

Statement on microplastics in seed treatment

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A STATEMENT PREPARED BY THE INTERNATIONAL SEED FEDERATION

SEED TREATMENT HAS MANY BENEFITS

To grow crops sustainably and safely, the use of seed treatments^{1,2} is beneficial in many ways. Among others, seed treatments benefit growers with accurate planting of seed, and protects the intrinsic value of the seed itself. Additionally, seed treatments help minimize the risk of exposure of Seed Treatment Products³ (STPs) to workers, growers and the environment. By applying STPs precisely, the use of active ingredients can be reduced by up to 99% compared to surface application.² All these benefits contribute to important UN Sustainable Development Goals.⁴

MICROPLASTICS IN SEED TREATMENT

Microplastics are small plastic fragments less than 5 mm (0.2 inches) in diameter.⁵ Once in the environment, microplastics are slow to (bio)degrade, prompting questions around environmental and health concerns.

While most microplastics in the environment derive from road tire wear, washing of synthetic clothes and plastic pellets, some agricultural practices also contribute to the release of microplastics. STPs are applied onto the seed combined with polymers, some of which are considered microplastics. The current contribution of seed treatments to the release of microplastics into the environment is estimated to be 1%⁵ with the goal of the agricultural industry to reach zero. The most prominent function of polymers in seed treatments is to ensure proper adherence of STPs to the seed surface. These polymers reduce unintentional exposure of potential dust and STPs to non-target organisms while increasing safety for factory workers and farmers. This functionality is of utmost importance in STPs. The transition to microplastic-free alternatives requires adequate time for development, validation of functionality, and regulatory approval.

LEGISLATION

Legislation that will restrict or ban the use of intentionally added microplastics in seed treatment has come into effect in Europe in October 2023, with a transition period of 5 to 8 years according to the regulatory state of the applied product.⁵ Other regions are starting to evaluate legislation and might follow the example of the European Union. Legislation should specify a transition period for microplastics used in seed-applied polymers and STPs. This transition period is needed for the industry to develop and validate alternative seed treatments and associated equipment. Clear microplastic definitions in the legislation and alignment and harmonisation between regions will be critical to ensure that microplastics are removed efficiently.

SEED COMMUNITY SUPPORT FOR SUSTAINABLE ALTERNATIVES

There is broad support from the international seed community to offer microplastic-free products where feasible. As the result of a significant effort, microplastic free seed-applied polymers are already becoming more readily available as companies evaluate and transition their portfolio. The situation for STPs, however, is even more complex, as the entire formulation must evolve from a technical and biological perspective and follow a strict regulatory process, which takes several years. A joint proactive attitude from suppliers and seed companies to develop alternatives, validate those in actual practice, register where needed, and transition as quickly as possible will contribute to a positive societal opinion on the agricultural community's ambitions to sustainably feed the world. All companies and regions are encouraged to support the transition where it is practical and economically realistic. It is crucial to ensure that growers have continued access to STPs. Therefore, all stakeholders must be mindful that sufficient time is needed to develop microplastic-free alternatives for all crops and STPs.

In conclusion, the advantages of seed treatment are clear in promoting sustainable and safe crop growth. While acknowledging the concerns surrounding microplastics, the industry is actively addressing these issues through ongoing research for innovative, environmentally friendly alternatives. The commitment from the international seed community to provide microplastic-free products reflects our collective dedication to responsible practices. As we navigate this transition, it is crucial for all stakeholders to collaborate, ensuring the availability of sustainable alternatives for growers. Together, we can uphold our commitment to environmental sustainability and reinforce our role as conscientious leaders in the agricultural industry.

1 Seed treatment is defined as the application of (chemical) ingredients and/or biological organisms to seeds to protect against diseases and pests or improve soil health and utilization of crop inputs.

2 See ISF&CLI: Stewardship Guidelines on Seed Treatment and handling of treated seed (https://croplife.org/wp-content/uploads/2019/01/Stewardship-Guidelines-on-Seed-Treatment-and-Handling-of-Treated-Seed_Final-1.pdf)

3 Seed Treatment Product (STP): Product applied on seeds to protect them against pests and diseases present on the seeds and in the environment during sowing, or to enable the seeds to express their genetic potential across various agronomical conditions when sowing. STP can be a chemical, biological, biostimulating, phytosanitary or fertilizing product having a positive effect when the seed is sown in the natural environment

4 Several UN SDG goals are positively impacted through the use of seed treatment. In the context of this document, the most prominent is UN SDG 12: Responsible consumption and production

5 Commission Regulation (EU) 2023/2055 of 25 September 2023 amending Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as regards synthetic polymer microparticles (https://single-market-economy.ec.europa.eu/publications/commission-regulation-eu-amending-reach-regulation-regards-synthetic-polymer-microparticles_en#details). For plant protection products there will be a transition period of 8 years, while other products for agricultural use, like polymers, will be allowed a 5 year transition period.

