## Cutworm on onion

*Agrotis ipsilon, A. segetum*

### Prevention
- Practice farm sanitation. Keep the nursery and field free of weeds and ratoon crops that may act as alternate host and reservoirs to the cutworm
- Deep plough and harrow fields before transplanting to expose the cutworm to natural enemies and sun heat
- Remove and burn all crop residues before planting
- Intercrop onion with mustard at every 15 rows of onion as a trap crop
- Conserve natural enemies like, spiders, parasitic wasps, praying mantis, ants, and birds by minimizing the use of insecticides; do not spray insecticides when natural enemy numbers are high in the field

### Monitoring
- Additional relevant crops: peppers, eggplants, beans, cereal crops
- Begin monitoring at seedling stage, look for dry wilted and discoloured onion plants. Infestation may show in small restricted areas. If the moths are present, scout for presence of larvae
- Check daily for caterpillars at base of the plants and inside the leaves. Look for stout soft bodied green to dark-brown caterpillars (5-10 mm) with striped margins at the back
- Early in the morning flush larvae using a mixture of lemon scenting dishwashing liquid at 2 tablespoon/2 gal of water
- Ensure crop is washed after flushing to minimize risk of phytotoxicity to the crop
- If 5-10 caterpillars are observed, initiate control measures

### Direct Control
- Remove and destroy egg masses and caterpillars from plants and crush them
- Dig around the damaged plant to unearth and mechanically kill the caterpillars
- Flood the area to suffocate the larvae in the soil if you are growing onion in deep soils
- Drench at seedling stage with crude neem extract at 35 ml/L of water to reduce infestation drastically. Apply in mornings or evenings
- Mix equal quantities of sawdust, bran and molasses with enough water to make mixture sticky and spread around the base of the plants in the evenings

### Direct Control
- When using a pesticide or botanical, always wear protective clothing and follow the instructions on the product label.
- Do not use chemicals with the same mode of action per year as this can lead to resistance. Always consult the most recent list of registered pesticides of MOFA, Ghana.
- Spray Bt based products (e.g. Bypeel) at a rate of 55-550 g/Ha (IRAC, 11A)
- Lambda-cyhalothrin based products (e.g. Pawa, Controller, Lambda suiper) each at 35-40 ml/15 L of water. These are synthetic pyrethroids (IRAC, 3A), with contact activity

### Restrictions
- WHO Class III (Slightly hazardous). Apply as soon as the larvae appear in the field. Repeat application every 7-10 days. Maximum 3 applications per season in the morning and later in the day. PHI 7-14 days. REI 24 hours. Apply mixture as soon as possible after preperation. Do not apply if rain is expected in the next 6 hrs and store this product away from direct sunlight
- WHO Class II (Moderately hazardous); Maximum 2 applications per season in the morning and later in the day. PHI 14 days. REI 24 hours. Eye and skin irritant. Highly toxic to bees and other non-target arthropods. Toxic to aquatic organisms. Avoid using near waterways.

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**Ghana**

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