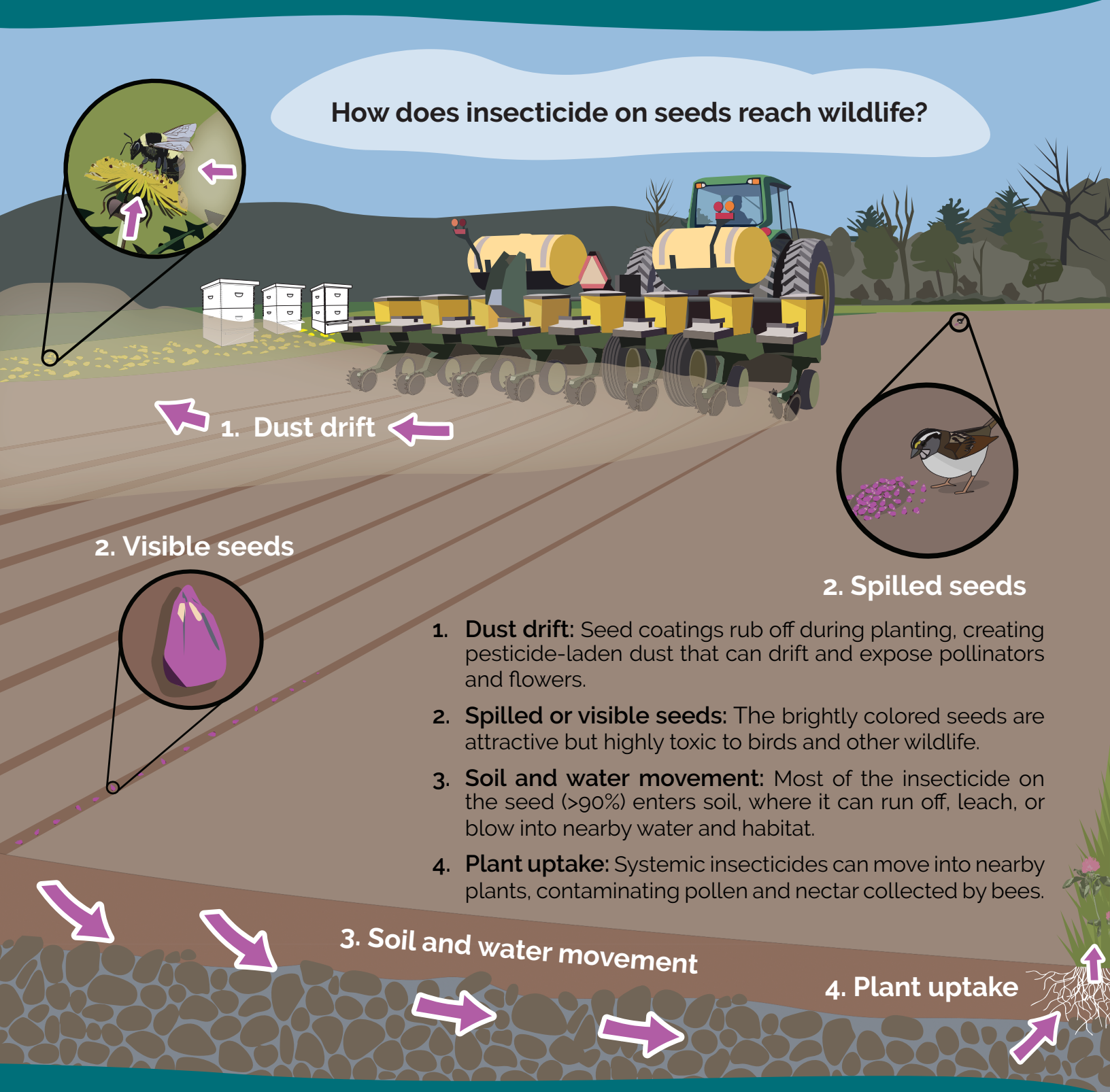
Reducing Risks to Wildlife from Insecticide-Treated Seed



1. **Dust drift:** Seed coatings rub off during planting, creating pesticide-laden dust that can drift and expose pollinators and flowers.
2. **Spilled or visible seeds:** The brightly colored seeds are attractive but highly toxic to birds and other wildlife.
3. **Soil and water movement:** Most of the insecticide on the seed (>90%) enters soil, where it can run off, leach, or blow into nearby water and habitat.
4. **Plant uptake:** Systemic insecticides can move into nearby plants, contaminating pollen and nectar collected by bees.

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What You Can Do: Practical Steps to Reduce Risk

During Planting: Reduce Off-Field Movement

Insecticides applied on seeds can move off the field and harm pollinators, birds, and freshwater invertebrates. Small changes when planting can make a big difference.

1. **Be aware of sensitive areas around your field.**
   a. Identify sensitive areas like flowering habitat, bee yards, surface water, and public drinking water sources around your fields ahead of planting treated seeds.
   b. Communicate with nearby beekeepers about planting timing. Use FieldCheck (vt.driftwatch.org) to find beekeepers with nearby hives.
   c. Provide advance notice when planting neonicotinoid-treated seeds near public drinking water sources.
2. **Reduce dust and runoff from planting.**
   a. Load seeds carefully inside the planting area to reduce the amount of dust that blows into nearby habitat.
   b. Use fluency agents designed to reduce dust, and do not over-apply. Talc and graphite can increase dust-off.
   c. Direct planter exhaust toward the ground. If available for your equipment, deflectors, filters, or exhaust modification kits can minimize the amount of dust exhausted into the air.
   d. Soil and weather conditions affect pesticide movement off the field. Very dry soils increase dust, and planting before heavy rain will increase run-off after planting. Monitor wind speed and direction and pause or adjust planting farther away from sensitive areas if prevailing winds are blowing towards them.
3. **Keep treated seeds in the ground.**
   a. Make sure that seeds are planted at the correct depth, covered by soil, and not visible to wildlife.
   b. Clean up any spilled seed immediately.

Beyond Planting: Use IPM Approaches for Insecticide-Treated Seed

1. **Use integrated pest management (IPM) for insecticides on seeds**
   a. Insecticide-treated seed is often used even when pest risk is low. Scout and monitor for wireworms and white grubs in the fall to determine if an insecticide seed treatment is warranted. Follow UVM Extension guidance for management and scouting-based thresholds.
2. **Reduce risk from early season pests**
   a. Rotate crops at least every three years to break insect pest and disease cycles.
   b. Delay planting until soils warm (~50°F) to promote quick germination and reduce the time seeds are vulnerable.
3. **Use care when disposing of excess treated seeds**
   a. Follow label and state requirements for treated seed disposal. Excess treated seed and containers should be handled like other pesticides and stored securely where wildlife cannot access them.
   b. Leftover seeds can be planted, returned to the manufacturer where possible, or buried in small amounts away from water, wetlands, and floodplains. Do not burn or compost treated seed or seed bags.

References and resources:

Vermont Agency of Agriculture, Food and Markets. Best Management Practices for Neonicotinoids. Available at agriculture.vermont.gov/neonicotinoids-vermont

University of Vermont Extension. Integrated Pest Management: Neonicotinoids. Available at uvm.edu/extension/nwcrops/integrated-pest-management-ipm

The Xerces Society for Invertebrate Conservation. Understanding Neonicotinoids. Available at xerces.org/pesticides/understanding-neonicotinoids

DriftWatch and FieldCheck. Vermont Crop Site Registry. Available at vt.driftwatch.org

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