CROP INNOVATION DENMARK
- from genes to seeds

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The future demand for food, feed and biomass calls for new plant innovation

Challenges ahead – why do we need research in plant breeding?

Plants are the basis for food, feed and biomass for multiple purposes. Thus, of high value and interest for the society. With the increasing resource usage, challenges with climate changes and the competition for application of the plant biomass we – as society – face a great challenge in increasing the plant biomass production in order to feed the future. We must provide solutions for food security through measures that enable a sustainable and increasing plant production. At the same time – and equally important - is the demand for stable production – we need increasing yields and yield stability in the production of plant biomass.

Plant breeding is all about selection of the best crop varieties – the ones with the highest yield, the best quality and the most resistant toward diseases, drought etc. **Bringing new improved varieties to the market is a significant part of the solution of feeding the future**.

Plant breeders across the world are constantly striving towards improving the crops – but breeding a new variety often takes 6-10 years. Encouraging, and through heavy engagement in research and innovation, plant breeding methods, new molecular approaches that improve plant breeding processes have been developed over the last decade.

However, we still need to accelerate the breeding progress to deliver new improved sustainable and productive crop varieties that will cope with future challenges and the demands for stable and robust supply of food, feed and biomass.

CID stresses that:

- There is a need for a strengthening of the strategic research and plant innovation
- The framework and funding bodies should pay notice that future challenges are now only addressed through short-termed research projects. There is a need for ambitious persistent research programs that will utilize the full potential from plant breeding and plant innovation.
- Future research and innovation should focus on further improving the productivity and sustainability of the plant production through breeding of new varieties.
- New strategic research and innovation initiatives should accelerate the breeding progress – delivering new improved crop varieties for EU and global agriculture.
- The three highest priorities for future research is i. to improve yield, yield stability, resource efficiency and adaptability to climate change, ii. to utilize the full potential of new precision breeding technologies and iii. to utilize recent advances in molecular genetics to improve breeding tools such as genomic selection.
- There is a need for a strategy with ambitious goals for improvement of our crops to answer how to feed the future – we need to speed up innovation.
- This calls for a strengthened corporation between public and private funding and research bodies and plant breeding companies – at national and international level

CROP Innovation Denmark (CID)

CID is a formal public-private partnership. CID's ambition is to increase research height and strengthening the innovation drive in applied plant research.

CID members include **University of Copenhagen, University of Aarhus, Danish Agriculture & Food Council and the Plant Breeding Companies DLF, Nordic Seed and Sejet Plant Breeding and Vandel Potatoes**.

Together the CID members cover Danish breeding within grasses, cereals and potatoes.