



**So you want to
build a
biodigester...**

RIMROCK CATTLE COMPANY LTD.

About Rimrock Cattle Company

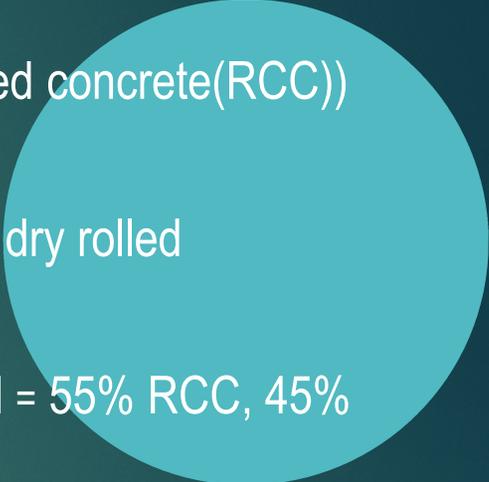
- ▶ Introduction to Rimrock Cattle Company -operations
- ▶ Manure management in the feedlot : What do we do different?
- ▶ Biodigester – adding value





1. Introduction

- ▶ Rimrock Cattle Company previously known as Korova Feeders(Acme) & Rimrock Feeders(High River)
- ▶ Korova Feeders and Rimrock Feeders- Family-owned operation (Price Family from Acme , Ab)
- ▶ Rimrock Cattle Company was founded in 2022 when Korova Feeders, Rimrock Feeders and Tidewater Renewables formed a partnership
- ▶ The 2 companies entered a strategic renewable natural gas and livestock partnership
- ▶ The partnership creates alignment between Tidewater Renewable and RCC securing feedstock supply and allows each party to focus on their core competency

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- ▶ Three feedlot locations with total standing capacity of 78 000 hd
 - ▶ Feedlot has 2 types of pen surface- clay based & rolled compacted concrete(RCC)
 - ▶ RCC- mixture of cement powder, gravel, activating agent, water – dry rolled
 - ▶ High River site =100% RCC, K2 =100% RCC & Korova West yard = 55% RCC, 45% clay pens
 - ▶ Layout cost of RCC initially is high- payback through benefit in 7-10 years

The Challenge

- ▶ Company-wide we are dealing with over 150,000 MT of manure/year
- ▶ There are different ways to record manure management
- ▶ Production cost
- ▶ Prepaid fertilizer
- ▶ Depends on if custom or done by your own team
- ▶ The cost of dealing with manure is between \$0.05-0.10 per head day

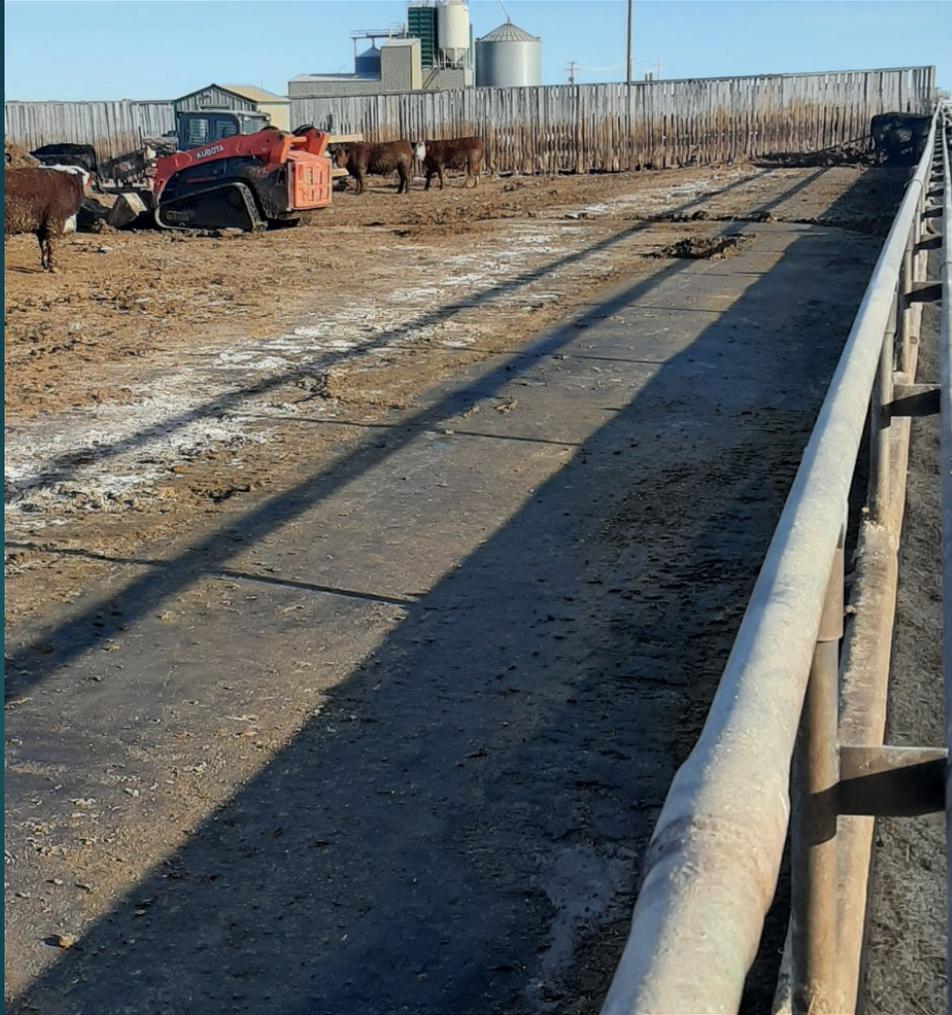




Our Situation

► Importance of Rolled Compact Concrete

- lower maintenance costs
- improve cattle performance through better pen conditions
- added benefit has been a noticeable improvement in manure quality. No rocks, no clay, and no wood.
- Need to balance between nutrients that your land will take and be able to turn into crop production
- Neighbours are an important resource for additional acres to take manure
- Many benefits to the land with organic material
- Recent prices of synthetic fertilizer has created demand for manure from neighbours



Manure Management

WHY?

Prevent mud events - hinder performance and profitability of cattle

Every 4-8 inches of mud - decrease gain by 15%

Manure build up close to feedbunks- hinders access to feedbunks

Manure from the yards serve as a source of plant nutrients for our annual crops.

Manure is a valuable source of N,P,K and S

The concentrations of these macro nutrients can vary – influenced by diet, type of bedding, location of the yards and method of your manure handling

RCC pens makes for a more consistent product- no clay contamination.

Manure Management

- ▶ Some of the drawbacks to current manure management
- ▶ Manure that we haul tends to be about 35% DM, hauling a lot of water
- ▶ Cost of hauling that much water limits the effective distance you can haul
- ▶ Limited to spreading in spring and fall
- ▶ Odour complaints by neighbours where manure is spread





▶ What if we could take manure management from a cost of doing business to cost neutral to potentially becoming a revenue source?



Renewable Natural Gas

- ▶ On farm bio digestors are not a new idea
- ▶ Many successful projects in Europe
- ▶ Dairy industry has been quicker in adopting this model, but there are some advantages they have
- ▶ Previous attempts to build digestors at open pen lot feeding sites, but have not tended to be successful
- ▶ Significant capital outlay required to build a large-scale facility



Making it a reality

Advantages to this project:

- ▶ Feedstock quality from RCC pens
- ▶ Proximity to off-farm organics
- ▶ Government support for renewable energy and climate change mitigation
- ▶ Energy companies' requirements to offset production with carbon credits

Getting started



- Looking at existing operations

- Learning from those with experience

- The need for a partner with the technical experience to navigate the process of permitting and production

- Working with the government and regulators

Opportunities

- ▶ Currently awaiting regulatory approval
- ▶ Site preparation completed
- ▶ Final design is close to completed and depends on conditions of approval
- ▶ Agreement for sale of biogas production
- ▶ Digestate will continue to be used for land spreading and liquid to be re-used and injected into cropland
- ▶ Ability to potentially haul digestate further distance because of lower water content
- ▶ Potential for additional outlets for digestate



Questions?

