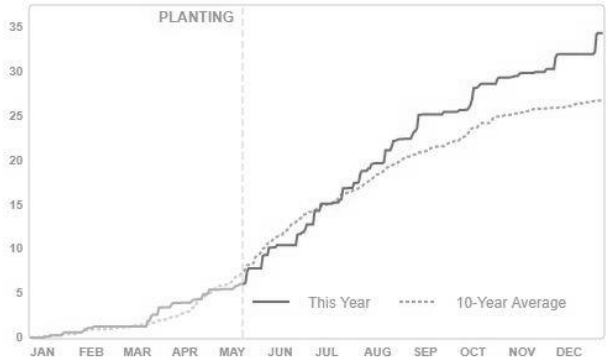
# Corn Planted into Rye Cover Crop

**Study ID:** 0064099201801
**County:** Kearney
**Soil Type:** Coly-Kenesaw silt loam 0-3% slope; Hersh fine sandy loam 3-6% slopes; Kenesaw silt loam 0-1% slope; Libory loamy fine sand 0-3% slope; Hersh fine sandy loam 0-3% slope
**Planting Date:** 5/16/18
**Harvest Date:** 10/29/18
**Row Spacing (in):** 30
**Hybrid:** Mycogen® 11V17 Enlist®
**Reps:** 8
**Previous Crop:** Soybean
**Tillage:** Strip-Till
**Fertilizer:** 100 lb/ac N, 50 lb/ac P, and 10 lb/ac S on 4/12/18 as strip-till application

**Irrigation:** Pivot, Total: 8.8”
**Note:** Field was hailed twice; damage was uniform across the plot; hail insurance was collected for 16% yield loss
**Rainfall (in):**




**Introduction:** This study compared the effects of a cereal rye cover crop on the corn crop yield. This is the second year of the study. Rye was drilled following soybean harvest on October 21, 2017. Cattle pastured the rye in March and early April. The rye was terminated with 2 qt/ac of 4 lb glyphosate on May 6, 2018. Rye was approximately 15" tall at the time of termination. Preplant fertilizer of 100 lb/ac N, 50 lb/ac P, and 10 lb/ac S was applied via strip-till on April 12, 2018. Corn was planted into the strips on April 28, however the fertilizer was not incorparated as deep as planned and the corn seedlings had salt injury resulting in a poor stand. The field was replanted on May 17, about 8 inches off the center of the strips and the original thin stand of corn was sprayed and killed on June 6 with Assure® II. Starter fertilizer was not used at planting.

**Results:**

| | Moisture (%) | Corn Yield (bu/ac)† | Marginal Net Return‡ ($/ac) |
|---|---|---|---|
| Check | 15.5 A* | 227 A | 733.70 A |
| Cover Crop - Rye | 15.6 A | 228 A | 713.43 B |
| P-Value | 0.219 | 0.454 | 0.014 |

*Values with the same letter are not significantly different at a 90% confidence level.
†Yield values are from cleaned yield monitor data. Bushels per acre corrected to 15.5% moisture.
‡Marginal net return based on $3.23/bu corn and $24.30 cover crop cost.

**Summary:**

- There was no yield or grain moisture difference between the corn following the rye cover crop treatment and the corn following the no cover crop check.
- Marginal net return was lower for the corn following the rye cover crop due to the increased input costs for establishing cover crops.

## Summary of Previous Years (Year 1)

In year one (2017), cover crops were drilled on November 1, 2016. Rye was terminated with glyphosate on May 5, 2017. Soybeans were drilled in 10" rows on May 8, 2017.

**2017 Results:**

| | Moisture (%) | Soybean Yield (bu/ac)† | Marginal Net Return‡ ($/ac) |
|---|---|---|---|
| Check | 12.0 B* | 80 A | 714.25 A |
| Cover Crop - Rye | 12.1 A | 81 A | 692.20 B |
| P-Value | 0.058 | 0.682 | 0.008 |

*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 $8.90/bu soybean and $24.30 cover crop cost.

**Sponsored by:** University of Nebraska Lincoln

**In Partnership with:** Nebraska Corn Board; Nebraska Soybean Checkoff; Nebraska Corn Growers Association; Nebraska Dry Bean Commission