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## FACT SHEET

Dec. 22, 2017

Ministry of Forests, Lands, Natural Resource  
Operations and Rural Development

### **Understanding Winter Feeding of Wild Ungulates**

#### **Background**

Severe winter conditions can lead to high mortality of wild ungulates (e.g., elk, moose, deer and sheep), particularly when sufficient forage or habitat (including cover) or is not readily available. Many people believe that winter feeding programs with supplemental feed (e.g., livestock hay, pellets or grain) will provide the required nutrition to increase ungulate survival during harsh winters. However, decades of scientific research has shown that winter feeding programs can have serious negative consequences for ungulates. It is important to carefully weigh the pros and cons before implementing a wild ungulate feeding program.

#### **Biology**

Ungulates have specialized food requirements that vary seasonally. As ruminants, ungulates have bacteria in their digestive tract that are specifically matched to their food. It takes weeks for these bacteria to adapt to changes in diet. Thus, when ungulates switch from natural winter forage to supplemental feed, the sudden shift in diet can result in sickness or even death. Wild ungulates, particularly deer and sheep, can die of starvation with a full rumen following a rapid change in diet.

#### **Behaviour**

Winter feeding programs may disrupt the normal behaviour of wild ungulates. For example, ungulates attracted to artificial feed can become habituated and stop migrating to traditional summer ranges. This in turn can concentrate animals in low elevation areas, causing conflicts with communities and agricultural producers, and damage to important winter habitat.

#### **Competition**

Competition for food can be fierce among ungulates at supplemental feeding sites. Males and prime aged females typically dominate and exclude more needy individuals from the food source. While some animals get no food, dominant animals may gorge themselves, putting their own survival at risk from dietary shock.

#### **Disease and predation**

Supplemental food concentrates ungulates at feeding sites, which increases the risk of parasite and disease (e.g., Chronic Wasting Disease) transmission. High densities of animals and associated behavioural stress can also suppress their immune systems, further increasing their susceptibility to disease. In addition, high densities of ungulates attract predators which can increase ungulate mortality and human-predator conflicts.

## **Habitat**

Supplemental winter feeding programs can negatively impact habitats near feeding sites, since high concentrations of ungulates will continue to forage on surrounding vegetation. This can result in irreversible damage to native forage species, trampling of fragile soils, and increasing erosion. In addition, non-native supplemental feed can introduce invasive plant species to an area, which can permanently destroy native habitats.

## **Human conflict**

When ungulates are attracted by supplemental food they often become habituated to people. This can exacerbate human-wildlife conflicts for years. Ungulates can be aggressive in the spring when females are protecting their offspring, and in the fall during the rut. Habituated animals are also more likely to spend time along roadways, in communities and in agricultural areas. This can result in more collisions with trains and motor vehicles, and damage to gardens and crops.

## **Benefits of feeding**

Despite the concerns identified above, some jurisdictions in North America implement winter feeding programs for wild ungulate to address specific management objectives, such as drawing animals away from agricultural areas and roadways. Clear criteria must be met prior to feeding (e.g., critical snow depths, poor ungulate body condition). These programs use well-designed protocols for the type, locating and timing of feed, to minimize risks to animals and their habitats. Wildlife managers also recognize that any benefits of these programs are small-scale and have little impact on wildlife populations.

## **Alternatives to feeding**

The best way to help wild ungulates survive severe winters is to maintain and create high-quality habitat for all seasons. Animals that enter the winter in good condition due to abundant summer and autumn forage are more likely to survive a severe winter. Even in well-functioning natural ecosystems, however, some animals die during the winter. This is natural and keeps ungulate populations in balance with their available habitat. Another way to help wild ungulates survive the winter is to avoid disturbance. Recreational activities and chasing by domestic dogs force wild ungulates to expend valuable energy and move away from optimal foraging sites, which can reduce their survival.

## **Recommendations**

Despite best intentions, winter feeding of wild ungulates can do far more harm than good. The nutritional benefits are limited at best and the risks of negatively impacting ungulate health, behaviour, habitat and human conflicts are substantial. Protecting and enhancing natural habitats and avoiding disturbance during winter are better ways to ensure the long term sustainability of ungulate populations. Wildlife managers must carefully weigh the benefits and risks before implementing a winter feeding program.

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