Insect Control Technologies In BT Corn

Stacked BT Corn Contains Two Proteins For Corn Borer

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Dr. Scott Stewart, Professor, UT Entomology and Plant Pathology with the University of Tennessee Extension, recently spoke about some of the new BT corns that may become available as soon as this year.

Stewart said, "Things are getting very complicated in the corn market. We have got a lot of different traits including herbicide traits and insect resistant traits being combined into individual varieties."

Complication in the corn market with different herbicide traits and insect resistant traits combined into individual varieties, and some of the new BT corns was explained by Dr. Scott Stewart.
Photo by John LaRose, Jr.

Stewart gave an example, "We have got what I call stacked BT corn which means it has two BT proteins for corn borer control. What is interesting about them is not only does it have a potential benefit for resistance management to BT by having those two toxins in one plant, but these new technologies have more impact on other caterpillar pests."

This impact on other pests attracted Stewart. "Curiosity, because corn earworm causes a lot of problems in corn and we know they end up in cotton as boll worms."

"It is pretty apparent to me, this new BT technology is going to have a significant impact on corn earworms coming out of corn. Indirectly we are probably going to see an impact in our cotton with fewer moths coming out of corn."

This impact on other pests is what attracted Stewart. "Corn earworm can be a problem in corn, but we know corn is a primary source of corn earworm (bollworm) that end up in cotton."

Stewart explained approval by the EPA is expected. Once approved, Stewart said, "It will be available for sale, Monsanto is anticipating they will be able to sell the new technologies this year. I would expect within a few years most of the corn we will be planting will be these new technologies and the old ones will slide away." Actually, Monsanto has received EPA approval of the stacked (VT PRO) technology in the U.S. according to Stewart.

"Another nice thing about the technologies for a corn farmer is the EPA petition also includes relaxing or reducing the non BT refuge that is required in corn. That is a big deal in some areas that have a lot of corn borers. If growers are in a county that has corn and cotton, they are currently mandated to plant a 50 percent non-BT refuge of corn."

The changes, when they go into effect, only require a 20 percent non-BT corn refuge in cotton growing acres. Stewart said, "Growers could plant more BT corn and that will benefit them because they will get better corn borer control on those additional acres."

"In fact, growers in non-cotton counties will be able to plant as much as 95 percent BT corn, again this is all pending approval by the EPA but, it is anticipated that it will happen very soon." Δ