

CALVING EASE

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Tips for Hot Weather Management

Depending on where your dairy is located this may be a hot weather season for you. It is always challenging to maintain good gains under these weather conditions.

What is “hot” weather for calves?

For practical purposes we can use the range between 75° and 80°F as a guide to predict heat stress conditions for calves. This is the top of their comfort zone. Above these temperatures calves must use energy to cool themselves.

More technically there are both upper and lower limits. The top and bottom of this zone are designated as critical temperatures – upper and lower. The upper critical temperature is not fixed. It changes depending on the animal’s age, level of nutrition, wind velocity and humidity.

If you are curious about how this comfort zone idea applies to cows, a much more complete guide to heat stress conditions that incorporates humidity called Temperature/Humidity Index is available at http://www.uaex.edu/Other_Areas/publications/PDF/FSA-3040.pdf.

What do calves do to increase their rates of heat loss?

Heat losses occur through radiation, convection, conduction and evaporation. Evaporation losses include water vaporization from both skin and mucous membranes. Therefore, we see calves standing rather than lying down. They seek shade rather than full exposure to the sun. Calves also increase their respiration rates and may even be seen panting when severely heat stressed. Although we cannot observe this change, there may also be an increase the rate of blood flow to the skin. In addition calves may decrease their dry matter intake especially from calf starter grain and increase their water consumption.

What can we do to promote good growth in hot weather?

Provide opportunities for calves to find shelter from direct sun. Just as calves seek out the sun in cold weather, they will go to shade in hot weather. Shelter from the sun (radiant heating) allows calves to radiate heat away.

Provide fresh palatable water. I always dumped water pails and refilled them with fresh water two or more times a day during hot weather. It is reasonable to expect water intake to double as environmental temperatures go from 60° to 90°. For larger calves drinking more than two gallons of water a day I found it helpful to switch to five-gallon water pails. No matter the feeding frequency or pail size, the essential management decision is to keep water in front of the calves all the time. Not just most of the time but, rather, all the time during hot weather. It is a very poor practice to let calves go without water any appreciable length of time in hot weather. Once they are severely dehydrated calves that are suddenly allowed access to essentially unlimited water can suffer water intoxication leading to loss of consciousness.

Palatable water means that the water pails are not covered with green slime. Every dairy and water source probably will have different issues with keeping water pails clean. I had a routine where we replaced one-fifth of the water pails every weekday with clean ones. Those were scrubbed and put out the next day. This weekly rotation kept the water pails quite clean.

Provide fresh grain. Avoid moldy or spoiled grain. Naturally, this means dumping grain pails daily. In order for this not to turn into a huge time-consuming chore, it is best to use some judgment when feeding grain. Many calf care persons use markers of some kind on pens/hutches to signal the “usual” amount of grain each calf eats daily. Following those guides the amount of grain to dump and recycle to older heifers is minimized.

Providing fresh grain may also require some management of the grain supply. Ordering smaller loads may be required in hot weather months in order to prevent off-flavors in calf starter grain.

I tried to get calves switched over to once a day feeding for milk replacer as soon as I could in hot weather. At around four weeks I had the calves up to about two pounds of milk replacer powder per day. About this time I stepped down the ration from two pounds to one pound of powder daily. This was fed in one feeding. Even in hot weather as long as the calves always had water their grain intake would increase dramatically within a few days of the change. Since many calves would eat more grain in the cool evening and early morning hours than during the heat of the day I always checked during the afternoon feeding to see calves had an ample amount of calf starter grain.

If you know of someone that doesn't currently receive **Calving Ease** but would like to, tell them to **WRITE** to **Calving Ease**, 11047 River Road, Pavilion, NY 14525, or **CALL** 585-591-2660 (Attica Vet Assoc. office) or **FAX** 585-591-2898, or **e-mail** sladley@frontiernet.net. Back issues may be accessed on the Internet at www.atticacows.com, click on the Resources menu, select Calf Management Newsletter.

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