

This assessment is based on a now-expired version of the achievement standard and may not accurately reflect the content and practice of external assessments developed for 2024 onwards. No part of the candidate's evidence in this exemplar material may be presented in an external assessment for the purpose of gaining an NZQA qualification or award.



Mana Tohu Mātauranga o Aotearoa  
New Zealand Qualifications Authority

## **Level 1 Agricultural and Horticultural Science RAS 2023**

**91931 Demonstrate understanding of sustainability considerations that influence primary production management practices**

# **EXEMPLAR**

**Achievement**

**TOTAL 04**

### **Write your report below:**

Water could be considered the lifeblood for all primary industry producers and overall plays an essential role in our environment. So it is important that all farmers are carefully managing the water/rivers in a sustainable way to ensure the waterways are healthy and protected not only for the present but for the future as well. The type of farming I'm going to be referring to in this report is Dairy farming and the management practices I'll be suggesting/including are riparian planting and riparian fencing, and discussing how it is sustainable for the water by referring to nearby rivers.

Riparian planting is the process of planting native plants such as flax, along the river banks usually right next to the paddocks where the livestock graze. It is done by planting a whole bunch of native plants like flax along the river bank usually situated right next to or below the area the cattle is being farmed. Riparian planting is an excellent management practice farmers are able to do because it is efficient(easy to do and manage), has no negative effects, and provides many benefits. First of all it keeps the water quality and appearance clean by stopping all the waste(fertilizer and feces) from washing down into the river, which is called leaching. This is because the nutrients that are in the waste, the plants like and absorb them to enhance their own growth. Also the native plants provide a natural ecosystem for many different species to live and thrive. From doing this it shows kaitiakitanga and manaakitanga for not only the waterways and the native plants/species but also preserving the water for future generations to swim and use. To extend on that the farmer is doing good for themselves if they use the water for the cattle to drink.

Another management practice the farmer is able to do is riparian fencing. Riparian fencing is extra kaitiakitanga to riparian planting in terms of sustaining the water . It is when the farmer also lays a fence around the riparian plants. It comes with all the positive and benefits of riparian planting, but the extra protection that it adds is keeping the cows completely out of the river. Because if it wasn't there the cows would still be able to get into the river and possibly drop its feces in the river, which defeats the whole point of the riparian planting.

Out of both management practices I've discussed, I personally think that riparian planting has the greatest impact in sustainability for the water. I think this because it comes with many more benefits compared to riparian fencing alone. The only effect riparian fencing has is 100% keeping the cattle out from the river, but riparian planting includes more benefits such as the native plants creating habitats for many species, natural leaching sponges, and it still also could somewhat keep the cattle out of the river. To all dairy farmers that own land surrounding rivers, I highly recommend investing in riparian planting because it comes with so many benefits that could impact yourself, others, and the environment.

## Achievement

**Subject:** Agricultural and Horticultural Science

**Standard:** 91931

**Total score:** 04

Q	Grade score	Marker commentary
One	A4	The candidate shows understanding of why a dairy farmer would fence and riparian plant the waterways around their farm. The response shows a good understanding and connection of kaitiakitanga and themes of tūhononga. The candidate has not explained in detail how the management practices would improve water sustainability. For a Merit, detailed links needed to be made between the management practices and how they prevent the negative impacts on the water of dairy farming.