

Pollinator Protection and Responsible Use of Insecticide Treated Seed

Health Canada
Ministry of Agriculture and Food
Ministry of Rural Affairs

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NEW 2014 REQUIREMENT:

When using a seed flow lubricant for planting corn or soybean seed treated with the insecticides clothianidin, thiamethoxam, or imidacloprid (e.g. Poncho, Cruiser, Gaucho, Stress Shield, etc.), only the Fluency Agent by Bayer CropScience is permitted in order to minimize the potential for abrasion/production of insecticidal seed dust. Talc and graphite are not permitted to be used as a seed flow lubricant for corn or soybean seed treated with these insecticides. Carefully follow the use directions provided with the Fluency Agent by Bayer CropScience.

Best Management Practices

Insect pollinators are vital to agricultural production and the environment. Many farmers, including those who grow corn and soybeans, use insecticide treated seed to protect their crop from insect pests. Some insecticides, such as neonicotinoids, are toxic to pollinators. Planting of treated seed can result in the emission of dust-containing insecticide into the air, placing pollinators at significant risk of exposure to toxic insecticides. Factors that significantly impact the risk of exposure include the use of treated seed, type of planting equipment, planting conditions, flowering resources and bee yard locations.

The following Best Management Practices (BMPs) are provided to reduce the risk to bees and other insect pollinators from exposure to dust from treated seed. The BMPs provide a toolbox of options that should be used in combination wherever possible.

Read and adhere to the pesticide label and seed tag directions

Directions for use on pesticide product labels or on treated seed labels [such as personal protective equipment (PPE) and buffer zones] must always be followed in order to minimize risks to human health and the environment.

Practice Integrated Pest Management when choosing seed treatments

Practicing integrated pest management (IPM) is essential for sustainable pest control. This approach can include cultural practices to discourage pests (e.g., crop rotation), correct identification of the pest problem and risk factors.

- As part of an IPM program, evaluate fields and determine if soil pests are present at threshold levels or if fields have a high pest risk before making a decision to use treated seed. [under *Related Information* see provincial websites for soil pest information]
- Use insecticide treated seed only where necessary.
- If insecticide treatment is required, use the lowest effective seed treatment rate.
- Most seed companies can accommodate orders for non-insecticide treated seed. Talk to your seed dealer about timing and options.

Develop and maintain shared communication with beekeepers to help protect honeybees

Communication and cooperation among growers, custom operators and beekeepers on the timing of planting treated seed and the location of hives can help to reduce the risk of bee incidents. This communication will enable growers to know which fields have hives located close by and provide advanced notice to beekeepers of planting intentions, allowing beekeepers to ensure hives are located strategically, take actions to temporarily protect or relocate hives where feasible, and ensure clean water sources are provided.

- Beekeepers should inform growers of hive locations.
- Growers should inform beekeepers of timing of planting treated seed and pesticide applications.

Recognize pollinator habitat and take special care to reduce dust exposure

Bees collect pollen and nectar from flowering crops, trees and weeds, as well as water from puddles and moist soil

in or beside fields. Pollinators can be exposed to treated seed dust when it is carried in the air or deposited on food and water sources.

- During planting season, weeds, such as dandelions, and flowering trees, including maples, willows, hawthorns, apples, etc., are important pollinator foraging resources.
- Dust emitted through planter exhaust may be transported under all weather conditions. Pollinator exposure may be increased under very dry and/or windy conditions which favour dust transport. Avoid planting treated seed under these conditions if flowering resources, standing water or bee yards are located downwind and follow best practices to reduce dust exposure.
- Control flowering weeds in the field before planting so that pollinators are not attracted to in-field forage.

Avoid generating dust when handling and loading treated seed

- Handle bags with care during transport, loading and unloading in order to reduce abrasion, dust generation and spillage.
- Do not load or clean planting equipment near bee colonies, and avoid places where bees may be foraging such as flowering crops, trees or weeds.
- When turning on the planter, avoid engaging the system where emitted dust may contact honey bee colonies or foraging pollinators.

Use appropriate seed flow lubricant

Seed flow lubricants may affect the generation of dust during planting.

- Starting in 2014, the Fluency Agent by Bayer CropScience is the only seed flow lubricant permitted with corn or soybean seed treated with insecticides clothianidin, thiamethoxam, or imidacloprid (e.g. Poncho, Cruiser, Gaucho, Stress Shield, etc.). Do not use more than the recommended 1/8 cup of Fluency Agent per unit seed (i.e. per 80,000 kernel seed corn unit or 140,000 seed soybean unit). Carefully follow the use directions on the fluency agent label.

Managing planting equipment to decrease dust drift

Research indicates that use of vacuum (i.e., negative pressure) planters poses a significant risk of pollinator exposure from drift of insecticide containing dust exhausted from these planters. Limited information is available on the extent of exposure though other planter types. All growers should take care to reduce/control insecticide containing dust exhausted from planters.

- Follow the directions provided by planting equipment manufacturers and keep up-to-date on new use practices.
- Clean and maintain planting equipment regularly, including the fan housing and hoppers of air-assisted planters. For example, vacuum any dust remaining in the fan housing and hopper.
- Use deflector equipment, where appropriate, to direct exhaust to the ground level and thus reduce dust drift.

Ensure proper clean-up and disposal

Take care when cleaning up after planting seed and follow provincial / municipal disposal requirements:

- Spilled or exposed seeds and dust must be incorporated into the soil or cleaned-up from the soil surface.
- Keep treated seed and dust away from surface water.
- Do not leave empty seed bags or left-over treated seed in fields or the environment.
- Participate in collection programs for seed bags where available.

Report suspected pollinator pesticide poisonings

For suspected pollinator poisonings related to planting of treated seed or pesticides, contact the appropriate federal / provincial authority.

See the Health Canada's pollinator protection web page for appropriate federal and provincial contacts and additional information.

www.healthcanada.gc.ca/pollinators

Related Information

Additional information and best practices can be found at Health Canada's pollinator protection web page: www.healthcanada.gc.ca/pollinators or by contacting Health Canada's Pest Management Regulatory Agency at 1-800-267-6315.

The following provincial sites provide soil pest information to support IPM practices:

Ontario Ministry of Agriculture and Food:
www.ontario.ca/crops

Ministère de l'Agriculture, Pêcheries et Alimentation
Québec : www.mapaq.gouv.qc.ca/neonicotinoides