

A Perspective on Big Game Farming in Alberta

Introduction

Throughout Alberta's history, our abundant and diverse wildlife resources have played an important role; from the early fur trade days; through provision of subsistence to Native people and early settlers; to modern times where in 1989 Albertans spent about \$660 million on wildlife-related recreational activities. Substantial commercial and domestic benefits also are derived from our wildland in the form of trapping, tourism, guiding, and Native subsistence hunting.

Conservation and protection of our wildlife resources and provision of public opportunity to use them is given high priority in land-based plans and projects. However, the recent establishment of a big game farming industry in the province constitutes a significant threat to continued efforts to conserve and protect wildlife and their habitats. In addition, traditional public use of these resources also is in jeopardy.

From its early developmental stages in the mid-1980s, big game farming has been a controversial issue in Alberta. Opposition to the practice has come from sportsmen, conservation groups, livestock organizations, and concerned individuals from a wide variety of backgrounds.

Arguments in opposition to big game farming have highlighted a number of potential problems. Experience over the past 5 years has shown that many of the concerns are legitimate and deserving of serious consideration at this time.

This paper summarizes and discusses the relevant issues and concerns and provides the reader with a factual basis upon which to reach a well-informed opinion on big game farming in the province.

Background

Rapid development of the big game farming industry in Alberta began in the mid 1980s as a result of encouragement from various sectors to explore options for agricultural diversification. Big game farming was touted as an economical and environmentally viable alternative to conventional agriculture on large tracts of marginal grazing land. As well, it was viewed as a more culturally adaptable form of agriculture on Indian Reserves and Metis Colonies.

Elk and deer were considered desirable species for game farming because of their ability to utilize naturally occurring range without expensive and environmentally objectionable habitat destruction. Minimal winter feeding requirements, adaptable grazing capabilities and high priced products were seen as attractive economic incentives.

Relaxation in legislation governing wildlife in captivity provided for private ownership of wildlife and was an important catalyst contributing to the rapid development of the industry. This resulted in numerous operators erecting big game containment and handling facilities, which was the legal prerequisite to acquiring breeding stock. By mid 1991 there were about 150 licenced big game farmers in the province, most of who raised elk as their primary species.

Original legislative changes in 1986 permitted use of specified indigenous species including black bear, pronghorn, mountain goat, bighorn sheep and cougar in addition to moose, elk, white-tailed and mule deer are permitted.

The following is an outline of relevant issues and concerns regarding big game farming and the impact on wildlife and traditional wildlife use in the province.

Poaching

Concern:

(a) The potential use of big game farms to launder wild ungulates or parts thereof which were acquired illegally was a fear very vocally expressed by hunting groups and the public in general.

An apparent lucrative market for wild meat and wild animal parts exists in North America and in eastern Asia. As a result of public concern in this area, efforts to combat poaching have recently been bolstered by numerous government wildlife agencies, including Alberta. The legal market for wild meat and parts of game farm animals was seen as providing an easy outlet for poachers.

(b) Related to the issue of poaching is the expressed concern that Alberta big game farms may be used as paid sport hunting grounds as in some U.S. states. Such practice is viewed as unethical and distasteful by most organized hunting groups and many sectors of the general public. Also it was feared by hunting groups that such activity would further provoke the ire of the powerful anti-hunting lobby.

Evidence:

(a) In an effort to curb potential illegal activity. A relatively rigorous system of animal identification, registration and monitoring was invoked early in the development of game farming in Alberta. Births, deaths, acquisition, sales, movements, importation and exportation must be documented. The system also included identification and registration of animal products. Recent suggestions of reducing the requirements for documentation of game farm animals pose a renewed threat of increased opportunity for illegal activities.

The system was tested and found to be relatively effective when it became necessary to trace individual animals through various owners in efforts to control an outbreak of bovine tuberculosis (see below).

(b) Existing legislation prohibits sport hunting on licenced big game farms at present.

Conclusion:

(a) The identification and reporting system is elaborate and requires considerable monitoring and enforcement by regulatory agents. There are opportunities for operators to circumvent the requirements and perhaps the easiest method of breaching is in the procedure of reporting births on the farms. Neonatal deer,

moose and elk are relatively easily captured in the wild and can be registered subsequently as farm-born animals. This is made easier by the fact that operators are not expected to register animals immediately upon birth because the design of most facilities does not permit the early detection of calves or fawns until weeks or months after birth. A case involving an operator attempting to illegally add to his stock in this manner has been tried and resulted in a substantial penalty.

With increasing numbers of big game farms and game farmed animals, monitoring and enforcement requirements likely will outstrip the capability of regulatory agents and it is unlikely that government will increase their capability to keep pace.

Legislation change in 1985 prohibited the sale of meat from game farm animals but permitted the sale of products such as antlers. In spite of considerable public concern, regulatory jurisdiction was transferred from Alberta Fish and Wildlife Division to Alberta Agriculture in mid 1991. Regulation changes permitting the sale of elk meat were included in the new legislation. This provides even greater incentive and opportunity for poaching to occur.

(b) The issue of sport hunting on big game farms is of concern relative to public access but is of little consequence to the viability of the wildlife resource in general.

Diminished access to wildlands by the public and by wildlife:

Concern:

From the outset of rapid big game farm development in the mid-1980's, hunters and environmental lobbyists expressed fear that large tracts of high quality wildlands would be dedicated to big game farming or ranching. It was speculated that access to wildlife for hunting or viewing would be significantly reduced. Further it was feared that access to critical wintering ranges by wild ungulates could be seriously reduced.

Evidence:

Legislative changes to accommodate big game farming contained two sections relevant to this concern:

1. The definition of big game "farming", the practice being legalized, was determined to be different from big game "ranching" in that the intent of "farming" permitted the private ownership of live wildlife and maintenance in a husbandry sense without the sale of meat as a product of the farm. "Ranching" was defined as the practice of raising specific wildlife for meat markets: and
2. Big game farming was restricted to private land.

Conclusion:

Although these restrictions are reassuring, there are presently two related issues which affect public access to wildland as well as wildlife access to habitat on private lands dedicated to big game farming.

1. Ungulate-proof fences prohibit the use of habitat on game farms by wild ungulates and other larger wildlife species which previously could use the area while it was either unfenced or fenced in a conventional manner.
2. The practice of grazing bison (an indigenous Alberta species which is considered domestic under existing legislation) on public land leases is now permitted. This requires perimeter fencing, which is an effective barrier to large wildlife species. Wildlife use of those lands is seriously affected as is public access to the wildlife resources contained therein:

Recent legislative changes permitted the sale of elk meat raised on big game farms. This negated the distinction between big game “farming” and big game “ranching”. Successful lobbying by big game farmers could result in the extension of crown land bison grazing to include big game farm animals. This would further reduce wildlife use and public access to public lands in the province.

Loss of wildlife

Concern:

Opponents of big game farming expressed concern that collection of game farm stock from the wild would reduce the abundance of wildlife or substantially reduce the opportunity for traditional consumptive users.

Evidence:

Legislative changes in the mid 1980s included provision for wild capture of up to six of each big game farm species once in the lifetime of each licenced big game farmer.

Relatively limited elk stocks in the wild and the high demand for hunting and viewing in Alberta resulted in a ban in 1986 on live capture of that species for big game farm purposes. However, in 1987 and 1988 several deer were live-captured and placed on game farms. Public opposition and problems in subsequent survival and containment resulted in a general ban on live capture of white-tailed and mule deer in 1989. Capture of a very limited number presently is conducted on two military bases as a method of reducing a safety hazard on airstrips.

Stock acquisition is a critical issue among big game farmers. In an attempt to circumvent the lifetime limit, several operators split their facilities and registered each portion under a separate name (usually a relative) thus doubling the lifetime limit for the farm unit. Following the recent bovine tuberculosis outbreak and subsequent depopulation efforts, operators have suggested that elk should be taken from National Parks to replenish lost of big game farm stock.

The Fish and Wildlife Division maintains a list of various agencies, institutions and game farmers that are willing to accept orphaned and abandoned wildlife. However, the number of animals received is often small and game farmers are the lowest priority. As a result, many operators acquired breeding stock in the U.S. any other Canadian

provinces. This action resulted in numerous concerns and consequences discussed below under genetics and disease.

Direct loss of wildlife resulting from big game farms has recently surfaced in another form. Wild ungulates (moose, elk and deer) are attracted to the perimeters of big game farms, particularly during the breeding period. Attempts to enter have resulted in fence damage and/or damage to game farm animals which sparred with wild cohorts. In at least three cases attempts to discourage these intruders have been unsuccessful and wild stock was destroyed.

Some free-ranging animals successfully entered perimeter fences and were subsequently destroyed because the farms were under quarantine for tuberculosis.

Conclusion:

Big game farms are being established within wild ungulate range and attraction of wild stock will become an increasing problem with disastrous results for the intruding animals.

With the ban on importing coupled with the loss of stock in tuberculosis control efforts, operators will be lobbying for stock from wild sources in the province thus reducing the availability to traditional consumptive users.

Genetics Contamination

Concern:

Husbandry of elk on big game farms in other parts of the world has resulted in efforts to produce desired characteristics via cross-breeding with red deer. This closely-related European species breeds readily with elk, producing viable offspring.

Early opposition to Alberta's big game farming initiative identified a concern that red deer/elk hybrids would likely be imported to Alberta as big game farm stock.. Subsequent escape to the wild could allegedly result in genetic contamination of wild elk in the province. Genetic mixing was deemed undesirable by concerned groups since our wild populations could be seriously affected by ill-adapted and genetically inferior red deer stock..

Evidence:

This concern resulted in two efforts to address the potential problem of genetic contamination.

1. Importation restrictions and prior genetic testing were imposed to assure only "pure" elk would enter the province.

2. Big game farmers were encouraged to construct facilities to adequately contain their stock.

A significant number of hybrids did enter the province in the early years of game farming. A test, slaughter or neuter program was established to remove the undesired genetic stock.

The effectiveness of the genetic test as well as the elimination procedure was plagued with problems and game farm stock in the province still contains some red deer genetic material.

Efforts to assure containment of stock on big game farms were ineffective. Relevant legislation enacted in 1986 did not contain standards for fence quality nor design. Prerequisite for obtaining a big game farm licence was and is at present contingent upon acceptance by the regulatory agent of a game farm design proposal. The onus is largely on the operator to contain his stock and adequate fence height, etc. is only encourage via policy. Adequate containment continues to be a problem as about 50 animals have been recorded as escaped over the past few years. Most of these were subsequently recovered or destroyed.

Concern about containment is also relevant to discussions above under the topic of loss of wildlife and below under disease concerns.

Conclusion:

In Alberta the environmental threat of introducing red deer hybrids to wild elk population via game farming is presently a moot point as importation of elk ceased in 1988. However, if importation occurs in the future, identification and prohibition of red deer and their hybrids will be a renewed concern. In addition, other jurisdictions should be encouraged not to move untested animals into the range of wild elk.

Introduction of Disease

Concern:

Wild ungulates are susceptible to a number of diseases of cattle, sheep, and goats as well as several parasites unique to wildlife. The potential for game farm animals to introduce disease to domestic and wild stock is a worldwide concern. Rapid growth of the game farming industry in Alberta necessitated the importation of many animals to meet the demand for breeding stock. Fears were expressed about the potential introduction of diseased or parasites that do not exist presently in Alberta. Traditional livestock diseases include tuberculosis, brucellosis, anaplasmosis, and bluetongue. Wildlife parasites of concern include the meningeal worm (Parelaphostrongylus tenuis), the carotid artery worm (Elaeophora schneideri), and giant liver flukes (Fascioloides magna) (the latter is established in a

small portion of the province at present). These parasites could be transmitted to and become established in free-ranging wildlife populations.

The agricultural, economic, and human health concerns regarding the above livestock diseases are well documented. The wildlife parasites are less well known.

Mule deer in the western U.S. can be infected with the carotid artery worm. Although the worm causes few problems in mule deer, it is very pathogenic to elk. Similarly, many white-tailed deer in eastern North America are infected with the meningeal worm. It too causes little damage in its normal host, white-tailed deer, but can cause fatal neurologic disease in most other cervid species. Neither of these parasites occurs in Alberta.

Some elk survive infections of meningeal worm and pass infective larvae in their feces. Importation of such animals could result in importation of meningeal worm into Western Canada and subsequent infection of white-tailed deer. The consequences of infecting free-ranging white-tailed deer are undetermined, but could include extensive mortality of indigenous ungulates, especially moose, mule deer, and caribou.

Evidence:

Current regulations prohibit the importation of mule deer and white-tailed deer in an attempt to prevent the introduction of carotid artery worm and meningeal worm, respectively.

In 1988, Alberta imposed a moratorium on the importation of elk until their potential role as a carrier of meningeal worm could be determined.

Recent investigations at the University of Alberta in conjunction with Alberta Fish and Wildlife Division have shown that meningeal worm could be imported with elk. There is presently no reliable method of detecting elk infected with meningeal worm and no reliable treatment.

All animals imported from outside Canada are subject to quarantine and testing for tuberculosis, brucellosis, anaplasmosis, and blue tongue. However, often the tests used were those known to be effective in identifying infected agricultural livestock. As a result infected elk have inadvertently been brought into Canada. Several other serious diseases have occurred in elk on game farms in western Canada. In 1986, blue tongue was detected on a Manitoba game farm. Subsequently, 51 elk were destroyed and the disease apparently was eradicated.

In December 1990 bovine tuberculosis was confirmed in a game farm elk in Alberta. As a result, an extensive and exhaustive effort was made by provincial and federal disease specialists to control and eradicate the disease. About one half of the 4200 elk along with numerous deer and other species on Alberta game farms have been destroyed

to date. In addition, a few workers involved in the program seroconverted to a positive skin test.

The source of the outbreak was traced to infected elk imported from the U.S. which were not detected during import inspection. Since January of 1989, diagnostic procedures for detecting tuberculosis in elk have been improved but are still not fool-proof.

Subsequent compensation for destroyed big game farm animals has been the source of aggravation within the cattle industry and among taxpayers because original settlements were substantially higher than that received for cattle destroyed for disease control. Up to \$15 million compensation has been paid to game farmers in Alberta alone. Since 1988, bovine tuberculosis has been confirmed in fallow deer in B.C. and Quebec; red deer, elk and hybrids in Ontario; and elk in Saskatchewan. All cases involved imported animals on game farms.

The devastating setback to the Alberta big game farm industry resulting from tuberculosis eradication efforts has renewed the lobby to acquire breeding stock whether from the wild or via import.

Although the threat of tuberculosis spreading to wildlife is real, the actual risk of this happening is unknown. There is at present no documentation that the disease agent has done so nor did it establish in cervids when bovine tuberculosis was widespread in cattle in the 1920s and 30s. Bison in Wood Buffalo National Park is the only known case of bovine tuberculosis established in free-ranging wildlife. The disease source apparently was cattle which shared the same range with the bison at Buffalo National Park (now Camp Wainwright) in the 1920's.

Conclusion:

The examples of tuberculosis and red deer hybrid entry into the province, in addition to several incidents involving individual operators attempting to circumvent game farm control regulations, is evidence that opponents of big game farming have very real and legitimate concerns.

It is very unlikely that disease/genetics testing procedure will improve sufficiently to prohibit additional entry of animals containing tuberculosis or red deer genes and it is very possible that even more devastating disease agents (such as meningeal worm) would enter the province if import bans are lifted.

It is similarly unlikely that existing big game farmers will be required to upgrade their facilities to assure containment of their stock as well as prevent breakins by wild ungulates. It is further anticipated that lobby pressure to capture wild stock will increase to the point where future political will may not be sufficient to refuse their requests.

Government regulatory agents which are not adequately equipped at present will not likely be provided with sufficient direction and resources to maintain adequate control of an expanding industry and prevent infractions which could result in spread of serious disease to our wildlife.

Philosophical Concerns

Concern:

The announcement that the Alberta government would encourage and facilitate the establishment of a big game farming industry resulted in strong vocal opposition from various public sectors based on a variety of arguments. There were however several arguing solely on a philosophic basis. Big game farming was seen by these groups and individuals as degrading to the aesthetic value of wild animals. The idea of private ownership of live wild animals for commercial purposes was considered distasteful and unethical. In their opinion the fundamental North American idea of maintaining wildlife in public ownership (in general) was seen to be defiled.

In another vein, concern was expressed that big game farming may produce animals and products to such an extent that the values associated with viewing in the wild and acquisition of meat and products through hunting would significantly decline. It was feared that this in turn would see a decline in the will to protect and conserve the wild stock and its supporting habitat.

Conclusion:

Although there are several cases in Alberta where live wild animals are kept in captivity for commercial purpose (zoos, fur farms, birdgame farms, etc.) the philosophical points of view expressed have merit from cultural and historic and resource perspectives but because they are based on personal values and predictions they cannot be judged right or wrong.

Summary

The foregoing describes the potential detrimental effects on our wildland and wildlife resources that a continuation of big game farming would have under a regulatory regime such as is currently in effect in Alberta. In summary these are:

- reduction in access to habitat on private lands by wild ungulates
- reduction in public access to wildlife on private land
- possible extension of the above issues to crown land
- increase in options and incentive for illegal acquisition and disposal of wildlife.
- decrease in ungulates available in wild setting
- increase in possible genetic contamination of wild stock of some species
- greatly enhanced chance of introducing untreatable, detrimental parasite and disease agents into our wildlife
- degradation of traditional wildlife values
- reduction in traditional wildlife resource management effort and incentive.

For these reasons the Alberta Chapter of the Wildlife Society believes that continuation of the big game farming industry is detrimental to the conservation and protection of wild species and their supporting habitats in Alberta. In addition, public access to these resources is diminished both in quantity and quality.