

CowTime

CASE STUDY



Simple changes cut hot water bill

Heywood dairy farmers, Rex and Lou Matthews, almost halved their hot water use by making simple changes after attending *Watts 'n' Your Dairy*, CowTime's 2006 Shed Shake-up.

At the event Rex was surprised to discover that his power bills were significantly higher than some of his neighbours who milk a lot more cows.

A nurse, Lou works off-farm which means Rex runs the dairy single-handed. He milks the 130-cow autumn calving herd through a 10-unit swing-over herringbone dairy.

About a year ago he changed to three-phase power providing a more reliable energy source. But the neighbours' power bills made him realise there must be opportunities for savings.

At *Watts 'n' Your Dairy* Rex heard that hot water accounts for almost half of the energy used in a typical dairy.

"So it was definitely worth looking for ways to cut our hot water bill," he said.

Rex reviewed the manufacturer's recommendations for his cleaning products. It resulted in a double whammy saving - in both chemical use and volume of hot water.

He halved the amount of hot water used by cutting out an unnecessary hot rinse after the evening milking, and by measuring more accurately the amount of hot water used each time.

He also checked the settings on the hot water system. Rex discovered it was set at 94° C. That's unnecessarily hot and clearly a waste of energy.

"Most times I went into the dairy the hot water system would be steaming, which was as good as money going up in smoke!," he said.

Just as important, washing with 94°C water tends to bake milk proteins onto the pipe-work which can eventually harbour bacteria and cause milk quality problems.

"I dropped the thermostat down to 89°C, saving energy without compromising milk quality," he said.

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 at 75-80°C," Darold 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 the water fills from the bottom rather than spraying in from a tap.

Rex is delighted with the results. "It didn't cost me a cent to make those simple changes so it was well worth the small effort," said Rex.

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.

→ 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)

