



1-2-3S OF PROTECTING BEES



Reduce exposure to pesticides.

- Only use registered insecticides when necessary as part of an IPM program based on scouting and economic thresholds. Follow label instructions to minimize drift.
- Choose products with low toxicity to bees and short residual toxicity time. Also consider alternatives like trap crops or biologicals.
- Use sprayer and nozzle technologies designed to reduce drift and use the largest effective droplet size. Install cones or shrouds on sprayers. For aerial applications, boom width should not exceed 75 percent of the wingspan.
- Turn off sprayers if there are gaps in crops or near water sources when making turns and at ends of fields. When spraying field edges, turn off outward-facing nozzles.
- Do not mix an insecticide with other pesticides as it could become more toxic to bees.
- If possible, avoid spraying when bees are present, during bloom, on other flowering plants or when weather (e.g., high wind, low temperature, heavy dew) could increase risk of exposure.
- Treated seeds should be handled with care per bag and/or tag information. Avoid generating dust.
- Consider use of synthetic seed flow lubricants and a deflector kit for your vacuum planter to reduce dust and drift, respectively.
- Practice good clean-up and disposal methods of treated seeds, insecticides and their containers. Clean all equipment well after use.



Communicate and coordinate with beekeepers.

- Facilitate communication with any beekeepers in your area. GPS-based apps like DriftWatch and BeeConnected (Australia, Canada and U.K.) are useful.
- Before planting, find out where beehives will be placed in or near your fields. GIS-based bee colony crop registries can help (e.g., North Dakota Bee Map, FieldWatch)
- Create an agreement with your local beekeeper(s) to guide interactions throughout the growing season based on hive locations and what, where and when you are spraying, including any pre-harvest desiccants.



Provide safe forage.

- Grow no-till canola as an ideal habitat and food source for bees.
- Avoid mechanical tillage where possible to prevent disturbance to ground-nesting or over-wintering bees. Otherwise, delay tillage to as late as possible.
- Leave non-crop areas untilled and avoid spraying them with insecticides.
- Control flowering weeds in the field prior to planting.
- If planting cover crops, add flowering plants into the mix.
- In non-crop areas, grow flowering plants, trees and shrubs.