Livestock producers use many methods to reduce predation from coyotes, bears, wolves, mountain lions, and domestic dogs. An effective predator management program typically incorporates a variety of methods to increase productivity. Livestock protection dogs (LPDs) can be an important component of an overall predation management program.

LPDs are working dogs that stay with or near sheep most of the time, with the purpose of aggressively repelling predators. While LPDs are most commonly used to protect sheep, they are also helpful in protecting other livestock from predators.

WS supports the use of LPDs for predation management and develops and distributes informational resources for livestock producers and others. Additionally, WS’ National Wildlife Research Center conducts research to identify improvements in the application of LPDs for predator management. For additional information about books and Internet resources that can provide greater detail regarding specific aspects of using LPDs, please refer to the WS contact information presented at the bottom of this factsheet.

LPDs have been used around the world for centuries. Since the 1980s, their use in the United States has increased as more producers are interested in using a wider variety of methods, especially nonlethal approaches.

LPDs are generally large animals (80-120 pounds), often white or fawn colored. Unlike dog breeds used for herding, they are typically independent and less energetic. While various breeds of LPDs exist, some of the more readily known and utilized in the United States include Great Pyrenees, Anatolian Shepherds (Akbash), Komondors, and Maremmas. A report, entitled *Livestock Guarding Dogs: Their Current Use Worldwide*, provides an in-depth overview on a variety of LPDs and can be found at http://www.canids.org/publicat.htm.

Rearing pups singly with sheep from a young age with minimal human contact is probably the most critical ingredient for success, allowing the dog to develop social bonds with the sheep.
Although many LPDs ultimately perform well, it is important to realize that some dogs bred for livestock protection are unsuccessful at repelling predators. In many cases, however, failures can be attributed to improper rearing or acquiring a dog beyond the optimum age for training.

Rearing a Livestock Protection Dog

There are several key points to keep in mind to successfully rear an LPD.

- Select a suitable breed. Evaluate the type of environment where the dog will be working. Some breeds excel in particular situations. Thorough research of breeds suited to local conditions will increase the odds of success. Select a reputable breeder once you have decided on the breed best suited for your needs.
- Rear pups singly from 8 weeks-of-age with sheep. Human contact, while important, should be minimized. Unlike a dog intended as a pet or human companion, an LPD must develop social bonds with the sheep. This is probably the most critical ingredient for success.
- Monitor the dog and immediately correct undesirable behaviors.
- Encourage the dog to remain with or near the livestock.
- Ensure the dog’s health and safety, providing adequate food and water.
- Manage the livestock in accordance with the dog's age and experience. For example, use smaller pastures while the dog is young and inexperienced.
- Be patient and allow plenty of training time. Understand that an LPD may take 2 years or more to mature.

Potential Benefits of Livestock Protection Dogs

Effective LPDs help livestock owners by:
- Reducing predation on livestock
- Reducing labor and lessening the need for night corraling
- Alerting the owners to disturbances in the flock
- Allowing for more efficient use of pastures and potential expansion of the flock

Potential Problems

LPDs require an investment with no guarantee of success. The dogs may become ill, injured, or die prematurely. Some dogs roam away from flocks.

LPDs are potentially aggressive. Some dogs may injure the stock or other animals, including pets. They may confront unfamiliar people (e.g., hikers and bikers) who inadvertently approach the sheep or other livestock; this can be an important consideration for producers who periodically graze livestock on public lands. To reduce conflict, livestock producers should ensure that signs indicating the presence of LPDs are readily visible.

Despite their size and temperament, protection dogs may be injured or killed by wolves.
Livestock Protection Dogs and Other Predator Management Tools

Use of LPDs does not preclude the implementation of other predation management methods. All applied techniques should be compatible with each other. Toxicants are not recommended where LPDs are working. Traps and snares can kill dogs if they are caught and not released in a reasonable period of time. As a precaution, dogs should be restrained, confined, or closely monitored if these methods are being used nearby.

Many factors influence dog effectiveness, but LPDs can be helpful in a variety of livestock operations. LPDs will not solve all predation problems for most producers. Nevertheless, in many situations, they are a useful tool. They can aid in reducing occasional predation and have worked well in both fenced pasture and herded range operations. Their effectiveness can be enhanced by good livestock management and by eliminating persistent predators.

Large pastures (large, open range) where livestock are widely scattered may decrease effectiveness of LPDs. At least two dogs are recommended for range operations or in large areas with several hundred sheep.

LPDs have been shown to be an effective tool in reducing predator conflict from a variety of species including coyotes, black bears, and mountain lions. Successful deterrence of wolves and grizzly bears is less evident. Many LPDs have been killed by wolves. Larger or more aggressive breeds of LPDs can be considered for use in wolf country, but the potential benefits and problems should be weighed carefully, especially on public lands.

Avoiding Conflicts

Many public lands are managed with a multiple-use approach; every year, millions of people enjoy camping, hiking, hunting, mountain biking, and trail riding on these lands. In addition to recreational activities, livestock grazing is also an important activity common on public lands where grazing allotments are administered by government agencies like the U.S. Forest Service (USFS) and the Bureau of Land Management (BLM). Much of the grazing involves sheep, and LPDs are a common predator deterrent. As more people enjoy and utilize natural resources on public lands, the potential for conflicts between people and LPDs increases.

Generally, if a person unknowingly approaches sheep on foot, horseback, or on an all terrain vehicle, an LPD should have time to recognize that the person is not a threat to the livestock. However, a rapidly approaching mountain biker may surprise an LPD and be perceived as a threat. Additionally, hikers with companion dogs may be perceived as a greater threat since dogs are in their company. An unleashed dog encountering sheep will likely be perceived as a predator and may be aggressively confronted by an LPD. LPDs are present to protect sheep, and if a stranger does not appear to be a threat, LPDs will often just watch them pass by.

LPDs are not pets; they are trained working dogs. Feeding or petting them will distract them and may encourage them to approach and follow other recreationalists they encounter.

If you encounter a band of sheep on public land, it is best to alter your route to minimize any contact. If you cannot avoid contact, be sure to:

- Watch for LPDs near sheep.
- Remain calm if an LPD approaches you.
- If you are on a bike, dismount and put the bike between you and the dog.
- Tell the dog to “go back to the sheep” or say “no” in a firm voice.
- Walk your bike until well past the sheep.
- Keep your distance and choose the least disruptive route around the sheep.
- Keep your dog leashed.
When near the sheep or LPD, be sure not to:

- Chase or harass the sheep or dog(s).
- Make quick, threatening movements towards the sheep or dog(s).
- Try to outrun the dog(s).
- Attempt to befriend, pet, or feed the dog(s).
- Allow your dog to run towards or harass the sheep.
- Mistake a dog as lost and take it with you.

Additional Information

Additional information about LPDs can be obtained from local WS offices by calling 1-866-4USDA-WS (1-866-487-3297) or by contacting WS Resource Management Specialist Michael Marlow. The address is: 2150 Centre Avenue, Bldg. B, Fort Collins, CO 80526. The telephone number is: (970) 494-7456.