

COVER CROP PRACTICES IN ORGANIC FARMING



OVERVIEW:

Cover crops are a foundational conservation practice for organic farmers that improve soil health, protect water quality, and increase resilience across South Dakota's diverse climates. On the wet, highly productive eastern side of the state, cover crops help reduce erosion and nutrient leaching. On the drier western rangelands, they conserve moisture, enhance organic matter, and protect soil from wind erosion. This guide summarizes best practices based on USDA Natural Resources Conservation Service (NRCS) standards, region-specific considerations, and practical recommendations for producers farming organically.

NRCS CONSERVATION PRACTICE STANDARD: COVER CROP (340)

Cover Crop Practice 340 is the planting of grasses, legumes, forbs, or other herbaceous plants for seasonal cover and conservation purposes. The purposes include:

- Reduce soil erosion from wind and water.
- Increase soil organic matter and improve soil structure.
- Capture and recycle nutrients in the soil profile.
- Fix nitrogen using legumes.
- Increase biodiversity and habitat for beneficial organisms.
- Improve forage availability for grazing livestock.

To qualify for NRCS assistance, cover crops must be established with species suited to the site, seeded at recommended rates, and managed for termination according to the following cash crop planting window.

RESOURCES:

- NRCS South Dakota Field Office Technical Guide (FOTG) practice standards and [specifications for Cover Crop \(340\)](#).
- South Dakota Soil Health Coalition – [Cover Crop Poster Download PDF](#).
- SDSU Extension Services – Research and [outreach on cover crop mixes](#).
- Midwest Cover Crop Council (MCCC)– Region-specific [cover crop selector tools for South Dakota](#)
- EQIP Programs – NRCS financial and technical assistance for adopting [interim practice 823](#) for transitioning organic producers in South Dakota.
- Albert Lea Seed House – certified [organic cover crop](#) seed mixes

SDSPA TECHNICAL GUIDE

§205.204 – Seeds practice standard.

- Producers must use certified organic seed and planting stock for all crops when commercially available.
- If an equivalent organic seed variety is not commercially available (meaning not available in the form, quality, or quantity needed), then non-organic, untreated seed may be used.
- Non-organic seed must not be treated with prohibited substances. If treated, only substances on the National List of Allowed and Prohibited Substances are permitted.
- The USDA NOP requires that before a producer uses non-organic seed, they must document a seed search to show that organic seed was not “commercially available in form, quantity, or quality.
- GMO Prohibition: Genetically modified (GMO) seeds are strictly prohibited under NOP standards.

Use organic seed first. If you cannot source it commercially in the variety, quality, or quantity you need, you may use untreated non-organic seed — but never GMO.

COVER CROPPING CONSIDERATIONS IN SOUTH DAKOTA

East Side (Wet, Higher Rainfall)

- Cereal Rye & Winter Wheat – Excellent for fall establishment and spring nutrient scavenging.
- Hairy Vetch & Crimson Clover – Nitrogen fixation and spring biomass.
- Oats + Radish – Quick fall growth; radish reduces compaction and scavenges nutrients.
- Annual Ryegrass – Improves soil structure but requires careful termination.

West Side (Dry, Lower Rainfall)

- Winter Triticale & Barley – More drought-tolerant than rye.
- Field Peas & Lentils – Fix nitrogen in limited moisture conditions.
- Millet & Sorghum-Sudan – Warm-season options for grazing and rapid biomass.
- Forbs like Sunflower – Add deep rooting and pollinator value.

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