AGRONOMY RESEARCH UPDATE: Influence of Soybean Cyst Nematode Source of Resistance

PIONEER agronomy

Key Findings:

- Peking source Soybean Cyst Nematode (SCN) resistant varieties continue to hold populations of SCN lower than PI88788
- An addition of the seed treatment iLevo ® with a Peking variety reduced the level of increase in SCN populations

Objectives

- Evaluate changes in SCN population during the growing season
- Determine if there is a difference in increased populations of SCN when planting a variety with different sources of SCN resistance
- Understand the influence of iLevo ® on SCN levels

Study Description

- Soil samples were taken twice during the growing season from 22 locations. The first sampling date was during June and the second at the end of the season.
- Soil samples were taken from strips of two different varieties and kept separate. One variety had Peking SCN resistance and the other had PI88788 resistance
- 8 of the 22 locations included the addition of iLevo ® on a Peking SCN source of resistance to determine effects of the seed treatment on SCN levels.

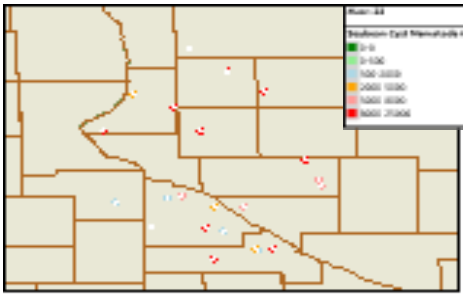

Figure 1. Map showing SCN Levels at the final sampling time for the 22 locations.

Results and Discussion

- Overall SCN levels across the testing area are high enough that it is important to continue testing to reduce yield loss from SCN.
- Final sample results showed significantly lower SCN egg counts following the Peking source of resistance variety versus the PI88788 variety.
- Peking varieties averaged a final SCN count of 5426 eggs/100 cc of soil while PI88788 varieties averaged 8582 eggs/100 cc of soil.

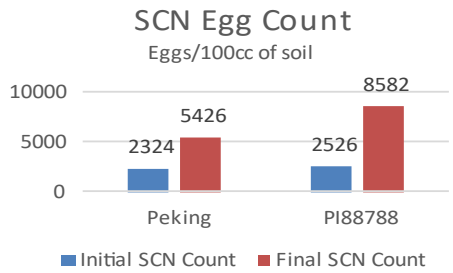

Figure 2. Chart indicating initial and final SCN Egg Counts for Peking and PI88788 sources of resistance.

- The addition of iLevo ® on the Peking variety helped reduce the increase in SCN levels at the 8 locations
- The addition of iLevo ® on the PI88788 variety showed similar increases in SCN levels as the untreated.

Table 1. Table showing results oiLevo® seed treatment on different sources of SCN resistance.

Treatment	Initial SCN Count	Final SCN Count	Increase	Percent Increase
Peking Untreated	2100	7848	5749	274%
Peking with iLevo®	2283	6317	4034	177%
PI88788 Untreated	2584	10269	7685	297%
PI88788 with iLevo®	3208	12150	8942	279%

Conclusions

- Choose a Peking variety for fields with a history of higher SCN levels.
- In fields that have extremely high SCN levels, the addition of iLevo ® to a Peking variety may further reduce the increase in SCN levels.