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A Citizen Jury on New Genomic Techniques: A Format For Public Participation in Genomic Matters in Agriculture?

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Between 26-28 January 2024, the [Chair of Food Law of the University of Bayreuth, Campus Kulmbach](#), organised a [citizen jury on new genomic techniques \(NGTs\) at the Schloss Thurnau in Upper Franconia, Bavaria](#) as a part of the [DFG project](#) on EU decision-making on benefits of new technologies. The central questions posed to the jury to deliberate on was: "What are the needs and desired purposes regarding the application of new genomic techniques in plant breeding? Under which conditions should they be used, and for which objectives and intended impacts?". The jury took place ahead of the first reading vote of the European Parliament on the [Commission's proposal for a regulation on plants obtained from certain techniques of genetic mutation and their feed and food products](#). [The Parliament adopted the proposal with amendments](#), and the voting on the proposal now awaits the [Council of the European Union](#).

The convention of the jury was a research experiment which followed several reflections: first, the Commission's proposal on NGTs does not contain any provisions on public participation, marking a departure from the existing genetically modified organisms (GMO) regulatory framework. In that regulatory framework, public participation in the form of public consultations takes place at the EU level (placing on the market) as well as the level of Member States (cultivation). The 20+ years of experience with this form of [public participation has shown, however, that the public is unable to meaningfully participate](#). At the level of the Commission, this is demonstrated by the fact that since comments by the public often raise ethical issues, risk assessors have difficulties considering such comments in the assessment reports. At the level of Member States, the comments are often found to be too general to be addressed in any meaningful way in the process of risk assessment. The interest of the public to partake in such consultation

exercises has been limited from the beginning but also [steadily declined](#). For that reason, it is hypothesised that public participation in the form of [deliberative mini-publics could be better suited for assessments of the benefits](#) of NGTs, in which ethical issues over their use could be voiced. Limiting public participation at the policy-making or maybe even administrative (i.e., authorisation procedure) level could backfire as [NGTs will be subject to public acceptance of consumers](#).

Secondly, unlike [in existing GMO laws](#), the Commission's proposal on NGTs introduces a benefit assessment couched in terms of sustainability which is used to award regulatory incentives for certain types of NGTs. Such regulatory incentives include expedient risk assessment or pre-submission advice. However, it remains unclear to what extent these proposed measures are "assessments" proper. The request for incentives would be sent to the European Food Safety Authority which does not necessarily examine the information submitted by the applicant. Incentives are provided based on supplying information that a trait of a plant conveyed by an NGT is one featuring on the list of traits in Annex III of the proposal (with the list being currently subject to proposed amendments of both the Parliament and Council, as [draft revisions](#)).

According to the proposal, the Commission is mandated to "conduct an up-to-date scientific literature review of the impact on environmental, social and economic sustainability of the trait(s) it intends to add or delete from the list in Annex III" (Article 22(8)(b)). It is uncertain what the Commission considers to be "social" sustainability, as none of the traits currently listed in Annex III can be established to be directly linked to the concept as understood by [the literature](#). The traits currently listed in the Commission's proposal include yield, tolerance to abiotic and biotic stresses, more efficient use of resources, characteristics that enhance the sustainability of storage, processing and distribution, improved quality or nutritional characteristics and reduced need for external inputs. The trait excluding the application of the incentives is tolerance to herbicides. It is also noticeable that one of the amendments of the European Parliament proposes that characteristics of a plant that improve yield or yield stability (for example, [modified root architecture](#)) must be coupled with the condition that the trait also leads to the tolerance to (a)biotic stresses or a more efficient use of resources. That would mean that, according to the Parliament, improving yield alone is not a trait with the potential to contribute to sustainability.

One of the possibilities to define the social sustainability dimension in the food sector is now open in the [proposal for a regulation on EU geographical indications for wine, spirit drinks and agricultural products, and quality schemes for agricultural products](#) which aims at allowing producers to valorise their actions relating to sustainability in their product specifications. In light of this gap, a citizen jury may fill in the missing understanding of

social sustainability and offer an additional epistemic source besides the literature to review the list of traits benefitting of regulatory incentives.

The third reflection reposes on the proliferation of [deliberative processes at the EU](#), as well as the national level, notably in the area of sustainable food systems. At the EU level, the Commission vowed in its [2024 work programme](#) to continue with citizen panels' initiatives, and currently initiated recruitment for a [panel of energy efficiency](#). This follows a series of [three citizen panels](#) which took place in 2023, one of which concerned food policy, namely [food waste](#). At the national level, for example in Germany, a [citizen assembly on nutrition finalised its report in January 2024 and currently awaits its submission to the German Bundestag](#). None of these recent initiatives have touched upon the issue of NGTs.

However, there are other examples of deliberative process tackling the issue of NGTs directly in the past. Already in 2005, the Danish Board of Technology put together a citizen jury of 16 to formulate and vote on arguments for and against the "[new GM plants and conditions for the possible growing of the plants in Danish fields](#)". The youngest group in that process represented people born in 1980. In 2019, the German Institute for Risk Assessment (BfR) organised a consumer conference "[Genome Editing in the Field of Nutrition and Human Health](#)" of 20 citizens with a good command of German [recruited based on socio-demographic criteria](#) (age, gender, profession, employment status). In 2023, the Rathenau Institute in the Netherlands published a [report](#) of six focus groups made up of five to eight participants, representing the Dutch public in terms of age, educational background, socio-economic class, and gender. The focus groups explored the participants views on the use of NGTs and GMOs in crops.

In the Kulmbach process, the recruitment and selection strategy proceeded upon the hypothesis that young people will be predominantly affected by the placing on the market of NGTs. If a new regulation were to be adopted today, it would take an additional 10 to 15 years for the first real applications to appear on the market, e.g. in food products. A total of 24 jury members were selected based on stratification criteria, with the primary consideration being [discursive representation](#) on the topic of NGTs. For the recruitment, the [Q methodology](#) was used. The Q set was elaborated by identifying discourses in the [feedback obtained by the Commission on the NGT proposal](#). The questions regarding the participants' opinions on NGTs were included in the recruitment survey distributed to all Bavarian universities and *Fachhochschulen* (universities of applied sciences) by email. The jury selection aimed at striking gender balance and further demographic criteria (age, study subject, university programme, nationality). Nearly half of the jury members fell within the age group of 18-24, while the second largest contingent, comprising almost half as well, represented the age group of 25-34. The remaining jury positions were filled by individuals from older age categories, ensuring a comprehensive range of experiences and viewpoints. The jury members represented a diverse range of fields of study (including

medicine, literature, life sciences, law, mathematics, and others) and reflected a broad geographical spectrum. While the majority of the jury members were German nationals, some jurors also came from neighbouring countries such as Austria and Italy. Furthermore, recognizing the global impact of the NGTs and the impact of the prospective EU regulation on all people in the EU market, irrespective of their nationalities, the jury also comprised jurors from two non-EU countries, Nigeria and Japan. The selection is biased towards age and education and by no means can be said to be [representative](#) of the German, EU or world population. However, it can be hypothesised that it still offers meaningful lessons as to the [involvement of citizens in the regulatory framework](#) relating to NGTs under preparation, especially as regards the assessment of the benefits (including necessity and social sustainability) of those technologies.

Over the course of three days in January, the jury engaged in intensive dialogue, drawing upon a diverse range of perspectives and expertise provided by six experts and two stakeholder witnesses. The witnesses represented diverse points of view regarding the applications of NGTs. The table deliberations took place in German and English, while the plenary was held in English. The observations, assessments and recommendations featuring in the [final report](#) were written in English by the members of the jury.

As regards the content of the recommendations, it is surprising how well the jury's output aligns with the European Parliament's proposed amendments, given that the deliberations took place ahead of the Parliament's debate and vote. For example, like the Parliament, the jury recommended to pursue a no-patent policy as regards NGTs. Like the jury, [the Parliament has inserted references to the precautionary principle and reinforced the references to biodiversity](#). Similarly, the jury and EP both endorse the Commission's proposal for a differentiated regulatory regime concerning NGTs. The jury endorsed a forward-looking regulation of NGTs to enable their potential to solve issues such as climate-change, increased land use and enable further research and innovation. In that regard, the jury also approved of the proposed system by which NGTs and methods from organic productions are used collaboratively to tackle sustainability challenges of agriculture. Nevertheless, despite the jury's plea for active citizen participation, differentiating NGTs from GMOs eliminates the risk assessment for [category 1 NGT](#) per the Commission's proposal, posing challenges for integrating public participation into the newly established regulatory framework.

On one of the most contentious points of the Commission's proposal – traceability and labelling of NGTs – it is yet to be seen which vision of transparency and consumer protection and freedom of farmers will prevail: the jury recommended mandatory labelling that would not stigmatise NGTs whilst the Commission proposes mandatory labelling of so-called NGT1 plant reproductive material and mandatory labelling for NGT2 products, making it voluntary whether to emphasise the sustainability traits of such products.

Specifically, the jury suggested that the use of NGTs should be mentioned in the ingredient list of a product differently to that of GMOs. In this context, it is useful to recall Article 13 of [Regulation \(EC\) 1829/2003](#) as a *lex specialis* which prescribes that words "contains genetically modified (name of organism)" or "genetically modified" or "produced from genetically modified (name of the ingredient)" must appear in the list of ingredients of a GMO product. Therefore, despite the intention, the jury's proposal seems to be heading in a similar direction as the currently applicable GMO labelling rules. On this point, the EP adopted a position that traceability requirements for NGT food/feed should be established to facilitate the accurate labelling of such products. The Parliament proposed that documents containing information that products containing NGT1 plants is kept and transmitted, together with unique codes for those NGTs at each stage of their placing on the market. The Parliament [endorsed the proposal](#) of the Commission that, if a plant is declared a NGT1 plant, the decision should assign an identification number to the plant concerned and list the plant in a public database. The difficulty with mandatory labelling, however, lies in the problems with [detection, identification and quantification](#) of NGTs. Aware of this problem, the Parliament proposed for NGT2 plants that the Union reference laboratory is the final arbiter in determining the claimed unfeasibility by the applicant to provide an analytical method that detects, identifies and quantifies an NGT2 plant.

While the citizen jury on NGTs warrants careful consideration as a case study with broader implications, it can inform the policy-making process. Citizens are actively debating various justifications, needs and objectives, such as climate change, increased land use, and the global competitiveness of the EU, for implementing a less stringent regulatory framework for NGTs compared to GMOs. It should be noted, however, that the participants' regulatory solutions went beyond the [science-based recommendations brought forward by scientific societies such as the *Deutsche Forschungsgemeinschaft* and the *Deutsche Akademie der Naturforscher Leopoldina*](#), which states that NGT plants are different to GMO plants and that NGT plants are equivalent to conventionally bred plants due to their similar or even more favourable risk profiles. As technology evolves, citizens are becoming increasingly aware of these distinct risk profiles associated with such innovations. Nevertheless, they emphasize the necessity for more reliable, well-mediated, and balanced information, feeling inundated by the sheer volume of available content. This sentiment was echoed by the Kulmbach jury and other deliberative processes concerning NGTs. While citizen juries are not a flawless means of addressing these concerns, they can provide an important impetus for [navigating societal impasses arising from technological advancements calling for new regulatory approaches](#).