

Pulse Beetle

Recognize the problem

Pulse beetles are serious pests of stored pulses like pigeon pea, green gram, black gram, cowpea and chickpea. The white coloured eggs hatch after 4 to 5 days. The grub makes a hole inside the grain which causes heavy damage. This reduces the quality as well as market prices. Adults are 4.5 mm long and heart shaped.

Background

This is a primary pest of stored pulses. Infestation starts in the field and continues in the store. The grubs penetrate grains and feed on the inner content. Infested grains are unfit for human consumption and cannot be used as seeds. Maximum damage occurs when conditions are favourable i.e. an optimum temperature of 30°C and relative humidity of 70%. This pest completes its life cycle in 25 to 40 days and causes heavy yield losses. The pest can be effectively managed using various physical methods.

Management

All the stages of pulse beetle in seeds could be killed by exposing them to temperatures of up to 45°C for varying periods, or by exposing them to sunlight for 4 to 6 hours with the diurnal temperature varying from 37 - 45°C. Viability of the treated grains not will be adversely affected.

- Clean the warehouses and storage places with brushes, scrapers or a vacuum cleaner, then destroy any collected insect

For storing the grains, use any of the following methods:

- Mix ash with grains
- Use neem leaves at @ 1 kg / 100g of grains
- Apply neem oil @ 8-10ml / kg seed, fenvalerate 0.4% @ 4 gm/kg seed, malathion 50EC @ 0.06ml/kg seed or deltamethrin 2.8 EC (0.04ml)/ kg for seed treatment
- Dust with 5% malathion

Pulse beetle on green gram seeds.
(Photo by Carolina Biological Supply Company)



Damage of pulse beetle feeding.
(Photo by Agropedia)



When using a pesticide, always wear protective clothing and follow the instructions on the product label, such as dosage, timing of application, and pre-harvest interval.

Scientific name(s) > *Callosobruchus* spp.

The recommendations in this factsheet are relevant to: All Countries