Wildlife Management Safety Talk



WHAT'S AT STAKE?

As humans develop the world, the risk of conflict between wildlife and people increases. From the expansion of agricultural frontiers to habitat fragmentation by roads and buildings, to the commercialization of wildlife as food, trophies, ornaments, medicine, and pets, threats abound. Managing wildlife helps ensure they have a say in their future.

THE GOAL

Minimize threats to wildlife in the best wild places on Earth so that their populations are stable or increasing, ensure that hunting and fishing is sustainable, and that a balance is struck between the needs of wildlife and the needs of people.

WHAT'S THE DANGER?

BACKGROUND

Agricultural land covers 6.8 per cent of the surface area of Canada. In addition to producing crops, Canadian farms also support wildlife habitat, such as forests, hedgerows, wetlands and streams. There are more than 20 million hectares of pasture alone in the agricultural landscape of Canada, which is important habitat to thousands of species of birds, mammals, reptiles, plants and insects. Natural habitats on farmland not only support wildlife but also provide important ecosystem services, such as pollination, natural pest control, and drought and flood mitigation.

BALANCE

Wildlife Management attempts to balance the needs of wildlife with the needs of people using the best available science. Wildlife management can include gamekeeping, wildlife conservation and pest control. Wildlife management draws on disciplines such as mathematics, chemistry, biology, ecology, climatology and geography to gain the best results.

Wildlife management aims to halt the loss in the Earth's biodiversity, by taking into consideration ecological principles such as carrying capacity, disturbance and succession, and environmental conditions such as physical geography, pedology and hydrology. Most wildlife biologists are concerned with the conservation and improvement of habitats; although rewilding is increasingly being undertaken.

Techniques can include reforestation, pest control, nitrification and denitrification, irrigation, coppicing and hedge laying.

Gamekeeping is the management or control of wildlife for the well-being of game and may include the killing of other animals which share the same niche or predators to maintain a high population of more profitable species, such as pheasants introduced into woodland.

Pest control is the control of real or perceived pests and can be used for the benefit of wildlife, farmers, gamekeepers or human safety. In the United States, wildlife management practices are often implemented by a governmental agency to uphold a law, such as the Endangered Species Act.

Trend

Over the last several decades, agricultural intensification has diminished biodiversity on farmland because it converts land to more concentrated use, which supports far fewer species. Intensification also increases risk of agricultural pollutants flowing into watersheds, which impacts fish and aquatic invertebrates.

Farmers

Conservation of wildlife should not happen on the back of farmers. Better policies ensure incentives to farmers for maintaining wildlife habitat. We must share our knowledge about farming practices in order to reduce risks.

Game Farming

Game farming of wildlife is neither economically nor environmentally viable. It is antiethical to wildlife, our system of conservation and our living wildlife economies. Animals that have evolved in dispersed populations are especially susceptible to disease when kept in close proximity. Many of these diseases are transmissible to traditional livestock and to wild animals across fences, through flowing streams and through escaped animals. Although scientific and economic evidence indicated that game farming would have a negative impact on wildlife, would not be economically viable and would require government subsidization, the Alberta government legalized game farming in 1987 without a public review and without environmental or economic impact assessments.

Some Alberta game farm lobby groups have sought the authorization of penned “hunting” farms in order to diversify the economic opportunities available to those within the industry. The shooting of captive wildlife for a fee, as it is considered to be an unethical and unacceptable method of hunting by various hunting and fishing groups.

HOW TO PROTECT YOURSELF

WILDLIFE MANAGEMENT

How Do We Get There

Wildlife management is more about managing people. Except when wildlife populations are so small they need assistance finding food or mates, animals are perfectly capable of managing themselves. We step in only when people’s use of wild animals and their habitat puts the long-term survival of wildlife in jeopardy.

We look to:

- Influence local, national, and international decisions about economic

development and natural resource use so they benefit people but are friendly to wildlife.
- Minimize the economic costs and safety risk to rural families living in close proximity to wildlife.
- Partner with local communities and national agencies to prevent poaching and illegal fishing, ensuring that local families with legitimate rights benefit from the sustainable management of wildlife.
- Ensure that commercialization of wildlife and fish can be managed sustainably across a species' geographic range and does not place the species at risk of being lost forever.

Land Use

The Canadian agricultural landscape is a mosaic of different types of land cover, ranging from cropland to wetlands. The Census of Agriculture collects data on different types of land use, comprising the following six categories: **cropland, summer fallow, tame or seeded pasture, natural land for pasture, woodlands and wetlands, and all other land.**

WOODLANDS AND WETLANDS

Natural Land for Pasture

Wildlife habitat is any land that can be used as a shelter, breeding ground or a food source for wildlife. While most agricultural land provides at least one of these requirements, **woodlands and wetlands, and natural land for pasture** support more species and rank higher in terms of habitat value.

The **woodlands and wetlands** category includes forests, woodlots, tree windbreaks, hedgerows, ponds, rivers, marshes, bogs, riparian areas and other wetlands. These habitats are used by a variety of wildlife including birds, small and large mammals, fish, amphibians, reptiles and insects. Wetlands remain one of the most important habitat types in the category. They support a large and diverse number of animals, and many species depend on wetlands for all of their shelter, breeding and feeding needs.

The **natural land for pasture** category represents pasture land that has not been cultivated, drained, irrigated or fertilized. It includes grasslands and woodlands used for pasture. Grasslands provide habitat to a diversity of wildlife such as small and large mammals, grassland raptors, nesting birds, songbirds and pollinating insects.

Conserving Natural Pasture, Woodlands and Wetlands

Conserving natural pasture, woodlands and wetlands in the agricultural landscape is an important step to maintaining these valuable habitats. Recent challenges faced by Canadian farmers coupled with increases in cash crop prices have made this a difficult task. Stewardship programs, such as community pastures, have played an important role in maintaining natural pasture land in Canada. For example, 468 community pastures reported over 2.4 million hectares of natural pasture on the 2011 Census of Agriculture. Overall, however, there was a 4.8% decrease in natural pasture land between 2006 and 2011.

Natural Land for Pasture

Natural land for pasture was reported on 40.3% of all farms in 2011. In general, natural land for pasture was more commonly reported by larger operations and the average area increased with farm size.

Decrease of Woodlands and Wetlands

Woodlands and wetlands reported in the Census of Agriculture also decreased between 2006 and 2011. Across Canada there was an 8.8% decline in woodlands and wetlands area on agricultural land, amounting to a decrease of approximately 0.5 million hectares.

FARMS AND FARMERS

Benefits to Farmers

Wildlife provides many benefits to farmers that are not always obvious. These "ecosystem services" include crop pollination, breakdown of organic matter to provide nutrients for crops, contaminant degradation and agricultural pest control. For example, a member of the little brown bat species can eat 600 mosquitoes in an hour, a breeding pair of ferruginous hawks can effectively control gophers, and lady beetles are important predators of numerous agricultural pests including soybean aphids.

Farms Benefit Wildlife

There are several agricultural practices that enhance wildlife habitat. Examples include rotational grazing, windbreaks, winter cover crops, buffer zones around water bodies, and tillage practices that retain most of the crop residue on the surface. These practices are mutually beneficial to both the farm and wildlife.

OTHER MANAGEMENT PRACTICES

Agricultural Dependence on Pollinators

One of the valuable ecosystem services that wildlife provides to agriculture is pollination. While some food crops grown in Canada require insect pollinators to produce a crop or to achieve maximum yields, for other crops, pollinators have little effect on crop production.

Hedgerows and Tree Windbreaks

Hedgerows, fencerows and windbreaks can provide shelter, food and breeding sites to many wildlife species. They can also serve as valuable travel corridors that allow animals to move between habitats. For farmers, the advantages of these agricultural features and the wildlife they support include pollination, reduced soil erosion and natural agricultural pest control. In 2011, windbreaks or shelterbelts were reported on 29.7% of all farms, down from 36.9% in 2006.

Tillage

Crop residue are materials, such as straw, stalks and stubble, that are left on a field or orchard after a crop has been harvested. The amount of crop residue that remains on the surface after harvesting depends on the type of tillage used to prepare the soil for the next crop.

Conventional tillage incorporates most of the crop residue into the soil, whereas conservation tillage and no-till retain most of the crop residue on the surface. Several wildlife species find refuge, feed and nest in crop residue, therefore these species benefit from no-till and properly timed conservation tillage. From the perspective of the farmer, no-till and conservation tillage can reduce soil erosion, increase soil organic matter and help retain soil moisture. One of the negative aspects of no-till seeding is that farmers will typically rely more heavily on pesticides to control weeds and insects.

The total area of agricultural land prepared for seeding has remained relatively constant over the past two decades, rising slightly from 29.0 million hectares in 1991 to 29.6 million hectares in 2011. However, the methods used to till the soil have shifted. Conventional tillage is no longer the most common method used by Canadian farmers and, in 2011, it represented under 20% of all land prepared for seeding. It has been surpassed by conservation tillage (24.6%) and no-till seeding (56.4%) as the most common methods of tillage.

Grazing

Farms use both natural and tame pasture land for livestock grazing. Both types of pasture are also used by wildlife, although natural pasture is considered more valuable as both feeding and breeding habitat. Grasslands, in particular, provide habitat for a large diversity of wildlife, including many grassland birds that benefit from well-managed livestock grazing.

For pasture land in general, wildlife habitat and the quality of livestock forage can be improved by implementing rotational grazing. Rotational grazing involves alternating use of two or more pastures at regular intervals, or temporary fences within pastures to prevent overgrazing. This allows pastures sufficient time to recover and improves soil and plant health. In 2011, 49.4% of all farms with cattle and pasture land reported practicing rotational grazing, down from 54.4% in 2006.

Buffer zones

Buffer zones are strips of land around water bodies including streams, rivers and wetlands. They prevent sediments and contaminants from entering water bodies, provide wildlife habitat, and act as travel corridors between habitats. This, in turn, improves water quality for livestock use and protects fish stocks for recreational use. In 2011, buffer zones were reported on 20.7% of all Canadian farms, up from 19.6% in 2006.

FINAL WORD

With important wildlife habitat representing 30% of all agricultural land reported in the Census of Agriculture, and wildlife providing invaluable ecosystem services, the relationship between agriculture and wildlife might be described as co-dependent.