American Bollworm of Mungbean

Recognize the problem
*Helicoverpa armigera* usually attack leaves, buds, flowers and pods, and all field crops except wheat and barley. *H. punctigera* attacks broadleaf crop plants such as cotton, chick pea, sunflower, soybean, mung bean, lucerne, canola, peanut, safflower and linseed. Larvae feed on leaves but are most damaging when feeding on growing terminals, buds or squares, flowers, pods, seed and fruit. This includes direct losses through shedding and reduced quality. The adult moths lay eggs on the top third of plants and on growing points.

Background
*Helicoverpa* defoliation is characterised by rounded chew marks and holes (loppers make angular holes). *H. armigera* is generally regarded as the more serious pest because of its greater capacity to develop resistance to insecticides and broader host range. High populations in seedling or drought-stressed crops can cause considerable damage if vegetative terminals and stems are eaten. Once crops reach flowering, larvae focus on buds and flowers (vegetative terminals) before attacking pods. Small pods may be totally consumed, but larvae target the seeds in large pods. *H. armigera* numbers increase to become the dominant species in mid-summer to autumn. Small larvae should be scouted for by inspecting (opening) vegetative terminals and flowers. Damage to vegetative terminals is often the first visual clue that *Helicoverpa* larvae are present.

Management
- Mung bean crop should be closely monitored during the budding, flowering, pod formation and maturity.
- Inspect crops weekly during the vegetative stage. Inspect twice weekly from early budding until late podding. Sample six widely-spaced locations per field.
- Use pheromone traps to monitor *Helicoverpa* moths.
- Where possible, avoid successive plantings of summer legumes.
- Predatory bugs and beetles that attack *Helicoverpa* eggs and larva include: spine predatory bug, glossy shield bug, damsel bug, big eyed bug, apple dimpling bug, assassin bug, red and blue beetle, predatory ladybirds, other important predators include ants, spiders and lacewings.
- Parasites include: *Trichogramma* sp i.e. tiny egg parasite wasps, *Microplitis* and *Netelia* (wasps) i.e. caterpillar parasites, species of tachinid flies i.e. caterpillar parasites. With the exception of *Trichogramma* and *Microplitis*, most parasites do not kill *Helicoverpa* until they reach the pupal stage (dormant).
- Good agronomy and soil moisture are crucial as large, vigorously growing plants suffer less defoliation for a given *Helicoverpa* population and have less risk of terminal damage.
- *H. armigera* has developed resistance to a wide range of insecticides. However application of chlorpyrifos 20 EC (75 ml) + acephate 35 ml/Acre, profenofos 50 EC @ 600 ml/acre or emamectin benzoate @ 200ml/acre or thiamethoxam + chlorantraniliprole (Voliam Flexi) @ 80ml/acre is effective against this pest.
- Manage weed to control the population of *Helicoverpa* and other insect pests.

Scientific name(s) > *Helicoverpa armigera, Helicoverpa punctigera*