



## MINISTRY OF AGRICULTURE, FOOD AND RURAL AFFAIRS

## Guidelines for Using Donkeys as Guard Animals with Sheep

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### Introduction

The range and extent of predation on Ontario sheep has increased to the point where it threatens the viability of many operations. Most sheep producers agree that no one management practice or method of control will eliminate predation. To effectively combat predation producers must adapt management practices and implement methods of predator control that address specific problems facing that particular operation.

There has been significant interest in using livestock guard animals, sometimes also referred to as predator control animals or mobile flock protectors, as a non-lethal means of reducing predation. Livestock guard animals live with the flock, protecting the sheep from predation, without harming or interfering with the flock. Guard animals currently being used with sheep include specially trained dogs, llamas and donkeys. Donkeys are gaining in popularity due to their relatively low cost, minor maintenance requirements, longevity and their compatibility with other predator control methods. Donkeys also offer the additional advantage in that they can be fed in much the same manner as sheep.

Sheep producers in Australia, United States and western Canada have successfully used donkeys as guard animals, protecting sheep from predation by wolves, coyotes and dogs. The Ontario Predator Study reported that about 70% of the donkeys being used were rated as either excellent or good in terms of providing flock protection. However the donkeys' effectiveness ranged from total elimination of predation, to having absolutely no impact on predation while simultaneously causing other problems within the flock. In many instances poor management practices and unrealistic expectations (too many sheep, scattered sheep or pastures ...) are as much or more to blame for many failures as any shortcoming of the donkey(s). This paper summarizes some of the management guidelines and other factors which may improve the likelihood of a donkey becoming a successful livestock guard animal.

### How Do Donkeys Protect the Flock?

In order for donkeys to provide the best predator protection possible it is important to first understand how they protect the flock. The livestock guard animal, regardless of species, is really no different than a security

guard, in that in order to provide protection they must both be in the right place at the right time. The more time the guard animals spends with the flock the more likely it will be present when needed. The donkey's natural herding instinct means if properly bonded to the sheep, it will stay with the sheep most of the time. The donkey's herding instinct combined with its inherent dislike and aggressiveness towards coyotes and dogs can make it an effective livestock guard animal... if managed properly.

Donkeys rely predominantly on sight and sound to detect intruders. When approached, sheep will tend to move so the guard animal is between the intruder and themselves. The donkeys' loud brays and quick pursuit will scare away predators and may also alert the shepherd. In most instances donkeys will confront and chase dogs or coyotes out of the pasture. If the canines do not retreat quickly the donkeys will attack them by rising up on their hind legs and striking with both front feet. A solid blow can injure, kill or at the very least discourage the predator.

### **Donkey Compatibility with Sheep**

Given ample opportunity, most donkeys will bond with sheep and protect them from predators. The donkey should be introduced to the sheep as early as possible to increase the likelihood of the donkey bonding to the flock. Getting the sheep and donkey to accept each other as flock mates is the first step in allowing the donkey to exhibit its true guarding instincts. Under ideal circumstances the jenny (female donkey) and her foal should be raised with the sheep. The weaned foal should then be left alone with the flock. Many believe that because donkeys are very sociable animals that they must work alone in order to effectively protect the sheep. The concern is that if the donkeys are allowed to mix with cattle, horses or other donkeys, then the sheep may be ignored.

All is not lost if the donkey has not been raised with the sheep. The donkey can still be taught to protect the sheep by housing them next to each other for 1 - 2 weeks. Usually after this adaptation period the donkey can safely be turned out with the sheep, although they should be watched carefully for signs of potential conflict.

In order to effectively protect the flock from predators the donkey and sheep must be compatible. Conflict-free compatibility should not be assumed! There is wide variation in how individual donkeys interact with sheep. Be aware that the donkey's behaviour and mood may be unpredictable during estrus, or when the ewes are lambing.

Not all donkeys make good livestock guard animals, as there are significant behavioural differences between individuals. Some donkeys can be overly aggressive with the sheep. This aggressiveness can range from chasing sheep, nipping at ears or wool, preventing access to feed or water, to the extreme of hurting or even killing lambs or sheep.

### **Donkey Compatibility with Farm Dogs and People**

The donkeys' distinct dislike of canines may also include the farm or herding dog. Be careful to initially limit and supervise the interaction between the donkey and dog. Most herding dogs will eventually adapt and learn to work around the donkey rather than try to control it like one of the sheep. Neighbours with dogs should also be notified of the presence of a guard donkey and the potential conflict between donkeys and wandering dogs. While naturally aggressive with canines, most donkeys are docile and gentle with humans.

### **Considerations When Buying a Guard Donkey**

#### **Size, Conformation and Behaviour**

- miniature - under 36" at the withers
- small standard - over 36" and up to and including 48"
- large standard - over 48" and under 54" for jennies and over 48" and under 56" for jacks (males) and geldings
- large - over 54" for jennies and over 56" for jacks or geldings.

Most miniatures are likely too small to effectively fend off predators. Although the large donkeys' frame enables them to repel predators, they do tend to be more difficult to handle. It would thus appear that the small and large standards provide the best combination of predator control and ease of handling. Alberta recommends guard donkeys should be at least 2 years old and at least 44" high at the shoulder. Key points to

look for when purchasing a donkey are good conformation, straight legs and a good attitude. A donkey's aggressive tendencies towards dogs and coyotes can be checked by introducing a dog into a small pen containing the prospective guard animal.

### **Flock Size and Number of Donkeys**

Producers using donkeys as livestock guard animals tend to have smaller flocks. Donkeys appear best suited for farm flocks of less than 100 ewes. Ideally a donkey may be able to guard up to 200 ewes if the terrain is flat and barren and provided the sheep are grazing in one pasture. However many Ontario flocks are raised or pastured on rough and rolling land, scattered with bushes which provides ideal cover for coyotes. Under such conditions the donkey will likely have obstructed sightlines and thus be less likely to oversee the entire flock.

The use of guard donkeys may have limitations for larger flocks and rolling and bush laden pastures, unless one donkey is used for each group or pasture. It should be stressed that if using donkeys in adjacent pastures that the pastures be adequately separated to ensure the donkeys stay with their respective sheep and not with each other. There is also concern that coyotes and/or dogs may become adept at luring the donkey away from the flock, while other coyotes come in for the unprotected kill.

### **Donkey Gender**

A jenny and foal probably provide the best protection, however jennies also work very well on their own. Geldings are also effective and especially popular because of their even temperament. Intact males (jacks) are not used as commonly as they tend to be overly aggressive with both sheep and people.

### **Over-Protective Behaviour**

There have been instances where donkeys are over-protective of the flock. Lambing season should be approached with caution as some donkeys may behave as if the lambs are intruders. The donkey's protective behaviour can lead to the lambs being injured or killed.

Another potential consequence of this over-protective behaviour is the donkey preventing the ram from breeding the ewes. Housing or penning the donkey separately from the ewes during breeding season, and lambing time, or until the lambs are well-bonded with their mothers and steady on their feet should resolve these problems. However one should question the use of a guard animal which must be removed during a high risk period of predation, particularly when lambing on pasture.

### **Advantages and Disadvantages of Donkeys Over Guard Dogs**

Like donkeys, specially trained livestock guard dogs can also protect flocks from predation. However unlike dogs, donkeys are not prone to wandering, providing the fences are well maintained. Donkeys live longer than dogs and with proper management producers can expect donkeys to provide 10 - 15 years of productive protection. On average it will cost less to purchase and maintain donkeys than livestock guard dogs since donkeys will eat primarily home-grown feed.

### **Care & Management of Donkeys**

One of the distinct advantages of using donkeys as guard animals is that they can eat the same feed as the sheep, unless the hay is an extremely high protein legume. Lush pasture or high quality legume hay are not recommended because donkeys have a low energy requirement and are prone to obesity and certain metabolic disorders such as laminitis (founder) and hyperlipaemia if allowed to feed free choice. Donkeys do well on good quality grass hay and in most cases will require very little grain. If grain is fed, ensure the donkeys do not eat cattle or lamb rations containing rumensin as ingestion of monensin (active ingredient) by horses and other equine has been fatal.

The amount of hay and grain fed will depend to a large extent on the size and body condition of the donkey. As a rule of thumb the total dry matter intake (hay and grain) for maintenance should be about 2.0% of body weight. For a 600 lb. (272 kg) donkey the daily total dry matter intake should be about 12 lb. (5.5 kg) on a dry matter basis or about 13.3 lb. (4.9 kg) on an as-fed basis This is about 1/3 of bale per day. Based on having 185 days of pasture and 180 days of hay, it would cost about \$90/year (\$0.50/day) to feed hay at \$1.50/bale.

When grain the sheep it may be advisable to either feed the donkey separately or at least gives the donkey its grain in a separate tub. Otherwise the bigger more dominant donkey may prevent the sheep access to the feeder or even butt the sheep potentially causing injuries.

Donkeys should have their feet trimmed every 3 - 4 months which will cost about \$75 - \$100/year. Proper care of the donkey's feet is important if the donkey is expected to effectively chase predators away.

### **Economics and Conclusion**

Before proceeding with any kind of predator control producers must ask themselves "How much is it going to cost?" and "Is the predation problem serious enough to justify the expense of implementing and maintaining predator control?" Perhaps the best approach to determining the answers to these questions is to compare the cost of acquiring/maintaining a donkey with the number of lambs that it would have to save in order to pay for itself.

Assuming a donkey can be purchased for \$500 and provide 10 years of useful predator control the annual capital cost would be \$50/year. The annual costs of keeping a donkey including home-grown feed, hoof trimming, and other expenses will be in the range of \$150 - \$200/year. At lamb prices of \$175/cwt for lambs weighing 100 lbs., the donkey would only have to save 1 lamb per year to pay for itself.

Although donkeys alone may not be the ultimate solution to the Ontario sheep industry's conflict with predators, donkeys certainly have proven that they can successfully reduce predation under specific circumstances, if managed properly.

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