

Farmer case study: Grains2Milk

HEAD: Keeping cows cool (800 words)

The prospect of global warming has dairy farmers Sam and Fleur Tonge and Paul Judge planning for the future.

A sprinkler system, increased troughs, an alternate water source, feeding in shade, changing grazing rotations and tree planting are just some of the strategies being used to reduce the impact of heat stress on cows now and in the future.

Mr Judge is a member of the Northern Young Farmers Network, chair of the region's Subtropical Dairy committee and manages the pastures and the feeding of the cows on Sam and Fleur Tonge's Casino farm. The dairy enterprise covers 80 ha, with 200-220 cows milked year round.

Members of the two groups have been working to reduce the impact of heat stress on their herds, now and in the future, after looking at the Cool Cows resources developed by Dairy Australia's Grains2Milk program.

Heat stress can dramatically slash milk production, reduce herd fertility, cut milk protein and fat tests, trigger live weight losses and create animal health problems.

Grains2Milk program leader, Dr Steve Little, said dairy cows could be affected by heat stress once temperatures hit 25 deg C, given certain humidity levels.

"In recent years the temperatures have been getting hotter and the temperature humidity index (THI) has increased," Mr Judge said.

The THI is a measure of temperature and humidity and once it gets over 72 cows start experiencing heat stress and in-calf rates are affected. When the THI gets over 78 milk production drops.

After working through the Cool Cows booklet and talking with local advisers, the Tonge farm has implemented a raft of changes to reduce the impact of heat stress on the herd which compliment the ones already in place.

Mr Judge accesses updated weather forecasts from the Cool Cows website and receives a free e-mail alert service warning him when the cows are at risk of heat stress.

The Weather Forecaster tool on the Cool Cows website gives past and forecasted temperatures, humidity and THI levels for the district which are useful to estimate a cow's heat load in the coming week.

"The website and e-mail service are great at times of the year when the weather is unpredictable, but once we get in a regular weather pattern we just employ a number of techniques to help the cows cope with the heat on a daily basis," Mr Judge said.

"At this stage we are not so much concerned about milk production, but are concentrating on keeping the cows cool and making sure they hold condition."

Sprinklers have been installed in the dairy yard to keep the cows cool before milking.

On really hot days the sprinklers are turned on early and the cows are allowed to walk up to the dairy to stand in the yards to cool off before milking.

Heat stress suppresses the herd's appetite. Cows are free to walk straight back to pasture after the morning milking so they can optimise their grazing time during the cooler part of the day.

"We accept that the cows don't want to graze in the middle of the day when the temperature rises, so we provide hay in the shaded parts of the paddocks to encourage them to eat," he said.

In future, he is considering using cottonseed as a condensed energy source the herd could eat in the cooler parts of the day.

Paddocks closer to the dairy are grazed on hotter days to reduce the amount of time, and heat generated by cows travelling for afternoon milkings.

The grazing rotation is managed so the cows have a paddock with clean shade areas during the day, and paddocks with less shade are grazed during the night when the shade is not needed.

"We're lucky we have a lot of trees on the farm so we can give cows access to shade, but we also have an ongoing tree planting program to improve the availability of shade in the future," said Mr Judge.

Dr Little suggests shade should be the first priority in managing heat stress as it reduces the radiant heat load by 50% or more.

"Shade is king! It protects cows from direct sunlight, particularly during the hottest part of the day. Cows eat more and produce more milk when they have access to shade," he said.

"Shade doesn't require electricity or water to run, making it a good investment," said Dr Little.

Mr Judge has also installed more water troughs to ensure the herd always has access to water and is looking to access bore water to overcome water quality issues during summer.

"When we get summer storms the run off affects our water quality. If we have better water quality then the cows will drink more water."

Cool Cows resources have been developed with funding from Dairy Australia and the Australian Government Department of Agriculture, Fisheries and Forestry.

For more information visit www.coolcows.com.au or www.dairyaustralia.com.au.

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Photo DSC_0108.JPG (in front of cows) DSC_0123.JPG (in front of tractor)

Caption: Sam Tonge (right) and his share farmer Paul Judge have put in place a number strategies to manage heat stress in the Tonge's dairy herd, including planting trees for shade, providing more water troughs and subscribing to an email service to alert them to high risk days.



Box article HEAD: GRAINS2MILK

The Grains2Milk program provides dairy farmers with the training, resources and support they need to make better decisions about using grains and concentrates in their businesses. It is funded by dairy farmers through Dairy Australia. For more information contact Dr Steve Little ph 0400 004 841.
