

TRUE COSTS OF VIRTUAL FENCING GUNNISON COUNTY

Kaden Robbins

Project Mentors:
Hannah Cranor-Kersting
Retta Bruegger
Franklyn Garry
John Ritten
Robin Young

PROJECT INTRODUCTION

Virtual fencing technology is a new management tool increasingly being implemented in cattle ranches across Colorado. The technology is equipped with a tracking system that allows ranchers to locate their cattle while also keeping cattle virtually contained within a desired area when functioning properly. The alternative is traditional hard fences used by the majority of ranchers involved in beef production. These fences require yearly maintenance which demands an abundance of time and materials. Virtual fencing isn't cheap either and introduces distinctive issues and labor requirements.

When comparing the costs of these two forms of fencing there are countless variables to consider aside from their face value costs. Some of the variables to consider are the producer's time, land health, and overall sustainability of the operation.

PROJECT GOALS

Goals for the Internship

The goal for this internship was to reach an honest conclusion about the costs of virtual fencing technology as seen through the eyes of Colorado producers. An understanding of how the costs of these two forms of fencing compare makes it easier for producers to decide whether or not such a change is necessary and feasible for their operation.

Goals as a Student

My goal as a student of agricultural science was to expand my understanding of new technology and equip myself for an ever-evolving industry. I hoped to achieve this by talking with producers and building relationships that could broaden my knowledge, so I could later communicate my findings to those unable to conduct the necessary research.

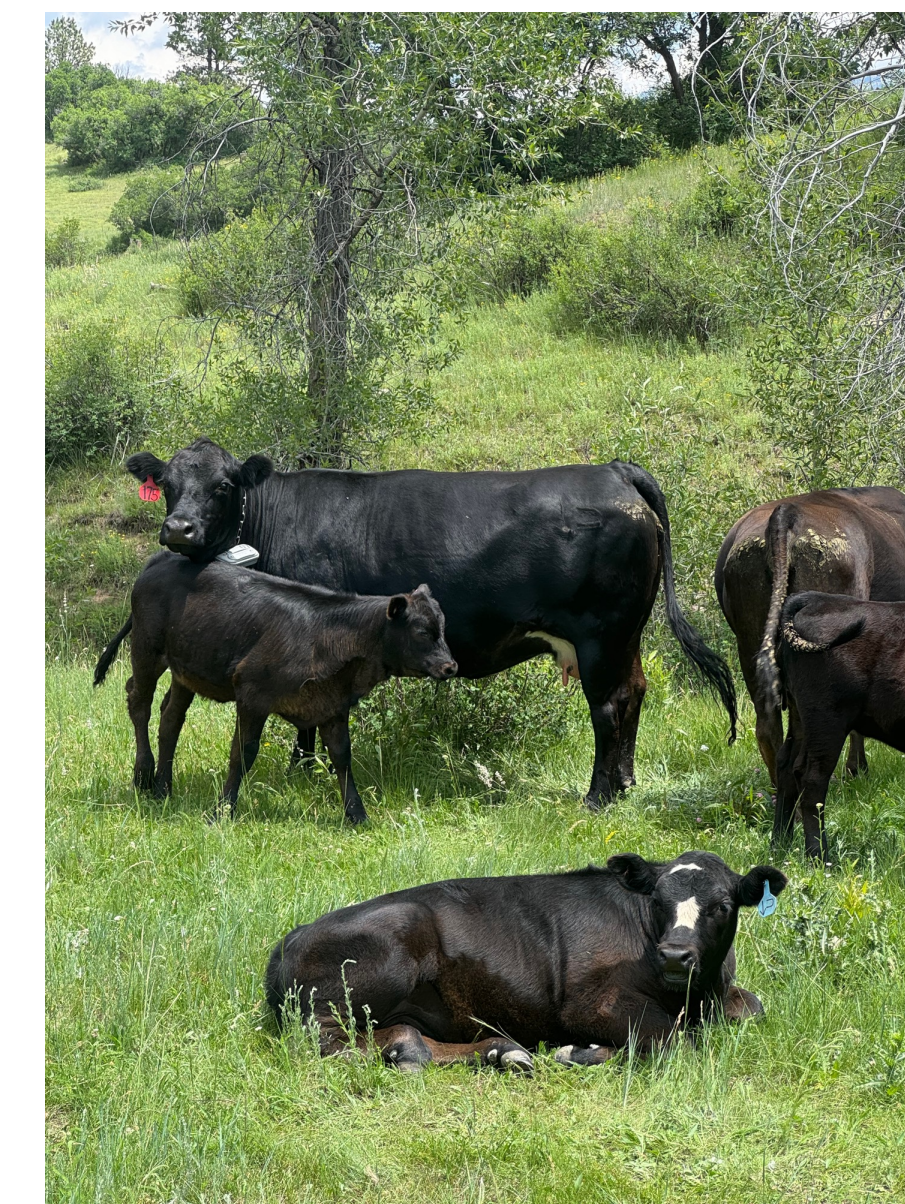
HOW THIS APPLIES TO MY EDUCATION

My fondest memories growing up are those associated with our family's ranch and the lessons I learned caring for the land and animals. I knew I wanted to dedicate myself to our ranch, however, this dream expanded to include the entirety of the agricultural industry. This goal led me to CSU to pursue an education in agricultural science with a focus on agricultural business. While attending CSU I was eager to work with producers and learn more about the future of the industry. This internship focused on my area of study while also fulfilling my desire to help producers.

MY RESEARCH EXPERIENCE

Secondary Research

My main job when researching the true costs of virtual fencing was to meet with producers in various parts of Colorado totaling 4 counties and 6 towns. While meeting with these producers I was privileged to get a glimpse at how their cattle are managed with the system.



Primary Research

Another portion of my research included working closely with the Reddens, a ranching family in Gunnison County, who were new to the system. To make myself most useful I learned the computer side of things as best I could, and closely studied the range both in person and virtually. My time spent managing the Reddens herd via virtual fencing technology gave me an unmediated experience of both the benefits and costs associated with this management tool.



PROJECT FINDINGS

This is a new era of management

- More time and labor in the spring to collar cattle.
- Requires pre-planning before moving cattle while collared.
- Continuous learning of the online platform is required.

The technology is still improving

- Hard fences are still a necessity.
- Batteries need to be replaced every year.
- There is no mobile form of the online management system.

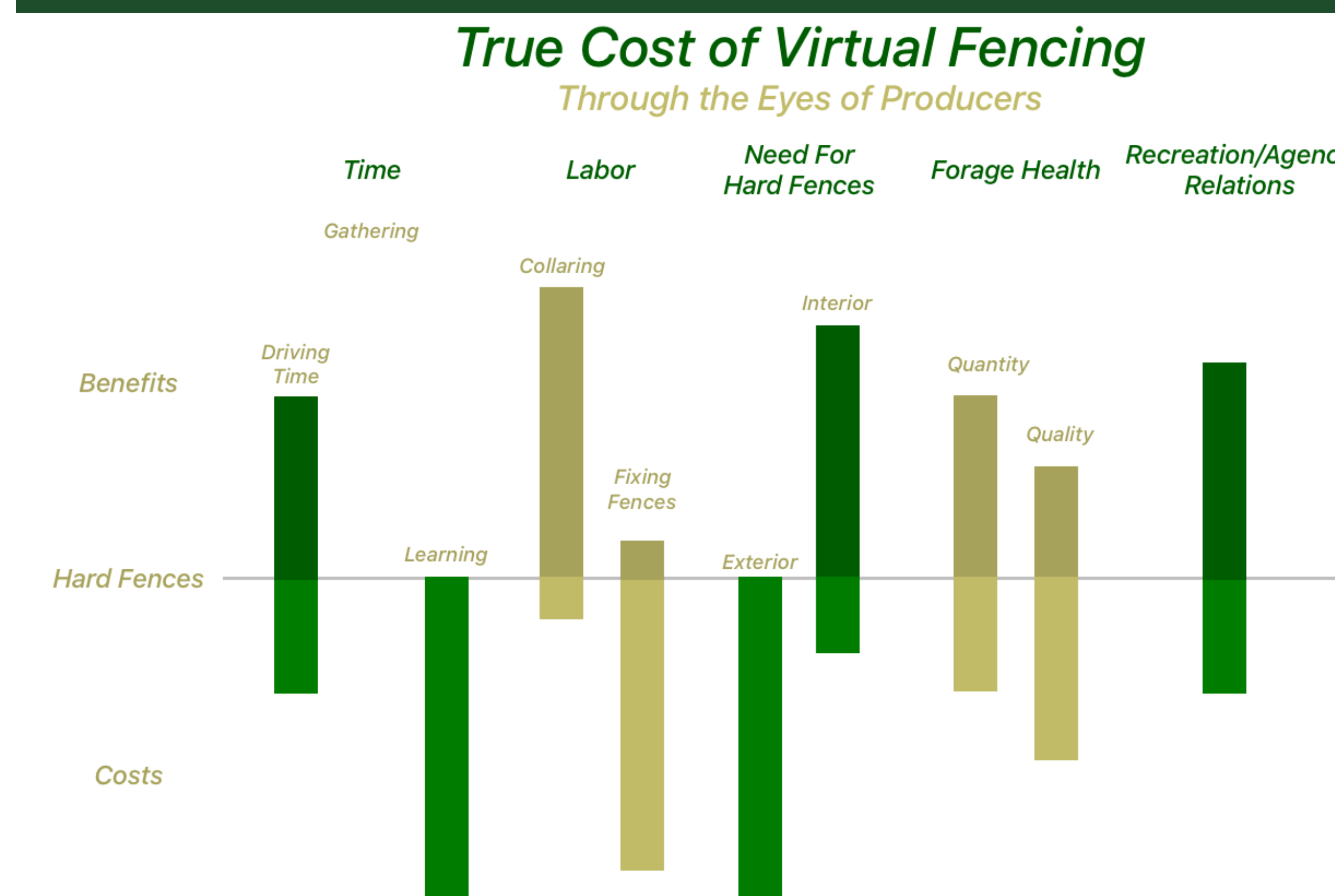
Modern conditions require outside funds

- The vast majority of ranchers would not be using this technology if they didn't have help from grants and the NRCS.
- Those without help see it as a temporary tool.

The future is bright for VF technology

- Allows for a more in-depth analysis of cattle grazing habits.
- Increases precision when grazing cattle.
- Can prevent death by poison.
- Significantly decreases time when gathering and locating cattle.

Table 1. Producers' Experiences with Virtual Fencing



NEXT STEPS

With the agricultural industry constantly changing it is important for producers to always be looking for technology that can improve their operation. Virtual fencing is a promising management tool that should be further developed. In the mountains of Colorado, virtual fencing is not an easy sell; however, once the technology is more widely available and costs decrease this tool will be implemented on most ranches.