



New app helps decision-making about erosion and sediment control on cultivated vegetable land

Farmers and regional authorities will soon have an app to help them make better decisions about how to control erosion and reduce sediment entering New Zealand waterways, thanks to a four-year project supported by the Ministry for Primary Industries' (MPI's) Sustainable Farming Fund (now superseded by Sustainable Food & Fibre Futures).

Developed through the 'Don't Muddy the Water' project, led by Agrilink and NIWA, the app measures the impact of various practices for reducing sediment and phosphorus loss. The app user is required to enter factors such as soil type, slope and location. Mitigations, such as vegetated buffer strips and sediment retention ponds, can then be added to assess the impact of these practices.

"The project came out of the need to put some numbers behind the performance of typical sediment control measures," says Andrew Barber, Managing Director, Agrilink.

"While the horticultural industry had developed 'Erosion and Sediment Control Guidelines for Vegetable Production', they needed to be better justified with quantified data."

The project ran trials of different good management practices to test how best to keep soil in the paddock and out of waterways. This included measures such as cover crops, sediment retention ponds, vegetated buffer strips and wheel track dyking/ripping.

The project found that 96 percent of large soil particles would be stopped by almost any sized pond. However, a minimum pond size of 50m³/ha was required to capture more than 80 percent of light suspended soil. These findings, along with work on vegetated buffer strips, were added to the app.

"Demonstrating the key control measures and collecting the data that can be used in our tool to

calculate their effectiveness, has enabled a more cohesive approach nationally to soil management," says Barber.

"It allows farmers to do a paddock risk assessment and subsequently prioritise their actions as part of their future Farm Environment Plans. The app also allows them to provide robust evidence to support consents or prove to regional authorities that their control measures are effective."

Agrilink has been hosting workshops around the country to inform farmers about their findings.

"Our 'Don't Muddy the Water' app is a tool to help decision-making. I have been asked what next; the answer is implementation, we just need to get on and do it," says Barber. "Ultimately, this is a win-win for farmers and the environment."

Steve Penno, Director Investment Programmes at MPI, says the app is a practical tool that will help farmers take action to reduce their environmental footprint. "This project has provided quality information on how erosion and sediment loss can be effectively mitigated, and the app makes this information available to farmers in a practical and useful way."

The 'Don't Muddy the Water' app will be free and is expected to be publicly available from February 2020.

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