

# Heat stress can depress yields

Some tips on spotting 'hot' cows and how to keep them cool as temperature continue to soar, by

**Rachael Porter**

Hot weather has been causing problems on some dairy units. Kendal-based cattle vet Andrew Crutchley, from Westmorland Veterinary Group, says he's seen many heat stressed herds and been called out to some clinical cases in the past few weeks.

"Heat stress is much more common than producers think – hardly surprising when temperatures inside buildings can be 10°C higher than outside temperatures," he explains.

Heat stress with livestock can occur at relatively low temperatures as humidity plays such a huge role in its onset.

The average humidity in the UK, for example, is about 70% with little change all year round. The heat stress threshold is generally believed to be 22°C at 45% humidity. So at temperatures of 24-25°C cows can be experiencing mild to moderate heat stress and severe stress at between 28°C and 30°C in UK conditions with humidity of 70%.

"It's worth remembering that humidity in dairy sheds can easily exceed 70% and approach between 80% and 90%. This humidity also makes heat exchange by the cows less effective through sweating and panting," adds Mr Crutchley.

Typical symptoms to look out for include quickened breathing, depressed appetite and listlessness. Cows will eat less – the primary strategy for lowering body heat production is for a cow to reduce its feed intake. This decreased feed intake includes altered feeding pat-

terns and behaviour, with less forage consumed and more sorting of rations for straights and concentrates because digesting these produces less heat energy. This, in turn, increases the risk of acidosis.

Heat stressed cows also tend to stand around more – activity levels will decrease. They will also drink and salivate more and will display shade-seeking behaviour.

"So take a look at cows when they're tightly stocked in the collecting yard during the summer and see if you can spot the signs," says Mr Crutchley. "A drop in yield is also common and can be as much as 20%. I've seen cows losing as much as five litres a day on some units this summer. Milk quality can also be reduced as butterfat levels can also drop."

Heat stress also impacts on cow reproduction – it can be difficult to get cows in calf because they don't cycle if they're too hot for prolonged periods. "It's too early to see signs of that, but we may see an increase in the number of cows failing to get in calf as the summer progresses and we'll certainly see any effects as we move into the autumn and winter."

Lactating animals start showing signs of heat stress

when temperatures hit around 20°C, but performance – in terms of milk yield and reproduction can start to be affected at just 15°C. Cows are happiest between 5°C and 15°C.

"In the most severe cases, which are classed as heat stroke rather than heat stress, cows can collapse and die. But this is relatively rare."

Heat stress is relatively common and although you can't treat the cow's symptoms, you can change the temperature of her environment and make her more comfortable.

Plenty of accessible water is essential, as consumption can increase by up to 50%.

If animals are outside then access to shade is also important. Good ventilation is also important for housed cows. Active cooling, using misters and foggers in conjunction with fans, is another option for herds suffering from heat stress.

"Aim to cool the air, not the cow. The cow is cooled by movement of cooled air over the skin. Caution must be used when setting up misting systems as inadequate fans can make the situation worse – the mist traps a layer of air next to the skin acting like a wet suit," Mr Crutchley says.

## TIPS FOR SQPS

### Signs of heat stress:

- Quickened breathing
- Depressed appetite
- Listlessness/inactivity
- Thirst and salivation
- Shade seeking

- Drop in yield/quality
- Lower fertility

### Strategies:

- Plenty of water, shade, ventilation, air cooling systems