



# CHECKPOINT

PENNSYLVANIA SOYBEAN BOARD 2011 ANNUAL REPORT



**Our soybean checkoff.**  
*Effective. Efficient. Farmer-Driven.*

**PENNSYLVANIA  
 SOYBEAN PROMOTION  
 BOARD**

**2010 – 2011 DIRECTORS**

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# Making Your Checkoff Pay Off

The Pennsylvania Soybean Promotion Board administers the national soybean checkoff program, approved by Congress in 1990. Under its terms, farmers “check off” 50 cents on every \$100 at the first point of sale of their beans. Half goes to the state, with the remainder to the United Soybean Board. The money is used to fund or support soybean research, market development and education.

The Pennsylvania Soybean Promotion Board promotes the growth and development of Pennsylvania’s soybean industry. The board membership is composed of eight soybean producers from across the state.



*Lebanon soybean grower Dale Patches, flanked by his sons Douglas and Brian, fills out a crop management survey at the Pa. Soybean Promotion Board booth at the Keystone Farm Show.*

## Stop by and See Us!

The Pennsylvania Soybean Promotion Board exhibits at farm shows and other events throughout the state. This gives growers and the public an opportunity to ask questions and receive information about soybeans and soybean production.

**Look for us at:**

- **Keystone Farm Show**
- **John Deere Days**
- **Professional Crop Producers' Conference**
- **Ag Progress Days**
- **PA Farm Bureau Convention**

Pennsylvania Soybean Promotion Board  
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# Meet Board Chairman Daryl Alger

**Twenty-five years ago**, says Lebanon County soybean grower Daryl Alger, corn was king and soybeans were basically put in for rotation purposes in a grain operation. Not so anymore.

The “miracle bean” has become a mainstay in animal agriculture, in alternative energy, in the food industry, and as an export. Soybeans have been very profitable to producers the last number of years.

Not bad for a little bean.

As chairman of the Pa. Soybean Promotion Board, Alger is justifiably proud of the part the USB and the Pa. Soybean Promotion Board have played in that scenario. Like all Board members, Alger is a soybean producer. He operates a feed mill and a 9,000-acre cash grain farm under the AAA Farming name. He served on the Pa. Soybean Board even before there was a checkoff. And, he was one of the charter members of the USB.

“Our goal was to increase the profitability of soybean production,” he says. “Through all our years with working with exports and different markets, as a Board we feel we’ve played a major role in the reasons soybean usage has gone up.”

## Questions answered

As Board chairman, Alger regularly fields questions from soybean growers about the checkoff. “The price of beans has basically doubled in the last 3-5 years, so the money going into the checkoff has doubled. Some growers feel that the checkoff shouldn’t be a flat 1/2 of 1%: they feel it should be pro-rated.”

The answer, says Alger, only requires a look at the cyclical nature of a farmer’s own operating budget. “Just like in farming, you’re going to have good years and bad years,” says Alger. “When soybeans were at a depressed value, we didn’t have much money in our budget. We couldn’t do much because we just didn’t have the funds. Then, throw a drought year in there where your yields are down, and you get very little. A lot of the research projects we fund are three-year projects, and we need to budget



*Lebanon County farmer Daryl Alger is one of the eight Pa. farmer/leaders who administer checkoff funding through the Pa. Soybean Promotion Board.*

for them. 2010 was a good production year and a good year price-wise. We’ll have a good budget this year and we’ll be able to fund more projects as we feel needed.”

But, Alger says, just because there’s money in the bank doesn’t mean the Board is going to spend it.

“We will not spend money just to spend it,” says Alger. “We’re all soybean farmers, and just like any other producer, we contribute to the checkoff, too. We may be sitting on a stockpile of money from time to time, but on our Board, we’ve never, ever voted on a project just to use up money. We only spend money when we think it will earn more money for the soybean producer in the future. We are just as strict now with a good budget as we were five years ago when we didn’t have as much. Our outlook hasn’t changed. We have a good track record and I’m not hesitant to tell any soybean producer, ‘We don’t waste your money. We treat it like it’s our own.’”

## Unique challenges

One of the challenges unique to the Pennsylvania Soybean Board is the dominant role animal agriculture plays in the state’s ag economy.

“In Pennsylvania, we have a very unique and diverse Board. Pennsylvania is a soybean-deficit state due to all the livestock agriculture: there are more producers who are buying soy for feed than are selling soybeans off their farm. We have some livestock producers on our Board, and when considering projects and funding, we vote very carefully on how we feel our Pennsylvania farmers would want us to vote – not necessarily how the national soybean farmer would want us to vote. We have to consider what’s in the best interests of our animal agriculture producer here in Pennsylvania.”

## Representing PA farmers

“Sometimes you vote against your own interests, knowing that you are from a livestock area, not a Midwestern production crop area, and have to keep livestock in your thoughts at all times. We’ve been diligent in evaluating every program, talking both sides of it. We’re very proud of how we approach that, and that we act as a representative of all Pennsylvania farmers, not just soybean producers.” ✓

# Research Aims to Stem Stand Loss Caused by Slugs

**They're ugly. They're slimy. And they love to munch on young soybean plants.** They're slugs, and they're becoming an increasing problem for Pennsylvania soybean growers.

*If you no-till, chances are you've had problems with slugs eating your young plants. They overwinter in the crop residue, and then chomp through your seedlings in the spring. In years having favorable conditions for slug development, stand loss can be significant.*

*The slug shown here is a gray garden slug traveling on and eating a young soybean plant. Note the cotyledon-less stem to the right: this is a plant that is already doomed by slug feeding.*

Slug activity is picking up, says John Tooker, Penn State University entomologist. "2009 was one of the worst years in memory for slug damage to soybeans," says Tooker. "Conditions in 2010 were drier and not as favorable for slug populations, but we still saw significant damage in some fields, particularly in central Pennsylvania. Soybean growers clearly need effective no-till-based management strategies."

A research project directed by Tooker and funded by a grant from the Pa. Soybean Promotion Board aims to find an effective, biologically based management strategy for slugs in no-till beans. Traditional slug management has depended on applications of expensive toxic slug-specific baits or homespun remedies such as spraying nitrogen solutions at night when slugs are active.

The occurrence of slug damage to corn and soybeans is directly associated with a lack of tillage and widespread adoption of reduced tillage farming, which is a conservation-based approach to managing farm land that has many benefits such as reduced erosion, better water conservation, and improved soil health. However, the increased soil surface residue associated with no-till cultivation has a downside: it provides the perfect environment for slug populations to develop, especially during wet, cooler years. And if a field is maintained under no-till practices for an extended period of time, the threat of increased slug populations is even greater.

While slugs are damaging to corn, they're even more damaging to soybeans. Corn damage is usually limited to defoliation of emerging leaves: an injury that corn

can often outgrow. However, slugs in soybeans can cause greater damage because the growing point is above ground at an early stage, and slug feeding typically causes the plant to die.

## Slug biology the key

Gaining a better understanding of slug biology is a key part of Tooker's research. "It's surprising how little we know about slug feeding preferences and the arthropod natural enemies that feed on slugs," he says.

To find out more, Tooker and his team are conducting a series of laboratory, greenhouse-based and field experiments to provide more insight on those two issues.

"Our initial results indicate that juvenile gray garden slugs prefer clover and forage radish over soybeans and cereal rye grass over corn plants. We have some leads we may pursue in a field experiment. For example, could underseeding soybeans with clover or radish reduce slug damage on soybeans significantly enough that this approach may be helpful to growers?"

Tooker's continuing research aims to find out.

The second focus of Tooker's research is identifying the variety of arthropods that feed on slugs, particularly on juvenile gray garden slugs, which are the most problematic in Pennsylvania soybean fields.

"Our surveys in soybean fields have found that ground beetles, harvestmen (commonly called daddy longlegs), soldier beetle larvae and firefly larvae can all be slug predators.

Using live captured specimens, our lab-based feeding assays indicate that species of ground beetles and harvestmen will eat juvenile slugs.

"We'll continue our research to help determine slug feeding preferences and the natural enemy species that will consume slugs," says Tooker. "And we'll begin to assess the role of early season slug feeding on soybean yield. All in all, I'm pleased with the progress my team is making." ✓





# Checkoff Funded Research Projects

Soybean growers are investing in a wide array of research projects that focus on soybean production and developing new soybean uses. Each year, the Pennsylvania Soybean Board funds qualified research projects that address issues that are important to Pennsylvania soybean growers in the areas of marketing, production, education and new uses. More than \$100,000 in soy checkoff funds were committed for new and ongoing soybean research in Pennsylvania in 2010. Here's a brief recap of those projects:

## Soy Protein in Sports Drinks

Dr. John Coupland, Penn State associate professor of food science, is continuing his effort to produce a powdered soy protein ingredient that is stable in acid foods and might find its way into a fruit-flavored sports drink. Sports and energy drinks represented a \$2.1 billion industry in 2010. The goal of this project is to produce an ingredient that can be sold to food processors or consumers in a powdered form that can be readily added to boost the protein content of foods.

To view a national database of research projects funded by checkoff dollars, go to: [www.soybeancheckoffresearch.org](http://www.soybeancheckoffresearch.org)

## Soybean Variety Testing

Penn State agronomist Greg Roth is continuing the Penn State soybean variety testing program at the University's Research Centers in Lancaster and Centre Counties. Roth and his team are accessing the results of full season Roundup Ready trials and non-Roundup Ready trials in both counties, as well as double-crop trials in Lancaster County.

## Biologically Based Slug Control

Dr. John Tooker, a Penn State entomologist, is exploring novel, biologically based ways to control slugs in Pennsylvania's no-till soybean crops.

## On-Farm Testing Network

An On-Farm Network project spearheaded by Lebanon Extension Specialist Del Voight provides real-life, on-farm production scale data to aid farmers in their on-going crop management decision-making. The data is taken from a variety of farms throughout Pennsylvania with varying field, equipment and crop conditions.

In one study, field trials were conducted in Lancaster and Lebanon Counties to assess the need for further investigation into the impact of molybdenum as a seed treatment. Information from southern states suggests a yield advantage in low pH fields, but until this study, little information existed on the response of molybdenum in Pa. soils.

In another study, the On-Farm Testing Network evaluated the impact of insecticides and fungicide applications on soybean yield through field trials in Lancaster, Lebanon, York, Franklin, Fayette, and Berks Counties.

The results of the 2010 field tests are being finalized, and will be available for viewing at [www.pasoybean.org](http://www.pasoybean.org). ✓



## Soybean Field Day Gives Growers Look at Checkoff Funded Research

Soybean growers throughout the state were invited to take a first-hand look at some of the research projects funded by the checkoff at the first annual Soybean Field Day, held August 25, 2010 at the Penn State Research Station in Landisville, Pa.

Tour wagons ran throughout the day as growers inspected plots dedicated to variety testing, herbicide, fungicide and insecticide testing, as well as tillage and other research specific to soybeans. Growers also participated in discussions on seasonal issues, heard award-winning soybean growers tell about their production practices, and learned

about the newly formed On-Farm Testing Network and the exciting soybean field research taking place on farms throughout Pennsylvania.

The Pennsylvania Soybean Promotion Board was the main sponsor of the Soybean Field Day. The Field Day not only gave producers the opportunity to view checkoff funded research, but also an opportunity to network with other growers.

Watch the Pa. Soybean Promotion Board website [www.pasoy.org](http://www.pasoy.org) for information on the 2011 event or call the Lebanon Extension Office at 717.270.4391. There's no charge for the event, but pre-registration is requested. ✓

*The first annual Soybean Field Day included a tour of the research plots and variety trials conducted at Landisville, Pa.*

## Soybean Yield Contest Winners

# Top 92 Bushel/Acre

**Two winners in the 2010 Soybean Yield Contest both topped a whopping 92-bushels per acre, more than double the 2010 Pennsylvania average soybean yield of 43 bushels per acre reported by the USDA.**

A. Dale Herr, of Kirkwood, Lancaster County was the top producer in the annual competition sponsored by the Pennsylvania Soybean Promotion Board, with a yield of 92.78 bushels per acre. Not far behind was fellow Lancaster County soybean grower Charles Farms, Inc. with a 92.36 bushel per acre yield. Third place winner was Robert Shearer of Mt. Joy with 87.18 bushels per acre.

Prior to this year, Charles Farms was the only contestant in the 19-year history of the contest ever to beat the 90 bushels per acre mark, winning the Yield Contest in 2007 with 90.11 bushels per acre.

We asked the two top contest winners to share their crop management strategies for producing 90+ bushel beans.

### Foliar feeding

A. Dale Herr's record-breaking yield was Pioneer 93M11 planted in 7.5" rows. The crop followed corn, was drilled no-till at a population of 176,600 and was harvested on Sept. 21 a final stand of 163,786 with 10.04% moisture.

"We've been in the top five a number of times," says Herr. "We did some experimenting and backed off on population. The advantage to that is the beans don't get so tall. They don't fall down on the ground and you put more pods on the bottom. That's my thinking. If you plant real thick, the beans have to stretch up to get the sunlight, and then they get so tall they end up on the ground. For most of the beans I planted for the contest, we dropped back to about 175,000 population, and they did real well for us."

"And then the last couple of years, we've been doing some foliar feeding," he continues. Last year we did it one time and got the best yield I ever had, so this year, we went to double foliar feeding for the contest, and I had the best average I ever had this year in my whole crop."

### Plant early

Charles Farms, another frequent winner in the Yield Contest, also planted Pioneer 93M11 in 7.5" rows in rye stubble. His crop was drilled no-till at a substantially higher population of 225,000, and the final stand, populated at 209,088, was harvested Sept. 20 at 12.67% moisture.

"We try to plant early, pretty much the end of April is when we get our highest yields," says Charles. "The last few years we've planted the same variety, which has been pretty hard to beat. Some of the shorter season beans did really well, and then we had a longer season bean planted just a week later, and the yields dropped by 4 bushels. This year, early was the best because of the very dry summer we had: the later beans ran out of moisture."

In contrast to Herr's approach, Charles Farm plants a higher population. "We plant early and we never know what kind of weather we're going to get, so we err on the high side," Charles explains.

Charles added that proper potash levels are also vital. "It's important for tomatoes, corn and whatever we do, but especially for soybeans. They like potash," he says.

### Yearly yield average increases

According to Delbert Voight, Penn State Senior Extension Agent who oversees the program, average yield of the 30 participating growers in 2010 was 70.44 bushels per acre. "Each year, the base soybean yields have been climbing at a rate of about a bushel per acre," says Voight. ✓



As the first-place winner of the Soybean Yield Contest, A. Dale Herr received an all-expense paid trip for two to the Commodity Classic. Second-place winner Charles Farms received a \$500 cash prize, and third-place winner Robert Shearer received a \$250 cash prize.

### Yield Contest Crop Management Statistics

*Crop management statistics gleaned from the 2010 contestants' reports:*

- 30 growers participated
- Average yield = 70.44 bu./acre
- 63% of growers used no-till
- 70% planted by May 20 or earlier
- 43% favored 11" to 20" rows, with the remainder evenly distributed between 30" rows and 10" or under rows
- 70% used treated seed
- 53% followed with a small grain cover crop
- Average seed drop = 176,118
- Average population at harvest = 150,338
- Most growers had the crop in the bin by Oct. 20

*A summary of the production information for all 30 entries can be found at [www.pasoybean.org](http://www.pasoybean.org).*

### 2010 Soybean Yield Contest Top Ten

1. **A. Dale Herr**, Lancaster County  
92.78, Pioneer P93M11
2. **Charles Farms, Inc.**, Lancaster County  
92.36, Pioneer P93M11
3. **Robert Shearer**, Lancaster County  
87.18, Pioneer P93M11
4. **James E. Hershey**, Lancaster County  
84.56, Northrup King NK S28 B4
5. **Richard C. Krieder**, Lebanon County  
83.15, Pioneer P 93Y13
6. **Kyle Henninger**, Lehigh County  
82.91, Asgrow AG3539
7. **Herman Manbeck**, Berks County  
82.33, Pioneer P93Y91
8. **David Wolfskill**, Berks County  
79.31, Asgrow AG3803
9. **Elvin Reilt**, Lancaster County  
77.37, Hubner H3901
10. **Darren Grumbine**, Lebanon County  
74.94, Pioneer P93Y20

### How to enter the 2011 Soybean Yield Contest

*The yield contest, launched by the Pennsylvania Soybean Promotion Board in 1992, is attracting more growers every year. Any bona fide farmer who farms in Pennsylvania and grows five acres or more of soybeans within Pennsylvania's boundaries is eligible.*

To download an application for the 2011 contest, go to [www.pasoybean.org](http://www.pasoybean.org) or send a request for an application to:

**PA Soybean Yield Contest**  
Attn: Del Voight  
2120 Cornwall Rd., Suite 1  
Lebanon, PA 17402



# Soy by the Numbers

Pennsylvania Soybean Promotion Board Fiscal Year 2010

Oct. 1, 2009 through Sept. 30, 2010

<b>Total FY10 Assessments.....</b>	<b>\$785,015.00</b>
50% to United Soybean Board .....	<b>\$392,506.00</b>
Pennsylvania Soybean Board .....	<b>\$392,509.00</b>
Interest & FY09 Project .....	
Funding Carryover.....	<b>\$701,613.00</b>
Miscellaneous .....	<b>\$701.00</b>
<b>Total Revenues FY10 .....</b>	<b>\$1,094,823.00</b>

## Disbursements

Administration, Collection, Compliance & Board .....	
Operating Costs, Elevator Audits .....	<b>\$43,381.00</b>
Special Projects .....	<b>\$11,649.00</b>
Communications.....	<b>\$34,875.00</b>
Promotion .....	<b>\$45,520.00</b>
In-State Research.....	<b>\$103,504.00</b>
<b>Total Disbursements FY10 .....</b>	<b>\$238,894.00</b>

**Ongoing Project Funding FY11.....** \$855,894.00

# 98%

U.S. poultry and livestock consume nearly 98 percent of the U.S. supply of soybean meal. Poultry farmers use more U.S. soybean meal than any other end user.



# 4.5

The latest federal government examination of soy biodiesel's energy balance shows it produces 4.5 units of energy for every 1 unit used to produce the renewable fuel. Petroleum diesel has a negative balance.

# 20

Pennsylvania ranks 20 in the nation in soybean production. In 2010, U.S. soybean farmers harvested more than 3.4 billion bushels. Of that, it's estimated that 19.9 million bushels came from Pennsylvania farms.

## Heating Up Demand for Soy Biodiesel

In an effort to set the heating industry on a new cleaner, greener and more sustainable course, the U.S. heating oil industry has reached out to U.S. soybean farmers and the rest of the U.S. biodiesel industry to meet increased demand to use biodiesel in the nearly 8-billion-gallon-a-year heating oil market. Bioheat, a blend of 5% biodiesel and 95% traditional heating oil, has the potential to increase demand for biodiesel by 450 million gallons annually.

The oil heat industry is comprised of thousands of individual companies, all competing for market share. Heating oil is a fairly generic product, so Bioheat gives fuel dealers an opportunity to offer their customers something truly new and improved.

The promotional resources funded by the checkoff aim to educate consumers and train oil heat company personnel on the benefits of Bioheat. The Pa. Soybean Promotion Board helps to fund a variety of activities, including a website with information geared to consumers and dealers, as well as a dealer locator where consumers can find local suppliers of Bioheat. Materials being developed include brochures, door hangers, statement stuffers and other items that are designed to help oil companies tell the Bioheat story to their customers.

## Clean Cities Chapters

On a national level, the soybean checkoff has partnered with the U.S. Department of Energy Clean Cities chapters from across the country to promote the use of soy biodiesel and Bioheat through promotional and education projects. USB checkoff farmer-leaders recently selected ten chapters to participate in this year's program, including the Greater Philadelphia Clean Cities Program (GPCCP). Like other Clean Cities programs throughout the country, the GPCCP serves as a public/private partnership designed to promote the use and infrastructure for alternative fuels, including biodiesel and Bioheat. ✓

Learn more about Bioheat at [www.bioheatonline.com](http://www.bioheatonline.com).



# Your Checkoff Dollars:

## Where else can you get this kind of return?

### Would you invest \$1 to get \$6.40 in return?

That's the return on investment from the soybean checkoff dollars, says Pa. Soybean Promotion Board member and United Soybean Board (USB) representative Bill Beam. Beam cites this figure from a study\* on the results of the checkoff funding invested in research, promotion, new uses, exports and other initiatives that benefit soybean producers.

"If the USB was not in existence, the industry would be backwards by many years," says Beam "We wouldn't have the export markets we have now, we wouldn't have the biodiesel industry. The soybean genome is mapped-- that would not have happened without research funded by checkoff dollars. We're looking to the future, making a better a bean and creating markets literally around the world."

Beam, like all Pa. Soybean Promotion Board members, is a soybean producer. Beam grows about 1,000 acres of soybeans, in addition to wheat, corn and hay, in Chester County. He also runs a woodshaving business, providing sawdust to dairies, horse farms and industrial users. But even with this busy schedule, Beam has carved out time to serve on the Pa. Board for over a decade, and is currently serving for the fourth year as one of two Pennsylvania state representatives on the national United Soybean Board. (Pa. Soybean Board member Jim Musser is the other state representative on the 69-member USB.)

"The USB is made up entirely of farmers," says Beam. "We're not a bunch of elitists who never get into a tractor."

Beam is currently vice chairman of the USB Production Committee. He also serves on the USB's Sustainability Committee and represents the USB on the United States Soybean Export Council (USSEC).

"It's my duty to represent Pennsylvania soybean growers on the national board," says Beam. "It's important that the USB has perspectives from all states.

Beam says that even though he's grown soybeans ever since he got out of college and rented his first farm, being on the Production Committee "has been a real learning experience for me. I didn't realize I knew so little about growing soybeans. The Production Committee gets into the actual science of growing soybeans and the composition of the bean, whether it is oil content, protein content, or the type of oil. We look at yield-robbing diseases or ways to enhance the size of a soybean seed or the number of seeds in a pod. There are many different research projects out there."

### Valuable research

Research funded by checkoff dollars and conducted in other states often has a direct impact on Pennsylvania farmers. Beam cites the example of a research project currently being carried out at Virginia Tech.

"They're looking at developing a new low-phytate bean that is going to lower the phosphorus content in chicken manure, which is a big deal for us here in the Chesapeake Bay. Early testing seems to be going well on that. Things like this didn't even hit my radar screen until I became a member of the Production Committee.

"Another thing I learned is that we're building a world market. A bit over 50% of our beans are exported, China buys about 50% of that. So roughly one out of every four rows of soybeans grown in the U.S. is sold to China. Being on the USB gives me a broader grasp of what's going on in the industry as a whole."

### Passion and commitment

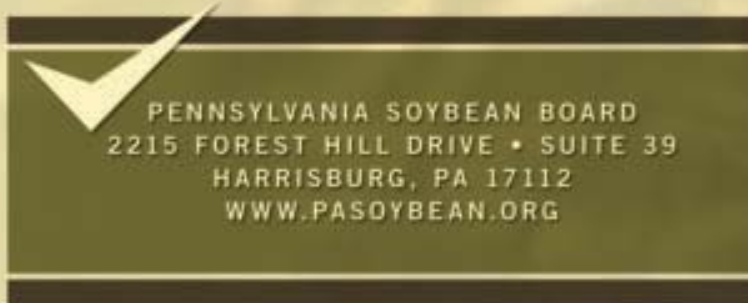
On a personal level, although it does require the sacrifice of time away from the farm and sitting through plenty of



*Chester County farmer Bill Beam is one of two farmer/leaders representing Pennsylvania on the national United Soybean Board (USB.)*

meetings, Beam says serving on the USB has been a great experience. "You make a lot of good friends; you gain a lot of knowledge, especially on the national level.

"The thing that impressed me the most when I went to my first USB meeting was the passion and the amount of time some of our leaders are willing to give up for that Board," he continues. "The farmers paying into the checkoff can rest assured that the Board is doing everything possible to give us back maximum payback for our dollars and effort. From firsthand experience, I can tell you it's a really good group of people." ✓



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*\*A 2009 study conducted by Gary Williams at Texas A&M University determined the checkoff provides a \$6.40 return on every checkoff dollar invested. The return on investment study is conducted every five years.*