Good Management Practices

PATHWAY FOR NORTH OTAGO FARMERS

noslam
North Otago Sustainable Land Management
Collectively enhancing North Otago's Land, Water and Community Resources

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The sections included in this document are suggested and recommended practices for managing water quality contaminants.

Good management practices are practices which help manage farm resources while minimizing environmental risk.

There are many positive outcomes from adopting good management practices on farm, for example:

- Water quality will be maintained and/or improved.
- Water quality provisions in the Otago Water Plan will be easier to comply with.
- There are likely to be economic benefits because of improvements in pasture/crop growth and quality.

Hot Spots

- Ensure silage stacks are at least 50 metres from waterways, and any leachate coming from the silage stack is collected.
- Recycle plastic waste from the farm.
- Ensure any offal holes or rubbish pits are at least 50m from a waterway and there is no seepage to groundwater.
- Septic tanks should be regularly emptied and checked to ensure they are functioning correctly.

Erosion Control

- Plant trees on slopes where there is the greatest risk of erosion.
- Retain vegetation cover in gullies to reduce erosion and provide filtering of any runoff.
- Avoid cultivation of areas susceptible to erosion.
- Plant trees on stream margins that will help stabilise banks.
- Keep fencing well back from waterways so that bank erosion is reduced and to allow for changing directions in streams.

Paddock selection for wintering

- Identify winter grazing paddocks early.
- Ideally select paddocks further away from waterways.
- Look for areas at lower risk of pugging and compaction.
- Identify critical source areas and leave these in grass.
- Select paddocks where you can manage sediment loss.

Winter Intensive Grazing

- Work out an access and grazing strategy before putting up fences, think about the location of stock water sources and using temporary water troughs if necessary.
- Graze paddocks from the top to the bottom.
- Keep the soil on the paddock.
- Retain a buffer zone along any riparian areas.
- Graze critical source areas last and only if conditions allow.
- Ensure you are back fencing where possible.
- Lower density winter grazing where possible.

Critical Source Areas

Critical source areas are low-lying parts of farms such as gullies and swales where runoff accumulates.

- Runoff from critical sources areas can carry sediment and nutrients to waterways.
- Where possible keep critical source areas uncultivated and un-grazed.
- By managing these areas, we can greatly reduce the loss of sediment and nutrients from farms.
- At the time of re-grassing a paddock – leave the CSA in grass until the rest of the paddock is re-established.
- If need be direct drill or use some non-tillage method.

Stock Management

- Match stock class and stock type to your location, land, soils and water.
- Think about your subdivision plan to optimise your soil health, reduce fertility hot spots, stock access to waterways.
- Fence all stock out of waterways where possible.
- Feed supplements and locate water troughs away from waterways and critical source areas.
- Avoid pugging and soil compaction – use stand-off areas when wet.
- Ensure deer wallows do not run into waterways.
  - Reticulate stock water.

Irrigation Management

- Design, calibrate and operate systems to minimise the amount of water needed to meet production objectives.
- Undertake tests to show that the system performs to desired specifications for application depth and uniformity.
- Regularly assess soil moisture buried sensors, tapes, a handheld probe or scheduling service.
- Adjust return period and or application depth according to evapotranspiration, soil moisture, crop requirements and rainfall.
- Undertake daily checks for excessive runoff/ponding and ensure irrigator problems/ issues are fixed.
- If you have an issue you can't resolve yourself, contact your water supply company for help and advice.

Infrastructure

- Stock crossings over waterways should have either a culvert or bridge in place where possible.
- Manage farm tracks, gateways, water troughs, self-feeding areas, stock camps, wallows and other sources of run-off to minimise risks to water quality.
- Maintain races so that effluent goes into a paddock and not a waterway.
- Ensure all effluent run-off is collected from stock handling facilities and silage pits.
- Ensure all crossings have a lip or bund on the edge so stock waste and mud cannot enter a waterway.
- Put measures in place to avoid loss of agri-chemicals, fertilisers and fuels.
- Fence off all pressure points – have adjacent culvert for stock crossing.
- Ensure a good source of reticulated water.

Effluent Management

- Do not apply effluent directly to, or within 50 metres of a waterway.
- Use low rate effluent applicators, over a large area.
- Ensure there is no ponding or runoff of effluent.
- Document the farm's plan for effluent management including application conditions, rate and time.
- Have sufficient effluent storage – your effluent pond storage volume is based on the Dairy Effluent Storage Calculator.
- Check your pond does not leak by doing a drop test.
- Know where your tile drains are and try to avoid application over them.
- Use technology – moisture monitoring, fail safe system, bucket test your irrigator.

Fertiliser Application

- Test soils to check nutrient status, understand your nutrient budget, make a plan.
- Only apply when conditions are suitable i.e. avoid times when soil temperature is too low.
- Don't apply when heavy rain is forecast.
- Keep well away from waterways.
- Avoid application to critical sources areas.
- Only apply fertiliser that can be used by the crop or pasture.
- Little and often is better than lots now and then.
- Use Spreadmark approved spreaders and ask for a record of application.

Riparian Management

- Adjust riparian margins dependent on slope and wide enough to filter sediment from any run-off.
- Prioritise areas to protect by fencing and planting.
- Plant trees for shade on north side of streams.

Biodiversity

- Understand the values of your native area before you change anything.
- Recognise and protect existing landscape and native areas before you change anything.
- Understand what you have – what native species are present and what habitat they require.
- Retire existing wetlands/ swampy areas if you can.
- Protecting native bush can also help improve water quality.
- Understand and take actions to eliminate weed and animal pests.
- Work with your neighbours to create connected habitats and predator free areas.

- Extend long grass buffer dependent on slope can be a very effective filter.
  - Allow for a minimum of at least two rows of plants.
  - Start plantings from the bottom up.

This leaflet has been adapted for NOSLaM by NZ Landcare Trust from the Good Management Practises poster created for their Kakannui Catchment Project in 2017.

Images thanks to NZ Landcare Trust.

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Resources

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