

Fact Sheet

NEW BREEDING TECHNIQUES: seizing the opportunity

The world is facing crucial challenges on food security, sustainability and climate change. Agricultural productivity must increase and requires more efficient crops that are resistant to pests, disease and other stress factors such as drought, while respecting the environment and making better use of natural resources.

The European plant breeding sector has always been a driver in developing highly innovative and sustainable solutions. But this takes time: conventional plant breeding techniques usually take from seven to twenty years or more to generate the desired characteristics.

New methods, developed in the last decade following breakthrough research in plant

genetics - both in the private and public sector - offer a solution. A set of **New Breeding Techniques (NBTs)** can be used to introduce desired characteristics more precisely and in less time in a wide variety of crops. However, at the moment, the lack of clarity on what EU regulation is applicable to NBTs is hampering their application.

NBTs and the GMO debate

As an effective alternative in light of the *de facto* moratorium on GMOs in Europe, NBTs allow to produce plant varieties in a similar - but more precise - manner to that of conventional breeding techniques, thereby effectively overcoming current limitations in plant breeding.

What are the advantages of NBTs?

- NBTs allow breeders to develop desired plant characteristics at a far more rapid pace
- NBTs help develop resistance in plants to pests, thus reducing the need for pesticides
 - Positive impact on the environment and for consumers, and economic benefit for farmers
- NBTs help to improve the precision and efficiency of the plant breeding process
 - More methods for plant breeders to increase food production in a sustainable manner
- NBTs strengthen plants' tolerance of disease and drought
 - More efficient production, more food, and better use of water and other resources
- NBTs make it possible to achieve important breeding objectives - such as increased disease resistance - more rapidly and efficiently
 - Benefits for farmers, consumers and the environment
- NBTs provide impetus to Europe's economy and to the competitiveness and innovation potential of the European plant breeding sector

But in some EU Member States, NBTs are being associated with GMOs, even though plants resulting from the application of NBTs differ from GMOs. In the meantime EU institutions are still in the lengthy process of evaluating whether or not the NBTs should fall within the scope of GM legislation.

This is blocking further development in Europe's plant and seed industry, which is a world leader in terms of innovation and representing a market value of approximately 6.8 billion euro.

The importance of EU recognition

Recognition by the EU that the products developed with NBTs do not fall under the scope of GMO legislation would give a strong impetus to the competitiveness of the European plant breeding sector which, thus far, has carried out almost 50% of the research on NBTs done globally.

The many small and medium-sized enterprises (SMEs) that make up this sector would then be freed from the expensive regulatory burden associated with the GMO legislation. They could then focus their resources on research and innovation, and thus offer added value to the European agricultural sector and economy as a whole.

Furthermore, this will level the playing field between Europe and other markets, such as the US and Argentina, which are less likely to raise

NBTs - a beneficial technology that is vital to Europe's economy and innovative edge

First likely applications of New Breeding Techniques

- Fungal resistance in potatoes
- Herbicide tolerance in oilseed rape and maize
- Drought tolerance in maize
- Scab resistant apples and potatoes with reduced amylase content

barriers at the breeding level. Indeed, as varieties developed using NBTs are identical in many cases to those developed using conventional breeding techniques, a different regulatory regime could generate issues relating to enforcement.

The NBT Platform: achieving agreement on NBTs at the EU level

The NBT Platform is a coalition of SMEs, large industry and prominent academic research institutes, which strives to bring clarity to the European debate on NBTs.

Its aim is to provide policy makers and stakeholders with clear and precise information on NBTs and to generate awareness about their potential benefits for the European economy and society as a whole.

NBT Platform Secretariat

More information on www.nbtplatform.org, or contact us via info@nbtplatform.org