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# DONKEYS FOR PREDATION CONTROL

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## ABSTRACT

Donkeys (Equus assinus) are described and their availability discussed. Key points which appear important in successfully using a donkey for reducing predation on livestock are presented.

## INTRODUCTION

One result of changing public attitudes towards wildlife and the environment in the 1960's was the 1972 ban on using toxicants in Federal predation control programs. Although there are now several exceptions to this ban, public sentiment continues to favor using and finding more innocuous techniques for reducing predator damage to livestock. Federal agencies have responded by conducting research to improve the effectiveness, selectivity, and humaneness of existing control tools and searching for new methods (Fall 1984, Green 1987).

One idea that has been researched in recent years is using various types of animals to protect livestock from predators. Results from studies showing success with guarding dogs (Green and Woodruff 1988) and cattle (Hulet et al. 1987) have been published in the scientific literature. Anecdotal accounts of several other livestock guarding species, most notably llamas (Lama glama) and donkeys (asses, Equus assinus), have appeared in the popular literature. Although no formal research has been reported for these two species, interest in their use is increasing.

This paper presents information on using donkeys for predation control, focusing on apparent key concepts identified by livestock specialists and producers.

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## DISCUSSION

### Description

Donkeys are small asses, and like their close relatives, horses (E. caballus), they come in all sizes (mammoth, standard, and miniature) and colors. The standard size is used most commonly for predation control. The name "donkey," is derived from the English word "dun," which describes the usual color (Evans et al. 1977). Males are known as "jacks," females as "jennets" or "jennys."

Burros are the small so-called native asses of North America, having been brought here by early Spanish expeditions. They are a blend of many breeds originating in Europe and the Middle East. The Spanish translation of "donkey" is "burro." Thus the terms donkey and burro are synonymous (Evans et al. 1977), and the names are used interchangeably. Donkey will be the term of choice in this report.

### Availability

Donkeys can be obtained at stockyard auctions throughout the United States, but they are

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not abundant. Some registered stock may be expensive, but most animals sell for one hundred to a few hundred dollars. One farmer in Kansas rents guarding donkeys to sheep producers for $100 a year (F. R. Henderson, pers. commun.). Many donkeys in use today come directly or indirectly from wild (feral) stock.

Federal adoption program -- Feral donkeys have been under protective federal government control and management since the Wild Free-Roaming Horse and Burro Act was passed in 1971. The Bureau of Land Management and U. S. Forest Service administer the program and are responsible for managing the animals at appropriate populations levels.

Feral donkeys are found primarily in Arizona, Nevada, and California with far lesser numbers in Oregon and Utah. In 1988 the population estimate for feral donkeys was 5,464, and the estimated appropriate management level was set at 3,477 (U. S. Forest Service and Bureau of Land Management 1989).

Achieving the desireable management level requires rounding-up and disposing of excess animals. In fiscal years 1986 and 1987, 1,283 and 1,291 donkeys, respectively, were removed from federal lands. Several more years of harvest will be required to reach the target management level, and periodic removal will likely be required to maintain the desired number of animals. Thus feral stock will be available for the foreseeable future.

Healthy donkeys are offered for adoption at a fee of $75 each, and most are adopted. Since 1972 when the program began, 13,229 donkeys have been adopted by people from 48 states with California and Texas taking the majority (U. S. Forest Service and Bureau of Land Management 1989). Most donkeys are adopted to become pets, breeding stock, or livestock guardians.

BLM data from the South Dakota Resource Area indicate an increase in the number of donkeys adopted for use in predation control since 1988 (1988, 62% of 50 donkeys; 1989, 73% of 113 donkeys; 1990, 79% of 114 donkeys [1990 data based on applications received as of August 1989], D. Heinze, pers. commun.).

Management

There are several key points to consider when using a donkey for predation control.

1. Use only a jenny or a gelded jack. Intact jacks are too aggressive and may injure livestock. Some jennys may also injure livestock.
2. Use only one donkey per group of sheep. The exception may be a jenny with a foal. When 2 or more adult donkeys are together or with a horse, they usually stay together, not necessarily near the sheep. Also avoid using donkeys in adjacent pastures since they may fraternize across the fence and ignore the sheep.
3. Allow about 4-6 weeks for a naive donkey to bond to the sheep. Stronger bonding may occur when a very young donkey is raised from birth with sheep.
4. Avoid feeds containing anabolic agents like monensin (Rumensin) and lasolacid (Bovatec) as these are poisonous to donkeys. Donkeys also

may founder if they eat a lot of prepared sheep feed.

5. Remove the donkey during lambing, particularly if lambing in confinement, as a precaution against accidental or intentional injuries to lambs or disruption of the lamb-ewe bond.

Fences in good repair are a requirement where donkeys are used as they will find holes and escape wherever they are able.

Although donkeys are reportedly generally docile to people, they seem to have an inherent dislike for dogs (Canis familiaris) and presumably other canids including coyotes (C. latrans) and foxes (Vulpes vulpes). The typical response of a donkey to an intruding canid is vocalization (braying), baring its teeth, and a running attack punctuated with attempts to kick and bite the intruder, particularly if it is cornered. Donkeys are likely not acting directly to protect the sheep as much as acting out their aggression to the intruder. In addition to direct aggression, the mere presence of a large animal, such as a donkey, with sheep may be sufficient to cause some coyotes or dogs to avoid the area.

There is little information available on donkeys' effectiveness against other predators such as bear (Ursus spp.), cougar (Felis concolor), bobcat (Lynx rufus), or birds of prey. One producer who has worked with many donkeys reported that they are afraid of bears and cougars and "will flee in terror whenever these animals are anywhere in the area" (J. Conter, pers. commun.).

Several trials with donkeys and pastured sheep were conducted in Texas under rather adverse conditions (M. Shelton, pers. commun.). Donkeys were introduced into pastures in areas where coyote density was great and where coyotes had previously established a pattern of killing sheep. In these instances, donkeys had little effect, and predation continued.

Donkeys apparently are most effective in smaller open pastures or where the sheep are cohesive and graze together. The maximum number of sheep that can be guarded by one donkey is unknown but is probably not usually more than 200-300. Several producers have reported success with up to 600 head of sheep (J. Conter, pers. commun.). Donkeys would probably be of limited value with herded range bands of sheep or in large pastures where sheep were widely scattered.

It seems to be important to introduce the donkey with the flock prior to the onset of predation. Donkeys that are effective associate with the sheep continuously, and some donkeys may be an asset in moving sheep, acting like a lead wether. Conversely, others may hinder the moving of sheep. Donkeys work equally well with either sheep or goats, but it is not clear to what extent they can be used in pastures with mixed species of livestock.

Donkeys are currently in use on several hundred ranches in Texas (M. Shelton, pers. commun.) and in lesser numbers throughout the United States. More than 100 farmers in Virginia are using donkeys for predation control (S. Umberger, pers. commun.). One donkey breeder in Montana sold 39 donkeys over the past several years to sheep producers within that state for use as flock guardians. Two of those animals

were not successful (J. Conter, pers. commun.).

Although donkeys aren't suited to as wide a variety of guarding situations as livestock guarding dogs, in some respects they may be easier to manage than guarding dogs. They usually require no special feeds, and they are relatively long-lived (20 years or more). Donkeys need some maintenance including hoof trimming and perhaps floating their teeth. Standard vaccinations and worming may be recommended but are not usually practiced. When kept in sound condition, donkeys are quite agile and capable of chasing predators.

Just as guarding dogs have different temperaments, donkeys do also. Some are not suited to the guarding role, and their use for this task is relatively recent in the U. S. livestock industry. There are no data concerning the percentage of donkeys that become successful protectors. The paper by Walton and Feild (1989) in these proceedings is probably the largest effort to date to quantify some aspects of using donkeys for reducing predation. The results indicate that this method has merit and will likely increase in use in the future.

As with other methods of predation control, it is wise to view the use of donkeys as but another tool to minimize loss. There is no substitute for good livestock management and for a sound program of predator management that includes a variety of techniques that are effective, biologically sound, and economically practical.

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