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The Role of Beef Cattle in Regenerative Agriculture

Introduction: Every day, new headlines speak to the negative environmental impact of cattle and our need to replace them in our food system. After reviewing scientific literature, and gaining insight from beef cattle producers and extension agents, I found a different story which I will share now.

The Truth of Methane

Because grazing cattle can sequester carbon, reducing the carbon footprint of beef does not require removing cattle, but instead better managing pastured cattle.⁵

Cattle do emit a small amount of enteric methane, which is a part of the biogenic carbon cycle.

In grazing rangelands, it is possible for up to 268 pounds of carbon to be stored per acre per year.⁴

Regenerating Soils

A 1% change in soil organic matter across ¼ of the world's land area could sequester 300 billion tons of physical CO₂.³

Improved soil organic matter increases the resilience of the soil.²

Through increased infiltration and water holding capacity, the soil has increased resistance to drought and other tumultuous weather patterns.

By increasing the nutrient holding capacity of soil, it becomes more cost effective for farmers while protecting water from leached nutrients.¹

Protecting Pastures

Planned grazing protects pastures from overstocking and overgrazing which would otherwise lead to bare ground.

Consistent ground cover maintains wildlife habit to promote biodiversity while also preventing the release of carbon.

Grazing cattle provides an economical way for ranchers to manage their grasslands while protecting native species and pollinator habitat.

High intensity, short-term planned grazing can:

- increase soil organic matter
- efficiently utilize available pasture
- improve pasture
- enhance weed control⁶

Integrating Enterprises

By grazing pasture, cattle stimulate the regrowth of grasses while add microorganisms back to the plants through their saliva, promoting soil health.

Once consumed, forages are recycled by the cattle and returned to the ground as nutrient-rich fertilizer.

Grazing cattle on cover crops can increase the economic value of both operations simultaneously.

The Modern Meat Customer

The next generation of consumers want different things than their parents:

- Sustainability
- Transparency
- Storytelling
- Genuine connections with producers

By sharing the stories of our sustainable practices, working to improve our lands, taking care of our animals, and being transparent with our consumers, we can meet the expectations of our consumers while raising beef cattle and caring for the environment.

Conclusion: Cattle are an asset to regenerative agriculture systems as their emissions are more than compensated for by the carbon sequestered in a well-managed grazing system. Further, their contributions to soil health and biodiversity can not be overlooked.

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