

# Stable fly management in Western Australia

April 2022

Stable fly (*Stomoxys calcitrans* L.) is gazetted under the *Biosecurity and Agriculture Management Act 2007* (BAM Act) as a declared pest for the following 14 designated local government areas:

- Cities of Armadale, Cockburn, Joondalup, Kwinana, Rockingham, Swan, Kalamunda and Wanneroo.
- Shires of Capel, Chittering, Gingin, Harvey and Serpentine–Jarrahdale.
- The portion of the Shire of Murray described as the Peel-Harvey Coastal Plain Catchment - State Planning Policy No. 2.1.

Stable fly is a declared pest assigned to C3 Management, meaning this pest should: “*have some form of management applied that will alleviate the harmful impact of the pest, reduce the numbers or distribution of the pest, or prevent or contain the spread of the pest.*”

Reducing stable fly numbers and its distribution relies on a community-based approach, with all landholders in the above local government areas required to take action if stable fly is found on their property.

The Stable Fly Management Plan 2019 was gazetted under the BAM Act to provide guidance for commercial enterprises and land users in the stable fly declared areas on how to effectively control stable fly.

Under the BAM Act landholders are responsible for controlling declared pests on their land. Not doing so can result in penalties of up to \$20,000.



Figure 1 (left). A stable fly on a piece of straw.



Figure 2. A stable fly on a human drawing a blood meal.

# Stable fly FAQs

## What is stable fly?

Stable fly is an insect that has become an aggravating pest in WA, particularly on the coastal plain, north and south of Perth. It can attack humans, domestic pets and livestock, seeking to draw blood which is essential to complete its life cycle. Stable flies typically occur in large numbers from late spring through to late autumn.

Some Local Government Authorities, including Gingin and Wanneroo, are more seriously affected by large populations of stable fly, particularly in warmer weather. As a result, DPIRD works closely with these Local Government Authorities to determine the best control measures.

## What are the impacts of stable fly in our community?

Stable fly has potential to be a serious pest to livestock, and cause health and welfare problems for cattle, horses, goats, dogs and humans because of its painful bite.

Animals will try to avoid the fly by stamping their feet, tail switching, throwing their heads and kicking sand up onto their legs and body. The constant movement of animals due to the agitation of the flies can lead to loss of weight and condition, combined with allergic reactions to the bites.

Stable fly numbers can be monitored by counting the number of flies found on all four legs of about 10 animals. When the average number is more than 25 flies per animal (treatment threshold), action is required.

- More than 25 flies per animal can lead to measurable reductions in weight gain and condition.
- More than 50 flies per animal can reduce weight gain by 25% and milk production by 40%–60%.

## How can I help to reduce stable fly impacts in the community?



*Figure 3. Stable fly larvae can be found under layers of animal feed near the soil.*

Removal of potential breeding sites must be the first step in any effort to manage stable fly as it is by far the most effective (see *Figure 3*).

## Good management practices

- Deep ripping the edges of vegetable plots (tyre tread lines) in market gardens where waste and water accumulate.
- High speed mulching and incorporation of vegetable crop residues into the ground after harvest.
- Regular (weekly) removal of animal manure accumulating in and around pens and yards, water troughs, fences and gates.
- Spreading animal manure and grass clippings into thin layers on the ground to dry out.
- Placing reject vegetable produce and lawn clippings into pits and covering regularly with soil to a depth of 100cm.
- Regular removal of accumulations of spilled grain feed or other organic material in pens and yards.

Animal manure should only be stockpiled in the open for a short period (less than three days). It must then be covered with plastic to protect it from getting wet. Alternatively, manure should be removed and used as a blend for compost or sprayed with insecticide to prevent stable fly development.

These practices will greatly reduce stable fly breeding sites and lessen the need for chemical control.

## Storage of untreated poultry manure



*Figure 4. Deliveries of raw poultry manure (left) can result in stable fly development if the manure is delivered wet and/or the manure becomes wet from sprinkler overspray or rain events (Figure 5 – right).*

Poultry producers may only store untreated commercially derived poultry manure (i.e. has originated from any commercial poultry undertaking or business) on their land for the purposes of:

- composting or treating it to Australian Standard 4454
- temporary storage prior to transporting to a premise licensed to accept poultry manure, under the *Environmental Health Act 1996*
- temporary storage prior to transporting to an area outside of the declared stable fly area.

## Some of your questions answered regarding untreated poultry manure ...

**Q. Can I use untreated poultry manure on my irrigated pasture?**

**A.** No.

**Q. Can I use untreated poultry manure on my non-irrigated pasture?**

**A.** Yes. The manure must be spread onto the pasture immediately on arrival at the property and after it has been spread the size of manure lumps must be less than 20cm. You cannot spread subsequent loads of manure within six weeks of the last load arriving and being spread.

**Q. Do I need to let the Local Government Authority in my area know when I plan to have untreated poultry manure delivered?**

**A.** It is best to contact your Local Government Authority about local requirements.

**Q. How far away from dwellings does the untreated poultry manure need to be before I can spread it?**

**A.** You must not spread untreated poultry manure within 500m of any dwelling.

## Cultivation and harvesting of annual fruits and certain vegetables



*Figure 6. Stable fly in rotting carrots.*

The commercial cultivation of fruits and some vegetables can result in rotting fruit and vegetable material, which creates a perfect breeding environment for stable fly (see *Figure 6*).

Therefore, in the stable fly declared area, a crop of fruit or vegetables that has reached maturity must be harvested within six weeks. If harvesting has been completed, plant material remaining on top of the soil (leaves, stalks, plant base) must be incorporated into the soil within three days using a rotary hoe, stone burier or mouldboard plough, or treated with approved chemicals.

## Some of your questions answered regarding fruits and vegetables ...

**Q. Are there any fruits or vegetables that are not included in the Stable Fly Management Plan 2019?**

**A.** Yes. Tomatoes and perennial fruits (e.g. lemons, limes, figs) are not included. Vegetables proven not to breed stable fly are also not included in the 2019 plan, such as

beans, capsicums, cucumbers, parsley, potatoes and spinach. Refer to the 2019 plan for a full list.

**Q. What should I do with fruit and vegetables that are not for human consumption or are unsuitable for sale?**

**A.** This plant material must be removed from the property within seven days after harvesting UNLESS it is treated or disposed of using one of the following options:

- Using a rotary hoe for five consecutive days to incorporate the material into the soil.
- Using a counter rotating rotary hoe and soil compacter to incorporate the material into the soil to a depth of 20cm. This must be carried out within three days of harvesting, and no more than five tonnes per square metre can be compacted.
- Treated with approved chemicals. *Current information on stable fly products can be found on the Australian Pesticides and Veterinary Medicines Authority (APVMA) website: [apvma.gov.au](http://apvma.gov.au)*
- Fed to stock in a box or trough, away from soil.
- Deep buried to a soil depth of at least 100cm.
- Desiccated (dried out) on fallow ground in accordance with local laws and an agreed management plan with your Local Government Authority.

## Pomace produced from olive pressing

Pomace is the remaining residue after the first oil extraction from olives and can provide a suitable environment for breeding stable fly. If you are an olive producer and you produce pomace residue that is surplus to production requirements, it is important that you monitor residues for at least two weeks for the presence of stable fly larvae.

### Some of your questions answered regarding olive pomace ...

**Q. What do I do if I find stable fly larvae in pomace residue?**

**A.** Any olive pomace that is found to be infested with stable fly must be immediately treated with an approved pesticide and deep buried to a soil depth of at least 100cm.

## Keeping of stock



Figure 7 (left). Bales of hay exposed to the weather causes them to rot and harbour moisture.



Figure 8. Large accumulations of cattle dung in pens attract flies.

During the warmer months of October through to May, livestock feed, manure and water create a perfect breeding ground for stable fly. Removing or drying out larval habitats through one of the below options will make them less attractive to breeding flies:

- Weekly remove spilled grain feed, animal manure, soiled straw, or other organic material accumulating in and around pens, yards, water troughs, fences and gates.
- Spread animal manure and grass clippings into a thin layer on the ground which will assist with drying.
- Compost animal manure and grass clippings.
- Use spray insecticide where needed to prevent stable fly development.

### Some of your questions answered regarding stock ...

**Q. *What should I do if I find an infestation of stable fly larvae in animal manure, straw animal bedding, poultry litter, spilled grain or other feed?***

**A.** The infested material must be immediately collected into a heap or mound, treated with an approved insecticide, covered with plastic sheeting, and left undisturbed for at least two weeks or longer (until such time that it is not infested with stable fly).

### Report any stable fly activity

- Department of Primary Industries and Regional Development MyPestGuide® Reporter app or online report: [mypestguide.agric.wa.gov.au](https://mypestguide.agric.wa.gov.au)
- Local Government Authority: refer to their **website** for contact details
- Stable Fly Action Group: [stableflyactiongroup.org.au](https://stableflyactiongroup.org.au)

### Stable fly management plans

Contact your Local Government Authority to discuss a stable fly management plan for your enterprise.

### More information on stable fly

[agric.wa.gov.au/StableFly](https://agric.wa.gov.au/StableFly)