



STORED GRAIN INSECT CONTROL

bruchid beetle in beans and peas

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Bruchid beetles (*Callosobruchus maculatus* and *C. phaseoli*) attack mungbean, cowpea and lab-lab seed stored by growers and grain traders in Queensland. Other bruchids attack different peas and beans, including navy beans.

Bruchids are not a temporary problem - action must be taken now to reduce future damage.

What are Bruchids like?

Bruchid beetles are about 3 mm long, 2 mm wide and mostly grey or brown with large eyes and hairy bodies. Adults live for only a few weeks.

After mating, female beetles glue their whitish-coloured eggs to bean or pea seeds. Larvae hatch, then burrow through the seed coat to feed inside.

Before pupation each larva chews a circular hole, leaving only a thin layer of seed coat above them. After pupation, newly formed adults chew through this seed coat 'window' to escape from the seed. Circular 'windows' are an easy-to-see feature on infested seeds.

Why are bruchids a problem?

The bruchid life cycle from egg to adult takes 3 to 4 weeks at 30°C. If not controlled, bruchid populations increase rapidly in stored beans.

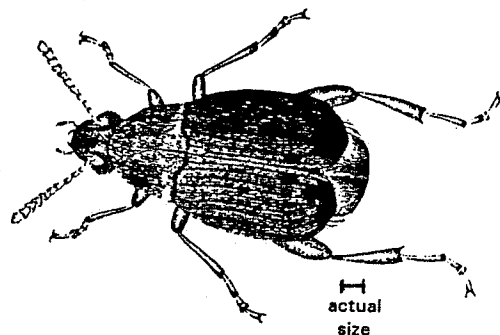
Beetles from infested produce fly to grain legumes stored nearby, to other storages, and to legumes ripening in the field. They breed both in unharvested crop and in stored seed.

Pre-harvest control methods are still in the developmental stage. But even if pre-harvest methods are successful, bruchids could infest grain later so control in stored seed is vital.

Plan for control

Bruchid problems increased rapidly when bean and pea cropping expanded in Queensland. Long term planning is needed to control bruchids effectively. If your present methods are not working, take an open-minded look at available alternatives.

Infestation problems will continue if bruchid control is only started when beetles appear in mid-summer. Growers with problems this summer, or who plan to store mung beans, cowpeas or lab-lab next summer, must start their control program early and continue through the year.



Options

Bruchid control in Queensland depends on good hygiene, possibly combined with cooling or drying. **Fumigation is the best available method to control infestations.**

Phosphine fumigation is cheap and effective, if it is carried out in well sealed enclosures. Controlled atmosphere disinfestation using gases such as carbon dioxide is also possible.

No insecticides are registered to protect stored mungbean against insects. Using residual insecticides could destroy export markets for Australian mungbean. ■