

Best Management Practices

Best Management Practices* (BMPs) are approaches based on known science that, when followed, support healthy crops, healthy bees and a healthy environment.

Good communication between beekeepers and growers is critical for reducing exposure risks, for example sharing of hive locations and timing of agronomic operations.

BMPs for the proper treatment of seed and the management of those seeds are key steps in ensuring a sustainable business environment for all involved stakeholders. Seeds that have been treated with pesticides should be handled with special care to minimize the generation of dust.

Dust can be generated in a number of different ways including during treatment, transport and storage and during planting operations. Seeds that have been treated with a pesticide need to be handled with care as per the information on the seed tag.

Adhering to BMPs will help to maximize the benefits of seed treatments and minimize the potential for adverse effects on beneficial organisms such as honey bees.



**BMPs developed in conjunction with CropLife Canada and its member companies*

Before Seeding - Communication and Outreach

- Know how to contact beekeepers whose bees may forage on your land
- Be aware of hive locations near your fields:
 - If possible, discuss alternate locations with beekeepers (upwind, shelter belts, etc.)
 - Suggest that beekeepers remove their hives at night if pesticides that may affect pollinators (as indicated by the product label) will be applied in the immediate vicinity
 - If application near beehives is unavoidable, shield beehives with wet burlap to confine and protect the bees
 - Ensure that bees are kept cool at all times and have access to a source of water
- Beekeepers and applicators should review the cropping system and pest management practices in the area to know:
 - Timing and method of application or planting, types of products to be used and location of hives during the growing season
 - If a pesticide with pollinator-specific considerations must be used, then spray or plant when bees are not foraging
- Growers are encouraged to provide pollinator-friendly habitats (e.g., alfalfa or clover) away from active fields

Handling and Storing Treated Seeds on the Farm

- Store treated seed under appropriate conditions, protected from the elements and pests
- Wear the appropriate personal protective equipment during handling, such as gloves (never handle treated seed with bare hands), long pants and long-sleeved shirt, and a dust mask or respirator (refer to seed tag and product label)
- Do not reuse empty seed bags for any purpose other than storing the original treated seed
- Read, understand and follow all label and seed tag requirements; if needed approach the dealer or manufacturer with questions
- Reduce exposure to dust from treated seed by:
 - Not shaking the seed bag
 - Use seed lubricants correctly (a dust-reducing agent is the only seed lubricant permitted for use when planting corn and soybean seed)
 - Covering any exposed seeds and cleaning up any spills
 - Proper equipment selection and maintenance
 - Being aware of weather conditions (especially wind direction)
 - Removing flowering plants from the target field
 - Proper waste disposal

Planting Practices

- To minimize dust drift prior to planting:
 - Always use high-quality seed that is free of excessive dust
 - Always clean and maintain planting equipment
 - Do not load or clean planting equipment near bee colonies or flowering crops or weeds
 - Avoid transfer of dust from the seed bag into the sowing machine
 - Do not apply additional seed treatment products to previously treated seed
 - If needed, use an appropriate dust-reducing agent that minimizes abrasion of the seed treatment and carefully follow use directions
 - Remove flowering weeds from the field prior to planting
 - Depending on the type of planter, deflectors may be an option to reduce the off-field movement of seed dust generated during planting. Speak with your equipment dealer or manufacturer regarding the availability of deflector kits for your planter
- To minimize dust drift during planting:
 - Plant at the recommended seeding rate
 - Calibrate the seeder for correct depth and seed placement according to the manufacturer's instructions
 - Avoid leaving seed on the surface when planting to protect birds and mammals
 - Before leaving a seeded field, check headlands, rough areas and the main body of the field for exposed seed. If large areas of exposed seed exist, harrow and roll field to cover seed with soil
- Other important considerations during seeding:
 - Dry, windy conditions can carry dust onto flowering crops or weeds, increasing potential exposure of bees to dust material
 - Be aware of wind direction when planting a field near a source of pollen or nectar for bees (i.e. nearby flowering crops or weeds)
 - Control weeds in the field prior to flowering and before planting to prevent bees from foraging during the operation
 - Exposure risks are lower if corn is planted at times of day when bees are not foraging (early morning or evening)
 - Treated seeds must be incorporated into the soil at proper planting depth
 - Sow the field so that the dust exhausts towards the centre of the field
 - As appropriate, modify planters with deflectors to exhaust air directly at or into the ground
- To minimize dust drift after seeding is complete:
 - Identify and process sources of contaminated waste
 - Vacuum treated seed from seed box and return to the bag from which it came
 - Dispose of empty seed bags and dust-reducing agent containers according to provincial regulations
 - Do not leave empty bags or left-over treated seed in fields

Spill and Equipment Cleanup

- To avoid spilling treated seed:
 - Take time and care when loading or emptying drills and when calibrating
 - Load seed drill on the field area to be drilled or in the yard where spillages can easily be collected
 - Do not fill drill or calibrate on grass; seed cannot easily be recovered
 - Ensure no seed can spill while traveling on the perimeter of field
 - Check seeder operation on a part of field yet to be sown, never check over grass
- Small treated seed spills in-field should be buried where they occur
- Large treated seed spills outside the field should be collected immediately and stored in the original bag to await disposal
 - Never leave cleanup until later as spilled seed can be consumed by animals or insects.
- Do not dispose of treated seed in field margins or non-crop areas
- Carry a spillage kit containing:
 - Shovel or spade to cover or retrieve spilled seed
 - Spare bag (original if possible with label) to save recovered seed
 - Appropriate personal protective equipment, such as protective gloves and a dust mask

Record the following information during the seeding operation:

- Which seed treatment(s) used, including company name and lot numbers
- Type of planter used
- Type of hopper box lubricants used
- Time and date of planting
- Weather conditions at time of seeding
- Soil conditions (wet or dry)
- How soon rain occurred after planting
- Whether or not flowering weeds are nearby

Any issue associated with the planting of seed treated with a Syngenta product must be reported to Syngenta:

- Contact Syngenta (1-800-FASTMED; 1-800-327-8633)
- Report the incident in detail
- Refer all information available (see information referenced above)

Beekeepers who suspect an issue with their hives should contact Health Canada's Pest Management Regulatory Agency (1-800-267-6315) to report the incident.