Martin Häusling MEP, 60 Rue Wiertz, B-1047 Bruxelles

To: Mariya Gabriel,
Commissioner for Innovation, Research, Culture, Education and Youth

Cc: Stella Kyriakides,
Commissioner for Health and Food Safety

Virginijus Sinkevičius,
Commissioner for Environment, Oceans and Fisheries

Brussels, 8 February 2022

EU research on risks and detection methods related to new GM plants

Dear Commissioner Gabriel,

We are writing to ask for a dedicated EU research into the potential risks and analytical detection of genetically modified organisms (GMOs) engineered with new genetic engineering technology, such as CRISPR/Cas.

These GMOs fall within the scope of the EU's existing GMO legislation, which aims to protect public health and the environment from any adverse effects they may cause. At the same time, they bring new challenges for the application of EU GMO legislation:

- GMOs developed with so-called genome-editing technology pose new and different risks from both conventional breeding and GMOs commercialised today.
- Existing GMO surveillance strategies are insufficient to detect the presence of these new GMOs, especially when they do not contain foreign genetic material.

We are convinced that the EU can and must overcome these challenges, in order to maintain a high level of protection for our public health and the environment. Just as it is possible to develop new and innovative GM products, based on revolutionary genome-editing technology, it is also possible to develop state-of-the art risk assessment and detection methods for them. However, this will not be possible without dedicated EU research.

The Commission's responses to our written questions[i] show that the EU has not funded any such research so far - not on the specific risks posed by new GMOs, and not on ways to detect these GMOs.

The Commission also appears to have no plans to fund such dedicated research under the Horizon Europe Work Programme for 2021-2022. The Programme's call on 'new genomic techniques' focuses on advancing GM technology, assessing regulatory bottlenecks and improving relevant production processes but does not entail any specific risk research or any research that would enable national authorities to identify unauthorised GM products. Calls related to the traceability of food products make no reference to GMOs or 'new genomic techniques'.[ii]

We are asking the Commission to remedy this situation, and to urgently call for dedicated EU research in these areas.

European Parliament

New GMO risk research

New GM technology, especially CRISPR/Cas, allows a deeper and faster modification of genetic material in organisms than conventional breeding and previously known GM technology. It gives rise to specific risks that did not occur earlier, both related to the intended traits and unintended consequences caused by the genetic engineering process. In principle, guidance developed by the European Food Safety Authority (EFSA) can be applied in the health and environmental risk assessment of genome-edited GM organisms.[iii] However, scientists have called for a broader assessment,[iv] to facilitate a more focused approach.[v]

Research into the specific risks that can arise from genomic irregularities linked to the application of so-called genome editing remains scarce. Such research is paramount to enable the development of robust risk assessment guidance, and must receive adequate public funding.

New GMO detection research

Already today, it is possible to establish robust analytical methods for the detection of genome-edited crops if there is sufficient information about their modified DNA sequences.[vi] The developer of the first commercialised 'genome-edited' crop, a herbicide-tolerant oilseed rape, has submitted such a method to the Canadian Food Inspection Agency (CFIA).[vii] Subsequently, US scientists also developed an open-source detection method for the same product.[viii] More recently, Chinese developers of genome-edited rice established a similar detection method for their products.[ix]

Still, EU national authorities have no way to identify known genome-edited products listed in the EU GMO database,[x] nor do they have strategies to screen for unknown products of that kind.

Several EU governments, including Austria, France and Italy, have called for targeted EU research into GMO detection strategies and methods.[xi] France demands a "major research programme at European level" whereas Italy suggests that progress cannot be achieved without a new generation of research programmes "as happened for 'traditional' GMOs between the end of the 1990s and the first decade of this century". As MEPs, we join this call and urge the Commission to set up such research programmes as soon as possible.

Commissioners, the issue of GM food is and remains an important concern for EU citizens. The Commission cannot only invest in EU research to advance GM technology and its applications. It should urgently invest in EU research to deepen our knowledge of potential risks, and to enable the detection and traceability of GM products across the food chain. Only a comprehensive research agenda on genetic engineering will allow the EU to develop well-informed policies in that regard.

We look forward to your favourable reply.

Eric ANDRIEU
Maria ARENA
Benoît BITEAU
Manuel BOMPARD
Biljana BORZAN
Milan BRGLEZ

Pascal DURAND
Eleonora EVI
Charles GOERENS
Martin HÄUSLING
Anja HAZEKAMP
Hannes HEIDE
Petros KOKKALIS
Aurore LALUCQ
Benoît LUTGEN
Tilly METZ
Maria NOICHL
Sirpa PIETIKÄINEN
Evelyn REGNER
Frédérique RIES
Manuela RIPA
Michèle RIVASI
Andreas SCHIEDER
Günther SIDL
Nicolae ŞTEFĂNUȚĂ
Róża THUN UND HOHENSTEIN
Bettina VOLLATH
Thomas WAITZ
Sarah WIENER
Michal WIEZIK
Isabel WISELER-LIMA

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i Questions for written answer
https://www.europarl.europa.eu/doceo/document/P-9-2021-004657_EN.html
https://www.europarl.europa.eu/doceo/document/E-9-2021-003643_EN.html
ii https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/wp-call/2021-2022/wp-9-food-bioeconomy-natural-resources-agriculture-and-environment_horizon-2021-2022_en.pdf
iiihttps://vkm.no/english/riskassessments/allpublications/crisprandothergenomeeditingtechniquesimplicationsforriskassessment.4.581a91ee16d1a06e872a6bca.html
iv https://enveurope.springeropen.com/articles/10.1186/s12302-020-00361-2
v https://www.mdpi.com/2673-6284/10/3/10
vi https://gmo-crl.jrc.ec.europa.eu/doc/JRC116289-GE-report-ENGL.pdf
vii https://inspection.canada.ca/plant-varieties/plants-with-novel-traits/approved-under-review/decision-documents/dd-2013-100/eng/1427383332253/1427383674669
viii https://www.mdpi.com/2304-8158/9/9/1245/htm
ix https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8226746/
x https://euginius.eu/
xi See their submissions to the EC study, https://ec.europa.eu/food/plants/genetically-modified-organisms/new-techniques-biotechnology/ec-study-new-genomic-techniques/stakeholders-consultation_en#replies-from-member-states