



## **SOUTHWEST NEW YORK FIELD CROP CHRONICLE**

Compiled by Josh Putman - Field Crops Specialist, SWNY Dairy, Livestock, Field Crops Program

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### **Cover Crops in New York - Improving Soil Health While Providing Other Benefits**

The harvest of low residue row crops, such as corn for silage or soybeans, usually means the soil surface of a field will be left fallow until the next crop is planted. In the Northeast, the next planting and new crop canopy establishment, may be several months away. During this time, bare soil can be subject to soil erosion; cover crops offer an opportunity to reduce this effect. New York is prone to heavy rainfall events, snowmelt and wind which is why cover crops are usually established and grown in the fall months and remain during the winter. Properly planned and executed, cover crops will protect farmland during this vulnerable period and may serve as a beneficial forage crop as well. Cover crop use and management should be based on your objective(s): soil erosion, soil quality and health, nutrient management, or forage use. Not only can soil erosion be significantly reduced, many other benefits can be derived as well. However, there can be some risks involved too.

#### **Benefits of Planting Cover Crops (adapted from USDA-NRCS)**

- ◆ Canopy of a cover crop greatly reduces the impact of rain on the soil surface, decreasing the breakdown of soil aggregates. This reduces soil erosion and runoff, and helps with infiltration.
- ◆ A cover crop slows the velocity of runoff from rainfall or snowmelt events, reducing soil loss from sheet and rill erosion.
- ◆ Over time, cover crop residue can increase soil organic matter, leading to improved soil structure, stability, and increase moisture and nutrient holding capacities.
- ◆ Cover crops increase soil quality by improving biological, chemical, and physical soil properties.
- ◆ As a “trap crop”, a cover crop will store nutrients from manure, mineralized organic nitrogen or underutilized fertilizer until the following years’ crop can utilize them, reducing nutrient runoff and leaching.
- ◆ Cover crops will reduce or mitigate soil compaction. Deep tap roots of some cover crops grown in the fall and spring when compacted layers are relatively soft and can penetrate these layers.
- ◆ A cover crop can provide high-quality material for grazing livestock or haying and can provide food and habitat for wildlife, beneficial insects, and pollinators.

#### **Risks of Planting Cover Crops**

- ◆ Fields with heavy plant residue, or green tissue, may be more susceptible to increase in pest populations. Certain pests, such as slugs, will feed on the cover crop and be present at the time of new crop establishment. Proper pest scouting and treatment, if needed, can reduce the risk of damage by pests to future crops.
- ◆ The cost of establishing and maintaining a cover crop might outweigh some of the benefits.
- ◆ Consider the herbicide program you used in the given year before planting a fall cover crop. Many small grains will be fine, but legumes (clovers) and radish can be very susceptible to certain herbicides.

\*Proper planning and management of a cover crop can help minimize or eliminate risk, leading to a successful payback. For additional cover crop information, contact Field Crops Specialist, Josh Putman.



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## Cover Crops in New York

*\*Adapted from [Agronomy Fact Sheet #43](#) and [Agronomy Fact Sheet #93](#)*

**Table 1. Winter hardy cover crop options for NY field crop rotations**

Cover crop	Benefits	Establishment	Termination Options
<b>Oats</b>	<ul style="list-style-type: none"> <li>* Quick to emerge</li> <li>* Good weed competition</li> </ul>	<ul style="list-style-type: none"> <li>* August-early September</li> <li>* Broadcast or over-seed, disc to incorporate</li> <li>* Drill 80-110 lbs/acre; higher seeding rate needed for later planting</li> </ul>	<ul style="list-style-type: none"> <li>* Will winter-kill</li> </ul>
<b>Wheat and Triticale</b>	<ul style="list-style-type: none"> <li>* Good spring weed competition</li> </ul>	<ul style="list-style-type: none"> <li>* Drill, or broadcast</li> <li>* Drill at 75 lbs/acre</li> <li>* Mid to late September</li> </ul>	<p><b>Termination for wheat, triticale and rye:</b></p> <ul style="list-style-type: none"> <li>* Glyphosate (Roundup) common termination method especially when soil is too wet for tillage.</li> <li>* Plow, disc or mow wheat and triticale before seed matures</li> <li>* 2-3 weeks before following crop</li> <li>* Roll crimp wheat and triticale at soft-dough</li> </ul>
<b>Cereal rye</b>	<ul style="list-style-type: none"> <li>* <b>Tolerates later seeding than oats or wheat</b></li> <li>* Best cool season crop to absorb unused nitrogen in soil</li> </ul>	<ul style="list-style-type: none"> <li>* Early August through mid-October</li> <li>* Drill, broadcast or by air.</li> <li>* Drill 60 lbs/acre mid-September; higher seeding rate for later planting</li> </ul>	<ul style="list-style-type: none"> <li>* Plow or till rye to incorporate before the plants reach 8 inches</li> </ul>
<b>Annual ryegrass</b>	<ul style="list-style-type: none"> <li>* Quick to emerge</li> <li>* Erosion control</li> <li>* Tolerates wet soils</li> <li>* Good weed competition</li> </ul>	<ul style="list-style-type: none"> <li>* July 20- September 15</li> <li>* Interseed</li> <li>* Drill at 10-20 lbs/acre</li> </ul>	<ul style="list-style-type: none"> <li>* Will not winter-kill</li> <li>* Will re-seed if not terminated in time</li> <li>* Terminate before 6 inches</li> <li>* Plow or till to incorporate, or use glyphosate</li> </ul>

**Cereal rye cover crop after corn silage**



**Tillage radish taproot**



**Tillage radish + cereal rye cover crop**



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