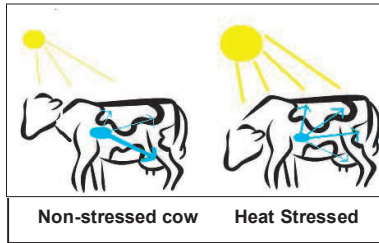


beating heat stress this summer !!

Heat stress is a big issue in the warmer months; once ambient temperatures reach outside a cows' comfort zone (5°C- 20°C) it can have a drastic effect on milk production. Dry matter intake and water consumption in particular can be affected by a heat stressed cow. As temperature increases, dry matter intake can decrease by 77 grams for every degree above 20°C. Therefore when temperatures reach between 35°C to 40°C cows' intake reduces by 1.15 to 1.54 kg DM. This drop is estimated to have a 1: 2 effect on milk production (eg for every 1 Kg DM not eaten, 2ltrs of milk is lost). In extreme hot weather intake and production loss can be up to 25%, indicating a severely heat stressed cow. High producing cows are more prone to heat stress, as a result of higher intakes. They generate more heat during digestion, thus having a greater requirement for water. This is not to say reduce cow production, but consider different management tools that can help overcome this stress.

As temperature increase from 30 to 35°C, cows water intakes also increase from 79 to 121 ltrs. This is why it is important to have adequate trough space and flow rates (i.e. pipe fittings), so cows don't suck troughs dry! It is also important to supply fresh, clean water free from contaminants. If your farm uses bore water for stock: have it tested for sodium, alkalinity, sulfates, and nitrate nitrogen to determine if it is safe for livestock. Reduced intake of water due to palatability can often be the issue on farms which otherwise seem to have adequate flow and availability of water to their herd.

Cows use water not only to make milk and carry out bodily functions, but to dissipate heat. This is carried out through their lungs (respiration) and by sweating. If water supplies are inadequate cows divert water that is used in



milk synthesis to the metabolic processes of heat dissipation. It is these efforts to cool the body that divert water from production into trying to regulate their body temperature.

At 35°C a cows intake is reduce by 1.1 kgDM

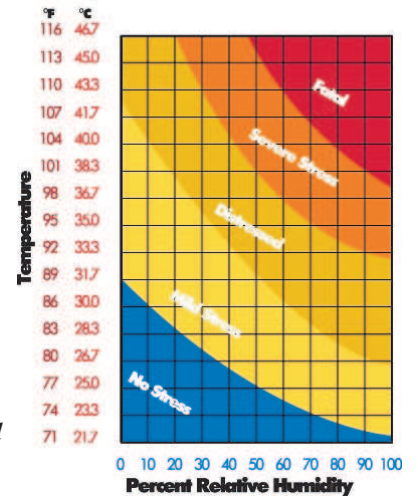
THI = temperature + relative humidity index, which gives an indication of how these two factors combine to affect a cow's ability to cope with heat stress.

A THI of greater than 72 causes stress in a cow (eg 28°C & 44% RH or 35°C + 37% RH)

Ways to Prevent Heat Stress:

To encourage water consumption try to **supply water in shaded areas** (cows prefer water temperature below 30°C) and give cows access to water right after milking. Ensure there is enough trough space and flow rates are adequate. Increase the **energy density of the diet** when intake is limited, to ensure adequate nutrient intake. Use fans to **create air movement** wherever possible, as this drops ambient temperature. **Spraying water** on your herd with **large droplets** (that wet the skin, not sit on top of hair) will aid in heat transfer, especially when combined with fans. **Minimise environmental mastitis outbreaks** over summer, by changing standing area. There are also **additives** and **mineral inclusions** that can help minimize the effect of heat stress.

Dairy Heat Stress Chart



All farms should have recently received a copy of "Cool Cow" information from Dairy Australia. You will find more helpful hints. And for more information, please contact your technical services representative.