

factsheet

FEEDLOTS



A framework for water and energy monitoring and efficiency in feedlots

Factsheet 26: Water supply and cattle washing energy usage

Energy required for water supply and reticulation at feedlots represents a relatively minor energy usage (ranging from 1-13% of total energy usage). Depending on the system used, savings may be made by reviewing system performance and layout. Cattle washing also requires a minor amount of energy for water movement.

Water supply and reticulation is a necessity for feedlot operation, however the annual energy requirement to source and supply water can vary greatly from one feedlot to the next (*Figure 1*).

Energy used for water supply is closely related to the distance and head (in meters) that water needs to be pumped for the feedlot. In most cases, it is difficult to reduce this if water is sourced from deep artesian bores or from some distance from the feedlot—such as Feedlots A and C in *Figure 1*. This should be kept in mind when siting feedlots, as the energy requirement for water supply will be ongoing over the life of the feedlot.

Energy required for reticulation is generally significantly lower than water supply, as most feedlots are designed to gravity feed water to most sectors of the feedlot. However one feedlot within the energy use study (Feedlot G—*Figure 1*) used significant amounts of energy for water reticulation. It may be possible to significantly reduce annual energy usage and costs by changing this system to gravity feed. Energy is also required for cattle washing where this is undertaken. Cattle washing generally requires high pressure water for soaking and hand washing of cattle. This can contribute an additional 1% to total feedlot energy usage.

Key benefits

- Energy used for water supply is related to the distance and head (in meters) that water needs to be pumped and the volume of water used.
- Significant amounts of energy may be used for water reticulation.
- Energy for cattle washing is proportional to the water used.

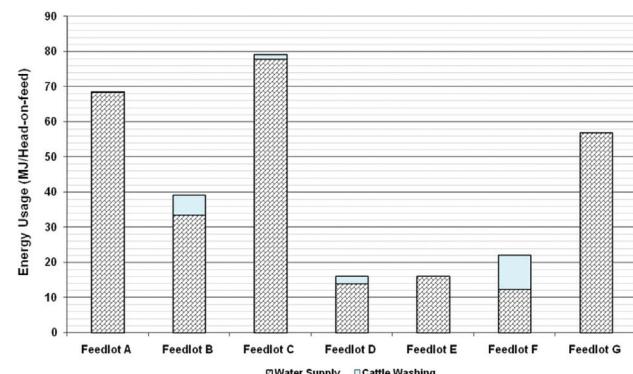


Figure 1: Energy usage for water supply, reticulation and cattle washing at seven Australian feedlots.

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Further information

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