

Case study | North Coast

Automated irrigation tools making use of every drop



Growers discussing crop health

Sandhu and Chouhan farm,
NSW North Coast

Overview

The Clean Coastal Catchments Project offers support to help landholders in intensive horticulture industries in the North Coast region to implement nutrient management activities and other works that improve water quality through reduced losses of nutrient and sediment exporting from farms.

The project has helped local landholders to improve their farm's efficiency and benefit the local environment. One example is the Sandhu and Chouhan family, who received funding to establish a grow scale technology demonstration site on their farm in Bucca on the NSW North Coast.

The challenge

Brothers Paul and Karmjit and their cousin Kul grow substrate berries and greenhouse cucumbers on their family farm. For these crops, the efficient use of water is one of the most important considerations. Too little water reduces yield and quality, whilst too much water can contribute to root diseases, as well as contributing to runoff, which wastes water and fertilizers.

The families were interested in opportunities to improve water efficiency and the overall

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sustainability of their operations.

Work underway

Through the Clean Coastal Catchments Project, the family business received funding in 2022 to install PRIVA grow scales to the cucumber crop tunnels. Using computerised automation, grow scales schedule watering by weighing the crop and calculating the correct amount of water each day. Water is triggered once the weight of the bag drops to a pre-set refill point, ensuring the crops are not under or over watered. This results in improved irrigation efficiency and many flow-on benefits for the farming operation and the local environment.

The family will host farm walks for local vegetable growers as part of the Clean Coastal Catchments Project.

Two field days have run in collaboration with VegNet NSW, a program to give vegetable growers access to the latest research and development activities to assist them to become more profitable. The field days brought around 70 people together to build knowledge and capacity around water technology for farms, biosecurity and sustainable agriculture.

What we learnt

There were some challenges commissioning and implementing the new irrigation technology. This can occur with any new automated control system, as there is a lot to learn. Control settings need to be adjusted to suit each farms growing system, climate and management.

The first crop was not successful, because leaf debris was blocking some measurement components. The family have now fabricated mesh screens on top of the grow scales to exclude leaves and keep the trays and sensors clean. They also received some extra support from project consultant Tony Bundock to revise the irrigation settings and optimise inputs.

Sharing both good and bad experiences helps growers to learn together. Problems can be avoided by others if they know what they might expect. The local grower community are good at working together to share their knowledge.

The new crops are now experiencing rapid growth and the family is happy with their system. They are using less water and reducing fertilizer use. This saves them money and reduces the impact on the environment.

Other local growers have been kept informed of the project, with many expressing a desire to also utilise grow scale or drip/drain technology.

Find out more

Local Land Services thanks all those involved in this Clean Coastal Catchment Project and looks forward to continuing to work with growers on the use of water technology for the betterment of their farms and local environment.

The Clean Coastal Catchments Project is delivered by Local Land Services through funding from the NSW Government's Marine Estate Management Strategy (MEMS). To find more about the project and the MEMS, visit www.lls.nsw.gov.au/mems



Healthy plants on the modified grow scale tray