

Winter Feeding of Maine Deer -- Does It Help or Hurt Them?

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The 2011 deer hunting season is fading into memory, the temperature is dropping, and eventually snow will arrive. It is at this time that Maine's white-tailed deer begin a shift away from fields and cut-overs by moving into their wintering habitat. During winter, deer seek out dense forests comprised of balsam fir, spruce and cedar. In these mature coniferous forests, snow is shallower, the wind chill is a bit less, and deer are more able to cope with the rigors of Maine winters. Although not abundant, food is available in the form of twigs and buds of shrubs, and litterfall. The shallow snow enables deer to create an extensive network of trails that they use to find food and to escape predators. Under favorable conditions, deer also range out from these sheltering forests to find food in the hardwoods or open areas. In some areas, deer move less than a mile to their winter yards; in others they migrate 20 or more miles to find favorable habitat.

The scenario above is the natural behavior our deer have evolved to survive winter here at the northern limit of their range. But deer are also adaptable and they are easily attracted to other food sources. For example, deer from a wide area are often content to move into a winter logging operation, where they may thrive on the tops of harvested trees. Alternatively, deer can be enticed to feed on palatable foods put out for their benefit by well-meaning people. There is a small army of people engaged in winter feeding of deer in every corner of the state. No one has solid estimates of the number of deer feeders, but the practice appears to be increasing in popularity, particularly since the Maine deer herd started its precipitous decline 4 years ago. Whether or not winter feeding improves deer nutrition and survival depends on which types and amounts of supplemental feed are used, as well as where and how they are fed.

White-tails are known to consume over 500 species of plants. During the course of the year, deer are constantly shifting diets to take in the right mix of plants to meet their nutritional needs. Since no one plant provides all the nutrients needed to remain healthy, deer try to mix and match their diet as plant availability changes. In nature, these diet changes are usually gradual. Since most digestion in deer is accomplished by billions of bacteria and one-celled protozoa in their 4-part stomach, diet shifts need to be gradual to allow the various types of microbes to adapt. Failure to do so could result in some pretty serious and often fatal digestive problems in white-tails. If you choose to feed deer in winter, start feeding early on, introduce foods gradually, don't change feeds abruptly, and stick with the program until spring green-up.

White-tailed deer are considered selective feeders. They normally pick only the most nutrient-packed, easily digested plant parts available. In contrast, cattle, sheep, elk and to a lesser extent moose, are more of a bulk feeder. Bulk feeders can eat large quantities of plants that are difficult to digest, and they let the microbes in their huge paunches slowly digest the fibrous plant parts. White-tailed deer cannot efficiently digest grass hay. When forced to do so, they will die. Hays with a high percentage of legumes such as clover or alfalfa are more palatable to deer, but they will waste most of each bale. White-tails tend to pick the tender leaves, and leave the stems alone. Avoid feeding hay to white-tails during winter. It's not worth it to you, and it may be lethal to them.

During winter, deer need a lot of calories in their diet to keep warm, and to fuel their activities. They normally get these calories in the form of carbohydrates. White-tails also need a supply of protein to keep their bodies functioning. But protein needs during winter are not as high as at times when they are growing muscle, antlers, or producing milk. Winter diets also need a certain amount of indigestible fiber to keep digestion cooking along at the right pace. Feeding deer supplements that are too high in calories and too low in fiber can kill a deer, if it cannot access fibrous plants. As with all animals, deer need a daily supply of vitamins and minerals and water to maintain health. When providing supplemental deer foods, it is best to offer foods that will meet all or most of their daily nutritional needs, especially if they become confined to a small area.

Many people put out vegetable trimmings discarded by supermarkets. Comprised of celery, cabbage, lettuce trimmings, old fruit, or other waste, these foods are deer killers if deer have to rely solely on them for their survival. People lose weight by eating salads. So do deer! Veggie trimmings are high in water, low in carbs and protein. Please leave them in the supermarket dumpster.

Waste apples and potatoes are often fed to deer during winter. These foods are palatable to deer and they contain ample amounts of calories. But apples and potatoes are not a healthy stand-alone diet for deer. Fruits and spuds are high in water, and too low in protein and fiber for wintering deer. If deer cannot access high quality natural forages around your feeder, they will not thrive.

As a winter supplement, cracked corn, oats, or barley are an improvement over veggies and fruit, but single diets of grains are not optimal. They may contain adequate amounts of carbs and most proteins, but these grains lack fiber and some minerals. If deer cannot balance the missing dietary components from surrounding vegetation, they won't remain healthy. Consuming too much grain at one time can kill a deer in a matter of hours.

Deer will readily eat sunflower seeds. Perhaps you have seen deer clean up dropped seeds beneath your bird feeder. Do not be tempted to put out large amounts of sunflower seeds for deer. Besides the expense to you, sunflower hulls are lethal for deer, when ingested in quantity. There is a chemical compound in the hull that kills the microbes in a deer's paunch, leading to its demise.

So what's left? All the major agricultural feed stores in Maine market nutritionally balanced feeds formulated especially for deer. These feeds contain the right amount of calories, protein, minerals, and fiber to serve as a sole diet for white-tailed deer during winter. They can be purchased in bulk, or by the bag. As a stand-alone diet, deer need about 2 to 3 lbs of this feed per day.

If you make the commitment to feed deer, there is more to it than just dumping out a little feed once in a while. Feed twice daily. Put out all the deer can eat, and then some. Remember, you may start out feeding 2 or 3 deer initially, but others usually arrive as time goes on. Increase their feed as needed to ensure that all deer are getting enough. Don't assume deer can access natural foods. They often cannot. And where deer have been fed year after year, the natural browse is likely depleted. Feeding deer is a long-term commitment. Eventually, you are all they've got!

Deer are very competitive around feeding areas. Mature bucks muscle in for the lion's share, if inadequate feed is put out. Mature does push away last June's fawns until she gets her fill. Dominant doe/fawn groups out-compete more subordinate family

groups, and so on. Again, put out enough feed for all to get their fill. Spread it out in many small piles to minimize fighting, and try to keep feeds dry. It is possible to have deer that are in prime condition alongside others that are severely malnourished, if you underfeed them or offer nutritionally inadequate feed.

Part of the allure of feeding deer is being able to observe these beautiful wild animals from the comfort of our homes. It seems that a high percentage of deer feeding occurs in proximity to our residences and our highways. This may suit us just fine, but it has its drawbacks. Supplementally fed deer spend only an hour or two each day eating. The remainder of the day is spent loafing around and potentially getting into trouble. If you feed deer, expect your prized shrubbery and trees to be heavily damaged by browsing. Your neighbors may also experience severe plant damage as well. The same is true for plant life within reach of deer in adjacent woodlots. Worse for the deer, collisions with motor vehicles are all too common near deer feeding sites. It seems pointless and a waste to try to reduce malnutrition among wintering deer, only to lose them to motor vehicle collisions. Where possible, locate deer feeding sites at least $\frac{1}{4}$ mile from roads, preferably in habitat deer naturally use during winter.

Free-ranging dogs can be a problem at feeding sites near residential areas. Almost any breed of dog will chase deer, often with fatal results for the deer they harass. Please see that dogs are kept under control, as is required by Maine law. Coyotes can also be a problem in deer feeding areas, particularly where deer are confined to a small area in deep snow. It can be frustrating to see deer killed by predators after investing much time and money trying to improve the nutritional welfare of your local deer.

Proper feeding of white-tails during winter is obviously not for everybody. This is even more apparent when cost is taken into consideration. For example, let's say you have a half dozen deer using your property. You provide 3 lbs of deer feed per deer each day from December 15 until March 31. During this 106-day period "your" six deer will require 1,908 lbs of feed, or about 38 bags from the feed store. With a cost of about \$15/bag, you need to commit about \$570 to the feeding effort, not counting transportation costs. Any lesser financial commitment risks under-feeding deer that have become dependent on your largesse. Now expand that cost analysis to situations with substantially more deer. There are places in Maine where herds of 200 or more deer are being fed each winter. One hundred days of feed for 200 deer would require 30 tons of feed at a cost of at least \$15,000.

If you find these costs are within your means, then you may be able to help improve the deer situation in your area. On the other hand, skimping on costs may worsen a deer's chances of surviving to see spring. If you choose to feed deer this winter, please do so responsibly.

For more information on deer feeding issues, the Maine Department of Inland Fisheries and Wildlife (MDIFW) has produced a brochure on the subject. You can get it online at: www.mefishwildlife.com, or by calling (207)287-8000. In addition, MDIFW and the Sportsman's Alliance of Maine are co-producing a DVD all about winter feeding of deer. It will be available in early February. Detailed information about various feeds formulated specifically for deer can be found at your local livestock feed store.