

CowTime

CASE STUDY



(too) Hot stuff!

After attending CowTime's *Watts 'n' Your Dairy Shed Shake up*, Luke Kimber from Bega, NSW discovered the hot water system in his dairy was set to run at almost boiling. Not only was it wasting energy and money, it was actually set too high for efficient plant cleaning and was at risk of compromising milk quality.

The business, Cedar Grove, is a family affair involving Luke's parents Ken and Judy, Luke and his wife Pam plus brother, Matt and his wife Annabel.

They milk about 760 cows all year round in a single-operator 44-unit rotary.

"I was surprised to hear that hot water could actually be too hot. We all thought the hotter the better," said Luke.

When Luke checked the hot water temperature it was running at 94°C, rather than at the recommended 85°C.

It is worth every dairy farmer checking their hot water setting because water heating accounts for almost half (45%) the energy used in a typical milking shed. Milk cooling accounts for 36% with the rest made up from lighting and milking machine ancillary costs.

CowTime estimates turning a hot water system down 10°C will cut 10-15% off the hot water bill.

Luke is also likely to have better milk quality because washing milking equipment with water too hot tends to bake milk proteins onto the pipe-work which can eventually harbour the bacteria that cause milk quality problems.

→ Did you know?

- most farms use far more energy than they need and many could save at least half their energy use
- some farmers use four times the energy that others use to harvest the same amount of milk
- water heating and milk cooling account for 80% of energy used in the dairy
(based on research conducted for SEAV/Bonlac)

CowTime's Darold Klindworth suggests checking the temperature of hot water leaving the tank as well as the temperature in the holding barrel.

"Most chemicals are designed to work in wash solutions entering the plant at 75-80°C," he said.

"Check the manufacturer's recommendations. But your hot water system setting needs to allow for heat loss in the pipes and the holding barrel."

Water can lose 10°C between the hot water system and the washing barrel on a hot day, and even more in cold weather.

This loss can be minimised by insulating pipe-work, keeping a lid on the washing barrel and plumbing the barrel so that water fills from the bottom rather than spraying in from a tap.

"These small changes can add up to a big difference in energy use and costs," said Darold.

Energy Monitor

Find out how energy efficient your dairy is. Run your dairy through CowTime's Energy Monitor. Log on to www.cowtime.com.au and follow the prompts; or phone CowTime on 03 5624 2221 and ask us to fax you the Energy Monitor form.

CowTime is proudly supported by Dairy Australia, DPI VIC, DPI&F QLD, Sustainability Victoria and the University of Melbourne.

Your Dairy Australia levy making milking easier.

