



Year-Round Cattle Shelter to Prevent Heat and Cold Stress

Beneficial Categories



Background

In Canada, beef cattle are raised mostly outdoors. Cattle need protection from the varied Canadian climate and extreme weather conditions. Heat stress and cold stress can affect cattle negatively, so it is important to minimize their risk which includes providing adequate year-round shelter. Cattle welfare is important to people who raise cattle as well as those who buy and consume beef. The natural environment such as trees or hills can provide some shelter, but other times man-made structures may need to be provided. It is important to know what shelter is available and what may need to be added to pastures or pens.

Cold Weather Shelter

Providing shelter in cold weather is important to ensure the cold does not negatively impact productivity. If extreme weather is expected, it is important to provide cattle with an improved environment to support them, especially if you are overwintering your cattle in the field. Be sure to have a plan in place to provide cattle additional shelter and support if the temperatures drop significantly. Shelter is important to reduce the effects of wind chill. Bedding reduces heat loss to the ground and helps keep the cattle drier. Without shelter, wind can negatively impact the animal's body temperature faster than still air at the same temperature. Supporting cattle and creating a microclimate allows for the extension of the grazing season. Examples of shelter options, both natural and man-made, include:

- Portable windbreaks
- Thick tree lines
- Topographic barriers such as hills
- Snow fences
- Good quality bedding such as straw
- Standing corn for grazing

Providing bedding and shelter over a greater area or regularly moving bedding and shelter sites can help spread nutrients more uniformly across the winter grazing site.

Warm Weather Shelter

Providing shelter in hot weather is important to ensure the heat is not negatively impacting productivity. Temperatures above 28° C and high humidity can cause heat stress in cattle. Heat stress can have many negative impacts on cattle including reduced weight gain, reduced feed intake, compromised reproductive performance, decreased male fertility, and could even lead to illness or death. Dark-hided cattle are at higher risk of heat stress than light-hided cattle. Heat stress is a larger issue in Canada in July and August, however it should be watched for in early summer before cattle have acclimatized to higher temperatures. Shelter from the sun but not necessarily from the wind is also important. Supporting cattle and creating a microclimate allows for the reduced risk of heat stress and negative impacts on the cattle's health and wellbeing. Examples of shelter options, both natural and man-made, in the field include:

- Access to shaded areas such as trees, hills, shrubs and buildings
- Reduced windbreaks or extensively treed areas or thick crops to ensure airflow and ventilation are not negatively impacted

Potential Economic Costs/Benefits

If you currently do not have any shelter available, there will be costs to provide shelter. Depending on the type of shelter, costs will vary; however, there is long-term benefit from providing shelter year-round. Reducing the chances of decreased productivity and minimizing the risk for illness or death loss can ensure your herd remains profitable and productive.

Financial Incentives

There are no current financial incentives available for providing year-round cattle shelter.

For more information on providing shelter year round, you can visit the following sites:

[Government of Alberta – Minimizing Winter Cold Stress in Beef Cattle](#)

[Government of Alberta – Minimizing Heat Stress in Beef Cattle](#)

[Alberta Beef Producers – Wintering Sites](#)

[Government of Ontario – Cold Stress in Cows](#)

[Government of Ontario – Managing Heat Stress in Fed Beef Cattle](#)

[Government of Manitoba – Winter Feeding and Shelter Requirements for Cattle](#)