

SaniDate® 12.0 for Suppression of White Mold in Soybeans

Study ID: 1542159202501

County: Seward

Soil Type: Hastings silt loam

Planting Date: 4/29/24

Population: 157,000

Row Spacing (in): 15"

Hybrid: Pioneer™ P30A75

Reps: 3

Previous Crop: Seed Corn

Tillage: Vertical-Till

Herbicides: **Pre:** 11 oz/ac Outlook® + 1 qt/ac Enlist

One® + 4.5 oz/ac Anthem Maxx® **Post:** 1 qt/ac

Liberty® + 11 oz/ac Outlook® +1 qt/ac Enlist One®
+ 10 oz/ac clethodim

Seed Treatment: Full Seed Treatment® + ILEVO®

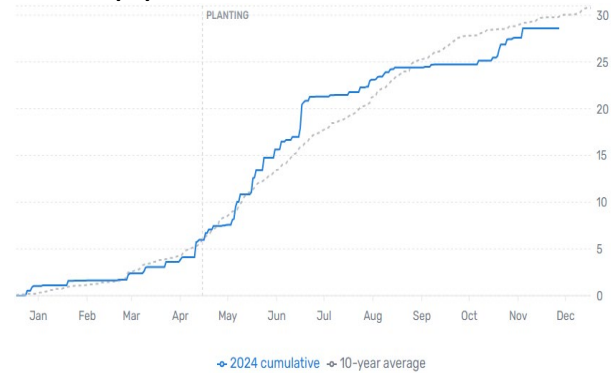
Foliar Insecticides: None

Foliar Fungicides: None

Fertilizer: None

Irrigation: Pivot

Rainfall (in):



Introduction:

Soybean white mold (a.k.a. Sclerotinia stem rot) is a fungal pathogen of soybean production in the Northern United States. This disease spreads as spores from mushroom-like structures growing from fungal survival structures in and on the soil surface during wet or humid summer conditions. These can also be triggered to grow if excess water is added through overhead center pivot irrigation. SaniDate® 12.0, produced by BioSafe Systems, can kill bacteria and fungi through an oxidation chemical reaction. SaniDate® 12.0 has been shown to be effective on other plant pathogens, especially bacterial pathogens, so it was applied here to test its effectiveness against the white mold pathogen. This product was applied three times with three irrigation events, starting at flowering in a production soybean field. The applications were made as irrigation was needed on July 9, July 29, and August 7. The field was scouted for disease pressure throughout the season and no white mold, or other significant disease was present.



Figure 1: Project Design and treatment layout

Results:

| | Moisture (%) | Yield (bu/ac)† | Marginal Net Return‡ (\$/ac) |
|-----------------|--------------|----------------|------------------------------|
| Untreated Check | 9.8 A* | 75 A | 822 A |
| SaniDate® 12.0 | 9.3 A | 76 A | 744 B |
| P-Value: | 0.24 | 0.58 | 0.06 |

*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, BioSafe SaniDate® 12.0 cost of \$30.32/ac/treatment.

Summary:

- There was no significant difference found in yield between the untreated check and the BioSafe SaniDate® 12.0 treatment.
- There was a significant difference found in marginal net return, with the untreated check resulting in a \$78/ac greater marginal net return.
- While we saw no significant direct return from the product, this may have been due to the low disease pressure in the field.