



water quality

fact sheet



Maximise Stock Performance with Improved Water Quality

Can improved water quality have an impact on cattle weight gains?

Two international studies have recently looked into the impacts of water quality on cattle weight gains. Both studies have demonstrated a clear link between improved water quality and increased gains of stock, adding a further incentive for graziers to look at the quality of the water travelling through their properties.



Study 1

In 2000, and 2002, Willms et. al. from Canada reported the results of their project, in which they monitored the weight gains of yearling cattle on different drinking water sources at three sites between 1995 and 1999. The water sources included direct access to pond water, pond water pumped to a trough, and clean water pumped to a trough from a well, river or pond.

The results clearly showed that the cleaner water produced higher weight gains. (See Figure 1, below.)

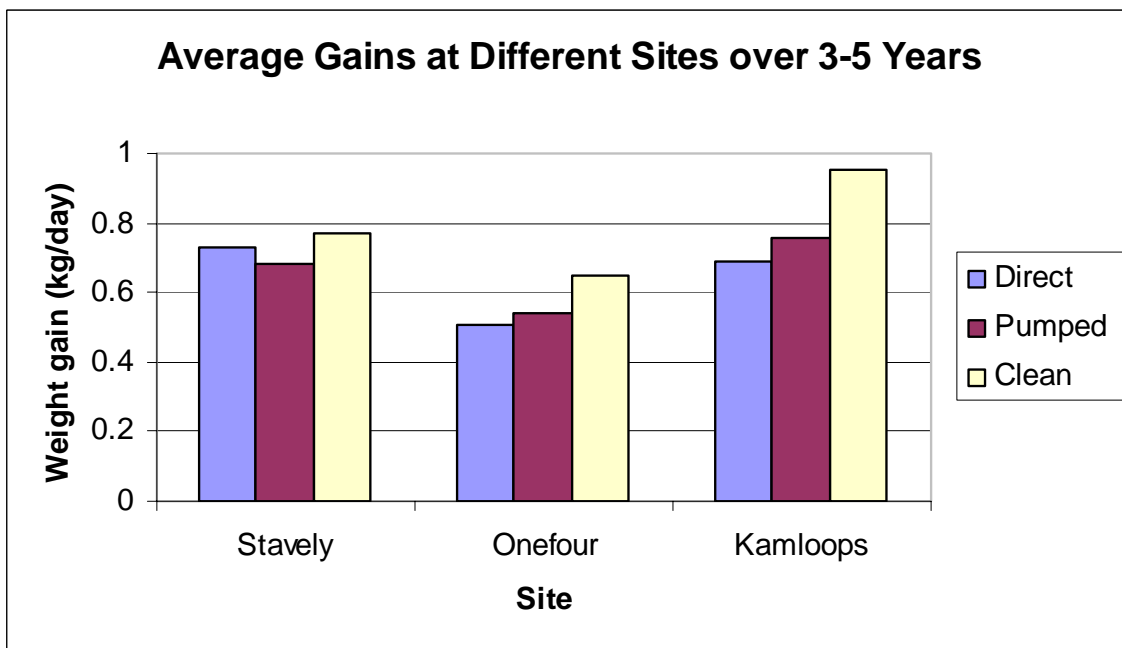


Figure 1. The average daily weight gains of cattle on different drinking water sources at three sites. The study was conducted over three years at Staveley and over five years at Onefour and Kamloops.



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Study 2

In 2005, Lardner et. al. also from Canada, reported similar results. This study compared the daily weight gains of cattle (yearling steers) over five years from 1999 to 2003 on different drinking water sources. The different sources were:

- direct access to pond water
- pond water pumped to a trough
- pond water treated with aeration
- pond water treated to remove impurities by coagulation (flocculation).

And, again, the cleaner water produced higher weight gains. (See Figure 2, below.)

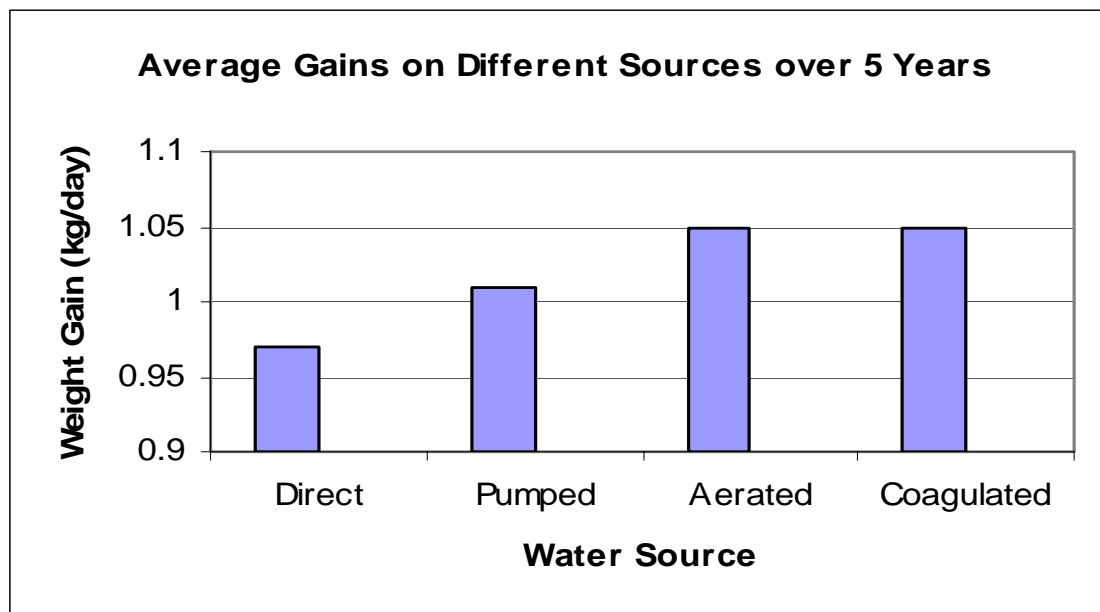


Figure 2. The average daily weight gains of cattle over five years on different drinking water sources.

Improvements due to better taste!

The authors of both studies observed that the gain improvements appeared to be mostly due to improvements in the palatability of the water, which encouraged the cattle to drink more, enabling them to eat greater amounts of feed. Hence, the cattle with cleaner water, gained more weight!

References:

1. Lardner HA, Kirychuk BD, Braul L, Willms WD, Yarotski J (2005) The effect of water quality on cattle performance on pasture. *Australian Journal of Agricultural Research* **56**, 1-8.
2. Willms WD, Kenzie OR, McAllister TA, Colwell D, Veira D, Wilmshurst JF, Entz T, Olson ME (2002) Effects of water quality on cattle performance. *Journal of Range Management* **55**, 452-460
3. Willms WD, Kenzie O, McAllister TA, Colwell D, Veira D, Wilmhurst J, Beck R (2000) Water quality effects on cattle performance. In Adams B and Douwes H (eds.) *The Range: Progress and Potential, Proceedings Western Range Science Seminar*. Lethbridge, Alberta.