EXHIBIT 7
DATE 3-21-13
SB 256 or 305

A Self-Learning Resource From MSU Extension

MONTANA STATE UNIVERSITY EXTENSION

MontGuide

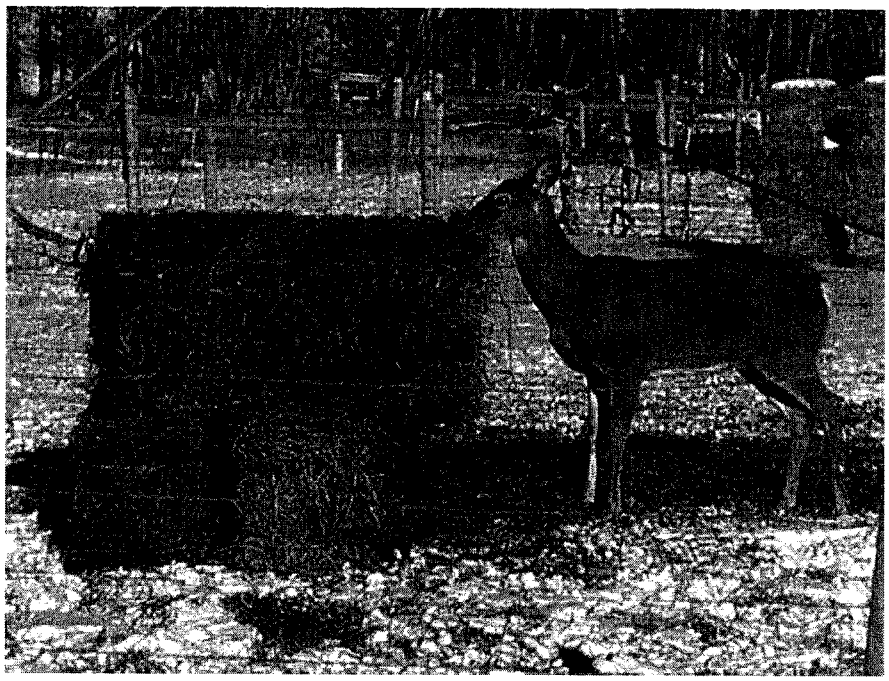
The Contributions of Landowners to Big Game in Montana

by Jim Knight, Professor and Extension Wildlife Specialist and Carolyn Nistler, Associate Extension Wildlife Specialist, Montana State University

Too many people think of ranching and wildlife as an "either-or" proposition. The facts show that ranching practices and wildlife management can work together with positive results for both.

MT 200604 AG New 1/07

EVERYONE KNOWS THAT BIG GAME animals need room to roam. Everyone knows Montana is blessed with huge expanses of public land that provides habitat for wildlife. But many people don't realize that without the two-thirds of Montana that is privately owned, the abundance of wildlife we enjoy would be greatly reduced. When Montana was settled, most of the homesteaded land was in lower elevations where soils were fertile and winter snows were less challenging to settlers. These same conditions make these valley lands attractive to wildlife and critical for the winter survival of big game.



A white-tailed deer feeds on hay bales at a central Montana ranch during winter.

The farms and ranches across Montana are crucial to the sustainability of the state's wildlife. Montana citizens should be thankful for the past and current management of these lands that has resulted in providing plentiful, quality wildlife habitat. We should also do what we can to support policies that help farmers and ranchers stay on the land. Sustainability of these traditional big game areas is contingent on the sustainability of the farms and ranches that make it up.

It is very difficult to quantify many of the contributions of Montana landowners to big game. But if we consider only the economic value of the forage eaten by deer, elk and antelope on private land, this contribution alone demonstrates the importance of farms and ranches in Montana.

Value of Private Land Big Game Forage

Consider the following facts:

1. Montana Department of Fish, Wildlife and Parks estimates the following big game population numbers:

Pronghorn Antelope	126,000
Elk	145,000
White-tailed deer	400,000
Mule deer	500,000

2. According to the National Ag Statistics Service, approximately two-thirds of Montana (64 percent) is private land.

3. When describing forage use range scientists use an Animal Unit (AU) as a measure of how much an animal eats (relative to forage use by cattle).

1 beef cow and calf	= 1.00 AU
1 antelope	= .20 AU
1 elk	= .60 AU
1 white-tailed deer	= .15 AU
1 mule deer	= .20 AU

4. According to the Montana Department of Agriculture 2003 Montana AG Statistics, average forage value in Montana is $15.10 per AUM (AU per month).

Therefore the statewide forage consumed by big game in Montana is:

Pronghorn Antelope
.20 x 126,000 x 12 months = 302,400 AUM's/year

Elk
.60 x 145,000 x 12 = 1,044,000 AUM's/year

White-tailed deer
.15 x 400,000 x 12 = 720,000 AUM's/year

Mule deer
.20 x 500,000 x 12 = 1,200,000 AUM's/year

Total **statewide** big game forage use is = 3,266,400 AUM's/year

The **statewide** value of forage consumed by big game is:
3,266,400 AUM's/year x $15.10 per AUM = $49,322,640

Value of forage consumed by big game on **private land** in Montana is: .64 x $49,322,640 = $31,566,489

There are some assumptions behind this estimate of forage used by wildlife on private land in Montana. Some of the assumptions (such as equal distribution of wildlife across the state) are obviously not true, but the overall estimate still provides a picture that shows the significance of big game forage use on private land.

- The figures assume big game is equally distributed across the land. We know a high percentage of antelope and whitetail deer are on private land and a high percentage of elk and mule deer are on public land.
- The figures also assume equal temporal distribution of big game across the land. We know most big game spend winters on private land.
- Big game population estimates are very difficult to obtain and these numbers may be significantly higher or lower. However, the error would be equal across public and private lands.

Please note that we cannot say all forage consumed by wildlife could be consumed by cattle if the big game was not there. While some of this could surely be consumed by cattle, some of it would be unavailable to livestock because of location, distribution or simply because the livestock producer chooses not to use it.

This dollar figure however, does represent the significance of the contribution of private landowners to big game forage in Montana.

Cost of Big Game to Ranchers and Farmers

A study in southwestern Montana looked at the ranchers' cost of having elk. The study found that without elk the ranches could support from 86 to 166 more cattle. The added income to these ranches would be $3,900 to $19,300 if they had no elk to support.

Another study in Montana showed big game caused an average monetary loss of $5,616 per landowner due to forage consumed on hay fields.

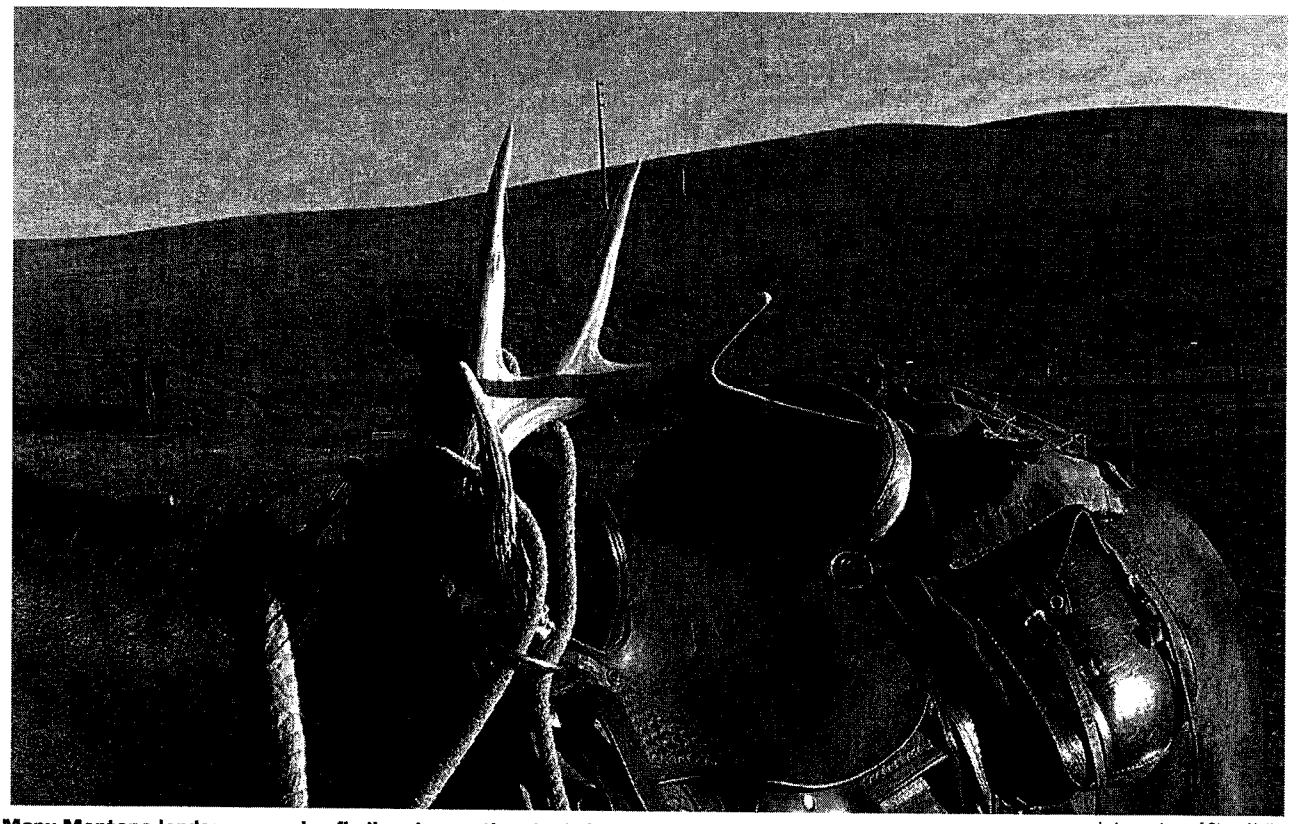
Positive Benefits of Farms and Ranches

When we ask how big game can influence ranches, we should also ask how ranches influence big game. Concerns usually revolve around how wildlife and livestock compete while we ignore the positive influences ranches have on wildlife.

The importance of wildlife habitat provided by ranches is often under rated by those who would like to attack the ranching industry. Farms and ranches contribute to big game habitat in a variety of ways, in addition to providing forrage. Mineral and supplemental food put out for cattle is often used by wildlife. In many parts of the west, water tanks constructed and maintained for livestock allow big game and other wildlife to use areas that would otherwise be used only during wet times of the year. Predator control to protect livestock also reduces predation on deer, elk, antelope and other wild prey animals.

In outlying areas, the human activities associated with ranching often deter potential poachers who are more comfortable when others are not around.

Livestock grazing often mimics what the great herds of bison did to keep range vegetation succulent and productive. Studies have been conducted which show



Many Montana landowners enjoy finding deer antler sheds in the spring. photo courtesy of Steve Hutton

that properly grazed areas provide more palatable and nutritious forage than areas that are ungrazed and allowed to grow into old, matted and decadent clumps of vegetation that shade out young grasses and forbs.

The most significant manner in which sustainable ranches positively impact wildlife is by providing wildlife space to live. If ranches fail, the land may be sold and possibly developed, or in some way put into a form less compatible to wildlife needs. This becomes more critical when we realize most of the private land in Montana has been retained in private ownership because it is the most productive and usually lies in the lower elevations near water. These private lands are critical winter habitat. We only have to look at the situation around Jackson, Wyoming, where subdivisions have eliminated significant amounts of critical elk winter habitat, to see the negative impact development can have on big game populations.

Challenges to Farmers and Ranchers

Since first coming to Montana, ranchers have had to cope with natural elements affecting ranches. Fences damaged due to migrating big game herds had to be repaired. Predator losses due to coyotes, wolves or grizzly bears had to be controlled. Grass fires, floods, dust storms, drought and severe winters were all aspects of ranching that had to be dealt with. But ranchers were able to survive because they could look at the situation, weigh the costs and benefits and decide on the best avenue to address the problem.

This is not the situation today. Ranchers now must deal with a public that demands to be involved in numerous issues affecting rangeland management. They must also deal with a government bureaucracy that sometimes bows to public sentiment often driven more by emotionalism than by scientific fact. Farmers and ranchers must now deal with laws, regulations and policies dictated by legislators and lobbyists, some of whom have no understanding of what it takes to successfully run a ranch.

The Good News

Ranchers and farmers like wildlife. In spite of the costs and challenges associated with wildlife, private landowners take pride in managing their land in a way that makes it attractive to wildlife. The pride in good land stewardship is a part of what makes a successful farmer or rancher. Providing good wildlife habitat that supports big game that spills over to adjacent, possibly public, lands is a benefit farmers and ranchers are

happy to provide.

Those who appreciate the contribution of landowners in Montana are plentiful. They are demanding that landowners be included in management decisions. Credible special interest groups, those sincerely interested in proper natural resource management, are growing and being utilized as input sources by land managers seeking multi-interest involvement in land management decisions. Ecosystem management is gaining support across Montana as a strategy for making resource management decisions. When properly applied, ecosystem management requires consideration of all parts of the system when making decisions. All parts include humans, economy, tradition as well as the natural parts of the system.

Although there is potential for big game and other wildlife to influence ranch sustainability in a negative way, there are also many ways wildlife can positively influence ranch sustainability. Many states now have programs to provide economic incentives to ranchers who implement practices benefiting wildlife. Some of these programs are tied to providing access for hunters, but in many cases the hunters are needed to keep big game at population levels compatible with their habitat. Some state wildlife agencies are recognizing the need to help ranchers control hunters and have implemental permit systems to limit hunter numbers. Other states are providing hunting permits to ranchers who provide big game habitat, or depredation permits to help alleviate problems outside hunting seasons.

In Montana, habitat acquisition dollars are being used to purchase conservation easements from willing ranchers to ensure the land is never developed, but retains its agricultural potential while providing big game habitat. On some ranches in Montana, wildlife enterprises allow ranchers to increase their income through photo safaris, hunting access and other recreational opportunities.

Overall, the recognition by the public of the contribution of private landowners to big game has resulted in policies that may reverse the net negative impact wildlife has on ranching operations. Hopefully, as the public becomes more educated to the contribution of farmers and ranchers the sustainability of ranches will be recognized as the basis for sustainability of wildlife.

http://www.montana.edu/wwwpb/pubs/mt200604AG.html

Copyright © 2006 MSU Extension Service
We encourage the use of this document for nonprofit educational purposes. This document may be reprinted for nonprofit educational purposes if no endorsement of a commercial product, service or company is stated or implied, and if appropriate credit is given to the author and the MSU Extension Service. To use these documents in electronic formats, permission must be sought from the Extension Communications Coordinator, Communications and Public Affairs, 416 Culbertson Hall, Montana State University–Bozeman, Bozeman MT 59717; **E-mail: publications@montana.edu.** To order additional publications, please contact your county or reservation MSU Extension office, visit our online catalog at **www.montana.edu/publications, or e-mail orderpubs@montana.edu**

MONTANA STATE UNIVERSITY EXTENSION

The U.S. Department of Agriculture (USDA), Montana State University and the Montana State University Extension Service prohibit discrimination in all of their programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital and family status. Issued in furtherance of cooperative extension work in agriculture and home economics, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Douglas L. Steele, Vice Provost and Director, Extension Service, Montana State University, Bozeman, MT 59717.

File under: Wildlife

A-6 (Big Game Animals)

New January 2007
500-1/07JM