

Summer 2020

Heat Stress

With Britain in the grip of another heat wave and temperatures set to remain in the high 20s for many parts of the country into the next couple of weeks, it is crucial to look out for signs of heat stress in cattle.

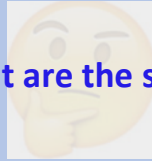


What really adds to the problem is the high humidity we have been experiencing. The chart below highlights how high temperatures alone do not necessarily result in severe heat stress but coupled with even moderate humidity this can result in problems.

Temperature Humidity Index (THI)									
Relative Humidity %									
C	20	30	40	50	60	70	80	90	100
22	66	66	67	68	69	69	70	71	72
24	68	69	70	70	71	72	73	74	75
26	70	71	72	73	74	75	77	78	79
28	72	73	74	76	77	78	80	81	82
30	74	75	77	78	80	81	83	84	86
32	76	77	79	81	83	84	86	88	90
34	78	80	82	84	85	87	89	91	93
36	80	82	84	86	88	90	93	95	97
38	82	84	86	89	91	93	96	98	100
40	84	86	89	91	94	96	99	101	104
<div>No heat stress</div> <div>Moderate heat stress</div> <div>Severe heat stress</div> <div>Dead cows</div>									



What are the signs?



- Increased breathing rate/panting
- Increased water intake
- Reduced feed intake
- Decreased milk yield
- Milk fat and protein reductions
- Cows can sweat
- Standing next to water troughs
- Refusing to lie down
- Crowding together
- Sticking their tongues out

What can we do to minimise the stress?

Water, water, water – it is the key!



We cannot stress how important it is to ensure cows have completely ad lib access to plenty of good quality water. A quick checklist will help to ensure the additional water needs during hot periods are being met:

- ✓ Have animals got plenty of access to water troughs (both indoors and in the field)?
- ✓ Do troughs fill up quickly enough after peak periods so that all animals can really drink all they want?



- ✓ Do you pay particular attention to cows first thing in the morning when you go out to get them in, and about an hour after you have turned them out – do they stand around troughs waiting to drink for a long time?
- ✓ If the answer is yes – put out some temporary troughs to help improve access when demand is so high.
- ✓ Do you have sufficient access to water around the collecting yard/dispersal yard?



Are you sure that all water troughs are working and providing clean, fresh water to livestock?

Heat stress – a nutritional nightmare?

Not at all, but there are a few things you should remember when dealing with heat stress. Dry matter intakes will generally **fall** when cows become heat stressed. This leads to energy deficiency, which will result in poor conception rates for potentially the next couple of months.

It is important that you provide them with good quality grazing as much as possible. This is easier with rotational grazing, but even these paddocks are succumbing to the drought.

Grazing by night when it is cooler will maximise intakes of grazed grass.

Buffer silages offered should be palatable to encourage intakes. The best buffer forages to feed are those that are **high in energy** and **low in NDF** - maize silage and good quality grass silage. Butterfats in milk may be challenged by this, but it is more important to get energy into your cows and maintain milk/cow



fertility for the longer term, and to accept a slightly lower milk price in the short term. But if you are close to a large penalty on butterfat, feeding 1kg hay/cow/day may be needed.

Make sure you are giving the cows enough **mineral supplementation** in hot weather as the heat will make the cows lose more minerals through sweating. Double check you are actually feeding the mineral levels suggested on your diet sheet.

Shade – not just for people!

Try grazing paddocks with trees for shade during the day, if possible, as this will be when the cows need most protection from the full heat of the sun– easier said than done, we know!

Management

There are a range of management changes you can make to try to help in the extreme weather:

- Choose paddocks/grazing fields closest to the farm for really hot days – the less they have to walk the better.
- Take time to walk your cows in and out of the buildings – **let them go at their own pace**.
- Check that your cows are not under excessive fly challenge – any stress will make things worse.
- Minimise cattle handling as much as possible.
- Try to minimise the amount of time the cows are crowded together in and around the buildings.
- Milk earlier in the morning and later in the afternoon when air temperature has dropped.
- **Sprinklers spraying water on the cows' back** can help as it wets the cows coat and aids evaporative cooling for up to 6 hours. But it can increase the humidity around the cows making things worse if cows are crowded together. So, if you are planning to do something in a collecting/dispersal yard it is important to **install a fan too to remove humid air**.
- Wetting the cows' backs before they go out to the field to graze is fine and will not cause this humidity issue.



'To house or not to house during hot weather'.....that is the question?!

Cows in well designed, well ventilated sheds can in fact suffer **less from heat stress** than those cows out grazing. But housing cows in hot periods can make things **much worse** if you don't have the right sheds.

Things to consider are:

- ✓ **Water, water, water** (again!). Even more important in housed cows, especially as water trough capacity in sheds is normally less than the big troughs out in the fields. Make sure that the troughs are filling fast enough to meet demand, and if not provide some more.
- ✓ **Stocking rate.** Reducing the number of cattle in the shed will reduce humidity levels and subsequently the risk of heat stress. A cheap temperature/humidity monitor can be extremely useful to give an indication of heat and humidity in the shed.
- ✓ **Fans.** These are a great idea for the hot weather, especially above the feed passageways. But many farmers cannot install them quickly enough for the short period of extremes we are experiencing currently. And they do use a lot of energy to run.
 - Many herds with high yielding housed cows will have these already. But if you haven't then anything you can do with your buildings to encourage air flow will help i.e. keep doors open/take off some yorkshire boarding etc.



Prevention is better than cure!

Do you know how good your airflow is in your buildings?
Are you set up to deal with potential heat stress situations? Are you keen to look at installing fans to cubicle buildings?

If you would like support on improving overall building airflow – from testing current airflow through to looking at solutions available to you, please contact us and one of our consultants would be happy to advise you further.

Call our office on 01666 812278

Or email

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