

Introducing Livestock-Guarding Dogs

Livestock-guarding dogs are one of a variety of tools that sheep and goat producers are finding effective for preventing livestock losses to predators. Guarding dogs are used alone or in combination with other controls to keep predators out of flocks and herds.

These floppy-eared, sheep-sized, sheep-shaped dogs live with the flock day and night. Rarely will a coyote challenge the presence of a dog three times its own size.

For centuries, dogs have been the method of choice for guarding flocks from wolves, bears, and wildcats in southern Europe and Eurasia. Now, this Old World concept in predator control is being adopted by livestock growers across the United States.

In the United States, guarding dogs are used primarily with livestock that have high rates of predation—sheep and goats. Field-testing results group sheep and goats together, and examples that refer to sheep also apply to goats.

A new application is the use of dogs to guard cattle from the endangered timber wolf in northern Minnesota. The potential of this technique with cattle and other livestock appears positive, although results are not yet available.

Positive results in field trials

Controlled field-testing of traditional guarding breeds dates from the late 1970's. Biologists at Hampshire College,



Forming a social bond between sheep and dog is a two-way process. Here a week-old lamb investigates a resting Anatolian Shepherd. Young lambs will often show more curiosity toward a new guarding dog than older ewes will show.

Amherst, Massachusetts, and the USDA Sheep Experiment Station, Dubois, Idaho, are leaders in this effort. By 1984, the results were impressive—65 to 75% of dogs worked to the satisfaction of the cooperating producers.

Livestock growers in at least 35 states were using these dogs, and they reported them to be working equally well with large flocks (1,000 or more) and small ones (100 or less). They worked in range operations and within

fenced pastures. Researchers at Hampshire College are continuing to explore the use of dogs in different management systems.

Hampshire College biologists compared the frequency of attacks reported by producers, before and after getting a dog. On their 1982 questionnaire, with a sample of 158 adult dogs, cooperators reported that 98 of the dogs were with flocks that experienced reduced losses. Of the 75 dogs with flocks that reported frequent attacks (6

or more a year) *before* getting dogs, 50 reduced and 25 eliminated losses to predators.

Researchers at the USDA Sheep Experiment Station reported benefits in addition to reducing predator losses. In a survey of 40 producers, 39 said their dog brought them peace of mind; 24 said they relied less on other forms of predator control; and 21 said the dog eliminated the need for night confinement.

Choosing a dog

Producers in the United States can select dogs from several Old World breeds, including Anatolian Shepherd (Turkey), Castro Laboreiro (Portugal), Great Pyrenees (Spain, France), Komondor and Kuvasz (Hungary), Maremma (Italy), Shar Planinetz (Yugoslavia), and Tibetan Mastiff (Tibet).

Good dogs can be found within any of these breeds because basic behaviors are the same among them. However, differences in temperament can be found between individuals of the same breed—and these differences are greater than those between dogs of different breeds.

When you choose a dog, it's better to ask about bloodlines than to rely on the general reputation of any particular breed. Select a dog from a working line, by leasing or purchasing a dog from a breeder. Some breeders advertise in trade magazines; some offer guarantees.

Behavior and management

A guarding dog must show three basic behaviors to be effective:

1. It must be trustworthy—it must not injure livestock or interfere with routines of feeding, breeding, and lambing.
2. It must be attentive—it must stay very close to its charges.
3. It must be protective—it must bark whenever a predator shows up.

Guarding dogs are docile and inquisitive when approaching livestock. They react to changes in routine, alternately rushing out with threatening barks and then retreating to the flock. Only rarely does a protecting dog fight with a predator.

The behavior of the well-known herding dogs varies greatly from that of guarding dogs. Herding dogs display a predatory pattern of stalking and chasing sheep. A handler moves

the livestock by controlling the direction of the chase.

The two types of sheepdogs—with two different behaviors—can both be valuable assets on the same farm or ranch. They have separate jobs; you use them in different ways.

Training a guarding dog is largely a matter of raising a pup with the stock. Keep in mind that you don't want to make a pet out of a dog you expect to stay out with the flock.

You can start a pup in the lambing barn, or out in a pasture with older stock. The goal of training is that dog and sheep will form a social attachment to one another.

Sometimes, this means confining dog and sheep in a pen where they can get to know one another on friendly terms. A pup that sleeps with sheep and barks at strange activity is on its way to becoming an effective guardian.

Remember this motto: "If the dog isn't with the sheep, it's not where it's supposed to be."

Estimating costs

The cost of a dog depends on your initial acquisition costs (purchase price and delivery), annual maintenance (food and health), and its longevity. In 1984, breeders were asking \$300 to \$600 for puppies. Typical maintenance ranged between \$175 and \$200 a year.

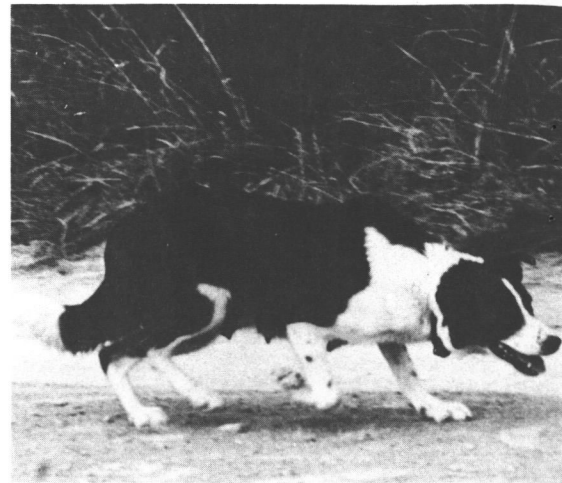
You can figure your own costs by adding acquisition costs to maintenance costs; then divide that total by the number of years of useful service the dog should give you.

Dogs are expected to begin working at about 1 year of age; so years of useful service generally equals actual age minus 1. Figure your cost this way:

1. Add your purchase cost, your puppy year costs, and the total adult cost.
2. Divide this total by the number of years of useful service.

From this formula, you can see the annual cost will decrease with each additional year of ownership. Barring accident or illness, you can expect a lifespan of 10-12 years. However, untimely deaths take their toll during the early years, primarily because of accidents.

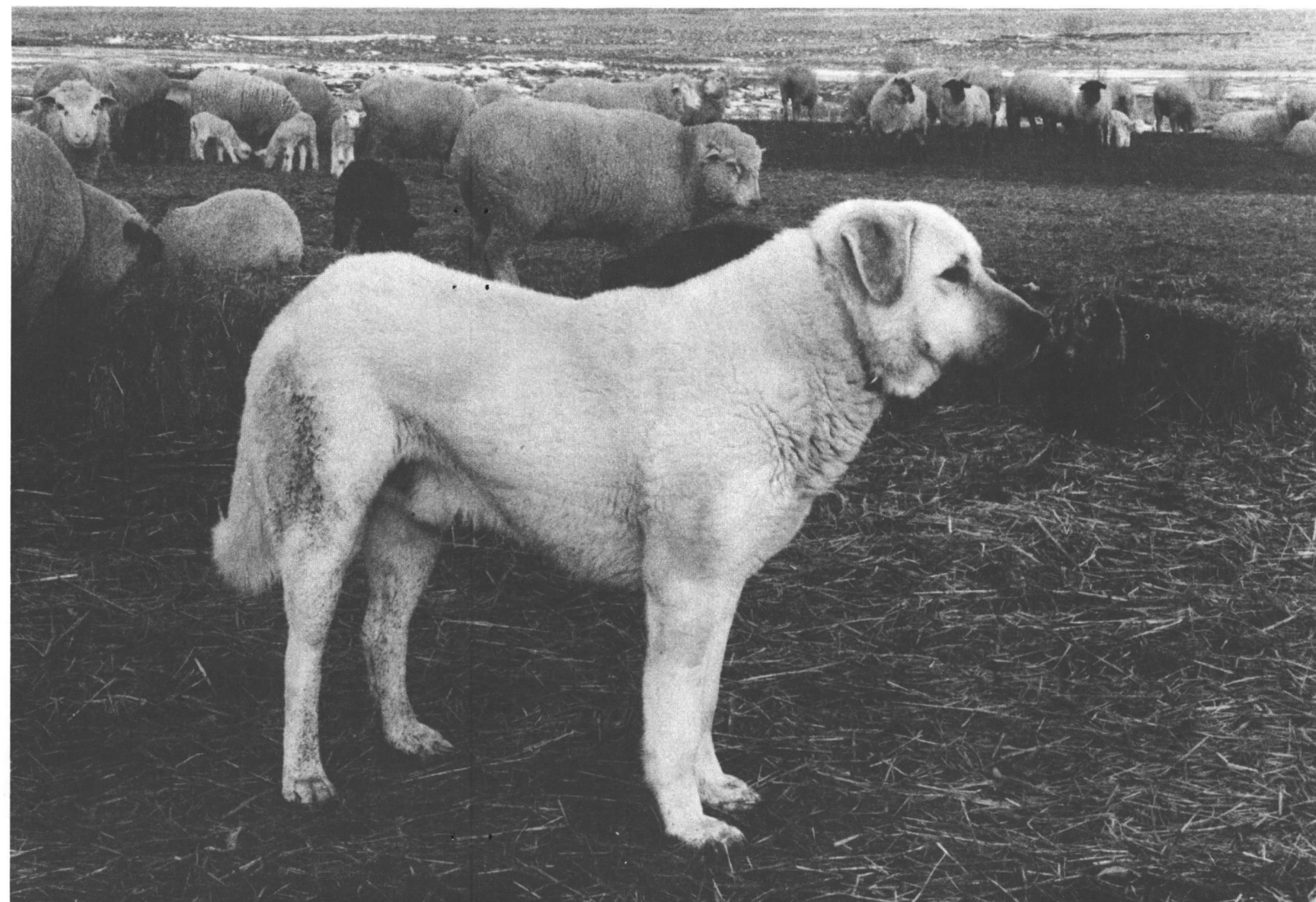
Through age 2.5, 2 of every 10 dogs on the range, and 1 of every 10 used away from the range, dies each year. After age 2.5, 1 of every 20 dogs dies each year. Good management should ensure a long life for all dogs.



Herding dogs, like this Border Collie, stalk sheep in a crouched position. Sheep react by moving away from this predatory behavior. Shepherds control the direction of the stalking movements to guide sheep from one location to another. Photo courtesy Lorna Coppinger.



Many ranchers in the Southwest are using guarding dogs to protect their Angora goats. Two or more dogs may work together where predation is severe. These Shar Planinetz-Maremma crosses enabled this rancher to increase the size of his flock.



An Anatolian Shepherd stands alert with his flock of sheep. The rounded head and floppy ears are characteristic of all the traditional guardian breeds. Males weigh 90 to 110 pounds; females, 75 to 95 pounds.

Current programs

Several programs across the country can provide educational materials and answer questions on the behavior and management of guarding dogs.

The Oregon State University Extension Service is sponsoring a pilot program designed to demonstrate the effectiveness of guarding dogs. An Extension specialist is available to furnish literature, give workshops and seminars, and assist in procuring dogs.

Oregon's program is an outgrowth of the research and field testing at Hampshire College and the 5 years of field trials at the USDA Sheep Experiment Station.

For educational materials and information about where to get a guarding dog, write or phone the nearest program:

Livestock Dog Project
Department of Fisheries and Wildlife
Nash Hall
Oregon State University
Corvallis, OR 97331
phone (503) 754-4531

New England Farm Center
Hampshire College
Amherst, MA 01002
phone (413) 253-7065

Guarding Dog Project
USDA Sheep Experiment Station
Dubois, ID 83423
phone (208) 374-5506

For further reading

Coppinger, L., and R. Coppinger, "So firm a friendship," *Natural History*, March 1980, pp. 12-26.

Coppinger, L., and R. Coppinger, "Livestock-guarding dogs that wear sheep's clothing," *Smithsonian*, April 1982, pp. 64-73.

Coppinger, R., and L. Coppinger, "Livestock-guarding dogs," *Country Journal*, April 1980, pp. 68-77.

Green, J., and R. Woodruff, *Guarding Dogs Protect Sheep from Predators*, USDA Agricultural Information Bulletin 455, 1983, 27 pp. Single copies are available at no charge from: Guarding Dog Project, USDA Sheep Experiment Station, Dubois, ID 83423.



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