

Keeping cows on the curve through summer

Shade and sprinklers

- Providing shade is critical as it reduces the amount of heat that cows absorb during the day. Aim for 4m² per cow at midday.
- Sprinkling cows in the dairy holding yard before milking on warm/hot days is a must whenever the air temperature is above 25°C and/or cows' resting breathing rate is more than 60 per minute (indicating that their heat load has increased and core body temperature is above normal).
- On hot days, wet the dairy holding yard concrete by hosing, flood washing or sprinkling for the hour before cows arrive for afternoon milking. This will help dissipate the heat stored in the mass of the concrete.
- Fans are a useful complement to sprinklers, especially on days when there is little or no wind. Fans only help cool cows when the air temperature is lower than the cows' body temperature (39°C) and the surface of the cow is wet.

Drinking water access and quality

- Unrestricted access to cool, fresh drinking water is essential as cows' water intake and turnover rate are closely associated with their feed intake and milk production. (Given that milk contains 87 per cent water, this is not surprising.)
- In hot weather, allow for 200–250 litres per cow per day of drinking water – double what cows usually need each day.
- Ensure that cows don't have to walk far for a drink at any time of day and that water flow rates to troughs are sufficient to meet peak cow demand. Having a large water trough on the exit side of the dairy is a must, as cows may consume 30–50 per cent of their daily water intake within one hour of milking. When on a sacrifice paddock or feedpad, cows should have access to two water troughs at all times.
- If you know or suspect that your herd's water intake, feed intake, and animal performance are sub-optimal, arrange with a specialist laboratory to have a farm water sample analysed for its physical, chemical and microbiological composition.

KEY MESSAGES

Provide shade and use sprinklers to help keep cows cool

Provide cows with unrestricted access to cool, fresh drinking water

Make adjustments to your milking cows' diet to help sustain daily nutrient intakes

Consider changing milking and feeding times

Maintain grazing residuals at 4–6cm to optimise pasture persistence and autumn re-growth

Ensure that dry cows and heifers also have adequate shade and cool, fresh drinking water at all times



Cows being sprinkled in dairy holding yard

Nutritionally balanced diets

- Understand the quantity and quality of forages you have on hand by doing a thorough stocktake of your feed inventory and feed testing all your main feeds.
- Feed high quality fibre to maintain rumen stability and increase nutrient density without producing excessive metabolic heat. Ensure all cows get equal access when feeding out quantities of forage fibre to your herd.

- Use a slowly fermenting starch source such as corn (maize) grain. This will aid feed digestion by taking some of the starch fermentation away from the rumen, thereby reducing the risk of ruminal acidosis, and providing much needed glucose to the heat-stressed cow.
- Feed higher-quality protein sources in the diet to compensate for reduced daily feed intake and rumen microbial function during hot weather, and lower protein levels of summer pastures.
- Supplementing your cows' diet with fat will help increase its energy density and maintain cows' daily energy intake. Be careful, as too much fat interferes with microbial digestion in the rumen and depresses feed intake. Feed no more than 6–7 per cent total dietary fat (DM basis), of which no more than 5 per cent is unprotected fat (i.e. rumen degradable fat). Consult your nutrition adviser.
- Dietary supplementation with a buffer, additional sodium, potassium and magnesium, and use of additives such as betaine and yeast products should also be considered as means to support cows in hot weather. Discuss options with your nutrition adviser.
- Use the Dairy Australia **Feed Budgeting Tool** to develop a month-by-month feed budget for your herd.

Milking and feeding times

As days get warmer, think about changing milking and feeding times.

- Get the cows onto available pasture before the temperature rises and starts to affect their desire to graze. This may mean milking earlier in the morning. Offer the cows a larger part of their daily pasture allocation at night as they are more likely to graze harder at night when it is cooler.
- Walking cows to the dairy during the hottest part of the day (about 3pm) adds to their heat loads. Delaying afternoon milking until 5pm may increase milk yield by up to 1.5 litres per day, regardless of whether the cows are sprinkled with water while in the dairy.
- If you have limited pasture available, feed a mixed ration, hay or silage on a feedpad or in a sacrifice paddock close to the dairy with good shade and water access. This will help achieve higher feed intakes on hot days and take the edge off cows' hunger before letting them into a new strip of grass, making it easier to control the grazing intensity and leaving a residual close to target.

Grazing residuals

- To optimise pasture persistence and autumn re-growth, don't over-graze pastures over summer. Maintain residuals at 4–6cm to help retain soil moisture close to the surface and provide protection for extreme soil surface temperatures. Grazing may need to be restricted, as cows tend to graze lower than this.
- Where possible, aim to maintain some green material over summer (e.g. green stem, pseudostems). For further information on managing summer grazing see the video **Summer – Ryegrass Grazing Management**.

Dry cows and heifers

- Autumn and year-round calving farms with a high heat stress risk level should ensure that their dry cows have access to adequate shade and cool, fresh drinking water at all times. This avoids the long term adverse productivity and health impacts of heat stress during late pregnancy on cows and their unborn calves.
- Heifers will eat more feed and grow at a faster rate if access to shade and cool, good quality feed and cool, fresh drinking water are provided.

Flies

- Excessive flies can severely irritate cows, disrupting feeding and contributing to heat stress.
- Control fly breeding areas. If necessary, treat cows with an approved pour-on preparation and re-apply at regular intervals.



Cows drinking from water trough near dairy shed exit

FOR FURTHER INFORMATION

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