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Flush with change

Who would have thought that domestic sewage would bring together the farming industry, water corporations, researchers and RMIT University.

The organic matter from the sewage treatment process, commonly known as biosolids, has beneficial properties that can be used in agriculture, horticulture and even in cities and towns.

While most people are familiar with the concept of recycling water, finding a way to put Phillip Island's waste to good use required some creative thinking. A new partnership between Westernport Water, Bimbadeen Farm, Transpacific Industries and RMIT University is setting out to prove how effective biosolids can be in repairing salt affected soils.

While there are studies globally on biosolids reversing or stopping environmental damage, very little study has been done on Australian soil. As part of this partnership, Peter Matthews, an Honours student from RMIT University is investigating the effect of biosolids on salt-affected land

on Phillip Island. Associate Professor Barry Meehan of RMIT University said: "Peter's study will assess pasture growth, productivity, plant species and soil condition. The research and academic rigour is very important and has broader implications for soil remediation across Victoria and Australian coastal regions."

This ongoing research and assessment partnership with RMIT has helped develop case studies on the local land. It is providing greater understanding of the potential for biosolids to reverse or stop damage to saline soils, and at the same time is supporting carbon farming.

Westernport Water's Managing Director, Peter Quigley said: "The partnership provided students with practical, on-ground experience and access to expert advice to enable them to complete their research."

RMIT honours student Peter Matthews said he was excited to be part of the project. "Using a local waste product to solve a local problem makes perfect sense. The project has also provided me with the opportunity to work with water authorities, waste management services and local producers which has been a great experience."

Mr Quigley said that changes in community attitudes had opened the door to exploring new ways to efficiently and effectively use waste products. "The nutrient rich biosolids were traditionally stockpiled and destined for landfill; however, nowadays people have a greater understanding and acceptance of biosolids, which has led to a wider range of uses for this resource."

"Although some of the beneficial uses for biosolids include alternatives to composting, use in road base and power production, as far as I'm aware this project is the first in Gippsland to use it to restore salt affected soils," said Mr Quigley.

Well-known Phillip Island Farmer, Bob Davie, began trialling biosolids on an unstocked portion of Bimbadeen farm in 2013 in an attempt to rejuvenate salt affected paddocks and increase productivity.

Bob has been very pleased with initial trials, experiencing better crop yields, improvements in soil quality and unprecedented growth rates. "We're now able to grow crops on previously saline soils," said Mr Davie.

"It's hard to believe biosolids haven't been trialled for reversing saline impact on soil in Gippsland before. With the amount of nutrients it contains, it's such a valuable resource. The good thing about the Phillip Island biosolids is that it doesn't contain significant heavy metals because there's not much industry here," said Mr Davie.

Bass Coast Landcare Coordinator, Joel Geoghegan, who works with farmers across Bass Coast to implement alternative land management strategies, said for farmers, "biosolids is a very attractive alternative to expensive fertilisers."

Westernport Water is delighted to find a solution to the challenge of disposing of biosolids that also benefits local farmers. "Instead of thinking about it as waste requiring disposal, we're now looking at it as a resource that can add value to our farming community and at the same time help us reduce our impact on the environment," said Managing Director, Peter Quigley,

The current trials are being managed through a Regional Environment Improvement Plan, approved by the Environmental Protection Authority in accordance with strict guidelines, to ensure the biosolids don't adversely impact the environment.

Want to find out more about Biosolids?

Visit www.epa.vic.gov.au or www.westernportwater.com.au

