

# Rice Pests

*of Louisiana*

## Rice Water Weevil

### Identification:

Adults are grayish-brown (1/8 inch long x 1/16 inch wide) beetles which fly into rice fields to feed on the leaves of rice plants. Leaf feeding by adults causes narrow scars that run lengthwise on the leaf, but this feeding rarely causes economic damage. Females lay eggs on the leaf sheath at or below the water line, primarily after permanent flood is applied. The larvae are white, legless grubs with brown heads that feed on the roots, reducing rice yields. There are four instars that vary in size (1/32 inch to 3/16 inch).

### Scouting:

Scouting for adult weevils is important and may begin at any time after emergence of rice, but efficacy of insecticides is maximized when adults are controlled just before oviposition (egg laying). Oviposition is possible when the field has been saturated by rainfall or flushing or when permanent flood has been established. In most fields, the majority of oviposition is likely to occur after the establishment of permanent flood. Check at least five to 10 locations per field for the presence of adults or their feeding scars. Treat when adult weevils or their scars are observed and conditions for egg laying are favorable after application of permanent flood.



*adult rice water weevil*



*puparia on rice plant root*



*rice water weevil in mud*



*feeding scars*



## Rice Stink Bugs

### Identification:

These tan and golden bugs (about 1/2 inch long) feed on rice when it begins to head. Females lay light-green, cylinder-shaped eggs in two-row clusters on leaves, stems and panicles. Eggs turn red-black just before larval emergence. Nymphs (immatures) are black with red marks on the abdomen. Older nymphs resemble adults. Nymphs and adults suck the sap from developing rice grains. During the flowering and milk stages, this causes empty grains and reduces yield. During the soft-dough stage, pathogens enter the grain at the feeding spot, and the pathogen infection and bug feeding together cause pecky rice.

### Scouting:

To scout for rice stink bugs in the field, use a 15-inch-diameter sweep net and take 10 sweeps at 10 different areas around each field. Count the number of bugs collected after every 10 sweeps. In the first two weeks of heading, treat fields when there are 30 or more bugs per 100 sweeps.



*adult stink bug*



*stink bug egg mass and nymphs*



*stink bugs mating*



*stink bug egg mass*



*stink bug damage*



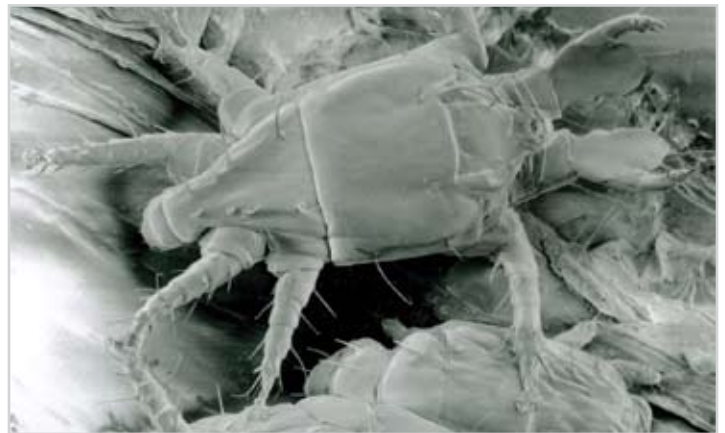
## Panicle Rice Mite

### Identification:

The immature and adult panicle rice mites (PRM) are clear to straw-colored, oval in shape and approximately 1/100 inch in length. Immatures are about half the size of adults. Eggs are clear in color, oval-shaped and about 1/3 the size of adults. The generation time ranges from 7-21 days, depending on temperature.

### Scouting:

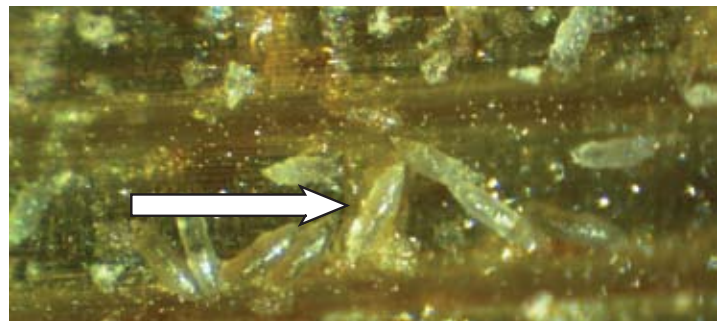
Scout for PRM by looking for the symptoms associated with bacterial panicle blight and sheath rot. In affected plants, look for a cinnamon-, yellow- or chocolate-brown-colored lesion on the leaf sheath that does not have a distinct edge. To find mites, pull the leaf sheath back and examine the underside with a minimum 20X hand-lens. PRM feed on the plant on the inside of the flag leaf sheath. Once a new leaf begins to develop, a female PRM will move to the new leaf sheath, produce male offspring and establish a new feeding lesion. Thus, damage will often be observed on interior sheaths when the outer sheath is removed. This continues until the PRM reaches the leaf nearest the stem. They also feed on developing panicles from the boot stage to the milk stage of heading.



*male panicle rice mite*



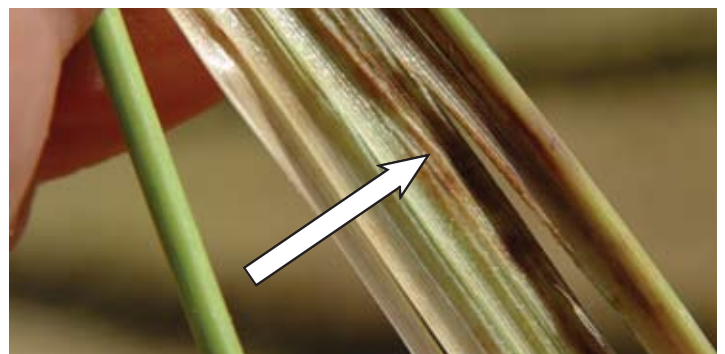
*damage on leaf sheath*



*mites feeding inside of leaf sheath*



*damage on leaf sheath*



*mite damage*

# Rice Leafminer

## Identification:

Adult flies are less than 1/4 inch long, with a metallic blue-green to gray thorax and clear wings. They lay eggs on rice leaves as they lie on the water. The larvae are transparent to cream-colored after hatching but become yellow to light green within a few days. Larvae tunnel between the layers of the leaf, attacking and killing leaves closest to the water. Larvae move up the plant, killing additional leaves, and under heavy infestations, the entire plant may die. Rice is attacked in the early spring, and infestations usually occur on the upper side of levees where water is deepest. Rice leafminer is not usually a problem in water 4 inches to 6 inches deep. Leafminer problems are more severe in continuously flooded rice than in periodically flooded rice. Leafminers appear to attack rice fields in the same vicinity from one year to the next.

## Scouting:

Scout for rice leafminer larvae by pulling a rice leaf gently between the thumb and forefinger. If larvae or pupae are there, a bump can be felt in the leaf blade. The larvae or pupae can be found by separating the layers of the leaf. If plant populations are being reduced to less than optimum stands (10 plants to 15 plants per square foot), chemical control may be necessary.



*rice leafminer maggot in leaf*



*leaf pulled back to expose maggot*

# Rice Stem Borers

## Identification:

Adult sugarcane borers are straw-colored moths about 3/4 inch long with a series of black dots arranged in an inverted V-shape pattern on the front wings. Adult rice stalk borers are also 3/4 inch long with pale white fore and hind wings tinged on the edges with metallic gold scales. Egg laying by both species on rice begins in May, but economically damaging infestations generally occur July through September. Eggs are flat, oval, cream-colored and positioned like fish scales in clusters of two to 100. Young larvae crawl to the base of the leaf while feeding on the leaf surface and continue feeding on the inside of the leaf sheath. Larvae bore into the stem and continue to feed inside the stem. Mature larvae of both species may reach 1 inch in length. Larvae of the sugarcane borer are cream colored with a series of brown spots on the back. Larvae of the rice stalk borer are cream-colored with two pairs of continuous dark stripes running the entire length of the body. Larvae of the Mexican rice borer are a translucent golden color with two pairs of discontinuous stripes running the entire length of the body. Larvae pupate inside the stem. The pupae are brown, about 1/2 inch long and cylindrical.

## Scouting:

Start scouting for stem borers at green ring and intensify as plants reach early boot stages. Look for feeding lesions located on the inside surface of the leaf sheath. These feeding lesions are easily observed from the outside; however, care must be taken to avoid confusing these lesions with those caused by sheath blight or PRM. Peel off the leaf sheath to expose the feeding larva or to detect the presence of frass to ensure it is stem borer. Also look for adults, egg masses or fresh feeding scars on the leaves. Early infestations by these species are noticed when the youngest partially unfurled leaf of the rice plant begins to wither and die, resulting in a condition called deadheart. Stem feeding that occurs during panicle development causes partial or complete sterility and results in the whitehead condition. Severe infestations cause stalk breakage and plant lodging above the water surface.



*sugarcane borer*



*Mexican rice borer*



*rice stalk borer*



*whitehead damage caused by stem borer feeding on rice*



*Damage from stem borer larva feeding on leaf sheath. If you peel back the leaf sheath, you will find frass underneath.*

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**Pub. 3020**  
**11/07**

Issued in furtherance of Cooperative Extension work, Acts of Congress of May 8 and June 30, 1914, in cooperation with the United States Department of Agriculture. The Louisiana Cooperative Extension Service provides equal opportunities in programs and employment.