

Sustainable Breeding in Organic Farming

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Alternative Pathways for 'Sustainability' and 'Innovation' in Agriculture and Breeding



The Myth of Sustainable Traits

- Resilience: health and robustness of agroecological system
- one trait cannot be called sustainable, only the cultivation of crops can take place sustainably with high-quality seeds

ANNEX III

Traits referred to in Article 22

Part 1

Traits justifying the incentives referred to in Article 22:

- (1) yield, including yield stability and yield under low-input conditions;
- (2) tolerance/resistance to biotic stresses, including plant diseases caused by nematodes, fungi, bacteria, viruses and other pests;
- (3) tolerance/resistance to abiotic stresses, including those created or exacerbated by climate change;
- (4) more efficient use of resources, such as water and nutrients;
- (5) characteristics that enhance the sustainability of storage, processing and distribution;
- (6) improved quality or nutritional characteristics;
- (7) reduced need for external inputs, such as plant protection products and fertilisers.

Part 2

Traits excluding the application of the incentives referred to in Article 22: tolerance to herbicides.



NGT Sustainability Claims Still Only Hypothetical Promises

- New GMOs: Few actually address sustainability issues.
 - [2021 Study](#) from Dr. Kawall (ESSNER Researcher): 5 out of 231 pre-market studies.
 - Pesticide resistance and commercial features.
- Why?
 - Requires modification of complex traits.
 - E.g., at least 60 genes associated with [drought tolerance](#), which in turn depends on environmental conditions.
 - Unintended effects and trade-off effects.



Organic Pioneering in Breeding Innovation

- Intrinsically innovative.
- Aims of Organic breeding:
 - Sustainable use of resources taking into account dynamic ecological equilibrium
 - Food security, sovereignty, and societal needs
 - Biodiversification
 - Adapted to future growing conditions
- Improving symbiosis and taking into account natural interactions
- Countless positive examples:
 - Apple Breeding in Germany for comprehensive vitality instead of monogenous scab resistance
 - Maize Breeding in the Netherlands for more robust cultivation adapted to climate conditions
 - ...



Innovation and Sustainability

- Innovation in plant breeding is necessary but it should not be reduced to the use of gene editing
- No shortcuts to circumvent the complexity of our agroecosystems.



Strong Support from Civil Society and Environmental Organizations

- 300+ organizations
- Letter to European Commission



Mr Frans Timmermans
Executive Vice-President for the European Green Deal
European Commission

By electronic mail

16 May 2023

Re: Request for a meeting on New Genomic Techniques: Time to shift to evidence-based decision making for sustainable food systems and nature

Dear Executive Vice-President,

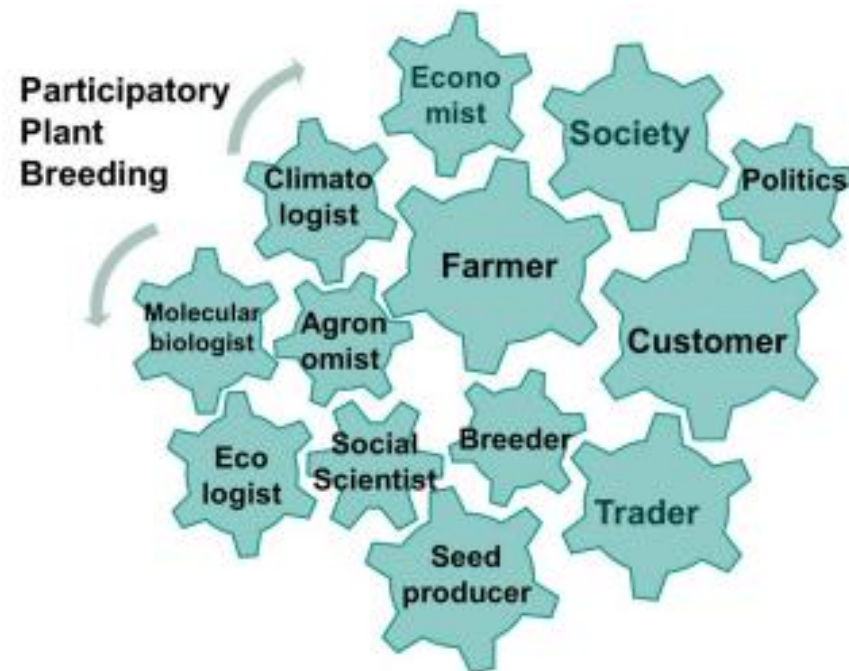
As Executive Vice-President for the European Green Deal we, the undersigned 300+ organisations, call on you to intervene and prevent the far-reaching deregulation of new genomic techniques at the expense of nature and the climate, and of farmers' and consumers' rights. We note with great concern that arguments in favour of deregulating new genomic techniques (NGTs) are often put forward without relevant evidence by DG Sante, especially when it comes to sustainability claims.

As you know, the EU already has legal clarity on the status of NGTs – according to the European Court of Justice, they are GMOs, based on Article 191.2 TFEU.¹ The EU also has effective GMO legislation, based on transparency, labelling, and safety checks, with an authorisation procedure that has proven its worth for more than 20 years. New GMOs are not banned in the EU. Just as with previous GMOs, any company can apply for a market authorisation for new GMOs.



Beyond Ecological Goals – Social Innovation

- Organic breeding encourages knowledge exchange and participatory breeding models
- Important counter-approach to encroaching monopolization of genetic resources through patents

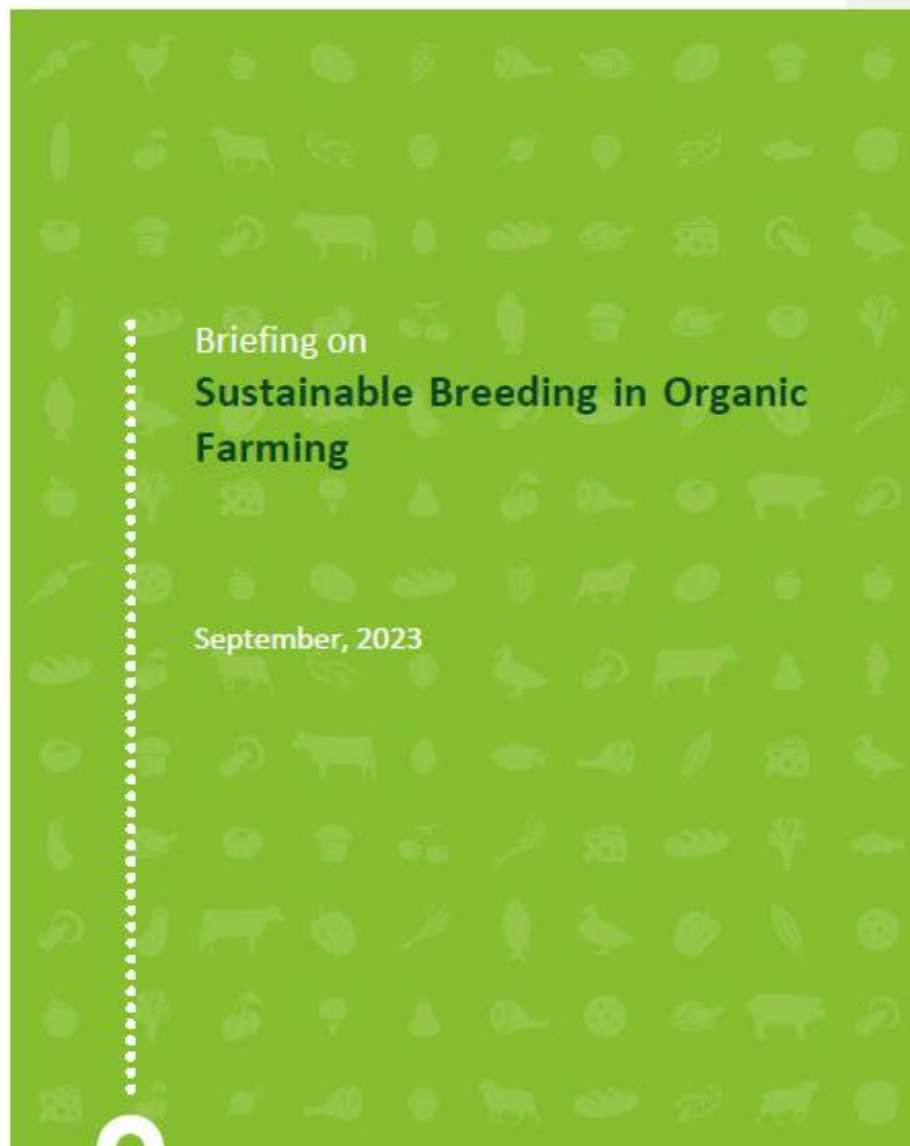


The EU as one of the Last Bastions



- Organic sector calls for systems-based approach to innovation and sustainability

Soon to be released!



Briefing on
**Sustainable Breeding in Organic
Farming**

September, 2023

Thank you!

