



Do Not Feed Deer This Winter

Severe winters cause people to be concerned about the welfare of white-tailed deer and the deer's ability to survive the winter. White-tailed deer have biological adaptations that help them survive Michigan winters. Although winter-related starvation can occur during particularly hard winters, trying to save them by supplemental feeding is not the solution that many people think it is. Deer do not need handouts to survive winter. The goal of the Department of Natural Resources (DNR) is to maintain a deer population that demands less food than is naturally available during most winters. That level of population can be sustained by the habitat over the long term without the need for supplemental feeding.

Deer Adaptations to Survive Winter

In the fall, deer grow a specially designed winter coat and begin to store fat. The winter coat has hollow guard hairs for insulation with a fine hair underfur for warmth - this helps them retain body heat, thus reducing energy demands to stay warm. The fat reserve provides nutrition over winter. In addition, deer decrease their metabolic rate during the winter, which reduces food requirements to approximately one half of what they need in the summer. Research at the Cusino Wildlife Research Station in the Upper Peninsula (UP) showed that fawn growth rates even slowed to allow the deer to put on fat reserves for the winter. All these factors contribute to substantially decreased winter energy demands for a deer. Those demands can be met with limited natural browse, supplemented with the fat reserves.

In locations where a severe winter is an annual event, deer migrate to wintering habitat complexes, which are areas with thick overhead cover and natural winter browse available. These complexes provide thermal cover and sufficient natural food for deer to survive winter. They have been called "green barns" and the description is appropriate because they substantially reduce wind chill and the snow is often shallower under conifers. Deer substantially reduce their activity in these wintering complexes; reduced movement requires less energy.

All these adaptations: winter coat, fat storage, reduced metabolism, thermal cover, and sedentary behavior, help deer survive severe winters. Even with all the food they want, deer use their fat reserves and lose weight over winter. Deer in relatively good condition can fast for several weeks without harmful effects.

The Negatives of Feeding Deer Over Winter

Deer are ruminants, meaning they have a four part stomach with microbes that help digest woody vegetation. Deer acquire sufficient specifically adapted microbes over a period of time that digests specific food material. When deer eat food that has not been part of their diet, the specific microbes are not present to help with digestion. Deer will eat any readily available handout, forgoing the easily digestible natural food, thus possibly filling their stomach with indigestible material. If deer are provided a supplemental diet they cannot digest, the deer may starve even with a full stomach. Over the years, many deer have died with stomachs full of hay, for example, the hay having been provided as emergency food at a time when the animals had been feeding on browse for many weeks. In addition, a food source rich in carbohydrates has been known to cause acidosis (grain overload) and enterotoxemia (overeating disease), which can be fatal. Corn, fed as an emergency supplemental diet, has been known to cause the death of many deer due to these difficulties.

(See http://www.michigan.gov/dnr/0,1607,7-153-10370_12150_12220-26508--,00.html) Other than commercially available pelletized food, there is not a single food source that provides the complete nutrition deer obtain through natural browse.

Providing artificial food may also increase the energy demand on deer. The deer may be forced to leave the wintering complex to gain access to the food or deer may be disturbed within the wintering complex when food is artificially distributed within the complex. Food placed for the convenience of humans causes deer to travel long distances through deep snow and away from thermo cover, thus resulting in a negative energy balance. Taking food into a wintering complex causes deer to move within the complex, forcing deer to unnecessarily utilize energy to avoid the intrusion.

Artificially feeding deer in the wrong location often results in deer spending winter in a poor location where wind chill is more severe and heat loss is more substantial. Deer in these locations become dependent upon artificial food to survive, as natural browse was never available. In addition, the winter thermal cover provided in a good winter complex not available, thus causing deer to expend excess energy on staying warm.

The artificial feeding of deer may also concentrate the animals into even a smaller area than the habitat that they usually winter in, which can cause two additional negatives consequences, the potential for disease transmission and habitat degradation. Bovine Tuberculosis (TB) and Chronic Wasting Disease (CWD) have been documented in Michigan. Congregating deer repeatedly at feed sites increases the potential of disease transmission. Also, deer will eat everything within close proximity of the artificial feeding site. By the conclusion of winter, that site will be devoid of all edible vegetation; vegetation other wildlife species depend upon for survival.

Deer do not share food. Placing out an insufficient amount of food to feed all deer will not change what would happen without the food. If insufficient food is available to feed all deer, only the biggest and strongest deer will have access to the food. The young, old, weak, and smaller deer will be denied access. Insufficient food available to feed all deer only ensures the survival of those that would survive anyway. The survival of those deer without access to the food may actually be decreased. These deer expend valuable energy to try gaining access to food that dominant deer consume.

Upper Peninsula & Northern Lower Peninsula

The deer herd in the UP and NLP has been intentionally reduced to a population that is more compatible with the available wintering habitat. Although spring, summer, and fall habitat could support more deer in the UP and NLP, the winter habitat will not. Deer in the UP can spend over 120 days (mid-November to April) on winter habitat. In order to sustain deer numbers in the wild, it is imperative the number of deer depending upon the limited winter habitat be equal to or slightly below the number the winter habitat can support during most winters.

The only appropriate management techniques that ensure deer survive any winter are maintaining the deer population below what the winter habitat can support and managing the winter habitat to provide food and cover for deer.

