USE AND DISPOSAL OF TREATED SOYBEAN SEED

Early-season diseases and insects are common problems in Midsouth and Mississippi soybean farming. Seed treatments have been and continue to be instrumental in controlling these risks. However, using these seed treatment products turns the seed into a material that must be handled and treated differently than untreated seed if they are not planted to produce a crop.

According to The Guide to Seed Treatment Stewardship published jointly by the American Seed Trade Association [ASTA] and CropLife America [CLA], "seed treatment is the application of biological organisms and chemical ingredients to seed to suppress, control, or repel plant pathogens, insects, or other pests that attack seeds, seedlings, or plants. Treated seed is intended for planting only and not for food or feed uses."

This publication presents guidelines for 1) safe handling and transport of treated seeds, 2) storage of treated seeds, 3) planting of treated seed, and 4) disposal of excess treated seeds.

USING TREATED SOYBEAN SEED

Major points to consider when using treated seed follow.

- Minimize human exposure to seed treatments, treated seed, and dust from treated seed.
- Transport treated seed in a manner that prevents their being spilled during transit to the planting site.
- Collect and properly dispose of seed that are spilled during handling to prevent exposure to humans, animals, and the environment.
- Properly secure and store treated seed until used.
- Calibrate planting equipment properly, and direct planter exhaust downward toward the soil surface where possible.
- Be aware of wind speed and direction when opening treated seed containers and when filling the planter with treated seed.
- Follow label and planter manufacturer recommendations when using seed flow lubricants, and avoid their excessive use to minimize dust.
- Consider the proximity of honeybee hives and flowering crops or weeds that may attract pollinators in close proximity to the field where treated seed are planted.

DISPOSAL OF TREATED SEED

An article on the USB website discusses a dilemma that will be encountered by soybean producers on an increasing basis: preventing unplanted soybean seed that have been treated with crop protection pesticides from entering the commodity grain market. As stated in that article, "We need to properly handle and dispose of treated seed" to ensure that our customers do not reject imports of US commodity beans.

The above article does not give specifics for handling of treated seed that were not planted, so guidelines have been summarized from the links shown below. These summary points and the details found in the shown links can be used to make decisions about the management and/or prevention of this possible contamination in Mississippi soybean farming.

- **Green Manure Crops.** Planting treated seed on fallow or otherwise unused parcels of land is a cheap, safe, and effective method for disposing of small amounts of treated seed. Care should be taken to ensure that any one area is not overplanted so that a labeled rate for any of the treatment pesticides is not exceeded on a given area. This is likely the best and preferred method for disposal of treated seed when the following guidelines are followed.
  - Use an acceptable seeding rate (do not double or triple plant).
  - Plant seed deeper than 1 inch.
  - Immediately incorporate seed that are

broadcast.

- **Enlist a Valid Disposal Agent**. If this option is used, ensure the Disposal Agent has valid and necessary national and local environmental permits to accept and dispose of treated seed. Develop a contract with the Disposal Agent to ensure proper conduct during the disposal process.
- **Incineration or Sanitary Landfill Waste Management Facility**. These entities generally have the required environmental permits. This may be an expensive approach, however, especially if large amounts of seed are involved. The sanitary landfill option may require special packaging. This method requires that a determination be made if the treated seed is considered as normal solid waste or as hazardous waste.
- **Incineration for Power**. The cost relative to the above two options should be lower since the seed will be converted to energy for sale by the incineration facility. The high-temperature burning used by these facilities does a thorough job of incineration. The deliverer of treated seed should ensure that these facilities have the required permits for handling waste materials.
- **Wildlife Habitat Plantings**. This method allows the seed to be used for its intended purpose of planting. However, if the seed bag states that the treated seed may be hazardous to wildlife, do not use this method of disposal.
- **Things Not To Do.**
  - Never burn treated seed in a stove used in the home or farm shop.
  - Never compost treated seed.

In addition to the above-linked ASTA/CLA publication, the following links access articles that give definitive guidelines and details for the use and disposal of pesticide-treated seeds. Included in each of these articles are links to other valuable information sources that are pertinent to the process and can be used by Mississippi soybean farmers to address this issue.

- Guidelines for the Disposal of Seeds Treated with Plant Protection Products—ISF
- Disposal of Seed Treatment Products and Treated Seed—Syngenta Environmental Stewardship.
- The Guide to Seed Treatment Stewardship for Farmers—ASTA and CLA
- The Guide to Seed Treatment Stewardship for Applicators—ASTA and CLA
- Stewardship Guidelines on Seed Treatment & Handling of Treated Seed—ISF & CLA

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