

'Best Bet' IPM strategy

Canola pests

	Summer/autumn	Winter	Spring
<p>Aphids</p> <p>particularly green peach aphid (GPA)</p>	<p>Assess virus risk.</p> <p>High risk where:</p> <ul style="list-style-type: none"> summer rainfall creates a brassica green bridge warm conditions favour early aphid build-up and timing of flights <p>If high risk:</p> <ul style="list-style-type: none"> use an insecticide seed treatment to manage virus spread (e.g. BWYV) by GPA manage brassica weeds and volunteers (ideally area wide) 3-4 weeks before sowing sow early to promote early flowering in spring before aphids peak 	<p>Monitor crops for aphid colonisation from late winter when daily temperatures start to rise.</p> <p>High risk where:</p> <ul style="list-style-type: none"> mild winter GPA present on vegetative plants forecast is for warm and dry conditions that favour aphid development no beneficial activity (predation or parasitism) 	<p>Monitor trends in aphid and beneficial populations over time.</p> <p>High risk where:</p> <ul style="list-style-type: none"> aphid populations rapidly increasing during early flowering to bud formation forecast is for warm and dry conditions to continue low/no beneficial activity broad-spectrum insecticides (e.g. SPs/OPs) have been used to control DBM or native budworm). <p>Use thresholds to guide spray decisions, considering crop stage (% flowering) and moisture stress. NSW, SA, WA thresholds: 10-50% of plants infested.</p> <p>If spraying:</p> <ul style="list-style-type: none"> use soft products (pirimicarb) to retain beneficials consider border sprays to prevent/delay build-up rotate insecticide groups to reduce selection for resistance in GPA.
<p>Rutherglen bug (RGB)</p>	<p>Remove summer/autumn weeds (especially fleabane, wireweed, and capeweed) in and around fields 3-4 weeks before sowing. Monitor crops for RGB and other pests during establishment.</p> <p>High risk if:</p> <ul style="list-style-type: none"> warm conditions in late summer/autumn nearby weeds (off in or near crop) drying off <p>If spraying:</p> <ul style="list-style-type: none"> border spray infested areas of crop and nearby host weeds monitor for re-invasion and the need for repeat application 	<p>Increased risk where:</p> <ul style="list-style-type: none"> abundant weed hosts over winter allow build-up of local populations 	<p>Monitor crops from flowering to windrowing/harvest.</p> <p>High risk where:</p> <ul style="list-style-type: none"> hot, dry conditions in spring and early summer forcing RGB to move from weed hosts moisture stressed plants (limited compensation potential) long distance migration into cropping areas <p>Use economic thresholds to guide spray decisions, considering moisture stress.</p> <p>If spraying, monitor for re-invasion and the need for repeat sprays. Large numbers of RGB at harvest may pose a live insect contamination risk</p> <p>NSW Threshold: 10 adults or 20 nymphs per plant (podfill-harvest).</p>

	Summer/autumn	Winter	Spring
Diamondback moth (DBM)	<p>Manage brassica weeds and volunteers (ideally area wide) 3-4 weeks before sowing.</p> <p>High risk where</p> <ul style="list-style-type: none"> high summer rainfall creates a green bridge of brassica hosts (e.g. wild radish, volunteer canola) warm summer/autumn conditions favour early DBM build-up 	<p>Monitor crops for moths and larvae from mid-winter.</p> <p>High risk where</p> <ul style="list-style-type: none"> DBM population present in mid-late winter warm temperatures in mid-late winter seasonal forecast is for a warm/dry spring <p>If high risk:</p> <ul style="list-style-type: none"> consider a Bt spray to delay population build-up. Best results where most larvae are small and beneficial activity and/or DBM parasitism (e.g. <i>Diadegma</i> sp.) is detected. 	<p>Monitor crop with a sweep net for larvae until maturity.</p> <p>High risk where:</p> <ul style="list-style-type: none"> warm and dry conditions favour rapid population development low beneficial activity and/or DBM parasitism (note: this can also happen if SPs/OPs are used) moisture stressed plants <p>Use thresholds to guide spray decisions, considering crop stage and moisture stress. If spraying:</p> <ul style="list-style-type: none"> avoid SPs/OPs which destroy beneficial insects (may flare pests) and increase resistance selection in DBM. consider Bt to control small larvae. consider emamectin or spinetoram to control larger larvae rotate insecticide groups across seasons ensure good spray penetration into the canopy monitor after spraying to determine need for repeat application <p>SA threshold: Mid – late flowering: 20 larvae per 10 sweeps Pod maturation: 50 larvae per 10 sweeps</p>
Helicoverpa (native budworm)		<p>Monitor for moth flight activity from mid-late winter, using pheromone traps or monitoring outside lights at night.</p> <p>High risk when:</p> <ul style="list-style-type: none"> wet winter in inland breeding areas moth flights detected <p>If high risk:</p> <ul style="list-style-type: none"> monitor crops for eggs and larvae consider biological insecticides (Bt or NPV) to control small larvae (<7-8 mm) 	<p>Monitor crops with a sweep net 1-2 times per fortnight from flowering/podding until maturity.</p> <p>If spraying is warranted:</p> <ul style="list-style-type: none"> consider biological insecticides (Bt or NPV) to control small larvae <7-8mm avoid SPs where aphids and/or DBM are present (flare pests and increase resistance selection in DBM) <p>Thresholds: NSW: 5 or more larvae (>10 mm) per sq metre + evidence of pod damage. WA: 4 larvae per 10 sweeps at pod maturity</p>