

PANAMA DISEASE TROPICAL RACE 4

Decontamination Guide





Decontamination guide for Panama disease tropical race 4 (Panama TR4)

Panama disease tropical race 4 (Panama TR4) is a serious disease of banana plants and has been found on commercial banana farms in Far North Queensland. It is a fungus that lives in soil and is easily spread by the movement of contaminated soil and water and plant material (e.g. infected plants, planting material).

Once Panama TR4 is in the soil there is no way of getting rid of it, so it is very challenging to manage. The goal is to contain it as much as possible, to where it has been found and minimise its spread to new places. Minimising its spread can be achieved by following procedures that reduce soil and plant material movement.

Equipment and items that have come in contact with soil or plant material, such as vehicles, machinery, tools, clothing and boots, have the potential to spread Panama TR4.

To protect your farm from Panama TR4 it is recommended you:

- Manage the movement of vehicles, machinery, tools, clothing and boots
- Manage the movement of people
- Implement washdown and decontamination procedures
- Encourage visitors and workers moving on and off your property to come clean, leave clean.

Minimising the risk of spreading pests and diseases is everyone's responsibility.

Minimising the movement of soil and plant material

To limit the amount of soil and plant material being moved, there are three key principles: exclude, avoid and decontaminate.



1. EXCLUDE

Exclude all non-essential people, vehicles and equipment from entering your property. This could include:

- Designating a parking area at the entrance to your property for all staff and visitor vehicles
- Installing fencing or barriers
- Putting up clear signage to direct staff and visitors about who to contact, where to go and what to do before entering your property. The Farm Check-In app can also be used to help identify potential biosecurity risks and minimise their spread.
- Having a visitor register for all visitors and contractors to sign on arrival to your property
- Using your own vehicle to transport workers and visitors around your property
- Providing workers with all the right tools and equipment to do their job effectively.

The more you exclude from your property, the more you reduce the risk of introducing unwanted pests and diseases onto your property.





2. AVOID

Avoiding contact with soil and plant material is the next best option if you can't exclude an item.

Where essential vehicles like delivery and pick-up trucks must enter your property, ensure they are relatively clean of soil and plant material before entering. Avoid them having to access the production areas or roads used by banana appliances (e.g. tractors, slashers), travelling only on main access roads. External vehicles should always travel on separate roads and driveways to farm-based vehicles and machinery, to reduce the chance of cross contamination.

Farm based machinery and vehicles should stick to headlands and regular traffic pathways within production areas and blocks, and should never come into contact with the main access road.

Restrict unnecessary items from being taken into production areas to avoid having to decontaminate them on exit. This includes leaving food containers and eskies in eating areas. All clothing should be clean on entry to the property, and any piece that is dirty or requires cleaning should be bagged and sealed before removing from the production area. A spare change of clothing should be kept on hand.

3. DECONTAMINATE

In cases where people and vehicles need to go into the production area on your farm, cleaning and disinfecting is recommended. No matter what the item is, whether footwear, tools, farm machinery or equipment, it should be thoroughly cleaned and disinfected.

Cleaning and disinfecting should take place on entry and exit to your production areas.

Decontamination



1 CLEAN & SCRUB



TOP TIPS FOR DECONTAMINATION

- Ensure second-hand machinery and equipment, whether borrowed or purchased, has been decontaminated before it's moved onto your property
 - Ensure all clothing, hats, water bottles and eskies are clean on arrival
 - Ensure vehicles and machinery are securely parked prior to washdown by applying the park brake or using chocks behind tyres
 - Always clean machinery and vehicles from the top down
 - Areas of the vehicle that require cleaning with compressed air (e.g. radiator) should be cleaned first
 - Internal areas of the vehicle that have the potential to collect soil require cleaning (seats, floor mats)
 - In wet conditions, allocate extra time to decontaminate effectively as the soil will be sticky and hard to remove
 - Clean items frequently to reduce soil build up. Regular cleaning will make subsequent cleans easier.
 - Use strong plastic bags for collecting and sealing any items for disposal. Bags should then be placed directly into the waste bin.
 - Always use chemicals in accordance with the label, Australian Pesticides and Veterinary Medicines Authority (APVMA) permit, and Safety Data sheet (SDS) instructions.
- A vehicle and machinery washdown checklist is included on page 7.
- Decontamination is a four-step process.

Clean off all soil, plant material, debris and grease at the identified washdown pad. Use compressed air for any areas that might not easily clean with water (such as for radiators) then use a brush, water and detergent to scrub all surfaces so they are free of soil and plant material. You might need to use high pressure water.



2 RINSE ALL SURFACES



Rinse all surfaces with clean water. Detergent may reduce the effectiveness of disinfectant products.



3 DISINFECT



Apply an appropriate disinfectant in accordance with the chemical label's directions or relevant APVMA permit. An additional rinse step may be considered following disinfection.



4 CHECK AND RECORD



Undertake a final check to ensure all areas have been cleaned. Record details each time a vehicle or piece of machinery is cleaned and disinfected.

Considerations for decontamination



DECONTAMINATION SITE

A decontamination site allows contaminants to be contained in one easily managed area. They should be tailored to meet the operational and maintenance requirements of the property, and their size and shape will be determined by the item to be decontaminated. For vehicles that enter and exit the property, a washdown site that caters for trucks, work buses, tractors and implements may be needed. For people entering and exiting the property, a footbath and footwear exchange station would be more appropriate.

Decontamination sites should be located in places where decontaminated items won't become contaminated before they exit the area. The site should be located:

- Where it does not flood
- Where wastewater cannot directly enter a waterway, your neighbour's property, or the production area of your property
- Away from crops, roads, drains, pathways and riparian zones.

Footbaths and footwear exchange stations should be located at the entrance and exit to the production area. However, to minimise the movement of soil and plant material from one production area or block to another, decontamination checkpoints can be used. Dedicated footwear can also be provided at this point.

To limit soil movement, the decontamination site and entry /exit areas should be made from a hard surfaced material such as concrete, bitumen or gravel. Regularly check areas around the site for new pests and diseases.

EQUIPMENT

All facilities need to be set up with the appropriate equipment to complete decontamination effectively. A vehicle or machinery washdown will need high-pressure water, chemicals, scrubbing brushes and brooms, whereas a footbath on exit from the production area may only need low pressure water and a scrubber to effectively wash off soil or mud. All equipment will need regular maintenance to optimise its performance. Spray nozzles will need to be checked for consistent and effective coverage, and chemical solutions will need regular monitoring to maintain their efficacy. Access to a power source may also be required.

WASTEWATER

All wastewater from a decontamination site should be contained so it doesn't contaminate clean areas. It must be contained within your property boundary, and a collection sump and bunding can be used. Large amounts of wastewater may be contained in a tail-water dam, however contact your state environmental agency for further information (activities with the potential to release contaminants into the environment).

Contain wastewater for as long as possible (10-14 days is usually sufficient) to allow the compounds to biodegrade. After this time, the wastewater can be disposed of via absorption (using diatomaceous earth or sawdust) or evaporation. Where this is not possible, the wastewater can be directed away from all production areas, gutters, culverts, or areas that could directly drain to waterways or coastal waters. Compound biodegradation can then take place.

A licensed contractor local to your area may also be an option to dispose of contained wastewater.

Always dispose of used treatment solutions as listed on the product label and SDS, making sure to follow the environmental considerations.



NEED HELP?

For further information go to panamatr4protect.com.au

For help setting up biosecurity on your property, contact the National Banana Development and Extension Program at betterbananas@daf.qld.gov.au

VEHICLE & MACHINERY WASHDOWN CHECKLIST

■ UNDERSIDE & OTHER PARTS	
Guards & belly plates	
Chassis rails & brackets	
Recesses	
Around the fuel tank	
Axel housing	
Ledges, gaps or crevices in the body including damaged areas where dirt may lodge	

■ ENGINE	
Chain cases	
Plates	
Radiator fins & grille	
In between the cooling cores	
Engine mounts	
Recesses in the engine or manifold	
Floor of the engine bay	
Air filter	
Battery box	

■ WHEELS & STEERING	
Treads	
Outside & inside rims	
Wheel arches	
Mud flaps	
Brackets & brakes	
Steering components	

■ LIGHTS & ACCESSORIES	
Lights	
Toolboxes	
Tools & equipment	

■ TRACK AREA	
Shoe	
Links	
Sprockets	
Idler wheels	
Track adjuster guards	
Lubrication points	
Inside track area	

■ BLADES/BUCKETS/ATTACHMENTS	
Front & back of cutting edge	
Teeth	
Pivot points & trunnions	
Turning circle	
Hydraulic rods	
Inside & back of bucket	
Hydraulic hoses	
Area where cutting edge is fixed	
Wear plates	
Pivot points	
Tynes & rippers	
Support frame	
Cherry picker bucket	

■ CABIN	
Carpets & mats	
Foot wells	
Pedals & controls	
Seats	
Air conditioner filter	
External surrounds	

Keep a copy of your checklist near the washdown area in a waterproof sleeve or marked folder

