

EARLY CANOLA INSECTS AND STRATEGIES

BY CHRIS ROBINSON, REVIEWED BY DAVID WARD

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There are never two seasons the same when it comes to insect management and with reasonable summer rainfall received in most regions, this year will be no exception. There are already abundant summer weeds and depending on the control measures and timing this will support an increase in populations of certain pests, to potentially damaging levels.

The risk of pest damage to canola is strongly determined by rotations, the tillage system used and the weed situation in each paddock - whether it be summer weeds or the build-up of weeds in previous years. High weed burdens in paddocks (i.e. pasture paddocks going into canola) will generally have the highest insect pressure or risk. The adoption of no-till into a farming system has also taken away the mechanical control of certain insects, with increased reliance on insecticides for control.

The insects discussed below have been identified by Farmanco Agronomy as some of the most problematic pests in previous years - and are considered to represent a high risk to crops this season.

When inspecting crops look at what symptoms the plant is showing before looking for the pest that “may be” doing the damage. Identifying the damage will give an indication of what insect you need to look for. The timing of inspections is also critical as certain pests will feed at different times. Inspecting pests when they are most active will highlight the amount of pressure they are putting on the crop.

MITES

Mites are most active during the middle parts of the day. Most mites will damage canola in a similar way - symptoms include silvery patches across the leaf surface and eventually cotyledons will have a cupped shape appearance. If cotyledons are drooping downwards then this is

not normally a sign of mite damage, but generally more a moisture stress or root disease symptom.

BRYOBIA MITE (CLOVER MITE)

Bryobia mites look like juvenile Red Legged Earth mite and can easily be mistaken for RLEM.

Bryobia are grayish in colour and have pale red to orange legs and are about half the size of an RLEM. The significant difference between juvenile RLEM and Bryobia is that Bryobia will have two very long front legs. Bryobia favour the light sandy and gravel soils, but as populations increase they will also become active on heavier soils. When inspecting for bryobia mites, check the lighter parts of the paddock first during the middle of the day. Theory suggests that as autumn to winter temperatures reduce, these mites will be less of a problem, but we often see in the southern areas that they are still causing damage even when night temperatures are below 10°C.

Control: 150 to 200ml/ha Omethoate @ \$4.40/ha or 20 to 30ml/ha Trojan® @ \$5.00/ha.

Suppression: 200ml/ha Bifenthrin @ \$4.00/ha.

BALAUSTIUM

Balaustium mites are twice the size of an RLEM, brownish to maroon in colour, short red legs and have quite a plump body. Their distinctive characteristic is identified with magnified inspection – in that they have a very hairy body. They do not favour any particular soil type and are quite often in populations with Bryobia mites, which has been the cause of misdiagnosis at times.

For the control of these mites high rates of Alpha-cypermethrin or Trojan® are required. Balaustium need to be emerged and active at the time of spraying, because canola seedlings do not have enough surface area to absorb the high rates of insecticide required to give residual protection - a knockdown approach is therefore necessary.

Control: 400ml/ha alpha-cypermethrin @ \$4.00 per hectare or 20 to 30ml Trojan @ \$5.00/ha.

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LUCERNE FLEA

Lucerne Flea need a degree of clay in the soil to incubate eggs over the summer period and hatching is caused by autumn soaking rains. Lucerne flea will produce a number of generations through the growing season until dry spring conditions commence and then they lay resting eggs. As a result, Lucerne flea are generally more concentrated on the heavier soil types, but will move into the lighter soils as population pressure increases.

Lucerne flea are green in colour with brown markings across their back and are about the size of a small pin head. They will quickly spring from plants when disturbed. Lucerne fleas eat the green tissue between the margins of the plant leaf, leaving a whitish transparent film. When blown by wind the film will break leaving windows or pin holes through the leaf. Lucerne fleas are easy and cheap to control with organophosphate insecticides. Higher rates of chlorpyrifos will give longer term residual control.

Control: 100ml/ha chlorpyrifos @ \$1.00/ha or 100ml/ha omethoate @ \$1.00/ha or 100ml/ha Dimethoate @ 50¢/ha.

WEEVILS

VEGETABLE, DESIANTHA AND LUCERNE WEEVIL

Desiantha and Vegetable weevils are small and are dark brown or black in colour. Lucerne weevils are light brown in colour and are much larger than the vegetable weevil.

Weevils rely on broadleaf weed burdens to build their population. Weevils mostly cause damage to canola plants when sown into pasture paddocks - especially when cape weed was a dominant component of the pasture. Vegetable and Desiantha weevils will directly feed on the plant leaving a neat serrated scallop along the edge of the cotyledon or leaf. Lucerne weevils mainly concentrate on ring barking the stem of a canola seedling. This damage can sometime be mistaken

for False Wire worm. Weevils are most active late in the afternoon and early evening. High rates of Bifenthrin will control low pressure populations. If population pressure is high then alpha-cypermethrin needs to be added to the knockdown spray prior to seeding.

Border sprays of Alpha-cypermethrin, Trojan® or Bifenthrin will prevent weevils moving into the paddock from nursery edges.

Control: 400ml/ha alpha-cypermethrin @ \$4.00 per hectare or 30ml/ha Trojan® @ \$5.00 to \$6.00 per hectare.

Suppression: 200ml/ha bifenthrin @ \$4.00/ha.

VEGETABLE BEETLE

In theory Vegetable Beetles should not feed on canola crops - they usually feed in decaying organic matter. In recent years, however, vegetable beetles have caused significant damage to canola crops. They are messy eaters leaving bits of plant lying on the ground with no pattern to their feeding technique, which is similar to the way slugs feed on canola.

There is limited knowledge on the life cycle of this insect, their larvae are known as false wireworms. Vegetable beetles are the common wood bug we see in large groups when lifting up rocks or logs. If the chemical application is poorly timed, they can tolerate high rate of all insecticides - 1.5L/ha chlorpyrifos mixed with 500ml/ha alpha-cypermethrin sprayed toward the end of the day when they are active seems to be the most efficient control option.

Control: 1.5L/ha chlorpyrifos mixed with 500ml per hectare alpha-cypermethrin.

SLUGS

Slugs have no eating pattern when feeding on plants. They will take random chunks from leaves and leave bits of leaf lying around the base of the plant and can totally destroy a plant in a few hours. Slugs will be concentrated on soil types where heavy clay is present, or very close to the surface.

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If you are unsure that slugs are doing the damage, spread a small amount of slug pellets over a small area among the crop and cover with a damp hessian bag. Slugs are easily drawn to the pellets and with moist conditions under the bag they will be present the next day, if they are there.

Control: 5kg/ha metaldehyde slug pellets - repetition maybe required.

STRATEGIES

The strategies to be implemented for early insect crop protection depend on the insect pressure in your area. Generally the highest pressure is concentrated to the higher rainfall zones and southern regions.

Canola being planted on pasture paddock will also have a higher insect pressure, as common pasture practices regularly allow the buildup insect populations. RLEM resistance to synthetic pyrethroid insecticides needs to be considered when planning a strategy for RLEM populations - particularly along the south coastal regions and in the great southern.

In low pressure situations our agronomy team recommends 15 to 20ml/ha Trojan mixed with 300ml/ha chlorpyrifos post sowing pre-emergent. This mix will suppress or control most insects that will cause damage when populations are low. In cases where vegetables weevils are present, increase the Trojan rate to 30ml/ha. The only extra to the mix should be 100ml/ha bifenthrin when canola is sown into pasture. This residual insecticide will control RLEM that hatch later into the season, when temperatures become colder. This base strategy will cost around \$4.00 to \$6.00 and an extra \$1.00 to \$1.50/ha for addition of bifenthrin.

In areas with higher insect pressure you will require much higher rates and longer residual activity to control insects in canola. Remember, prevention is a lot cheaper than having to control insects in crop when they will have already caused

damage and reduced potential yield.

A base mixture of 200ml/ha bifenthrin and 500ml per hectare chlorpyrifos will control and suppress most high pressure populations and substantially reduce the risk of needing to re-spray persistent pests. This mix will have low residual control against RLEM that are resistant to Synthetic Pyrethroids (Bifenthrin, Alpha-cypermethrin, Cypermethrin, Trojan®). If populations have suspected resistance then increase the chlorpyrifos rate to 1L/ha to increase time of residual control. The base mixture will cost \$8.00 to \$9.00/ha. The key to success with insect management is to monitor – inspect your paddocks at every opportunity.