FARMER ADVICE

Advice offered by the case study farmers included:

- Plan well and get good advice; work with people you like.
- Speak to a farmer who has already put in a system.
- Work out peak water requirements for your stock and allow for increased stocking rate because of water and additional subdivision.
- Spend time understanding altitude, distances for pipe and animals to travel, and stock grazing patterns. This will help design the best system for your farm.
- Talk to the pipe suppliers, they have a lot of experience and expertise with different farm systems and different water systems.
- Make sure you understand the requirements for different pressure ratings on pipes, whether pressure-break tanks are needed, what fittings are needed to handle the pressure, and what the water source will need to supply.
- Put in the entire system in one go rather than staging (if finance allows).
- Ensure the water source is clean and reliable (plentiful all year around, including in drought conditions).
- Put in more troughs than you think you will need (particularly where sheep and cattle will be drinking from the same trough). It is easier to put troughs in during installation than later, but at least allow for more to be put in.
- Burying the pipe reduces the risks to the whole system.
- Invest in a good pump.
- If you need to pump vertically, try and reduce the lift if you can. This might require two pumps.
- Use backflow preventers in the system.
- Don't use a trough as a pressure-breaker because if it is infected with animal faeces this will affect troughs further down the line.

- Invest in repeater/telemetry to monitor tanks remotely.
- Consider adding house supply in with the system, and include a firehose/hydrant for filling spray machines.
- Put plenty of taps on feeder lines to enable isolation for fixing leaks.
- Use trough location to improve grazing management by locating troughs in areas that are currently poorly grazed.
- If finishing cattle or lambs, good quality, plentiful water is a necessity.
- Fence off gullies and waterways during installation, rather than afterwards.

When asked what their main advice would be to farmers contemplating installing a water scheme, the unanimous response was: **JUST DO IT!**

The full report can be found at: www.mpi.govt.nz

AGFIRST

ECONOMICS OF STOCK WATER ON HILL COUNTRY

Thinking of installing a stock water reticulation system?

A recent study has investigated the economics of such schemes on some case study farms.

Ministry for Primary Industries
Manatū Ahu Matua

beef+lamb new zealand

The reasons farmers had installed a stock water reticulation system included:

- The current stock water system was inadequate and limiting production.
- Problems with dams: water quality was poor, they often dried up in dry periods, and rescuing stock stuck in the dams was a constant job.
- Issues with the impact of drought, often resulting in areas of the farm which were ungrazable due to no water.
- To better graze hill country areas.
- To finish more animals and required good water to achieve this.

Usually the installation of a water reticulation scheme resulted in higher stock numbers and/or better animal performance.

The general sequence of this was:

1. Installation of the water reticulation scheme;
2. Increased subdivision;
3. Better grazing management;
4. Improved pasture utilisation, and/or better pasture production;
5. Improved stock numbers and/or performance.

ECONOMICS

The economic analysis showed a weighted average rate of return of 53 percent, with a range of 14–85 percent. Median rate of return was 40 percent.

Payback period average three years, with a range of 1.5–7.5 years.

Capital costs involved were:

	AVERAGE	RANGE
Total Capital Cost/ha*	$311	$162–$601
Total Capital Cost/SU	$29	$13–$79
Water system only cost/ha	$154	$98–$280
Water system only cost/SU	$15	$6–$28

*Total capital includes the cost of the water scheme, increased subdivisional fencing, and changes in capital stock numbers.

Operating costs (R&M, fuel/electricity, insurance) averaged $4.77/ha, with a range of $3.13–$12.56/ha. Per SU figures were: average $0.59, range $0.17–$1.22.