German Federal Agency for Nature Conservation - position paper on new genomic techniques and their regulation

High risk potential requires case-by-case analysis

23 October 2021 / The German Federal Agency for Nature Conservation (BfN) has outlined its position in a paper published in October on the intention of the EU Commission to evaluate new legislative proposals for the regulation of certain new genomic techniques (NGTs) in plants. The paper concludes that these plants have a similar or even greater risk potential than plants obtained from older genetic engineering techniques. According to the BfN, a high level of safety can only be ensured with a case-by-case analysis as required in current genetic engineering legislation, especially since there is no or only very limited experience with the deliberate release of these plants and their products.

The BfN states that, in contrast to conventional breeding, genome editing makes the whole genome accessible for changes. This indicates that directed mutagenesis increases the depth of intervention, and is thus not comparable to conventional breeding, including random mutagenesis. Risks may arise from both the intended and unintended effects of the genetic modification. Even if there is some similarity to the characteristics produced by breeding, this cannot be regarded as equivalent to safety. The BfN notes: “We conclude that plants produced by both directed mutagenesis and cisgenesis have a similar if not greater risk potential compared to the plants produced by genetic engineering to date.“

One suggestion, first introduced into the debate in April by the EU Commission, was to divide New Genetic Engineering techniques into groups and then exempt individual groups from legislation. Meanwhile, the BfN paper maintains that, from a scientific point of view, no criteria exist which would allow certain categories of traits to be regarded as less risky: “The size of the genetic modification – for example – cannot be regarded as a reliable denominator of risks and safety of the specific modifications in an individual plant. Only a case-by-case analysis as performed under the current legislation can ensure a high safety level.” A paper published in July by a number of experts from various European environmental authorities comes to a similar conclusion.

Even though current genetic engineering legislation is often portrayed as outdated by particular interest groups from industry and research, it is, according the BfN, still the most sensible option since it considers different risk profiles on a case-by-case basis. In addition, directive 2001/18/EG was amended in 2018 in order to accommodate technical progress.

NGT plants are often presented as a way to achieve the sustainability goals of the EU’s “Green Deal“. However, this paper concludes that scientific analyses demonstrate the unreliability of the assumption that these plants will even become available within such short periods of time.

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