ALCOA

WOADY YALOAK

Mt Mercer Technical Fact Sheet 3

Draining wet paddocks to close the feed gap

Graeme & Heather Fagg, Mt Mercer

The Mount Mercer Neighbourhood Group in the eastern section of the Woady Yaloak Catchment see drainage as another major impediment to pasture growth in the winter months.

To study the options, Graeme Fagg volunteered a typically boggy paddock to trial an innovative method of draining his Mount Mercer property.

The problems

Graeme explained that the area on the farm was somewhat of a hollow, where in typical season's water would quickly build up and lie around greatly impacting on productivity.

"Basically we couldn't grow any grass in the paddock, - in a normal year the area would get too wet to graze sheep or cattle without it bogging up."

"Water would run off surrounding hills and build up in the lower lying areas, often for months at a time."

Looking for solutions

The group started to look at ways of getting the water away.

One option was a contractor from Gippsland with large laser guided rotary drainers.

"Using these laser guided drainers allowed us to accurately locate the low points and maintain accurate fall to ensure the drains work," Graeme said.

The contractor installed one V notch drain about 500mm - 750mm deep along the top of the paddock, and down the dividing fence into an existing gully.

The other drains were shallow spoon drains, connecting the low lying areas of the paddock back to the gully.

The rotary drainer in full swing. The laser guidance system allows the operator to follow the lowest point in the landscape.

Water from the drains is fed via an existing gully, into a large dam for stock and domestic water supply.

The overflow is carried down the gully system and away.

"We have had to wait until late 2000 for enough rain to test the system, but having had the heavy rain, we not only saw the drains work to fill our empty dams, but we could still drive vehicles across areas that in the past would have bogged a duck."

Concerns

The drains where completed in 1998, and fortunately in some respects they were not used to their capacity until the wet spring of 2000.

"The deeper drains were made like a steep V notch, and we were initially concerned that these were too deep and could wash if left exposed," Graeme said.

"In the time between the digging of the drain and their use at full capacity, pasture had established in the base and sides, which held it well."

Graeme points out his concerns of the deeper V-notch drain.
Inset: The V-notch drainer at work.

While the deeper drain had worked well, Graeme still has reservations about it and especially with stock access.

"While most of the drain was covered, where the sheep had climbed in and out had left some sections denuded and exposed to potential erosion."

To counter this, Graeme plans to fence it off and plant trees to provide stability and shelter in the adjoining paddock.

Spoon drains

In addition to the deep V-notch drain, shallow spoon drains were used to move the water off the lower areas of the paddock.

Graemes father Keith explained that these spoon drains were made with another type of large laser guided rotary drainer which made a smooth wide swale rather than a V notch.

"The smaller drains worked well."

"They follow the contour so we have excellent fall, however the benefit lies in the fact we can get across them at any point in any vehicle."

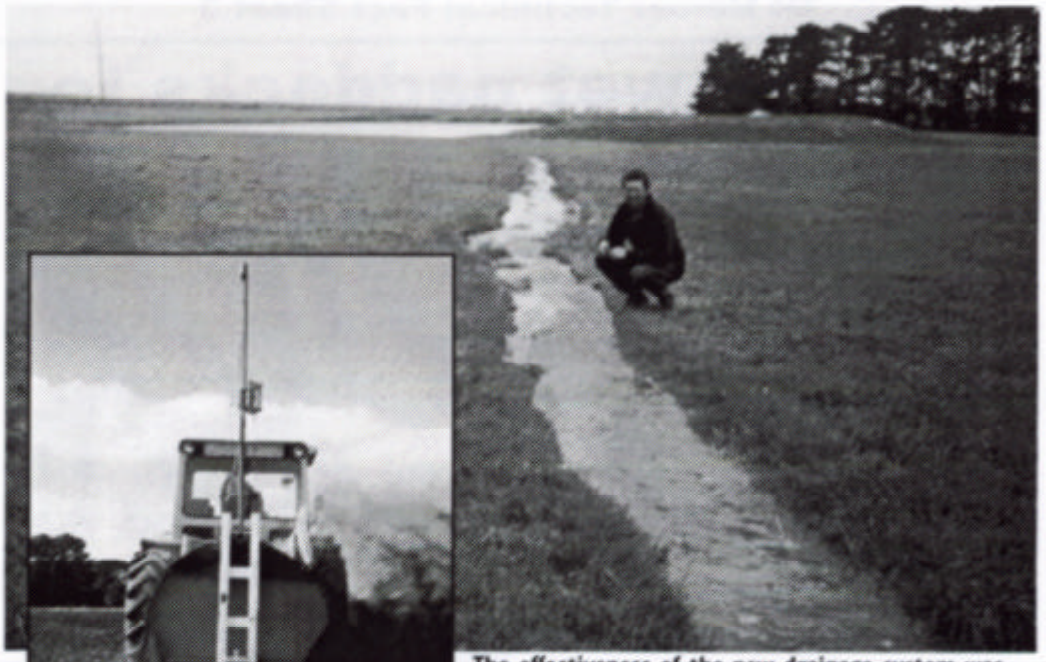
"A deeper drain would require a culvert," he said.

Some of the small drains drained into the deeper V-notch drain, while others chris-crossed the paddock, picking up low points and draining them into a nearby dam.

"After a couple of really dry years the dam had about 18 inches left in the bottom," Keith said.

"Literally overnight the drains flowed straight in and filled it."

"It was really marvelous - in the past it would have taken weeks and weeks to fill."



The effectiveness of the new drainage system was above expectation

The spoon drainer carving its way to the dam (above) The same drain running after the heavy spring rain (above right)

The Benefits

The spring feed was very good, however Graeme pointed out that the winter was relatively dry and spring rains late.

He said the heavy rains late in the spring did demonstrate the effectiveness of the drains, but the true benefits would be seen in the next 'normal' year.

Alcoa and the Woady Yaloak Catchment Project

The Woady Yaloak Catchment Project is an Alcoa Landcare Sponsored Catchment Partnership.

Since 1993, the Alcoa Landcare Project has contributed to the development and implementation of the Woady Yaloak Catchment Plan.

The Mt Mercer Pastures Neighbourhood Group is part of a new initiative reviving involvemnt at a subcatchment level.

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The Budget

Large V-notch drainer	$2.00 /metre
Spoon drainer	$1.35/metre.