

Introduction

An adult rice water weevil is small (1/8 inch in length) and gray. They over winter in clumps of perennial grasses, leaf litter, etc. adjacent to rice fields. Once the low temperature exceeds 65 degrees F for three consecutive nights during the Spring, adults take flight to feed, mate, and locate egg-laying sites. Female weevils prefer to lay their eggs in young grass plants (<2 weeks old) standing in water. This egg laying activity starts once a permanent flood is established or when rice plants emerge above the water surface. After hatching the larvae feed on the roots for three to four weeks before pupating, and the next generation of adults emerges within five to six weeks. Generally, there is one generation per year; however, another generation is possible in late-planted rice.

Adult foliar damage produces translucent, longitudinal scars, but this damage is not of economic importance. Rather, management programmes are geared to prevent the white, legless larvae (i.e. root maggots) from causing severe root pruning damage.

The progeny of the over wintering generation causes the most damage because the root systems of smaller rice plants may not compensate for the larval root damage. This root damage can eventually lead to lower yields. Also, weeds have less competition to become established because the weevil's root damage reduces the rice plant's tillering and growth.

Management

The severity of rice water weevil infestation is dependent upon several different factors. These may include the type of cropping system (No till or conventional), length of time in rice production, weevil infestation levels during previous years, availability and proximity of over wintering sites, plant stand, density and environmental conditions. In particular, the type of cropping system can greatly influence the level of weevil infestations. Because of the smaller plant size and earlier flooding of the fields, water-seeded rice is more susceptible to rice water weevil damage than No till rice.

In water-seeded fields or No till ones following many years of consecutive rice production, preventative insecticide treatment is advisable.

The leaf scar scouting method is a sequential system that should begin within 7 days after permanent flood and continue until 20 DAS. Starting 15 feet from the field border or levee thus avoiding thin stands. Inspect 100 randomly selected leaves and if 50 or more have feeding scars apply an insecticide.

Control

Control is most effective 7-14 days after a permanent flood and weevil number are at or above economic threshold level. Control of the larvae can be done by draining the fields and allowing it to dry until it cracks. Good field sanitation will also assist in weevil management, as alternative weed will be controlled. Apply fastac 60 ml/acre and pronto at 10 g/acre for the control of adults water weevil.

Notes



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MANAGEMENT OF RICE WATER WEEVIL



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