Pink stem borer (*Sesamia calamistis*)

Factsheets for Rice Production, East Africa

Biology

- Pink stem borer is a destructive rice pest affecting all stages of rice growth.
- The moth is light brown with brown strip, nocturnal and fly long distances.
- The adult moth lays up to 300 eggs on the lower side of leaf blades.
- On hatching, larvae move to the stem and bore while feeding.
- The larvae pupates at the base of stem for 10-14 days.
- The life cycle is continuous through out the year.

Fig 1. Pink larvae of stem borer (sciencephoto.com)

Geographical Distribution

- Found in rain fed lowland and irrigated rice. In Kenya (Ahero, Bunyala, Kirinyinga , Kisumu, Kiilifi, and Kwale Counties), Tanzania (Morogoro, Kilimanjaro, Arusha, Mbeya, Moshi) and Uganda.(lake Kioga, Buguri, butalenja and lira districts).

Damage on rice crop

- Larvae bore into a stem resulting to "deadheart" and "whitehead" damage at the vegetative and opening of the panicle stages.
- Pest feeding causes an increase in number of tillers and reduced grain
- The yield loss due to stem borer ranges from 10 to 100%.

Fig 2. Pink larvae and Moth (lucidcentral.org)

Management Strategies

1. Cultural control

- Synchronizing and early planting especially in areas with a history of borer infestations.
- Practice direct seeding to minimize pest infestation.
- Plant tolerant cultivars such as BW 196. (6)5.
- Cut the leaf-top at transplanting to reduce carry-over of eggs from the nursery to the field.
- Strengthen stem tissues to minimize insect boring by applying calcium silicate (1000kg/ha).
- Destroy alternative host and volunteer plants on field perimeters and burn infected rice straw.
- Apply correct amounts of nitrogen in 3 splits – basal, at tillering and panicle initiation (Refer to the sheet on rice establishment).
- Harvest the rice crops at ground level to expose the larvae, plough and flood the field.

2. Biological control:

- Enhance the natural enemies such as spiders parasites
- Use botanical insecticides, *Beavaria spp,*
- Use of pheromone traps

3. Chemical control:

- Spray* with Lambda-cyhalothrin 17.5g/L (like Tata Umeme 2.5 EC, Duduthrin 1.75EC, Duduthrin super EC, Kingcode 5% EC, Pentagon 5% EC, Karate)
- Spray deltamethrin 25 g/l (like Decis 2.5 EC, Deraphon GR

*The economic injury level is 4 and 6 egg batches for early and late infestation respectively. Apply insecticides to coincide with larval emergence to prevent their entry into the rice stems.

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