

# Ranching – There’s an App for That

Keeping your cattle operation profitable is often a moving target, but technology offers tools to help you hit the mark.

by **Katie Maupin Miller**

From cell phone applications you can hold in the palm of your hand to new, emerging tools, technology can provide cattlemen and women with innovative solutions to common industry problems. These inventions can make it easier for producers to aggregate data, judge their operation’s performance and profitability, reference materials, catch up on news and even make valuable management decisions. While some of these ideas and innovations may seem far-fetched, here are some emerging and existing tools to help you make ends meet in every aspect of your operation.

## Feeding in the future

Feed costs are among the most significant factors affecting beef producers’ profitability, whether they are running a cow-calf operation or managing a feedlot. Luckily, there are many tech tools available to cattlemen and women to help make the best management decisions for their farm or ranch.

Forage management is often an integral part of cow-calf producers and stocker-calf backgrounders operations. There are several cell phone applications available to help producers make better decisions when managing their forages – from identifying weeds and grasses to understanding their soil types – these low-cost tools are literally at your fingertips.

University of Missouri Extension has compiled a searchable database of common weeds. This free app allows users to search for weeds by their common or Latin names and to identify weeds using several different plant characteristics. While tailored to Missouri flora, the app can be useful for cattlemen in nearby

regions. Other popular weed identification apps include the BASF’s Weed ID, which has a vast database of U.K. species and some U.S. entries, and Bayer Canada Weed ID.

SoilWeb is a product of the University of California-Davis’ soil research lab. This iOS application pulls soil survey information on your current location from the SSURGO (Soil Survey Geographic) dataset from the United States Department of Agriculture Natural Resources Conservation Service. According to the app developers’ description, cattlemen can access soil sketches, estimated proportions and geomorphic positions of soil composition from an iPhone. The maps can aggregate data such as rated water holding capacity and can provide soil component details such as taxonomy, property depth profiles, land classifications, erosion ratings, etc.

Producers preparing to cut their largest field for hay know how important an accurate weather forecast can be for forage harvest and management. Luckily, there are several apps and programs available to provide producers with the latest forecast, radar readings and storm warnings. With so many valuable weather apps available for little to no cost – such as My Radar, Raindar, AccuWeather and WeatherBug, to name a few – producers can test several apps before settling on their favorite pocket-sized forecaster.

For those wanting to optimize rations, free online tools like South Dakota State University Extension’s feed cost comparison tool, available at [IGrowLivestockTools.org](http://IGrowLivestockTools.org), can help determine which feedstuffs provide the highest return on investments.

New and exciting technologies such as Vence, virtual fencing, can bring new opportunities to manage cattle more extensively with less labor. Vence allows producers to move cattle with a touch of a button on their smartphones. While this feature may sound too good to be true, Vence is proving that cattle can be contained by wearing a rugged, lightweight device which responds to the GPS boundaries set through the application, according to the Vence website. Innovations, such as Vence, will continue to find new ways to help producers manage their resources to optimize their operation’s performance without increasing labor. Devices worn by cattle may be the next step to allow producers to check herd health and heat cycles more accurately than ever before.

## Reproducing better herd health

Products like Allflex’s SenseHub Beef tags provide producers with cattle monitoring solutions that collect and aggregate data for a new cattle management solution.

“Powered by market-proven, sophisticated algorithms to analyze behaviors based on activity, rumination, eating and other key behaviors, SenseHub Beef delivers actionable information on the reproduction, health, and well-being status of individual cows and groups, in real-time,” the Allflex website says.

Wearable cattle monitoring systems like this can make it easier for producers to detect heats, calving difficulties and early indicators of health issues. Others are turning to robots to help monitor their cow herds.

The Australian Centre for Field Robotics at the University of Sydney made headlines when it started testing the “SwagBot,” an all-terrain robot designed to tackle the Australian bush and to help cattlemen check their herds. According to the *New Scientist*, this robotic rancher uses thermal and vision sensors to identify sick and injured animals.

While the SwagBot is still in development, many modern-day ranchers are already turning to drones to do flyover checks on fencing, water tanks and cattle. As drone technology becomes





more affordable and advanced, many expect drones to become a more common part of farms and ranches as they offer producers a way to save time and miles while checking on their herds.

But, if you're not yet ready for drones, robots and digital cattle monitoring devices, there are still plenty of tech tools to help you manage your herd's health and reproduction. The BCI Pregnancy Analytics app, published by Kansas State University Diagnostic and Analytical Services Inc., helps cattlemen and women see how their herd's reproductive rates stack up against the industry standard. Producers and veterinarians enter beef cattle pregnancy data and compare those numbers to industry reproductive benchmarks. All data uploaded to the app will be collected and maintained confidentially to create beef industry benchmarks and to conduct research, according to the app's description.

Genetic companies Cattle Visions and GENEX Beef offer smartphone apps giving producers access to these companies' sire catalogs, gestation calculators and semen tank inventory tools. These tools prove useful to cattlemen looking for a new sire or wondering in which tank they stored a particular semen straw.

Lameness is a common problem that can affect a producer's bottom line in a beef operation. Since lameness has such a profound effect on cattle's performance, production and profitability, the Zinpro Corporation released the ZinPro Step-Up application. This app helps producers use locomotion scoring to identify lameness in their operation.

"Locomotion scoring is an effective tool for assessing the prevalence and severity of lameness within a herd," the app developers say. "Use locomotion scoring to help determine the extra profit potential your herd can achieve by reducing the prevalence of lameness."

The must-have application of this section is The Compendium of Veterinary Products. This application is available for both Apple and Android phones and can even be accessed online. Most importantly, it features the label and dosage instructions for more than 5,900 pharmaceutical, biological, feed medications and parasiticide products from more than 260 manufacturers, according to its description. This concise reference is invaluable for double-checking dosage and withdrawal time information on your farm or ranch.

#### Data in, data out

With more and more ways to gather and to access data about your herd, it may seem overwhelming to use it all to make proper management decisions. Yet, cattlemen and women have long known the importance of good records. From scribbling calving dates into pocket books to entering performance data into computer spreadsheets — producers of all sizes are trying to find the most efficient and useful ways to store and to use information about their operation.

Many of the technologies already talked about use complex algorithms to translate these new and additional datapoints into real-world information. However, there are tools of all shapes and sizes to assist producers in measuring and monitoring their operation's performance. Some smartphone applications are even free to use. Here are some handy apps to help with your recordkeeping.

University of Wyoming Extension released YouTube videos in 2012 which showed farmers and ranchers how to use free tools such as Google Sheets to create an online data entry system. Then, multiple farm workers and owners could use the program to enter calf information from their smartphones, which would synch and save to a Google drive. By creatively using common and well-established tech tools like this, cattlemen and women can find new and convenient ways to improve their farm and ranch recordkeeping. They can even tailor the data collection points to their operation.

Other paid and specialized software systems, such as CattleMax, offer producers a dedicated interface designed for cattle operations, and many come with mobile options. For example, TagMax by CattleMax connects through Bluetooth to an EID tag reader. This allows producers to scan tags into sessions divided by dates, pastures or other working groups, according to the developer's description. Then users can export these working sessions into your CattleMax software, although this feature does require an online trial or customer CattleMax account.

Several other smartphone applications tout on-farm recordkeeping features at various price points, including iCattleMgrPro, Ranchr — Cattle Record Keeping, Cattle Check and Livestocked, to name a few. These are all worth reviewing to see if any of these existing applications gather the data your operation needs at a price point which will work within your operation's budget.



One all-around cattle application which is handy for most beef producers is the MSUES Cattle Calculator published by the Mississippi State University Extension Service. The calculator covers reproduction, performance and management figures that cattlemen and women can use to make quick calculations that are valuable to their operation. From figuring calving and breeding dates to adjusting performance weights and from calculating medicine dosages based on weights to figuring frame scores, the Cattle Calculator is an excellent tool for producers to have in reach to make everyday calculations that are often imperative to sound management decisions. With a 5-star rating in the Apple Store, producers have already found this smartphone application quite useful.

#### Trending tech

After seeing what tools are available now as well as emerging technologies aimed toward the beef industry, it is easy to see that tech's influence is here to stay. As producers, researchers and innovators continue to explore new ways to optimize production, performance and profitability, the industry will continue to rise to the challenge of producing more meat in safer, more sustainable and affordable ways than ever before.

The future hints at cattle operations that are managed more extensively with less labor. As animals are raised, more data and metrics are collected to track their performance from birth to harvest. This outpouring of data will undoubtedly help cattle producers learn more about their herd and optimize performance across all production areas.

Even if your operation is not ready to install virtual fencing or to check water with drones, there is technology available at your price point which can serve as a reference, help you collect data and assist in management decisions to help move your beef operation forward. **HW**