



The Guide to Seed Treatment Stewardship

Seed treatment is the precise application of biological organisms, products and/or chemical ingredients to seed to suppress, control, or repel plant pathogens, insects, or other pests that attack seeds, seedlings or plants.

Why Do Farmers Use Seed Treatments?

The use of seed treatment technologies, including neonicotinoid insecticide treatments, is an effective tool to provide the necessary protection of seeds for a strong, healthy start. Farmers select seed treatments after assessing their farm's risk factors in order to shield the seeds from the insects and diseases that exist in the soil during early developmental stages. This protection ensures that the plant has a greater opportunity to grow a strong root system which is the foundation of a healthy, productive plant. Nearly 100 percent of modern seed varieties, combined with seed treatments, produce a mature plant.

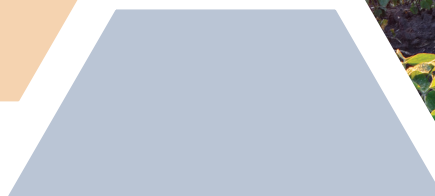
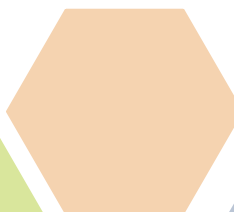
Seed treatments also reduce the environmental impact of the production process by decreasing the number of spray applications of agrichemical products and lessening exposures to non-target species including humans and pollinators. Potential soil surface exposure is reduced by more than 90 percent compared to other application methods such as in-furrow applications or broadcast sprays.

Registered seed treatment products are put through rigorous testing for product efficacy, environmental impacts and dust-off properties prior to EPA approval. Lately, concerns have been raised about neonicotinoid seed treatments and pollinator health. However, it is widely recognized that a variety of factors are impacting bees including pests, diseases and availability of forage.

Seed treatments have been used for decades and thanks to advances in the technology, only milligrams of active ingredient are now used per individual seed.

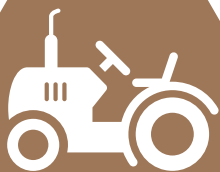
The industry is constantly evolving to improve seed treatment processes such as:

- Using closed application systems and continuously improving mixing and drying processes to create a better application of the active ingredient to the seed.
- Enhancing seed coating polymers to keep active ingredients on the seed and control dust-off.
- Creating new flow agents for use in planting equipment to help further minimize the amount of dust-off during planting.
- Finalizing an ISO planting equipment standard to better control dust emissions.



Key Stewardship Principles

It is essential that those who treat, handle, transport, and plant treated seed manage them properly and in accordance with label instructions to minimize the risk of pesticide exposure to non-target organisms. Some of the critical recommendations that need to be considered are:



Farmers

1. Follow the label directions for proper handling and storage practices for a pesticide treated product.
2. Be aware of wind direction and speed as well as the presence of foraging pollinators, hive locations, flowering habitats including weeds and other plants at field edges or nearby.
3. Properly dispose of treated seed and empty seed containers.
4. Ensure no treated seed enters the commodity grain channels.



Seed Treatment Applicators

1. Comply with all regulations for registered pesticide products and ensure proper employee training.
2. Establish written application protocols using best practices to ensure high quality seed treatment application to minimize dust-off.
3. Adopt stewardship documentation for the full life-cycle of seed treatment products.
4. Properly discard of treatment, treated seed and rinse water to minimize environmental impact.
5. Ensure that all required and pertinent seed treatment information is conveyed to customers through product labels and education.



To view full guides and other resources visit
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DISCLAIMER

The Seed Treatment Stewardship Guide is intended solely as an educational tool and as general guidance to assist product users in voluntarily developing and implementing stewardship practices related to the use of seed treatments and treated seed. This Guide is intended to serve as a reference document only. Entities may choose to refer to the entire Guide or specific sections of the Guide as appropriate. The guidance is intended to be flexible, and its application will differ according to the products involved and size, nature and complexity of the organization using the guidance. The Guide is representative and not exhaustive.

It is the responsibility of any user of this document to consider that user's specific circumstances in 1) developing a stewardship plan specific to its business; and 2) meeting any applicable legal and regulatory requirements. This Guide is not intended as, and should not be construed as, legal advice

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