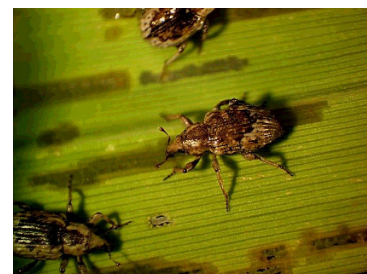


Chinese Rice Fields Require Insecticide Protection from an Invasive Pest—From the U.S.

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The rice water weevil is native to the southern U.S where it originally fed on grasses in flooded areas. With the introduction of rice to the southern U.S., the insect adapted to the new grass plant with the first reported damage to rice in the 1880s. Although rice has been grown in California since 1909, the rice water weevil was not observed there until 1959. The rice water weevil was first detected in Japan in 1976 and in Korea and North Korea in the 1980s. The first reported case of the rice water weevil in China was from Tangshen, Hebei Province in the northern part of the country in 1988. The pest spread quickly across a dozen provinces of China at a speed of 10–30 km/year, and infested more than 400,000 hectares of crop fields by the late 1990s [1].



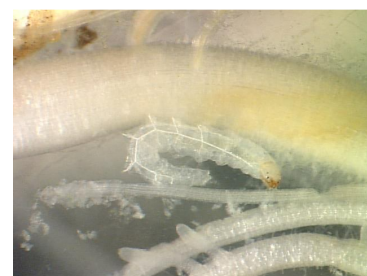
Adult rice water weevil

The adult rice water weevil is a small beetle about one-eighth of an inch long. The adults overwinter in woods, meadows and river banks adjacent to rice paddies. Swarms of flying rice water weevil adults invade rice fields soon after flooding. The adults feed on the upper leaves producing scars of little importance. Female rice water weevils lay eggs directly into the water, in roots and underwater in leaf sheaths. The larvae move to the roots and prune them. Larvae can prune almost all of the roots from a plant, stunting the growth of young plants and causing yield loss at maturity [2].



Rice water weevil eggs

The rice water weevil was recognized as an important invasive pest immediately after its discovery in China. Severe yield losses typically exceeded 10% in the established paddies but approached over 80% in newly infested areas [3].



Rice water weevil larva

As in the United States and Japan, insecticides provide the most effective means of controlling the weevil in China [3]. Since the first recorded infestation of the rice water weevil in China in 1988, more than 60 insecticides have been evaluated for control. Insecticides have been recommended for the management of overwintered adults in overwintering sites, seedling beds, and paddies. Insecticides are normally applied approximately one week after transplanting rice seedlings to paddy in order to target the adults before eggs are deposited [4].



Weevil damage

References

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