

Livestock Guard Dog Case Study

Jernigan Ranch,
Pecos County

Dr. Reid Redden

Extension Sheep & Goat Specialist
Texas A&M AgriLife Extension

Dr. John Tomecek

Extension Wildlife Specialist
Texas A&M AgriLife Extension

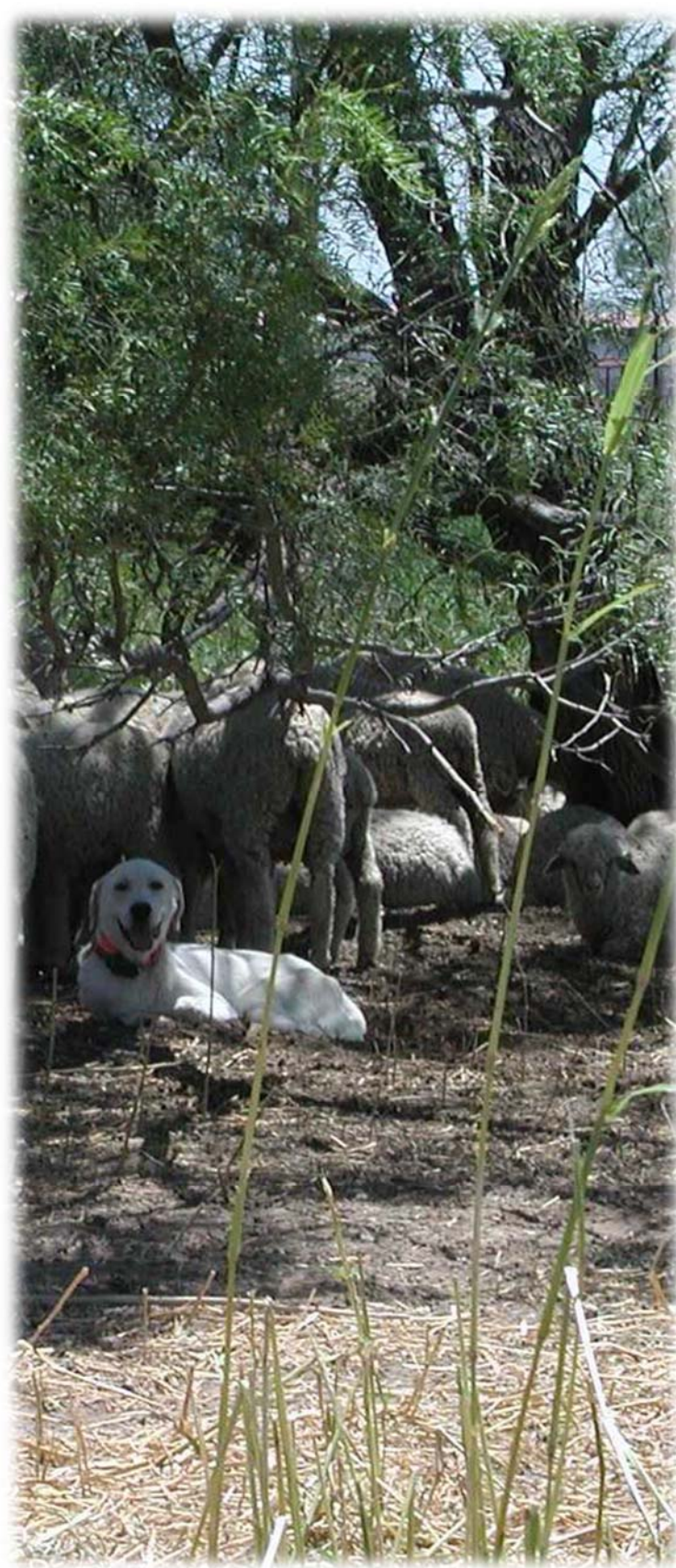
Dr. John Walker

Resident Director of Research
Texas A&M AgriLife Research

Mr. David Disselhorst

Pecos County Agent
Texas A&M AgriLife Extension

*This research was partially funded by the
National Sheep Industry Improvement Center.*



Livestock Guard Dog Case Study

Jernigan Ranch, Pecos County

Scenario

Two pastures (~2,500 acres each) located 30 miles southeast of Iraan, Texas, were used for this project. The pastures are made up of rough terrain with dense brush. These pastures had been stocked with cattle in recent years. Prior to the cattle, sheep were stocked in these pastures; however, they were removed because predation was too severe to justify running sheep. No neighboring pastures have sheep or goats.

Overall Management Plan

Four bonded livestock guardian dogs (5R Stock Dogs, Billings MT) were placed individually into small pens (1/2 acre) with a few ewes and lambs at ranch headquarters near Iraan, Texas. The sheep and dogs remained at this location for a couple weeks. The sheep and dogs were transported to a ~100 acre trap at a site of the project. At this time, there were ~400 head of ewes and most of the ewes had lambs or were pregnant. This flock of sheep was moved from a different ranch to the trap just prior to the start of this project. Within a couple days, the flock of sheep and four livestock guardian dogs were released from the trap to the Western pasture (~2,500). They remained in this pasture from February to August; then were moved to the Eastern pasture (~2,500 acres).

General Observations

The sheep and dogs were checked periodically (weekly); however due to the size of pastures and density of brush, not all sheep or dogs could be observed. The sheep scattered all over the pasture. The livestock guardian dogs were typically seen with sheep but not always. The dogs were seen in all parts of the pasture. They were seen together and individually. The location of one dog during a 60 day period in the ~2,500 pasture is shown in the Figure 1 (following page). As can be seen, the dog covered the entire pasture during the 60 day period and his activity was concentrated on the perimeter of the pasture.

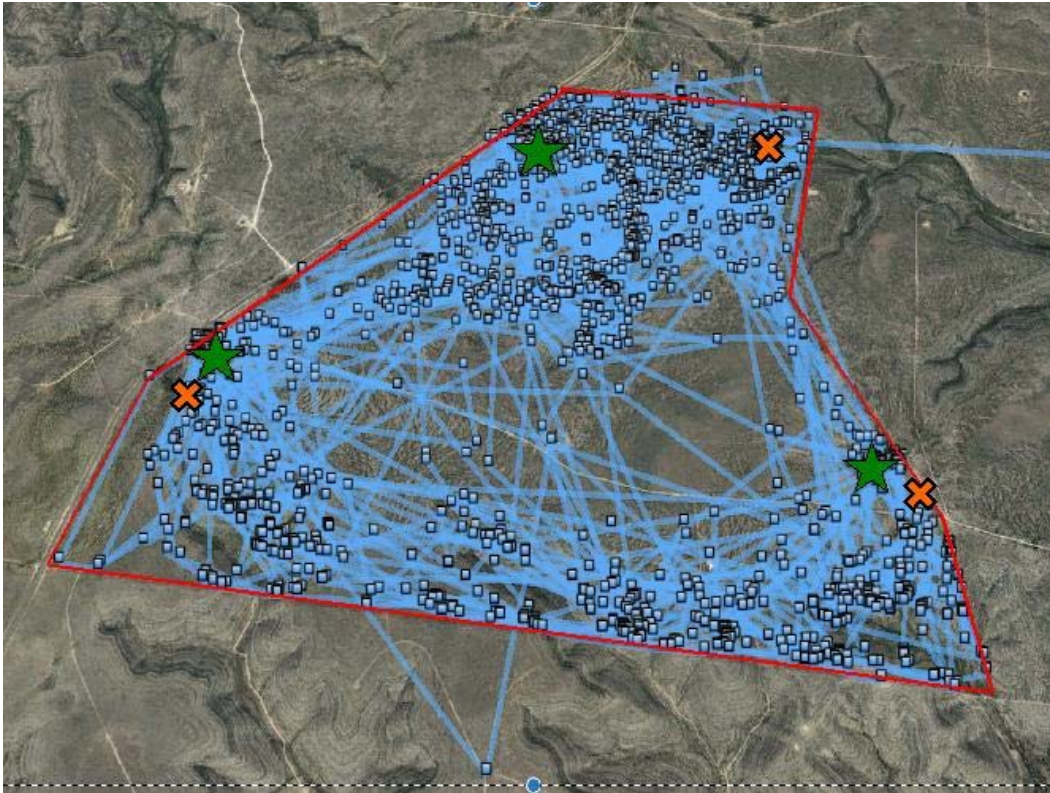


Figure 1. Hourly GPS locations of a dog in the ~2,500 acre pasture during a 60 day period. The red line is the pasture boundary, the green stars are locations of dog feeders, and the orange crosses are general locations of game cameras.

Guard Dog Movement _____

At minimum, the LGD travelled an average of 3½ miles per day. This was determined by measuring the distance between points taken every hour. Its home range was calculated to be 1,265 acres. Home range was determined by assessing where 95% of the GPS points were located.

Predation _____

Due to the terrain and size of the project, it is impossible to know exact predation rate. In July, three lamb kills were found that were attributed to coyote predation. Shortly thereafter, a coyote was snared and no more predator kills were found.

Camera Trapping

Two game cameras were put out for one month quarterly during the year. They were checked weekly. Locations were selected that were likely to catch predator movement, along roads, near water sources, etc. Deer were the most common species and no pictures of coyotes were taken, as shown in Table 1.

Table 1. Wildlife detected with game camera survey.

	Winter	Spring	Summer	Fall
Coyote	0	0	0	0
Bobcat	1	0	0	0
Red Fox	0	0	0	0
Grey Fox	2	1	0	1
Feral Swine	0	0	0	0
Deer	3	2	5	3
Turkey	0	1	0	0
Javalina	1	1	1	2
Raccoon	1	0	0	2

Lamb Crop

An accurate annual lamb crop is difficult to measure within this management system. This is for two reasons: 1) ewes of unknown pregnancy status were released on a new pasture, and 2) rams are left out year-round and lambs are weaned/sold multiple times per year. In April, 189 lambs were weaned and sold. In August, 109 lambs were weaned and sold. At the conclusion of 2016, an unknown number of lambs remained on the ewes. Ranch management estimated a 70% lamb crop sold in 2016. This is a drastic improvement from an estimated 25% lamb crop weaned prior to sheep being removed from these pastures.

Problems

The livestock guardian dogs are difficult to catch. Two of the dogs can be penned with the sheep and caught in the working pens. Two of the dogs will hide in the brush and cannot be caught. The dogs did not adjust to eating from self-feeders and the lack of dog food intake during the first few months was concerning. Feeders were placed in two locations: one near the trap where they were released and one near a centrally-located water source. One of the livestock guardian dogs went missing shortly after they were released into the pasture. A replacement dog was relocated to the pasture in April.

Question and Answer

- **What were the most positive benefits of the program?**
The dogs are working in large range pastures. And they stayed at home.
 - **What was the greatest challenge with the program?**
The dogs did not eat well. It was hard to notice any disappearance of dog food. It makes it hard to manage them if you cannot catch them.
 - **What are your plans for the future related to guard dogs?**
I plan to continue with current plan of livestock guard dogs and consider adding a dog in the next few years to the current dogs.
 - **What would you have done differently?**
Exposed the dogs to people that were horseback prior to release. The dogs were afraid of us when we gathered on horseback.
-

