# On-Farm Demonstration Trial: Cover Crop Studies Planting Into Cover Crop Trials

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## Objective

Determine the effects of termination timing of cover crop on corn yields to define best management practices.

## Introduction

Planting soybean into a living cover crop is a practice more farmers are doing across the Midwest. There has been data that shows a minimal yield penalty to soybean when "green" planting occurs. This practice has the benefit of weed suppression to reduce early season herbicide costs. It also assists with improvement of overall soil health. The objectives of this trial are to study soybean yield differences with different herbicide application and planting timing in a winter wheat cover crop.

## Materials and Methods

**Crop Year–2021**

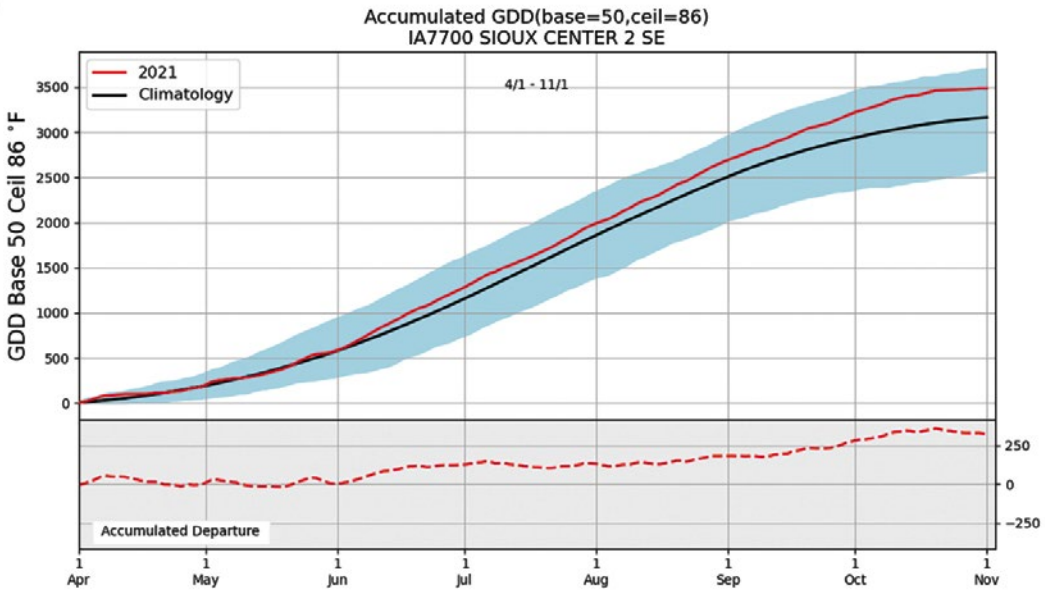
| | |
|---|---|
| Trial | 210112 |
| Trial County | Sioux |
| Soil Type | 8B, 31, 91, 91B, 133, 310B, 310B2, 310C2, 428B |
| Previous Crop | Corn |
| Tillage | No-Till |
| Current Crop | Soybean |
| Hybrid–Variety Number | P22T86E |
| Hybrid–Variety Company | Pioneer/Corteva |
| Row Spacing | 30 in. |
| Seeding Rate | 140,000/ac. |
| Planting Date | May 3 |
| Harvest Date | September 22 |
| Experimental Type | On-Farm Demo |
| Replications | 4 |
| Cover Crop Mixture lbs/ac | Red Clover: 3.5 Cowpea: 17.5 Radish: 3.5 Cereal Rye: 24 |

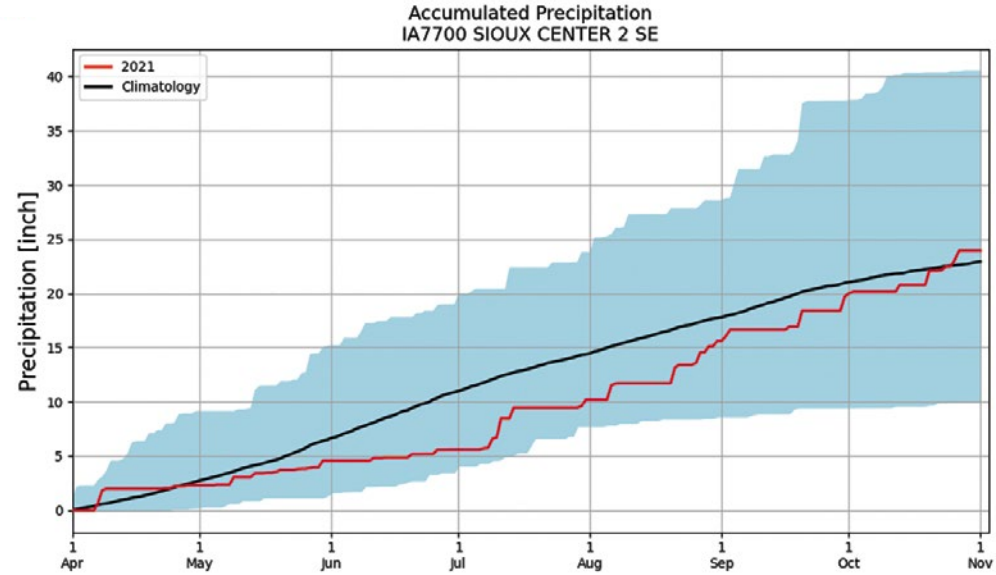
## Results

| Trial Number | Treatment | Yield (bu./ac.)[a] | P-value[b] |
|---|---|---|---|
| 210112 | Cover Crop | 80.7 a | 0.25 |
| | Untreated control with no cover crop | 78.1 a | |

[a]Values denoted with the same letter within a trial are not statistically different at the significance level of 0.10.
[b]P-value = the calculated probability that the difference in yields can be attributed to the treatments and no other factors. For example, if a trial has a P-value of 0.10, there is 90%t confidence the yield differences are in response to treatments. This is consistent for demonstration trials.

## Location Climate Analysis




## Key Takeaways

- There was no statistical difference between treatments for yields in experiments.
- Planting soybean into terminated cover crop was not detrimental to yield in this trial.
- NOTE: The results presented are from replicated demonstration trials. Statistics are used to detect differences at a location and should not be interpreted beyond the single location.