Rice whorl maggots (*Hydrellia spp*)

Factsheets for Rice Production, East Africa

Biology

- The rice whorl maggot is semi-aquatic and common in irrigated fields and feeds on central whorl leaf .
- The adult fly lays elongate, white eggs glued on leaves, which hatch into transparent to light cream legless young larvae in 10−12 days.
- The pest prefers ponds, streams and lakes or places with abundant calm water and lush vegetation.

Fig 1. Rice whorl maggot adult (IRRI Rice Knowledge Bank)

Fig 2. Whorl maggots (IRRI Rice Knowledge Bank)

Geographical distribution

- Rice leaf folders have been reported in all rice growing areas

Damage on rice crop

- Makes holes that are white or transparent patches on the leaves.
- They feed on leaf margins causing large scarred areas making leaf a ragged appearance.
- Slightly damaged leaves have pinholes, transparent patches and break easily.
- Damaged plants are stunted, have few tillers and renders infested plants less competitive with weeds.
- The plants have few tillers, hence lower yields.

Fig 3. Leave damage by whorl maggot (IRRI Rice Knowledge Bank)

Fig 4. tem damage by whorl maggot (IRRI Rice Knowledge Bank)

Management Strategies

1. Cultural control

- Drain water at intervals of 3-4 days during the first 30 days after transplanting to reduces egg laying. The adult flies are more attracted in standing water.
- Level the field and start the crop in 7-10 cm of water. Increase water depth slowly after the leaves begin to grow upright.
- Reduce the potential for damage by rice whorl maggots by encouraging the rice to emerge quickly and grow erect.
- Inspect neighboring fields planted 1 week ahead for manifestation of damaged leaves and dead heart.
- Encourage growth of Azolla and *Salvinia molesta to* prevent infestation.

2. Biological control

- Encourage predators- wasps parasitize the eggs and the maggots; dolicopodid flies prey on the eggs; ephydrid flies and spiders feed on the adults.
- Use soft chemicals or bio-pesticides e.g. Neem based products (Achook 8.1l/ha, Nemason 10l/ha, Nimbecidine 600ml/20l of water).

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