Armyworms

Rice Science for a Better World

rice fact sheets

What is an armyworm?

Armyworms are caterpillars that attack rice. At least three species attack rice in Asia: the rice swarming caterpillar (Spodoptera mauritia (Boisduval)), the common cutworm (Spodoptera litura (F.)), and the rice ear-cutting caterpillar (Mythimna separata (Walker)). A single armyworm egg mass contains hundreds of eggs. Each female lays 800-1000 eggs during its lifetime of about one week.

Why control armyworms?

Armyworm larvae feed on rice at any stage of the plant. The caterpillars feed on rice leaves and can also cut off young seedlings at the plant or panicle base. They feed in the upper portion of the rice canopy on cloudy days or at night.

Panicles are cut off from the base

How to control armyworms?

The caterpillars prefer dry fields and will drown if submerged. During the day the caterpillars hide deep in rice plants, just above the water surface if the field is flooded. If the field is dry they will hide on the ground under leaf litter. Armyworms prefer to pupate in the soil, but if a field is flooded they can pupate on rice plants.

Prevention

- Establish seedbeds far from large areas of weeds.
- Remove weeds outside and inside of the field - Plow fallow land.

Control

- **Natural control:** Avoid killing natural enemies (e.g., wasps and spiders) of armyworms. Do not use any insecticide on a schedule.
- **Physical control:** There are occasional, unavoidable, armyworm outbreaks in parts of Asia, when large numbers of moths deposit eggs in rice fields at night. Experience shows that seedbeds or fields of rice (up to panicle initiation) with standing water can survive even the worst armyworm attacks. Caterpillars eat the seedlings down to the water level, but rice with adequate water has an amazing ability to grow back again. Flooding seedbeds is the best defense against armyworms. Digging pits or trenches covered with leaves gives caterpillars a place to take shelter from the sunlight. The larvae can be easily collected from the pits. Placing ashes in the trenches makes it more difficult for the caterpillars to escape. Ash-filled trenches may also serve as a barrier to keep armyworms out of seedbeds during an outbreak. Placing branches around fields also gives the armyworms a place to congregate where they are easily collected by hand. Armyworms can be collected from the field by hand or net during the day and fed to chickens and ducks. Mix the caterpillars with other food or the fowl will refuse to eat armyworms after a while.
- **Chemical control:** Insecticides should be the last resort for armyworm control. The choice of insecticide depends on factors such as the application equipment available, the cost of the insecticide, the presence of fish, or a need to preserve natural enemies. Like all pesticides, the benefits of using an insecticide must be weighed against the risks to health and the environment. Indiscriminate insecticide use can disrupt existing biological control, resulting in pest resurgence or outbreaks. Before using a pesticide contact a crop protection specialist for suggestions, guidance, and warnings specific to your situation. Always read pesticide labels carefully.

Larvae and pupae of armyworm.

1. Leaf blades fed upon by armyworms.
2. Panicles are cut off from the base.

For more information:

- For more information on insect management visit the IPM materials in the Rice Knowledge Bank at: http://www.knowledgebank.irri.org.
- To diagnose problems in the field visit http://www.knowledgebank.irri.org/ricedoctor.

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