

Midwest Cover Crops Council

MICHIGAN STATE UNIVERSITY | Extension

MICHIGAN COVER CROP RECIPE

MCCC-140
CC-09

Post Winter Canola, Going to Corn or Soybean: Use Oats

This publication is intended to provide a starting point for farmers who are new to growing cover crops. With experience, farmers may fine-tune the use of cover crops for their systems.

Introduction

This recipe provides an introductory approach for integrating a cereal grain cover crop into winter canola cropping systems before going into corn or soybeans. Oats generally winter-kill in Michigan and can suppress weeds, build soil health, and prevent erosion during the fallow period between canola harvest in early summer and cash-crop planting the following spring.

Planning and Preparation

- *Winter canola variety and planting*—No modifications to canola variety and planting are required for the successful use of cover crops after a canola harvest.
- *Residual canola herbicides*—Oats are tolerant of most canola residual herbicides, and few restrictions apply unless grazing is being considered. See *MSU Weed Control Guide* in Resources) for more details.



Figure 1. Growing oat cover crop (Kim Cassida)

Summer and Fall Work

- *Canola harvest and field preparation*—Harvest canola at the normal time in fields where oats will be planted. If residue levels are high, consider flail mowing the remaining residue or using light tillage to improve seed-to-soil contact. If using no-till seeding, herbicides such as glyphosate, glufosinate, 2,4-D, and/or saflufenacil should be used prior to oat seeding to terminate weeds and volunteer canola.
- *Timing of planting*—Canola harvest losses are inevitable, which leads to millions of seeds per acre on the ground that will sprout in the field and could outcompete the oat cover crop. Plant oats in August after the first flush of volunteer canola has emerged and can be terminated with herbicide or tillage. Use the MCCC Cover Crop Decision Tool (in Resources) for precise seeding dates for your county because both proximity to the Great Lakes and latitude influence planting dates. (See Figure 1 for successful oat establishment.)
- *Planting method*—Drill to a depth of 0.50–1.00 inches or broadcast with light incorporation. Note that disturbance of soil, if any, should be light since excessive disturbance of crop stubble may negate the benefits of the cover crop.
- *Seeding rate*—Drilled: oats, 30–60 lbs./acre. Broadcast: oats, 35–65 lbs./acre.



Figure 2. Residue from oat cover crop in March (Madelyn Celovsky)

- *Fertility or liming*—If applying phosphorus (P), potassium (K), lime, or manure, complete the application and incorporation prior to seeding or apply to the growing oats before the ground freezes. If injecting manure, low-disturbance injectors are available that will minimize damage to oats. Surface broadcast of dry manure or litter should be done prior to seeding, but 4 tons or fewer can be applied to the growing oat crop with minimal damage provided it is evenly distributed. See *Generally Accepted Agricultural and Management Practices for Manure Management and Utilization* in Resources.

Spring Work

- *Starter fertilizer*—No modifications to your typical fertilization program are required for planting corn or soybean after an oat cover crop.
- *Termination*—Oats should terminate by winterkill. However, mild winters and early snow cover sometimes allow overwintering. If this occurs, oats are easily terminated with typical pre-plant herbicide applications or with spring tillage.
- *Corn or soybean planting*—Cash crops can be no-till planted into the dead/dry or standing cover crop. Almost all modern planters and drills are fully capable of planting corn or soybeans into an oat cover crop. Check planting depth and seed furrow closure shortly after beginning to plant into the cover crop residue (see Figure 2) as usually some adjustments are needed. If tillage is used prior to corn or soybean planting, the remaining oat residue is easily incorporated.
- *Scouting*—With such a small seed, canola seed loss during harvest is likely in the fall, and managing volunteer canola in the following crop is almost inevitable. Planting non-GMO canola can help keep glyphosate and glufosinate as options for controlling volunteer canola in the spring. After soybean or corn planting, scout for crop emergence and population. Additionally, scout for weeds since cover crop residue can often delay the emergence of annual weeds, which may delay the application of postemergence herbicides.

Resources

MSU Weed Control Guide for Field Crops (Michigan State University Department of Plant, Soil, and Microbial Sciences), www.canr.msu.edu/weeds/2026-msu-weed-control-guide

Midwest Cover Crops Council Cover Crop Decision Tool, covercroptool.midwestcovercrops.org/

Generally Accepted Agricultural and Management Practices (GAAMPs) for Manure Management and Utilization (2026; Michigan Commission of Agriculture and Rural Development), www.michigan.gov/mdard/-/media/Project/Websites/mdard/documents/environment/rtf/2026-GAAMPs/2026-MANURE-MANAGEMENT-AND-UTILIZATION-GAAMPs.pdf

Authors

Madelyn Celovsky, **Christine Charles**, and **Monica Jean**, Michigan State University Extension; **Brook Wilke**, Michigan State University *(Note: This publication was adapted with consent from MCCC under a joint project to produce customized introductory guidance about cover crops for all member states/provinces.)*

Reviewers and Contributors

Christina Curell, Michigan State University Extension, and **Abigail Smith**, USDA Natural Resources Conservation Service–Michigan.

The Midwest Cover Crops Council (www.midwestcovercrops.org) aims to facilitate widespread adoption of cover crops throughout the Midwest by providing educational/outreach resources and programs, conducting new research, and communicating about cover crops to the public.

September 2026

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call 800-795-3272 (voice) or 202-720-6382 (TDD). USDA is an equal opportunity provider, employer, and lender. ©2026 by MCCC. All rights reserved.

This material is based upon work that is supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under agreement number 2023-38640-39573 through the North Central Region SARE program under project number ENC23-226. Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and should not be construed to represent any official USDA or U.S. Government determination or policy. ©2026 by MCCC. All rights reserved.