NEWS OF AGRIBUSINESS

Diamond insecticide mode unique

The recent Federal registration of Diamond insecticide, a broad-spectrum cotton insecticide with a unique mode of action, will help cotton growers achieve more effective control of escalating populations of plant bugs, stink bugs and other damaging, mid- to late-season insect pests.

Unlike conventional insecticides that attack the nervous system, Diamond controls insects by interfering with chitin development, which causes the target pest to produce a weak or malformed insect exoskeleton. Applied early when insect pests are in the larvae/nymph stage, Diamond prevents juvenile tarnished plant bugs, clouded plant bugs, stink bugs, armyworms, loopers, budworms and bollworms, cotton leaf perforators and saltmarsh caterpillars from reaching the next growth stage.

The introduction of Diamond allows growers to effectively control a group of pests once considered to be "secondary." Cotton specialists agree that widespread adoption of transgenic Bt cotton, successful eradication of the boll weevil, and an overall reduction in the use of broad-spectrum insecticides have caused insect pests such as the stink bug and plant bug to emerge as primary cotton pests in states ranging from Georgia and Alabama to Mississippi, Louisiana and Arkansas.

Gary Lentz, Ph.D., research entomologist with the University of Tennessee, reports that stink bugs ranked as the No. 2 cotton insect pest in Tennessee in 2003, behind bollworm/tobacco budworm. However, the bug complex, including plant bugs and stink bugs caused the greatest losses in 2002.

University entomologists generally recommend use of a conventional insecticide when stink bugs reach a threshold of one bug per 6 row feet, or when plant bug populations cause at least 20 percent pinhead square damage or 10 percent damaged bolls in blooming cotton. Because Diamond will control juvenile insects, it should be applied at the first sign of nymphs.

"Replicated field trials have shown that Diamond is persistent and rainfast on plant tissue, and will provide at least 14 days of residual control of plant bugs and stink bugs when used according to label directions," says Tim Weiland, technical manager at Crompton Corp./Uniroyal Chemical. Because Diamond is safe to most beneficial insect species, it is highly compatible with IPM programs. Diamond offers a good option in rotation with other classes of insecticides for resistance management. Reapplication under heavy infestation may be required to protect new foliage.

Diamond may be applied alone for control of juvenile insects. Diamond may also be applied in a tank-mix combination with conventional pyrethroid or organophosphate insecticides, or in rotation with neonicotinoid insecticides for control of mixed populations of juvenile and adult insect pests.

Growers may make up to four applications of Diamond per season, and apply up to 42 total ounces per acre per season. Consult the label for specific application rates.

Diamond has been granted "OP Replacement" status by the EPA, with a worker re-entry interval of just 12 hours.

While Crompton Corp./Uniroyal Chemical is currently seeking state approvals for Diamond, registration of Diamond is not expected for 2004 in Arizona, California or Florida as a result of individual state approval processes.

For specific information about using new Diamond insecticide in your state, check with your state Extension entomologist.

Beyond herbicide new option for red rice

Clearfield rice growers have a new option for controlling red rice in rice.

Arkansas, Missouri, Texas, Mississippi and Louisiana have granted a 24(c) local needs registration for use of Beyond herbicide as part of the Clearfield Production System for rice. Beyond is registered for use with the variety, CL 161, and the Clearfield XL8 hybrid.

Beyond received this special registration to allow growers a third application option for the treatment of red rice escapes. There are a few factors, such as poor water management, that can cause red rice escapes in Clearfield rice fields. BASF technical service representative Alvin Rhodes said that in some areas with heavy infestation, even if a grower controls 99 percent of red rice with Newpath herbicide, a substantial amount of red rice remains.

"Newpath does an excellent job, and in most cases, we won't need to use Beyond," Rhodes said. "However, Beyond will help a lot in areas like southern Louisiana, where red rice is extremely intense."

Beyond herbicide, which contains the active ingredient imazamox, can be applied only after two applications of Newpath herbicide, which has the active ingredient imazethapyr.

Because red rice escapes may not be seen above the rice until after the application time has passed, Rhodes said the grower or a scout should monitor the Clearfield rice field closely. Rhodes suggests walking the fields to check for escapes to keep from missing the application opportunity.

"Beyond can only be applied to CL 161 and Clearfield XL8 from tillering to panicle initiation," Rhodes said. "That is why it is so important to monitor the field."

Beyond is also registered for use with the Clearfield Production Systems for wheat, sunflower and canola.

For more information about the Clearfield Production System for rice and our entire rice portfolio, visit the BASF Web site at www.agproducts.basf.com.

BASF's Agricultural Products division is a leader in crop protection and a strong partner to the farming industry, providing well-established and innovative fungicides, insecticides and herbicides. Farmers use these products and services to improve yields and quality of agricultural crops. Other uses include public health, structural/urban pest control, turf and ornamental plants. BASF aims to turn knowledge rapidly into market success. The vision of BASF's Agricultural Products division is to be the world's leading innovator, optimizing agricultural production, improving nutrition, and thus enhancing the quality of life for a growing world population.

Further information can be found on the Web at www.basf.de/en/produkte/gesundheit/pflanzen.

NexGen cotton offers high yield and top quality

In its latest response to global mill demand for high fiber quality and U.S. growers' need for high yield potential, Emergent Genetics has introduced the Stoneville brand NexGen high quality cotton. In 2004, two cotton varieties were released under this premium quality and high yield name.

These Roundup Ready varieties, NexGen 1553R and NexGen 2448R, were bred from advanced Stoneville germplasm specifically for the Texas northern High Plains, Oklahoma and Kansas.

They offer a unique trait package: NexGen 1553R is very early maturing and NexGen 2448R is early maturing; both offer excellent seedling vigor, storm-proof boll type, outstanding fiber quality and high yield potential.

Don Threet, Emergent Genetics vice president in charge of the U.S. business, says, "Northern High Plains cotton growers have demonstrated a desire to plant varieties, particularly those with the Roundup Ready gene, that offer high yield potential, and premium or at least non-discount fiber. Very few stripper varieties offer high yield potential and premium fiber, which is why more growers are planting picker varieties. However, growers give up maturity by planting pickers since they mature later, and they may be giving up some storm-proofness."

Cotton merchant Danny Lyons of Lyons Cotton sees a growing demand by farmers and textile mills for NexGen type cotton. "We see more U.S. growers switching to higher quality varieties that also yield as well or better than shorter staple varieties," says Lyons, who is based in Memphis, Tenn. "Fiber quality is becoming even more important because most of our cotton is now going overseas.

In addition to their high yield potential, both NexGen 1553R and NexGen 2448R offer fiber quality comparable to the best picker cotton in a storm-proof boll type. This season, Northern High Plains growers can view demonstration plots of NexGen 1553R and NexGen 2448R in their own area. Seed supplies will be available in 2005.

For more information, go to www.stoneville.com

DuPont and Tate & Lyle form bio-products joint venture

DuPont and Tate & Lyle PLC have announced a joint venture to create products from renewable resources such as corn for numerous applications including clothing, interiors, engineered polymers and textile fibers.

The new company — DuPont Tate & Lyle BioProducts, LLC — is equally owned by DuPont and Tate & Lyle and will be based in Wilmington, Del. The company plans to construct its initial commercial manufacturing plant adjacent to an existing facility in Loudon, Tenn., with startup scheduled for 2006. A pilot facility in Decatur, Ill. has been operating for several years.

The joint venture will use a proprietary fermentation and purification process developed jointly by DuPont and Tate & Lyle to produce 1,3 propanediol (PDO), the key building block for DuPont Sorona polymer. As DuPont's newest polymer platform, Sorona offers unique properties such as stain-resistance, exceptional softness, comfort stretch and recovery, and UV- and chlorine-resistance when compared to polyester and nylon.

Sorona can be used in a variety of applications including textile apparel, interiors, engineering resins and packaging. The new bio-based technology uses less energy and employs renewable resources — replacing the need for traditional petrochemicals now used to produce 1,3 propanediol (PDO).

"As a science company, DuPont is committed to business and research initiatives that meet customer and market needs while delivering both shareholder and societal value," said John Ranieri, vice president and general manager - DuPont Bio-Based Materials. "Sorona is an excellent example of putting science to work by integrating biology with materials science.

"Sorona combines the emerging discipline of metabolic engineering (the capability for biology to produce valuable products) with the leading polymer engineering capabilities of DuPont."

"The joint venture is further evidence of Tate & Lyle's strength in innovation, our success in developing key industrial partnerships and our ability to generate value-added product growth. It is a natural fit with our core skills in fermentation of natural products," said Iain Ferguson, chief executive — Tate & Lyle PLC.

John D. Halberstadt of DuPont has been named president of the joint venture. He will report to a board of managers with representatives from both parent companies.

Sorona is currently manufactured from petroleum-based PDO, and is available commercially from DuPont. It is used to produce clothing and fabrics with superior softness, dyeability, and a natural stretch. Bio-PDO corn-derived chemical and Sorona polymer made from Bio-PDO will be available in 2006.