

## Rice Leafminer (*Hydrellia griseola*)

### Biology

- The adult is a small, olive-green fly found in early-season walking on water and rice leaf surfaces.
- The females lay elongate, eggs on the upper surface of leaves.
- Eggs hatch after 3 to 5 days, into cream-colored, maggot-shaped larvae, most destructive stage.
- Because high humidity is required for hatching, leaf miner infestations are usually confined to leaves lying on water surface.
- The life cycle is about 2 weeks at 29.4°C to 32.2°C.

### Geographical Distribution

- It has been reported in all rice growing areas within the region



Fig 1. Flooded conditions encourage leaf miners (Lusike Wasilwa)



Fig 2. Rice leaf miner adult ( Plantwise Knowledge Bank)

### Damage on rice crop

- The larvae cause injury to the crop by feeding in mines between two epidermal layers of the leaves.
- The mines usually contain a swelling, which is the body of the feeding or pupating leafminer.
- Mined areas on the leaf fades to a light green color at first, then turns yellow and may appear white with time if it dries.
- In severe infestations, the pests mine the leaf sheath. Injured leaves drop prematurely and affected plants loose most of the leaves.
- Delayed maturity, or death of the plant.



Fig 3. Damage caused by leafminer (LSU Agcentre)

### Management Strategies

#### 1. Cultural Control Methods

- Monitor and scout for rice leaf miners to determine control.
- Manage water levels in the field to reduce potential for infestation and encourage rice to emerge quickly and grow erect (3-4 inches (4-7 cm) of water to start the crop).
- Use predators e.g. parasitic wasps (*Chorebus aquaticus* and *Opius hydrelliae*) to manage the leafminers.
- Encourage cover of *Azolla* and *Salvinia molesta* to prevent rice whorl maggot infestation.

#### Chemical control

- Spray with abamectin (eg Abalone 18EC, Agrimec 18EC, Amazing top 20g/kg +Acetamiprid 80g/kg, Dynamec) at the recommended rates
- Spray with pyrethrins (e.g. Brigade 025EC at a rate of 20-40ml/20 litres of water; Bigeran 25 EC AT 40ml/20 litres of water.