



A HAND IN TIME OF NEED

Whitetails are built to withstand winter, but there are limits to what they can endure. Wildlife managers can help by developing a solid year-round food plot plan.

■ by Matt Harper



Some long for the deep days of winter, when a strong north wind drifts feet of snow across roads and driveways, and temperatures drop to somewhere south of, “You have to be kidding.” Unfathomably, some folks say, “This is the best kind of day of the year.” I guess I can buy into that; a warm hearth and home, a steaming cup of coffee, and spending time with family watching old movies. But some of us, no matter the conditions, must venture into the frozen tundra to perform duties such as shoveling the walk, blading the drive, going for groceries and, in my case, providing hay for cows and chopping loose frozen cattle waterers.

Every time I return from one of these subzero escapades, I realize I’m able to enjoy a 90-degree temperature increase provided by my home. However, the animals I was caring for are still at the mercy of nature’s thermometer. I always wonder how they can survive those unrelenting conditions.

Animals that live at latitudes that produce cold temperatures are equipped to stare down the elements. They grow coats to shed icy winter blasts or, in some cases, burrow deep within shelter and nap their way through the brief days and long nights. If not, they wouldn’t exist there. Domestic and wild creatures have adapted to survive those conditions, but although domestic animals have food given to them by caretakers, wild critters are on their own.

This past winter, we had a stretch of several days when temperatures dipped well below zero, and that was coupled with more than 2 feet of snow, which had drifted to 5 feet or more in some places. I had to plow paths in the snow just to get hay to the cattle and then plow paths for them to reach food and water, as drifts rose higher than their midsections. I noticed that deer started using those trails and would show up to partake in the hay. Unless the hay is of the high-quality alfalfa, full of highly digestible leaves, deer won’t usually resort to dried and wrapped forages. But when that’s all there is to eat, that’s what they do, whether it’s digestible or not. As I pulled up to stab a bale with my tractor and saw the cored-out center where deer had dined the night before, I wondered what they would do if there were no bales.

SURVIVING THE WINTER

White-tailed deer are amazingly adaptable and resilient creatures. As long as they’re not hunted out of existence, they find a way to survive. Of course, some animals in the herd will not survive, but that’s the natural order of things, as the strong

make it through and the weak perish, thus solidifying the overall strength and health of the herd.

One of the factors that aids winter survival is a deer’s ability to slow down its metabolism, thus decreasing the demand for nutrients. Call it an intake/digestion/metabolic semi-hibernation state, in which deer minimize inward and outward energy demands for function and movement. No, they are not curled up in a den like a bear, but just as hibernating animals bring their metabolic rate to a near standstill, deer naturally decrease their metabolism, thus requiring less food intake and less overall nutrient consumption. Even in captivity, where deer have access to as much food as they desire, intakes in winter will decrease. In the middle to northern regions of the whitetail’s range, winter brings about a scarcity of food in quality and quantity, and it’s that ability to manipulate their digestive system to require less food that helps deer make it through. Cold weather can also be a factor in winter survival, but deer that live in cold places can ward off the effects of severe temperatures. The ability to maintain temperature homeostasis is accomplished through the production of internal heat via metabolic activity, in addition to the magnificent winter coat deer wear. Deer have two hair coats; one during the warmer months, and one for the colder months. Call it a summer and a winter wardrobe. Their hair in spring and summer is dense and contains solid hair follicles. In fall, deer essentially molt and shed their summer coat, and replace it with a winter version that contains hollow hair follicles that act as a thick layer of insulation. If you get pictures on your trail cameras in fall of deer that look ragged and almost scurvy, they are shedding one coat and replacing it with another.

But some extremely severe conditions can affect even the strongest of the herd. Although deer can withstand bitter temperatures, that requires more internal heat production, which requires a higher demand for energy. This energy comes from food or the fat stores deer built in summer and fall. Prolonged periods of extremely low temperatures deplete fat reserves, and unless there are energy sources deer can find to consume, deer will enter a negative energy balance. Energy is needed for almost everything, from temperature control to locomotion, so negative energy balances can eventually lead to weakness, which increases the odds of a deer falling victim to predation, becoming susceptible to disease and having a decreased ability to overcome injuries. Those circumstances dramatically increase the likelihood of higher winter death loss.

Beyond cold temperatures, deep snow produces a deadlier winter condition. As mentioned, I plowed paths for cattle to access food, but in the wild, there's no snow plow to make a deer's life easier. Remember, energy is precious to deer during winter, and deep snow creates a higher demand on energy reserves simply to move. Further, deep snow will cover food sources, and deer reach a situation in which they're burning more calories in search of food they cannot find. The longer the deep snow sticks around, the worse a deer's situation gets, and extended months of deep snow cover will almost always result in higher winter death loss. In addition, deep snow favors predators, which also decreases the odds of deer survivability. In fact, deep snow is likely the greatest enemy a deer will face in its quest to reach the next spring.

Within a deer herd, some classes of animals are more susceptible to severe winter conditions. In general, the very young and very old will suffer higher mortality in winter because they lack strength compared to deer in their prime. But mature bucks also rank high in winter death loss. If you see a 4- to 6-year-old buck during the rut, he's a picture of strength and power, and it's hard to imagine that class of deer would struggle

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■ Land managers can help deer through winter by providing the right food at the right time.

to survive. The issue, however, is that bucks burn most of their fat reserves during the rut while chasing potential mates and fighting off rivals. As mentioned, fat reserves help supply the energy needed to make it through winter. If bucks don't have food available in adequate amounts to rebuild their fat stores, winter can spell death to even the strongest.

Sometimes, winter conditions carry negative effects that cannot be easily seen or verified by a carcass in a snow drift. Does are carrying the next year's fawn crop and are trying to grow that fawn (s) while also attempting to survive. In an extremely rough winter with scarce food, does might make it to spring, but the survivability of their fawns

is questionable. If it's bad enough, a doe might abort one or more of the fetuses. Or if the fawns are born, they can have low body weights, dramatically decreasing the chances of surviving the first few hours or days. If a doe also does not have adequate milk supply because of poor body condition, that only exacerbates the problem.

A HELPING HAND

Land managers often wish there was a way to keep cold temperatures at bay and have snow cover swept away, but there's really nothing we can do. However, that doesn't mean you're helpless to improve the situation for deer. The key is food, but not just food — the right food. Moreover, deer need the right food at the right time.



It begins in spring and summer, making sure deer have a quality food source to rehabilitate from winter and then prepare for the winter to come. Does are raising their young and need a high-protein, highly digestible food source to support lactation. It's a simple equation — the better the food supply, the more milk produced, and thus the stronger the fawns and the faster they will grow. The better the nutritional plan in spring and summer, the better the odds young deer will survive their first winter.

Bucks are also trying to regain strength and body condition. Like a marathon runner on mile 25, they stagger out of winter and need nutrition to prepare their bodies for the fall rut. Quality food plots provide high levels of nutrients in spring, summer and fall, which builds the foundation and bodily fortitude to face the looming winter.

Growing winter food plots and providing high-energy food sources in winter helps diminish the threat of winter kill. Remember, the key is energy balance, and if energy intake can help decrease the demand on energy reserves, deer have a far greater chance of making it though winter and also making it in good condition. The key to winter food plots is use a nutrient-dense for-

age that is high in energy, and then be sure to provide enough of that food to supply deer as long as you can in winter. Think of it as your kitchen pantry. If you know you can't resupply the pantry for four or five months, you'd better make sure you have enough food to make it for that long. And what happens if your neighbors, who didn't prepare as well as you, come over and start eating food out of your supply? Essentially, that's how winter food plots work. When the killing frost hits or plots mature and quit growing, that's all the food that you will have until spring green-up the next year.

If you plant a winter plot and it produces 3,000 pounds of food, that might seem like a pretty good bounty. But let's do the math. If you figure a deer will eat 1.5 pounds per day (less intake than normal because of winter) and you have 20 deer on the property, that's about 900 pounds consumed per month. So you would have enough food for more than three months? This math doesn't take into consideration the neighbors. If the deer herd on your plots doubles in winter because adjacent properties lack food, you now have 40 deer using your winter plot. That gives them one to two months of food supply. It's extremely difficult — likely impossible — to plan for

an exact number of deer using a winter plot and determining how much they will eat each day. But doing the quick math involving area and expected tonnage helps you better plan for an acreage that's sufficiently large to provide at least some assistance. One of the reasons I plant Imperial Winter Greens is it can produce a high tonnage rate per acre and is very high in nutrients. Further, I use Tall Tine Tubers to provide the root food source in addition to the leaves and stalks. Regardless of what you plant, remember the equation: Total food produced (acres plus tons per acre) divided by the expected number of deer equals the number of days of food.

SUMMARY

If you live where winter brings snow and cold, you understand how difficult that time can be for deer in that region. Whitetails are built to withstand winter conditions, but there are limits to even what they can endure. As wildlife managers, we always have ways to help by developing a solid year-round food plot plan. You might still feel bad for the deer out in the subzero, snow-covered outdoors, but while you're sitting by the fire, you can at least take heart that you did all you could to help deer survive and thrive.

■ Hunters in regions with cold, snowy winters understand how difficult that season can be for whitetails.

