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Public consultation on plants produced by certain new genomic techniques

Fields marked with * are mandatory.

Introduction

In the last decades, advances in biotechnology have led to the development of new genomic techniques (NGTs), i.e. techniques capable of altering the genetic material of an organism that have emerged or have been developed since 2001, when on the deliberate release of genetically modified organisms (GMOs) into the environment was adopted. The Court of Justice of the EU in 2018 clarified that organisms produced by targeted mutagenesis are GMOs subject to the requirements of the EU GMO legislation. Targeted mutagenesis techniques are new genomic techniques, as opposed to random mutagenesis techniques. Based on the reasoning followed by the Court, the GMO legislation also applies to organisms produced by other NGTs, including cisgenesis techniques.

In November 2019, the Council requested the Commission to prepare a study on the status of NGTs under EU law, and submit, if appropriate in view of the outcomes of the study, a proposal accompanied by an impact assessment, or otherwise inform of other measures required.

The study, published in April 2021, confirmed that NGTs have developed rapidly in many parts of the world and are expected to continue to do so. There is significant interest both in the EU and globally for plant applications of NGTs, and some of their applications are already on the market outside the EU; this trend is likely to continue.

The study also concluded that plants obtained by NGTs have the potential to contribute to the objectives of the European Green Deal and in particular to the Farm to Fork and Biodiversity Strategies and the United Nations' Sustainable Development Goals (SDGs) for a more resilient and sustainable agri-food system. The study also reported concerns, e.g. on potential safety and environmental impacts, including on biodiversity, coexistence with organic and GM-free agriculture and on consumers' right to information and freedom of choice.

Concerning safety, the European Food Safety Authority (EFSA) has concluded that plants obtained by targeted mutagenesis and cisgenesis can have the same risk profile as plants produced with conventional breeding. EFSA has not yet assessed the safety of targeted mutagenesis and cisgenesis in microorganisms or animals, nor the safety of other techniques.

The study concluded that the GMO legislation has clear implementation challenges and requires contentious legal interpretation to address new techniques and applications, and that there are strong indications that it is not fit for purpose for some NGTs and their products, needing adaptation to scientific and technological progress.

Instructions and glossary

The questionnaire features three sections: section A focuses on the current situation and the definition of the problem, while section B and C are forward-looking and focus on possible solutions and other relevant aspects.

For the purposes of this questionnaire, references to plants obtained by targeted mutagenesis or cisgenesis include their food and feed products.

This questionnaire is available in all EU languages and you can reply in any EU language. You can pause at any time and continue later. You can download your contribution once you have submitted your answers.

Whenever possible, please substantiate your replies with explanations, data and sources of information, practical examples etc.

A short glossary of terminology relevant to this questionnaire follows below:

- **New Genomic Techniques (NGTs):** An umbrella term used to describe a variety of techniques that can alter the genetic material of an organism and that have emerged or have developed since 2001, when the existing GMO legislation was adopted.
- **Mutagenesis:** Creation of mutation(s) in an organism without insertion of foreign genetic material.
- **Classical (or random) Mutagenesis:** An umbrella term used to describe older techniques of mutagenesis that have been used since the 1950s; they involve irradiation or treatment with chemicals in order to produce random mutations, without insertion of foreign genetic material. Organisms obtained with such techniques are GMOs that are exempted from the scope of the EU GMO legislation.
- **Targeted Mutagenesis:** An umbrella term used to describe newer techniques of mutagenesis that induce mutation(s) in selected target locations of the genome without insertion of foreign genetic material.
- **Cisgenesis:** Insertion of foreign genetic material into a recipient organism from a donor that is sexually compatible (crossable).
- **Transgenesis:** Insertion of foreign genetic material into a recipient organism from a donor organism that is sexually incompatible.
- **Trait:** For the purposes of this document, a trait is a specific characteristic resulting from the modification of a plant by targeted mutagenesis and cisgenesis.

A. Regulating plant produced by targeted mutagenesis and cisgenesis - current situation

The EU GMO legislation applicable to plants includes Directive 2001/18/EC on the deliberate release into the environment of GMOs, Regulation (EC) No 1829/2003 on GM food and feed and Regulation (EC) No 1831/2003 concerning the traceability and labelling of GMOs and their food and feed products. The 2010-2011 evaluations of the GMO legislation and the 2021 Commission study on NGTs have indicated that, as regards plants obtained by some NGTs and their products, the current legislation is no longer fit for purpose and needs adaptation to scientific and technological progress. On the basis of these evaluations and the study, the inception impact assessment has identified the following problems associated with the application of the current legislation to plants produced by targeted mutagenesis and cisgenesis:

- Legal uncertainties in Directive 2001/18/EC (and other legislation based on it) have been intensified by developments in biotechnology, with unclear or undefined terms and notions;
- Current regulatory oversight and requirements are not adapted to the resulting diverse risk profiles, and in some cases can be disproportionate or inadequate;
- The GMO legislation includes authorisation, traceability and labelling requirements that raise implementation and enforcement challenges;
- The current legislative framework does not take into account whether products have the potential to contribute to sustainability.

These problems could impact operators across the agri-food system, including in agricultural biotechnology innovation and research, non-food/feed bio-based and biotechnology industries, operators in EU trade partners, organic and GM-free operators, EU and national authorities, and EU citizens and consumer organisations. The issues are of interest to a broad spectrum of stakeholders, including NGOs active in the environmental protection, agri-food system, biotechnology and consumer protection areas.

1. With regard to the problems above, what is your view of the existing provisions of the GMO legislation for plants produced by targeted mutagenesis and cisgenesis?

They are adequate

They are not adequate

No opinion/I do not know

1.2 This is because

multiple answers possible

- the GMO legislation is not sufficiently clear for these plant products
- the GMO legislation includes authorisation, traceability and labelling requirements that are not appropriate for these plant products
- the risk assessment approach of the GMO legislation cannot factor in the diverse risk profiles of plants obtained by targeted mutagenesis or cisgenesis

- the GMO legislation does not take into account whether products have the potential to contribute to sustainability
- of other reasons

For other reasons: Please specify 500 character(s) maximum

- Conventional-like NGT plants are as safe as conventional plants (1) & should not be regulated differently
- A major challenge to implement & enforce the provisions of the GMO legislation on imports of conventional-like NGT plants and products from non-EU countries
- The current GMO legislation is detrimental to competitiveness of the EU agri-food sector, hinders innovation and the uptake by SMEs, due to legal uncertainty & the financial & administrative burden of the approval process

2. If plants obtained by targeted mutagenesis and cisgenesis continue to be regulated under the current GMO framework, do you expect short, medium or long term consequences for you/your activity/sector?

- Yes
- No
- Not applicable
- No opinion/I do not know

Please specify potential positive consequences - 800 character(s) maximum

None

Please specify potential negative consequences - 800 character(s) maximum

- NGT plants will not be developed in the EU due to the legal uncertainty from an opaque and costly risk assessment & approval process, the limited market due to member states opting-out of growing GMOs, & the negative perception by society
- NGTs are being enabled outside the EU leading to a loss of competitiveness for breeders particularly SMEs that are restricted to the EU market; farmers that need to compete with imports benefiting from NGTs; & researchers that face limitations to test NGTs materials in field trials & a loss of attractiveness of the EU market for new scientists
- The situation does not allow NGTs to contribute to breeding a wide range of resilient and nutritious plant varieties to meet the green deal, F2F and biodiversity goals, or to contribute to the UN SDGs

B. Regulating plants produced by targeted mutagenesis and cisgenesis - the future

The envisaged policy action on plants obtained from targeted mutagenesis and cisgenesis will aim at an appropriate regulatory oversight for the concerned plant products, ensuring a high level of protection of human and animal health and the environment, and enabling innovation and the contribution of plants developed by safe NGTs to the objectives of the European Green Deal and the Farm to Fork Strategy. This section aims at identifying potential impacts and possible ways to address the problems acknowledged in the inception impact assessment and mentioned in section A above. Your views will assist us in defining whether the current situation should be changed and the possible way forward.

RISK ASSESSMENT

In the current GMO legislation, risk assessment requirements are to a large extent the same for all GMOs. However, EFSA has concluded that plants produced by targeted mutagenesis and cisgenesis generally pose lower risks than plants obtained with transgenesis. EFSA has also concluded that, in some cases, plants produced by targeted mutagenesis and cisgenesis do not pose new hazards compared to plants produced with conventional, non-GM breeding techniques, or compared to classical mutagenesis techniques, which are considered as GMOs outside the scope of the legislation, and not subject to risk assessment. Finally, EFSA has concluded that off-target mutations potentially induced by targeted mutagenesis are of the same type as, and fewer than, those mutations in conventional breeding.

3. Currently, plants produced by targeted mutagenesis and cisgenesis are risk assessed as any other GMOs. What is your view on their risk assessment?

- Plants produced by targeted mutagenesis and cisgenesis need to be risk assessed using the current GMO legislation requirements.
- Plants produced by targeted mutagenesis or cisgenesis need to be risk assessed using requirements adapted to their characteristics and risk profile.
- Plants produced by targeted mutagenesis or cisgenesis do not need to be risk assessed when they could have been produced through conventional plant breeding or classical mutagenesis.
- Plants produced by targeted mutagenesis or cisgenesis do not need to be risk assessed.
- No opinion/I do not know
- Other

3.2 In your view, which criteria should be used to determine whether a plant produced by targeted mutagenesis or cisgenesis could have been produced via conventional breeding or classical mutagenesis?

500 character(s) maximum

The end product should be assessed according to the following criteria
1 - Has any foreign DNA material been inserted? No -> 1.1 Yes -> 1.2

- 1.1 - Is the genetic variation the result of spontaneous or induced mutagenesis? Yes -> the product could have been produced by conventional breeding or classical mutagenesis
- 1.2 - Is the foreign DNA from a breeders' gene pool (2)? Yes -> the product could have been produced by conventional breeding or classical mutagenesis

4. Is there any other aspect you would like to mention, for example on the potential economic, social, environmental or other impacts of the above, or would you like to justify/elaborate on your replies?

1500 character(s) maximum

- The assessment of how to regulate a plant variety should be based of the end product, not the breeding method used to obtain it. A conventional-like NGT plant is as safe as, and should be regulated similarly to, conventionally bred plant, so as not to discriminate between like products
 - > This would provide legal certainty & enable breeders to adopt NGTs in their toolbox, to better provide farmers with varieties that are adapted to their needs & more resilient to (a)biotic challenges in a more timely manner, contributing to socio-economic & environmental sustainability
 - > This will enable researchers to conduct fields trials to test NGTs materials, leading to more competitive EU research & outcomes. EU-based field trials will ensure the development of diverse & locally adapted plant species & varieties(3), for the benefit of consumers, society and biodiversity
- Knowledge gained through research & gene discovery can be more easily applied to plant breeding programmes using NGTs. This will help bridge the gap between public & private research, increasing the use value of EU research, & supporting EU breeding programmes
- To avoid trade disruptions & ensure the competitiveness of the EU agri-food sector, the EU should aim to harmonise its regulation of NGTs with international standards

SUSTAINABILITY

The NGT study Commission has concluded that plants obtained by NGTs have the potential to contribute to the objectives of the European Green Deal and in particular to the Farm to Fork and Biodiversity Strategies and the United Nations' SDGs for a more resilient and sustainable agri-food system. Examples of potential benefits include plants more resistant to pests, diseases and the effects of climate change (e.g. notably increasing severity and frequency of extreme heatwaves, droughts and rainstorms) or environmental conditions in general, or requiring less natural resources and fertilisers. NGTs could also improve the nutrient content of plants for healthier diets, or reduce the content of harmful substances such as toxins and allergens.

5. Should the potential contribution to sustainability of the modified trait of a product be taken into account in new legislation on plants produced by targeted mutagenesis or cisgenesis?

- There is no need for specific regulatory provisions on sustainability in this initiative
- Specific regulatory provisions for sustainability should be included in this initiative

- No opinion/I do not know

Please explain why 500 character(s) maximum

- Sustainability criteria are already being considered in the revision of the seed marketing directive. Including such provisions in this regulation risks discrimination compared to conventionally bred plants

- Sustainability is not linked to a single trait but the combination of all traits, & is subject to eg location, soil and weather conditions, farming practices, processing & trade

- Sustainability should include all aspects included in the UN SDGs

6. In your view, which of the following traits are most relevant for contributing to sustainability?

	Strongly agree	Tend to agree	No opinion/I do not know	Tend to disagree	Strongly disagree
*Tolerance/resistance to biotic stresses (e.g. plant diseases caused by nematodes, fungi, bacteria, viruses, pests)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*Tolerance/resistance to abiotic stresses (e.g. to climate change or environmental conditions in general, such as drought, heat, cold, salt)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*Better use of resources (such as water, nitrogen)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*Tolerance/resistance to plant protection products such as herbicides or insecticides	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*Better yield or other agronomic characteristics (e.g. yield stability, more or larger seeds or fruits, greater height, better shape or flowering time, better breeding characteristics)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*Better storage performance (e.g. under harvest, transport or storage conditions, longer shelf-life, non-browning and fewer black spots)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*Better composition (e.g. higher or better content of nutrients such as fats, proteins, vitamins, fibres, lower content of toxic substances and allergens)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*Other quality-related characteristics (e.g. better colour, flavour)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Production of substances of interest for the food and non-food industry	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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7. In your view, which of the following would be the best incentives to encourage the development of plant products of targeted mutagenesis or cisgenesis with traits contributing to sustainability?

	Strongly agree	Tend to agree	No opinion/I donot know	Tend to disagree	Strongly disagree
*Regulatory and scientific advice before and during the approval procedure	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*Measures to facilitate the approval process (waiving of fees, faster procedures)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*Allowing sustainability-related claims to appear on the final product	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please specify any other incentives you would like to propose

500 character(s) maximum

- NGT plant products that could have been obtained by conventional breeding or classical mutagenesis, should be assessed & regulated as conventional products, so as not to discriminate between like products
 - Any additional burden, compared to conventionally bred plants will negatively affect uptake by SMEs
 - Please see points in text box from question 5

8. Do you think information about the sustainability contribution of a modified trait of a plant produced by targeted mutagenesis or cisgenesis should be made available to the consumer?

- Yes
- **No**
- No opinion/I do not know

9. Is there any other aspect you would like to mention, for example on the potential economic, social, environmental or other impacts of the above, or would you like to justify/elaborate on your replies?

1500 character(s) maximum

- Any sustainability claims should be on a voluntary basis
 - If enabled in the EU, NGTs can be used

-> by breeders to introduce valuable traits to several varieties in a short amount of time, thereby increasing agrobiodiversity & supporting regional & culturally relevant crops
-> by researchers to develop knowledge on a wide range of plant species that can contribute to sustainability e.g., yield stability, nutrient use efficiency, increase agrobiodiversity & promote public-private partnerships
- Farmers would benefit from the use of NGTs in research & breeding, by having access to a wider range of plant species & varieties from which to select according to their needs & conditions
- Irrespective of the breeding method, plant breeding is already a net contributor to all three pillars of sustainability (4,5)
- NGTs can contribute to increasing sustainability of all kinds of farming practices, including organic
- Aspects like nutrition & taste should also be promoted for better consumer health
- In the transition to more sustainable agricultural systems, production must be maintained to ensure socio-economic alongside environmental sustainability, & to avoid offshoring the EU's carbon footprint through increasing imports. Breeders must be enabled to use all available and safe breeding methods, including NGTs, to develop new &/or better adapted plant varieties to meet these challenges

INFORMATION FOR OPERATORS AND CONSUMERS

Under the GMO legislation, GMOs are traced (documentation with declaration of presence of GMO, GMO unique identifier for all transactions along the food chain, obligation to keep information for each transaction for a number of years) and labelled as such.

The GMO legislation includes an obligation for applicants for a GMO authorisation to provide a quantitative detection method that is specific to the product, i.e. it can both detect it and differentiate it from other products. In some cases of plants produced by targeted mutagenesis or cisgenesis, analytical methods might be able to detect the product but might not be able to differentiate it from similar plants produced by conventional, non-GM breeding techniques or by classical mutagenesis. This means that in these cases analytical methods might be able to detect the presence of a modified product, without being able to prove that the change was the result of a technique regulated under the GMO legislation.

10. When analytical methods are not available or reliable, effective traceability of plants obtained by targeted mutagenesis or cisgenesis, and of their food and feed products, can be ensured via: multiple answers possible

- documentation transmitted through the chain of operators
- public databases/registries
- digital solutions, e.g. block chain
- other means
- No opinion/I do not know

500 characters

- Traceability should not be applied to conventional-like NGT plants, so as not to discriminate between like products
- If it is not possible for a detection method to differentiate like products based on the breeding method used, traceability cannot be enforced, particularly in light of international trade ie imports from non-EU

countries that might contain products from conventional-like NGT plants that are regulated as conventional in the country of origin

11. When reliable analytical methods that can both detect and differentiate a product cannot be provided, operators wishing to introduce plants produced by targeted mutagenesis or cisgenesis in the market should:

- not be asked at all to provide an analytical method that can both detect and differentiate their product
- not be asked to provide an analytical method that can both detect and differentiate their product, if they can justify that this would be impossible
- be asked to provide a detection method, but without the need to differentiate, if they can justify that the latter would be impossible
- not be allowed to place the product in question on the market
- No opinion/I do not know

12. Transparency for operators and consumers, on plants produced by targeted mutagenesis or cisgenesis:

multiple answers possible

- can be achieved via a physical label on the final product
- can be achieved via a digital label accessible through the final product (e.g. link to a website, QR code)
- can be achieved via information available elsewhere (e.g. a website, a public database/register)
- is not necessary for plants produced by targeted mutagenesis and cisgenesis, when they could have been produced through conventional plant breeding or classical mutagenesis
- is not necessary for any plant produced by targeted mutagenesis and cisgenesis
- No opinion/I do not know

Note that plants produced with conventional, non-GM breeding techniques, or with classical mutagenesis (GMOs exempted from the scope of the legislation), do not need to be traced or labelled as GMOs; other legislation provisions on traceability and labelling apply, e.g. under EU food legislation.

13. Is there any other aspect you would like to mention, for example on the potential economic, social, environmental or other impacts of the above, or would you like to justify/elaborate on your replies?

1500 character(s) maximum

- Any type of traceability comes at a financial cost & requires the separation of production streams. Conventional-like NGT plants and their products should not be discriminated against, compared to their conventionally bred counterparts, as regards traceability, particularly when no detection method would exist to enforce it.

- In order to provide transparency & freedom of choice, the use of NGTs to develop a plant variety could be indicated through a public registry, such as the EU common catalogue. This would allow farmers to

choose whether to grow NGT plants or not, and operators to exclude it from their production stream, if desired

- A consumer survey conducted in Sweden indicated that, if given the choice, consumers would like all plants & their products to be labelled with the breeding methods used to obtain them (6). Labelling some plants & their products, but not others, risks discrimination between like products
- Transparency should not be used to discriminate against like products or stigmatise certain stakeholders

C. Other relevant aspects of a new framework

The following questions address other aspects, not covered in the previous sections, that are relevant to a new framework.

14. Which of the following measures do you think would be necessary for future-proof legislation on plants produced by targeted mutagenesis or cisgenesis?

	Strongly agree	Tend to agree	No opinion/I do not know	Tend to disagree	Strongly disagree
*improving legal clarity in the legislation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*putting in place mechanisms that facilitate easy adaptation to scientific progress	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*risk assessment that takes into account the characteristics and risk profile of a final product	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please specify any other measures you would like to propose

500 character(s) maximum

The decision on whether a risk assessment is needed at all should be based on the characteristics of the end product. If an NGT plant could have been obtained by conventional breeding or classical mutagenesis, it would be as safe as its conventionally bred counterpart and should not need any risk assessment (see box 3.2 for more details on criteria)

15. Which of the various measures outlined in section B would be most relevant to co-existence with existing agricultural practices (e.g. conventional, organic)? Are any other measures necessary?

1500 character(s) maximum

- By providing transparency about the use of NGTs to develop a new plant variety available through the EU common catalogue, farmers can decide whether or not to grow varieties obtained using NGTs

- Private certifications systems already exist to exclude certain breeding methods or products from specific origins from a dedicated production stream. Such systems could be set up to exclude NGT plants and their products, if desired
- Transparency is essential to provide freedom of choice to all operators and consumers. In order to promote the use of NGTs in plant breeding, it is essential for transparency not to come at an additional cost, or to lead to discrimination between like products. We therefore suggest to include information about the use of NGTs in a public registry like the EU common catalogue. This can be done during the registration process, at no additional burden or cost
- No coexistence measures would be needed for conventional-like NGT plants

16. Do you think any regulatory measures should be included in new legislation to facilitate access to targeted mutagenesis or cisgenesis technologies/plant genetic resources?

Note that this initiative on plants produced using targeted mutagenesis or cisgenesis does not cover intellectual property rules (e.g. plant variety rights, biotechnology patents)

1500 character(s) maximum

- In the transition to more sustainable agricultural systems, all forms of farming should be supported indiscriminately, rather than promoting a specific farming type
- Additional funding, through fx Horizon Europe, for basic & applied research would facilitate access to targeted mutagenesis & cisgenesis by further improving the technology & its applicability to a wider range of plant species, as well as increasing our knowledge of plant biology that can be applied to promote gene discovery for a wide range of traits
- Specific funding should be put in place to promote public-private partnerships. This will particularly enable SMEs & start-ups, which are the main drivers of innovation
- Better knowledge of plant breeding & food systems in general should be promoted by including specific curricula in basic and higher education systems, as well as supporting & rewarding science communication by academics

17. Do you think any regulatory measures should be included in new legislation to facilitate the uptake of these technologies by small and medium-sized enterprises?

1500 character(s) maximum

- SMEs & start-ups are a major source of solution-oriented innovations and should be supported through e.g., research funding, seed money, public-private partnerships
- Conventional-like NGT plants should be regulated as conventional, & require no additional cost or burden to breeders for registration. This would ensure uptake by SMEs & start-ups
- Increasing the diversity of plant species in agricultural systems will lead to more, but smaller acreages & markets per species, while the burden & costs of development will remain the same. SMEs & start-ups already serve smaller, more regional, markets & are therefore best equipped to support the diversification of agricultural systems

- Future legislation for NGTs should be clear, simple & provide a predictable timeline. This legal certainty will be essential to enable breeders, particularly SMEs & start-ups, to use these NGTs in their breeding programmes
- Future legislation should also be aligned with international standards so that SMEs remain competitive & can access external markets, if desired
- Breeding programs rely on the exchange of breeding materials to maintain diversity. If the EU chooses to regulate conventional-like NGT plants differently compared to conventionally bred plants, EU plant breeders will eventually not be able to utilise non-EU breeding pools, for fear that they might contain varieties developed using NGTs. This will particularly affect SMEs & start-ups.

18. You can raise any additional points or provide further information and evidence to support your views using the field below.

1500 character(s) maximum

- Plant ETP is a multistakeholder platform representing the plant sector. This response contains the joint views of academia, industry and farmers, which are convinced that NGTs can contribute to increasing the sustainability of EU agri-food systems, in line with UN SDGs & the F2F & Biodiversity & Green Deal goals
- Plant breeding evolves, with science constantly providing more knowledge & better tools to apply to breeding programs for the benefit of society. Future legislation must support scientific outcomes and promote application, rather than stifling it. Future legislation must be future-proof & able to quickly adapt to new scientific outcomes, for the EU to remain a driver of scientific excellence
- The EU common market & the free movement of goods must be supported by a better alignment of all member states to ensure predictability of markets. The current opt-out systems for GMOs should not be applied to NGTs
- NGTs can contribute to the transition to more sustainable agri-food systems. Studies show consumers accept the use of NGTs in light of current challenges (e.g. climate change, overpopulation) as long as they provide societal benefits (e.g. sustainability, reducing world hunger) and do not lead to monopolies(6,7). This can only be assured if conventional-like NGT plants are regulated like conventionally bred plants. Any additional burden, whether financial or administrative, will lead to SMEs & start-ups being excluded from the NGTs market due to limited resources

Additional document containing the following references

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2. EFSA scientific opinion (2012) Scientific opinion addressing the safety assessment of plants developed through cisgenesis and intragenesis
<https://efsa.onlinelibrary.wiley.com/doi/pdf/10.2903/j.efsa.2012.2561>
3. EU SAGE database (2022) <https://www.eu-sage.eu/genome-search>
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5. OECD (2021) Making Better Policies for Food Systems <https://www.oecd-ilibrary.org/sites/7958534c-en/index.html?itemId=/content/component/7958534c-en>
6. Gentekniknämnden (2021) Svenskars inställning till genomredigering inom växtförädling https://www.genteknik.se/wp-content/uploads/2022/02/Svenskars-installning-till-genomredigering_2022.pdf
7. Bioteknologiradet (2020) Norwegian consumers' attitudes toward gene editing in Norwegian agriculture and aquaculture
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