

Managing soil in a fire ant biosecurity zone

To prevent the spread of one of the world's most invasive pests, risk mitigation controls should be used when managing soil in fire ant biosecurity zones.

Fighting fire ants

The National Red Imported Fire Ant Eradication Program (program) is responsible for managing fire ant eradication in Australia.

The program's [10-year Eradication Plan](#) began in 2017 to commence eradication of the fire ant infestation in South East Queensland. By using a staged, rolling treatment program from west to east, it aims to rid Australia of this invasive pest in partnership with the Queensland community. The program is funded by all Australian states and territories, and the Commonwealth Government.

The *Biosecurity Act 2014 (Act)* aims to improve Queensland's biosecurity preparedness and response capabilities by managing biosecurity risks and the significant impacts animal and plant diseases and pests could have on our economy, agricultural and other industries, environment and lifestyle.

Fire ants are a category 1 restricted matter under the *Act*. It is a requirement under the *Act* to report suspect fire ants to the program within 24 hours.

What's a biosecurity zone?

There are two fire ant biosecurity zones established under the *Act* to help control the movement of materials that may carry fire ants. If you are operating or residing in these zones then you are required to undertake risk mitigation activities to prevent the human-assisted spread of fire ants. Not complying with requirements can result in penalties. Check out the fire ant biosecurity zones at daf.qld.gov.au/fireants

Soil is considered a high risk material requiring careful management to help prevent the spread of fire ants.

What is soil?

For the purposes of fire ant management, soil includes fill, clay, scrapings, and any material removed from the ground at a site where earthworks are being carried out.

What do I need to do?

The Biosecurity Regulation 2016 (Regulation) and the Soil Movement Guideline, made under the *Act*, outlines how soil should be managed in fire ant biosecurity zones.

Soil originating from a place within **zone 1** can be moved to a place within **zone 1** or **zone 2**.

Soil originating from a place within **zone 2** can be moved within **zone 2** only.

If you are moving soil within the fire ant biosecurity zones, you should undertake one or more of the following:

- treat soil prior to excavation
- take soil from depth
- disturb soil during or after excavation i.e. vigorously turn, crush, wash or screen
- store soil appropriately.

Treating soil prior to excavation

For business operators, it is recommended that a licensed pest manager should be engaged two weeks prior to the anticipated excavation date to:

- inspect the area to be excavated — if fire ants are found report them
- undertake direct nest injection (DNI) of any fire ant nests, and
- treat the site with an appropriate bait in order to prevent fire ants becoming established in the area to be excavated.

At **residential properties**, individuals can pre-treat an area that is to be excavated using a household pesticide that is available in a retail store. The products used should be recognised by the [Australian Pesticides and Veterinary Medicines Authority \(APVMA\)](#) as an appropriate product for treating fire ants.

Insecticides must be used in accordance with the conditions of the APVMA permit, the Safety Data Sheet (SDS) and in conjunction with the product's label. You can search for permits on the APVMA website at portal.apvma.gov.au/permits

Taking soil from depth

A newly established, or young fire ant colony, is often located within the first metre of soil. Removing the top one metre of soil at a site, undertaking the necessary excavation and then replacing the original top one metre of soil may reduce ant activity and the risk of ant movement to another location.

The top one metre of soil should not be mixed with the soil being moved from the site. The top one metre should be retained on site or taken to a waste facility within the fire ant biosecurity zones (restrictions apply, see table below).

This method is not recommended for areas where the soil type is soft, loamy or sandy as fire ant nests can extend further than one metre below the surface in areas with these soil types.

Storing

If the soil will be stored on the property for more than 24 hours, you should use the following storage options:

- off-ground and covered (e.g. in a shed, under a shade cloth or tarpaulin), or
- on-ground, and covered, either on:
 - concrete or bitumen (no cracks), or

- a barrier that cannot be penetrated by fire ants (e.g. 200 micron unperforated plastic sheeting), or
- compacted ground (other than sand) that has been treated with an appropriate chemical product before storage.

Chemical treatment should be applied around the perimeter of the on-ground storage area. This should be done by applying a 30 cm wide strip of treatment, such as insecticides containing 500 g/L chlorpyrifos or 80 g/L bifenthrin. If soil is stored on compacted ground, the whole surface area should also be treated.

It is important to keep the treated area free of material that could form an untreated bridge to the soil.

For an insecticide registered as a horizontal or perimeter barrier for fire ants, refer to Australian Pesticides and Veterinary Medicines Authority (APVMA) permit PER14317 (expires 31 December 2021).

Disturbing

Any untreated soil scheduled to be taken off-site should be disturbed before it is moved to another location.

Anyone storing soil should either comply with the storage requirements within this document, or disturb any stockpiles periodically to prevent fire ants becoming established. Disturbance means undertaking an activity to vigorously turn, crush, wash or screen the stockpile:

- every 21 days, and
- 24 hours prior to moving the material to another location.

Moving

Refer to the table below for restrictions on the movement of soil between and outside of the [fire ant biosecurity zones](#).

Fire ant biosecurity zone 1	Fire ant biosecurity zone 2
Soil originating from a place within zone 1 can be moved to a place within zone 1 or zone 2 . Soil can be moved from its original place in zone 1 directly to a waste facility within either zone 1 or zone 2 .	Soil originating from a place within zone 2 can be moved within zone 2 only. Movement to a place within zone 1 requires a biosecurity instrument permit (BIP) before movement takes place. Soil can be moved from its original place in zone 2 directly to a waste facility in zone 2 . Movement to a waste facility within zone 1 requires a BIP .
All movement of soil to outside of the fire ant biosecurity zones requires a BIP.	



Applying for BIPs

You can request a BIP from the program by calling **13 25 23** or via daf.qld.gov.au/fireants

Each BIP application is assessed on its own merits and applications may be refused if the movement poses an unacceptable risk of spreading fire ants.

Keeping a record

You should keep a written record of the steps you take to ensure the soil is inspected, stored and moved correctly, including chemical treatments applied and/or disturbance activities undertaken. This may include:

- dated, written records of the risk mitigation measures undertaken and the details of where the soil has been taken from/to
- photographs, site plans and surveyor's records
- receipts and records of treatment applied by a licensed pest manager.

These records should be kept for a minimum of two years.

These records would be requested by program inspectors who conduct random compliance checks to ensure businesses and individuals are complying with fire ant movement controls.

Penalties for not complying with movement controls apply under the *Act* and other relevant legislation.

More information

The program conducts free training sessions about the identification of the super pest, high risk material management and self-management treatment. Book at ants.daf.qld.gov.au

Visit daf.qld.gov.au/fireants or contact the program on **13 25 23** for further information.

