

PROTECTING WATERWAYS WITH CULVERTS

Water quality in New Zealand rivers, streams, lakes and wetlands is under pressure from a range of farming, industry and urban activities. Farmers have already made massive progress in excluding stock from waterways but there is still work to be done to meet the requirements set by the Sustainable Dairying: Water Accord.

SUSTAINABLE DAIRYING: WATER ACCORD

The Sustainable Dairying: Water Accord is a set of national good management practice benchmarks aimed at lifting environmental performance on dairy farms. The accord was launched in 2013 and it sets out the dairy industry's commitment to improving water quality in New Zealand.

BRIDGE OR CULVERT DEADLINE

The Sustainable Dairying Water Accord requires all farms to have bridges or culverts (constructed crossings) on regular stock crossing points by 31 May 2018. Regular crossing points are considered those used more than once a month to access the milking shed.

IMPACT OF STOCK ON WATERWAYS

Livestock contribute contaminants to water bodies in and around farmlands. The four main contaminants are nitrogen, pathogens, phosphorus and sediment.

These contaminants can enter waterways in several different ways including from direct deposits of stock urine and dung into water, from run-off, drainage or leaching through soil, or from erosion and damage of banks and streambeds.

Different contaminants have different negative impacts which can include: stimulation of nuisance plant and algae growth causing poor water quality for drinking and recreation, introduction of pathogens causing gastrointestinal illness for stock and people, excessive sediment which damages the habitat and natural eco-system in streambeds and waterways.



Keeping stock away from waterways also protects them from drinking dirty water that may be carrying pathogens that cause gastro-intestinal illnesses.

BENEFITS OF CULVERTS

Farmers around New Zealand have put in more than 26,000 kilometres of fencing to keep their stock out of waterways in and around their farms - but in many cases installation of a culvert could provide the same protections and additional benefits for less investment.

Culverts can improve efficiencies on the farm, making it easier and faster for people and stock to move around the farm particularly in the event of high water levels and flooding. Infill area above a culvert pipe line can be grassed therefore increasing production in the paddock concerned.

Introducing culverts can also reduce injuries for stock and farmworkers by creating safer crossings. Stock crossings through unstable or slippery surfaces in and around waterways present risks for falls.

According to Dairy NZ: "Well planned and constructed crossings prevent damage to the stream bed and reduce the amount of sediment, nutrients and bacteria getting into waterways. They may also improve stock health and production by reducing stress, lameness and the potential of liver fluke."

PROGRESS TO DATE

- More than 26,000 kilometres of fenced-off and measured waterways
- Over 97.2% of the waterways on New Zealand dairy farms are now excluded from dairy cattle
- More than 99% of 44,386 regular stock crossing points on dairy farms now have bridges or culverts
- Significant non-compliance for dairy effluent discharges has dropped to 5.2% - the lowest on record

Source: DairyNZ www.dairynz.co.nz

RESOURCES

Information about the Sustainable Dairying Water Accord bridge and culvert requirements <https://www.dairynz.co.nz/environment/waterways/crossings/>

Guide to constructing culverts and bridges

<http://www.mfe.govt.nz/publications/land/culvert-and-bridge-construction-guidelines-farmers>

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