

# Euroseeds input in the public consultation on the evaluation and impact assessment of Directive 2009/128/EC

Brussels, 11 March 2021

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## **The contribution of the European Seed Sector on achieving the EU sustainability goals.**

A constant stream of innovative quality seeds is essential to contribute to a sustainable agricultural production that fosters food security and healthy nutrition. The European seed sector plays a key role to meet global challenges: mitigating climate change, feeding a growing world population and supporting resource-efficient farming systems. Europe's seed sector is determined to help achieve the European Union's policy objectives of a secure supply of sustainable, healthy, nutritious and high-quality food, and of a greener, circular competitive and climate-neutral economy by 2050.

### **Contribution of the seed sector on environmental protection**

Plant breeders in Europe are committed to supporting environmental protection, with benefits for farmers, the whole agri-food chain and consumers.

Plant breeding is the science of recombining plant genetics into new varieties with improved stress-tolerance and resistance and tolerance to pests and diseases. In recent years, a range of new plant breeding techniques have been developed to provide a more efficient and precise adjustment of the genetic make-up of crops. These techniques include genome editing (or targeted mutagenesis), which has made major progress since the introduction of CRISPR-Cas in 2012. Plant breeding has and will support the reduction of pesticide use and improve the uptake of nutrients, therefore meeting the Biodiversity Strategy objectives. Improved varieties that are more resilient (tolerant to drought and diseases and pests) reduce the risk of crop failure thus supporting sustainable agriculture and global food security.

These new techniques will support plant breeding so that the improvement of important crop traits that are difficult to be improved by crossbreeding is possible in a much more efficient manner. In 2018 the European Court of Justice put those new breeding techniques under the prohibitive compliance requirements of the GMO Directive which relative to the value of commodity crops effectively cut Europe's breeders off from scientific progress and puts them as well as farmers, processors, traders and consumers at a competitive disadvantage to regions with more enabling regulations. Moreover, it will hamper Europe's ability to advance the development of new, better adapted plant varieties that are both high-performing and resilient, contribute to healthy diets to mitigate the effects of climate change and innovate for a more sustainable agri-food system at the pace that is urgently needed.

### **Contribution of the seed sector on food security**

As seeds are the basis of all our food and feed Europe's seed sector plays an important role in securing Europe's own food demands and contributing to the world's food supply. The demand for food is likely to grow by 50% with the global population rising to almost 10 billion by 2050 while further growth of the global agricultural land is not foreseeable. Plant breeding is a major driver to secure the availability of food by increasing and stabilising yields, enhancing shelf-life to reduce food waste, and strengthening resistance and tolerance to pest and diseases, and climatic stress, and with that reducing crop loss.

### **Contribution of the seed sector on sustainability and mitigation of climate change.**

The European seed sector is dedicated to developing robust and resilient varieties, that perform well also under increasingly extreme and fast changing weather conditions.

In the coming decades, modern agriculture needs to sustainably produce more plant-based products for the wider bio-economy, preserving natural resources and biodiversity under changing climatic conditions. More extreme and varied weather phenomena, together with related new phytosanitary threats and crop management problems, are creating additional challenges to all European crop production.

Innovative approaches in plant breeding and seed production give farmers access to the best quality seeds that play a major role in helping them to respond to climate change and the new pest and disease pressures it brings. New plant varieties also contribute to reducing the use of pesticides, fertilisers and other inputs.

### **Contribution of the seed sector in achieving the targets of the Farm to Fork Strategy**

In May 2020, the European Commission (EC) published its Farm to Fork Strategy which targets to a more healthy and sustainable EU food system.

Among others, the EC is expected to take actions to reduce by 50% the use of Plant Protection Products (PPP) and by at least 20% the use of fertilizers by 2030, as well as to enforce precision farming.

Integrated Pest Management, as part of the Sustainable Use Directive, is a critical instrument to ensure that PPP input is adjusted to what is needed. Euroseeds wish to stress the importance of seed treatment and use of more resistant crop varieties on meeting the above-mentioned objectives.

The protection against harmful organisms starts with selecting adequate crop rotation choosing the right crop variety, using seed produced in accordance with plant health requirements, applying cultivation techniques and using the least invasive techniques to preserve the ecosystem and to prevent pest population growth based on adequate monitoring and predictive modelling.

Plant breeding provides many benefits to sustainability by improving crop genetic diversity, responding quicker to climate change effects, creating new varieties more resistant and tolerant to pests and diseases and increase resource efficiency. This has been recognised in the general principles of Integrated Pest Management as one of the main ways to prevent and/or suppress harmful organisms. In light of the additional pressure resulting from climate change and increasing scarcity of natural resources such as arable land and water, crops need to become more pest- and disease-resistant especially in view of newly emerging pests and diseases. Continuous advances in science and technology- such as new breeding technologies- have provided precise and robust

tools to plant breeders that stimulate innovation and allow for the development of improved varieties more quickly and efficiently.

Experienced growers rely on a variety of tools to decide whether pest pressure has reached an economic threshold. Very often plants in their infancy stage are affected by soil-dwelling pests and diseases, which cannot be observed or captured by early diagnosis. Visible symptoms indicate a stage at which curative tools are needed to protect the rest of the yield as no post-planting solution is available.

When monitoring and corresponding experiences uncovers that no other measure can satisfy crop needs, preventive plant protection measures such as seed-applied technologies are often preferred by the grower. Proactive measures such as seed-treatment fit strategically within an IPM approach by effectively and efficiently combating pest population's growth, as seed treatment is the process of applying organic, biological and/or chemical products on seeds prior to planting, to protect and improve the establishment of healthy crops. Seed processing- such as seed sanitising; treatment of seeds with plant protection etc.- upgrades the quality of the seed and ensures seed and plant health by restricting pests and pathogens. Seed treatments can be particularly useful, since they can provide protection to young plants during a vulnerable stage in their development. Such protection offers seeds an excellent chance to develop into healthy, high-quality plants, thus reducing input use and maximizing and securing harvest potential. Seed treatments also lead to better and more accurate planting, and improved germination of seeds with greater vigour.

Seed treatments trigger plant defence- induced resistance- mechanisms which could be beneficial for reducing the need for other crop protection treatments (e.g. field-spraying). Seed treatment addresses the occurrence of soil-dwelling or emerging pests that cannot be solved by any other means, thus preventing pest population growth. Moreover, seed treatment is a targeted application. By keeping the treatment on the seed, it reduces the application surface and limits the potential exposure to non-target organisms on the soil or in the air (see ANNEX).

All these elements underline that resilient varieties- deriving from plant breeding- and healthy seeds- deriving from seed treatment- are in line with the principles of IPM as well as they constitute the best options a grower can have to protect and nurture his valuable production.

## ANNEX

Depending on the crop the actual surface where the plant protection product is applied can be reduced from 1 Ha to 50-100 m<sup>2</sup> as shown on the picture below.

### The advantages of seed treatment

