European Commission

New genomic techniques

5 July 2023
#EUGreenDeal
#EUFarm2Fork

Why is this important?

New Genomic Techniques enable highly precise and efficient plant breeding. They can help increase the **sustainability** of our food system through the development of **improved plant varieties** that are more resilient to droughts or other climate extremes, that require **less fertilisers and pesticides**, and that lead to higher yields.

Why new rules?

Current rules lag behind scientific and technological progress and are not designed to facilitate the development and placing on the market of innovative NGT products. The EU needs an **adapted framework for safe NGT plants** tailored to their specificities to provide benefits to farmers, consumers and the environment.

Objectives of the proposal:

- Ensure **high level of protection of health and the environment**. These rules apply only for NGT plants which are as safe as conventionally-bred plants. These plants are safe for humans, animals and the environment. For any other NGTs, GMO rules will still apply.
- Contribute to **sustainability** in a wide range of plant species, especially for the agri-food system.
- Create opportunities for **research and innovation**, including for SMEs.

WHAT ARE NEW GENOMIC TECHNIQUES?

NGTs are techniques that can help breed new plant varieties faster, and with higher precision than classical breeding techniques, such as seed selection or cross-breeding. NGTs can produce a wide diversity of plant products. These plants may have only small changes that might also occur in nature or through classic breeding or they may have more complex modifications.

Key elements of the new rules:

Establishment of two categories of plants obtained by NGTs:

- Category 1: Plants that are comparable to naturally occurring variations will require notification (and central registration).
- Category 2: Plants with more complex modications will go through the more extensive process of the GMO-regulation.

Incentives to steer development of plants in support of sustainability goals

Transparency about all NGT plants on the EU market (for e.g. through labelling of seeds)

Robust monitoring of economic, environmental and social impacts of NGT products

PROMISING NGT EXAMPLES:

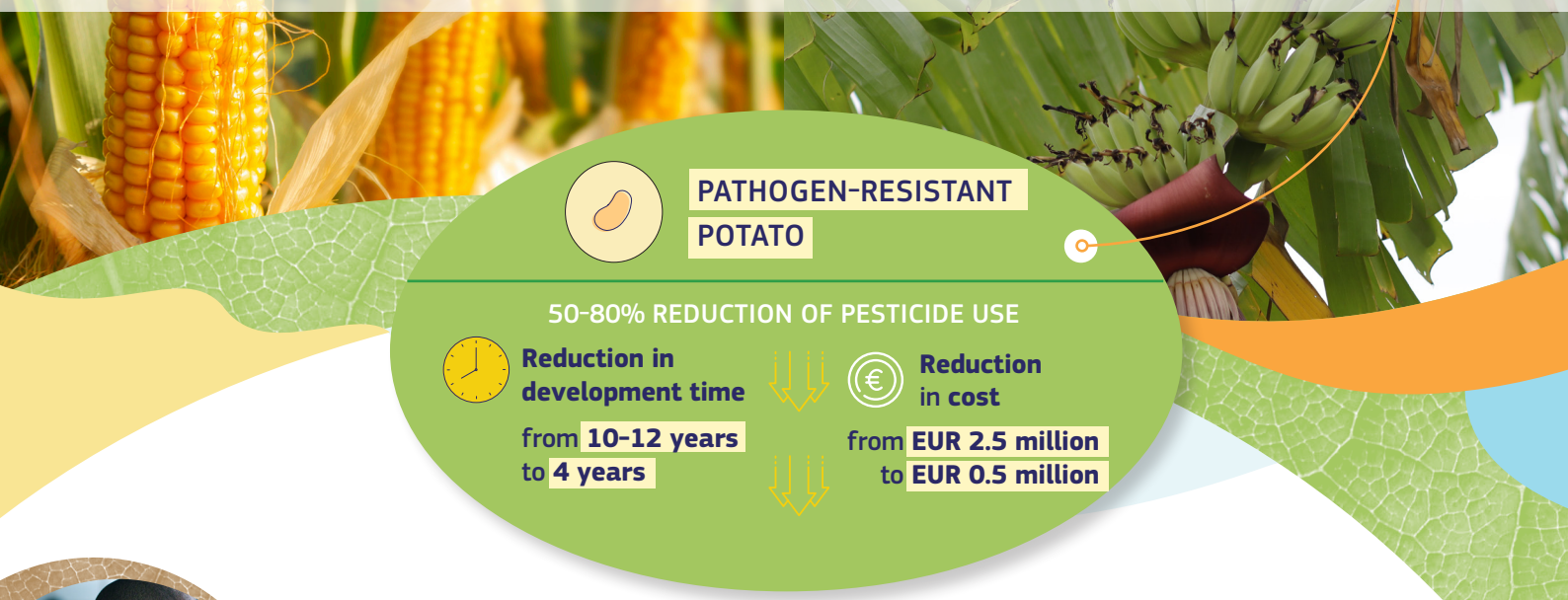
Bruise-resistant bananas can reduce food waste

Drought-tolerant maize varieties are being developed in Europe to adapt to climate change

Mustard greens modified to reduce bitter flavours can increase variety for healthier diets

Poplar varieties with favourable wood properties for use in manufacturing are being developed in Europe

Pathogen-resistant potato is being developed in Europe to reduce pesticide use and food waste



PATHOGEN-RESISTANT POTATO

50-80% REDUCTION OF PESTICIDE USE

Reduction in development time

from **10-12 years** to **4 years**

Reduction in cost

from **EUR 2.5 million** to **EUR 0.5 million**

Who can benefit from NGTs?

- **Farmers** – broader choice of plant varieties, lower costs and higher environmental performance due to less use of pesticides and fertilisers.
- **Consumers** – broader choice of safe products, improved nutrition, less undesirable substances such as pesticides
- **Researchers and plant breeders,** including SMEs – more legal clarity and more tools to increase breeding speed and precision
- **Food system** – climate resilience, saving natural resources, lower emissions, reduced food waste and higher food security

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