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Cow Cress Concern - do you have cow cress on your property?

By Holly Ormond

Farmers in the Kahahakuri catchment have embarked on a collaborative effort with local catchment collective, Tukituki Land Care (TLC), to address the pressing issues of cow cress and stream bank erosion, which are impacting waterways in the catchment.

Following site visits and the engagement of several experts from across New Zealand, a recent presentation at the Ongaonga Community Hall unveiled findings and charted a course of action.

“We are looking for effective solutions to protect our waterways”, says Andy Gunson, local farmer and chair of the Kahahakuri Catchment Group. “We are keen to hear from anyone who is dealing with cow cress on their properties so we can understand the extent of the problem across the wider Tukituki catchment”.

Cow cress, also known as water celery, is an invasive species which is similar to watercress but with a larger leaf and an unpleasant bitter taste. It is identified as a pervasive threat across the catchment, encroaching upon tributaries and streams. Farmers are concerned about its adverse effects on stream health and the heightened risk of flooding and damage due to the bulk of the weed.

It is understood that cow cress arrived in the catchment about eight years ago, but over the last five years, local farmers have observed a concerning proliferation, likely caused by milder winters, legislation around the fencing of waterways and elevated nitrogen.

Bank erosion and shingle accumulation have also emerged as significant challenges, leading to rapid land loss in certain areas of the catchment. The severity of the erosion, evident from aerial photos and LiDAR analysis, underscores the urgency of considered management to safeguard agricultural lands and water resources.

To address these concerns, the Kahahakuri catchment group secured a grant from TLC, enabling them to investigate the best course of action to control cow cress and mitigate erosion. TLC is working closely with the catchment on this project and have partnered with A2E, a complimentary service established by the Ministry for Environment, which facilitates connections between catchment groups and freshwater specialists.

A2E is providing 42 hours of assistance dedicated to the project through the expert advice of Dr Ranvir Singh, Associate Professor in Environmental Hydrology and Soil Science at Massey University and Professor Ian Fuller, Professor in Physical Geography also at Massey University.

Dr Singh and Professor Fuller have visited several farms in the catchment to see the extent of the issues and come up with a proactive management plan. At a recent presentation in Ongaonga, local farmers were invited to hear from these experts alongside Richard Frizzell from Nelson City Council, who shared insights from his ongoing endeavors to combat cow cress in the Nelson area.

Professor Ian Fuller who has been investigating erosion in the catchment went back to basics – looking at the nature of the water channel to help explain why imbalances in the system are leading to erosion. The stream in some places is deeply entrenched and is both cutting down and migrating laterally. Bank protection, riparian planting and rock riffles as a means to counteract erosion are less likely to be able to cope with the power of flood water in constrained channels. Instead Ian suggested that the stream be considered at a catchment level and that the system be mapped in detail to show critical zones and priority areas.

The battle with cow cress is likely to be a long-term effort requiring a combination of chemical and riparian control methods. “Spread of cow cress appeared abundant in the visited farm drains and streams”, commented Dr Singh. “Cow cress appears to favour nutrient-rich environments but is intolerant to dense shading. A coordinated and consistent effort with tools such as targeted spraying, riparian planting, and mitigation of nutrient losses should help reduce and manage its growth in the streams”. Dr Singh also presented several novel edge-of-field nutrient loss mitigation practices to the group including managed drainage, woodchip bioreactor, and runoff detainment bunds.

TLC is keen to work with HBRC around the management of this weed and is hoping to gain an understanding of the extent of the problem across the 17 Tuktuki sub-catchments, and beyond. If you have cow cress on your property please get in touch with Pixie at tukicoordinator@gmail.com.

To find out more about this project and how Tuktuki Land Care is supporting other Tuktuki sub-catchment groups, go to www.tukitukilandcare.org.