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WELCOME TO NEW GENOMIC TECHNIQUES

In 2020, two scientists were awarded the 2020 Nobel Prize in Chemistry for developing a groundbreaking innovative tool in genetics, allowing the development of New Genomic Techniques (NGTs).

WHY ARE THESE NEW TECHNIQUES USEFUL AND DESIRED?

NGTs are new powerful tools (using systems present in nature) able to cut, introduce, repair and change the genome sequence in a very targeted way. NGTs are expected to have a huge impact on agriculture in the coming years.

Indeed, this innovation can help meet some of the challenges of this century for the benefit of European citizens!

WHY ARE NGT PLANTS DIFFERENT FROM GMOS ?

These NGTs allow to introduce genetic modifications without inserting genetic material from non-crossable species, i.e. without inserting foreign genetic material:

- Their use can result in plants with traits equivalent to what can occur naturally or be obtained by conventional breeding methods, but in a faster and more targeted way.
- Varieties obtained with these techniques cannot be distinguished from those obtained through conventional breeding.

WHAT RESPONSES TO AGRICULTURAL CHALLENGES, ESPECIALLY FOR SUGAR BEET CULTIVATION?

ADAPTATION TO CLIMATE CHANGE

There is a need for agriculture to further reduce its GHG emissions and its impact on the environment, as well as rapidly adapt to the negative effects of climate change.
These negative effects include biotic and abiotic stresses.
NGTs are real solutions for farmers and for sustainable agri-food systems.
NGTs can be used to develop sugar beet varieties more resistant to water stress (e.g. drought).

LOWERING INPUTS

NGTs can help develop sugar beet varieties with improved nutrient use efficiency and/or improved tolerance or resistance to pests (certain insects such as moths, weevils, aphids or cicadas) and/or diseases, be they insect-transmitted such as virus yellows, root diseases such as aphanomyces, foliar diseases such as cercospora.
They could thus contribute to further improve the implementation of Integrated Pest Management and help reduce inputs (fertilizers and/or plant protection products).

WHY A NEW REGULATORY FRAMEWORK?

The main obstacle to developing NGT plants in Europe is the current EU regulatory framework on GMOs. A new, adapted framework is absolutely necessary to allow this, as well as future, innovation to materialize and to avoid Europe falling further behind other regions which are advancing rapidly. We welcome the recent EU Commission proposal on NGTs. We ask that this adapted regulatory framework should:

- make the authorization and marketing procedures for these conventional-like plant varieties obtained by these techniques fully aligned in terms of safety, risk assessment, transparency and labelling with those of current conventional varieties when these new varieties are equivalent to conventional plants: no additional burdens should be introduced.

- be fit for purpose and not discriminate types of farming: provisions on organic farming and production should remain and only be addressed in the European legislation on organic production.

- avoid political considerations and bias far from science-based and risk-based considerations, to allow further innovation towards better sustainability.

- avoid any national opt-out by Member States, which would disrupt the EU Single Market and obstruct freedom of choice for European farmers to access such innovation.

SUGAR BEET & NGTs