Risky business

Who wins and who loses when new GMOs go unchecked?

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Who benefits from the deregulation of risk assessment for new GMOs

The Big Three

The biggest winners from the deregulation of GMO risk assessments are the 'Big Three' agribusiness Bayer, Corteva and Chem China/Syngenta. These corporations dominate the GMO market and stand to gain significantly if safety checks are eliminated. By removing these regulatory requirements, they can lower authorisation expenses, cut cost for studying potential adverse effects, and aim to strengthen their corporate power over the European farming market.

According to a study by Croplife,¹ a lobby group representing among others the Big Three, the cost of developing and authorizing of 'classical' GMOs between 2017 and 2022 averaged \$115 million at international level.²



"MANY NGT PRODUCTS COULD BE OBTAINED ALSO BY USING CONVENTIONAL BREEDING TECHNIQUES ALBEIT WITH LESS PRECISION, LESS EFFICIENCY AND, IN A MUCH MORE TIME-CONSUMING WAY. WHERE THE RESULTING GENO- AND PHENOTYPE IS COMPARABLE TO RESULTS FROM CONVENTIONAL BREEDING, THE RISK ON HUMAN/ANIMAL HEALTH AND ON ENVIRONMENT IS ALSO SIMILAR TO CONVENTIONALLY-BRED PLANTS. THIS IS WHY THESE PLANTS WOULD NOT REQUIRE A SPECIFIC PRE-MARKET RISK ASSESSMENT."³

Stated Euroseeds.



Who lose from the deregulation of risk assessments for new GMOs?





1. Nature

Biotech corporations claim that new GMOs are effectively the same as conventionally bred plants.⁴ They liken genetic modifications for pest or mould resistance to traditional selective breeding practices that have been in place for thousands of years.⁵ This comparison is misleading: unlike conventional methods. new GMOs pose unique environmental risks, such as genetic contamination, and speed up monoculture expansion. These all have the potential to destabilize ecosystems and harm biodiversity. Gene editing can also lead to the unexpected production of new toxins and allergens in plants.⁶ However, due to a lack of independent research and public funding, many of the impacts GMOs might have when entering nature are unknown. The French Agency for Food, Environmental and Occupational Health & Safety (ANSES) recommended a case-by-case approach to risk assessments.7 Already in 2021, authorities from Austria, Poland, Italy, Germany and Researchers from five relevant public authorities recommend specific checks for environmental impacts of new GMOs.8 But this authorities' opinions were dismissed by EU lawmakers so far.

Most potentially risky product applications are granted for 10 years. However, the deregulation law suggests that one member state must do one field trial and then market them indefinitely. Even if adverse effects were detected, the new GMOs could still be marketed and sold to the public, effectively forever.

2. Consumers

Gene editing leads to new and unforeseen combinations of toxins and allergens in plants. Altering multiple genes in one organism, in the process known as multiplexing, can result in the creation of new proteins or molecules with unknow impact on humans.⁹ Consumers deserve to rest assured that potentially harmful ingredients in food undergo basic safety checks before they are marketed in the EU and that EU institutions apply the precautionary principle in the lawmaking.



Under current European law, new genetically modified organisms (GMOs) must undergo a risk assessment before entering the market as food, feed or seeds. This is to protect citizens, wildlife and farm animals from the potentially harmful impacts of untested GMOs. However, big agribusiness lobby to eliminate these safeguards for the new generation of GMOs and pushes for them to be sold and grown without any safety checks in the EU.¹⁰

Big Agri on one hand claim patents on the innovation in the development on new GMOs. On the other hand, they claim that new GMOs are as safe as any conventionally developed plant, a claim translated by EU decisions-maker into new legislation that deregulates these new GMOs. Based on this alleged safety, the law has also abolished any requirements for monitoring. Under the deregulation law, once a new GM product or seed is approved for the market, the approval is permanent -this approach contradicts other existing EU laws, such as those for GMOs and pesticides. Even if harm is later identified and detected, corporations retain the right to market the food, feed and seeds forever.

The new EU deregulation law classifies new GMOs into two categories. Category 1 includes GMOs involving no more than the substitution or insertion of 20 genetic modifications.¹¹ For these new GMOs, the law requires no approval procedure, no risk assessment, no provision of detection methods. Labelling obligations are insufficient and no monitoring is envisaged. Over 94% of new GMOs will fall under this definition.¹²





The European Commission and EU Parliament sided with the Big Three on the issue of deregulation, embracing the industry line that most new GMOs are as safe as conventional crops. This stance grants the biotech industry carte blanch to continue operating as it pleases.

This wide deregulation may lower costs for multibillion corporations like Bayer, Corteva, and Syngenta, but the long-term costs to nature, and consumers could be severe. Once these products are entrenched in the market, mitigating their impact will be nearly impossible, leaving irreversible consequences in their wake. Overall, the EU's current trajectory prioritizes corporate convenience over public and environmental safety.

Endnotes:

- 1 https://croplife.org/wp-content/uploads/2022/05/AgbioInvestor-Trait-RD-Branded-Report-Final-20220512.pdf
- 2 Croplife Time and Cost to Develop a New GM Trait (04/2022) p. 30
- 3 https://www.amsem.ro/ImageHandler.ashx?UploadedFile=true&pg=d63ee450-0f3a-4e83-b811-127758e634a0&image=~/App_Data/UserImages/File/ESA/2021/PBI%20Advocacy%20Brief%20E SA.pdf
- 4 Euroseeds, Presentation of the EC Study On New Genomic Techniques to the AgriFish Council on 26th/27th May (05/2021) https://euroseeds.eu/app/uploads/2021/05/21.0268.2-Final-VCletter-to-Council-NGT-Study-25-05-2021.pdf
- 5 Petra Kostolaniova, The Potential of New Genomic Techniques in Agriculture (11/2023), Croplife, https://croplifeeurope.eu/the-potential-of-new-genomic-techniques-in-agriculture/
- 6 Eckerstorfer, M.F., Heissenberger, A., Reichenbecher, W., Steinbrecher, R.A., Waßmann, F. (2019). An EU perspective on biosafety considerations for plants developed by genome editing and other new genetic modification techniques (nGMs). Front Bioeng Biotechnol 7:31 doi: 10.3389/fbioe.2019.00031

- 7 https://www.anses.fr/en/system/files/infographieNTG-GB.pdf
- 8 Eckerstorfer, M.F., Grabowski, M., Lener, M., Engelhard, M., Simon, S., Dolezel, M., Heissenberger, A., Lüthi, C. (2021) Biosafety of genome editing applications in plant breeding: Consideration for a focused case-specific risk assessment in the EU. biotech 10, https://doi.org/10.3390/biotech10030010
- 9 https://www.anses.fr/en/system/files/infographieNTG-GB.pdf
- 10 https://www.amsem.ro/ImageHandler.ashx?UploadedFile=true&pg=d63ee450-0f3a-4e83-b811-127758e634a0&image=~/App_Data/UserImages/File/ESA/2021/PBI%20Advocacy%20Brief%20E SA.pdf
- 11 Annex 1 https://eur-lex.europa.eu/resource.html?uri=cellar:c88fe9ac-1c06-11ee-806b-01aa75ed71a1.0001.02/DOC_2&format=PDF
- 12 Front. Genome Ed., 14 March 2024, Sec. Genome Editing in Plants, Volume 6 2024 https://www.frontiersin.org/journals/genomeediting/articles/10.3389/fgeed.2024.1377117/full

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