Decision Making Tools: BeefTracker Mobile App for Tracking and Analysis of Beef Herd Pasture Use and Location

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Abstract

Beef Tracker is a web-based mapping platform that provides beef cattle ranchers a tool to demonstrate that cattle production fits within sustainable ecosystems and to provide regional data to update beef sustainability lifecycle analysis. After digitizing pastures, herd data (class and number of animals) are input on a mobile device in a graphical pasture interface, stored in the cloud, and linked via the web to a personal computer for inventory tracking and analysis. Pasture use calculated on an animal basis provides quantifiable data regarding carrying capacity and beef production. This data is sought by the National Cattlemen’s Beef Association to provide more accurate inputs for beef sustainability lifecycle analyses. This application is a useful way for large, complex ranching operations to have all employees remain informed as to cattle movements and ranch wide improvement projects. Better yet, as users make changes to their operation in BeefTracker, histories are automatically recorded and stored in the cloud. After initial testing by university range scientists and ranchers, we have enhanced the BeefTracker application to improve automation for increased ease of use. The following have been added: ability to access and edit the BeefTracker livestock inventory while disconnected from WiFi and cell service, ability to represent portions of a pasture in BeefTracker as irrigated and non-irrigated, and ability to report animal unit harvest (by pasture) calculated on an annual basis. This will provide quantifiable data regarding carrying capacity and subsequent beef production to provide more accurate data inputs for the beef sustainability lifecycle analysis, enhanced map synchronization, and improved security to allow a single individual to access multiple livestock operations without needing multiple user IDs and passwords.

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