

# farm news



## Summer Mastitis

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August is the time of year we see most cases of summer mastitis, both in beef and dairy cattle (especially those at pasture).

This is an acute, severe mastitis that usually affects dry cows or pregnant heifers, and the infection is often transmitted by flies.

Affected animals are often dull, isolated, lame and anorexic, with high temperatures. The teats will be swollen and often surrounded by large numbers of flies. The disease will progress until the whole udder is swollen and producing thick foetid yellow secretions, possibly blood-tinged. Affected animals can abort and, in worst-case scenarios, die. Sometimes you will find a heifer with a blind

quarter without having seen her obviously sick, which may be due to a previous, unnoticed case of summer mastitis.

Early treatment for summer mastitis is important. Affected quarters rarely recover, and so your aim is to save the animal and prevent the infection spreading to the rest of the udder. A good result is a live animal that is still pregnant, with some healthy quarters to produce milk in the lactation.

Call us if you think you have a case of summer mastitis, as sometimes drastic surgical treatment of the udder is necessary in very severe cases. In general, anti-inflammatories and systemic antibiotics should be used to reduce swelling and drop the temperature, and affected animals should be isolated since they will be infectious to the rest of the herd. The udder is often full of pus and dead tissue, and so it is important to strip the affected quarters as frequently as possible. Do not strip onto the

ground as this may spread the infection. Instead, use an old bucket full of disinfectant and dispose of safely. Despite your best efforts, the udder may slough off.

Prevention is definitely better than cure. Fly control for cattle is best done with tags or pour-on products. These often do not provide great protection to the udder, but you can use a gloved hand to apply some product directly around the teats. Stockholm tar can be applied to the teats as a preventative, but is very messy and needs to be reapplied every 2 weeks through the summer. Animals with healthy teats are at lower risk so it is recommended to check the teat ends and possibly remove those with badly damaged teats. In older animals silicone teat sealants will reduce the risk. Areas where there are likely to be high numbers of active flies should be avoided if possible, such as sandy soils, damp pastures and fields adjoining woodland where flies shelter.

# Heat Stress

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With the warmer weather here, it's important to think about the best way to manage heat stress in your livestock.

Heat stress, or hyperthermia, occurs when an animal cannot lose heat as fast as it is gaining it. It is becoming more common, especially with all-year housing, high humidity, and hotter temperatures.

All animals have a 'thermoneutral zone', a range of temperatures where they can perform normally without wasting energy on maintaining body temperature. Dairy cattle can work between -15°C to +25°C without using energy to thermoregulate their bodies. The young, the sick, and animals with previous respiratory disease are more susceptible to heat stress.

Once the ambient temperature rises above 25°C, you may notice that cattle have reduced appetites and thus lower milk yields. Conception rates can also be affected due to increased levels of cortisol, caused by stress. Prolonged high cortisol levels can cause a reduced immunity, making animals more prone to disease, such as mastitis. Cattle will use more energy to try to cool down by drooling, sweating and increasing blood flow to the skin. Higher yielding cows naturally produce more heat anyway, and can be more susceptible to hotter weather.

Heat stress can be monitored using a 'temperature humidity index'. The example below shows when dairy cattle may start to be affected by the heat, especially when housed.

| Temperature Humidity Index (THI) |                     |    |    |    |    |    |    |     |     |  |
|----------------------------------|---------------------|----|----|----|----|----|----|-----|-----|--|
| C                                | Relative Humidity % |    |    |    |    |    |    |     |     |  |
|                                  | 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            |

Courtesy of Ian Ohnstad, The Dairy Group. See <http://www.nadis.org.uk/bulletins/managing-heat-stress-in-dairy-cows.aspx> for more information

Clinical signs of heat stress include:

- Elevated respiratory rates
- Increased water intake
- Sweating
- Reduced appetite
- Decreased milk production
- Lower fat % and protein % in milk
- Lethargy

Heat stress can also vary between different livestock:

- Pigs are affected at lower temperatures and are very prone to becoming sun burnt
- Sheep can become burnt when they have just been shorn
- Milking cows are more susceptible than dry cows due to the extra heat generated for lactation
- Dark coloured animals are more susceptible because they absorb more solar radiation than light coloured animals
- Pink/white skin has a high risk of sun burn across all species
- Native British breeds are less tolerant of higher temperatures compared to more tropical breeds

There are various measures that can be taken to prevent heat stress:

- **Improving ventilation in buildings** – replacing doors with gates, removing alternate Yorkshire boards, installing fans, opening side inlets and roof ridges, cutting away any vegetation around buildings. Carrying out a smoke bomb test will allow the ventilation to be easily assessed.
- **Water supply** – it's vital that animals have continuous access to plenty of fresh water. Dairy cows, for example, require at least 10cm of trough space per animal. Lactating cows can drink more than 100 litres a day.
- **Feed times** – feed out when the temperature is lower (early morning/late afternoon) to help prevent degradation of food and mineral loss. High fibre feeds, such as stemmy forages, can increase the heat of rumen fermentation.
- **Provide shade** – animals out at grass will appreciate trees or shelters. Blocking out roof lights can help reduce ambient temperatures for housed animals. There must be enough shelter provided so all animals can access it at one time to prevent crowding and a further increase in heat. Nest boxes for poultry should be placed out of the sun to prevent them becoming heat traps.
- **Milking management** – allow cows to walk at their own speed to the parlour, without rushing. Reduce the time spent in holding yards, and minimise handling stress.
- **Sprinklers** – these can help cows lose heat by evaporation when combined with a good airflow or fan. They should only be used in areas with good ventilation to prevent rises in humidity.
- **Shearing** sheep and alpacas is important to reduce body temperature. Animals without a fleece can be sprayed with cool water too, but this must be avoided in fleeced animals as it prevents the airflow through the wool to the skin.

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