Open Letter to Coreper I - Deputy Permanent Representatives
Regarding the Commission's Proposed Regulation of New Genomic Techniques (NGT)

Paris, Neustadt an der Weinstraße, and Frankfurt, 15 December 2025

Dear Ambassador,

At your meeting scheduled for Friday, 19 December 2025, the question of the NGT Regulation will be raised again by the Danish presidency, following a provisional agreement entered between the Council and the Parliament on December 4.

The four undersigned associations, AFBV (Association Française des Biotechnologies Végétales), FGV (Forum Grüne Vernunft), the German Society of Plant Biotechnology (Gesellschaft für Pflanzenbiotechnologie e.V.) and WGG (Wissenschaftskreis Genomik und Gentechnik e.V.), applaud the considerable efforts of the Danish Presidency and the negotiators of the Trilogue parties in reaching the December 4 compromise. The EU needs the NGT legislation to come into effect as quickly as possible to enable use of genome editing tools to produce varieties that address the major challenges facing agriculture, and more broadly, climate change, the agroecological transition and food security, which affect all of society.

These are such serious reasons that, despite our concerns (described below) regarding Annex Ia, we advocate accepting the compromise proposal. With a view to the future of agriculture and food security, as well as political responsibility for Europe, the Council's approval of the compromise proposal is necessary.

Our main concern regarding the compromise proposal lies in the absolute nature of Annex Ia (it is currently not subject to revision, contrary to Annexes I-III), and its lack of definitions. The blanket classification as NGT-2 of plants with herbicide tolerance traits (usable or not) and those producing insecticidal substances should be reconsidered either presently through the addition of definitions, if this is still possible, or addressed in subsequent guidelines, implementation regulations, or amendments to the Regulation, between now and the effective date.

We understand that your vote on December 19 is subject to further legal or linguistic revision. If it is possible in the context of your vote to add definitions for two undefined terms as well as a small modification to Article 5.3 permitting the possibility of revising Annex Ia in the same manner as Annex I, this would be preferable. If not, these matters ought to be addressed by the time the Regulation becomes effective. As explained below these small changes would remove uncertainties that would be harmful to researchers, breeders and SMEs.

Our principal focus here is on the lack of definitions for traits that have been excluded from the definition of NGT-1 traits and that are now listed in Annex Ia.

The first item in Annex Ia is "tolerance to herbicides". While this term is not defined, Recital 14b describes what is intended: "Herbicide tolerant plants are bred to be intentionally tolerant to herbicides, in order to be cultivated in combination with the use of those herbicides." The language of Annex Ia could be interpreted to include NGT traits containing herbicide selection markers, which are not intended to be intentionally tolerant to the crop. We urge that herbicide selection markers be explicitly excluded from the definition of the term "tolerance to herbicides". Herbicide-tolerance genes are widely used as selectable markers during tissue culture as an alternative to antibiotic resistance (and do not automatically confer commercial tolerance to the final varieties). Classifying plants containing HT selectable markers as NGT-2 would disrupt routine research, pre-breeding pipelines and SME product development in Europe (keeping in mind that under the December 4 compromise NGT-2 plants are also subject to cultivation opt-out). See in particular the use of ALS1 and ALS2 genes in NGT breeding with no applied use in crop cultivation. (Veillet et al, 2019) See also Atkins et al., 2020, Veillet et al. 2020. To resolve this question we propose the following definition of « tolerance to herbicides" :

> "herbicide tolerant traits intentionally bred in order for the crop to be cultivated in combination with the use of herbicides, excluding herbicide selection markers unintended to confer commercial herbicide tolerance".

The second item in Annex Ia needing a definition is the term "production of a known insecticidal substance". Recital 14c describes the intention: "Such traits are aimed at killing insect pests, but they may also have adverse effects on beneficial insects such as pollinators." It is because of the presumed negative impact on pollinators and beneficial insects that they are proposed to be automatically classified as NTG-2/GMOs. The presumed negative impact is not necessarily observed and it would be preferable if this term were defined to avoid the automatic inclusion of insect resistance traits that do not actually have an observed negative impact on pollinators and beneficial insects in the targeted crop. Mechanisms of resistance to insect pathogens and pests naturally present on plants is part of resistance to biotic stresses, which are among the traits for which subsidies are allowed in Annex III, Part 1, item 2:

> "(2) tolerance/resistance to biotic stresses, including plant diseases caused by nematodes, fungi, bacteria, viruses and other pests;"

Plants naturally produce a wide variety of chemical compounds to defend themselves against insect pests (*Borg et al*, 2025). Many specialized plant metabolites (alkaloids, terpenoids, phenolics, protein-based defenses) are natural plant defenses, including in cultivated crops. Enhancing such pathways to increase resistance to insects reduces pesticide use and can be environmentally beneficial. NGT-2 classification of all traits causing "production of a known insecticidal substance" would conflict with (a) the goal of pesticide reduction (Zaidi et al, 2020), and (b) ongoing research that treats plant metabolites as low-risk biopesticides, environmentally friendly alternatives to synthetic pesticides due to their biodegradability and lower toxicity to non-target organisms (*Souto et al,* 2021). It would also be quite inconsistent that the same substance could be authorized as an eco-friendly phytosanitary product while forbidden within the NTG-1 plant category. Moreover, many NGT edits are single nucleotide changes indistinguishable from naturally occurring alleles. The proposed categorical routing to NGT-2 for all insecticidal substance traits would seem difficult to enforce, could create trade barriers, and would likely treat identical genetic outcomes inconsistently across breeding methods. See JRC116289.

Regarding the possible impact on pollinators, natural plant metabolites like protease inhibitors, glucosinolates, terpenes, and phenolic compounds can influence pollinator insects, sometimes deterring or harming them, but also providing benefits at certain concentrations.

The overall impact of these metabolites on pollinators is complex and context-dependent, with effects ranging from attraction and benefit to deterrence or harm, depending on the compound, its concentration, and the pollinator species involved.
Plant defense responses are primarily directed against herbivorous insects, but pollinators may be indirectly affected through changes in floral rewards, plant phenotype, or secondary metabolite profiles. We have provided references at the end of this letter for each of the plant metabolite categories mentioned.

If a family of potentially insecticidal substances is to be classified as NTG-2, it should be those for which adverse effects on pollinating insects or beneficial insects have been demonstrated for the target crop. If in the future a variety containing a trait producing an insecticidal substance should unexpectedly be found to have an impact on pollinators or beneficials, the Commission has an arsenal of remedies available to take appropriate actions as mentioned in Recital 22.

We therefore suggest adding a definition for “production of a known insecticidal substance” as follows:

> “a trait resulting in the production of a known insecticidal substance observed to adversely impact pollinators or beneficial insects in the target crop".

The current compromise proposal empowers the Commission to adopt delegated acts in accordance with Article 26 amending Annexes I, II and III. We suggest amending Article 5.3 to enable the Commission to revise Annex Ia in the same manner as Annex I.

The changes we propose are clarifying changes, unintended to delay the adoption process, which need addressing to bring clarity to EU researchers, breeders and SMEs.

We thank you for your kind consideration.

Respectfully,

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References to studies describing impact of plant metabolite compounds on pollinators

- **Protease Inhibitors**

Impact on Pollinators: Protease inhibitors (PIs) are primarily studied for their role in plant defense against herbivorous insects by inhibiting digestive proteases. However, high concentrations of PIs in floral tissues (e.g., anthers) may limit pollen collection by pollinators or pollen robbers, potentially affecting pollination patterns. While PIs are not typically toxic to pollinators at low doses, their presence in transgenic plants or altered biochemical pathways can have unintended pleiotropic effects, including changes in floral rewards or plant phenotype, which may indirectly impact pollinators

1. Mangena P. (2022): *Pleiotropic effects of recombinant protease inhibitors in plants.* Front. Plant Sci., Sec. Plant Proteomics and Protein Structural Biology 3 | https://doi.org/10.3389/fpls.2022.994710
2. Hartl M., Giri A.P, Kaur H., Baldwin I.T. (2011): *The multiple functions of plant serine protease inhibitors: Defense against herbivores and beyond*. Plant Signal Behav, 6 (7), 1009–1011; https://doi.org/10.4161/psb.6.7.15504 | https://www.tandfonline.com/doi/full/10.4161/psb.6.7.15504
3. Schlüter, U., Meriem B., Aurélie M., Kiggundu, A. et al. (2010): *Recombinant protease inhibitors for herbivore pest control a multitrophic perspective.* Journal of Experimental Botany 61 (15): 4169-4183, | DOI: 10.1093/jxb/erq166 | https://www.ovid.com/journals/jebot/abstract/10.1093/jxb/erq166~recombinant-protease-inhibitors-for-herbivore-pest-control-a

- **Glucosinolates**

Impact on Pollinators: Glucosinolates are sulfur-containing compounds found in Brassicaceae and related families. They play a dual role: attracting specialist pollinators (e.g., certain bees and butterflies) while deterring generalist herbivores. The breakdown products of glucosinolates (e.g., isothiocyanates) can be toxic to non-adapted insects, but specialist pollinators have evolved mechanisms to tolerate or even sequester these compounds for their own defense. The effect on pollinators depends on the specific glucosinolate profile and concentration.

4. Giamoustaris, A., Mithen, R. (1996): *The effect of flower colour and glucosinolates on the interaction between oilseed rape and pollen beetles*. In: Städler, E., Rowell-Rahier, M., Bauer, R. (eds) Proceedings of the 9th International Symposium on Insect-Plant Relationships. Series Entomologica, vol 53. Springer, Dordrecht. https://doi.org/10.1007/978-94-009-1720-0_47 | https://link.springer.com/chapter/10.1007/978-94-009-1720-0_47
5. Wittstock, U., Kliebenstein, D. J., Lambrix, V., Reichelt, M., & Gershenzon, J. (2003). *Glucosinolate hydrolysis and its impact on generalist and specialist insect herbivores*. Recent Advances in Phytochemistry, 37, 101–125 | https://www.sciencedirect.com/science/chapter/bookseries/abs/pii/S0079992003800205
6. Johnson, S. D., Griffiths, M. E., Peter, C. I., & Lawes, M. J. (2009): *Pollinators, "mustard oil" volatiles, and fruit production in flowers of the dioecious tree Drypetes natalensis* (Putranjivaceae). American Journal of Botany, 96(11), 2080–2086. https://doi.org/10.3732/ajb.0800362 | https://bsapubs.onlinelibrary.wiley.com/doi/10.3732/ajb.0800362

- **Terpenes**

Impact on Pollinators: Terpenes are volatile organic compounds that mediate plant-insect interactions. They can attract pollinators (e.g., bees, moths) through scent, but at high concentrations or specific compositions, they may deter or even harm non-adapted insects. Some terpenes, like those in thyme, have antibiotic properties that can reduce the growth of bee disease-associated microbes, potentially benefiting pollinator health. The overall effect depends on the terpene type, concentration, and the pollinator species

7. Boncan D.A.T., Tsang S.S. K., Li C., Lee I.H.T., Lam H.-M., Chan T.-F., Hu J.H.L. (2020): *Terpenes and Terpenoids in Plants: Interactions with Environment and Insects.* Int. J. Mol. Sci. 2020, 21, 7382; doi:10.3390/ijms21197382 | https://www.mdpi.com/1422-0067/21/19/7382
8. Wiese, N., Fischer, J., Heidler, J. et al. (2018): *The terpenes of leaves, pollen, and nectar of thyme (Thymus vulgaris) inhibit growth of bee disease-associated microbes. Sci Rep* 8, 14634, https://doi.org/10.1038/s41598-018-32849-6 | https://www.nature.com/articles/s41598-018-32849-6
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Phenolic Compounds

Impact on Pollinators: Phenolic compounds have a dual role: they can attract pollinators through pigmentation (e.g., anthocyanins in flowers) and scent, or repel herbivores and pathogens. Some phenolics, like flavonoids, are involved in UV protection and visual signaling to pollinators, while others (e.g., tannins) may deter or reduce the palatability of floral resources to non-adapted insects. The effect is highly context-dependent, influenced by compound type, concentration, and pollinator species.

10. Pratyusha S. (2022): *Phenolic compounds in the plant development and defense: An overview.* IntechOpen. DOI: 10.5772/intechopen.102873 | https://www.intechopen.com/chapters/80846
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