

# Heat Stress

Some of you have had a bit of welcome rain last week, but many have not. With little prospect of rain in the forecast this next week, and continued hot weather, we thought a timely reminder of ways to help cows cope with the heat stress may help.

## SYMPTOMS OF HEAT STRESS

Things to look out for are:

- 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

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

No heat stress

Moderate heat stress

Severe heat stress

Dead cows

## HOW TO HELP THEM AND MINIMISE THE STRESS

### Water, Water, Water !!

We cannot stress how important it is to ensure cows have completely ad lib access to plenty of good quality water.

Have you checked that all water troughs providing drinking water to livestock are clean? If not do it now.

Have animals got plenty of access to water troughs and do they fill up quickly enough after peak periods so that all animals can really drink all they want? Especially check cows first thing in the morning when you go out to get them in, and about an hour after you have turned them out in the field – do they stand around troughs waiting to drink for a long time? If so put out some temporary troughs to help improve access when demand is so high.

And if possible try to make water available around the collecting yard/dispersal yard, so that when they come in for milking you minimise the time they cannot access water.

### Feed

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 and grass is heading rather than bulking.

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

Try grazing paddocks with trees for shade during the day if possible as this will be when the cows need most protection from full 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 – don't put them under pressure and let them go at their own pace as much as possible.
- Check that your cows are not under excessive fly challenge – any stress will make things worse. Protect for flies if necessary, especially if they are gathering under trees.
- 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 and make 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 back before they go out in the field to graze is fine.

## Housing Cows in Hot Conditions

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 big troughs out in the fields. Make sure 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.
- Fans – 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.