

Deregulation of New GMOs? No way!

In the EU, all GMOs and GM food/feed products are subject to EU authorization, risk assessment, GMO labelling and traceability. However, the Commission is now taking steps to deregulate new GMOs. It is time to make our voices heard!

What are 'old' GMOs?

Corporations promoted the first wave of genetically modified organisms (GMOs[1]) with their speculative claims that they would feed the world and reduce the use of toxic chemicals. In reality, wherever they have been used GMOs made matters worse. Most GMOs in use today are engineered into one of two types of plants – one type that stays alive after being sprayed with weedkillers, such as the herbicide glyphosate; the other type producing chemicals that are toxic to insects. Some GMOs have both of these characteristics.

Soybeans, corn, rapeseed and cotton are the crops most commonly subject to these genetic changes. Far from reducing the application of toxic chemicals, the use of GMOs has actually increased their use. In Europe, GMOs have so far been largely rejected by both public and decision-makers, with one variety of GM corn currently the only GMO that is cultivated commercially in a few countries. Nineteen EU countries explicitly decided against growing that GM corn. However, an army of corporate lobbyists has been working full-time on dismantling the EU's GMO regulations for many years.

What are 'new' GMOs?

The European Commission uses "new genomic techniques" (NGTs) to refer to genetic engineering. The biotechnology industry has invented a variety of alternative terms to GMOs, such as "new breeding techniques" or "precision breeding", to sow confusion as their lobbyists make their case to decision-makers that various genetic engineering processes and products do not need to be subject to existing GMO regulations.

NGTs are not fundamentally different from processes of genetic modification – or as their proponents now prefer to call it, "gene editing". The processes have essentially stayed the same for the last thirty years. What has changed is that genetic modification is now using a series of new techniques that have reduced the cost of the process whereby genetic material is transferred within the same or closely related species. The most famous of these techniques, which earned its pioneers a Nobel Prize and millions of Euros in patent rights, is known as CRISPR/Cas9. The biotech industry prefers people to think that they are trying to release organisms into the fields that

are simply new breeds, rather than merely new types of the same old GMOs.

Massed ranks of corporate-funded lobbyists are now attempting to influence EU policy-makers by claiming that new GMOs will help humanity adapt to climate change and fix “broken” food systems. Yet already the “new” GM plants that global corporations have in the pipeline are engineered to be tolerant to the herbicides on which the same corporations have a monopoly. Their cultivation would necessarily increase the presence of pesticide residues in the soil and water, as well as in our food.

Organisms with engineered gene drives

Also enabled by new genetic engineering techniques such as CRISPR/Cas9 are so-called “gene drives”. This type of genetic engineering enables humans to spread selected new genes throughout wild populations forcing the inheritance of newly introduced genes to all offspring of a particular species. One of its possible goals can be to make the offspring infertile or reduce the survival chances of the affected species. Therefore, in the future gene drives may serve as new means to control or decimate so-called pests in agriculture.

This technology - once released - is uncontrollable and carries high risks for ecosystems, food webs and food security: in the most extreme case, a gene drive organism could spread at an exponential rate, would replace the entire wild population with genetically modified organisms or drive an entire species into extinction. There is a significant risk that “extinction genes” forced by gene drives could pass into closely related species and thus wipe out entire groups of species with keystone functions in an ecosystem, such as pollination. More than 200 global food movement leaders and organizations representing hundreds of millions of farmers and food workers have set out their opposition to gene drive organisms in a letter demanding a moratorium on their release.

Language traps

While new GMO proponents attempt to popularise terms like “genetic scissors”, which imply that the new genetic engineering techniques are more precise than those used with old GMOs, the reality is that both CRISPR and other new techniques are far from precise, as they generate a range of “off-target” effects on other parts of the genome to those that are being targeted, with as-yet-unknown risks to the health of the engineered organisms and to those, including humans, who might consume them.

New GMOs are also being used as part of what their proponents call “nature-based solutions”, along with the claim that the use of this biotechnology is as natural as traditional plant breeding. Using this analogy is like saying that the proliferation of nuclear weapons is natural because human civilization has used fires.

New GMO risks

Ten risks posed by new GMOs:

1. tied to use of toxic chemicals affecting human, animal and environmental health
2. further intensifying monoculture and industrial agriculture
3. threatening the sovereignty of farmers and fisherfolk
4. unknown risks from unintended “off-target” effects of genetic engineering techniques such as CRISPR/Cas9
5. threats to biodiversity
6. threats to food security
7. monopolisation and concentration of seed market
8. threatening traditional seed varieties and the cultural heritage of local communities
9. uncontrolled spread of engineered traits to agroecological and other GMO-free ecosystems
10. gene drive organisms could wipe out whole species and potentially wipe out entire groups of species with keystone functions in an ecosystem, such as pollination.

New GMOs should be subject to the EU GMO laws

All new GM technology risks taking us further from a future based on a fairer more sustainable food system (food sovereignty) and further from addressing climate change in a way that is fair (climate justice). As with the GMOs that are already in existence, their promotion – largely by Western corporations – is linked to a new wave of colonisation of food systems in the Global South, which is undermining the ecologically-appropriate farming systems and expert knowledge of smallholder farmers and fisherfolk.

To protect our food systems, collective heritage and biodiversity, both in the EU and globally, we must prevent any regulations that allow the release of varieties derived from genetic engineering, including at EU level. If new GMOs are commercialised, transparency, traceability and labelling will be crucial to allow producers and consumers to continue to choose GM-free products. All new GMOs should be subject to the current EU GMO laws which require rigorous risk assessment, detectability and labelling.

Further reading

<https://www.testbiotech.org/en/news/eu-commission-spreading-misinformation>

<https://www.eurovia.org/wp-content/uploads/2017/09/2017-09-EN-ECVC-STOP-new-GMOs.pdf>

<https://friendsoftheearth.eu/publication/regulate-new-gmos/>

<https://friendsoftheearth.eu/publication/generation-unknown-exposing-the-truth-behind-the-new-generation-of-gmos/>

<https://friendsoftheearth.eu/publication/editing-the-truth-genome-editing-is-not-a-solution-to-climate-change/> and video on the topic <https://www.youtube.com/watch?v=v2Pcur8dy0A>

<https://corporateeurope.org/en/2021/03/derailing-eu-rules-new-gmos>

https://www.slowfood.com/wp-content/uploads/2021/06/2PAGER_NEWGMO6.pdf

<https://www.organicseurope.bio/what-we-do/gmos/>

<https://www.etcgroup.org/content/gene-drive-organisms-destructive-and-uncontrollable>

<https://etcgroup.org/content/hijacking-food-systems-technofix-takeover-fss>

<https://www.stop-genedrives.eu>

[1] GMOs are defined by the European Commission as: “organisms, with the exception of human beings, in which the genetic material has been altered in a way that does not occur naturally by mating and/or natural recombination”.

(Written by a network of NGOs in EU, Winter 2021/2022)