

Maryland checkoff board invests \$99, 878 in soybean research

A total of 13 research projects have won funding support from the Maryland Soybean Board for 2007-'08. The year's investment of soybean checkoff funds totals \$99,878,

The projects cover a broad spectrum of interest, ranging from how to manage weeds that have developed a resistance to Roundup to how well early maturing soybean varieties fare in the Maryland growing environment to management techniques of Asian soybean rust should it reach Maryland fields in the coming season.

The research is solely supported by soybean farmers who contribute 50 cents of every \$100 of their soybean sales for research, educational and market development projects.

Here is a brief summary of the funded projects.

- \$10,550 to University of Maryland agronomist Dr. Robert Kratochvil to determine how much, if any, nitrogen soybeans of various maturities leave in the soil for a following cover crop under the Maryland cover crop program. That information is crucial under that 20-cent-a-bushel premium program because farmers may not fertilize at planting nor until March 1 of the following year.
- \$5,750, also to Dr. Kratochvil to evaluate the possibility that a tract planted to early maturing soybeans might serve as an early warning system of sorts to the arrival of soybean rust spores.
- \$13,700 to Dr. William Kenworthy, University of Maryland soybean breeder, to continue, in concert with breeders at other land grant universities, the search for "the better bean." Kenworthy and his colleagues are developing and evaluating genotypes having oil with low saturated fats and/or mid-oleic acid and low linolenic acid; genotypes with higher protein and lower phytic acids; and genotypes with both traits – modified oil and protein.
- \$8,500 also to Dr. Kenworthy to direct and evaluate the 2007 Maryland soybean variety trials. This year, Dr. Kenworthy will ask seed manufacturers to donate Group 2 variety seed, such as 2.8 to 2.9, to the trials to compare their performance with later maturing varieties in the same trial.
- \$10,500 to Dr. Ron Ritter, veteran University of Maryland Extension weed control specialist, for three research studies to evaluate weed management programs for Liberty Link soybeans; to look at the timing of application of various herbicides — postemergence, pre-emergence, or pre-emergence followed by postemergence; and to explore various management options for controlling glyphosate (Roundup)–resistant weeds in soybeans.
- \$6,000 to Bill Rhodes of Schillinger Seed Inc. of Queenstown and associates to continue to company's development of a "stacked" soybeans varieties in Groups 3 and 4 containing glyphosate resistance and/or tolerance, low linolenic acid and medium high protein levels and yield. A total of 1,500 acres of a Schillinger early Group 4 variety for the food industry were grown last year by farmers for Chesapeake Fields Inc. of Kent County, Md. and the company expects limited sales in 2009 of the first generation seed of a low linolenic and high protein bean.
- \$6,500 to Dr. Ray Weil and his associate Yvonne Lawley, a graduate student from Canada at the University of Maryland to continue their exploration of whether a cover crop of forage radish, when winter-killed or otherwise decomposed, is able to control horseweed or other herbicide resistant weeds in soybeans. If this is a natural weed control process, Lawley commented to the Soybean Board, the questions are is it reliable year after year and how long does the weed control last?
- \$7,000 to Dr. Arv Grybauskas, University of Maryland agronomist, to complete a three-year study of the response of soybeans to the strobiluria class of fungicides, namely in this project, Headline and Quadris. Grybauskas would like to determine, for example, if the products are effective against soybean rust, have good activity on other fungal diseases, or do they improve seed quality or improve yield response in the absence of disease.
- \$16,378 to University of Maryland Extension entomologist Dr. Galen Dively for two studies. One, under a grant of \$11,433 will assess the potential damage of stick bugs on Maryland soybean crops; the other, to evaluate the effects of the Cruiser Maxx Pak on early season insects, plant stand density and soybean yield. It will also look at what effect, if any, the herbicide pack has on non-targeted organisms. Cruiser Maxx Pak contains an insecticidal seed treatment and a fungicide. The stink bug project, under the direction of Jerry Brust, the new regional IPM specialist stationed at the Lower Shore Research Center near Salisbury, is being conducted in collaboration with entomologists at Virginia Tech and the University of Delaware. Dively told the Soybean Board that "we have never treated for stink bugs in the Mid-Atlantic area" but they appear to be moving up from cotton fields in the South. The issue, Dively said, is whether late-season

infestations of stink bugs, as were seen by many growers at harvest time in 2005, have the potential to inflict economic losses on the crops.

- \$15,000 to Dr. Lucy Yu, associate professor in the Department of Nutrition and Food Science at the University of Maryland, to support the first of a proposed two-year study to explore and demonstrate the health beneficial factors of soybeans. By examining 15 varieties of soybeans grown by Maryland farmers, she will look for varieties that are rich in antioxidants and other health beneficial factors for use as nutraceuticals and functional food ingredients. The question is, she commented to the Soybean Board in presenting her proposal, “when you have the soybean, how can you use it to its best advantage?”