New genomic techniques (Polfjärd report)

The Commission's proposed Regulation on plants obtained with New Genomic Techniques (NGT) aims to accelerate market access for the latest generation of GM plants and avoid consumer rejection of GM food. The proposal exposes consumers and the environment to unknown risks, jeopardises both organic and conventional GMO-free agricultural production and would lead to a surge of patented GM seeds. Without labelling of final products, consumers would be left in the dark.

What are New Genomic Techniques (NGTs)?
New Genomic Techniques (NGTs) are genetic modification techniques that have been developed since the adoption of EU GMO Directive 2001/18/EC. Some are based on the transfer of genes from related species (cisgenesis). Others are so-called gene editing techniques such as CRISPR/Cas. They have in common that, in principle, the final organism contains no foreign DNA (i.e. genetic material from a species that is not sexually compatible).

Are NGT plants genetically modified organisms (GMOs)?
Organisms produced with New Genomic Techniques are GMOs and subject to the rules of the EU's GMO legislation, according to the European Court of Justice. The Commission's proposal acknowledges that in its Article 3. The EU's GMO legislation aims to protect human and animal health and the environment, and to support the EU internal market.

What has the Commission proposed?
On 5 July 2023, the Commission presented a proposal establishing two categories of GM plants obtained through NGTs.

- **Category 1 NGT plants** have no more than 20 genetic modifications. The European Commission considers these GM plants to be "equivalent" to conventionally bred plants. It wants to remove existing requirements for GMOs, including authorisation based on an individual risk assessment, detection methods, traceability, monitoring and consumer labelling. Seeds and other plant reproductive material (e.g. tubers, cuttings) would be labelled as "cat 1 NGT" and listed in a public database.

- **Category 2 NGT plants** are all other NGT plants. For these GM plants, most GMO requirements would be maintained, although some (e.g. the submission of

a detection test) could also be dropped. EU countries would no longer be allowed to ban the cultivation of NGT2 plants in their territories. However, they would be required to adopt measures to avoid the unintended presence of these GM plants in organic and conventional crops.

Like any other GMOs, NGT 1 and NGT 2 plants would be banned in organic production.

Why should these GM plants not be regulated like other GMOs?
Companies like Corteva, Bayer and others have long argued that GMOs that do not contain foreign DNA are not GMOs. They also claim that new GM techniques are a faster route – compared to ordinary breeding – to plants that withstand droughts, resist diseases and achieve higher yields.

The European Commission has adopted this line of argument although it recognises that, technically and legally, NGT organisms are GMOs. The Commission wants to speed up the commercialisation of such organisms and circumvent consumer rejection of GM food.

Are any of these GM plants already on the market?
Even though countries like the US, Brazil, Japan and others have more lenient regulations, only a handful of products are commercialised outside the EU. A herbicide-tolerant oilseed rape from Cibus and a soybean with a supposedly healthier oil composition from Calyxt have failed in the marketplace. Niche products, such as a tomato claimed to lower blood pressure (Sanatech, Japan) and a salad with a longer shelf life (GreenVenus, US), have been introduced in some countries.

What are the main problems with the proposed legislation?
Farmers' organisations, independent scientists, environmental groups and the organic sector have warned that the deregulation of the latest generation of GM plants would lead to major problems:

Potential risks – NGT1 plants could pose risks to nature and human health. This view is shared by GMO experts in national authorities such as ANSES in France, BfN in Germany and UBA in Austria who have questioned the scientific basis of the proposal.

Lack of choice for businesses and consumers – Although farmers would know whether they grow NGT1 plants, they would not be able to detect outcrossing or other adventitious presence in following generations. Food producers, retailers and consumers would not be able to choose. This would make it harder for them to avoid GM food. Surveys have shown that most people in the EU want GM food to be labelled as such, and consumer associations have called for appropriate labelling.

Increase in patented seeds – Genetic modification techniques and their resulting traits are patented, while conventionally bred plant varieties are protected under seed variety laws (UPOV). Patents prevent the use reproductive material for further breeding unless licenced by the patent holder. With the introduction of NGT plants, the number of patented seeds and traits would increase, threatening small- and medium-sized breeders and farmers as well as the organic and GMO-free sectors.

Beneficial plant traits, such as increased resistance to heat, water stress or pathogens, have been achieved through classical breeding and selection. However, NGT patents could jeopardise access to these traits and make them the subject of legal disputes.

What is the Parliament's position?
The European Parliament has voted to introduce

- ✓ **Mandatory labelling and traceability of NGT1 plants and products** containing or consisting of NGT1 plants. MEPs have called for a label indicating the words "New Genomic Techniques" and document-based traceability, so that operators and consumers can "exercise their freedom of choice in an effective manner". (AMs 264 and 265)

- ✓ **A ban on patents** on "NGT plants, plant material, parts thereof, genetic information and process features they contain". The aim was to avoid legal uncertainties, increased costs and new dependencies for farmers and breeders. (AMs 23, 33)

- ✓ **Evaluation and monitoring of environmental impacts**. Only in a recital, not in the articles, the Parliament said: "NGT plants with the potential to persist, reproduce or spread in the environment, within or beyond fields, should be evaluated with the highest level of scrutiny in respect of such plants' impact on nature and the environment." (AM 8) In another recital, MEPs called for "a monitoring plan for environmental effects" (AM 260).

These changes address some, but not all, of the problems with this proposal. Any final text negotiated in the trilogue that does not include them should be rejected.

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Save Our Seeds is a campaign run by the Foundation on Future Farming. Since 2002, it has successfully led efforts to prevent GMO contamination of seeds and to preserve precautionary GMO legislation at both national and EU levels. Current campaigns include efforts to Stop Gene Drives.