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Pa. Soybean Farmers Support Checkoff-Funded Research Projects

HARRISBURG, Pa. (March 22, 2020) – Research projects designed to provide reliable crop production data to soybean growers and to support Pennsylvania’s animal agriculture industry have been awarded checkoff grants totaling more than \$500,000 by the Pennsylvania Soybean Board.

The all-farmer board, which administers the national soybean checkoff program in the Commonwealth, approved research projects focusing on crop management practices and research benefiting animal agriculture, the largest domestic user of soymeal and the largest sector of Pennsylvania’s agricultural industry.

Funding grants were approved for the following crop production research projects:

Soybean Response to Nitrogen and Sulfur Rate and Timing of Fertilizer Application (Penn State)

This research will help to identify whether one S fertilization event can meet the needs of both a soybean and corn crop, or if there is a benefit to applying S fertilizer to both crops in the rotation. The results will aid farmers in managing the S supplied to their soybean crop, either from the previous year’s fertilization or fertilization in the current year in order to maximize yield and grain quality.

Assessing the Suitability of Non-GMO Soybeans in Northeast Pennsylvania Growing Conditions (Penn State)

Soybean producers in northeastern Pennsylvania often struggle to find marketing opportunities for their crop due to a lack of available local grain buyers. This project will explore the possibility of utilizing Sulfonylurea Tolerant Soybeans (STS) to gain access to non-GMO commodity markets in Lycoming County. This variety of soybeans allows producers to grow soybeans for a niche market and price premium while providing additional options for the control of difficult weeds.

Proactive Monitoring and Management of Soybean Cyst Nematode (Penn State)

Soybean cyst nematode is the most destructive soybean pathogen in the United States. One of the greatest challenges for SCN management is the fact that infestations and yield reductions can occur in the absence of visible symptoms. This project will aim to raise awareness of the risk SCN poses to soybean production and offer a free SCN testing program to proactively track SCN across Pennsylvania to develop best management practices.

Best Management Guidelines for White Mold (Penn State)

The persistent annual risk of white mold requires development of a proactive approach to understanding the importance of different risk factors, as well as farm-level economics to incorporate new changes on the farm. Research will investigate best management practices for the control of white mold.

Pennsylvania On-Farm Network (Penn State)

In a continuing project, the Penn State Research Experiment Farms and Pennsylvania growers participating in the On-Farm Network will test a variety of products and management practices. A new project this year will address integrating different cover crops into standing soybean to improve nitrogen sequestration. Last year, growers in 27 counties participated in the research.

Sentinel Plot Program (Penn State)

The sentinel plot program will be run in collaboration with Penn State Extension to provide soybean growers with statewide assessment of insects and diseases active in soybean fields. Soybean fields in 20 counties throughout the state will be scouted weekly for insect pest and disease population. Reports of the scouting results will be reported weekly via Penn State Extension-based outlets.

Bacteria Biocapsules: Green Materials that Improve the Performance of Soybean Inoculants (Penn State)

Maximizing soybean crop yields requires large amounts of fixed nitrogen. This project will develop a non-toxic, sustainably sourced material that can be used to improve the performance of nitrogen-fixing soybean inoculants. This new technology will address the needs of maintaining soil health and technologies to combat mold and other pathogens with a more sustainable, greener alternative.

Funding grants were approved for the following research projects in support of Pennsylvania's animal agriculture industry:

Detection and Analysis of Streptococcus Zooepidemicus, a Recently Emergent Pathogen of Pigs in Pennsylvania (Penn State)

A bacterium, which is commonly abbreviated Strep zoo, has become a growing concern in the swine industry worldwide. In China, repeated outbreaks for Strep zoo over the past decade have revealed genetic changes of the strains associated with a more severe disease. There is an opportunity during this early phase of emergence in the U.S. to limit Strep zoo before the more virulent strain becomes persistent. However, if it is not detected in a timely manner, mortality can quickly reach 30 to 50 percent. This research will investigate an alternative diagnostic procedure which is highly sensitive, rapid and specific and can identify the presence of a pathogen within hours instead of days.

Determination of the Effect of High Oleic Soybeans on Fatty Acid Digestibility (Penn State)

Dietary fat helps support high energy demands of lactating cows, but the dairy cow has a limited ability to digest dietary fat. High oleic soybeans provide both dietary fat and protein to diets and increase milk fat yield compared to conventional soybeans in lactating dairy cows. The research will investigate whether the effect of high oleic soybeans on fat digestion may provide an additional benefit to dairy cows by increasing fatty acid digestibility.

Production Effects of Extruded Soybean Meal in Comparison with Canola Meal in Lactating Dairy Cows (Penn State)

The study aims to demonstrate a greater supply of metabolizable protein and increased cow productivity with extruded soybean meal versus canola meal, which will expand the market for soybeans and soybean meal among dairy producers.

Control Measures for Avian Reovirus Variants and other Enteric Viruses in Poultry Flocks (Penn State)

Prevention and sanitization of avian infectious disease agents, especially highly pathogenic or newly emerging pathogens, are essential and priority issues to prevent disease outbreaks and maintain healthy production in poultry flocks. This research will test the efficacy of “soft” disinfectants on the ARV variants to develop more effective control measures.

Promoting the Proliferation of Specialist Microbes on Selected Soybean Products in Concert with Forages to Improve Rumen Function in Dairy Cows (University of Pennsylvania)

Producers are constantly looking for cost-effective feeds to boost milk production. University of Pennsylvania field veterinarians have demonstrated the dual benefit of improving milk production and lowering feed costs when soy-products were include in dairy cow rations. This research project will study combinations of forage/soybean products to deduce the best expected outcome for rumen fermentation and dairy cow productivity. The study will also measure the methane and CO₂ production in various forage-soybean product combinations fermentation.

About the Pennsylvania Soybean Board

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.