

Heat Stress in Sheep

Heat stress during summer can have significant negative impacts on herd health and farm profitability. Factors such as health status of animal, breed, fleece height, access to shade, acclimatization and time spent on feed affect how much heat load is accumulated. In addition to lambs on a lot feed, ewes too are prone to heat stress due to the increased metabolic heat produced.

Behavioural signs of heat stressed sheep include:

- Actively looking for shade
- Panting or sweating
- Depressed feed intake
- Increased water intake
- Salivating
- Standing rather than lying down to air movement

Implications of heat stress?

- Reduced dry matter intake
- Immune suppression
- Lower conception rates
- Decreased milk yield
- Decreased growth rates
- Metabolic issues
- Low lamb birthweights
- Increased mortality rates



Managing heat stress?

1. Shade

- Blocks solar radiation and is considered the most effective way to reduce heat load.
- Where possible ensure there is enough shade with stacked hay bales or preferably trees in the lot feeding area.
- Artificial shade cloths would also work provided it has a minimum solar rating of 80% and a 10 year warranty against UV degradation. Best colours to use are green or black.
- Air movement is an important factor to minimise heat stress in sheep. Therefore, design of shade structures should ensure that ventilation is not restricted.

2. Water

- The normal intake of water doubles during warmer weather conditions.
- Sheep will drink about 10L/day during this period. Therefore it is important to ensure flow rates (21 L/min for 500 dry sheep) to troughs are fast enough that the trough never runs dry.
- Ideally troughs should be shallow and linear. This will prevent any crowding and restricts access to less dominant lambs.
- Additional portable water troughs could be used in high risk pens.
- Be mindful of the quality and temperature of water (stock troughs made from concrete will aid in maintaining a constant temperature).

3. Management Factors

- Stockmanship: low-stress stock handling techniques reduces physical heat. Avoid moving or yard work on hot days. Yard work in the morning before a hot day can impact lambs as their core temp doesn't have time to drop before the heat of the day.
- Graze paddocks without shade during cooler parts of the day
- Removal wet manure before build up to reduce the humidity in pens.

4. Nutrition

i. Provide quality forage to maximise dry matter intake.

- This will in turn encourage cud chewing → rumen stability → maintain ruminal contractions and total volatile fatty acids.

ii. Use buffers to maintain rumen stability and manage Sub acute Ruminal Acidosis (SARA)

iii. Consider including a slower fermenting grain such as maize.

- It favours propionate over lactic acid which will help maintain DMI as it reduces the heat load in sheep

v. Consider using effective feed additives such as yeast and betaine

Contact us to discuss effective nutritive feed additives that could help manage heat during summer.

