



CHECKPOINT

The soy checkoff's mission is to maximize profit opportunities for soybean farmers.

Farmers & Feed Producers from Poland Visit Pennsylvania Soybean Farm

(WYALUSING, Pa.) - No matter when or where farmers get together, they talk. Yields, growing conditions, crop management practices. Challenges and opportunities.

Bradford County farmer and Pennsylvania Soybean Board member Justin Jones discovered that was the case when he and his wife, Amanda, welcomed a group of farmers and feed producers from Poland to his farm in Wyalusing. "We were the exact same people: we just spoke a different language," said Jones.

The group from Poland included key dairymen as well as representatives from ETOS, a respected importer and feed distributor of Amino Plus bypass soymeal and other products for high yielding cows.

The dairy industry is a vital part of the Polish ag economy. Poland is the fifth largest dairy producer in the European Union and has the third largest dairy cow herd size.

"They had a lot of questions," Jones said. "Anywhere from harvest timing on soybeans to the dessication of soybeans. In Poland, they dessicate their soybeans before maturity. They were shocked that we will combine beans in December and January. They couldn't believe what our yields were, even on poorer soil, versus what they can get."

Poland currently opposes the use of genetic engineering in agriculture and prohibits the cultivation of GMO crops.

"They can't use GMO beans," Jones continued. "They can't use a lot of the sprays we have. They are full till. It's a night and day difference in how they farm."

Jones took the group to a field he farms for a closeup look at his soybean crop. He

estimates the yield in that field will be in the 70-bushel/acre range.

"In Poland, they struggle getting good bean yield," said Jones. "They told us they are averaging almost 30 bushels an acre. The farmers wanted to know how to increase yield. The feed producers were wondering about the feasibility of buying soybean meal from the U.S. and how that would work with their amino acids. They were all dairy producers basically trying to improve their feedstock, especially now that they're not able to source soybean meal from Ukraine anymore."

This trade mission was organized by the United States Soybean Export Council (USSEC). USSEC builds relationships between global buyers and domestic producers to increase the value of U.S. soybeans and expand markets for U.S. soybeans. With checkoff support, domestic trade missions like this one help international buyers understand that U.S. soybeans are sustainable, reliable and high quality.



Justin Jones answered questions as guests from Poland surveyed one of his soybean fields.

Photo: Amanda Jones



Justin Jones (second from left) hosted Polish farmers and feed producers at his farm.

Photo: Amanda Jones

During their U.S. trip, the group also visited the renowned Dept. of Animal Sciences at Cornell University and met with a leading feed and forage analysis lab in Pennsylvania.

This type of face-to-face meeting is one way USSEC and the soybean checkoff help make U.S. soybeans more attractive to global end users.

"It was a great meeting," said Jones. "No matter who they are, farmers have the same concerns. I was so blessed to have them. I was glad we had the opportunity to do it."

Pa. Soybean Yield Contest Harvest Forms Due Nov. 15

(HARRISBURG, Pa.) -As farmers throughout Pennsylvania begin soybean harvest, the Pa. Soybean Board reminds growers who registered to enter the 2022 Pa. Soybean Yield Contest to submit their harvest report form by November 15, 2022.

The Pa. Soybean Yield Contest is designed to focus farmer attention on agronomic and management skills that will increase soybean yields and profitability. The contest is sponsored by the Pa. Soybean Board in association with Penn State University Extension. State-wide and regional winners will receive an educational trip to the Commodity Classic.

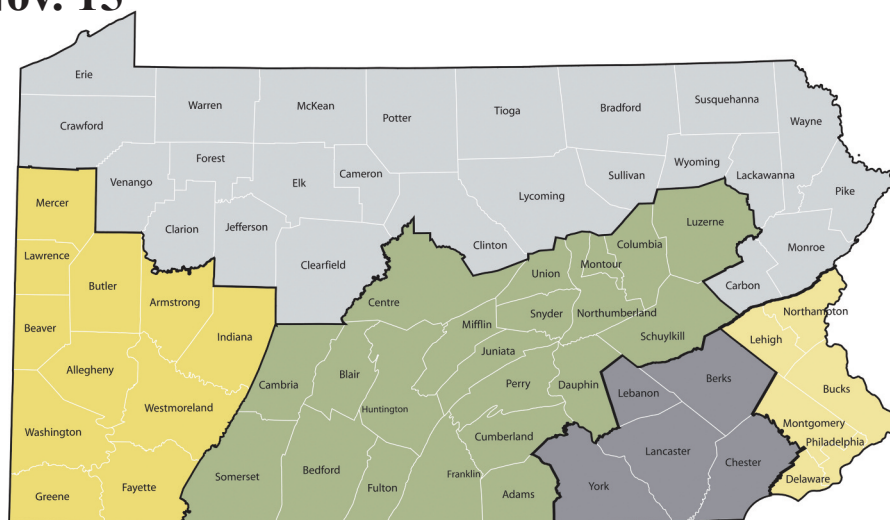
Data gathered through the contest is aimed at delivering important information on growing practices throughout the state. In addition to a verified harvest report form, growers who enter the contest must provide a 1-pint seed sample, which will

be tested for oil and protein, and a soil sample, which will be tested for fertility and nematode presence.

For the seed sample growers are asked to submit a 1-pint random sample by collecting the sample as the combine is unloading. For the soil sample, growers are asked to take 15-20, 6" deep core soil samples next to a soybean plant so that some of the roots are contained in the sample.

Return soybean and soil sample in a plastic bag by November 15, 2022, to: Delbert G. Voight, Jr., 2120 Cornwall Rd., Suite 1, Lebanon, PA 17042

Growers who submit a completed harvest report form and the seed and soil sample will receive a triple-rinsing jet rinse nozzle as a "thank you" for their participation.



The Pa. Soybean Yield Contest recognizes top producers in each of these regions of the Commonwealth.

Questions? Call Penn State extension educators Del Voight at 717-821-0699 or Andrew Frankenfield at 215-407-8950.



SOYBEAN RESEARCH & INFORMATION NETWORK

Research Results at Your Fingertips

The United Soybean Board's Soybean Research Information Network website is designed for farmers to read about the benefits of research they spend checkoff dollars on in their states.

Read articles and summaries about research projects and see up-close information about soybean diseases and pests.

You'll also find the latest publications and resources and can see what's new in soybean research.

The searchable database can be found at soybeanresearchinfo.com.

LEARN MORE AT PASOYBEAN.ORG

Take Advantage of the Soybean Cyst Nematode Monitoring Program

Adriana Murillo Williams, Alyssa Collins, Paul Esker, Penn State Extension

(STATE COLLEGE, Pa.)-Soybean cyst nematode (SCN, *Heterodera glycines*) is the most destructive soybean pathogen in the United States. Discovered in North Carolina in 1954, SCN has continued to spread to every soybean-producing state, causing yield losses that can reach 50%.

What makes this pathogen so dangerous?

In addition to the potential yield losses, the nematode can survive in the soil for many years in the form of eggs, located within a protective structure called a cyst.

Soybean cyst nematode moves long distances through anything that carries soil and infected roots, for example, tractor wheels and ag implements. The nematode has over 100 hosts, including weeds.

Once the pathogen is established in a field, SCN can reproduce on soybean without causing any foliar symptoms, going unnoticed. Likewise, SCN can also reproduce on most of the commercially available resistant varieties, making management more challenging.

Where is SCN?

In Pennsylvania, SCN was first detected in Lancaster County in 2002. For many years, the distribution of SCN in Pennsylvania remained unknown.

Recently, a new project was established by Penn State Extension's Agronomy Team members to provide free SCN testing to all soybean growers in the Commonwealth. With funding support from the SCN Coalition and the Pennsylvania Soybean Board, 382 samples from 45 counties have been tested for SCN.

In 2020, SCN was confirmed in York County. SCN has also been detected in other counties requiring state authorities' confirmation.

We recommend all soybean growers collect soil samples and send them for nematode analysis. Nematode assays from soil samples are the only way

to confirm the presence and population density of SCN in your field.

How do I take a soil sample for nematode analysis?

Soil samples for SCN can be taken anytime during the growing season if there is suspicion of nematodes affecting your crop. However, the best time to monitor SCN densities in your soils is right before or at harvest, when nematode populations reach their highest levels.

Soil sampling for nematodes requires collecting 1-inch-diameter soil cores to a depth of 6-8 inches. When a soil probe is unavailable, use a shovel or a hand trowel to take the sample.



The best time to test for SCN in your soils is right before or at harvest. Testing by Penn State's Department of Plant Pathology and Environmental Microbiology is free.

Photo: Penn State Extension

There are different approaches to collecting soil samples. For example, large fields can be subdivided into 20-acre segments, and samples collected in a zigzag pattern. For patches of stunted and yellow plants, samples should be collected from the margin of the affected areas, avoiding areas where plants look heavily damaged.

You can also consider taking samples from areas of high risk of introducing SCN. These include field entryways, areas prone to flooding, low spots, along fence lines, and near buildings where equipment is stored.

Obtain at least 20 soil cores across areas of 20 acres or smaller. Collect the soil cores in a bucket and mix them to create a composite sample. Place at least two pints of the composite sample in a soil testing bag, seal the sample, and keep it protected from direct sunlight or heat. Store samples in the refrigerator until ready for submission.

I have the soil samples. Now what?

Before mailing the sample, make sure the sample has a label with your name, email or phone number, address, current crop, and the number of acres in your field.

Send the sample to the following address:

Dr. Dilooshi Weerasooriya
Dept. of Plant Pathology & Environmental Microbiology
211 Buckout Lab
University Park, PA 16802
Phone: 814-863-4798

If you have questions about the free testing program, please contact Adriana Murillo-Williams (axm1119@psu.edu), Paul Esker (pde6@psu.edu), or Alyssa Collins (aac18@psu.edu).

Ilevo Seed Treatment in Pennsylvania Soybean Production Systems

Dilooshi Weerasooriya, Tyler McFeaters, Mariah Kidd, and Paul Esker
Penn State Department of Plant Pathology and Environmental Microbiology

(STATE COLLEGE, Pa.)-Sudden death syndrome (SDS) is one of North America's major yield-limiting soybean diseases. SDS has caused approximately \$3.13 million in economic loss in the Northeastern U.S. during 2019 and 2020. Ilevo seed treatment has shown promise in other parts of the U.S. to control SDS. However, the ability to recommend this seed treatment in Pennsylvania requires further research that integrates different risk factors.

With the support of the Pennsylvania Soybean Board, trials began in 2021, working with farmers using an on-farm approach to study Ilevo. In those trials, we learned that there was no difference between the Ilevo and the control treatments. Nematode assays showed a range of different nematode types. However, none of the sites were positive for soybean cyst nematodes or root rot nematodes. Soil nutrient profiles for the sites also showed considerable variability.

In 2022, trials were established in farmer fields with a history of SDS in six Pennsylvania counties: Centre, Cambria, Lancaster, Lawrence, Lebanon and Lycoming. Before planting, bulk soil samples were collected from each site to determine the density of four important soilborne fungal pathogens: *Pythium* spp., *Phytophthora* spp., *Fusarium* spp., and *Rhizoctonia* spp. Plant parasitic nematode density and soil nutrient profiles for each site were also determined.

For the microbiome portion of this study, sampling of root ball samples was carried out at emergence (VE), unrolled unifoliate leaves (VC), and first trifoliate (V1) growth stages. Sampling was done for Ilevo-treated and control plots within a selected block. The goal of taking these three samples was to determine if there are any detectable changes in the soil microbial profile and composition due to the Ilevo seed treatment.



An Ilevo-treated plot in a Lebanon County field at the R2 growth stage.

Photo: Penn State Extension

To measure crop health, normalized difference vegetation index (NDVI) was recorded at the R2 growth stage using the "GreenSeeker" handheld crop sensor. At the same growth stage, the initial plant stand count of each Ilevo-treated and control

plot was recorded, and 15 plants per plot were collected for destructive measurements. The collected plants were evaluated in the lab for any disease incidence. At harvest, the yield from each plot will be collected separately for yield comparison between the two treatments.

Currently, the 2022 data collected for soil nutrient and nematode profiles and destructive measurements at the R2 stage are being analyzed while root ball samples for the microbiome portion are still being processed.

Once data analysis is completed, we hope this experiment will lead the way to a holistic view of the effectiveness of Ilevo seed treatment in protecting soybean seed against SDS and other soilborne pathogens in Pennsylvania.



Root ball samples at a) unrolled unifoliate leaves (VC), and b) first trifoliate (V1) growth stage collected from Ilevo field in Lebanon and Centre Counties, respectively.

Photo: Penn State Extension



In 2022, SDS was found in Pennsylvania fields in a) Chester County b) Centre County and c) Adams County.

Photo: Penn State Extension

The **Pennsylvania Soybean Board** is a farmer-controlled Board responsible for managing Pennsylvania's share of funds received from the nationwide Soybean Checkoff program.

The funding is available under an assessment program, approved by Congress in 1990, under which soybean farmers contribute 50 cents of every \$100 they receive for their beans at the first point of sale. Funds are used to develop markets, educate consumers, and research new ways to utilize and produce soybeans more efficiently.



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