

'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>

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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>