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CHECKPOINT

NEWS FOR PENNSYLVANIA SOYBEAN GROWERS www.pasoybean.org

Take Action Against Pest Resistance

ST. LOUIS – Planting season is coming soon and so are the pests. If you haven't looked into Take Action, it might be a great time to give the program, supported by the United Soybean Board and a host of partners, a close look.

Take Action is the checkoff-funded program that encourages farmers to adopt weed-management practices to lessen the impacts of herbicide-resistant weeds. It's also a resource to help Take Action against pests and disease.

"Farmers can use some of the lessons from herbicide-resistant weeds and apply those to fungicide-resistant pathogens that cause disease," says Purdue University pathologist, Kiersten Wise. "They know how difficult it is to manage herbicide-resistant weeds; it will be equally difficult to manage fungicide-resistant pathogens."

Take Action will continue to be a resource to farmers on weed management strategies, but as expanded, it will emphasize the importance of using integrated pest management (IPM) strategies. Key themes focus on understanding new product labeling, increased focus on integrated pest management including cultural practices, and optimal use of the various tools and modes of action available.

The mission of Take Action is to help farmers choose the best available tools and technology for the environment and their balance sheet, all with an eye on preserving access to these important tools. Controlling insects and diseases will prevent unnecessary applications of insecticide and fungicide and reduce the potential for development of pest resistance. This helps to further preserve the technology available.

"If we can take measures to prevent or slow resistance from occurring, it will make disease management easier for soybean farmers," says Wise. "We've seen the hurdles herbicide-resistant weeds pose. We have an opportunity to take action against fungicide resistance before it becomes more widespread."

Take Action was originally developed by the United Soybean Board as a resource of farmers combating herbicide resistance issues. The National Corn Growers Association, along with several other commodity organizations, joined with the United Soybean Board to help promote this important program. It enjoys broad support across the agricultural community and serves as an example of an effective collaboration between a cross-commodity partnership and agricultural input companies.

Finding a clearer path to a more sustainable and profitable way to farm is made much easier thanks to Take Action. As a farmer, you face an uphill battle against pesticide-resistant weeds, insects and diseases. The Take Action materials provide helpful information always at your disposal. A Take Action digital kit, which includes materials such as the Herbicide Classification Chart, Fungicide Classification Chart, and several fact sheets is available on request by going to **iwilltakeaction.com.**

Take Action Herbicide Lookup App

ST. LOUIS – Use the Take Action Herbicide and Weed Lookup Tool to help diversify your herbicide site of action (SOA) to prevent herbicide-resistant weeds from spreading. With this app, you can now identify and use the herbicide SOAs to give your crops the upper hand against weeds.

Using multiple herbicide sites of action (SOAs) is key to effectively manage your fields to combat or prevent a herbicide-resistant weed problem on your farm.

With this handy tool, you can:

- Quickly identify the SOA of the herbicide brand or active ingredient you have used before
- See a list of other SOAs you can use that will allow you to diversify
- Search the name of your problem weed to find SOAs that have proven effective against your weed
- Search the herbicide you used on your problem weed to eliminate similar SOAs

The app, available in the Apple App store and Google Play store, is brought to you by the soy checkoff.

Photo credit: United Soybean Board

Pa. Soybean Yield Contest Winners Attend Commodity Classic

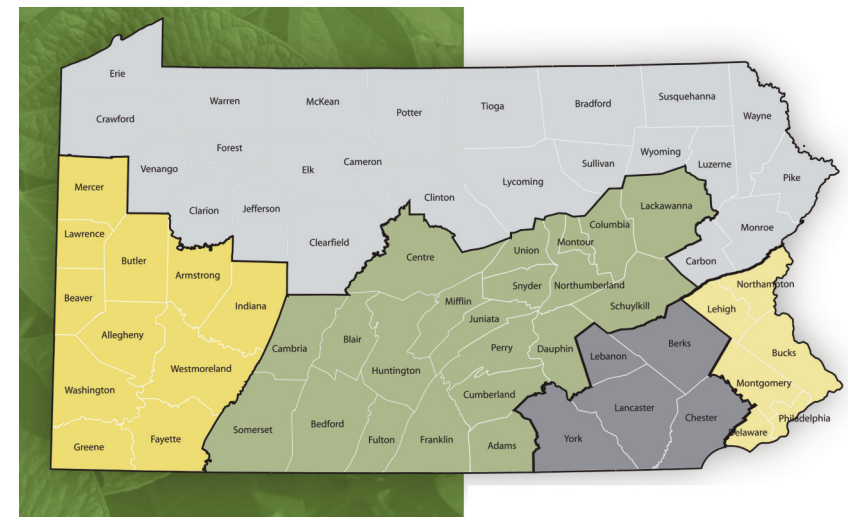
ORLANDO, FL.– The annual Commodity Classic is the nation's largest farmer-focused and farmer-led convention and trade show. The Commodity Classic is open to all friends of corn, soybeans, wheat and sorghum – from growers to member associations to agribusiness to farm media. The farmers who attend walk away with ideas that can have a profound and profitable impact on their farm. That's why the top growers from across the nation come back year after year.

The state-wide and regional winners of the 2018 Pa. Soybean Yield Contest attended this year's event, held February 27- March 2 in Orlando, Fl. The Commodity Classic offered high-quality educational sessions and seminars on a wide range of topics of critical importance to farmers. The yield contest winners attended early riser sessions and educational seminars that provided ideas, information, and expertise that can make a powerful difference on their farms.

At the trade show, they were among the first to see the newest equipment, technology and innovation in the industry. They enjoyed in-depth conversations with top ag industry representatives and networked with fellow growers from throughout the U.S.

State and regional winners of the 2018 Pa, Soybean Yield Contest attended the 2019 Commodity Classic. Left to right: Thomas Hoovler, Leslie Bowman, Tim Stewart and Jim Hershey.

Photo credit; Karen McMahon



Enter the 2019 Pa. Soybean Yield Contest

HARRISBURG - The state and regional winners of the 2019 Pa. Soybean Yield Contest will have the opportunity to attend the 2020 Commodity Classic in San Antonio, Texas.

For purposes of the contest, the state is divided into five regions based on maturity maps. Top growers in the 2018 Yield Contest included:

State Overall & South-Central Region – Jim Hershey, Hershey Farms (Lancaster County) 97.19 bu./acre

Central Region – Leslie Bowman, Leshers' Poultry (Franklin County) 88.75 bu./acre

Southeast Region – Tim Stewart (Bucks County) 86.21 bu./acre

Northern Region – Vernon Martin (Tioga County) 72.57 bu./acre

Western Region – Thomas Hoovler (Mercer County) 71.06 bu./acre

For complete contest rules and information on the Pa. Soybean Yield Contest, visit **www.pasoybean.org.**

Pa. Soybean Farmers Support Checkoff-Funded Research Projects

HARRISBURG — 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.

At its February meeting, the all-farmer board, which administers the national soybean checkoff program in the Commonwealth, approved research projects focusing on crop management practices. Additionally, the board approved grant requests for 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 research projects:

Pennsylvania On-Farm Network (Penn State) — The Penn State Research Experiment Farms and Pennsylvania growers participating in the On-Farm Network will test a variety of products and management practices. New projects this year will address questions on how to deal with compaction, especially after record rainfall, with a focus on no-till environment. Another new research trial will focus on good inoculation practices based on observations made from successful practices in Brazil. Last year, growers in 27 counties participated in the research.

Photo credit: Holly Slegowski, PSB

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 23 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.

Soybean Variety Trials Under Pennsylvania Conditions (Penn State) — Soybean early and late-maturity variety trials will be conducted at three locations in Pennsylvania. More than 100 commercial varieties and experimental cultivars will be evaluated.

Using Precision Ag Data to Refine Soil Fertility Management (Penn State) — The project will allow growers and agronomists to synthesize information contained in multiple datasets to identify differences in soil fertility levels across a field. By identifying zones within a field that have low fertility levels, producers can vary the rate of nutrients to achieve higher yields with a more economical use of fertilizer.

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.

Deciphering the Soybean-Microbe Interactions in the Rumen of Dairy Cows (University of Pennsylvania) - Feed is the largest cost on dairy farms. The research will scientifically evaluate the dual benefit of improving milk production and lowering feed costs when soy products are included in dairy cow rations.

Thrips Attraction to Volatiles of Viruliferous Soybeans (Penn State) — Soybean vein necrosis (SVN), a viral disease, causes development of shriveled, deformed seeds with reduced germination percentage and decrease in oil percentage, seed weight, protein content and fiber content. This project will investigate thrips/soybean plant interactions to determine if volatile compounds emitted by diseased plants are more attractive than those emitted by healthy plants. Information may allow the development of thrips attractants that can be used in traps.

Developing Proactive Herbicide-Weed Management for No-Till Soybeans (Penn State) — Herbicide-resistant weeds, including Palmer amaranth, waterhemp and horseweed, remain a primary pest management challenge for no-till crop producers in Pennsylvania. This project focuses on management of Roundup-resistant weeds and opportunities to reduce input costs associated with weed control programs in no-till soybean.

Impact of Soybean Inclusion on Late Gestation Sow & Litter Performance (Penn State) — Least cost diet formulations have become a normal method of primary diet formulation in the swine industry. Many producers have elected to move forward with changes to ingredients without supportive research in all stages of production. This research will investigate the effect of variable soybean inclusion rates, as compared to standard synthetic amino acids, for protein balance fed during late gestation on sow and litter performance at farrowing.

Impact of Soybean Particle Size on Poultry Performance and Digestibility (Penn State) — The poultry industry consumes more soybean meal than any other animal ag sector in Pennsylvania. Optimizing soybean particle size (PS) maximizes nutrient utilization and bird performance, but also minimizes soybean processing energy expenditures for PS and prevents bridging and flowability issues with the meal and final feed. The study will measure the impact of soybean PS on pullet chick growth in a mash-type diet, on nutrient digestibility, on broiler performance, and if pelleting the diet masks the effects of particle size.

Photo credit; United Soybean Board

Incidence of Influenza D Viruses in Pa. Cattle (Penn State) —Bovine respiratory disease (BRD) is the number one disease of dairy and beef cattle. Growing evidence shows that newly discovered influenza D viruses (INDs) are major players in BRD. The project will aim to isolate and characterize IDV to evaluate the prevalence and genetic diversity of these viruses to reduce losses to the cattle industry.

Ability of Roasted High Oleic Soybeans to Increase Milk Fat Yield (Penn State) —The research will evaluate whether feeding high oleic soybeans at increasing rates will increase milk fat. The objective is to demonstrate that fat intake is limiting milk fat yield in high-producing dairy cows, and high oleic soybeans are a safe and inexpensive source of dietary fat.

Marestail is one of the biggest problem weeds in many fields.

Photo credit: United Soybean Board

Get a Head Start on Weed Management

ST. LOUIS – With planting season coming soon, farmers should think about addressing the weeds that could already be lurking in their fields. The issue of herbicide-resistant weeds poses a major threat to soybean yields throughout the United States. Armed with a plan, however, farmers can effectively manage herbicide-resistant weeds, according to Larry Steckel, Ph.D., of the University of Tennessee.

"By having a plan up front for weed control and spraying for weeds in a timely manner, farmers can save money and have much more consistent weed control," Steckel says.

The soy checkoff collaborates with other farmer organizations, herbicide companies and land-grant universities on Take Action, a unified strategy against herbicide-resistant weeds. Under this program, the checkoff develops tools to help farmers manage weeds with a diverse and comprehensive weed-control program.

Steckel, a row-crop weed specialist and associate professor at the university, discusses the importance of starting planting season with clean fields.

Q: Why is it so important for farmers to begin their planting season with clean fields?
A: The bottom line is farmers have to make sure they are ahead of weeds. If weeds have already emerged before the crop starts coming up, those weeds are going to have a huge advantage. Weeds compete for the same nutrients as soybeans – nitrogen, light and water – and typically weeds get first dibs. We have documented Palmer amaranth going from a small seed to 8 inches tall in 13 days. Soybeans would be lucky to be a couple of inches tall at that point – there is really no contest. So farmers have to start out clean with clean fields; if they don't, weeds can easily outgrow their crop.

Q: What are the best weed-management practices for farmers to use to achieve a clean field before planting?
A: Try to start applying the first burndown applications when weeds like horseweed and marestail are still relatively small and easier to control. Typically, you can get by with 8 ounces of dicamba or 24 to 32 ounces of 2-4D. Once you get closer to planting season, you have to use greater amounts or you have to start applying other methods to get any kind of consistent control.

Q: What weed-management tips do you have for after planting?
A: The key to resistant pigweed species is overlapping residuals. After applying the residual with the first burndown application, about 14 to 20 days out, we are applying another residual and trying to activate them. Ideally, both residuals activate and start doing their job fighting weeds. The key is keeping the weeds from coming up in the first place and that's where overlapping the residuals comes into play.

Q: How can the use of cover crops help farmers with weed management?
A: Using cover crops is a much more sustainable system than what we can do with herbicides only. We're seeing that cover crops are helping us eliminate a whole round of herbicide application in marestail. Usually you have to burn down marestail twice. But with cover crops, you only have to burn down the cover crop once, because if you have a good stand of cover crop, you won't have much marestail, if any. We're also seeing great control on pigweed.

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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