

Cutworms (*Agrotis* species) in establishing field crops and pasture

	Seedling — Vegetative
Signs	<p>A sporadic pest. Distribution is usually patchy or confined to portions of the paddock</p> <p>Damage:</p> <ul style="list-style-type: none"> • Small larvae cause skeletonised or scalloped leaves (damage may be confused with that of lucerne flea or pasture web worm) • Large larvae (40–50 mm) are the damaging stage. These larvae may remain below the soil surface feeding on the stem at or below ground level and sever seedling stems near ground level • While generally a pest of seedlings (1 to 5 leaf stage), cutworms can occasionally cause damage at tillering and early stem elongation in winter cereals. <p>Where to find them</p> <ul style="list-style-type: none"> • Difficult to detect as most species feed at night and shelter under the soil surface during the day • Use a trowel to check around the base of freshly damaged seedlings for sheltering larvae
Monitoring	<ul style="list-style-type: none"> • Inspect crops regularly from emergence to establishment. Larvae are active from late afternoon through the night. • Look for signs of feeding on leaves – if detected, search the soil and stubble in the areas that are damaged, or where the plant stand is thinned. • Larvae may move into a crop from a neighbouring weedy fallow, particularly as the weeds start to dry off, or are sprayed. Be alert to sources of larvae from outside the field.
Beneficials	<p>Fly and wasp parasites, predatory beetles and diseases. Orange and two-toned caterpillar parasites and orchid dupe are key parasitoids. These beneficials may suppress cutworm populations, but are unlikely to prevent crop loss in the event of an outbreak.</p>
Cultural control	<ul style="list-style-type: none"> • Control weeds in and around fields prior to planting to reduce potential cutworm infestations. • Be aware of cutworm movement from sprayed weedy fallow into neighbouring crops. • Prolonged green feed in autumn allows larvae to develop to a large size by the time crops emerge • Aim to control potential hosts at least 2 weeks prior to planting to ensure larvae do not survive to infest crops.
Thresholds	<p>Thresholds are speculative</p> <ul style="list-style-type: none"> • 2 larvae per 0.5 metre of crop row – visual inspection
Pesticides	<p>Chemical control is warranted when there is a rapidly increasing area or proportion of crop damage.</p> <ul style="list-style-type: none"> • Treat the crop when seedling loss is nearing minimal plant density crop requirements • Treat older plants if more than 50% of plants have 75% or more leaf tissue loss • Chemical control is most effective when applied late in the day to maximise likelihood of larvae contacting/ingesting insecticide when they emerge at night to feed • Ground rig applications may provide flexibility to treat just affected areas, or to apply a border spray where larvae are moving into the crop from neighbouring weeds.
Considerations	<ul style="list-style-type: none"> • Using broad-spectrum insecticides to control cutworm will affect other establishment pests (lucerne flea, mites and early infestations of aphids) and beneficial insects. • Synthetic pyrethroids can flare resistant mites. <ul style="list-style-type: none"> ○ Be aware of the impact of chemical choices on insecticide resistance in earth mites • Consider impact of insecticide choices on beneficial insects
Communication	<p>Agronomists and growers can discuss:</p> <ul style="list-style-type: none"> • Management strategies for the coming season such as the management of weeds in fallows and timing of weed control to minimise cutworm movement into seedling crops. • Sampling methods and frequency – consider sampling for other establishment pests at the same • Potential implications of controlling cutworm on other establishment pests, particularly in relation to insecticide resistance management for mites. <p>Industry publications provide up to date regional information about pest activity in crops</p>