Livestock Guard Dog Case Study

Lewis Ranch, Val Verde County

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Scenario

A ranch near Del Rio, Texas, was used in this project. The ranch consists of two dozen large pastures that are all within a contiguous area. The pastures are moderately rough with heavy brush density. In recent years, predators have been an increasing problem. Dogs were placed in a perimeter pasture that had predation problems the previous year.

Overall Management Plan

The ewes just started lambing before the start of the project. A dozen ewes and a few lambs were gathered in a water lot (2.5 acres). Four bonded livestock guardian dogs (5R Stock Dogs, Billings MT) were placed with the ewes and lambs. Three of the dogs were released into the ~800 acre pasture the next day with 250 ewes. Two dogs had to be removed. One dog remained in this pasture with ewes and lambs until weaning time. The other dog relocated to another pasture. Two more dogs were placed at the ranch in May. They were kept in a small trap for a couple weeks. One of the dogs was then placed with a group of 600 finewool ewes and the other was placed with a small group of black-faced ewes.

General Observations

The sheep and dogs were checked every couple days or when possible. Due to density of brush and terrain, it was impossible to view all sheep and dogs. One dog stayed in the original pasture with the sheep and was not reported to leave the area. This dog was relatively friendly and easy to catch; however, is not well bonded with the sheep. During the day, it stays at the ranch headquarters and at night it roams the pasture. The second dog that remained from the original placement fled the original pasture and was placed with a group of ewe lambs. It then left the ewe lambs and bonded with a group of ewes lambing in a nearby pasture. One of the dogs that were placed in May bonded to a group of ewes and is normally seen the pasture with them. This dog's movements were tracked with a GPS collar. The second dog placed in May is not seen with sheep very often. It is often seen at a second ranch headquarter site.
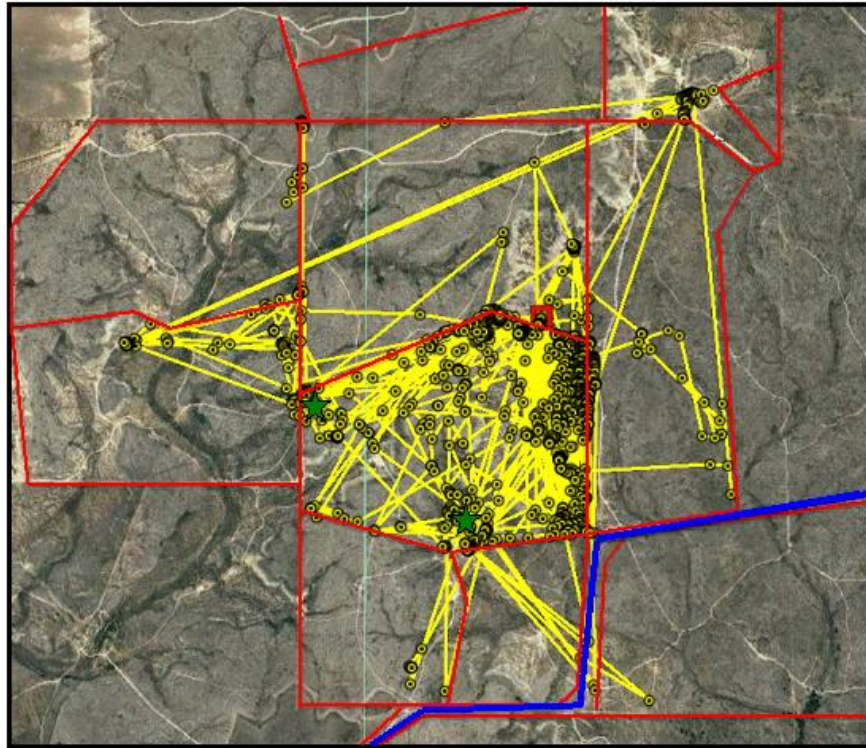
Figure 1. The map contains the hourly GPS locations of one dog during a 45 day period in late fall. The red lines are the pasture fencelines, the green stars are locations of dog feeders, and the blue line is a paved Farm-to-Market road. The pasture in the center of the map with the guard dog feeders is 741 acres.

Guard Dog Movement _____

At minimum, the LGD travelled an average of 3.3 miles per day. This was determined by measuring the distance between points taken every hour. Their home range was calculated to be 909 acres. Home range was determined by assessing where 95% of the GPS points were located.

Predation _____

Two lambs were killed by one of the livestock guardian dogs in the water lot. A couple more newborn lambs were found dead in the pasture and had been scavenged by the two of the dogs. CaraCara were present in the area and were likely killing newborn lambs, therefore it is unknown what killed the lambs. Multiple coyotes were trapped on the ranch and neighboring ranches during 2016. It is a growing problem for this ranch.

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. A few known predators were caught on camera in the spring.

Table 1. Predators detected with game camera survey.

	Winter	Spring	Summer	Fall
Coyote	0	2	0	0
Bobcat	0	1	0	0
Red Fox	0	0	0	0
Grey Fox	0	2	0	0
Feral Swine	0	0	0	0

Problems

Within a few hours of placing the dogs with the sheep, two of the lambs were killed by the dogs. They had eaten the umbilical cord and opened up the abdominal cavity. Dogs were separated from the sheep for the remainder of the day. The dog suspected of killing the lambs was removed. The following morning the remaining three dogs were returned with the ewes that did not have newborn lambs. They stayed with the sheep for most of the day. Prior to nightfall, the dogs and sheep were turned out to a ~1,000 acre pasture with the rest of sheep. Not long after, two of the dogs were accused of killing lambs. The dogs were very afraid of people and they could not be caught or gathered into a pen. One of the dogs was captured by running it down on horseback and cornering it in very thick brush. (*As a side note, this dog was relocated to a new ranch and has turned out to be a very effective guardian dog).* The second dog fled the pasture. It was spotted in various pastures over the next month. It did bond with a group of sheep and was working well. However, it went missing in late spring and has not been seen again. The dog that remained in the original pasture was very protective of the dog feeding station. It would not let sheep drink from the water trough because it thought they were trying to get into the dog feeding station. The dog feeding station was moved away from the water source, which remedied the problem. Raccoons are thought to have become a problem and are consuming dog food.

Lamb Crop

In both pastures that had a livestock guard dog present during the lambing season, no lambs were lost from marking (February) to shearing (April). On average, other pastures that did not have a guard dog present reported 10% lamb loss from marking to shearing. Weaning occurred in May. However, multiple pastures were combined, making it impossible to determine weaning rates within each pasture.

Question and Answer

➤ **What were the most positive benefits of the program?**
We saw a definite positive impact on lamb crop from the guard dogs. Increasing lamb crop is the goal and has the most impact on our bottom-line. We learned that dogs have different personalities and understand that we have to manage around this.

➤ **What was the greatest challenge with the program?**
We started the program at the worst time. Keeping the dogs fed was a challenge and varmints are starting to be a problem with the feeding stations. Tracking the dogs and knowing where they are was a major problem.

➤ **What are your plans for the future related to guard dogs?**
We got some Llamas to see how they would work in our situation and how they will work with the guardian dogs. We are interested in getting another dog or two in the spring. But we are waiting to see how this lambing season goes with the dogs that we have.

➤ **What would you have done differently?**
We would've started the program in May to allow six months to acclimate the dogs to the ranch, plus allow time for us to get to know and trust the dogs before lambing. This would also enable us to leave the dogs in a small area for a longer period of time before releasing to the pasture.