

Circular Ranching: A Sustainable Approach to Land Management

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Introduction

- Throughout the United States, industrial agriculture has created a set of traditional methods used to raise beef cattle. These traditional methods have large adverse effects on the environment as well as profitability (Windh et al., 2019; O'Connell, 2023).
- Compared to the average US beef supply chain producer, non-traditional suppliers utilize holistic management practices that have been identified as benefiting the health of cattle, improving water quality, increasing stocking density, and enhancing native plant recovery (White, 1991; USDA, 2020).

Purpose

- This study examines the intersection of profitability and sustainability of traditional beef cattle operations compared to a holistic non-traditional beef cattle operation.

Methods

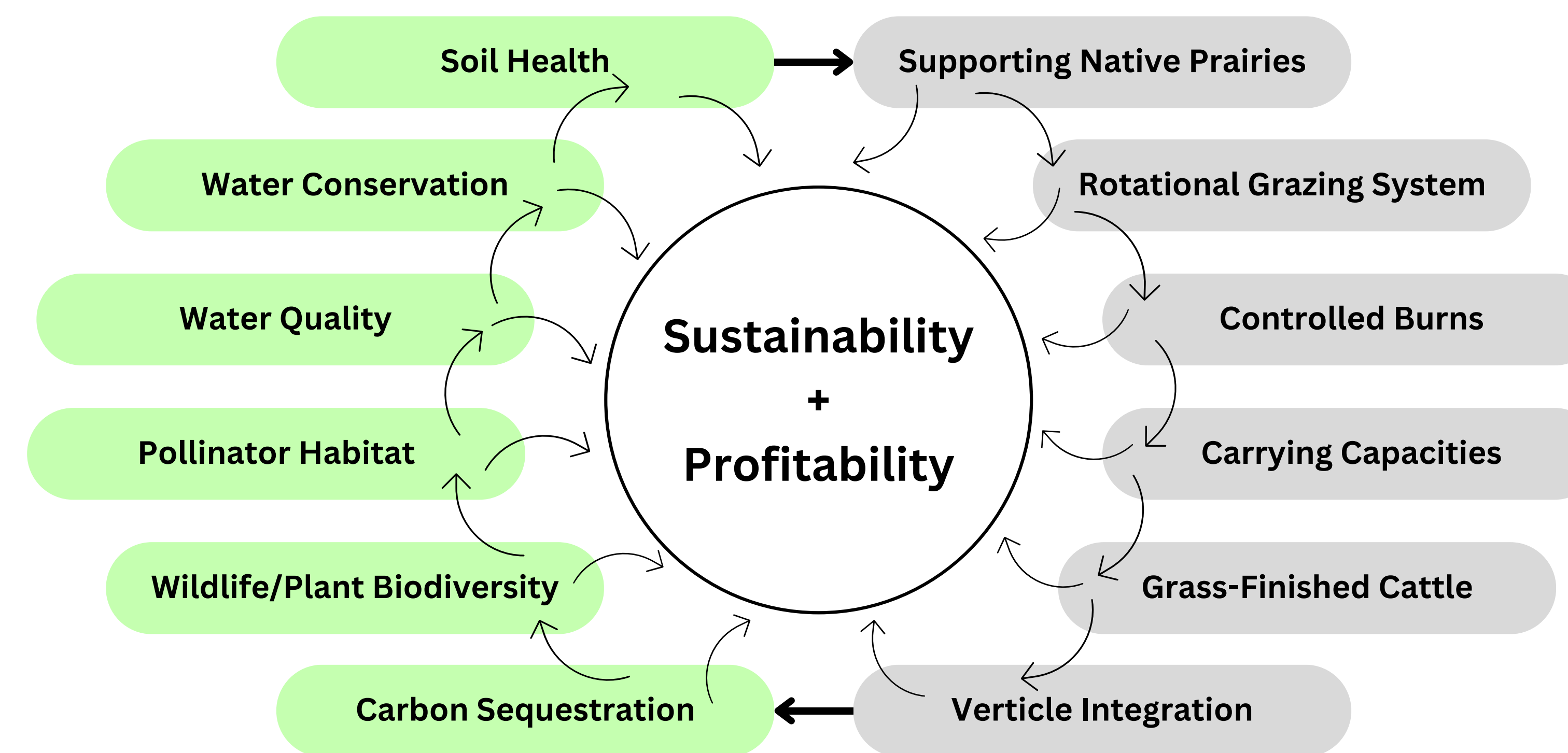
Single case study:

The examined holistic non-traditional beef cattle ranch is a direct-to-consumer, grass-finished beef cattle operation located in the southwestern United States. The case study ranch was purposely selected based on the set of holistic management practices that are utilized within the operation's business management plans.

Data sources:

- Interviews with a holistic non-traditional beef cattle rancher, a ranch management subject matter expert, and a local ecologist from the Botanical Research Institute of Texas
- The ranch's historical management documents, soil reports, and botanical reports
- Government documents

Results



Circular Ranch Management Techniques/Grey points are holistic management techniques leading to positive environmental impacts, which are the points in green. All of these play a part in the sustainability and profitability of the case study ranch.

Traditional Supply Chain



Non-Traditional Supply Chain



Traditional Versus Non-Traditional Beef Supply Chain /Traditionally, after concentrated feeding, cattle are sold to the packing plant on a grid price. Then they are sold in boxed beef cuts to the wholesaler and/or retailer to reach the consumer. In this case study's non-traditional model, the producer retains ownership through finishing, processing, pricing, and sales to the consumer.

Discussion

- Based on the results from this case study, holistic non-traditional ranching management practices were both sustainable and economically profitable for the producer.
- Circular ranch management techniques have positive environmental impacts through their improvement of the land. This in turn increases the profitability of the ranch itself because the land used to produce is performing at a higher capacity.
- The case study's supply chain to the consumer is vastly different from traditional methods route. Rather than cattle being sold to the processing plant, this producer maintains ownership all the way through retail. This is beneficial because it allows the rancher to control his pricing mechanism through proprietary price discovery, therefore allowing him to capture more value and profit on his beef products.
- While the management methods from this case study are used by a beef cattle rancher, these practices may be transferable to additional grazing producers and land managers in the United States and around the world.

Limitations

- Due to the case study design, the results from this study are not generalizable. Additional research is needed in the field of agriculture to provide further insight into the applications of holistic ranch management practices.

References

- O'Connell, Megan, and Botanical Research Institute of Texas. *Fort Worth Prairie Phenology Data*. 6 Mar. 2023.
- USDA. "Water Quality Practices and Resources." *Farmers.Gov*, 25 Sept. 2020, <https://www.farmers.gov/conservation/water-quality>.
- Windh, Jessica, et al. "Economic Cost Analysis of Continuous-Season-Long Versus Rotational Grazing Systems." *Western Economics Forum*, vol. 17, no. 1, Apr. 2019.
- White, Larry, and C. Wayne Hanselka. "Prescribed Range Burning in Texas." *Texas Agricultural Extension Service*, July 1991, https://tpwd.texas.gov/publications/pwdpubs/media/pwd_bk_w7000_0196.pdf.

Acknowledgments

