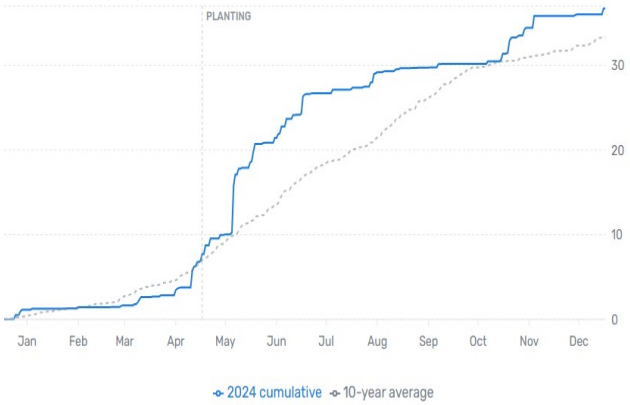
Soybean Planting Date in Cereal Rye Cover

Study ID: 0029053202401
County: Dodge
Soil Type: Moody silty clay loam
Planting Date: Varied
Population: 120,000
Row Spacing (in): 30”
Reps: 8
Previous Crop: Seed Corn
Tillage: No-till
Foliar Insecticides: None
Foliar Fungicides: None
Fertilizer: None
Note: Rye was planted 9/15/23 and 10/1/23. Terminated at boot stage with glyphosate.
Irrigation: Pivot

Rainfall (in):



Introduction: Cover crops and especially cereal rye are increasing in popularity in Eastern Nebraska. With this, there is discussion about termination method and timing. Planting green soybeans is the method of planting into living rye, with termination following shortly. The purpose of this study was to determine the effect of planting soybeans before and after rye was killed. The treatments consisted of:

1. April 12 soybean planting **(planted into green cover)**
2. May 10 soybean planting **(planted into terminated rye)**

Yield was collected during soybean harvest to determine the effect of cereal rye termination timing.

Results:

Planting Date	Moisture (%)	Yield (bu/ac)†	Marginal Net Return‡ ($/ac)
April 12- Plant into green rye cover	10.3 B	89 A	983 A
May 10- Plant into terminated rye cover	11.1 A	81 B	892 B
P-Value:	0.05	0.1	0.1

*Values with the same letter are not significantly different at a 90% confidence level.
†Bushels per acre corrected to 13% moisture.
‡Marginal net return based on $11/bu soybeans. Cost of cover crops was constant across both treatments.

Summary:

- There were significant differences in moisture, yield, and marginal net return.
- The later planting date with the terminated rye had reduced yields compared to planting earlier into a green cover crop.
- Cover crop termination timing may have alternative benefits as well, such as weed suppression and erosion control.
- Further projects in other locations and testing various cover crops can discover more findings in this area.