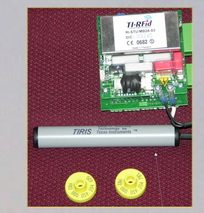
AN EARLY LOOK AT "INTEGRATED CORRAL MANAGEMENT"

Brent W. Auvermann, Thomas H. Marek and Graham Hartmann
Texas Cooperative Extension and Texas Agricultural Experiment Station
Amarillo, TX

MOTIVATION

Holistic management of a cattle feedyard means, among other things, accommodating all of the essential values into the management and decision-making. Those values include profitability, worker safety, neighbor relations, animal welfare, natural-resource conservation and environmental sustainability. Fostering the adoption of non-profitmaking practices in the service of those values—most notably, environmental protection—requires that those practices be less intrusive, less costly and more easily integrated into the day-to-day, logistical management of the feedyard.

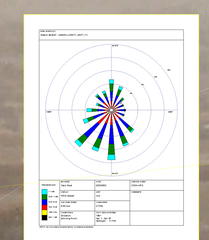


APPROACH

In this NRI-funded project, we seek to demonstrate how advanced information technologies can be used to facilitate the integration of air-quality management and other environmental values into the routine operations of a cattle feedyard.

WHAT WE'RE DOING

We are prototyping a secure, wireless Ethernet network across an experimental cattle feedyard that allows all feedyard employees and contractors to send relevant data (e. g., digital photos, cattle mortality reports, requests for maintenance, feed-bunk or veterinary attention) directly to headquarters via handheld computer.



HARDWARE

The cowboy, bunk reader and veterinarian are tracked in real time by Bluetooth GPS.

Cowboys carry an RFID reader to identify cattle with the sweep of a wand antenna.

The handheld computer can take digital photos of maintenance needs and upload them by wi-fi in a live report to feedyard headquarters.

The HQ computer is collecting air-quality, holding-pond level and weather data in real time. The feedyard manager can keep apprised of air-quality conditions in real time, as well, dispatching additional resources as needed to fix leaky sprinkler systems, remove mortalities, harvest deep manure accumulations or repair damaged corral surfaces.

We gratefully acknowledge the financial support of the USDA Cooperative State Research, Education and Extension Service under the National Research Initiative Competitive Grants Program (Contract No. 2005-35112-15340).