

New Pests And New Insecticides: Research Shows Promise

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A new pest has come to Missouri and new insecticides are approaching the market for rice water weevil, according to University of Missouri researcher Dr. Kelly Tindall.

According to Tindall, rice water weevils aren't the only pests affecting rice crops this year. "Tadpole shrimp have become a big problem this year for water-seeded rice. There have been about 4,000 acres of water seeded rice that have had infestations, with 100 acres having to be re-planted in 2008," said Tindall.

"2008 was the first time we saw this pest in Missouri; however it has been a pest in California for many years," said Tindall.

"Baby tadpole shrimp feed on bacteria and other micro-organisms in the soil. But as they get bigger, tadpole shrimp damage the rice because they are big enough to root around in the soil and uproot young rice plants. Adult tadpole shrimp have also been known to eat seed and seedlings. They are not a problem in drill seeded systems and may actually be beneficial there because the tadpole shrimp feed on mosquito larvae in rice fields and uproot young weed seedlings just like they uproot young rice seedlings in water seeded systems. Drill seeded rice has a strong root system and are not uprooted by tadpole shrimp," said Tindall.

Tindall is also working on three new pesticides for rice water weevil in Missouri.

"One of the products getting ready to hit the market is called Trebon 3G, which has the active ingredient etofenprox" said Tindall. "Trebon 3G is used very much like a pyrethroid but it is not as toxic to crawfish and fish as pyrethroids," said Tindall.

According to Tindall, Trebon 3G was available in 2008 under a Section 18 in Louisiana and there is a full label this year in Missouri and other mid-south rice producing states

"For best results Trebon 3G should be applied pre-flood and usually at the higher end of the rate label (about 8 or 9 pounds per acre). Applications made more than 5 days after flood did not look that good, so timing is important for this product. It is shown to be promising in certain situations so it is something that you would have to try out first to see how it works for you before making it your main product for rice water weevil control," said Tindall.

Tindall is also looking at Cruiser, which we hope will have full label by 2010.

"Cruiser is a product that kills adult water weevils so there will not be much scarring on

the leaves of rice," said Tindall. "One of the positive things about Cruiser is that it also has activity against grape colaspis on other crops so we believe it should also activity for it in rice," said Tindall.

"We are also looking at Dermacor X-100, a seed treatment that should have its label by



According to Dr. Kelly Tindall, University of Missouri Researcher, tadpole shrimp were a big problem for water-seeded rice this year.

Photo by John LaRose, Jr.

2010 as well. There is a crisis exemption for use of this product in the mid-south rice production area. Dermacor X-100 kills the larvae so you may see scarring on the rice leaves," said Tindall. "Dermacor X-100 did not give the control that the researchers were anticipating for grape colaspis however, it does offer rice water weevil, fall armyworm and, possibly, stem borer control."

"Our research is in development right now," said Tindall. Tindall recommends trying the different options to see what fits best with your system. Currently there are no plans to label either of the seed treatments for water-seeded rice. Δ

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