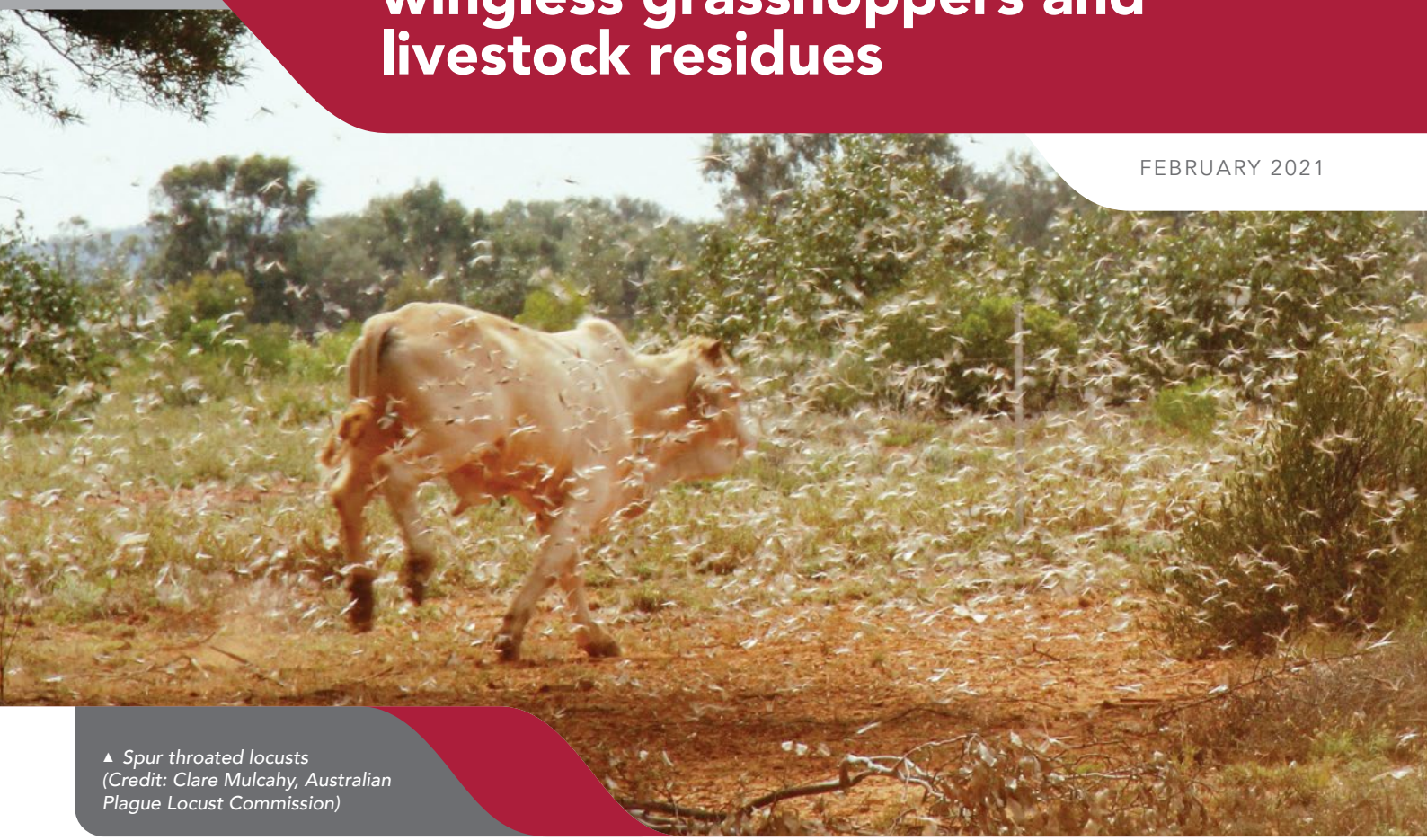
FACT SHEET

Plague locusts, wingless grasshoppers and livestock residues

FEBRUARY 2021



▲ *Spur throated locusts (Credit: Clare Mulcahy, Australian Plague Locust Commission)*

Locust numbers can periodically build up and pose a significant threat to grain, horticultural crops and pastures. Wingless and small plague grasshoppers can also cause crop and pasture damage.

Locusts can migrate hundreds of kilometres. Depending on the nature and scale of activity, individual landholders, state and territory government authorities and the Australian Plague Locust Commission (APLC) may all be engaged in the control of locusts.

The most effective means of controlling these pests is to spray the nymph stages, either by air or ground rig, with an appropriate insecticide. However, the chemicals used have the potential to cause residues in grazing livestock — residues that can cause problems for our export industry.

Control authorities use licensed ground and aerial operators to mix and apply control chemicals. Landholders must apply the same level of professional care.

A THREAT TO OUR EXPORT MARKETS

In 2018/19, Australia exported $16.3 billion in red meat and livestock to more than 100 countries.

To retain consumer confidence and to protect existing trade to export markets, Australia must guarantee the integrity of its products and their freedom from unacceptable chemical residues.

HOW DO LIVESTOCK BECOME CONTAMINATED?

Livestock can be exposed to plague locust and wingless grasshopper control chemicals by:

- direct over-spraying of livestock
- grazing of pastures or crops that have been sprayed
- feeding fodder (hay, grain) that has been sprayed
- grazing or feeding on crops or produce affected by off-target movement of chemicals.

YOUR RESPONSIBILITIES

- Find out when spraying is likely to occur in your area.
- Check what chemicals the control authorities are using and observe relevant Export Intervals (see table on page 4).
- Determine what chemicals are best suited to your enterprise when undertaking your own control spraying.
- Read and follow the label directions or permit conditions. Always:
  - use only in the situations or crops listed on the label or permit
  - use the correct treatment rate
  - observe the harvest and grazing withholding periods (WHP) or alternative export intervals set out in the product label or Australian Pesticides and Veterinary Medicines Authority (APVMA) permit (see table on page 4).
- Confirm that all relevant Export Intervals have been met before selling stock for slaughter — especially if meat or other products may be destined for an overseas market (see table on page 4).
- Keep records of any spraying activity.
- Consult with neighbours about spraying (both yours and theirs) — particularly near property boundaries.
- Fill in the Livestock Production Assurance National Vendor Declaration (LPA NVD) correctly. Penalties apply for providing false or misleading information on the LPA NVD.
- If unsure, seek further advice from chemical manufacturers, chemical suppliers or state/territory departments of agriculture/primary industries.

▲ *Assess the likelihood of spray drift onto pastures or feed crops. (Credit: Department of Agriculture, Water and the Environment)*

UNDERSTANDING CONTROL CHEMICALS

It is essential that producers obtain information about the chemicals which may be applied to control locusts, regardless of whether they are controlling the locusts themselves or control is being undertaken by an outside authority.

Chemicals registered to control locusts and/or wingless grasshoppers

Chemicals registered for the control of locusts and/or wingless grasshoppers contain different active ingredients and are marketed under a range of brand names. It is important for landholders and contractors applying insecticides to read the product label, confirm that the product is registered for the intended purpose and to identify the active ingredient in the product that is to be used. Use this information and the Export Intervals table on page 4 to check that use of the chemical is appropriate for your enterprise.

Chemicals applied to neighbouring land

Determine the active ingredient in any sprays applied on or adjacent to your land by control authorities or neighbours. Assess the likelihood of spray drift onto your pastures or feed crops. If they have been exposed to drift, manage them as if they have been treated intentionally.

Organophosphate and carbamate insecticides

Use chemicals from these groups wherever possible as they break down relatively quickly. Active ingredients in these groups include **fenitrothion, chlorpyrifos, diazinon, maldison** (malathion) and **carbaryl**. Fenitrothion and maldison pose the least risk of producing unacceptable residues in livestock, provided the required Export Interval is observed.

Fipronil is also registered for Australian plague locust, migratory locust, spur throated locust and wingless grasshopper control. It persists on pasture and in animals for longer than fenitrothion but is applied at very low rates. A very small volume is required to make up a spray.

Although fipronil is registered for use in some of our major export markets, residues in meat could put at risk the export meat trade due to differences in importing countries' residue standards.

Errors in mixing or application rates could cause residues in livestock even if the recommended Export Interval is observed. Carefully read the label directions for use before mixing or applying any agricultural chemical product.

Synthetic pyrethroid insecticides

Alpha-cypermethrin is registered for control of wingless grasshoppers in pasture situations. Alpha-cypermethrin can persist on pastures for relatively long periods. Observe the appropriate Export Interval for livestock exposed to feeds treated with this chemical.

Metarhizium anisopliae is registered for the biological control of locusts and grasshoppers. The grazing withholding period (WHP) is 0 days. There is no risk of residues in livestock associated with use of products containing metarhizium.

Other chemicals

The APVMA may consider industry requests for permits for the off-label use of other insecticides if there are no registered alternatives available. Any permits will include appropriate WHP directions and trade risk management advice.

Note: Under the LPA program, producers must have management systems in place to ensure agricultural chemicals are administered in accordance with label directions to minimise livestock exposure to feeds containing unacceptable chemical residues.

Producers must comply with state and territory laws governing the use of chemicals.

APVMA PERMITS FOR LOCUST CONTROL CHEMICALS

The APVMA has issued permits PER 10927 and PER 10928 to allow the use of certain synthetic pyrethroid chemicals to control the Australian plague locust (*Chortoicetes terminifera*). These permits expire at the end of June 2025. The permits cover the use of the active ingredients: lambda-cyhalothrin, gamma-cyhalothrin, beta-cyfluthrin, alpha-cypermethrin and cypermethrin. Each permit clearly states Export Interval advice for users.

The APVMA has also issued permit PER 13642 which allows the use of chlorpyrifos and maldison for control of Australian plague locust in tree nut orchards. This permit expires at the end of June 2025[1].

In addition to complying with permit requirements, livestock producers should observe either the Export Slaughter Interval (ESI) **OR** the Export Grazing Interval (EGI) before selling stock for export slaughter.

Caution: These chemicals will persist on dry pasture or forage and in cut fodder. Their use may pose a trade risk unless export intervals are adhered to. Anyone wishing to use these chemicals must first read the permit and the label (or have both read to them) and comply with all instructions and any conditions stated in the permit and label.

Copies of the permits can be obtained from the APVMA website **www.apvma.gov.au/permits** or may be available from locust control authorities.

WITHHOLDING PERIODS AND THE NATIONAL VENDOR DECLARATION

The LPA NVD communicates the food safety and treatment status of every animal every time it moves along the value chain. LPA NVDs are legal documents that are key to Australian red meat's traceability and market access, and underpinned by state and territory legislation.

It is essential that LPA NVDs are filled out accurately, including information on WHPs. The WHP questions can be found as follows: Cattle (Q7), Sheep and Lambs (Q5), Goats (Q4), Bobby Calves (Q3), and EU Cattle (Q6).

1 Users should check the status of APVMA permits at **https://portal.apvma.gov.au/permits**

▲ *Control spraying can result in drift. (Credit: Australian Plague Locust Commission)*

Producers who have observed Export Intervals are encouraged to make a statement to this effect, in the Additional Information section.

WHP intervals for a chemical product can be found on the approved label. Producers who require additional information about WHPs should contact their local Department of Agriculture/Primary Industries.

WITHHOLDING PERIODS AND RECOMMENDED EXPORT INTERVALS

Harvesting of treated crops, including animal feeds:

- Observe the label WHP for all treated crops and pasture, including those that may have been subjected to spray drift.
- If crop or pasture is to be cut for stockfeed, observe the Export Animal Feed Interval (EAFI) recommended in the table (see page 4) or, alternatively, do not sell stock that have been fed cut material for export slaughter until the relevant ESI has been observed.

Grazing treated areas (livestock for domestic consumption only):

- Observe the grazing WHP or withhold from slaughter period that is specified on the registered product label.
- Where possible avoid spraying areas in which livestock are grazing.
- If over-spraying of livestock grazing pasture is unavoidable, withhold them from slaughter until either the EGI indicated in the table (see page 4) is met or they are moved to clean feed and the ESI is met.

Grazing (livestock for export markets):

- The label WHP for grazing applies to stock slaughtered for the domestic market. Some export markets apply different standards including a nil tolerance for some chemicals. To meet these standards, check that Export Intervals are available before selecting or applying chemicals and ensure that one of the Export Intervals shown in the table (see page 4) is observed before stock are sold or slaughtered.

▲ *Australian plague locust,* Chortoicetes terminifera
(Credit: James Woodman, Australian Plague Locust Commission)

RECOMMENDED EXPORT INTERVALS

Chemical	Export Animal Feed Interval (EAFI)[1]	Export Slaughter Interval (ESI)[2]	Export Grazing Interval (EGI)[3]
Organophosphate or carbamate products registered for locust and/or wingless grasshopper control			
Fenitrothion	14 days	EGI applies	14 days
Chlorpyrifos (EC)	No data available	56 days	56 days
Diazinon	14 days	14 days	28 days
Carbaryl	7 days	EGI applies	7 days
Maldison	Label or APVMA Permit WHP applies 1 day	Label or APVMA Permit WHP applies 1 day	Label or APVMA Permit WHP applies 1 day
Fipronil products registered for locust and/or wingless grasshopper control are (1.25 grams active ingredient per hectare)			
Fipronil ULV	14 days	14 days	21 days
Fipronil — 200 SC	14 days	14 days	21 days
Alpha-cypermethrin products registered only for wingless grasshopper control			
Alpha-cypermethrin	N/A	42 days	56 days
Synthetic pyrethroid products permitted to be used for Australian plague locust control			
Lambda-cyhalothrin	N/A	42 days	56 days
Gamma-cyhalothrin	N/A	42 days	56 days
Alpha-cypermethrin	N/A	42 days	56 days
Cypermethrin	N/A	63 days	No data available

Definitions

1. **Export Animal Feed Interval (EAFI):** The minimum period that must elapse between the application of a chemical and grazing or harvesting the crop/pasture for animal feed.
2. **Export Slaughter Interval (ESI):** The minimum period that must elapse between removal of grazing livestock to clean pasture or feed and slaughter, where the livestock have been grazing the crop/pasture prior to expiry of the export animal feed interval.
3. **Export Grazing Interval (EGI):** The minimum period that must elapse between the application of a chemical and slaughter of the stock, where grazing has continued on the crop/pasture from the time the chemical was applied.

ADHERING TO ESI AND EGI

Export Slaughter Interval (ESI)

Livestock should be placed on clean feed for the appropriate ESI prior to export slaughter — unless they have already met the recommended Export Grazing Interval for the chemical. This applies if they have been over-sprayed or grazed on or fed treated crops/pastures, including treated feeds cut after the expiry of the label withholding period.

Export Grazing Interval (EGI)

Livestock that have been over-sprayed or grazed on treated crops/pastures and that cannot be placed on clean feed should not be sold for export slaughter until the EGI has expired.

Cutting stockfeeds and dairy stock

The label grazing and fodder/forage withholding period must be observed before:

- cutting treated pasture/crops for fodder
- grazing treated crops/pastures by stock producing milk for human consumption

FURTHER INFORMATION

For further advice contact your state department of agriculture/primary industries, local shire or, in NSW, your Local Land Services agency.

Permit or other chemical product label details can be found on the Australian Pesticides and Veterinary Medicines Authority (APVMA) website: **www.apvma.gov.au**

Locust specific information can also be found on the Australian Plague Locust Commission website: **www.agriculture.gov.au/pests-d**

SAFEMEAT *is a partnership between industry and government that provides a platform for engagement and collaboration on policy that ensures Australian meat products adhere to the highest standards of safety — from the paddock to the plate.*

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