

Conservation Crop Rotation

Early Harvest

NH-328

Objective

Harvest corn or a summer annual early in the fall in order to establish a winter cover crop by the “Early Fall” planting deadline for NH. This strategy is appropriate for all fields, but can be beneficial for poorly drained fields that tend to be wet in late fall and early spring.

Typical scenarios involve growing a shorter season corn or sorghum-sudangrass and either:

- Double cropping with winter triticale/red clover (or other appropriate species). The triticale can be cut at flag leaf stage in late spring and harvested as feed.
- Planting legumes, radishes/brassicas, or multi-species mixes to improve soil health. These species need to be planted by the “Early Fall” deadline that is often before typical corn harvest. In the spring the cover crop may be harvested, grazed, or turned into the soil as green manure.

Criteria

The primary requirement is for the corn to be off the field and the cover crop planted by the “early fall” deadline. The planting date is **FIRM** and is determined by the Major Land Resource Area.

Table 1 - Early Fall Planting Deadlines

Major Land Resource Area (MLRA)	“Early Fall” Deadline
Northeastern Mountains (143)	Sept. 1
Northern NE Upland (144B)	Sept. 7
Southern NE Upland/Coast (144A)	Sept. 14
Connecticut River Valley (145)	Sept. 14

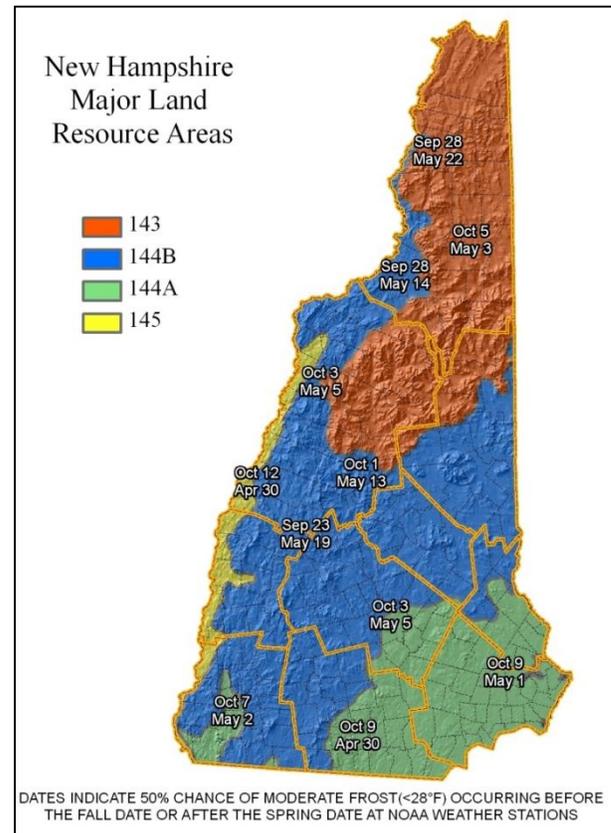
Use the [NH NRCS Cover Crop Planting Specification Guide](#) and the [NH NRCS Simple Cover Crop Calculator](#) to determine the minimum seeding rates.

If the intent is to double crop, consider increasing seeding rate by 30% and use a grain drill.



Triticale Double Crop: For optimum results, (i) drill 150 lb/ac triticale at 1¼ inches deep, and (ii) include 5 lb/ac of inoculated red clover.

Avoid planting clover too deep. Clover can be broadcast separately or else planted in the same pass by putting the seed in the small seed box, disconnecting seed tubes from disc openers, and allowing seed to fall on soil surface. Using clover is not required.



Considerations

Consult with your crop advisor, UNH Cooperative Extension, and/or your seed supplier to find a corn variety with an appropriate relative maturity range. *The NH NRCS will not make recommendations for corn variety selection.*

Double Crop: Corn and Triticale: If the objective is to double crop with triticale and harvest at flag leaf stage in spring, the relative maturity range for corn will depend on the rotation strategy.

There are 2 main strategies:

1. Same Field: This involves double-cropping on the same field for successive years.

The cover crop needs to be planted by the “early fall” deadline, and extra time in the spring is needed to allow it to reach flag leaf stage.

This strategy will require a **very short season corn**. The table below lists expected cover crop harvest/corn planting windows – they are considerations only and not required by the NRCS.

Table 2 - "Same Field" Planting and Harvest Window

MLRA	Relative Maturity Range (days)	Cover Crop Harvest/ Corn Planting Window
143	75-85	May 24 - June 14
144B	80-90	May 17 - June 7
144A	85-95	May 14 – Jun 4
145	85-95	May 14 – Jun 4

2. Alternating Fields: The double-cropped field alternates between fields each year.

In this strategy, only a portion of the fields are cover cropped with the intent of harvesting the cover crop in the spring at flag leaf stage.

In a given year, one field will be planted early and harvested early and the other field will be planted later and harvested later.

This strategy will require **moderately short** season corn can be planted (see Table 3).

Table 3 – “Alternating Field” Strategy

Year	Field 1	Field 2
1	Plant MS Corn Early Harvest Corn Early Plant Triticale Early	Plant Typical Corn Plant Cover Crop
2	Harvest Triticale Late Plant Corn Late Plant Cover Crop	Plant MS Corn Early Harvest Corn Early Plant Triticale Early
3	Plant MS Corn Early Harvest Corn Early Plant Triticale Early	Harvest Triticale Late Plant Corn Late Plant Cover Crop

*MS = Moderately Short Season

In the alternating years when triticale is not being planted as a double crop, a cover crop such as rye, winter wheat or triticale can still be planted by the “Fall” or “Late Fall” deadline.

There should be no expectation that this crop will perform well as a double crop in the spring.

Soil Health

This rotation will help improve soil health by:

- Avoiding field operations in early spring when soil is wet and reducing compaction risk.
- Allowing the cover crop to utilize excess soil moisture in spring
- Ensuring the soil is covered by vegetation at all times
- Obtaining maximum cover crop biomass
- Improving soil tilth, organic matter, microbial diversity, and nitrogen availability.

References

Brown Midrib Sorghum Sudangrass, Part I. Cornell University Agronomy Fact Sheet #14 <http://nmsp.cals.cornell.edu/publications/factsheets/factsheet14.pdf>

Winter Triticale Forage. Cornell University Agronomy Fact Sheet #56 <http://nmsp.cals.cornell.edu/publications/factsheets/factsheet56.pdf>

Is Longer Season Corn Really the Answer to Higher Yields? Advanced Ag System’s Crop Soil News. T. Kilcer. January 2013. <http://advancedagsys.com/site/wp-content/uploads/2013/03/Jan-2013.pdf>

