

Cyclones can cause massive damage in Queensland's wet tropics and in addition to the usual pre-cyclone preparation there is now the issue of Panama Tropical Race 4 (TR4) for northern banana farmers to consider.

Pre-cyclone planning is critical and growers need to prepare a clear plan for minimising the spread of Panama TR4 during and after a cyclone event. There will be some things that are beyond anyone's control such as flooding and wind, however there are many things within our control that can reduce the risk of spreading TR4 in the event of a cyclone.

Planting material

Plan ahead and set up a tissue culture-sourced nursery on your own property in a biosecure area away from flood-prone sites. Bits and suckers from your nursery can then be used for replanting. This is a good strategy for biosecurity, cyclone or no cyclone.

There are some key things to consider in your cyclone planning:

- Access to clean, safe planting material may not be possible. Nurseries may not be able to cope with the surge in demand and they may sustain damage from the cyclone.
- Planting material is a high risk pathway for the spread of Panama TR4. Avoid sourcing bits and suckers from other properties and don't be tempted to donate or sell bits and suckers to other growers following a cyclone.

- Beware of buying in potted plants after a cyclone. Suitable sterile potting mix may be in short supply and potting mix components may have come from potentially contaminated sources. For example river sand and council composted green waste may contain infected banana material.
- The best option is to plan ahead and set up a tissue culture-sourced nursery on your own property in a biosecure area away from flood-prone sites. Bits and suckers from your nursery can then be used for replanting. This is a good strategy for biosecurity, cyclone or no cyclone.
- If you have set up a nursery area, protect it by cutting down the canopy and bunches before a cyclone. This can help protect the stool and young suckers.
- Rehabilitate damaged plantings (if possible) rather than replant.

Plant material

A lot of waste banana plant material will need to be cleaned up after a cyclone. Avoid dumping it in areas outside your farm if possible.

Soil movement

Material (including soil) carried in floodwaters is beyond anyone's control, however we may be able to control the movement of people, vehicles, machinery, tools and equipment carrying potentially contaminated soil.

- After previous severe cyclones there was an influx of people into the

district with little knowledge or understanding of biosecurity.

Authorities involved in cyclone recovery will provide some biosecurity training but you should remain vigilant to reinforce that training at your farm. When utility workers, emergency services and volunteers need to access your property after a cyclone, try to ensure that good biosecurity practices are maintained. Excluding them won't always be an option, so check and ensure biosecurity signs (with contact phone number) are at all entry points. Also check that disinfection facilities are present and operational at entrances to your farm.

- Electricity outages are likely and may persist for an unknown time after a cyclone. Electricity-driven wash-downs will be affected so backup generators or fuel-driven pumps will be needed for wash-downs to continue operating. Manually operated sprayers will allow for backup disinfection of emergency staff, vehicles and footwear.
- Having someone trained in biosecurity and decontamination procedures stationed at your farm entry/exit points will help to ensure any non-essential visitors are excluded and disinfection of essential vehicles, machinery and footwear is carried out properly.
- Restore critical barriers that may be downed after a cyclone or with flooding. Temporary barriers may be

sufficient to stop accidental access by people onto your farm.

- Before a cyclone, it is preferable to define and segregate areas where flooding may bring soil or banana plant material onto the farm. Always undertake farming operations on these areas last and decontaminate machinery exiting these areas.
- Items used in the paddock for banana production such as bunch bags, string, dripper tube, bunch slips etc. may become contaminated by TR4 spores in a cyclone and subsequent flooding. These items would be considered as a risk and preferably be stored in a low risk place on the property until they can be disposed of by deep burying on the farm. Do not recycling these items.

Feral animals

Feral animals roam more widely after a cyclone due to reduced food sources. They are more likely to enter your farm searching for food. Pigs in particular can carry potentially infected soil as they move across farms. Fencing should be replaced as soon as possible.

Transport

Fruit transport contractors

After a cyclone there will most likely be reduced supplies of fruit from any one farm and transport trucks will be visiting more farms taking away smaller loads more frequently. This is another reason to plan for adequate backup disinfection facilities.

Farm supply vehicles

Plan to reduce the number of visits by off-farm supply vehicles after a cyclone by stocking up on things like fuel, cartons, fertilisers and irrigation equipment before a cyclone. Also road closures caused by flooding and downed infrastructure may limit the ability of delivery vehicles to visit your farm immediately after a cyclone.

Salvaging fruit after a cyclone

Salvaging downed fruit (in contact with the soil), or bunches that were in contact with floodwaters (and the suspended silt), may pose a risk to TR4 spread. So, growers need to comply with the General Biosecurity Obligation (GBO) and not enable soil or leaf matter to leave the farm.