



Guide to Agricultural Best Management Practices Cover Crops

2025



For assistance with customized species selection, mix design, and general implementation guidance, contact New Jersey Audubon's Stewardship Department

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What is a Cover Crop?

A cover crop is vegetation planted when a cash crop is not in production for soil health benefits.

In New Jersey, cover crops typically consist of grasses, legumes, broadleaf, and/or small grains.



Rye and tillage radish cover crop establishment in a South Jersey, mid-November climate.

What Are the Benefits?

- Protection from soil erosion
- Increased organic matter
- Increased water infiltration
- Reduced compaction
- Weed and pest suppression
- Nutrient additions, such as nitrogen fixation
- Water quality protection and reduced runoff



Erosion/Runoff

Planting Considerations

There are several important factors that can influence cover crop establishment

- Plant in a timely manner after cash crops are harvested
 - Tools such as the USDA Plant Hardiness Zone Map can help inform appropriate species selection and planting timing
- Select species based on compatibility with production system, climate, and soils.
- Select species that provide maximum benefits towards your goals.
- Plan around the appropriate timing, and method, of termination.
- Consider planting techniques:
 - broadcast
 - no-till
 - aerial seeding
 - interseeding, etc.
- Consider both warm and cool season cover crop options for optimal ground resting



Cool season rye cover crop beginning to germinate

Identify your cover crop goals and let New Jersey Audubon's Stewardship Department help bring your ideal mix to life!

Types of Cover Crops

Legumes

Warm Season Examples:

- ✿ Cowpea
- ✿ Soybean
- ✿ Sunn Hemp

Cool Season Examples:

- ✿ Clovers (crimson, red, white, etc.)
- ✿ Hairy Vetch
- ✿ Winter Pea



Hairy Vetch

Benefits:

- ✿ Nitrogen fixation
- ✿ Builds organic matter
- ✿ Blooms attract beneficial insects including pollinators and natural pest predators
- ✿ Weed suppression
- ✿ Erosion reduction



Grasses

Warm Season Examples:

- ✿ Millet
- ✿ Sorghum-Sudan

Cool Season Examples:

- ✿ Barley
- ✿ Spring Oats
- ✿ Rye
- ✿ Winter Wheat



Winter Wheat cover crop on top of daikon radish, also a cover crop

Benefits:

- ✿ Erosion reduction
- ✿ Weed suppression
- ✿ Builds organic matter
- ✿ Absorb excess nutrients from previous crop

Broadleaf/Brassicas

Warm Season Examples:

- ✿ Buckwheat
- ✿ Sunflower

Cool Season Examples:

- ✿ Rapeseed
- ✿ Mustard
- ✿ Phacelia
- ✿ Radish
- ✿ Triticale
- ✿ Turnip



Warm season Sorghum-Sudan and sunflower mix.

Benefits:

- ✿ Improved water infiltration
- ✿ Compaction reduction
- ✿ Weed suppression
- ✿ Erosion reduction

