



Agronomy Update September 11th 2008

Heliiothis –

Economic threshold levels for heliiothis control via aerial spray contractor –

- Lupins – 5 grubs/10 sweeps – grubs **greater than 15mm** long, after first leaf drop.
- Canola – 3 grubs/10 sweeps – monitor from podding, most susceptible when haying off, avoid placing high numbers into the swathe. If you have locked in a higher price than \$650 for canola or \$250 for lupins, then the numbers required are lower again.

Control Options –

- Sumi Alpha Flex - 200-330ml with 3L water + 5-8% oil
Or up to a total of 1.5L with diesel for ULV, use higher rate for big grubs
- Sonic EC – 120-240ml – with 2-3L water and 5-8% spray oil only – high rate for big grubs
- Bulldock Duo – 200-400ml – higher rate for big grubs.
- Fastac Duo/Astound Duo/Alpha Duo – 120-300ml with 1.2-1.4L diesel or with 2-3L water and 5-8% spray oil – higher rate for big grubs or dense crops.
- Trojan – 20-30ml with water and 5-8% oil.

Considerations – larger grubs require higher rate, dense crops like fabas, lupins and canola require higher rates and good penetration. Avoid bulking up with diesel on crops where flowering window is likely to continue.

Read the label for formulation information and recommended bulking up agent.

Avoid warm days when using EC insecticides – add extra oil if spraying must continue or switch to ULV formulations.

Aphids Thresholds in canola – spraying is more critical if the crop is still flowering as aphids cause flower abortion. Use 5-800ml Dimethoate, which can be added to other EC insecticides and water for DBM/ heliiothis and aphid control. Do not add Dimethoate to ULV insecticide mixes. If Green Peach Aphids or predator insects are present, use 250-300g Pirimor or Aphidex in water. Aphidex is ‘bee friendly’ if your crop is still flowering but is over double the price of Dimethoate.

Aphids in lupins -

Many crops are infested – at varying levels. Crop stage is quite important. If the crop is flowering, the threshold is approximately 15-20% of buds with 3-5 aphids. Most crops currently have third and fourth order pods that are small and still filling. Heavy aphid infestation on these growing points will cause these pods to abort or not fill properly. Only 65kg/ha of lupin yield needs to be conserved to pay for an aphid insecticide plus aerial application. Aphids are also vectors for CMV and BYMV.



Again – 500-800ml Dimethoate in as much water is possible to obtain very good coverage of the crop canopy. *ULV applications of insecticide mixtures for aphid control is not ideal as the coverage achieved can be relatively poor.* Aphids in lupin crops are generally on the top of the canopy and are more easily targeted than aphids in cereals, which are generally lower in the canopy and require better penetration with higher water rates and coarser droplets.

DBM in Canola –

Now that we are in September and many crops have finished flowering, the threshold for DBM has increased from 40-50/10 sweeps to 80-100 grubs per 10 sweeps. However, if the population is increasing rapidly in numbers and about to go exponential, a well timed spray will be needed. DBM do not bore into pods like heliothis, but graze on leaf material, the pod walls and even can ring-bark the stem, hence affecting pod fill. Monitoring the population growth or decline over multiple inspections is required to determine if the population is rapidly growing, staying stable or in a natural decline. Sometimes spraying will not be required.

Control options for DBM in canola –

1. 400ml Alphacypermethrin Duo in water or diesel - some finesse is required with ULV applications for DBM control as crop penetration is paramount.
2. 400ml Bulldock Duo in water or diesel
3. 250ml Sumi Alpha Flex in minimum of 1.5L diesel.
4. 20ml Trojan in water and oil.

DAFWA research from Kevin Walden suggests that better results have been seen with high water rates with CP nozzles set up to provide some coarse droplets to penetrate to lower in the canopy. A good result for DBM control is considered to be a 50% reduction in numbers with one spray, hence a 2 spray strategy can often be required if numbers are high and the crop is not maturing quickly.

Mixing Rules of Thumb –

1. EC formulations are designed to mix with water – ideally not diesel (some will) best to do a jar test!!!
2. EC formulations should be mixed at a ratio of at least **9 parts water to 1 part EC insecticide and oil.**
3. Duo formulations mix with water, crop oil or diesel.

Withholding periods–

1. Trojan – 7 days to harvest in canola, 14 days in lupins.
2. Dimethoate – 2 weeks to harvest in lupins and canola
3. Sumi Alpha Flex – 2 weeks to harvest in lupins and canola
4. Alpha Cypermethrin – 3 weeks to harvest in canola, 4 weeks in lupins.
5. Bulldock Duo – 2 weeks to harvest in lupins and canola