

Watering systems to maximise production



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Michael Morrison of Three Springs runs a self-replacing Merino flock with 2000 ewes, along with his mixed cropping system. He uses his 500 ha of perennial pastures strategically throughout the year to build his sheep enterprise

The perennial pasture paddocks have been subdivided into 15 ha cells, with a central trough. The fencing consists of four strand plain wire with an electric top and bottom wire. Michael has found that ringlock fencing is not required if animals are adequately watered and have sufficient feed.

Cells full of stock

Michael prefers to run sheep in big mobs, with 1000 to 2000 ewes per cell. The rotation through the cells varies through the year. Typically in winter,

the stock move every three days and in summer the rotation varies according to summer rainfall.

Managing lambing ewes in a rotational grazing system can be difficult, so Michael will leave the gates open for longer than usual between cells to allow the mob to move itself thereby preventing mis-mothering (stragglers are left to mother up). Over summer, sheep are supplementary fed lupins via self-feeders.

Farm info.

Grower: Michael Morrison

Location: 'One Tree Hill',
Three Springs

Arable area: 3400 ha

Ave annual rainfall: 400 mm

Soil type: Mostly sand — perennial grasses are sown on lighter country not suitable for cropping.

Enterprise mix: Merino self-replacing flock (2000 ewes) and mixed cropping



Michael is convinced there's a production benefit from this system but is yet to quantify it.

Designing the watering system

Michael designed his watering system to be low maintenance, easy to manage and allow the property to diversify into cattle and/or sheep. Most importantly, the system is straightforward for a caretaker to manage when the family goes on holidays.

A four-line electric fence is used to subdivide large paddocks



ABOVE LEFT: A high flow rate ensures the water trough is always full
ABOVE RIGHT: Ringlock cocky gates control stock access when four paddocks share the same trough

troughs too labour intensive. One trough is adequate to service the whole flock (1000 ewes) if the flow rates are correct. Troughs in erosion prone areas have been placed on gravel ridges and in bush areas.

Trough flow rates will depend on elevation and the fall of the land. Michael adds an extra 10% when calculating flow rates for the stock and never uses one inch pipe. Variations in flow rates will occur with variations in fall, while the pipe size is determined by how many stock are being watered on that trough. Michael's trough flow rates vary from 72 litres per minute down to 36 litres per minute, the variation in flow is due to a drop in elevation.

Michael believes that the hardest part of the watering system is calculating elevations, pipe size and the flow rate you want at the trough. No specialist equipment was sourced for the watering system; it is all generic equipment readily available from a rural retailer. ✓

Michael believes burying pipe is essential and uses a grader to dig the trenches. He dislikes trenching and pipe feeding machines as they can cause stone grazes and weak points in the polypipe which lead to leaks in the system. Pipe is laid in the trench in the afternoon and filled with water; however

the pipe is not buried until the following morning when it is cool which prevents the pipe from expanding out of the trench when buried.

Michael uses fixed concrete general purpose troughs featuring high flow float valves, as he found moveable

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