The Guide to

Seed Treatment Stewardship

Handling, Planting and Disposal of

Treated Seed

asta first-the seed®

CropLife AMERICA

The Guide to Seed Treatment Stewardship

DISCLAIMER

The Seed Treatment Stewardship Guide is intended solely as an educational tool and as general guidance to assist growers in voluntarily developing and implementing stewardship practices related to the use of 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 entity 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 or a substitute for a user's own individual understanding of applicable legal requirements. Regulatory requirements may be issued or revised by government agencies after the publication date of this Guide. Users are advised to consult with their legal counsel and/or contact the appropriate regulatory agency or agencies to ensure compliance with applicable requirements.

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Overview of Seed Treatment

Seed Treatments as a Part of U.S. Agriculture

The use of seed treatment technologies by farmers is an effective tool to provide the necessary protection of seeds for a strong, healthy start. Using seed treatments delivers a very precise application that shields seeds from the insects and diseases that exist in the soil during those 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.

In addition, seed treatments 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. Seed treatments can guard against insect or disease damage during a plant's most vulnerable developmental stages and help maximize the performance potential of each seed. The industry is constantly evolving to improve seed treatment processes. 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.

Definition of Seed Treatment

Seed treatment is the application of biological organisms/products and chemical ingredients to seed to suppress, control, or repel plant pathogens, insects, or other pests that attack seeds, seedlings or plants. Other products such as inoculants, herbicide safeners, micronutrients, plant growth regulators, seed coating materials, colorants, etc. may also be applied to the seed. Treated seed is intended for planting and may not be used for food, feed, or oil purposes.

This Guide is geared specifically to those who plant treated seed. If you are planning to treat seed, refer to the **ASTA-CLA Guide to Seed Treatment Application.**

Highlights

It is essential to educate those who treat, handle, transport and plant the seed to help ensure that seed treatment solutions result in success for everyone involved. Some of the critical factors that growers need to consider when using treated seed are:

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

SECTION 1:

Safe Handling and Transport of Treated Seeds

I. Personal Protection Equipment (PPE)

- When selecting PPE, always read and follow treated seed tag safety language. PPE typically includes long pants, long sleeved shirt/coveralls, chemical resistant gloves, shoes and socks, etc.
- Reference required or suggested PPE as indicated by equipment manufacturers for operation of equipment used to handle, transport, and plant treated seed. Additional PPE may include eye, ear, respiratory, foot, and/or head protection.

II. Transporting Treated Seed

- Read and understand seed treatment tag language and follow requirements that are printed on or attached to the treated seed containers or contained in shipping documents for bulk treated seed.
- Note manufacturer or seed company phone number for specific product questions. Also note any emergency or medical center contact information.
- Protect treated seed from direct sunlight, extreme heat and moisture.
- Avoid undue mechanical abrasion and damage to the treated seed and packaging containers to minimize dust and spillage and maintain seed quality.
  - In case of spills, collect the treated seed immediately using proper PPE .
  - Properly dispose of spillage to minimize exposure to people, livestock, wildlife, and the environment.

III. Handling Treated Seed

- Avoid exposure to dust when opening/emptying packaging or transferring bulk treated seed.
- Properly dispose of any spillage to minimize exposure to people, livestock, wildlife and the environment.
- Handlers should be aware of all seed treatment safety and stewardship tag language.

SECTION 2:

Storage of Treated Seeds

- Read the seed treatment tag language to understand specific treated seed storage requirements.
- Treated seed should be protected from direct sunlight, extreme heat and moisture. The facility should also be well ventilated.
- Treated seed should be kept secure from children, livestock, wildlife and unauthorized persons.

SECTION 3:

Planting of Treated Seed

I. Use of Seed-flow Lubricants

- Follow recommendations from planter manufacturers for use of talc, graphite or other fluency agents or lubricants.
- Avoid excess use rates of lubricants to minimize dust and to avoid buildup of unwanted residue.

II. Planting

- Identify the potential pest or disease before selecting seed treatments based on historical or other information.
- Read and understand planting instructions found on seed treatment tags and follow planting requirements that are printed on or attached to the treated seed bags and/or containers or contained in shipping documents for bulk treated seed.
- Survey for the presence of pollinator hives and flowering crops or weeds in the field to be planted, in field borders and nearby, which could attract pollinators.
- Eliminate flowering plants and weeds in and immediately adjacent to the field prior to planting seeds treated with a pollinator sensitive insecticide.
- Avoid dust drift from treated seeds to sensitive areas during planting by observing wind speed and direction.
- Always use high quality seed, free from excessive dust.
- Follow manufacturer recommendations/procedures for calibration, operation and maintenance as specified in the planter operator manual.
- For pneumatic planters, direct air exhaust downward towards the soil surface if possible to decrease the potential of dust drift.

- The use of downward deflectors may decrease drift of dust.
- The planter should be filled at least 10 yards inside the field to be planted, avoiding proximity to pollinator hives, hedges or flowering crops or weeds.
- When opening seed containers or when filling and emptying the planter, position yourself upwind to avoid any released dust.
- Avoid shaking the bottom of the seed bag when filling the planter to reduce release of any dust that may have accumulated during transport.
- When using planter box treatments, consult with the manufacturer to ensure the product will not increase abrasion and drift of treated seed products.
- Always plant the treated seed at the recommended seeding rate and depth as listed on the seed tag.
- Ensure all seed is covered by soil to protect wildlife and the environment.
- Follow plant back restrictions found on the seed tag or referenced elsewhere.
- Dispose of seed packaging and/or containers in accordance with local requirements and container return policies.

III. Cleaning of Planting Equipment

- It is not recommended to use transport and conveyance equipment for bulk treated seed for the harvested commodity. If used, the equipment must be disassembled, kernel cleaned, and all residue removed from all surfaces by scraping, vacuuming and washing of all surfaces. There is zero tolerance for treated kernels in the commodity grain channel when the treated seed tag states the seed is not for food, feed, or oil purposes.
- Clean planters and seed boxes away from sensitive environmental areas. Be aware of and avoid those areas that are attractive to pollinators, such as field margins with flowering crops or weeds, and/or near hive locations.
- Do not use compressed air as it may lead to significant dust drift.
- You may apply excess rinse water from the cleaning of planting equipment to a field for which the active ingredient is registered if it will not result in an applied concentration above the label recommendation.
- Do not dump rinse water on soil, surface water, ground water, or in septic systems.

SECTION 4:

Disposal of Excess Treated Seeds

I. Small Quantities of Pesticide-Treated Seed

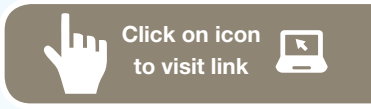
- Return excess treated seed to its original seed lot containers if the seed is intended for storage and subsequent planting.
- Plant in fallow or other non-cropped areas of the farm in accordance to the seed treatment product label.
- Unless restricted by label language, excess treated seed may be double planted in the turn rows at the end of the field or within a portion of the field.

II. Off Farm Disposal of Seed Not Acceptable for Planting and/or Larger Quantities of Pesticide Treated Seed

- Consult with your state and local authorities to ensure your disposal plan is in compliance with all appropriate regulations.
- Disposal facilities will be required to have an EPA permit to accept pesticide treated seed. Whether a waste management facility, power plant, cement kiln, ethanol plant, or municipal landfill is permitted to dispose of seed treated with a particular pesticide can only be confirmed by contacting the facility. Your seed supplier may also be aware of EPA permitted disposal facilities in your area.
- The contacts for both solid and hazardous waste disposal in each state can be found here.
- There is zero tolerance for treated seed kernels in the commodity grain channel when the treated seed tag states the seed is not for food, feed, or oil purposes.

RESOURCES:

Disclaimer:
The external links provided in this guide are intended for use as additional, external supplementary resources for the reader. Neither the American Seed Trade Association nor CropLife America can be held liable for the information found outside the scope of this document.



EPA links

- Environmental Protection Agency General
- Environmental Protection Agency – Label Review Manual – Chapter 18: Unique Product
- Pesticide Labeling
- Apply Pesticides Correctly, a Guide for Commercial Applicators
- Wastes-Hazardous Wastes
- Federal Insecticide, Rodenticide and Fungicide Act (FIFRA)
- Federal Regulation Title 40 – Protection of Environment, Chapter I – Environmental Protection Agency, Subchapter I-Solid Wastes, Part 261 Identification and listing of Hazardous Waste
- State Sites for Solid and Hazardous Waste

USDA links

- USDA Home page
- Agricultural Marketing Service-Seed Regulatory and Testing Services

Seed Law/Regulations

- Federal Seed Act (FSA)
- State Seed Laws
- Association of American Pesticide Control Officials
- Association of American Seed Control Officials
- Recommended Uniform State Seed Law (RUSSL)

Click on icon to visit link

Stakeholder Resources

- The American Association of Pesticide Safety Educators
- Certification & Training Assessment Group – National Partnership for Safe & Effective Pesticide Management

Disposal Resources

- The Cement Kiln Recycling Coalition

Labeling links

- CDMS
- Agrian

Association Resources

- Ag Retailers Association
- American Seed Trade Association
- Association of American Pesticide Control Officials
- Association of American Seed Control Officials
- Association of Equipment Manufacturers
- CropLife America
- National Association of State Departments of Agriculture

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