

Flood ready ... flood safe!

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Minimise lost production and maximise production recovery by planning, and being proactive

PRODUCTION

Disclaimer:

Information provided is broad level guidance only; landowners should seek region-specific and location-specific information and professional advice prior to action.



Planning

How long can your business survive without income? How long can you afford for your land to be unproductive?

Whether you are a farmer or a grazier, your land is your business, and its productivity is your financial lifeblood. Therefore, it's vital to plan how to best protect your land from flood damage and minimise lost production - see Beige - Planning factsheet in this series. And your local natural resource management body can assist with property management planning, so web search 'Regional Groups Collective' to find their contact details.

Apart from a detailed Property Management Plan (PMP), you may wish to consider becoming involved in a Best Management Practice (BMP) program. This is a voluntary, industry-led process that assists producers to identify improved practices to ensure the profitability and sustainability of their business in the long-term.

Where multiple farmers share the same floodplain, it is important to coordinate flood mitigation farming strategies where possible, so that plantings, strip directions, earthworks, infrastructure layout, etc. complement each other from farm to farm. This will help flood waters to flow evenly across the landscape - anything that diverts or concentrates flows increases velocity and the likelihood of erosion and crop damage.

The risks to your production unit will vary depending on what you produce, where in the State you are, and how exposed you are to flooding.

Risks to cropping enterprises include:

- loss of topsoil and associated nutrients, organic matter and biological activity

- loss or damage to crops from high velocity flows and waterlogging
- loss and damage to farm infrastructure including roads, irrigation equipment, fences and farm machinery
- loss or damage to farm inventory such as fertilisers and chemicals
- sediment deposition that affects land productivity and impairs the use of machinery
- debris deposition in cropping lands affects crop production and possible contamination
- prevention of access to land
- streambank erosion and the loss of adjacent land.

Risks to grazing enterprises include:

- loss of livestock
- bogged livestock (especially if weakened by preceding drought)
- inability to access livestock trapped in inaccessible places
- loss of fencing infrastructure
- pasture loss through inundation
- insufficient fodder reserves for hand feeding
- loss of access to suitable water because of boggy floodplains

The PMP of a grazing enterprise should include a Livestock Evacuation and Emergency section outlining actions to be taken, triggers for those actions, and what fodder, water and veterinary supplies (animals may be injured, bitten or infected) need to be stockpiled, or on hand, in preparation. It is important to allow enough time to undertake these actions without compromising personal safety.

Ensure vital business records, whether hard copy or digital, are stored in a flood-proof location. With digital records, cloud storage or an off-site hard drive are easy options.

Know and understand the impact of the local flood gauge levels which relate to each of the official Bureau of Meteorology flood warning categories (see Beige - Planning).

Mitigation

Know what you need to do, and know when to do it!

The flood preparedness and response section of your property plan should indicate the measures you need to take well in advance of the flood season, when a flood is on the way, and during a flood. For farmers, and apart from personal safety, these might include:

- planting flood season crops that resist waterlogging, and protect and bind the soil
- retaining stubble to protect soil
- strip cropping to spread flood waters
- employing controlled traffic farming to minimise wheel tracks that divert flows
- ensuring flood-prone areas drain naturally to avoid post flood waterlogging
- raising or move machinery and consumables
- controlling pest plants and animals

Where a number of farmers share a large floodplain, coordination of crop layout design and implementation is essential to ensure an even spread of floodwater and avoid diversions that can cause dramatic loss of topsoil.

Apart from preparation, there is little a farmer can do regarding his crops and land; however, a livestock producer is likely to have a more active role immediately prior to, during, and after a flood. First and foremost is attending to personal safety. Other activities might include:

- opening gates to allow stock to access to higher ground and additional pasture
- excluding livestock from flood zones
- ensuring adequate emergency fodder is on hand
- ensuring that watering facilities outside of flood areas are charged and operating
- rescuing stranded livestock
- ferrying fodder to stranded livestock
- hand feeding displaced livestock

- traversing boggy or flooded country by vehicle, foot or boat
- controlling pest plants and animals

Recovery

Getting agricultural production back into full swing after a flood event depends on a range of variables from the type and location of enterprise through to the amount of damage or dislocation. For example, tree crops may suffer little damage from a short flood; however, vegetable crops are less robust. Channels may need to be dug to drain waterlogged areas.

Floods can leach essential nutrients from the soil, cause a loss of oxygen, carry biological and chemical contaminants, as well as pests and diseases. Some crops may require inter-row cultivation to aerate the soil, replacement fertiliser may be needed, and so might disease or pest control. Before acting, consult a cropping expert.

While most pastures tend to benefit from inundation, recovery can be slow where flood waters coat the plant with silt and there is no subsequent rain to wash this off. Before returning livestock to a flood-affected pasture, ensure there is enough fresh growth to sustain your livestock, and that they are sufficiently strong to cope with potentially boggy conditions. Also ensure that any debris is not contaminated by spoilt food or carcasses.

If you have livestock die, have to put injured animals down, or have dead animals wash onto your land, the carcasses will need to be disposed of in an appropriate manner - see Blue - Rubbish and Debris factsheet in this series for more information or contact your local council. Some councils may provide assistance with carcass disposal following a declared natural disaster. Whatever course you take, human health, workplace health and safety and environmental impacts should be considered.

A great resource is the Queensland Government's Business and Industry Portal... web search 'business and industry portal qld' and follow the links through *For industry > Agriculture > Rural disaster recovery*, to cropping or livestock. And seek advice from a cropping or livestock expert if you are unsure.

Some landholders may need financial assistance to get back into production. This can be accessed through the Queensland Rural Adjustment Authority (QRAA) at either www.qraa.qld.gov.au, 1800 623 946 or web search 'qraa regional service' to find your local Client Liaison Officer.

When you earn a living off your land, the soil is your greatest asset, so protect it at all costs... be flood ready and flood safe!