THE LIVESTOCK GUARDIAN DOG
An Peischel, PhD
Goats Unlimited
Ashland City, Tennessee

I recently had an individual call and want to discuss the training of livestock guardian dogs. For a while I listened and at the same time, thinking to myself - train ?? - I don't "train", I facilitate success. Everything I do beginning with the selection of breeding stock, whelping, exposure to different classes of goats and topography, to a range of different predators, the situation is managed so each individual pup is given every chance to succeed. Every experience for a pup has to be positive, the pup needs to feel in control, and their intense natural instinct to guard needs to be self-expressed....then, the big day comes when they are sent miles away to guard the goats by themselves; they're on their own. My dogs have never let me down, I sleep peacefully. Goats Unlimited has been fortunate to never have lost a goat to predation with the use of livestock guardian dogs.

Goats Unlimited is located in rolling hardwood hills situated in the northern middle section of Tennessee. Our major predators are coyotes and domestic pack dogs. We do land cleaning and enhancement, restoration of marginal lands and riparian areas and weed abatement with our Kiko meat goats. Our type of business puts the dogs in situations where they could be guarding in a neighborhood type setting with people around or in densely forested areas where they will rarely encounter a human. There are also weather, topographic and vegetation extremes that the livestock guardians learn to survive in.

Breeding Stock: The Pyrenean Mountain Dog and the Akbash

The dogs used for breeding purposes are selected from ranches/farms that are using dogs as livestock guardians. Both the dam and sire of the dogs selected have to be guarding and the physical conditions (terrain, predator type, weather) very similar to ours. The dogs must be physically sound, structurally correct and representative of the breed standard.

The breeds we have selected as livestock guardians are the Pyrenean Mountain Dog and the Akbash. Each breed was selected for specific breed characteristic traits that fit our management program. As you begin the journey of "success facilitation", never lose sight of the fact, and remember that these dogs are nocturnal - so are the predators.

The Pyrenean is mentioned in documents hundreds of years old owing its origin to the plateau of Tibet. It started as one of the Mastiff family and came into Europe overland with the Aryan hordes. Remaining isolated in the Pyrenees Mountains (between France and Spain) for centuries, they guarded the flocks on the high and isolated mountain slopes. They have a natural guarding instinct, protecting with their very lives those placed in their protection. Pyreneans are large and powerful, have great stamina and a coat providing protection from foe and climatic elements. Their air of quiet confidence and tolerance makes the Pyrenean an ideal fit for our management requirements.

The Pyrenean is well suited to the neighborhood land cleaning, restoration and weed abatement projects as project size can vary from 20 to 160 acres. They are more people tolerant, therefore, less aggressive toward humans. For our conditions, their coat protects them from the winter rain, hail and occasional snow. The dogs are expected to find their own shelter and protect themselves from the elements.

The Akbash originated in western Turkey centuries ago for the guarding of sheep. White in color, their shorter length double coat is shed annually. They have a fleet appearance built for speed and stamina (long legs, muscular, strong) with keen eye sight and hearing. They are ideal for forest/brush and rangeland operations. Akbash are more aggressive to predators, have a strong maternal and guarding instinct and a forceful independent nature in their guardian behavior.

The Akbash was chosen to cross with the Great Pyrenean in an effort to reduce the dense coat of the Pyrenean. The hair coat of the cross is much shorter and has proven advantageous in hot, humid climates. The cross is exceptionally athletic like the Akbash yet the personality and the bone structure of the Pyrenean has been maintained. The crossbred guardians have the same black pigmentation around the eyes, nose and mouth as do the originating breeds.

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Whelping and Feeding

We do not breed our guardians until they have proven successful as livestock guardians in their own right, have OFA's (Orthopedic Foundation for Animals) confirming no evidence of hip dysplasia and are at least 2 years of age. Once the dogs are bred, they are maintained on a higher plane of nutrition (27% crude protein and 18% fat) with a vitamin/mineral (especially readily absorbable calcium and phosphorus) supplement given daily. The bred females are used for guarding on acreage close to homebase so they can be monitored daily as whelping day approaches. Approximately 8 days before whelping, they receive a parvovirus and 7-way vaccination. They are whelped out in the brush with the goats. It is up to the bitch to provide a "safe" area for her pups and to guard them. I check them from a distance with binoculars, leaving everything up to the dam. Pyrenean and Akbash pups are born in litters of 5 to 10 with an average birth weight between 1.5 and 2.5 pounds. After whelping, the female receives added nutrition; a cooked meal once daily (cooked meat, a gravy bullion base with suet, supplemental vitamins and minerals, goat milk, and rice). The dog consumes all she wants of this mixture and a high quality dry dog food is provided in a self-feeder free choice.

The pups will be twice their birth weight by day 5 - they grow exceptionally fast and need high levels of nutrients for the rapid long bone growth that occurs. Their eyes begin opening about 12-14 days of age and they are immediately started on warm goat milk. A liquid mineral/vitamin supplement is added to the milk of which the pups can drink all they want - offered 3 times in a 24 hour period. At three weeks of age, the pups start eating cooked food - mashed rice, puppy chow soaked in goat milk, vitamin/mineral supplement. By the time they are 5 weeks old they are chewing on dry dog food but still receiving a cooked meal a day with cooked meat. Once they are 6 weeks old, they are consuming dry food daily and an evening meal of dry food soaked in goat milk with cooked meat. Because this breed of dog experiences rapid bone growth, it is vitally important to provide a balance of calcium, phosphorus and vitamin D3 until about 18 months of age. Between three and six months of age they may grow from 30 to 100 pounds.

Preventative Health Care

At 2 days of age, both the front (single) and rear (double) dewclaws are removed from the Pyrenean pups. The pups receive a parvo virus vaccination at 5 weeks of age, a 7-way vaccination (canine distemper, adenovirus type 2, coronavirus, parainfluenza, parvovirus and leptospira bacterin) at 8, 12, 16 and at 20 weeks of age another parvo virus vaccination. At 12 and 16 weeks of age they receive lyme vaccine and at 16 weeks they are vaccinated against rabies. They begin a life long monthly heartworm prevention program at 3 months of age. Males are neutered at 4 to 5 months of age and females spayed before first heat, about 6 to 7 months of age. All of the dogs, upon reaching one year of age, are on an annual vaccination program for 7-way, lyme and rabies.

Guarding Management

The pups are born within the same time frame as kidding (March/April and October/November) so during any year several litters of guardian pups are born. When pups open their eyes there are many "kid" eyes staring back at them, checking them over. The kids are cautious around the pups and are tolerant when the pups start waddling around, interrupting the kids' nap time. Kidding takes place in solar powered electric fencing (5 to 6 strand polywire or electroneeting) so the pups learn at a very early age where they are to stay. They have a great respect for the electric fence - it only takes one time of contact and their memory is imprinted forever.

The pups need to be COMPLETELY bonded with the goats for them to be successful guardians. I do not pet the pups nor do I let anyone else pet them. They are handled when receiving vaccinations or heartworm medication. The pups will come around and "check in" when someone goes into the pasture to check the goats. The pups' presence is acknowledged with a quick "pat" on the head and they are encouraged to "get back to the goats". Once they are completely bonded, then an extended head pat and neck rub, which is an acknowledgement to them, is given. They are usually about 6 to 8 months old when this begins to happen. However, each pup is an individual, maturing at a different rate than littermates, so take care that they are totally bonded before befriending. And remember, the guardians are for the goats.
Weaning the Pups

Once the pups are 6 weeks old, the extra supplemental meal fed to the bitch is eliminated and she eats dry food only. This initiates the "milk" drying off process. The pups are encouraged to eat more food fed in individual pans and the self-weaning has begun. By the time they are 8 weeks old, they have weaned themselves. We leave the bitch with the pups if self-weaning has been successful. This allows the pups to travel with their mother and start learning the ropes of becoming a successful guardian. Should self-weaning not succeed, the bitch is removed from the pasture, and an older, neutered male is placed with the pups as "teacher/mentor". The pups stay with the kids to weaning; weaning the kids at 3 months of age.

It is now time to introduce the herding dogs (Border Collie, New Zealand Heading dog and Huntaway). The guardian pups are still in the "apprehensive, curious" phase of development so they more readily accept the working dogs. As the goats are moved to different areas to clean brush and browse, the pups are mustered with the goats by the herding dogs. The pups learn to travel with the mob and to not challenge the herding dogs.

The weanoffs are separated into two groups; the doelings (disbudded) and the wethers/bucklings (horned). At weaning, the pups and their "teacher" go with the doeling weanoffs. The pups will stay with the doelings until they are approximately as tall as the doelings. It is important to keep the pups with a group of goats that are just slightly larger than the pups are. This prevents the pups trying to "play" with the goats. When they try to become too aggressive or assertive, the goats are large enough to convince the pups they do not want to proceed with bad actions. Once the pups reach a point where they need to be removed from the doeling mob, they are taken to the wethers/buckling group along with their "teacher". It is also at this time when they learn to eat from self-feeders.

The wethers/buckling mob is physically larger and the bucklings less tolerant of "playful" pups; they straighten the pups out right away. It is at this point in "facilitation time" that the litter of pups is separated. Only 2 pups are kept together with an older (mentor) guardian. When the 2 pups are almost as tall as the goats, they are moved to either a doe mob, or in with a group of yearling bucks. These mobs are each being guarded by a minimum of three experienced dogs. They will stay with this size of goat until they are a year old. But, they will be exchanged every few weeks so that all the pups will be with other mature guardians and other pups. Do not keep the same two pups together. I prefer to only have one pup with other guardians but sometimes we have as many as 10 to 12 pups at a time and it makes logistics difficult. I like my dogs to be able to work together with any dog they may be placed with in the future. They have to be adaptive in acceptance to all livestock guardians and all classes of goats.

Evaluating the Maturing Dog

Up to this point, the maturing dogs have been in an area that has coyotes and domestic pack dogs as predators. They will be in this setting as yearlings. Between one and two years of age the guardians will participate in at least three kiddings. They are observed for their active guardianship of the young kids and does. Their personalities and temperaments are critically assessed. This is a major turning point in time when any guardian not "passing the test" will be culled. At about two years of age, they go into densely forested areas to guard and now in their guarding career will be faced with the possibility of encountering bear. Here they are guarding in higher elevation vegetation; lots of dense brush, blackberries, downed timber (or harvested area) and trees. Guarding in the mountains will round out their guarding experiences and I now consider them mature, experienced livestock guardians. The goats they are guarding under these vegetative conditions are mature wethers and mature does.

It takes time and a sincere effort to facilitate the success of a livestock guardian dog. They will save you many dollars and heartaches. A mature, experienced guardian is irreplaceable and commands respect. Goats Unlimited would not be successful without them. And it is to the "livestock guardian dog" that I am grateful.
Resources List


Border Collies In Action. Dan and Geri Byrne, 3701 County Road 114, Tulelake, CA, 96134.


PREDATORS AND PREDATION MANAGEMENT

An Peischel
Small Ruminant Specialist (Goats)
Cooperative Extension Service
Tennessee State University
and
University of Tennessee
Phone: 615-963-5539

?? WHY ??
? WHY ?

- Long term monetary effect
- Long term herd stress
- Consumption pattern changes
- Effect on guardians
- Human anxiety

the CONCEPT

- respond aggressively to predators
- display instinctive protective behavior
- remain with and respect livestock specie
- posses confidence / power / stamina
- environmental versatility
the SELECTION

- identify type of predator
- climate / topography
- vegetation type
- genetic heritability
Great Pyrenean

- large and powerful
- great stamina
- dense coat
- quiet confidence
- more people tolerant

Anatolian
Akbash

- short length double coat
- built for speed and stamina
- keen eye sight and hearing
- more aggressive to predators
- forceful independent nature

Benefits and Problems of Livestock Guardian Dogs

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R.A. Woodruff
## Benefits and Problems of Livestock Guardian Dogs

**Effectiveness**

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## Benefits and Problems of Livestock Guardian Dogs

**Aggressive to...**

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SELECTION of BREEDING STOCK

- Successful guardian in their own right
- Two years of age

- OFA (Orthopedic Foundation for Animals)
- OCD (Osteochondrosis)
SELECTION
of a
GUARDIAN PUP

- Dam and sire are working guards
- Whelped with livestock
- Raised with livestock
- Facilitated to be successful
- Disposition
Health Maintenance Program
(vaccinations)

- Annual
  - Parvovirus
  - Rabies
  - Lyme Disease
  - 7 Way (canine distemper, parvovirus, canine coronavirus, parainfluenza, adenovirus Type 2 and leptospira bacterin)
- Monthly
  - Heartworm medication

Health Maintenance Program

- Ticks
- Hotspots
- Burrs / Thorns (fibre / feet)
- Teeth
- Ears
- 3rd eyelid
Nutrition

- Feed on behavioral patterns
- Balanced for energy and protein
- Mineral and vitamin supplements
- NO ruminant animal byproducts in diet

Guardian Options