



GIVE **GENES** A CHANCE !

**EARLY-CAREER RESEACHERS IN THE EU
STAND UP FOR TRUST IN SCIENCE**

Initiated by





GIVE GENES A CHANCE !

Dear fellow scientists and science enthusiasts,

we are **EcoProg** - **Eco-progressive Network** a newly formed association from Germany striving for an ecological, technological, and evidence-based dialogue between the public and the scientific world.

Reaching out and cross-linking progressive movements and scientists throughout the European Union is always a great idea. But today, there is a more acute rationale to our writing: By April 30, the EU Commission will deliver a study on the ECJ's judgment in case C-528/16 **regarding the status of genome-edited plants** under the current GMO legislation. And we just don't want the scientific world to go unheard.

In the light of the great sustainability challenges ahead, rebuilding trust in science is sorely needed. This is why we ask you to join **#GiveGenesAChance**. We would be very happy to have your support for the campaign and therefore, we would ask you to sign the attached **joint statement** via our **Google form**.

Additionally, we plan to collect statements, pictures, and short clips of early-career researchers across the EU. We would combine these contributions and release them around the publication date of the EC study. In the end, it will look something like this our **prototype video**.

The **deadline for video contributions is April 12, 2021**.

Please also forward this e-mail to researchers, institutes, or NGOs throughout the EU that might want to join forces as well.

**With regards and on behalf of EcoProg,
Svenja Augustin & David Spencer**



HOW TO PARTICIPATE:



GIVE GENES A CHANCE !

Deadline: 12th of April

You already signed the [joint statement](#) and are interested in taking your participation to the next level? We created several ways to be a part of **#GivesGenesAChance**:

I. Send a picture of yourself or your team!

Grab your favorite marker and a piece of paper. Write "Give Genes A Chance!" on the paper and take a picture of yourself or your team.

II. Prepare a 20s video clip

You have five minutes to spare and would like to be part of the video of our campaign? Fantastic! We'd like to include researches of as many EU member states as possible.

Here is how:

- Make a "Give Genes A Chance!" sign
- Get yourself or team in front of a camera
- Start recording in a horizontal frame
- For 10s just look into the camera
- For additional 10s look into the camera and show your sign

III. Contribute

Send your picture or access link to your video uploaded to a cloud of your choice and via E-mail to [David](#) or [Svenja](#).

Add your name(s), research institute and location in the e-mail, and complete the sentence "I/We use (bio)tech to ...". If you'd like to share them, you can also provide your social media handles (twitter, Instagram,..).

We are also very happy if you are interested in writing further content for the campaign's [website](#). Just contact [Svenja](#) directly.

IV. Share our campaign

You know more early career researchers, science-based NGOs, or associations?! Just forward our digital brochure and get them on board. But keep in mind, that we focus on early career researches exclusively in the European Union and independent of corporations.

Website: <https://givegenesachance.eu/>

E-Mail: David.Spencer@oekoprog.org, Svenja.Augustin@oekoprog.org

JOINT STATEMENT:



This is the joint statement for the [#GiveGenesAChance](#) campaign. It is not in its final layout yet. If you would like to suggest some edits, feel free to mail [Svenja](#). If you would like to sign the joint statement, please fill our [Google form](#).

In April 2021, the EU Commission will deliver a study on the judgment of the European Court of Justice (ECJ) regarding the status of Novel Genomic Techniques (NGTs) under Union law. This study will contain information on the status and use of biotechnological methods developed since 2001, in plants, animals, and micro-organisms for agri-food, industrial, and pharmaceutical application. Additionally, it will cover an overview on the risk assessment of plants developed through NGTs [1]. In 2018, the ECJ's ruling in case C-528/16 including the status of genome-edited (GE) plants resulted in their strict regulation under the legal framework for genetically modified organisms (GMO Directive 2001/18/EC). Therefore, their release, placing on the market, labeling, and traceability have to follow the same regulations as transgenic plants produced with other biotechnological methods. As a consequence, there are currently no crops developed using NGTs, such as CRISPR, TALEN, or comparable techniques on the European market [1]. In contrast to this process-based approach on NGT regulation, many countries outside of the European Union (e.g. Australia, New Zealand, and Japan) decided on an evidence-based product-oriented regulation.

As early-career researchers in the fields of biotechnology, plant biology, and breeding throughout Europe, this regulation affects not only the application of our basic research results but also hinders science by complicating field trials. Several scientific societies published statements as well as recommendations regarding the European legal and political frameworks around new breeding technologies and their applications [2, 3]. As early-career researchers from different research institutes within the European Union, we are concerned about growing discrepancies between scientific consensus and political actions. With our knowledge and professional education, we can and wish to contribute to a more sustainable and environmentally-friendly European agriculture as well as a secured food supply for a growing population.

In contrast to previous technologies for the generation of GMOs, new breeding technologies are usually not utilized to insert genetic sequences from the same or different species into another genome. Instead, genome editing is widely used to introduce targeted point mutations, insertions, and deletions of single nucleotides without introducing (foreign) DNA into the plant's genome. These changes are indistinguishable from naturally and spontaneously occurring mutations or those induced in the context of conventional breeding by chemical or radioactive mutagenesis [4]. In 2019, a report of the European Network of GMO Laboratories concluded that unambiguous detection and tracing of mutations induced by genome editing without previous knowledge about the given mutation is likely to fail [5]. The main difference between the two breeding approaches is that in genome editing the locations of the mutations are not left to chance. They are induced at previously defined positions within the target genes. This enables a faster translation of basic research results into application. Therefore, according to the current state of knowledge including an assessment by the EFSA Panel on Genetically Modified Organisms, an evidence-based risk assessment does not see any greater risks in the application of targeted mutagenesis in comparison with conventional breeding methods [6].

JOINT STATEMENT:



Possible results of new breeding technologies span from increased yields [7], and increased yield-stability under adverse climate conditions such as drought [8], and increasing soil salinity [9], to resistances against plant pathogens like viruses [10] and pathogenic fungi [11]. With respect to climate change, two IPCC reports mention the potential of new breeding technologies [12, 13]. The resulting crops could not only be more resilient and sustainable, but they could also contribute to carbon sequestration and reduced soil erosion. Other aims of GE-assisted breeding could include crops with improved nutritional value which are already marketed in the USA and Japan [14, 15], or the *de novo* domestication of wild crop relatives [16, 17]. This would increase the available genetic resources for breeding and could benefit (genetic) biodiversity in agriculture.

Breeding and releasing a stable high-quality crop variety takes between 10 and 20 years. Therefore, the development of plants we need by 2040 has to start now. Locally adapted, resilient, and nutrient-efficient plant varieties are essential to provide food, medicine, and fibers. While the demand for such goods will increase with the growth of the global population, the area of arable land will decrease due to the adverse effects of climate change and necessary biodiversity conservation projects. Given the urgency to develop more resilient and diverse crops, plant breeding should have the widest possible range of safe methods at its disposal. Instead of the legislation and admission of crop varieties based on the method used for their production, we strongly favor a product-oriented approach with case-by-case admissions regardless of the production process. This would allow plant breeders to employ new breeding technologies for seed production while still enabling the European Union and its member states to control for sustainable and environmentally safe application. As a final remark, we would like to disclose that NGTs are not a universal remedy for the environmental and climate change-related tasks at hand. But they are a valuable addition to the methods of plant breeding and the current legal framework around them will negatively impact plant research and breeding in the European Union.

**Therefore, we urge you to reconsider the current state of the regulations,
your early-career researchers**

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