



NOVEMBER 2015: Winter Preparedness

Making sure your goat operation is ready for the cold winter months

Winters are long and cold in Canada – a reality that means it is important for farmers to plan ahead when it comes to feed, water, and housing for their livestock.

Good management practices are important all year round, including monitoring feed and water availability, evaluating forages, body condition, foot and overall health, and the need for culling and parasite control.



There's no doubt that cold weather will add management challenges to your operation, but some pre-season preparation coupled with daily observation and taking care of small problems before they escalate - broken pipes, thin animals, sick kids, damaged equipment or facilities – will go a long way to ensure your herd successfully navigates the winter months.

Planning ahead for winter feeding

There are many factors that will affect the amount of feed a goat needs over the winter, including age, stage of production, frame size and body condition, desired rate of gain, and breed and type (dairy, meat or fibre), as well as the quantity and quality of available feed.

Although it is recommended to work with your feed representative to develop herd-specific feed rations, goats on average need a 10 to 15 per cent minimum increase in their energy requirements in cold weather (i.e. when the temperature dips below the comfort range).

Jillian Craig, Small Ruminant Specialist with the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), advises keeping feed accessible and available at all times with increased available energy content, and that supplementing forage with grain may help increase calorie intake in colder temperatures. Testing forage and feed will help identify any deficiencies in protein, energy, or minerals.

Developing a feed budget will help determine whether you have enough feed on hand. This includes making an inventory of your available forage, grains and other feed stuffs and categorizing each into excellent, good or lower quality, as well as recording how many goats are in your herd and at what stage

of production they are at. Be sure to account for wastage and add a buffer amount of forage in the event of the winter season being longer than expected.

A calculation based on the nutrient requirements of small ruminants as established by the National Research Council can help you determine how much hay you might need for your herd. Here is a simplified example:

A mid-lactation meat doe at a weight of 70 kg (154.3 lbs) and raising twin kids being fed good quality hay with 88 per cent dry matter content would require 2.1 kg (4.6 lbs) of dry matter intake per day or approximately three per cent of her body weight. At 88 per cent dry matter, this equates to 2.4 kg (5.3 lbs) of as fed forage per day or 237 kg (522 lbs) per day for 100 does all in the same stage of production. Over a typical winter season of 150 days, this means 35,500 kg (35.5 tonnes) of forage are needed which translates into 98 round bales (1.2 m x 1.5 m (4 ft x 5 ft)) and weighing 363 kg (800 lbs) each).

“It’s very important to consider the stage of production and body condition score of each animal and the herd overall, and adjust feed as needed,” says Craig. “Consult with your feed representative to assist you in balancing feed rations suitable for your individual operation.”

Winter prep for water systems

Steady access to clean water is critical for goats all year long. Keeping water lines, buckets, troughs and waterers clean is a year-round task, but fall is a good time to check that everything is in good working order for the winter.

“When you’re getting ready for winter, it’s important to ensure on-farm watering systems are working properly, and that any necessary repairs are made before the temperature drops,” advises Steve Beadle, Sheep and Swine Housing Engineer with OMAFRA.

Heaters with built-in thermostats can help keep things from freezing in the barn; when it comes to automatic waterers, burying the lines at least 30 cm (1 ft) below the frost line – similar to municipal water lines – is the best protection.

Heating, ventilation and insulation

The primary goal for winter is to keep goat facilities dry and draft free. Good insulation will help keep heat in over the winter and out during the summer. To reduce the potential for building deterioration, the inside air in the winter must be kept above the dew point to avoid condensation on the walls and ceilings.

A key to keeping goats healthy is ventilation through either natural or mechanical systems to remove moisture from indoor air, with a minimum of four air changes per hour recommended.

“Ensure your barn is well ventilated; it’s better to have cold and dry goats rather than wet and slightly warmer goats,” says Beadle. “And don’t forget about the floor - have plenty of clean and dry bedding.”

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The comfortable temperature range for mature goats is from 7 to 27°C (44 to 80°F) and from 13 to 29°C (55 to 84°F) for kids less than one month old. A thermometer in the barn will help determine whether supplemental heat may be necessary in the winter, especially for groups of young kids or kidding does. A maximum/minimum type thermometer will indicate the temperature extremes that the thermometer has experienced since it was last reset. It's handy because you may not be in the barn at the hottest point in the day, or at the coldest point in the night, to read the thermometer. The information can be used to fine tune your heating or ventilation system, or change some aspect of your management.

Options for supplemental heat vary, including simple heat lamps, infrared tube heaters or forced air heating, but whatever technique is used, make sure the equipment is clean and in good working order before winter hits and to avoid any fire hazards.

Other winter prep tips:

- Use solid penning on pens with young kids or kidding pens to reduce drafts at their level. Surrounding the perimeter of the pens with small square bales of straw will also provide additional insulation.
- If you have outdoor access, reduce the size of those openings to keep the wind out.
- Keep the opening in the hay mow floor where you throw down hay or straw covered when not feeding or bedding to avoid drafts.
- Fall is a good time to walk around your facility and seal up any gaps or cracks in the exterior cladding to keep out rodents.
- Make sure ventilation and heating equipment is working and make necessary repairs.
- Don't turn fans off to heat the barn – keeping them running will keep air circulating, and keep ammonia and moisture levels under control.

If you want to know more:

- Ontario Goat “*Best Management Practices for Commercial Goat Production*” Manual
- OMAFRA factsheet on rodent control in livestock facilities:
<http://www.omafra.gov.on.ca/english/livestock/dairy/facts/10-077.htm>
- OMAFRA publication on ventilation for livestock and poultry facilities:
http://www.omafra.gov.on.ca/english/engineer/facts/vent_p833.htm

For more information or resources on biosecurity for the goat industry, contact Ontario Goat at 1-866-311-6422 or info@livestockalliance.ca, or visit www.ontariogoat.ca.