

New Tools For IPM In Rice

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Seed Treatments

The rice water weevil (RWW) is a key pest of rice in the South, but other insects, such as chinch bug, aphids, thrips, leafhoppers and black bugs, can be serious pests of seedling rice. With the cost of seed increasing and seeding rates decreasing, protecting seed from RWW as well as the above seedling pests is an excellent strategy to help insure a vigorous, uniform stand which is critical in a conservation tillage system. In 2008 and 2009, the seed treatment Dermacor X-100 was granted a Section 18 in Texas and other southern rice-producing states. The active ingredient in Dermacor X-100 is chlorantraniliprole. This seed treatment is effective against RWW, fall armyworm, South American rice miner and stalk borers, but does not control insects with piercing-sucking mouthparts, such as chinch bug. We hope to gain another Section 18 for Dermacor X-100 for the 2010 growing season.

For the past several years, we have evaluated other seed treatments with activity against RWW and insects with piercing-sucking mouthparts. Belay 2.13EC (active ingredient = clothianidin) and CruiserMaxx (active ingredient = thiamethoxam) provide excellent control of the above pests. The CruiserMaxx seed treatment also contains 3 fungicides to control an array of seedling rice diseases. CruiserMaxx recently was granted a Section 3 label, so this seed treatment will be available to southern rice farmers in 2010. CruiserMaxx also provides control of grape colaspis which is a serious pest of rice in Arkansas.

Foliar Treatment

In recent years, rice stink bug (RSB) has become more problematic in Texas. The average number of annual insecticide applications for RSB in Texas rice is 3 with some farmers spraying as many as 6 times. The vast majority of these applications involve pyrethroids and methyl parathion. Very high populations of RSB can develop quickly in Texas rice fields--especially in counties west of Houston. Frequently, sorghum fields near rice are harvested when rice is heading or in grain maturation stages of growth. Thus, high populations of adult RSB move from sorghum to rice. This can occur multiple times during the season, so rice farmers are forced to spray often. In addition, some scientists speculate the boll weevil eradication program has killed beneficial arthropods which suppress RSB populations. Also, adoption and widespread planting of Bt cotton may have increased populations of an array of stink bug species on a regional level. Finally, our data indicate populations of Texas RSB are harder to control with a pyrethroid than populations in other southern rice-producing states. In response to this added demand for more effective tools to control RSB, we recently evaluated Tenchu 20SG (active ingredient = dinotefuran) and other novel insecticides. Our data indicate Tenchu 20SG can provide up to 11 days residual activity against RSB. Thus, in 2008, a Crisis Exemption was granted for this product for Texas rice farmers. Again, in 2009, a Section 18 was granted for our farmers. Reports from the field confirm our results. We are in the process of applying for another Section 18 for Texas for Tenchu 20SG for the 2010 growing season. Other promising new RSB tools---not yet labeled on rice--- include Endigo ZC and Belay 2.13EC.

We will continue to evaluate new pest products in an effort to provide more effective, safe and affordable pest management tools for our rice farmers.

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