Australian Plague Locusts (Chortoicetes terminifera) - Frequently Asked Questions

GENERAL

Q. What is the current situation for plague locusts?

- Locust numbers are likely to remain very low during summer.
- There is a low probability of any immigration from other regions during summer.
- There is a low risk of a widespread infestation developing during summer.

Agriculture Victoria has received reports of locusts being detected in the Swifts Creek. Reports from Omeo and Benambra relate to grasshoppers.


Q. What damage can locusts cause?

Adult locusts and hoppers can cause extensive damage to crops and pasture in a relatively short timeframe. Locusts prefer to feed on tender, green vegetation, but experience shows they are still capable of causing damage to maturing and mature crops. When locusts are present in large numbers, all crops are at risk.

A locust swarm could also severely disrupt outdoor activities like sporting or community events and cause a hazard on our roads.

Q. What is the best time to treat locusts?

The best time to treat locusts with insecticides is when locusts are in the ‘hopper’ stage (during 2nd and 3rd instar) and before the adults can fly, with the period about ten days to two weeks after hatching the most effective and cost efficient.

When locusts first hatch and emerge from the ground, they are often scattered. Treating locusts at this stage may be inefficient as some locusts may not have yet hatched.

As these locusts develop, they form high-density groups or bands and this is the best time for treatment. Refer to the lifecycle diagram for more precise information on the timing of treatments.

Programs to treat adult flying locusts are generally ineffective.

Hoppers hatching (Source: S. Oliver)

Target 2nd and 3rd instar stages with insecticide application

Diagram of a locust life cycle
Q. Who is responsible for treating locusts?
All landholders have a legal responsibility to treat locusts on their land.

Private landholders are responsible for treating locusts on their own property.

Agriculture Victoria, in collaboration with the Department of Environment, Land, Water and Planning (DELWP) and Parks Victoria will treat locusts on public land. This will reduce the number of locusts on public land and minimise the impact on private landholders.

Councils and other land managers will be responsible for treating locusts along roadsides, train lines, and reserves.

The Australian Plague Locust Commission (APLC) may treat locusts in Victoria if they pose a threat to neighbouring states (and vice versa).

Agriculture Victoria will work with all public and private landholders, and if required, the APLC, to ensure a coordinated approach to locust treatment across Victoria.

Q. What is the Government doing to help treat locusts?
Agriculture Victoria is implementing preliminary surveillance to identify the extent of locusts in Swifts Creek. Aerial surveillance through fixed-wing planes and helicopters can be used in affected areas. Ground-based surveillance will also be used to inspect private and public land that is likely to be affected by locust activity.

Information is also available for landholders about the treatment of locusts in specific crops and can be found at www.agriculture.vic.gov.au/locusts.

Q. What is being done in other states to help treat locusts?
The Australian Plague Locust Commission (APLC) along with the State Governments of Victoria, South Australia, New South Wales (NSW) and Queensland have been monitoring the locust populations in inland eastern Australia. The APLC only undertakes aerial treatment against substantial targets of locust bands and swarms where these pose a threat to agriculture in more than one member state.

Q. What should I do if I find locusts on my property?
All landholders are required to report egg beds and locust activity to Agriculture Victoria and are responsible for treating locusts on their property.

Landholders should:
Report locust activity and known locations of egg beds – this will allow Agriculture Victoria to monitor life cycles and density. Reports should be made to the Agriculture Victoria Locust Hotline 1300 135 559.

Treat locusts when they are in the ‘hopper’ stage – seek advice from chemical suppliers and agronomists on the most appropriate chemicals for your situation. You should also seek advice on placing orders for your preferred chemicals.

Use chemicals safely and responsibly – make sure to read and adhere to all the instructions and seek advice from chemical resellers and agronomists about appropriate treatments for locusts where necessary.

For more information visit the Agriculture Victoria website www.agriculture.vic.gov.au/locusts or call the Agriculture Victoria Locust Hotline 1300 135 559.

Q. How can I treat locusts on my property?
The use of insecticides is the most effective method of controlling locusts. Farmers should seek expert advice from their chemical reseller or agronomist as to which chemical best suits their situation.

The best time to treat locusts is when locusts are in the ‘hopper’ stage and before the adults can fly. Programs to treat adult flying locusts are generally ineffective.

Q. Where are eggs laid?
Female locusts can lay up to 200 eggs in pods that contain about 30-40 eggs. Eggs are often laid up to 10 cm beneath the soil in bare ground, generally along roadsides, tracks, fence lines, dry land flats and sparse pastures and paddocks. Usually eggs laid in autumn are dormant over winter and hatch in spring as soil temperatures increase.

Q. Can I treat eggs before they hatch?
Treating locusts through cultivation of egg beds is generally ineffective. Landholders should concentrate their efforts on more regular monitoring and applying chemicals while hoppers are in a concentrated band after hatching.
Are landholders legally required to treat locusts on their property?
Yes. The Australian Plague Locust has been declared an exotic pest under the *Plant Biosecurity Act 2010*. Under the declaration, all landholders or land managers should treat locusts on their land. This must be completed before locusts grow wings and are able to fly.

Failure to notify or treat locusts is a breach of this legislation.

TREATING LOCUSTS

Q. What type of insecticides can be used to treat locusts?
There are many different trade name chemical products of varying strengths that can be used to treat locusts. The right insecticide group and individual product selection should only be made after careful consideration of your specific circumstances. There are four broad chemical groups:
- **biological insecticides** like metharizium
- **organophosphate and carbamate insecticides** containing fenitrothion, chlorpyrifos, diazinon, maldison or carbaryl
- **phenylpyrazole insecticides** containing fipronil
- **synthetic pyrethroid insecticides** containing cypermethrin, alpa-cypermethrin, beta-cyfluthrin, lambda-cyhalothrin and gamma-cyhalothrin.

All the chemicals are generally fast acting and are approved for use on a wide range of crops, pastures and home gardens. However, metharhizium takes longer to act.

Spray operators should check the Australian Pesticides and Veterinary Medicines Authority (APVMA) approved chemical label or minor use permit to identify if a specific chemical is permitted or registered for use on the intended crop.

Where treatments are conducted by Agriculture Victoria, in specific areas on public land, the biological insecticide metharhizium will be used, because of its mode of action and relative safety to non-target organisms.

Land managers should seek expert advice from their chemical reseller or agronomist as to which chemical best suits their situation. Remember to read and adhere to all insecticide label instructions.

Q. How long will it take before spraying kills locusts?
The metarhizium is a naturally occurring parasitic fungal disease. Once inside the locusts body it may take up to 20 days to kill them, or less time if the weather is warmer.
The other listed insecticides work much quicker than metharizium, generally causing locusts to stop feeding within a few hours, and to die within two or three days.

Q. When is the best time to spray?
The best time to treat locusts with insecticides is when locusts are in the ‘hopper’ stage and before the adults can fly, with the period about ten days to two weeks after hatching the most effective and cost efficient.

Hoppers form large slow-moving bands, providing a clear target for efficient chemical use. The hopper stage is temperature dependent, lasting for around six weeks in total, but the last stage of development before adulthood only lasts for a week or so, making it important to carry out regular monitoring.

The most effective treatment is achieved when hopper densities get up to around 80 hoppers per square metre and banding occurs.

The best time of the day to spray hoppers is late morning through to late afternoon when they are most active and most visible.

Q. What type of spraying equipment can be used?
Using a properly calibrated boom sprayer will minimise the risk of chemical sprays drifting outside targeted areas.

While misters may appear to apply chemicals efficiently, they present a greater risk of spray drift, increasing the risk of unacceptable residues in nearby crops, livestock, or other areas.

A hand-held application will be effective on small infestations.

Read the industry specific fact sheets most appropriate to your needs for further advice on spraying equipment at [www.agriculture.vic.gov.au/locusts](http://www.agriculture.vic.gov.au/locusts).

Q. How will spraying affect produce or my access to markets?
For advice on your situation read the related industry specific fact sheet on the Agriculture Victoria website at [www.agriculture.vic.gov.au/locusts](http://www.agriculture.vic.gov.au/locusts) or contact your peak industry body for further information.

Q. What is the impact to bees?
Certain locust treatments can be lethal for bees. Apiarists should remove bees from areas where spraying is planned. Landholders should also check for beehives in their area and...
notify beekeepers well in advance of any spraying, so the bees can be removed. Bees should not be returned to treated areas until all spraying in the bees’ foraging area is complete and after any chemical residue that may be harmful to bees has broken down. This period could be at least 28 days or more for some chemicals.

If you would like more information on bees, please see the Australian Plague Locust and Bees fact sheet, available at www.agriculture.vic.gov.au/locusts.

Q. Can I use insecticides in my own garden?

There are chemical and non-chemical treatment options available to homeowners wanting to protect their garden from locust damage.

Non-chemical options to protect plants and shrubs include using insect mesh or shade cloth that is not green-coloured (locusts are attracted to green).

Insecticides registered for use on locusts in home gardens differ from those used for agricultural and industrial uses because they are formulated in low concentrations and often sold as ready-to-use products. Before purchasing a product, read the label and seek advice from your local retailer on which one is best for your situation.

Q. How will the environment be monitored?

Agriculture Victoria will carry out environmental monitoring including waterways, aquatic and terrestrial vertebrates and invertebrates. There are significant buffer zones that apply to waterways. Agriculture Victoria has officers trained in safe chemical use as well as how to respond to threat of locusts and will take any corrective action that may be necessary.

**ORGANIC GROWERS**

Q. What chemicals can organic growers use to treat locusts?

Organic growers should consult their organic certification body to identify which chemicals can be applied under their certification scheme.

**GRAZIERS ON PUBLIC LAND**

Q. What do graziers on public land have to do?

Graziers holding stock on public land operate under a range of different leasing arrangements. Those with full management responsibility for the land, including controlling weeds and pests, must also deal with the threat of locusts.

More than 600 licensed ground-spraying contractors operate throughout the state, so most land holders should be able to source an appropriately qualified contractor near them.

Landholders with passive grazing arrangements are not expected to carry out control activities. However, they should call the locust hotline and report where they have seen locusts.