields will be lower as climate change will impose stress on agricultural production through an increased prevalence of drought, flooding and soil salinity”*. He made it clear that breeding companies are also dependent on public investments in basic research. *“Basic research is the seed. Neglecting it is like trying to harvest without sowing”*.

Luc Peeters, Chair of the Phytosanitary questions Working Party at Copa-Cogeca, highlighted the challenges posed by emerging diseases in the context of climate change on plant health. He said *“both modelling and actual data provide several examples of plant diseases that may spread as well as become more severe with a future warmer climate, including fungal pathogens such as powdery mildew in cereals and grape, stem canker in oilseed rape, and the devastating rust disease in wheat”*. He reminded the participants of who is producing the food we are eating and encouraged to include the farming sector as advisors in the Standing Committee on Agricultural Research (SCAR).

Dr Sundström summed up the talks and discussions and concluded that we need more effort to bridge the *“Valley of Death”* between research and innovation – a challenge for which Plant ETP is well designed to tackle.

In his concluding speech, MEP Jasenko Selimović emphasized the progress of plant breeding in the last 15 years – 15 percent production increase, 150 million less people suffering from undernutrition, and reducing the equivalent of Germany’s traffic emissions of greenhouse gases in one year. *“To be able to combat climate change we need a strong and competitive European research on plant breeding as well as long-term research financing. It is therefore very disappointing to see how business after business in the plant breeding sector moves their research about future plant breeding techniques to other parts of the world, especially the US”*. He pointed out *“this makes it difficult for Europe to compete globally and to preserve the European genetic and cultural diversity”*.

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About ETP Plants for the Future - www.plantetp.org

The European Technology Platform ‘Plants for the Future’ (Plant ETP) is a stakeholder forum for the plant sector that brings together members from industry, academia and the farming community. The industrial sector is represented by the European Seed Association (ESA) which represents itself the totality of the European seed industry (more than 7000 companies, 90% of which are SMEs) active in research, breeding, production and seed marketing. A certain number of individual companies are also direct members of Plant ETP such as BayerCropScience, Keygene, Limagrain, KWS, Céréales-Vallée, SESVanderHave and two food processing companies Nestlé and Südzucker. The academic sector is represented by the European Plant Science Organisation (EPSO) with over 220 research institutes and universities from 30 countries; together they represent over 28.000 plant researchers across ages. The farming sector is represented by Copa-Cogeca, the European organisation for farmers and their cooperatives. Copa represents over 13 million farmers whilst Cogeca represents the interests of 38,000 agricultural cooperatives.