

Pioneer® Brand Soybeans Treated with ILEVO® Fungicide Outperform Saltro® in Head-to-Head Trial Comparisons

Key Findings:

- [LumiGEN® seed treatments](#) with Pioneer® brand soybeans treated with ILEVO® fungicide treatment outperformed Saltro® seed treatment by 1.1 bu/acre under SCN pressure and 0.7 bu/acre under SDS pressure.
- Yield advantage under SDS pressure was 3.8 bu/acre compared to the base treatment.
- The halo effect did not reduce the yield benefits of ILEVO fungicide treatment nor did use of PPO herbicides.
- Final stands were similar between ILEVO and Saltro seed treatments.

Overview

- Pioneer conducted on-farm research to evaluate the benefits of soybean seed treatments at 76 locations across 8 key soybean growing states.
- Research sites were selected based on the possibility of soybean cyst nematode (SCN) pressure in the field.
- Head-to-head comparisons were made utilizing [Pioneer brand soybeans](#) treated with ILEVO fungicide treatment versus CruiserMaxx® Vibrance® plus Saltro seed treatment.
- The on-farm trials were evaluated for several factors including SCN population levels, [sudden death syndrome \(SDS\)](#) severity, halo effect on cotyledons, influence of PPO herbicides, and stand count.



SCN cysts visible on roots of soybean plants.

Results

Locations with SCN Pressure

- Soybean cyst nematodes were found in nearly all 76 sites evaluated (Figure 1).
- SCN pressure varied by site, with 60% having at least medium pressure.
- LumiGEN seed treatment SCN with Pioneer brand soybeans treated with ILEVO fungicide treatment yielded an average of 1.1 bu/acre more than soybeans treated with CruiserMaxx Vibrance plus Saltro seed treatment and 1.8 bu/acre more than the base seed treatment (Figure 2).

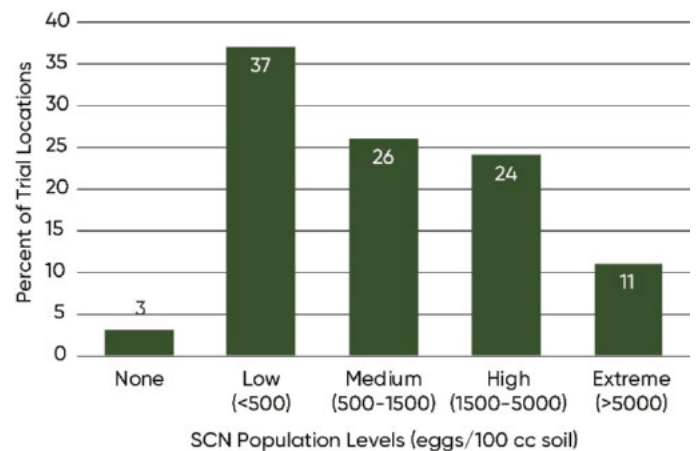


Figure 1. Soybean cyst nematode population levels in fields where on-farm research trials were conducted.

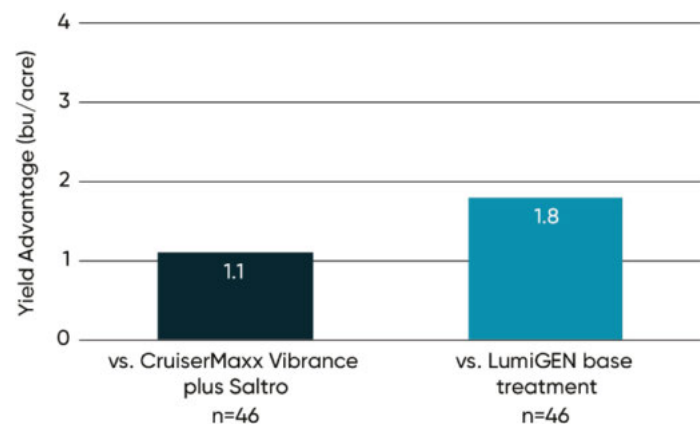


Figure 2. Average yield advantage of LumiGEN seed treatment with ILEVO fungicide treatment compared to CruiserMaxx Vibrance plus Saltro seed treatment and the LumiGEN base treatment at sites with medium or higher SCN population levels.

Locations with SDS Pressure

- Moderate to heavy SDS pressure was found at 16% of sites.
- Pioneer® brand soybeans treated with ILEVO® fungicide treatment averaged 3.8 bu/acre more than the base treatment under moderate to high SDS pressure (Figure 3).

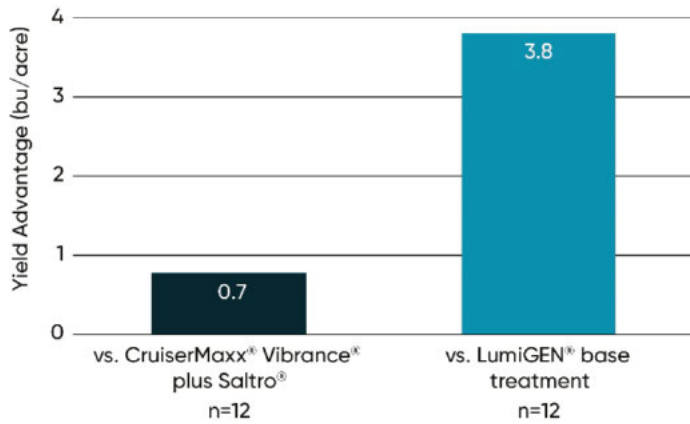


Figure 3. Average yield advantage of LumiGEN seed treatment with ILEVO fungicide treatment compared to CruiserMaxx Vibrance plus Saltro seed treatment and the LumiGEN base treatment at sites with moderate to high SDS pressure.



Halo Effect

- When applied to seed, a portion of the ILEVO fungicide treatment can be absorbed into the cotyledons.
- When the cotyledons are pulled up through the soil, sunlight interacts with the chemical in the edges of the cotyledons causing a sunburn-like discoloration on the edge of soybean cotyledons referred to as the “halo” effect.
- Since ILEVO fungicide treatment has very low translocative properties, this effect only appears on the cotyledon edges and does not extend to leaf tissue.
- PPO herbicides can have a leaf and cotyledon burn effect as well; however, prior research has not shown a yield penalty associated with either the halo effect or PPO burn.

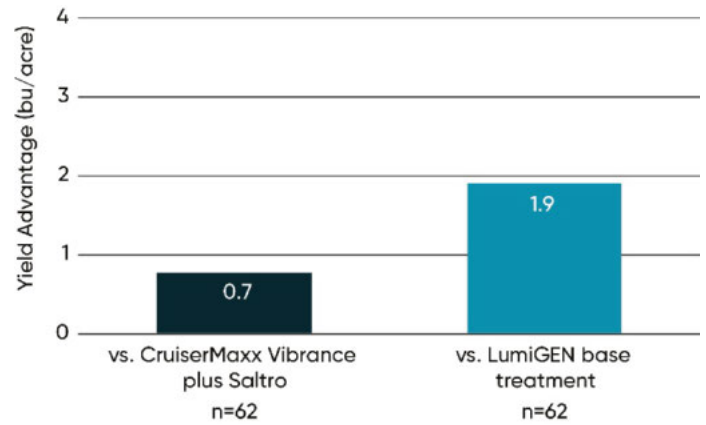


Figure 4. Average yield advantage of LumiGEN seed treatment with ILEVO fungicide treatment compared to CruiserMaxx Vibrance plus Saltro seed treatment and the LumiGEN base treatment at sites where the halo effect was observed with the ILEVO treatment.

- In this study, halo effect was observed with LumiGEN seed treatment with ILEVO fungicide treatment at 82% of locations, and PPO herbicides were used at 16% of locations.
- No yield penalty was associated with either factor in this study. LumiGEN seed treatment with ILEVO fungicide treatment provided a 1.9 bu/acre yield advantage over the base treatment across locations where the halo effect was observed (Figure 4).

Harvest Stand

- Seed treatments had minimal effect on stand establishment.
- LumiGEN with ILEVO and CruiserMaxx Vibrance plus Saltro seed treatment had average final stands of 130,700 and 129,600 plants/acre, respectively; only slightly less than the LumiGEN™ base treatment.

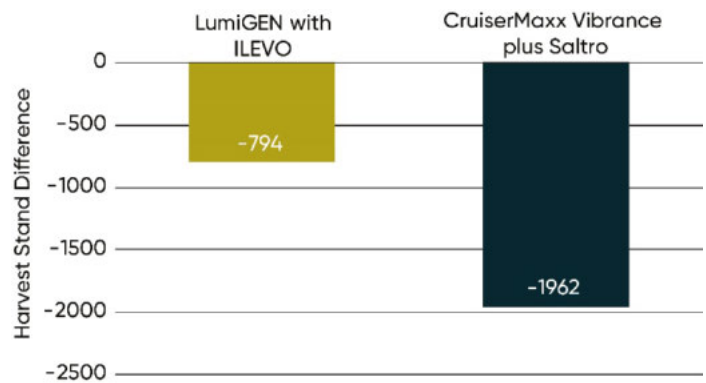


Figure 5. Average harvest stand difference with LumiGEN seed treatment with ILEVO fungicide treatment and CruiserMaxx Vibrance plus Saltro compared to the LumiGEN base treatment.

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December 2020