Dear [redacted]

with regard to issues concerning new mutagenesis techniques (e-mail below), please find Polish comments on that matter.

Regarding analysis of food, our national reference laboratory pointed out the following difficulties:

- basically we agree with the comments raised by the UK;
- evolving a common strategy in the matter of organisms (plants) that have been produced by new mutagenesis techniques will be a huge challenge for reference laboratories, since implementing new methods of detection of such organisms is possible under condition that changed sequence is known;
- contrary to GMOs obtained by transformation procedures, plants obtained by new mutagenesis techniques are characterized by an alteration of an existing DNA sequence occurring at a precise genomic site, thus, the new analysis method must lead to detection this unique target sequence;
- In recent years, an innovative technique of "reading"? sequences called "NGS" has been shown. This method seems to be used for analysis, but it is available for detection well known sequences with a simple composition, therefore for composite and processed food products this method may not be feasible;
- we see the need of establishing data base for detection methods for plants created by the new mutagenesis techniques (as it is done for testing GMOs which are authorized in the EU, or GMOs from third countries);
- additionally, for interpretation of analytical results, the sequencing and assembling a plant variety genome database is necessary;
- taking into account the diversity of plant genome, there is a concern that analytical problems may show up, e.g. spontaneous mutations, the need to get information concerning different species of plant (which leads to the need of enormous database of plants and its genomes);
- for plants created by new mutagenesis techniques (similarly to non authorized GMOs), analysis based on sequencing need to be used. Such methods are very expensive (expenditures related to new equipment, costs of implementing and maintaining this method, reagents, additional human resources), currently our NRL does not has this capability;
- after deciding by the EURL GMFF about detection methods, GM laboratories will have to implement it and use it for official controls purpose. This situation, will have an impact on the number and promptness of analysis, as well as the number of food samples.

Regarding analysis of plant-based plant-based products, but also other GMOs, we still waiting for comments from national reference laboratory (Genetically Modified Organisms Controlling Laboratory at Plant Breeding and Acclimatization Institute).

Until now we haven't received any application for field trials with new techniques. Furthermore, we have only one field trial with genetically modified poplar plants. The aim of project is a morphological and physiological analysis of genes. Field experiments are for study of correlations occur on each level of basic plant living processes regulation. Genes that influence on above processes are: LSD1, PAD4, EDS1, CAO1, MPK4.

So far we don’t have any contained use with new techniques. However, some of the applicants (public institutions, like research institutes and universities) start asking about such possibility. In our opinion in 2019 we will have at least several applications for contained use with new techniques.

To our knowledge there is no applications within registration or registered varieties based on new techniques. The same issue in case of any other products.

Ministry of Environment as Competent Authority for Directive 2001/18/EC and Directive 2009/41/EC will proceed in accordance with the judgement of the European Court of Justice.

We will inform You as soon as possible with additional information.

In case of any further questions in relation to new techniques or any other matter related with GMO please contact us.

Kind regards,