

On-Farm Irrigation Efficiency Program

Case study: Angove Family Winemakers

Efficient irrigation improves 2014 gewurztraminer yield



Angove Family Winemakers have converted 91 hectares from an old over-head sprinkler system to new automated surface drip irrigation with funding through the On-Farm Irrigation Efficiency Program.

Angove Family Winemakers utilised funding from round two of the On-Farm Irrigation Efficiency Program (OFIEP) to convert 91 hectares of their Murtho property, located outside Renmark in South Australia, from an old over-head sprinkler system to new, automated surface drip irrigation.

One of the oldest family-owned wineries in Australia, Angove Family Winemakers started to convert to drip irrigation in 1995 at the Anchorage property in Renmark and in 2000 at the Nanya Vineyard at Paringa, which is one of Australia's most efficient and sustainable vineyards with one quarter certified organic and much of the remainder in conversion.

Viticulture and grape supply manager for Angove Family Winemakers, Nick Bakkum, said once the two projects conclude in 2015, 356 hectares of the 480 hectare property will be watered by drip irrigation.

"The parts of the property targeted through the OFIEP projects were still operating under a sprinkler system, there are still another 124 hectares of sprinkler areas for future conversion, and the rest of the property is already using surface drip irrigation," Mr Bakkum said.

"The OFIEP round two projects have funded the conversion from overhead sprinkler irrigation to drip irrigation, including a new filtration system, which uses a lot less water to back-flush.

"It has exceeded our expectations; we are very happy with the system and haven't had any issues with it.

"Under a sprinkler irrigation system we used around 8.5 megalitres per hectare, but we are averaging six megalitres per hectare using the automated surface drip irrigation, using a 1.1 millilitre per hour application."

Mr Bakkum said the drip irrigation system was been easier to maintain and that positive benefits of the conversion could be visibly seen.

"The overhead system waters all the soil with significant off-target drift, patchy application and occasional over-water, while drip irrigation has a uniform application that goes into a small area where the roots regenerate," he said.

"Since conversion to drip we have had the ability to manage the flexible and efficient application of fertiliser and this has resulted in improved vine health, better fruit quality and an increase in yield.

"In the Gewurztraminer 20.5 hectare block the 2013 yield was 290 tonnes and the 2014 yield increased to 370 tonnes.

"Converting to an automated system has also made a big difference in time management because staff are no longer required to manually turn on and off valves, this has allowed a more precise approach to irrigation scheduling."

Mr Bakkum said the OFIEP funding to convert to drip irrigation prompted the company to further improve efficiency by seeking the installation of more soil moisture monitoring probes across the Murtho property.





Angove Family Winemakers Viticulture and Grape Supply Manager Nick Bakkum.

“Soil moisture is monitored and we look at the fruit on the vines to determine when to water, but we trickle feed the vines every day during hot weather,” he said.

The water savings generated from on-farm projects are shared between the irrigator and the Australian Government. The government returns a portion of the water savings to the environment to protect and restore rivers, wetlands and other environmental assets in the Murray-Darling Basin.

This project has also benefited Riverland businesses such as Think Water Riverland and will contribute towards securing a long-term future for the local irrigation community.

“Without OFIEP funding, Angove Family Winemakers would not have made the commitment to undertake the irrigation conversion at this stage; the funding not only made the infrastructure upgrade possible, it has also resulted in the company making a personal investment to upgrade technology and plant new vines,” Mr Bakkum added.

More information about the On-Farm Irrigation Efficiency Program is available at www.naturalresources.sa.gov.au/samurraydarlingbasin/ or by calling (08) 8580 1800.

The OFIEP is funded by the Australian Government and delivered across the southern connected system of the Murray-Darling Basin by the SA Murray-Darling Basin Natural Resources Management Board.



Irrigation conversion has led to a 27.5% increase in yield of Gewurztraminer wine grapes

Find out more about the On-Farm Irrigation Efficiency Program, the SAMDB NRM Board and its activities:

SA Murray Darling Basin NRM Board

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Location: Angove Family Winemakers - Murtho, South Australia

Australian Government funding: \$718,572 ex GST

Project: Two projects to convert from sprinkler irrigation to fully automated surface drip irrigation across 56 hectares and 35 hectares respectively

Project water savings: 247.5ML over two projects.

The program aims to increase water use efficiency in rural Australia, deliver substantial and lasting returns of water for the environment and secure a long-term future for irrigation communities. To-date local OFIEP projects have generated total water savings in excess of 20 gigalitres.

