Bayer, BASF lobby pushed to scrap safety rules on new GM crops – even if they increase pesticide use

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The GMO industry wants GM herbicide-tolerant and insecticide-producing crops to be allowed into our fields and onto our plates without safety checks or labelling. The European Commission and some MEPs have jumped to obey industry's orders in designing a GMO deregulation law that will harm health, biodiversity, and farmers.

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Crucial votes are coming up on 11 December 2023 in the Council (EU Member States) and Parliament's Agriculture Committee on the European Commission's proposal to deregulate GM plants made with "new genomic techniques" (NGTs) such as gene editing.

This proposal has been widely condemned by groups representing the interests of the environment, consumers, farmers, and the organic and non-GMO industry sectors,¹ as well as by independent scientists.²

New lobby documents show that even in the last days before publication of the Commission's final proposal on 5 July, it had been changed to weaken it even further and push GM herbicide-tolerant (HT) crops into European fields – in line with the wishes of these same corporations. Indeed, while industry was pushing the deregulation of NGTs with the claim that they would help to reduce pesticide use, at the same time their misleading lobby campaign has led to the derailing of the pesticide reduction law (SUR).

Several EU member states, including France, are strongly opposed to giving a free regulatory pass to HT GM crops. However, the health and environmental risks from all types of GM crops should be taken into account before their release, because important dangers are being overlooked.

A controversial proposal

Under the Commission's proposal, the risks for health and the environment of the vast majority (as many as 94%³) of new GM crops will be completely ignored:

¹ GMWatch (2023). "Spectacular submission to the biotech industry" and other statements on EU Commission proposal. 5 Jul. <u>https://gmwatch.org/en/106-news/latest-news/20249</u>; GMWatch (2023). EU Commission fulfils wishes of GMO corporations – more civil society reactions. 5 Jul. <u>https://gmwatch.org/en/106-news/latest-news/20250</u>

² GMWatch (2023). Academics, scientists call to scrap gene-editing proposal. 20 Nov. <u>https://gmwatch.org/en/106-news/latest-news/20328</u>; GMWatch (2023). New GM plants: EU Commission has lost sight of science and safety. 19 Oct. <u>https://gmwatch.org/en/106-news/latest-news/20305</u>; Robinson C (2023). EU Commission proposal is "scientifically unacceptable" and trashes the precautionary principle. GMWatch, 11 Jul. <u>https://gmwatch.org/en/106-news/latest-news/20261</u>

³ Bohle F et al (2023). Where does the EU-path on NGTs lead us? Preprints.org, 30 Nov. <u>https://www.preprints.org/manuscript/202311.1897/v1</u>

- Unintended effects associated with the applicaton of these techniques (which can change the composition of the crop in unpredictable ways) will be disregarded. <u>The European Network of Scientists for Social and Environmental Responsibility (ENSSER)</u> says that failing to consider such impacts is "negligent and not responsible", as well as violating the precautionary principle⁴ a view confirmed by a legal analysis of the proposal.⁵
- Also, the *intended* new properties of new GM crops will not be assessed for causing potential harm. This means that both HT and insecticide-producing GM crops the only traits widely commercialised at the moment will escape any regulatory oversight.

This is why all new GM crops should be subjected to a full risk assessment for their impacts on health and the environment, as emphasised by a new statement signed by 70 scientists with relevant expertise.⁶

The Commission's deregulation proposal was the result of a highly biased process followed by DG SANTE, which privileged industry actors and ignored the views of others. Indeed, the proposal closely followed the wishes of the biotech industry.⁷

Box: Deregulation - Uncontrolled harm from insecticide-producing GM crops

As an example of the harms that could result from releasing insecticide-producing GM crops, the existing crops of this kind, containing Bt insecticidal toxins, are known to harm wildlife, including insects that are helpful to farmers,⁸ as well as having toxic effects on mammals that

https://academic.oup.com/ee/article-abstract/27/5/1255/2395221?redirectedFrom=fulltext ; Hilbeck A

⁴ ENSSER (2023). EU Commission's proposal on new GM plants: no science, no safety. 19 Oct. <u>https://ensser.org/press_release/new-gm-plants-eu-commission-has-lost-science-and-safety-from-sight/</u>

⁵ Buchholz G (2023). Commission proposal for a regulation on new genomic techniques (NGT): In violation of the precautionary principle. Legal opinion on behalf of the Bündnis 90/Die Grünen parliamentary group. Machine translation from German to English, editing of the translation by Office MEP Martin Häusling. 14 Sept. ttps://www.martin-

haeusling.eu/images/Violation_of_precautionary_principle_by_NGT_proposal_EN.pdf ⁶ Tofighi-Niaki A et al (2023). Open Letter: Serious concerns about the EU Commission proposal on New Genomic Techniques. 19 Nov. <u>https://newgmo.org/2023/11/19/open-letter-serious-concerns-about-the-eu-commission-proposal-on-new-genomic-techniques/</u>

⁷ FoE Europe (2023). How big agri ghost-writes the Commission's proposal on new GMOs. 3 Mar. https://friendsoftheearth.eu/press-release/how-big-agri-ghost-writes-the-commissions-proposal-on-new-gmos/

⁸ Rosi-Marshall EJ et al (2007). Toxins in transgenic crop byproducts may affect headwater stream ecosystems. Proc Natl Acad Sci USA 104: 16204-8. <u>http://www.ncbi.nlm.nih.gov/pubmed/17923672</u>; Hilbeck A et al (1998). Toxicity of Bacillus thuringiensis Cry1Ab toxin to the predator Chrysoperla carnea (Neuroptera: Chrysopidae). Environ Entomol. 27(5):1255-1263.

et al (1999). Prey-mediated effects of Cry1Ab toxin and protoxin and Cry2A protoxin on the predator Chrysoperla carnea. Entomol Exp Appl. 91:305–316. <u>http://onlinelibrary.wiley.com/doi/10.1046/j.1570-7458.1999.00497.x/abstract</u>; Hilbeck A et al (1998). Effects of transgenic Bt corn-fed prey on immature development of Chrysoperla carnea (Neuroptera: Chrysopidae). Environ Entomol. 27(2):480–487. https://academic.oup.com/ee/article-abstract/27/2/480/2464645

eat them.⁹ The Bt toxin they contain is different from the natural Bt sprayed by organic and conventional farmers – having been engineered by Monsanto to be a "super toxin".¹⁰

Novel GM insecticidal crops could have a devastating impact if the insecticidal toxin is also expressed in pollen or nectar or is contained in water drops released by the GM plants, or if plant material is left in the soil. Insect decline could accelerate if such insecticidal crops are grown at large scale in fields – dramatically undermining food security and the ecosystems that we depend on.

Lobby documents: Industry push for free pass for herbicide-tolerant crops, Commission capitulates

On 15 June 2023 a leaked draft of the Commission proposal was published.¹¹ In this version, controversial herbicide-tolerant (HT) NGT crops were *excluded* from the completely deregulated group called Category 1. That meant that new GM HT plants would still have to be assessed for health and environmental safety and be labelled as GMOs from seed to final product. Unfortunately, the same safety checks were not proposed for potentially environmentally harmful insecticide-producing new GM crops.

The Commission explained in the leaked document that new GM HT plants would not be placed in Category 1 (completely deregulated) because they "score lowest" on the scale of sustainability in the list of new GM traits: "There is evidence showing that herbicide-resistant weeds may arise from the combined use of herbicide-tolerant varieties and overuse of the associated herbicide with potential health and agroecosystem impacts."

⁹ Séralini GE et al (2007). New analysis of a rat feeding study with a genetically modified maize reveals signs of hepatorenal toxicity. Arch Environ Contam Toxicol. 52:596–602. https://pubmed.ncbi.nlm.nih.gov/17356802/

de Vendomois JS et al (2009). A comparison of the effects of three GM corn varieties on mammalian health. Int J Biol Sci. 2009;5:706–26. http://www.ncbi.nlm.nih.gov/pubmed/20011136 ; Trabalza-Marinucci M et al (2008). A three-year longitudinal study on the effects of a diet containing genetically modified Bt176 maize on the health status and performance of sheep. Livest Sci 113:178–190. doi:10.1016/j.livsci.2007.03.009 ; Fares NH, El-Sayed AK (1998). Fine structural changes in the ileum of mice fed on delta-endotoxin-treated potatoes and transgenic potatoes. Nat Toxins. 6(6):219-233. http://www.ncbi.nlm.nih.gov/pubmed/10441029. ; El-Shamei ZS et al (2012). Histopathological changes in some organs of male rats fed on genetically modified corn (Ajeeb YG). J Am Sci. 8(10):684–696.

https://www.academia.edu/3405345/Histopathological_Changes_in_Some_Organs_of_Male_Rats_Fe d_on_Genetically_Modified_Corn_Ajeeb_YG_. ; Gab-Alla AA et al (2012). Morphological and biochemical changes in male rats fed on genetically modified corn (Ajeeb YG). J Am Sci. 8(9):1117–1123. https://www.academia.edu/3138607/

¹⁰ Latham J (2017). Have Monsanto and the biotech industry turned natural Bt pesticides into GMO "super toxins"? Independent Science News, 9 Oct.

<u>https://www.independentsciencenews.org/environment/have-monsanto-and-the-biotech-industry-</u> <u>turned-natural-bt-pesticides-into-gmo-super-toxins/</u>; Latham JR et al (2017). The distinct properties of natural and GM cry insecticidal proteins. Biotechnology and Genetic Engineering Reviews 33(1): 62-96. <u>https://doi.org/10.1080/02648725.2017.1357295</u>

¹¹ European Commission (2023). Draft proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on plants obtained by certain new genomic techniques and their food and feed, and amending Directives 68/193/EEC, 1999/105/EC, 2002/53/EC, 2002/55/EC, and Regulation (EU) 2017/625. <u>https://www.arc2020.eu/wp-content/uploads/2023/06/ARC2020_-1.-</u> Draft-NGT-proposal.pdf

But industry lobbyists got to work, the Commission capitulated, and this provision was deleted.

Lobby documents obtained by Corporate Europe Observatory via a Freedom of Information request show that after the leak, lobby groups Euroseeds, CropLife Europe (both of which count among their members the big four GMO corporations, Bayer, BASF, Corteva, and Syngenta) and CIBE (the sugar beet industry) lobbied behind the scenes to get new GM HT crops deregulated after all.¹²

CEO requested all lobby documents between 15 June (the date of the leak of the draft proposal) and 5 July, when the Commission's final proposal was published.

These show that on 26 June Euroseeds and CropLife Europe wrote to the Commission. In an implicit reference to HT plants, the groups said that "any technology specific regulation of certain traits" is "lacking a scientific basis" and "discriminatory".¹³ A similar message came from the International Federation of European Beet Growers (CIBE)."¹⁴ CIBE claimed HT varieties "allow a significant herbicide use reduction", even though globally, glyphosate use, for instance, is reported to have risen almost 15-fold since GM glyphosate-tolerant crops were introduced in 1996.¹⁵

The result: In the 5 July final proposal, the Commission proposed to deregulate HT new GM plants by allowing them into Category 1.¹⁶ This would allow these pesticide-doused new GMOs to slip into the farming and food systems unnoticed, unlabelled, and without any safety tests.

The Commission justified its move on the grounds that it would include provisions on HT in its seed law proposal.¹⁷ But the provisions in the seed law proposal are weak or even meaningless. They only require the Member State registering an HT variety to define minimum conditions for its cultivation: for example, requiring crop rotation

¹² The lobby documents can be viewed here: <u>https://gmwatch.org/20332-euroseeds-and-croplife-europe-2023-cibe-2023-and-ngts-repeated-amendments</u>

 ¹³ Euroseeds and CropLife Europe (2023). Letter to Stella Kyriakides, DG SANTE, EU Commission.
26 June. Document obtained by Corporate Europe Observatory. https://gmwatch.org/20332-euroseeds-and-croplife-europe-2023-cibe-2023-and-ngts-repeated-amendments

¹⁴ CIBE (2023). Letter to Stella Kyriakides, DG SANTE, EU Commission. 29 June. Document obtained by Corporate Europe Observatory. <u>https://gmwatch.org/20332-euroseeds-and-croplife-europe-2023-cibe-2023-and-ngts-repeated-amendments</u>

¹⁵ https://enveurope.springeropen.com/articles/10.1186/s12302-016-0070-0

¹⁶ European Commission (2023). Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on plants obtained by certain new genomic techniques and their food and feed, and amending Regulation (EU) 2017/625. 5 Jul. <u>https://food.ec.europa.eu/system/files/2023-09/gmo_biotech_ngt_proposal_2023-411_en.pdf</u>

¹⁷ European Commission (2023). Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the production and marketing of plant reproductive material in the Union, amending Regulations (EU) 2016/2031, 2017/625 and 2018/848 of the European Parliament and of the Council, and repealing Council Directives 66/401/EEC, 66/402/EEC, 68/193/EEC, 2002/53/EC, 2002/54/EC, 2002/55/EC, 2002/56/EC, 2002/57/EC, 2008/72/EC and 2008/90/EC (Regulation on plant reproductive material). https://eur-lex.europa.eu/legalcontent/EN/TXT/?uri=CELEX%3A52023PC0414

and monitoring measures. The proposed conditions do not provide for safety testing or consumer labelling of HT new GMOs.

Box: Why proposed cultivation conditions in the seed law proposal are not an adequate substitute for an HT crop being regulated as a GMO (or Category 2 NGT¹⁸)

According to the organisation IG Saatgut, the Commission's plan to deal with HT plants in the seed law proposal is extremely problematic, since:

- The national competent authority responsible for the registration of an HT new GM variety would define the conditions that would apply to the marketing of the variety across the whole EU. This would lead to GM developers "going shopping" in order to register their HT varieties with authorities that are less critical of herbicide-tolerant seed technology.
- There are strong doubts whether national authorities would be able to control whether the varieties are actually cultivated according to the prescribed rules. According to Article 80 of the seed proposal, only the "production and marketing of plant reproductive material" would be added to the scope of the Official Control Regulation 2017/625. Cultivation rules are not mentioned.¹⁹

Clearly, all new GM crops from techniques such as CRISPR should be robustly regulated. But the proposed deregulation *even* of HT new GM crops shows that any claim of NGTs promoting sustainable agriculture – or indeed pesticide reduction – has been an outright lie.

Yet this "sustainability" claim for new GM crops is the sole mantra that has underpinned the Commission's deregulation proposal.

Copa-Cogeca also pushing herbicide-tolerant crops – against farmers' interests

Echoing CIBE's message was a report on the Commission's proposal, published in October by the large-scale farmers' lobby group COPA-COGECA, which said, "Herbicide tolerant plants intentionally bred to be tolerant to herbicides when used properly allow for a reduction in the use of herbicides. This trait should not be considered unsustainable."²⁰ Indeed, in response to the proposed pesticide reduction law (SUR), COPA-COGECA called pesticides "an essential element" in Integrated Pest Management (IPM).²¹

Commenting on this claim, Charles Benbrook, agricultural economist and former Professor at the Center for Sustaining Agriculture and Natural Resources at Washington State University, said: "GM herbicide-tolerant and Bt transgenic crop cultivars violate all three principles that IPM is grounded on: season-long integration

¹⁸ Under the Commission's proposal, Category 2 NGT plants would still be subjected to some kind of risk assessment, albeit a simplified one, as well as traceability requirements and labelling.

¹⁹ Hundsdorfer S et al (2023). Links between the proposal to deregulate NGT plants and the proposal on the production and marketing of plant reproductive material. IG Saatgut. Oct.

²⁰ COPA-COGECA (2023). Position paper on the Commission's proposals for regulations on plant reproductive materials (PRM) and forest reproductive materials (FRM). 16 Oct. <u>https://copa-cogeca.eu/Flexpage/DownloadFile/?id=13462320</u>

²¹ COPA-COGECA (2022). Copa and Cogeca's position on the Proposal for a Regulation on the Sustainable Use of Plant Protection Products. 30 Sept. https://copa-cogeca.eu/Flexpage/DownloadFile/?id=13431697

of multiple tactics; prioritise prevention to avoid the need for treatments; and don't rely on chemical solutions in addressing problems rooted in farming system design and management."

Euroseeds weighed in again on 6 November, when it issued a statement saying, "Euroseeds clearly opposes the provisions that establish an unpredictable carte blanche for Member States to decide on the usefulness of specific traits (e.g., herbicide tolerance) and establish cultivation conditions for varieties carrying such traits."²²

For the average farmer and their families and neighbours, rolling out HT crop cultivation on a large scale will increase health risks, trigger conflict, and push production costs higher.

MEP supports Big Ag

Those who thought the Commission's revised proposal could not get any worse were in for a surprise. On 16 November, a known pro-agribusiness MEP, Herbert Dorfmann (IT), in his role as rapporteur for the European Parliament's Committee on Agriculture and Rural Development, published a report in which he proposed to remove even the inadequate provisions on herbicide tolerance from the seed law proposal.²³

Dorfmann is one of the members of the EPP (the largest political group in the EU Parliament) who have helped Bayer and BASF to push the irresponsible lobbying campaign against the pesticide reduction law (SUR).²⁴ The SUR, as part of the Farm to Fork Strategy, formed an important part of the EU Green Deal to improve sustainability. The campaign led to the SUR's destruction on 22 November 2023, putting farmers' health and long-term food security in jeopardy.

Dorfmann is also a staunch promoter of GMO deregulation and has said, "To achieve the goals of the Farm to Fork Strategy, including the reduction of pesticides, farmers need new tools." He called the Commission's proposed deregulation of new GMOs "essential" to achieving these goals.²⁵

²⁴ Corporate Europe Observatory (2023). Sabotaging EU Pesticide Reduction Law (SUR). 19 Nov. https://corporateeurope.org/en/2023/11/sabotaging-eu-pesticide-reduction-law-sur

²² Jared Onsando (2023). A new EU plant reproductive material legislation? SeedWorld Europe, 6 Nov. <u>https://european-seed.com/2023/11/a-new-eu-plant-reproductive-material-</u> legislation/?utm_campaign=Seed%20World%20Europe%20Newsletter&utm_medium=email&_hsmi= 282008545&_hsenc=p2ANqtz--p7OzktUgPWnKBj7hxxmNCfn8XHoqqpBumFW3-NALLPasmAVg23hd6Yq76JyzZqu2J3SoSNGtqQjBAKIstU0uR0SS4Z3PcTVzbDRGeV6PLJfQHYXw& utm_content=282008545&utm_source=hs_email

²³ Herbert Dorfmann, rapporteur, EU Parliament Committee on Agriculture and Rural Development (2023). DRAFT REPORT on the proposal for a regulation of the European Parliament and of the Council on the production and marketing of plant reproductive material in the Union, amending Regulations (EU) 2016/2031, 2017/625 and 2018/848 of the European Parliament and of the Council, and repealing Council Directives 66/401/EEC, 66/402/EEC, 68/193/EEC, 2002/53/EC, 2002/54/EC, 2002/55/EC, 2002/56/EC, 2002/57/EC, 2008/72/EC and 2008/90/EC (Regulation on plant reproductive material) (COM(2023)0414 – C9-0236/2023 – 2023/0227(COD)). 10 Nov. https://www.europarl.europa.eu/doceo/document/AGRI-PR-756010 EN.pdf

²⁵ Jessica Polfjärd and Herbert Dorfmann (undated). No greening without new genomic techniques. EPP. <u>https://www.eppgroup.eu/newsroom/news/no-greening-without-new-genomic-techniques</u>

Some MEPs have also worked to deliver industry's wishes to abolish the Commission's proposal to label seeds as NGT (GMO) and to maintain the ban on GMOs in organic production. This will be the topic of a further article.

Betrayal

If the deregulation proposal is adopted, it will open the floodgates for new GM crops that will not be assessed for risks for the environment, jeopardising food security in the long run.

The industry is misleading governments, the media, and the public when it claims that its new GMOs will be used to increase sustainability and reduce pesticide use. Herbicide tolerance is clearly central to the industry's pipeline of products and its vision for the future of new GMOs.

In the case of the Commission, its record leads us to expect it to take industry's side. But what is more shocking is that certain MEPs are also prepared to do Big Ag's bidding, against the interests of the public that they are supposed to represent.

With the killing of the pesticide reduction law, citizen concerns about their health and environment have been jettisoned – while with the deregulation of new GMOs, industry interests are being served up on a silver platter. Is this really to be the legacy of the EU Green Deal?

Box: Decades of damage from herbicide-tolerant monocultures in South America

HT crops are designed to increase reliance on herbicides and have done so worldwide. Greater reliance on herbicides, notably glyphosate, leads to the rapid emergence and spread of herbicide-resistant weeds, which triggers a herbicide treadmill. Even more herbicides have to be applied to control newly resistant weeds, leading to more resistance, until the system breaks down and farmland becomes overrun with weeds.²⁶

HT crops and their accompanying glyphosate herbicide applications also cause widespread damage to soil life like earthworms,²⁷ as well as to water-living organisms²⁸ and wild plants in and around fields that are crucial to insects and other animals that feed on them.²⁹

The introduction of large-scale cultivation of Roundup Ready soy and other HT GM crops, now adding up to many millions of hectares, has led to devastating effects on rural communities and the environment across Brazil, Argentina, Paraguay, and other countries. Those effects include serious health problems such as cancer³⁰ – the latest study points to an increase in childhood leukemia downstream from GM soy farms in Brazil³¹ – and land conflicts.³² It was in recognition of these effects that two years ago, MEPs from different political groups questioned how the Commission would deal with HT crops when designing new rules for deregulating new GM crops.³³

²⁶ Benbrook C (2012). Impacts of genetically engineered crops on pesticide use in the US – The first sixteen years. Environmental Sciences Europe 24. <u>http://www.enveurope.com/content/24/1/24</u>; Benbrook C (2016). Trends in glyphosate herbicide use in the United States and globally. Environmental Sciences Europe 28(1). <u>http://www.enveurope.com/content/28/1/3/abstract</u>; Perry ED et al (2016). Genetically engineered crops and pesticide use in US maize and soybeans. Science Advances 2(8). <u>https://www.science.org/doi/10.1126/sciadv.1600850</u>

²⁷ Casabé N et al (2007): Ecotoxicological assessment of the effects of glyphosate and chlorpyrifos in an Argentine soya field. Journal of Soils and Sediments, 7: 232-239 ; Springett AJ and Gray RAJ (1992). Effect of repeated low doses of biocides on the earthworm Aporrectodea caliginosa in laboratory culture. Soil Biology and Biochemistry 24: 1739-1744.

 ²⁸ Relyea RA (2005). The impact of insecticides and herbicides on the biodiversity and productivity of aquatic communities. Ecological Applications, 15: 618–627 ; Relyea RA (2005). The lethal impact of roundup on aquatic and terrestrial amphibians. Ecological Applications 15: 1118–1124
²⁹ Malcolm SB (2018). Anthropogenic impacts on mortality and population viability of the monarch butterfly. Annual Review of Entomology 63:277-302.

<u>https://www.annualreviews.org/doi/10.1146/annurev-ento-020117-043241</u>; Pleasants JM et al (2017). Interpreting surveys to estimate the size of the monarch butterfly population: Pitfalls and prospects. PLoS One 12(7):e0181245. doi: 10.1371/journal.pone.0181245

³⁰ Verzeñassi D et al (2023). Cancer incidence and death rates in Argentine rural towns surrounded by pesticide-treated agricultural land. Clinical Epidemiology and Global Health 20(101239). <u>https://doi.org/10.1016/j.cegh.2023.101239</u>

³¹ Skidmore ME et al (2023). Agricultural intensification and childhood cancer in Brazil. PNAS 120(45). e2306003120. <u>https://doi.org/10.1073/pnas.2306003120</u>

³² Goldfarb L, van der Haar G (2017). The moving frontiers of genetically modified soy production: shifts in land control in the Argentinian Chaco. In: Oliveira G de LT, Hecht SB (2017). Soy, Globalization, and Environmental Politics in South America. Routledge. 9781315099651.

³³ Natasha Foote (2021). Not all gene-edited crops should be treated equal, warn MEPs. Euractiv, 12 May. <u>https://www.euractiv.com/section/agriculture-food/news/not-all-gene-edited-crops-should-be-treated-equal-warn-meps/</u>