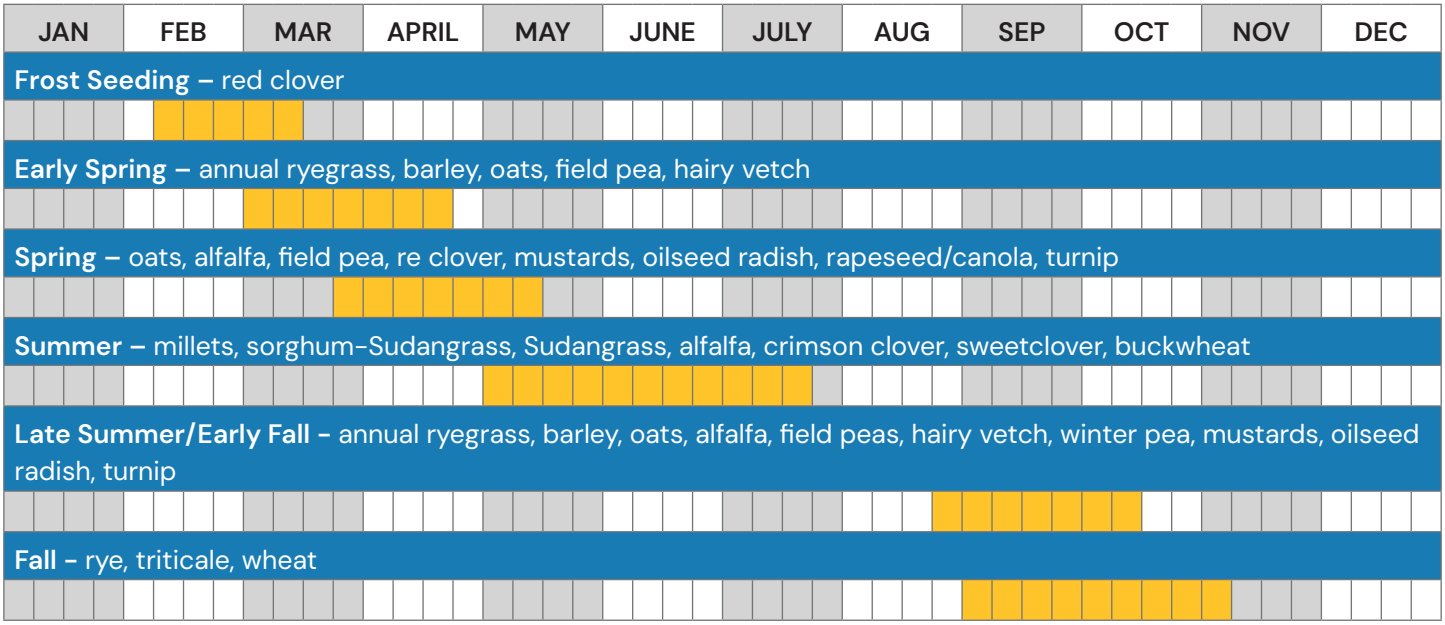
Early Season Cover Crop Planting

Choose Cover Crops Based on Soil and Crop Goals

Legumes are valued for their ability to fix nitrogen. Brassicas help to break up soil compaction. Grasses provide overwinter cover to reduce erosion. **When different cover crop species are used in combination, they can offer a wider range of benefits to the next season's crop.** The challenge is timing - unlike grasses, which can establish when planted late in the season (after harvest), brassicas and legumes need more heat units to grow, making early planting more important.

Approximate Cover Crop Seeding Periods for Southwestern Ontario

(Table adapted from the Midwest Cover Crop Field Guide Second Edition)



Before selecting a cover crop seed mix, consider your herbicide program and cover crop termination methods.

For more information on the right cover crop for you, visit:
mccc.msu.edu/selector-tool

Hairy vetch and field peas cover crop.

Legumes: clovers, alfalfa, hairy vetch, and field peas.

Benefits include:

- promote nitrogen cycling
- build organic matter
- reduce soil erosion

Oilseed radish grows long taproots.

Brassicas: oilseed, radish, turnips, mustard, and buckwheat

Benefits include:

- taproots ease compaction
- suppress weeds
- nutrient scavenge

In Partnership with:

U of G | Soils At Guelph

St. Clair Conservation

With Support from:

Ontario

For more information, contact
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Case Study:

THE RICHARDS PROJECT

CONCERN:

Mark Richards found that planting cover crops after soybean and sugar beet harvest led to poor and uneven establishment, especially for brassica and legume species, which require more heat units to grow well. To improve their establishment, Richards aimed to shift his planting window earlier, before sugar beet harvest and at soybean leaf drop.

Sunflower blooming among a mix of cover crop species.

The Richards equipment modifications were completed with support from SCRCA and OMAFA.

DIG DEEPER

More Soil Resources can be found at the Soils at Guelph Website

Cover Crop seed spreader attached to the boom of a sprayer. Three units were installed across the breadth of the booms. *(Photo: Mark Richards)*

SOLUTION:

To plant the cover crop earlier in the season, Richards had to modify his planting equipment. This allowed him to broadcast his cover crop seed over his soybeans at leaf drop and prior to sugar beet harvest.

EQUIPMENT MODIFICATIONS:

Richards modified his existing sprayer by attaching three seed spreader units along the 120-foot boom. Each spreader is capable of broadcasting cover crop seeds over a 40-foot spread pattern.

Seed spreader attached to the sprayer boom.

BENEFITS:

1. Lengthened the growing season of the cover crop by broadcasting cover crop seed mix over soybean at leaf drop and before sugar beet harvest.
2. Dropped soybean leaves act as mulch, covering the seed, retaining moisture, and improving germination, establishment, and growth.
3. Used existing spray tracks to reduce compaction.
4. Broadcasted red clover over winter wheat during the early nitrogen pass, reduces the risk of runoff, leaching, and denitrification.