

Grazing Sheep in Cold and Snowy Conditions

—Ulf Kintzel

Photos by Author

It seems like yesterday that I went fishing and swimming with my family in Acadia National Park and yet here I find myself writing about grazing in the snow. How did that happen; where did the time go? So yes, winter is once again just around the corner. In this article I would like to share what I learned over the years when it comes to grazing in cold and freezing conditions and particularly with snow on the ground.

There are basically three factors that influence grazing in the snow: Depth of snow, condition of snow, and length of forage underneath the snow. Sheep have the ability to dig through snow to get to the grass. A common question I encounter is, “How deep can the snow be for the sheep to still get to the grass?” My standard answer is, “It depends.” Let’s examine the snow first. Light and fluffy snow can be as deep and deeper than a foot and there will be no problems for the

sheep to dig through. In fact, they will do so with relatively little effort. Wet snow takes more of an effort. Drifted snow is even harder and at times even impossible for the sheep to dig through well below the depth of a foot. Ice on top of the snow often makes grazing with sheep prohibitive. No matter how little snow there is on the ground, it will be impossible for the sheep to get to any forage when there is a solid sheet of ice on top, simply because unlike cattle, sheep don’t have the weight and strength to break through it. In fact, they will refuse to even walk on top of the ice.

The length of the forage underneath matters a lot as well. The longer the grass, the more it will stick out and encourage the sheep to make the effort to start digging. Secondly, for each time a sheep digs, it gets to more forage when the grass is long versus short. Why does that matter? Having to dig means burning energy. It must be worth the effort. There must be a substantial net gain. Ice also has difficulties forming a coherent sheet when there are bunches of grass sticking



out. A thin layer of ice breaks at these bunches and gives the sheep a starting point, as well as an incentive to dig. How can one assess if there is enough forage for the sheep to bother, if they can get to it, or if it will meet their needs? Whenever I am not quite sure I simply put a couple feeders with round bales of good first-cutting hay out for my sheep.



The sheep in the front to the right shows with its right leg the typical pawing motion that enables a sheep to dig through the snow.

If the grass is good and reasonably easily accessible, they will hardly

bother eating hay. Good grazing will always trump feeding on hay. On the other hand, if they need the hay they will eat it. However, don't put the fanciest second-cutting alfalfa hay out there. The sheep might choose convenience over grazing when the stored forage is of the best quality. Why eat bread when you can eat cake?

I still work with my electric nettings during early winter, at least until late December and into early January, until I run out of grazing or when the snow gets too deep. A common comment I get from other producers is that they can't do that since their ground is solidly frozen and they cannot get the posts in or out. A look at their pasture often tells me why. Their grass is too short. Long stockpiled grass will keep the frost out of the ground much longer than short grass. The difference is indeed stunning. Short pasture may be solidly frozen while pasture with long grass will have very little frost in the ground. Secondly, if you have *some* frost in the ground and you then get snow—try again to put up electric fencing. A snow blanket not only keeps the ground from freezing, it also takes moderate frost back out of the ground. Also, I never step the double-spiked posts fully into the ground when I expect frost or have some already. That makes the removal easier. The occasional post that does not want to get into the ground gets tapped in gently with a hammer at the bottom where the double-spike is. The occasional post that is frozen solidly into the ground when I move the fencing can be removed by using a metal stake (i.e. a three-foot piece of a ground rod) as a lever underneath the double spike. That's what kids are good for! Have them tag along with that piece of ground rod while you take out posts. I found out they tend to get real ambitious when a post is frozen into the ground and you tell them, "I bet this one is too hard for you to get out by yourself..."

Water is a major concern when there is heavy frost without any snow on the ground. Bringing water to the sheep to let them drink will become a daily and cumbersome chore. That all changes when there is snow on the ground. Sheep can meet their water needs to maintain themselves by eating snow. Years ago the results of a field trial in

Wisconsin were published in *The Shepherd* magazine. During that

trial it was examined if snow as the only source of water is sufficient for sheep to maintain themselves. A group of ewes and yearlings had snow as their only water source while a comparison group also received water throughout the winter. When spring came, there was no difference in weight among adult ewes, but the yearlings that received only snow didn't gain as much as those receiving water. In essence, snow is just fine, but here are some helpful tips: The snow should be clean and soft. It should not be solidly frozen, covered with ice, or dirty. I do not advise having snow as the only water source for lactating ewes. However, ewes with young lambs are likely to be in the barn anyway that time of year where water can be given and can be kept ice-free. Lastly, if it is convenient and an open water source can be provided even though there is snow on the ground, you will find that the sheep prefer drinking water over eating snow. However, that in itself does not mean that the sheep cannot meet their water need by eating snow.

Having snow on the ground has one more advantage. It changes the eating behavior of the sheep. Sheep have a very pointy mouth and because of it they are able to eat extremely selectively. That changes with snow. Whatever they dig up will be eaten in a less selective manner.

Around here in upstate New York there comes a time in the winter when the weather is getting too cold and grazing becomes in my view prohibitive. Very often, the actual temperature is not the major concern, but in combination with the wind it is. Windy conditions with temperatures falling below 20 degrees will make sheep feel uncomfortable. Shelter will become a necessity. Shelter does not necessarily mean a roof over their head and certainly does not mean locking the sheep up in the barn. It means the area should be protected from the wind, i.e. a thick hedgerow. I always graze my exposed pasture first and leave the protected areas that don't

get the westerly winds until the days when I need them. That allows me to rapidly adjust when the weather changes. For the even colder days I prepare hay feeders around a run-in shed that, I have and resume grazing when the weather becomes more favorable again.

In essence, I try to extend the grazing season well into the cold season. My goal is to graze until around Christmas or New Year's. This will reduce my hay feeding costs significantly. However, I don't go to the extreme. I happily skip the months of January and February and parts of March. Weather as well as snow conditions are usually too unfavorable around here. The weather is too cold. The snow is too deep or too drifted. The effort it would take the sheep to dig through, combined with the energy needed to just keep warm, usually does not make up for the benefits that grazing brings. I understand that

grazing with sheep throughout the winter has been portrayed as an achievable goal by Cornell University. However, those sheep get total mixed ration once they return to the barn for lambing. My sheep will be fed first-cutting dry hay for the rest of the winter when grazing ends. They get that very same hay and nothing else when they lamb and during early lactation in late winter and early spring. What does that matter? Grazing in the winter must mean to my sheep that they can well maintain their body condition until they lamb. I cannot let them lose weight by grazing and then prep them up with expensive feed just for the sake of saving costs with grazing or to prove a point. The math for my farm does not work that way. So there comes a point where grazing in my area stops making sense and feeding hay in the pasture becomes the better option. That moment for me is usually right around the first of the year.

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Ulf owns and operates White Clover Sheep Farm and breeds and raises grass-fed White Dorper sheep without any grain feeding and offers breeding stock suitable for grazing. He is a native of Germany and lives in the US since 1995. He farms in the Finger Lakes area in upstate New York. His website address is www.whitecloversheepfarm.com. He can be reached by e-mail at ulf@whitecloversheepfarm.com or by phone at 585-554-3313.

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