Red Imported Fire Ant (RIFA)

Quick guide for commercial plant industries

Plant Health AUSTRALIA

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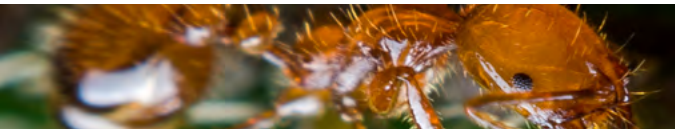


This guide has been developed by **Plant Health Australia** (PHA) to consolidate information from multiple sources into a single reference. It acknowledges the important work of the **National Fire Ant Eradication Program** in eliminating red imported fire ants (RIFA) from south-eastern Queensland, north-eastern New South Wales and areas outside the containment boundary.

The frequency of Red Imported Fire Ants (RIFA) nests being detected outside of prescribed **quarantine zones** is increasing.For information on detections of RIFA visit the **outbreak website**.

National Fire Ant Eradication Program eradication officers are continuing to respond to each detection. The New South Wales Department of Primary Industries and Regional Development (NSW DPIRD) in partnership with the National Fire Ant Eradication Program are working together on surveillance and treatment activities in relation to detections in New South Wales (NSW). Communities in the border regions of south eastern Queensland (QLD) that have experienced significant flooding events in recent years, including ex-Tropical Cyclone Alfred (January 2025) and subsequent major floods across the Northern Rivers and Mid North Coast should be on the lookout for RIFA and their nests and contact the **Exotic Plant Pest Hotline** on **1800 084 881** or their relevant state department of agriculture if suspected or found. QLD residents should report suspect fire ants using the **QLD online form** or by calling **13 25 23**.

NSW residents should contact NSW DPI by calling **1800 680 244** or use the **NSW online form**.

Information in this guide is current as at 8 October 2025, but may change as the situation evolves.

About RIFA

RIFA *(Solenopsis invicta* Buren*)* is an aggressive and highly adaptive invasive ant species that was first detected in Brisbane in 2001. Since then, the Australian Government in conjunction with state and territory governments have provided the financial support for a nationally cost shared program and worked together to eradicate this serious pest.

There have been over 17 reports of fire ants entering Australia. Eight of these have resulted in established populations of which seven have been successfully eradicated with support from the National Fire Ant Eradication Program. These eradication achievements include Port of Brisbane 2001, Gladstone (Yarwun 2006 and 2013), Sydney (Port Botany 2014), Brisbane Airport 2015, Port of Brisbane 2016 and Fremantle Port 2019. Efforts to date have been successful in slowing the spread outside of south east QLD. However, the increasing frequency of these detections outside the prescribed Interstate Plant Quarantine (IPQ) zone are contributing to concerns that the risk of RIFA spreading beyond current containment areas is increasing.

This quick guide provides a concise amalgamation of information from the National Fire Ant Eradication Program as well as other national and international scientific resources and expertise. It includes key information on the biology, behaviour, signs of infestation and management implications including steps to take if RIFA is detected in broadacre cropping areas. It is intended to highlight key areas on which to focus industry preparedness efforts.

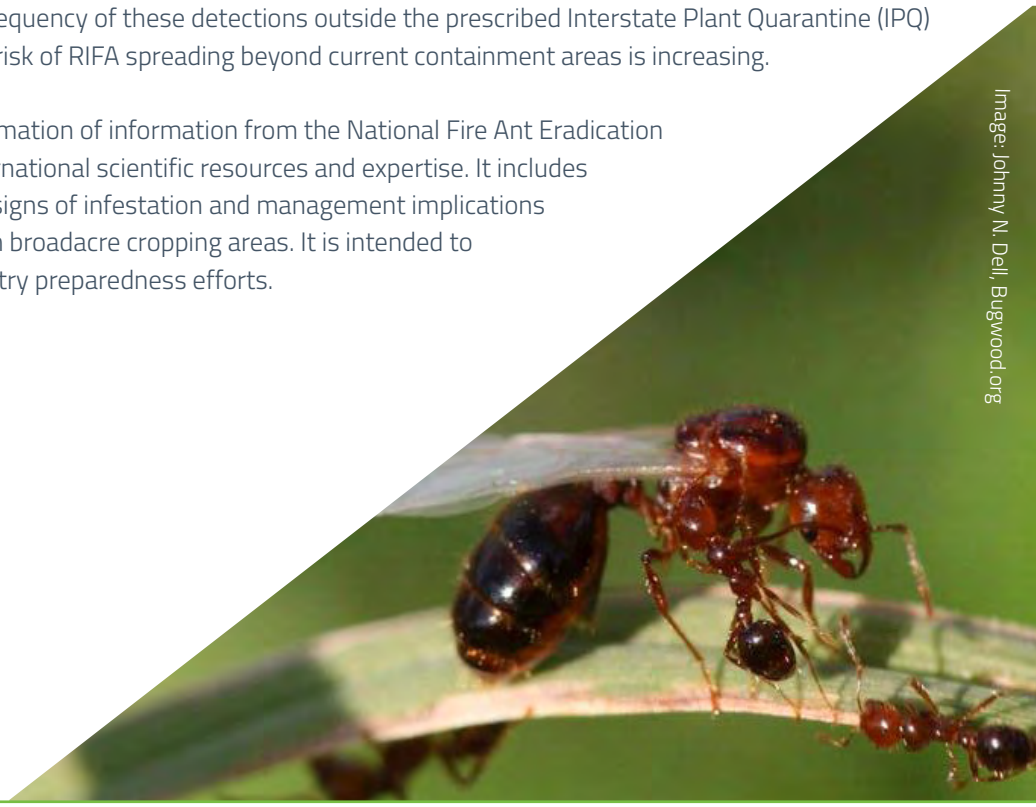
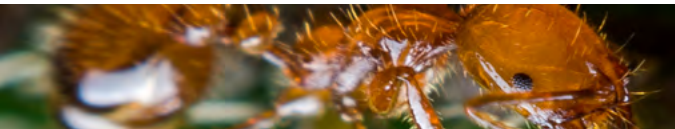


Image: Johnny N. Dell, Bugwood.org

Key points

- RIFA is a native ant of South America, and has spread to the United States, China, Taiwan, Japan, the Philippines and Australia
- Both forms of RIFA are also able to float or raft on flowing water, taking advantage of seasonal flooding. They float as a mat of ants on rising waters and can survive for weeks until waters recede, or they drift to land.
- There are two social forms of RIFA, both have been detected in Australia. Through a genetic mutation in the RIFA genome, RIFA can either be monogyne, and form a monogynous colony that has a single egg-laying queen, or polygyne and form polygynous colonies that have multiple reproductive queens within a single nest.
- Newly mated queens from monogynous colonies have been recorded flying distances of up to 5 km. Research in the US indicates that when exhaustion ends these flights at around the 5 km range, the ants are unlikely to have any energy reserves left for colony founding.
    - The 'monogyne form' typically spreads by flight. Virgin queens and males mate in flight and the mated queens usually fly 500 m or so to establish a new nest.
    - Newly mated queens from monogynous colonies have been recorded flying distances of up to 5 km. Research in the United States of America (USA) indicates that when exhaustion ends these flights at around the 5 km range, the ants are unlikely to have any energy reserves left for colony founding.
    - The 'polygyne form' spreads mostly through budding where a mated queen will leave the nest and walk a few metres with some workers and brood to establish a new nest.
    - Newly mated queens from polygynous colonies are poor fliers and their spread is often more localised.
    - Polygyne colonies are more likely to be spread with human assistance because a colony that is caught up in the material being moved may contain hundreds of queens, any of which can establish a new nest. Multiple rounds of bait treatment are usually required to eradicate infestations of the polygyne form.
- Both forms of RIFA are also able to float or raft on flowing water, taking advantage of seasonal flooding. They float as a mat of ants on rising waters and can survive for weeks until waters recede, or they drift to land.
- Despite the range of eradication, quarantine, communication and compliance activities currently in place, the most significant risk of spread of RIFA from the current IPQ zones is through human-assisted movement of RIFA carrier material.
- RIFA carrier materials are those materials that are considered high risk of carrying fire ants.
- Establishing a dedicated area for receiving farm deliveries is recommended so you can better target your surveillance efforts.
- Nests or mounds are often noticed before the ants themselves.
- Nests can be dome-shaped or flat in appearance and look like a small patch of disturbed soil (see figures 3-8.) The shape and size of the nest depends on soil type and size of the colony.
- Nests do not have obvious entry or exit holes. Ants enter and exit the mound using underground tunnels which radiate outward from the nest. These tunnels may be up to 30 m long.
- RIFA nests are often found in open areas, such as lawns grasslands and pastures, along roadsides and unused cropland. They can also be found next to or under other objects on the ground, such as logs, rocks, pavers or bricks.
- RIFA nests can also interfere with ground-based electrical and telecommunication equipment, including irrigation systems.
- Several treatment options and products are currently available to effectively treat fire ants. Details of currently registered products can be identified through searching the Australian Pesticides and Veterinary Medicines Authority (APVMA) **Public Chemical Registration Information System** database.



This quick guide has been developed on the Assess, Find, Identify, Thresholds, Enact (AFITE) strategy shown below:

Assess	Find	Identify	Thresholds	Enact
Assess your current RIFA risk based on your proximity to RIFA IPQ Zones. Establish designated delivery areas for receiving deliveries. Ensure Plant Health Certificates accompany the movement of RIFA risk material to your farm.	Remain vigilant to RIFA risks. Carry out regular inspections of designated delivery areas for anything unusual. Check for nests around obvious objects and structures that can retain heat our near water sources, such as concrete edging, paths, walls, dams, irrigation and fencing.	Accurately identify RIFA by consulting with your local agronomist or crop protection specialist. Suspicious ants must be reported to your State Department of Agriculture. Call the **Exotic Plant Pest Hotline** on **1800 084 881** NSW residents can also call **1800 680 244** or use the NSW online form. In QLD, residents should use the QLD online form or call **13 25 23.**	The impacts from RIFA across the urban, peri-urban and rural landscape are wide ranging. There are a number of action thresholds for RIFA that you need to be familiar with for your individual situation and circumstances.	Make informed decisions, remain connected to information networks and share knowledge with neighbours. Carry out regular inspections of designated delivery areas for anything unusual. Establish and maintain good Integrated Pest Management (IPM) practices across your cropping operations. Make chemical decisions that minimise impact on beneficial insects which help suppress other pest populations in your crop. Always follow label or permit directions for specific insecticides.

Purpose of this quick guide

This quick guide has been developed for the Peak Industry Bodies (PIB) of the major commercial plant industries and agricultural production industries more broadly to highlight the farm activities that industry can apply now and to assist with planning in the event that RIFA spreads into production regions of Australia. It has been compiled from information made available by the **National Red Imported Fire Ant Eradication Program** along with international scientific and extension literature, and available information from overseas experience in dealing with this pest.

The quick guide is focused on commercial plant industries and seeks to provide additional information to what is currently available in Australia which is focussed on urban or park-land management/treatment and eradication of RIFA and provides relevant background information on the current knowledge and status of RIFA in Australia. The intended purpose of the quick guide is to provide a reference point and understanding of RIFA as well as a baseline for industry to build upon in designing future management strategies and plans for RIFA within each of their different production systems.

Assessing your regional risk

1. Check the RIFA Interstate Plant Quarantine (IPQ) zone map regularly to determine your proximity to the latest quarantine zones. The risk of RIFA infestations is highest inside and adjacent to the current IPQ zones established in south eastern QLD (SWQ) and north eastern NSW (Figure 1). The New South Wales (NSW) Department of Primary Industries and Development (DPIRD) provides a copy of this map in a searchable format.

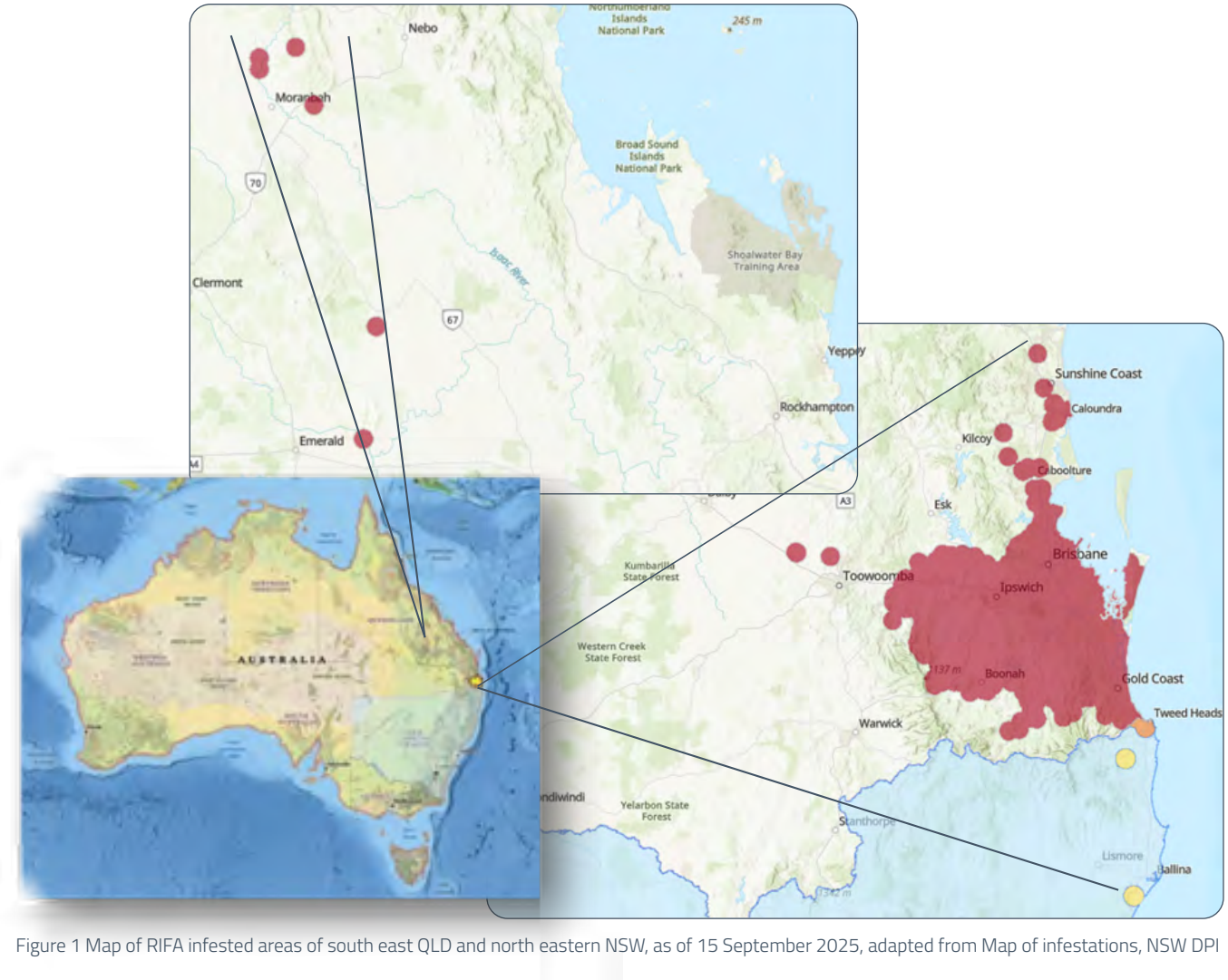


Figure 1 Map of RIFA infested areas of south east QLD and north eastern NSW, as of 15 September 2025, adapted from Map of infestations, NSW DPI

2. While the risk of natural spread of RIFA through flight, budding and rafting on waterways during floods increases during the warmer months and following prolonged periods of wet weather, the most significant risk of spread of RIFA from the current IPQ zones is through the movement of fire ant carrier material.
3. Communities recovering from the impacts of significant weather event such as ex-Tropical Cyclone Alfred in early 2025 need to be extra vigilant when moving debris. RIFA may be hiding in soil, potted plants, branches, or other materials, or in floodwaters. Where possible, check items before relocating them and **take steps to help prevent fire ants from spreading**.
4. Fire ant carrier material are those materials that are at high risk of carrying fire ants. These materials include organic mulch, compost, growing media, manure, soil, hay, straw, chaff, silage, potted plants, turf, agricultural equipment, earth moving equipment, sand, gravel, chitters, coal fines, coal stone, overburden and decomposed granite.
5. Human-assisted movement remains the most likely means by which RIFA will spread in significant numbers. Movement controls are currently in place in south eastern QLD and two 5 km control areas in NSW at Murwillumbah and Wardell. These control areas are specifically designed to manage the movement of potentially infested carrier material, including machinery to prevent the movement of RIFA with it. The the most information about **control areas** are available online.

Quarantine and interstate movements

1. The current quarantined area for RIFA in Australia now covers approximately 800,000 hectares in south-eastern QLD and north-eastern NSW. The quarantine means that movements of fire ant carrier material within and from these IPQ zones must comply with state movement regulations.

2. All Australian states and territories apply legislated quarantine conditions on the entry of particular products that are considered to be biosecurity risk material. Conditions for particular products differ between the states and territories. To find out what quarantine conditions apply to goods you are receiving or supplying, contact the plant biosecurity agency in your state or territory

3. If you, your staff or your contractors are ordering, sourcing or moving at risk RIFA carrier material from or through the IPQ zone, ensure it is accompanied with a Plant Health Certificate (PHC) and thoroughly checked for the presence of RIFA.
   If you plan to move RIFA carrier material within QLD, or out of QLD to another Australian state or territory, you will need a biosecurity certificate. For information on how to obtain a biosecurity certificate in QLD visit the **Business QLD website**.

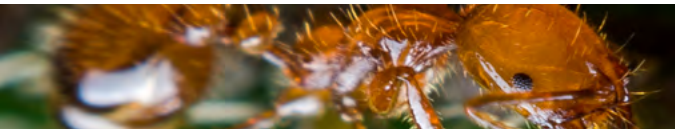
   If you plan to move RIFA carrier material between NSW and other states and territories, you will need to obtain a biosecurity certificate known as a PHC. For information on how to obtain a PHC in NSW visit the **NSW DPI website**.

4. If you are moving carrier material from within the known infested area in QLD into NSW, you are also required to complete a **Record of Movement Declaration** and have it accompany the carrier material during transit.

5. Moving agricultural and earth moving equipment into NSW from a known RIFA infested area in QLD requires a Plant Health Certificate that certifies it has been:
   - cleaned so that it is free from soil and any other RIFA carrier, and
   - checked visually and found to be free of RIFA
   - accompanied by a completed record of movement declaration form and a copy of the approved biosecurity certificate submitted to the Department before the RIFA carrier is moved, with movement records retained for four years.

   The measures above do not apply to agricultural or earth moving equipment that is new and unused.

6. Any person who initiates the movement of a RIFA carrier material into NSW from the RIFA infested area must provide details of the movement and a copy of the approved biosecurity certificate to NSW DPIRD by completing and submitting the record of movement declaration form before the RIFA carrier is moved, and retain details of the movement for 4 years.



Farm hygiene and biosecurity planning

1. Dedicate an area for receiving farm deliveries so you can better target your surveillance efforts and make it easier to detect any potential fire ants.

2. Exercise caution when bringing farm inputs, machinery, material, contractors, and visitors originating from IPQ zones onto your farm.

3. If you are purchasing hay, chaff or silage that has been grown, processed, or stored in RIFA infested areas, ensure it is accompanied with a PHC.

4. Ensure that you keep good records of farm inputs and deliveries including vehicle, machinery, people, and materials/goods coming onto your farm and especially if they have originated or recently travelled through a RIFA IPQ zone.

   The **Farm Biosecurity Plan for Grain Producers** has good templates for vehicle registers, consultant checklist and agreements. Cleaning machinery and vehicles before they enter production areas will substantially reduce the risk of introducing new pests.

5. Update your biosecurity risk assessment by reviewing and updating your biosecurity plan.

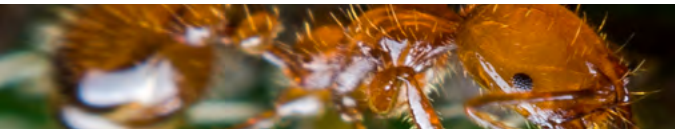
   Farm biosecurity planning resources are available through industry websites or via **farmbiosecurity.com.au** or **grainsbiosecurity.com.au**.

6. Work with neighbours as needed to ensure they are also aware of the risks and the actions they should take.

7. A property map is an important part of a farm biosecurity plan. It gives a visual representation of where your entry and exit points are for transport and deliveries, where designated delivery areas are located, as well as areas to avoid such as permanent and intermittent water courses, livestock watering points, and the location of your production areas. It also allows you to identify zones on your property that might require different levels of monitoring or inspection. Your property map can also be given to visitors and contractors so they can adhere to your requirements and how to inform you if they notice anything unusual.

   Some useful guides on how to do this using Google Earth are available via the following resource links: **Creating a Premises Map for a Biosecurity Plan**[1], and **Creating a premises map for a biosecurity plan**[2].

Figure 2 Google Earth imagery available for use in biosecurity plan mapping



General biosecurity obligations

The general biosecurity obligation or duty supports the principle that we all share the responsibilities for managing biosecurity risks. It means that everyone has a role in doing what is reasonable for them to do to prevent, eliminate or minimise biosecurity risks.

Under each state or territory's Biosecurity Act, individuals and corporations whose activities pose a biosecurity risk must:

- take all reasonable and practical steps to prevent or minimise each biosecurity risk
- minimise the likelihood of causing a biosecurity event, and limit the consequences, if such an event is caused
- prevent or minimise the harmful effects a risk could have, and to not worsen any of the harmful effects.

If you are moving or storing RIFA carrier material, you are legally required to adhere to the following procedures to reduce the risk of spreading fire ants:

- understand **what RIFA and their nests look like**
- check the **fire ant biosecurity zones**
- find out **what materials can carry and move RIFA**
- Inspect material for any **RIFA activity** before moving it
- follow **movement controls** relevant to the materials you or your business are working with, including when buying and selling products
- report suspect ants to the relevant state department of agriculture
- when working with materials that can carry RIFA, **clean machinery and equipment** used before moving it off-site
- To reduce the risk of spread, treat any RIFA you find.

When and how to look for signs of RIFA

1. Familiarise yourself with the signs and characteristics of RIFA and their nests.
2. Carry out regular inspections of designated delivery areas as human-assisted movement remains the most likely means by which RIFA will spread in significant numbers.
3. RIFA nests or mounds are often noticed before the ants themselves.
4. Nests are often found in open, low-cut, grassy areas such as lawns, grasslands, and pastures; along roadsides and unused cropland next to fence lines; and next to or under other objects on the ground that can retain heat from the sun such as logs, compost, rocks, concrete, pavers or bricks.
5. Nests can be dome-shaped or flat in appearance and look like a small patch of disturbed soil. The size and shape of the nest depends on soil type and size of the colony.
6. They will often have grass growing up through them.
7. Mounds in turfgrass may reach 30-40 cm in height and 30-90 cm in diameter. Mounds in clay soil are often larger than those in sandy soils.
8. RIFA also have a reported affinity for ground-based electrical and telecommunication units, utility pits and structures, where they may cause damage to equipment.
9. One of the characteristics of RIFA nests are that they do not have obvious entry or exit holes. Ants enter and exit the mound using underground tunnels which radiate outward from the nest. These tunnels may be up to 30 m long.
10. Be careful not to disturb the nest, as when a nest is disturbed, as with other ants, workers will very quickly move to protect the nest by swarming and attacking and will look to move the queen and brood to a new location.
11. RIFA tend to be more active and on the hunt for food during the warmer months, October through to March.

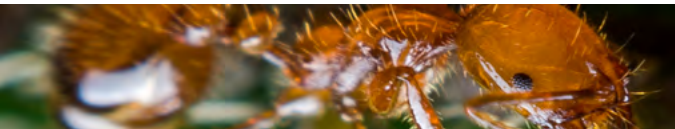


Figure 3 Nest near hay bale (Image: National Fire Ant Eradication Program)

Figure 4 Nest near small tree (Image: National Fire Ant Eradication Program)

Figure 5 Nest near semi-buried log (Image: National Fire Ant Eradication Program)

Figure 6 Nest near inspection pit Image (National Fire Ant Eradication Program)

Figure 7 Nest near brick wall (Image: National Fire Ant Eradication Program)

Figure 8 Fire ant nests can appear as mounds in lawns (Image: Jake Farnum, Bugwood.org)

Positively identify suspected RIFA

1. Familiarise yourself with the key features of RIFA.
2. RIFA are copper brown in colour with a darker abdomen. They are quite small (Fig. 9) ranging from 2-6 mm in size with a variety of sizes within a single nest.
3. As RIFA are quite small, you will need a magnifying glass, hand lens or hand magnifier to identify key characteristics of collected samples. Basic magnifying lenses can be sourced from common retailers such as Coles, Woolworths, Bunnings, or OfficeWorks, or for higher quality hand magnifiers, check online specialist stores such as **Bugs for Bugs** or **Australian Entomological Supplies**.
4. Do not disturb RIFA nests or attempt to collect RIFA samples if you have previously experienced severe allergic reactions or symptoms after an insect sting or bite.
5. When checking suspicious nests and collecting samples for identification, it will be necessary to get ants to leave the nest. To do this you will need latex gloves, a plastic container, such as a takeaway food container, a can of household insect spray, a long stick, and some tissues. Use caution when carrying out the following procedure.
   - Wearing latex gloves, stand well back and gently prod the edge of the nest with the stick. Be careful not to disturb the nest too much as when a nest is disturbed, as with other ants, workers may very quickly move the queen and brood to a new location.
   - Spray the ants with the insect spray as they run along the stick towards you and move clear of the nest. DO NOT spray the nest with the insect spray as this will not kill the whole nest and may cause the ants to move and spread further.
   - Gently wipe the sprayed ants off the stick onto a tissue. Spray the ants again if they are still moving.
   - Photograph the dead ants on the tissue and place in a plastic container.
6. Using a magnifying glass or hand magnifier verify the following RIFA characteristics (See Fig. 10):
   i. copper brown in colour with a darker brown-black abdomen
   ii. two-segment "waist"
   iii. antennae with 10 segments, including two larger segments at the ends forming a two-segmented club
   iv. visible stinger at the end of the abdomen
   v. 2-6 mm in length, with nests typically consisting of ants of different sizes.
7. Confirm ant identity by uploading photos of suspected fire ants via the **QLD online form** or **NSW online form**.

Figure 9 Fire ants on an Australian ten cent coin (Image: Queensland Department of Primary Industries)

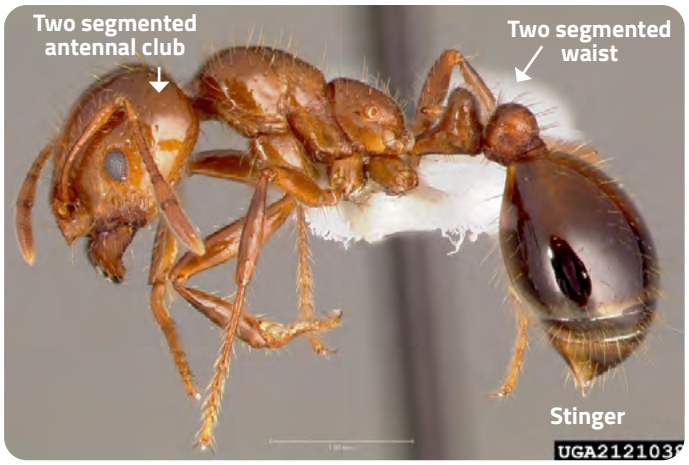
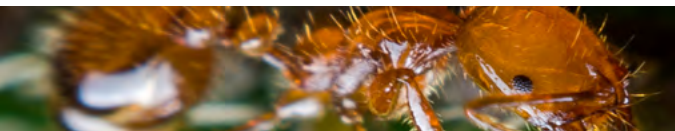


Figure 10 Fire ant worker (Image: April Noble, Antweb.org, Bugwood.org)



RIFA stings

Use caution when collecting ants for closer identification as RIFA will attack and sting when disturbed. Unlike many other ants, RIFA attack by biting their victims with their powerful jaws while stinging them repeatedly. After firmly grasping the skin with its jaws, the fire ant arches its back as it inserts it's rear-end stinger into the flesh, injecting venom from the poison sac. It then pivots at the head and typically inflicts an average of seven to eight stings in a circular pattern. RIFA venom is unique because of the high concentration of toxins, which are responsible for the burning pain characteristic of their name.

RIFA usually swarm and sting all at once and can sting repeatedly. Stings may initially appear as raised welts or hive-like lesions associated with intense burning, itchiness and redness that can last up to an hour. Most people will not need medical treatment for RIFA stings.

First aid

If you've been stung, gently wash the affected area with soap and water and apply an ice pack or cold compress to relieve swelling and pain. Over-the-counter antihistamines can be used to manage minor, localised reactions and itching. Small blisters or pustules (small bumps with fluid or pus) can appear on the skin after a couple of hours and sometimes even up to a day or two after being stung. These can take up to 10 days to heal. If the blisters or pustules break, there is a risk they can get infected. If pain persists or blisters get infected, see your doctor. Infected stings may require antibiotics.

Although rare, RIFA stings can cause severe and sometimes fatal allergic reactions (e.g. anaphylaxis).
Seek immediate medical advice if you are allergic to insects or experience the following symptoms:

- rapid onset of flushing
- general hives
- swelling of the face, eyes or throat
- chest pains
- nausea
- severe sweating
- breathing difficulties
- faintness.

Animal first aid

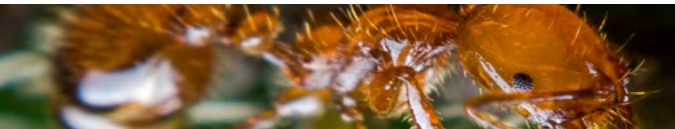
If your animal or pet has been stung, it is important to move them away from the ants or the nest and remove any ants from their skin or fur to ensure there are no further stings. Wearing a pair of gloves to protect yourself, brush the ants off the animal's skin or fur or pick the ants off individually. DO NOT try to hose them off as this can make the ants more aggressive. After removing the ants, you may be able to provide some pain relief by giving your pet a cool bath.
Seek further advice from your veternarian if pain persists or if they show signs of an allergic reaction such as drooling or vomiting, lethargy and trouble breathing.

Figure 11

Ants have two biting jaws (mandibles) with many sharp teeth.

Adult ants have a stinger that delivers venom.

Photos: Orange County Mosquito and Vector Control District, California, USA.



Other ants that can be confused with RIFA

RIFA can be mistaken for other ants in Australia. Some of these ants are also known to build mounds and/or sting and may be mistaken for RIFA at first glance. While these ants are not required to be reported, it is better to make a report than not. These ants include:

Coastal brown ants *(Pheldole megacephala)*

Also known as big-headed ants, this globally invasive species originated from Africa. They are distinguished by two very different sizes of workers – minors (2-3 mm long) and majors (3.5-4.5 mm long). The majors have disproportionately large heads and use their powerful jaws for cutting up large pieces of food for ease of transportation. More information and diagnostic images are availbleon **PaDIL**.

Figure 12 Coastal brown or big-headed ants
(Photo: Department of Agriculture and Food, Western Australia)

Figure 13 Meat ant *(Iridomyrmex purpureus),* a native ant species of Australia
(Photo: Marc Widmer, DAFWA ©2017)

Meat ants *(Iridomyrmex purpureus)*

The meat ant is a native species that is widespread throughout mainland Australia. Measuring 6-8 mm long, it is characterised by its iridescent dark blue to purplish body and red head. This ant also displays aggressive behaviour if the nest is disturbed. They can deliver a 'pinching' bite, but do not sting. Nests appear as shallow-domed piles of fine gravel. More information and diagnostic images are availbleon **PaDIL**.

Sugar ants *(Camponotus consobrinus)*

These large native ants (5-15 mm long) are commonly seen in forests and woodlands although also inhabit urban areas where they are considered a pest. They have an orange-brown body and legs with a black head and abdomen. Sugar ants are timid and neither bite nor sting.

Figure 14 Sugar ant (Photo: ©Andrew Donnelly, Australian Museum)

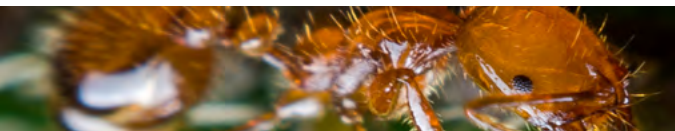


Figure 15 Bicoloured pennant ant worker (Photo: ©Eli Sarnat, Creative Commons Attribution, Share Alike CC BY-SA Licence)

Pennant ants *(Tetramorium)*

Tetramorium is a large group of ants distributed worldwide with numerous species found in Australia, including some undescribed species. With their black abdomen and reddish body, they are often mistaken for red imported fire ants. Search for and compare this group of ants on **PaDIL**.

Mono ants *(Chelaner rubriceps)*

This native species is found on the eastern and southeastern coast of Australia from QLD through to South Australia. It often, but not always, has a red-coloured body and darker abdomen with lighter coloured patches. Nest locations can be found on the ground, under leaf litter and vegetation, or under loose bark on the trunks of eucalypts.

Figure 16 Red mono ant (Photo: Carol Page, some rights reserved, CC-BY-NC-SA, **iNaturalistAU**)

Sensitivity thresholds

1. RIFA is an incredibly invasive pest. Unlike most other pests, RIFA can inhabit and have an impact upon urban, suburban, peri-urban and rural landscapes. Consequently, sections of the broadacre cropping and livestock industries, various rural based amenity businesses such as turf farms, landscape supply yards and nurseries as well as suburban and urban residents and social facilities (e.g. golf courses, parks and ovals) are all potentially vulnerable.

2. The economic, social, and environmental benefits that arise from successful RIFA containment and eradication are nationally significant and have been widely studied, analysed, and publicised.

3. As the impacts from RIFA are so broad, ranging across the urban, peri-urban, and rural interface, there will be a continuum of action thresholds that will apply when it comes to the ongoing eradication efforts.

4. While Australian research is ongoing, recent international research indicates that when we just look at the 'on farm' impacts, the sensitivity of certain activities, assets, crops, businesses, industries and ecosystems to RIFA could range according to this general order.

Sensitivity	**On-farm natural resource base and stewardship**	**Commercial activities, Assets, industries, and crops**	**Personal / family / social activities and assets**
More sensitive	Ground nesting birds	Irrigation pipes, pumps, beds and bays	Gardens and gardening
		Livestock watering infrastructure	Picnics, BBQs and other outdoor on-farm social / family gatherings
	Amphibians, turtles, etc. in farm dams, creeks, rivers, and other water courses	Calving and lambing during spring and summer	Children's play equipment
		Field worker intensive activities Apiaries	Outdoor dining and gathering areas
		Poultry production	Human health
		Ground based electrical and communication infrastructure	
		Production nurseries	
		Secondary crop uses such as sugarcane trash and hay and straw production	
		Machinery electrical wiring	
		Melon, sorghum, corn, soybean establishment	
		Row crop harvesting equipment	
		Cotton yield	
Less sensitive		Sugarcane yield	

The impacts of RIFA on a Brisbane resident's vegetable garden for example, are shown in Figure 17 and 18. A thriving productive garden (figure 17) that used to provide fresh produce to the householders was transformed into a desolate, weed filled wasteland (figure 18), as the property owners could no longer tend to it due to the RIFA infestation. These photos depict what a future with RIFA could look like for Australian producers, our environment and our precious way of life, without the efforts of a nationally coordinated eradication program.

Figure 17 Thriving productive garden providing fresh produce to the owners (Photo: late 1990's, courtesy of the property owner)

Figure 18 Desolate, weed filled wasteland no longer able to be tended by the property owners due to the RIFA infestation (Photo: end 2000, courtesy of the property owner)

Chemical control options

There are two types of RIFA treatments currently approved by the APVMA for use in Australia: fire ant baits and direct nest injection.

1. **Fire ant baits** – There are two types of baits currently approved for fire ant treatments. Baits consist of small pieces of corn grit (1-3 mm long) soaked in soybean oil and mixed with either an:

   ii. Insect Growth Regulator (IGR) where the bait contains 5 grams per kg of insect growth regulator consisting of s-methoprene or pyriproxyfen. These baits work by sterilising the RIFA queen and preventing new ants from maturing into adults. Once all adult workers have died, and without any ants left to feed her, the queen starves and the nest dies. This process takes about 3-4 months.

   iii. Fast-acting insecticide, either indoxacarb or a combination of hydramethylnon and pyriproxyfen, mixed with the corn grit and soaked in soybean oil, provides a faster acting bait than the IGR bait. Once ingested, the worker ants circulate the active ingredients around the colony, leading to the death of worker ants, larvae and the queen ant. The process takes 1-4 weeks.

   Baits are foraged and taken back to colonies where they are consumed and the active ingredient/s are circulated around the colony, leading to the death of worker ants, larvae and the queen. The baits are specifically targeted to kill ants and are not

2. **Direct nest injection** is typically used to treat RIFA nests where there is a risk to public or animal safety, and/or it is desirable to destroy colonies rapidly. Only licensed pest managers are currently authorised to use fipronil to treat RIFA. It involves flooding the ant nest and tunnels and is effective at very low application rates (25 ml to 100 L of water) and is often used in termite control. It is odourless and rapidly affects ants, with most dying within several days.

   Observe the following precautions following direct nest injection treatments:
   - ensure the ground remains undisturbed and is not watered for 48 hours
   - leave a 1 metre area around each mound undisturbed for at least 7 days

Different options for different situations and circumstances

1. RIFA impacts in broadacre cropping and livestock systems in the USA vary considerably from farm to farm, even within the same locality. As a result, no "one size fits all" threshold value or single control option is available in Australia at this time.
2. Existing threshold values from the USA are recommended to guide RIFA preparedness decisions in Australia until local thresholds are available.
3. Depending on the situation and circumstance, action levels and control strategies will vary. In sensitive circumstances or environments such as areas with high human or livestock traffic, or areas of ecological significance, the treatment threshold for direct nest injection may range from a single live ant through to multiple nests and colonies. In pastures and larger treatment areas however, an action level of 50 mounds per hectare for fire ant baiting has been promoted in the USA.
4. These higher threshold values for larger areas in the USA have been established to ensure that:

   i. RIFA is dominating the surface and numbers of competitor ant species are likely to be suppressed

   ii. sufficient numbers of foraging RIFA will be present to collect insecticidal bait particles scattered after broadcast application of an ant bait product. A broadcast bait application is likely to be less expensive than treating individual mounds.

5. Current details of Minor Use Permits and Registered Labels issued by the APVMA for RIFA control in Australia as of February 2024 are provided in the table below (Table 1). The actual permits, plus new ones as they are issued, can be found on the APVMA website. It is important that the rates and application methods specified in the permits for specific situations are followed.

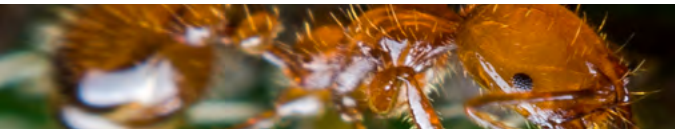
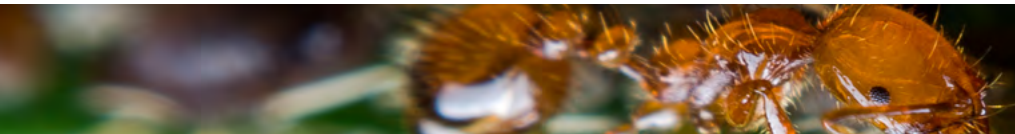
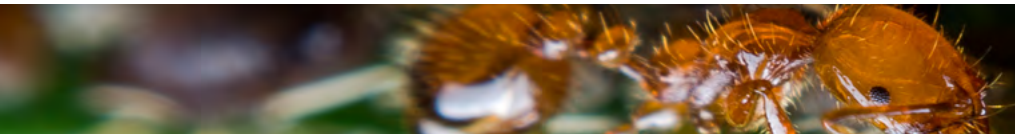


Table 1. Summary of permits and Registered Labels for RIFA control as of September 2025. The original permit must be consulted, and the approved use pattern followed.

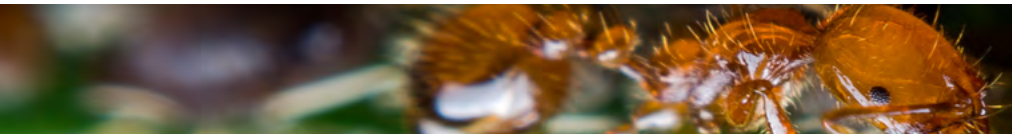
Active ingredient/s	Mode of Action Group	Permit / label examples	Typical situations / uses	Comments
Beta-cyfluthrin	3A	Permit examples: PER89374	Permits: Potted plants, containerised plants and bagged root-balled plants (not including fruit trees or other food producing plants).	Permits: Do not apply to food producing plants. Apply only as a drench.
Bifenthrin	3A	Permit examples: PER14317, PER94210, PER13959, PER13916 Label examples: 67858, 88371, 82932, 58803, 88996	Permits: Potted plants, potting media, risk items associated with nursery stock and landscaping. Labels: Turf (for example: lawns, commercial turf farms, parks, recreational areas, golf courses, bowling greens, sports fields). External surrounds of buildings and structures: Gardens, Lawns, ant nests and trails.	Permits: Check user qualifications needed to apply this treatment. May not be permitted for use in association with fruit trees or other food producing plants. Labels: Host aliases may allow for additional situations.
Chlorpyrifos	1B	PER81094, PER13504	Permits: Potted plants, containerised plants and root-balled plants. Commercial high-risk items subject to product storage requirements within fire ant restricted area.	Permits: Check user qualifications needed to apply this treatment..
Fipronil	2B	Permit examples: PER14458, PER14770, PER93008 Label examples: 93258, 93050, 90728, 90647, 90608, 88792, 84556, 84148, 82778, 68975, 68569, 68398, 67629, 67463, 64884, 64449, 63600, 63502, 54624, 89141, 95438, 86567, 70230, 65307, 63789, 82644, 70346, 69588	Permits: Turf and lawn situations (including residential lawns and ornamental garden beds). Agricultural situations (market gardens, intensive horticultural and backyard vegetable gardens dependent on permit). Commercial, Industrial, Government utility and Institutional areas. Labels: Spot application in domestic situations. External areas and surrounds of domestic, commercial, public and industrial buildings and structures.	Permits: Only duly trained and authorised personnel: Application by pressure injection using a termiticide spear or equivalent into the nest proper. Apply by sprayer or watering can on the surrounding soil surface up to 1 m radius from the nest. This method should be minimised to the extent possible. Labels: Respective situation/uses may depend on the respective form of the insecticide (e.g. foam, granular, dust). Host aliases may allow for a variety of additional situations.
Hydramethylnon	20A	Label example: 91476, 47194	Labels: Around domestic, commercial, industrial and institutional buildings: (e.g. hospitals, health and aged care facilities, food processing areas, offices, houses and schools), including non-crop areas, parks, golf courses, sports grounds, and plant nurseries.	Labels: Gel or granules is/are consumed and taken back to the nest and shared with the queen and other workers.
Hydramethylnon and pyriproxyden	7C	Permit examples: PER88626 Label examples: 81386, 69814, 67965	Permits and Labels: Domestic and public service areas, commercial and industrial areas, forests and non-crop areas (including gardens, golf courses, lawns, parks, turf, sports grounds, plant nurseries).	



Active ingredient/s	Mode of Action Group	Permit / label examples	Typical situations / uses	Comments
Indoxacarb	22A	Label examples: 86615, 81920, 66532, 87333, 62690, 92439, 94840, 90227	Labels: Residential, commercial and industrial buildings including factories, farm buildings, food handling/processing establishments, homes, hospitals, hotels, motels, offices, restaurants, retail outlets, schools, store rooms, supermarkets, warehouses. Transportation equipment such as aircraft, boats, buses, ships, trains. Other situations which fall within these definitions. Agricultural situations: cropping areas for fruit, herbs, nuts, spices vegetables, including market gardens and intensive horticultural and backyard vegetable gardens. Commercial, domestic,industrial and public service areas. Forests, grazing and non-crop areas. Lawn and turf situations, including residential lawns and ornamental garden beds.	The slight delay in mortality caused by the active ingredient, indoxacarb, encourages ants to consume the bait and return to the harbourage to contaminate other ants resulting in significant reduction in population levels.
Lambda-cyhalothrin Thiamethoxam	3A	Label example: 85595	Labels: Internal and External areas of commercial, domestic, industrial and public buildings & structures including; barracks, factories, farm buildings, food processing /handling establishments, hospitals, hotels and motels, offices, residential homes, restaurants, shops, schools, storerooms, transportation equipment such as aircraft, boats, buses, ships, trains, warehouses and other commercial and domestic situations. On surfaces including; cement (painted, unpainted and rendered). ceramic tiles, painted plasterboard, vegetation, soil, steel (stainless and enamelled), wood (painted and unpainted)	
Metaflumizone	22B	Label examples: 67126	Labels: Gardens, golf courses, industrial areas, lawns, parks, turf, sports grounds, and other non-crop land and non-food bearing nursery stock.	This granular ant bait is a slow-acting insecticide which is designed to be collected by ants and carried back to the nest as food for the colony. The bait is eaten and passed along to the queen and other nest-mates. Typically, in 1-4 weeks, the queen and a number of ants are killed and a visible reduction in activity results.
Permethrin	3A	Permit examples: PER94210.	PERMIT: Indoor potted plants	Apply as a soil drench using a watering can according to the provided procedure.
Pyriproxyfen	7C	Permit examples: PER87728 Label examples: 65967, 55784	PERMITS: Domestic and public service areas, commercial and industrial areas, forests and non-crop areas, pasture areas. Cropping areas: fruits, vegetables, nuts, herbs and spices (refer to restrictions under critical comments). LABELS: Domestic and public service areas, commercial and industrial areas incl. parks, golf courses, sports grounds, paths and walkways, gardens, lawns and turf. Cropping areas: Plantations and orchards including Olives, Citrus and tropical fruits and tree nuts Other fruits and vegetables, herbs, spices. Pasture Native and managed forests. Environmental management areas: National Parks and reserves where invasive ants are a threat to ecosystem values.	Permits: Produce that is traded for human consumption which has direct contact with the bait must be washed after harvest and prior to marketing. Labels: When used in vegetable cropping areas, DO NOT apply directly to crop plants. Apply to inter-row areas only.



Active ingredient/s	Mode of Action Group	Permit / label examples	Typical situations / uses	Comments
S-Methoprene	7A	Permit examples: PER81094, PER90213	PERMITS ONLY: Domestic and public service areas, commercial and industrial areas, pastures, forests and non-crop areas Cropping areas: Fruits, vegetables, nuts, herbs, spices, sugar cane, cereal grains including barley and oats (refer to critical comments regarding not covering grain crops other than cereals).	PER90213 Crops: Baiting in fruits, vegetables, nuts, herbs, spices, cereal grains and sugar cane may only be undertaken either where the crops do not come in direct contact with the bait by baiting between rows or broadcast directly onto crops but only when all crops (except cereal grains) are washed after harvest and before marketing. Baiting may not take place in grain cropping areas other than cereal grains.
Spinosad	5	Permit examples: PER94210	Permits only: Indoor potted plants	Permits: Apply as a soil drench using a watering can according to the procedure given.



Make informed decisions and act decisively

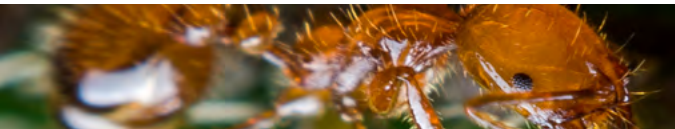
1. Keep informed of the evolving RIFA status and any new developments by checking the **RIFA IPQ zone map** regularly.
2. Compile a list of credible and trusted sources of information on the RIFA situation in Australia. A list of useful resources including documents, images, videos and websites is provided at the back of this quick Guide.
3. Start enacting your biosecurity plan now with a focus on establishing dedicated delivery areas for farm inputs and other deliveries, and keeping records of purchases, sales, deliveries and movements of RIFA carrier material onto your property
4. Carry out regular inspections of designated delivery areas looking for anything unusual.
5. Contact your relevant state department of agriculture if suspected RIFA are found:
   a. QLD residents should report suspected RIFA using the **QLD online form** or by calling 13 25 23.
   a. NSW residents should contact NSW DPI on 1800 680 244 or use the **NSW online form**.
   a. Property owners and residents in other states should call the Exotic Plant Pest Hotline on 1800 084 881
6. Keep a register of visitors, workers, and contractor movements, including agronomists, consultants, sowing, spray and harvest contractors and itinerant or seasonal workers (backpackers, grey nomads, shearers, etc.) who may have travelled from or through the **RIFA IPQ zone**.
7. Maintain good area wide and IPM practices across your cropping operations.
8. Make chemical decisions that will minimise impacts on beneficial insects which help suppress other pest populations in nearby crops. Be mindful of the effect your insecticide sprays could have on other pests in nearby crops.
9. Know which chemicals and strategies are likely to be most effective given your particular situation and circumstance.
10. Individual mound or nest treatments are preferred over broadcast treatments. As they use less insecticide, reduce the area treated and are also less likely to impact non-target species.
11. Ensure action is only taken with the intention of eliminating targeted nests, otherwise, unaffected ants will move the nests.
12. Always follow label or permit directions for specific insecticides.

To learn more about RIFA and any changes to this advice, please visit the National Fire Ant Eradication Program website fireants.org.au.

Do you or anyone you know need to talk to someone?

Don't go it alone, please reach out if you need help.

- Lifeline: 13 11 14 or lifeline.org.au
- Beyond Blue: 1300 224 636 or beyondblue.org.au
- MensLine Australia: 1300 659 467
- Kids Helpline: 1800 55 1800 or kidshelpline.com.au
- Headspace: 1800 650 890 or headspace.org.au



Reporting

Each jurisdiction has different reporting requirements for pests of biosecurity concern. For RIFA, the current reporting requirements within each state or territory are outlined below.

New South Wales

Fire ants present a high biosecurity risk to NSW, having been detecteed near Murwillumbah and Wardell in north eastern NSW. It is important to report any suspicious ant sightings immediately as these pests can spread rapidly. You can report suspicious ants by one of the following methods:

- for general biosecurity enquiries call **1800 680 244**
- call the **Exotic Plant Pest Hotline** on **1800 084 881**
- complete an **online form** at the Report a pest or disease web page.

Queensland

Under QLD's Biosecurity Act 2014 everyone has a general biosecurity obligation to take all reasonable steps to prevent the spread of RIFA. Suspect ants should be reported within 24 hours of sighting by calling 13 25 23 or by completing the simple **online form**.

Victoria

RIFA is a declared exotic pest in Victoria. Report any unusual plant pest or disease immediately to the **Exotic Plant Pest Hotline on 1800 084 881.**
Early reporting increases the chance of effective control and eradication. Alternatively, you can make a report via the online form on the **public reporting** web page, together with a photo where possible.

Australian Capital Territory

If you think you have seen fire ants or nests, contact the ACT Biosecurity on **02 6207 3587** or email **actbiosecurity@act.gov.au** during business hours.

Western Australia

RIFA is a prohibited organism in Western Australia (WA) under the Biosecurity and Agriculture Management Act 2007. WA was recently (October 2023) declared free of RIFA following a two-year eradication program at Fremantle Ports. If you suspect RIFA in your crops, home garden, or urban area, make a report to the **Pest and Disease Information Service (PaDIS)** by calling **08 9368 3080** or emailing **padis@dpird.wa.gov.au.**

Northern Territory

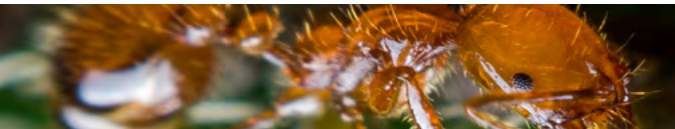
For more information on control measures contact the Department of Agriculture and Fisheries, Entomology unit on **08 8999 2258** or via email **insectinfo@nt.gov.au**.

Tasmania

Biosecurity Tasmania encourages all Tasmanians to remain vigilant for pests and diseases, including ants, and to report anything unusual, particularly if you are travelling from Queensland. You can report insect pests to Biosecurity Tasmania at **biosecurity.tasmania@nre.tas.gov.au** or **(03) 6165 3777** or by calling the **Exotic Plant Pest Hotline on 1800 084 881.**

South Australia

RIFA is a notifiable pest in South Australia, which means there is a legal obligation for everyone to report suspected detections. Report suspected findings of RIFA using the online **Report Plant Pest** form. Alternatively, call the **Exotic Plant Pest Hotline** on **1800 084 881.**



Useful RIFA resources

National Fire Ant Eradication Program
National Fire Ant Eradication Program (fireants.org.au)

Department of Primary Industries and Regional Development, Western Australia
Red imported fire ant: declared pest in Western Australia | Agriculture and Food

The Department of Primary Industries and Regions South Australia
Red imported fire ant - PIRSA

Agriculture Victoria
Red imported fire ants (RIFA) | Priority pest insects and mites | Pest insects and mites | Biosecurity | Agriculture Victoria

New South Wales Department of Primary Industries and Regional Development
Red imported fire ants (nsw.gov.au)

Northern Territory Government
Exotic ants | NT.GOV.AU

Invasive Species Council
Fact sheet: Red imported fire ants - Invasive Species Council

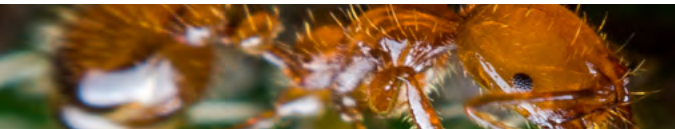
Outbreak – current outbreaks (Commonwealth Government)
Red imported fire ant (*Solenopsis invicta*) | Outbreak

Plant Health Australia
Fire ants Fact Sheet for the Tea Tree Industry

Australian Department of Climate Change, Energy, the Environment and Water
Red imported fire ant - *Solenopsis invicta* - DCCEEW

The AntWiki website contains useful information on Australian ants.
https://antwiki.org/wiki/Australia

CABI Compendium – *Solenopsis Invicta* **(red imported fire ant)**
https://www.cabidigitallibrary.org/doi/10.1079/cabicompendium.50569#sec-2



Red Imported Fire And Management - quick guide

Assess | Find | Identify | Thresholds | Enact

Assess your current RIFA risk based on your proximity to RIFA IPQ Zones.

Assess the risks of RIFA entering your farm through human-assisted movement and implement steps to reduce these risks. Farm biosecurity planning resources are available through industry websites or via farmbiosecurity.com.au

Establish designated delivery areas for receival of farm inputs and other deliveries.

Ensure Plant Health Certificates accompany the movement of RIFA risk material to your farm.

Regularly check for updates on recent detections via the fire ant map.

Remain vigilant to RIFA risks.

Carry out regular inspections of designated delivery areas for anything unusual.

If you are in or adjacent to the IPQ Zones (refer to map) check for nests around obvious objects and structures that can retain heat such as concrete edging, paths, walls and fencing.

RIFA nests are often located in open areas, such as pastures, roadsides and unused croplands.

In rural settings it is important to check the following locations for RIFA nests: dams and irrigation lines; edges of cultivated land; cropland; fence lines; and in or around piles of organic matter.

Confirm identification of RIFA by looking for these typical characteristics and submitting photos through the online reporting forms with your State Department of Primary Industries.

Characteristics used for identification include:

- copper brown in colour with a darker brown-black abdomen
- two-segment waist
- antennae with 10 segments
- visible stinger at the end of the abdomen
- RIFA are small at 2-6 mm in length, and there are typically a mixture of sizes in nests.

The impacts from RIFA across the urban, peri-urban and rural landscape are broad ranging.

There are a range of action thresholds for RIFA that you need to be familiar with for your individual situation and circumstance.

These thresholds will inform your specific control strategy as to whether to use baits, direct nest injection or a combination of both.

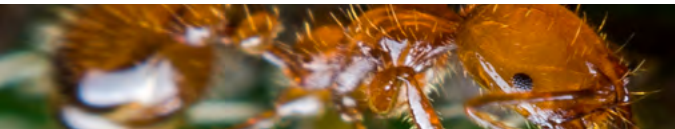
Make informed decisions, remain connected to information networks, and share knowledge with neighbours.

Maintain good area wide and IPM practices across your cropping operations.

Make chemical decisions that conserve beneficial insects which help suppress other pest populations in your crop.

Ensure action is only taken with the intention of eliminating targeted nests, otherwise, unaffected ants will move the nests.

Always follow label or permit directions for specific insecticides.



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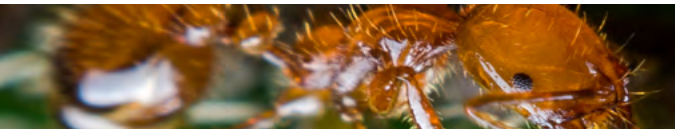

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