Inexpensive insect control

--in high yield soybeans

Effective insect control does not necessarily have to be an expensive component of a high yield soybean production program. That's according to Mississippi consultant Bernie White.

"The foundation of insect control is using a good insecticide and fungicide seed treatment," says White, who worked as a Mississippi State University agronomist for 30 years before joining Southern Ag, based in Starkville.

"From there, we will start scouting after the beans emerge. Some of our early insect pests include three cornered alfalfa hoppers, bean leaf beetles and cutworms. We stay in the field on a weekly basis with sweep nets and drop cloths, scouting for different insect pests as the crop progresses and grows."

One unusual problem White encountered this past season was early season armyworms; he discovered grass control caused the flare-up. "After we sprayed a few fields for grasses, armyworms migrated from the dying weeds onto nearby seedling soybeans," he explains. "So we mixed a pyrethroid with our Roundup where we found armyworms in the grass."

Later, at the R3 growth stage, White initiates an automatic fungicide and insecticide application. Alan Blaine, one of the founders of Southern Ag and former Mississippi soybean specialist, once had a graduate student conduct research several years ago at the R3 growth stage with fungicides and insecticides. Multiple locations

and replicated trials showed consistent, significant yield response with diflubenzuron insecticide tankmixed with a fungicide.

"Based on that data and field results, we tankmix diflubenzuron with our R3 fungicide application every year," White says. "Diflubenzuron is a very economical product that controls many insects, such as green clover worms and saltmarsh caterpillars. Diflubenzuron makes those pests disappear."

In 2010 one of White's growers decided against applying the fungicide/insecticide treatment. "His neighbors' diflubenzuron-treated soybeans stayed clean of insects, but we had to spray acephate on all of his fields for velvetbean caterpillars," White says. "And that drove up his control cost; custom ground application costs $5.50/acre, and aerial application costs $7.50/acre when putting out 3 gallons of water, $10/acre when using 5 gallons, not including the cost of the insecticide. Our early diflubenzuron was very cost effective to apply since we added it to our fungicide application.

"Additionally, diflubenzuron has very long residual control. Data indicate you can expect to get from 21 to 54 days control, depending on the rate and situation. It's also easy on beneficials because of its mode of action—it's a chitin inhibitor."

Last year White found a new pest in his Noxubee County territory—the kudzu bug. To clean them up, he added a pyrethroid to his diflubenzuron/fungicide application. "We knocked them out as well as stink bugs," he says.

"Remember, our growers push beans for high yield. We're proactive and stay ahead of insect pests that might lower yields. Our diflubenzuron/fungicide application essentially controls most of our insect pests without re-treating. Sometimes we have to

spray for soybean loopers or bollworms, but often we don't have them quite as bad as we would if we hadn't used our R3 diflubenzuron/fungicide application."

Cultural practices. White also uses cultural practices in his insect control program. For example, he says by planting soybeans early and pushing them for early harvest, growers can often get their crop out of the field before they have to protect it from late season insect pests.

"You absolutely can avoid the extra cost of managing late season pests such as soybean loopers," White says. "Many of my growers are transitioning from Group V beans to Group IV beans while gaining higher yields. They understand the high yield potential of Group IVs and the cost-savings of getting out of the field early. Loopers and stink bugs can really hammer you if you don't stay on top of them. The early diflubenzuron/fungicide application helps us with those late season problems. If we plant Group IV beans in mid-April, push them through the season and get the crop out in late August, it's highly probable that we will not have to make a costly, late season insecticide application."

In addition to avoiding late season insect management costs, early soybeans sometimes command a premium. This past season some northwest Alabama elevators offered a premium for beans delivered by the first week of September. "Several of my growers who planted Group IVs took advantage of that three dollar a bushel premium," White says.

Most of White's growers farm dryland soybeans; a few have center pivots. Some of his better dryland growers average 50 to 60 bushels per acre. Some of his irrigated

fields average in the 70s. “We have some wheat beans under pivots that average in the 60s,” he adds.

(sidebar)

Maximizing Soybean Yields

Tankmixing Cavalier 2L insect growth regulator with a fungicide application at the R3 growth stage is a great tool for soybean growers pushing for high yield production.

“Cavalier 2L’s active ingredient, diflubenzuron, provides excellent, economic insect control for at least three weeks,” says Raymat Crop Science owner James Oliver, Hernando, Mississippi. “Piggy-backed with the fungicide applied at the R3 stage, it economically and effectively controls a broad spectrum of soybean insect pests, including velvetbean caterpillars, green clover worms, cabbage loopers, saltmarsh caterpillars and grasshoppers.

“Farmers who tankmixed Cavalier 2L with their fungicide on their early beans in 2014 were protected without flaring secondary insect pests, and most did not have to make a late season, expensive insecticide treatment. This long-residual prophylactic treatment prevents subthreshold insect levels from nibbling away at yield. Results in university trials and in farmer fields have seen a two- to seven-bushel yield increase with the Cavalier 2L/fungicide treatment.”

Superior formulation. Cavalier 2L is an ingested product; therefore, good spray coverage, either by air or ground, is essential for control. Particle size is also critical in spray coverage. During the manufacturing process, Cavalier ingredients are precision milled to obtain a 1.5 to 2.2 micron particle size for maximum insect control because of

superior leaf coverage. “It’s also the perfect particle size for enhancing your soybean fungicide, developing a synergistic effect,” Oliver adds.

This exceptional product has longevity and wide application. In addition to soybeans, Cavalier 2L is labeled for peanuts, citrus, and tree, nut and vine crops.

For more information regarding Cavalier 2L, growers can contact their Helena Chemical sales representative.

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