

Dectes *Perplexes* Specialists

No-Till Provides Environment For Proliferation Of Dectes Insect

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Over 37 years a little known insect has prospered to a rather huge population on Tennessee farms, according to Dr. Russ Patrick, UT professor of entomology located at Jackson. Patrick works with all the crops, focusing primarily on stored grain.

"Dectes texanus has jumped in numbers from the time I first identified it in 1970," he said. "It was on about 1 percent of the plants in the whole state. It has jumped up now to where

in drilled beans.

"It used to be we could do it if they were in rows," Patrick said. "We could use drop cloths and check them, but not anymore. You would never find it. It would be hard to do."

With the dectes, it is just that they are more common now and more people are noticing them.

"At this point we don't know yet if it is damaging yield," Patrick said. "There has not been enough work done yet. Scott Stewart (UT entomologist) has put out some trials with some insecticides that are showing promise, but I can't



Dr. Russ Patrick, UT Professor of Entomology located at Jackson discusses "dectes texanus" a little known insect that has prospered to a rather huge population on Tennessee farms.

Photo by John LaRose

practically every stem you cut has a dectes in it."

Also known as soybean stem borer, the species Patrick identified is *texanus texanus*. He described his finding back in 1970.

"I was out in the field taking soil samples in the wintertime and I started seeing these girdled plants, soybeans that were falling over that had just a little concave indentation in there," he explained. "It looked like some frass which they chew on to plug a hole. I didn't know what it was. I started doing soil samples. I just had my interest piqued. What is it? It's something that looks like trash. I cut it open there was a yellow worm. I decided to cage a few of them and grow them out to adults. I sent it off. I didn't know what it was and they said 'you have dectes.' That was in 1972."

Since that time the pest has blossomed. A lot of things change in 37 years. Patrick thinks no till and disturbing the soil less has provided the habitat for the dectes.

"It used to be our recommendation to just plow it under to get rid of all of them," he said. Now no-till is the recommendation in order to preserve the topsoil, and farmers can't get away from no-till.

"But it gives the pests undisturbed territory for later," Patrick said. "These things will come out early, say in June of the following year, they will emerge as an adult. The dectes is simply one of the long horn beetles."

For photos of the insect, farmers can go to <utcrops.com> and look under insects. Under soybeans there is an almost fully grown dectes pictured on the right. Threshold levels for treatment are also on the website..

This year, soybeans were being attacked by stink bugs and treatment was focused on trying to prevent them from damaging the pods, which is what they normally do.

When soybeans are around the R5 or R6 stage, farmers need to begin spraying for stink bug. Patrick urged farmers to make sweeps.

"Be sure to scout and use a sweep net," he said. "Of course that is the only way you are going to be able to tell how many are in there and if there is a threshold level."

He said the sweep nets are needed, especially

mention it because it is not a labeled insecticide yet."

The insecticide is for control and presently, it is actually doing a good job of controlling it. However it will be another couple of years before researchers know if dectes is damaging yields.

However, there was damage in the past. When plants fall over and cannot be picked up for harvest damage is done. A big windstorm can easily knock them on the ground. The damage is on the inside of the plant.

"The pests drill up from the inside," Patrick explained. "Once they become a larva, they stay in that stem the rest of their life, until they girdle the plant and then overwinter. They come out the following summer or in June and they are adults. They will stay around for awhile until they mate and lay eggs again. They will attack the flowers too."

Today, more people are finding the dectes and they are wondering what is happening. Maybe within a year or so researchers will find out that this is actually causing a lot of damage. If the plant doesn't fall over and farmers can gather the beans it is alright.

Tennessee isn't the only state battling dectes. Problems are appearing in Arkansas and Louisiana as well.

"It is everywhere, more in the last couple of years than I have ever seen," Patrick said.

"With less disturbance of the habitat through no-till, they overwinter underground with the plant stem sticking up a bit," he said. "There's just a little curve or two with frass that plugs the opening and they are pretty safe from cold weather. I have seen them go through hard winters before.

"What I did see one time several years ago was a field got flooded and it stayed wet the whole time," he recalled. "Then they had a severe winter and freezing ice crystals got into the stalks and killed them all, but I can't count on that every year."

Patrick said that if the insecticides being researched work, he may know the scope of the economical damage that the dectes causes by comparing the treated with the non-treated. Δ