

INSECT PESTS OF GRAM

GRAM CUTWORM



Gram cutworm

Taxonomy

- *T.N:* *Agrotis flammata*
- *Family:* Noctuidae
- *Order:* Lepidoptera

Identification

- **Eggs** are yellowish white
- **Larvae** dark grey in colour
- **Adult** is a heavy-bodied grayish-brown or wheat colored insect



Cutworm Life Cycle



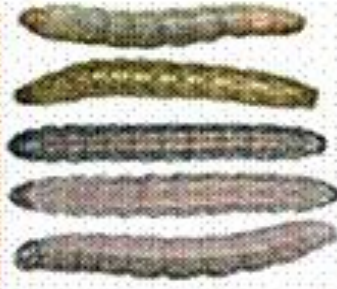
Adult

300-450 eggs/female



Eggs

Larval period 10-30 days



Larvae

Larval period 10-30 days



Damaged Plant

Pupal period 10-30 days



Pupa

Life Cycle

- This pest is active from **October** to **April**
- The moths appear in **October** and lay up to **900 eggs** on the under surface of leaves, shoot, stems or in soil
- The eggs hatch in **one week during summer** and in **2 weeks during winter**
- Larvae are **full-grown in 4-7 weeks** and then **pupate for 2 weeks** in earthen cells in the soil
- The **life cycle** is completed in **7-11 weeks**
- There are generally **2 generations** in a year

Damage

- Caterpillars **come out** from their breeding places **at night** and become **active**,
- **Cutting** down the **young plants of gram**, just above or slightly below the surface of soil
- The **cutaway gram seedlings** in the field are indication of its attack



Control

- **Hand picking**/ hand hoeing will be effective
- It is also controlled by using **poisoned bran mash**. The bait is placed in small heap in the infested field in the evening
- Trapping the moths by **light traps**
- **Clean cultivation** should be done
- The pest is kept under check by **enticing birds** and **insect predators**
- Spray **Cypermethrin + Monocrotophos** EC 500 ml/acre

GRAM POD CATERPILLAR



Taxonomy

- *T.N:* *Helicoverpa armigera*
- *Family:* Noctuidae
- *Order:* Lepidoptera

Identification

- The gram pod-caterpillar or gram pod-borer is a **serious pest** of gram and red gram
- The **mouth is stoutly built** and is **yellowish brown**
- Caterpillars are **greenish** with **dark broken grey lines** along the sides of the body



Moth



Egg



First instar caterpillar



Second instar caterpillar



Third to fourth instar caterpillar



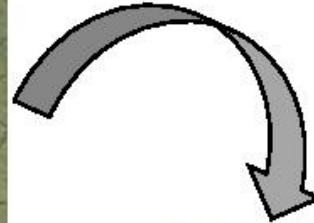
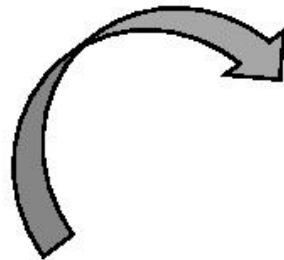
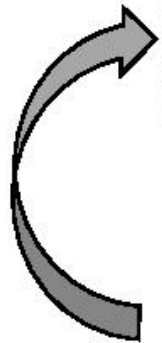
Fifth to six instar caterpillar



Pupa cell

Pupa

The life cycle can be completed in about 30 days in warm conditions



Life Cycle

- The females lay about **500-750 eggs** on the tender parts of the plants
- The eggs hatch in **one weeks**
- Larvae come out and move from pod to pod and are full fed in **3 weeks**
- The full grown larvae come out of the pods and **pupate** in soil for **2 weeks** which **prolongs in winter**
- There may be **8 generations** in a year

Damage

- Larvae feed on the foliage when young and on the seed in later stages
- A single larva may destroy 30-40 pods before it reaches maturity



Control

- The pest can be suppressed by **hand picking** the caterpillars in the early stages of the attack
- **Ichneumonid wasp**, larval parasitoid of gram pod-borer should be promoted in the field
- Spray

Profenofos EC 800 ml/acre

Lambda cyhalothrin EC 250 ml/acre