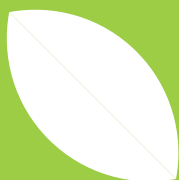




Advancing Sustainable Agriculture and Competitiveness through Plant Breeding



Reconciling sustainability with agricultural productivity in the face of climate change relies on developing resilient, high-yielding crops of superior nutritional value.

Plant breeding needs to speed-up

Innovation in plant breeding is crucial to achieve this goal and has gained unprecedented importance. Plant breeding contributes to increased yields, improved market conditions for farmers, food availability, economic prosperity, and environmental sustainability.

The latest plant breeding methods like new genomic techniques (NGTs) can help plant breeding to be more precise and efficient. And with that, farmers can be provided with improved plant varieties more rapidly.



Challenges and Solutions

NGTs offer efficient and precise opportunities for developing plant varieties with diverse characteristics, such as pest and disease resistance or climate adaptation.

The availability of a comprehensive breeding toolbox, including the latest breeding tools like genome editing, is necessary.

The regulatory burden for new plant breeding methods, particularly genome editing, is currently high in Europe.

Certain NGT-derived plants, such as those from targeted mutagenesis and cisgenesis, are indistinguishable from plants resulting from conventional breeding.

To unlock the potential of NGTs, a proportionate and efficient regulatory framework is needed.

An increasing number of countries are taking a risk-proportionate approach and exclude NGT plants, which cannot be distinguished from conventional breeding from their biotech regulations.

...Which means that

Plant varieties developed through the latest breeding methods should not be subject to different or additional regulations if they could be obtained through earlier methods or occur naturally.



The Role of Plant Breeding

66% of the productivity growth in EU agriculture relates to improved genetics, which is plant breeding.

Advances in plant breeding since 2000, are responsible for increasing productivity in arable farming by approximately 26%.

With this plant breeding avoided additional land use (saving more than 21.5 million hectares), greenhouse gas emissions due to additional land

use (4.0 billion tons of direct CO₂), and loss of biodiversity¹.

Therefore, plant breeding has a track record of driving competitiveness and socio-economic and environmental sustainability in the European Union.

Advancing sustainable agriculture and ensuring EU's competitiveness requires the full toolbox of innovative breeding methods.

Conclusions

Europe needs to leverage on the opportunities of technology and innovation to support the transition towards more sustainable agri-food systems. Europe should therefore adopt a regulatory approach that does not discriminate conventional-like NGT plants and regulates them in the same way as plants resulting from conventional breeding.

Why do we need a different regulatory approach for New Genomic Techniques (NGTs)?

¹⁻² See the QR code

The discussion on New Breeding Techniques (NBTs), as so called at that time, began in 2008 when the EU Commission first established a member states expert working group. Following a 2018 European Court ruling classifying all NBT organisms as GMOs, concerns about the current GMO Regulation and its enforcement arose. The EU Commission' study on NGTs confirmed challenges in identifying certain NGT products and noted that similar outcomes could be achieved with conventional methods.

On July 5, 2023, the EU Commission proposed a new regulatory approach². The core principle is that NGT plants that are similar to conventional breeding would be treated like conventional plants. These so called **Category 1 NGT plants**, would be subjected to a verification procedure and, if they meet certain criteria, they would be exempted from the GMO legislation. Other NGT plants would be regulated as **Category 2 NGT plants** and still follow GMO regulations.

Euroseeds supports a differentiated regulatory approach for conventional-like NGT plants and opposes any GMO-like requirements that would unproportionately discriminate these plants.

Over 20 countries globally have already introduced differentiated and enabling regulatory approaches, hence Euroseeds urges the EU to align with those countries to foster innovation and competitiveness, for European researchers, breeders, and farmers.



New techniques in biotechnology



About our HFFA study on plant breeding



Our website