

# Cool Cows farmer case study

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## HEAD: Dairy doubles as farm cooling centre (690 words)

Riverina dairy farmers Craig and Penny Gallpen have adapted their dairy yard so that it can double as a cooling centre for their 400-cow herd.

With the property located 20km East of Deniliquin, NSW the herd is at most risk of heat stress in December, January and February. The dry, hot days tend to come in cycles of two to three days with a couple of cooler days in between.

The Gallpens operate a 'hybrid' feeding system, with the herd fed a total mixed ration (TMR) over summer and grazing pasture when available over the rest of the year.

Milked three times a day, the herd averages 11,000L per cow per lactation. The Gallpens are well-aware of how much production can drop due to heat stress. Calving is spread across four even batches throughout the year so there are plenty of cows in early lactation in the hot months.

The farm cooling centre consists of a permanent roof made of steel and corrugated iron, with a sprinkler system and fans to aid evaporative cooling. During the summer when there's no pasture available the herd is fed a TMR twice a day. On hot days they spend most of the time between feeds at the cooling centre.

"Initially we had shade cloth and sprinklers but the humidity seemed to build up under it. In 2009, we decided to invest in a permanent cover with fans to keep air moving which improves the cooling effect from the sprinklers," said Mr Gallpen.

Although a significant capital outlay, the Gallpens estimate the permanent roof will pay for itself within two summers through sustained milk production; with the added bonus of improved herd fertility.

"In the past the heat resulted in a dip in milk production which tended to last until the end of the lactation," he said.

The roof over the dairy yard is 30m by 15m, and cows can also access the dairy, which provides about the same area of shade. A simple garden sprinkler system installed above cow height sprays water over the cows standing in the holding yard.

"It's a pretty basic sprinkler system but does the job. We can refine it by adding a timer and its own pressure pump," he said.

Three large fans at the top of the shed direct air flow over the holding yard, but Mr Gallpen plans to install an additional six fans.

"To gain from evaporative cooling, every cow needs to feel the air moving. The extra fans will give the cows more benefit from the water," he said.

The Gallpens were delighted with the results last summer.

“The main benefit is the feed intake remains normal on hot days and that allows us to maintain milk production.”

It made so much difference that the Gallpens plan to progressively install more shade shelters around the farm, starting with the feed pad.

“We started with shade at the dairy first because the yard has a cement floor. It is not ideal having cows standing on concrete for long periods but we were concerned about mud and the risk of mastitis if the cows spent all day under a shade shelter in a bare paddock or at the feedpad, which is on dirt.,” he said.

Dr Steve Little who manages Dairy Australia’s Cool Cows program said the combination of shade, sprinklers and fans gives farmers good control over the heat. Shade reduces the amount of heat cows absorb in the first place while the sprinklers and fans help the cows offload heat through evaporative cooling.

“Every Australian dairy farm should have a sprinkler system at the dairy yard and a large water trough at the dairy exit. They are both cheap and have proven benefits. Yet they are missing on many dairy farms,” said Dr Little.

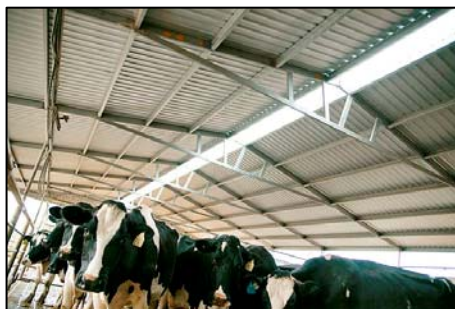
“Remember, shade is king! Craig’s cooling centre works well for his large, high producing herd. But other options, such as paddock shade may be more suited to your situation,”

The Grains2Milk page in this issue features Mark Petersen who has virtually eliminated the risk of heat stress by planting trees on his northern Victorian dairy farm.

*For more ideas for keeping cows cool this summer, visit [www.coolcows.com.au](http://www.coolcows.com.au).*

**ENDS**

**Caption:** Riverina dairy farmer Craig Gallpen has turned his dairy yard into a farm cooling centre with the installation of fans, sprinklers and a permanent roof for shade.



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### **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.