

Canopy dam good idea

Machinery Matters

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ONE way to combat Australia's punishing drought may lie in reducing dam evaporation rates by using protective canopy systems to significantly lower surface water losses.

Tucked away behind the Queensland township of Stanthorpe, and just off the thundering New England Highway, lies Renardo Andreatta's bustling apple-growing operation and his remarkable covered dam that is used to supply water to an extensive orchard enterprise.

He was one of the first growers in the Granite Belt district with the foresight to invest in what are termed suspended canopies that overhang all 3.5ha of a dam which, incidentally, has participated in a soon-to-be-released Queensland Government survey on ways to limit dam evaporation rates.

Essentially a spin-off from standard shade cloth, the new specially-twisted filament design sees the material draped beneath another important ingredient of the system, namely a network of spring steel high tensile cables from which the protective canopy is slung beneath.

Supplier the Stanthorpe-based Netpro organisation says the material allows torrential rain to quickly fall through without 'ponding' on its surface, plus the system has weathered hailstorms and high winds.

Company director Graham Minifie said after securing a grant from the Queensland Government, he offered innovative producer Mr Andreatta a chance to trial the new net technology to help minimise evaporative losses from his most precious resource - water.

The \$240,000 venture already has satisfied Mr Andreatta's early expectations and some two years down the track none of the individual 5.5m wide panels that spread across the dam's surface has had to be repaired.

Mr Andreatta envisages the netting will last for at least 20 years, noting that his hail netting still is in top shape after 15 year's service. When full, his main water storage holds about 1.1 megalitres, principally earmarked for his apple-growing enterprise.

It is sustained by a trickle irrigation system that is put to good use for at least seven months each year.

"Even though you don't have to give them a lot of water every day, if you want to get a decent crop of apples, then it has to on for a long time," Mr Andreatta said.

Water is pumped from small neighbouring dams into the main net-covered water storage when necessary. A single row of 11 marine poles spread down the dam ensure the netting does not sag into the centre of the dam.



ABOVE: Trapdoor access to Renardo Andreatta's covered dam is demonstrated by Netpro director Claude Grayling.

RIGHT: Netpro director Claude Grayling demonstrates the flexible yet strong nature of the netting which covers Renardo Andreatta's dam.

"Evaporation rates in Queensland vary from one dam to another but we anticipate close to 80 percent savings on evaporation rates because of the combination of reduced air movement and the absence of direct sunlight on the dam," Netpro's Mr Minifie said.

Co-director Claude Grayling said six men worked on covering this dam over a period of some two months. He made the point that some half-a-dozen companies had received government grants to come up with ways to limit water evaporation rates across Queensland.

Whatever the outcome, Mr Andreatta is satisfied with his investment.

"The dam is holding its level," he said.

"We pump into the main water storage from other dams in different areas so we end up with most of it under the canopy system.

"This way, we don't lose it whereas in other dams we do," Mr Andreatta added.

Currently, the property is processing a big crop but prices are down on previous years.

● Contact Netpro on 1800 501 337.

