

What do I need to consider before adding winter canola to my crop rotation?

Winter canola has proven to be a profitable field crop that provides diversity to crop rotations in Ontario. If you are considering winter canola, this planning checklist will increase the probability of growing a successful crop.



Location

Growing location is critical for crop success. Winter survival will be poor in regions with harsh, long winters. The crop is unlikely to be successful north of Muskoka, approximately (Figure 1).

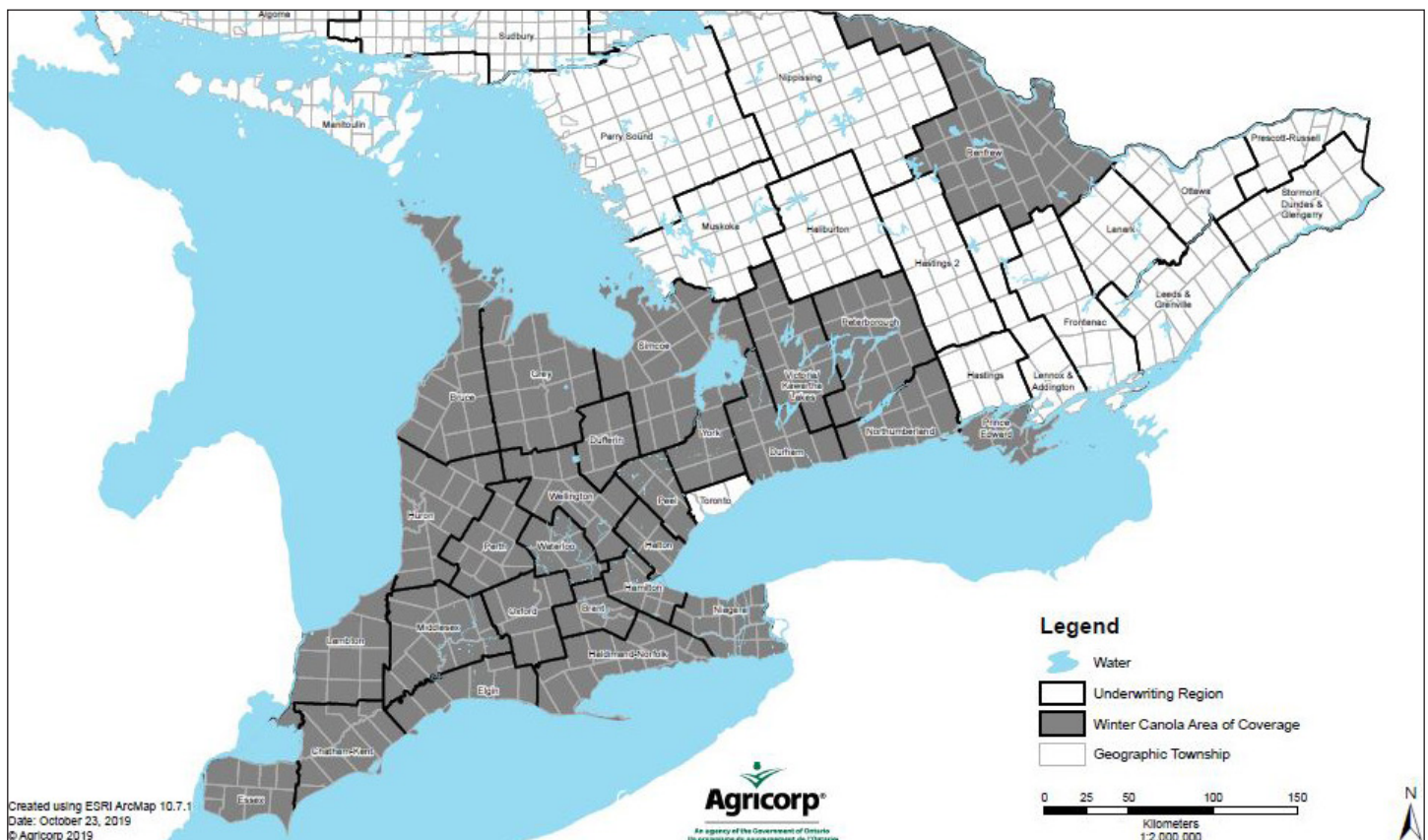


Figure 1. This map shows Ontario counties where winter canola can be insured against winter kill (shaded in grey) and where no insurance coverage currently exists (in white). Source: Agricorn

Order seed early

There is only one variety of winter canola registered for sale in Ontario (Mercedes) and seed is limited. Contact your local C&M seed dealer before June to order seed.

Seeding rate (lb/ac) and seed price are based on the number of live seeds in a bag. The seed dealer will provide guidance on how many pounds of seed per acre to plant, aiming for between 200,000 and 325,000 live seeds per acre. Higher rates may be used for less precise equipment like grain drills and lower rates for row unit planters.

Field selection

Select fields with good drainage and low clay content. Ponding and excess moisture can cause plant death and heavy soils are prone to heaving. Choose fields where winter wheat survival is strong.



Figure 2. Canola seedling heaving caused by poorly drained soils, resulting in exposed tap roots and significantly reduced yield potential.



Figure 3. Severe canola winter kill caused by excessive moisture and poorly draining soil.

Herbicide history

Review herbicide records for the past two years and check rotational restrictions for canola as some herbicides have a two-year plus restriction for planting canola.

Herbicide plant back intervals for canola that exceed two growing seasons

- 22 months: atrazine; imazethapyr (e.g. Pursuit); metribuzin (e.g. Sencor)
- 26 months: flumetsulam (e.g. Broadstrike RC)

Weed management

Winter canola is very competitive and yield loss from weed competition is typically low. Volunteer wheat is usually the most important weed to manage. Winter annual weeds are typically more common in winter canola and summer annual weeds are rarely found. Options for burndown, pre-plant and in-crop herbicides that are safe on canola are limited, and the winter canola variety available in Ontario is not herbicide tolerant (e.g. Roundup Ready or LibertyLink).

Crop rotation

Most canola follows winter wheat because of canola's late summer/early fall planting date. Seeding dates vary by region, but September 1st is generally a good target. Some winter wheat herbicides prevent winter canola from being planted in late summer/early fall following winter wheat harvest.

Winter wheat herbicide plant back intervals for canola after their application

- 1 month: 2,4-D; 2,4-DB; Achieve Liquid; bromoxynil (e.g. Pardner); bromoxynil/MCPA (e.g. Buctril M); MCPA
- 2 months: Boost; Express SG; Refine SG; Refine M
- 4 months: Truslate Pro
- 10 months: Barricade M; Enforcer M; Eragon LQ; Infinity; Infinity FX; Pixxaro; Prominex; Trophy; Valtera EZ
- 11 months: Simplicity GoDri; Varro

Source: Ontario Crop Protection Hub

There is some risk of phosphorous deficiency in corn when planted the year after canola. This risk decreases significantly if a species that is not a Brassica is grown in the field after canola harvest, such as oats or soybeans.

Tillage

There are many examples of canola failures in no-till fields. Slugs present a significant risk in fields with crop residue, and they are typically more injurious to canola than soybeans or corn.



Figure 4. Severe slug damage to newly emerged canola seedlings – these plants will not survive.



Figure 5. Foliar damage to canola seedlings caused by slug feeding – these plants will survive.

Good depth control with the small seed and shallow seeding depth is difficult where there is residue. Seedlings emerging in residue set their growing points above the residue rather than at the soil surface, which increases winter kill.



Figure 6. Shallow planting into heavy residue will cause the canola plants growing points (crowns) to set above the residue, making it more vulnerable to winter kill

Equipment

Canola can be seeded with a grain drill, air seeder or row unit planter with canola seed plates. Rows should be no wider than 15". Specialized harvest equipment is not necessary, but seed is very small, harvest losses can be high and harvest is slow. Seek out experienced canola producers for advice on setting up equipment to seed and harvest.

Harvest timing

In some years, canola is ready to harvest at the same time as winter wheat. Be prepared for this logistical challenge.

Proximity to end users

Delivery points for canola are limited. Ensure there is a local elevator that will accept winter canola, or that you can deliver directly to crush facilities in Hamilton or Windsor.

Crop insurance

Crop insurance is available and coverage for winter kill is available in many regions, but not all (Figure 1).