Project Summary

Building an Analytic App for Arm-Chair Ranching

Institution: University of Alberta

Primary Investigator: Graham Plastow Co-PI: David Wishart

Term: 2021 - 2024 Funding: $481,000 from Alberta Innovates

Background: Production efficiency has never been more important for the beef industry. There is an increasing demand for sustainable high-quality beef, taking place against climbing input costs and greater extremes of climate, with a declining number of producers. Big data and digital technologies are transforming many aspects of the agri-food sector leading to more sustainable, efficient, and profitable farms. However, the beef industry has lagged in the adoption of such digital innovations. Beef ranchers require a tremendous amount of skill, experience and knowledge, but they lack analytic tools to support their daily decisions. Instead, they must use their intuition to predict, forecast and plan scenarios. There is a need for an innovative solution to aid producers with their decisions to help improve the competitiveness and sustainability of the beef industry.

Goal: to add value to on-farm and industry data in one easy-to-use app to support producer decision-making for their operation from their "arm-chair"

Objectives: to develop a comprehensive, user-friendly mobile app called "Arm-Chair Rancher" with input from an industry advisory group

1) Develop an Alberta Beef Industry Database, combining all relevant beef industry data
2) Use machine learning to provide guiding scenarios, recommendations and predictions to improve farm efficiency and profitability
3) Incorporate existing farm data collection methods/software for producers to gain farm-specific recommendations and predictions
4) Minimize financial risk for beef producers while reducing costs and maximizing efficiency, sustainability and profitability

Benefit: The successful implementation of this technology could save time for herd management and increase productivity from more intelligent, data-driven decisions. Commercial uses of Arm-Chair Rancher could lead to improved feeding practices, improved feed efficiency, smarter culling decisions, and better breeding choices for economic return, all of which could lead to multimillion-dollar savings and/or improved efficiencies. This innovation could improve the competitiveness of Alberta ranching and help retain jobs and support the rural economy.

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