



Look out for Pea Weevil

Recently, pea weevil (*Bruchus pisorum*) was detected in the Wairarapa area but may also be present in other parts of New Zealand. If you believe you have found pea weevil please call MPI now on **0800 80 99 66**.

WHAT IS PEA WEEVIL

Pea weevil is a small insect pest whose entire lifecycle is dependent on the pea species (*Pisum sativum*). It is found in many regions around the world including the UK, North America and Australia. It has recently been discovered in New Zealand in a small area of the lower North Island and is considered a highly undesirable pest that, if not eradicated, could cause economic damage to New Zealand's export pea seed market and the processed green pea industry.

The pea weevil is small (4–4.5 mm long), brownish-grey in colour and flecked with white. The weevil has a globular body shape and long legs. The exposed tip of the abdomen has a white marking that superficially resembles an airplane. The larvae of the pea weevil is crescent shaped, white to cream in colour and about 6mm long when mature. The larvae have a brown head capsule and mouthparts.

DAMAGE

There is only one generation per year. Only green growing peas are attacked. The pea weevil cannot reproduce in stored grain, but sometimes the adults can remain concealed in grain for up to 2 years.

Heavy infestation of pea weevils often reduce the pea seed to shells. The larval stage of the weevil develop and tunnel within the pea leaving a seed membrane window for adult escape. They may consume nearly the entire contents as they mature. Pupation occurs in the peas and adults emerge through a neat circular hole. They will only infest green ripening peas so will not infest dry peas. Weevil infested seed may germinate if the injury is confined to the cotyledon; but these seedlings may be weak and more susceptible to pests and diseases. Infested green peas can become foul and unfit for human consumption.

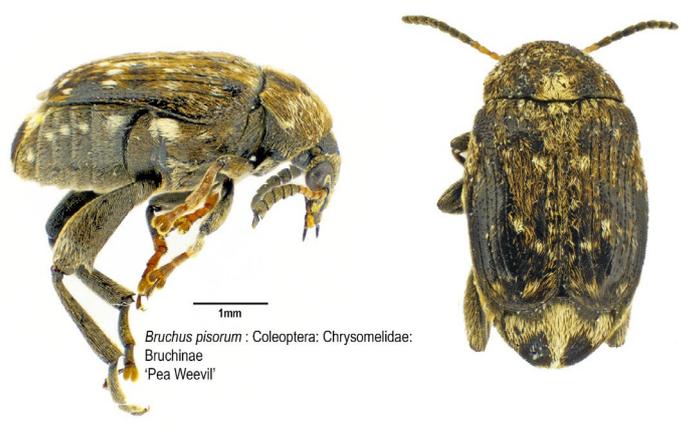
WHAT CAN BE DONE TO RESTRICT ITS SPREAD?

The only host of the pea weevil is the pea species. As well as flying from one crop site to another flowering crop, the weevil can also spread through the movement of infected pea seed, pea straw or machinery.

It is recommended to keep all pea straw on your property and

SPECIFIC INSTRUCTIONS FOR PEA SEED GROWERS, CONTRACTORS, SEED STORE OPERATORS, DISTRIBUTORS AND SEED MERCHANTS

1. Please sample and test your pea seed as per the guideline document.
2. If you think you have found pea weevil please call **0800 80 99 66**.
3. If you have tested your pea seed and did not find any pea weevil please email peaweevil@mpi.govt.nz with your name, business name and location, contact details and what line and variety of seed you sampled.
4. Please complete this by **31 May 2016** and we will remind you again on 30 May.



burn or consume with livestock. Pea harvesters and hay balers should be disinfected or fumigated using insecticides before leaving infested properties. Fumigation is also known to be an effective measure to eradicate larvae in infected pea seed post-harvest.

Only fumigated or weevil free-seed should be transported or planted to help stop the spread of pea weevil.



Figure 1: Shows the entrance hole created by the first larval instar.

LIFE CYCLE

The adults primarily overwinter within peas in storage, but also in the field and many other sheltered spots. The pea weevil adult emerges from overwintering sites as temperatures rise, and fly up to 5 km attracted by flowering pea crops, feeding on flowers (pollen, nectar and sometimes petals). The elongated, yellow eggs are laid on the outside of the pods. Although one to a dozen eggs are laid per pod, only one larva develops per pea.

Hatching occurs in 1 to 3 weeks and the larva burrows through into the pea, maturing in 5 to 6 weeks, when infested peas warm up aiding in the development of the larva. Pupation takes about 2 weeks, late in the summer.

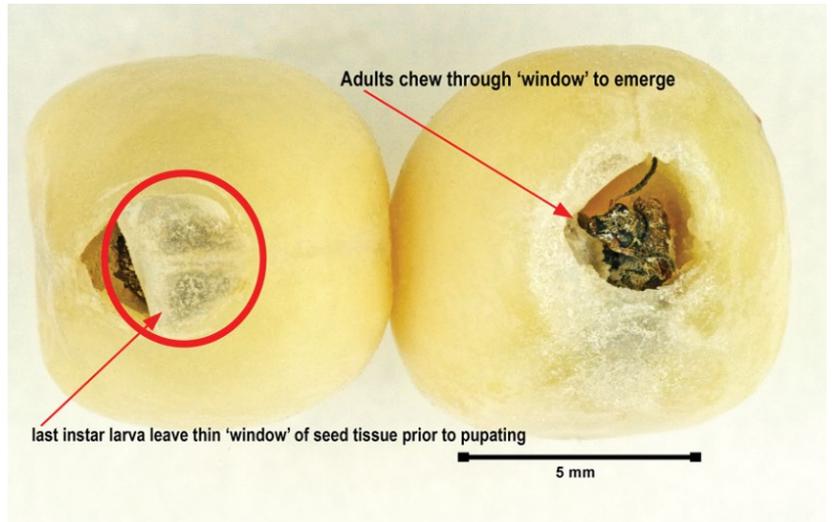


Figure 2: Shows the thin “window” of seed coat created prior to pupating (on left) and adult weevil emerging from the seed (on right).

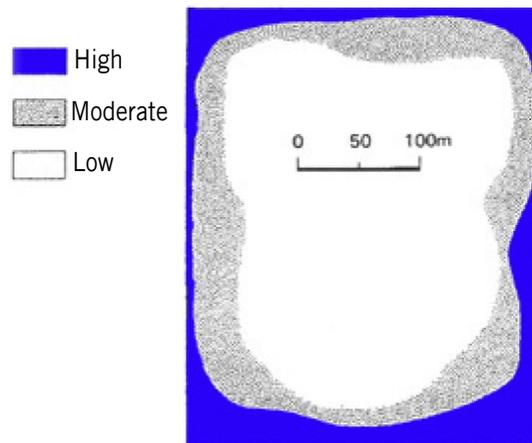
CONTROLLING THE PEST

Insecticide application during flowering before the larvae penetrate the pod, is the most effective control method. Several applications may be required if reinfestation occurs. Sowing clean uninfested pea seed will also remove one source of infection.

HOW CAN IT BE MONITORED?

Adult pea weevil is most easily found in spring within a flowering crop, close to the crop’s edge, especially where the crop is adjacent to overwintering sites such as hedges, trees or sheds. Monitoring is critical (suggest using a sweep net) and should be done at the crop edges every 3–4 days from the start of flowering and when average temperatures are above 20°C as this is when pea weevil are active.

Figure 3: Typical distribution of Pea weevil in a large pea field.



IF YOU HAVE SEEN A PEA WEEVIL:
**Contact MPI’s free 24-hour pest
 and disease hotline 0800 80 99 66**

www.mpi.govt.nz

