MOBILE MANIA: NEW USE FOR HANDHELD TECHNOLOGY

One of the nation's largest co-ops, Southern States Cooperative, develops an innovative way to improve maintenance tracking across its entire feed division with rugged PDAs.

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Tips for Purchasing an Automated Palletizing System

Southern State Gary Huddleston (left) and Bill Monroe inside the control room at the Park City, KY, feed mill.
Southern States Cooperative integrates mobile devices with its maintenance program to bring the feed division’s logging system into the 21st century.

By Elise Schafer

Since 1996 at this location, we’ve replaced computers, updated our operating system and installed new software, yet we’ve done very little to the PLC network because it’s still supported by the company who owns the hardware platform, Rockwell Automation [Allen Bradley],” Monroe states.

One of the co-op’s upgrades was a bar code hand-add system, implemented in 2005 and now employed in all eight feed mills.

“We weigh by hand the medications, premixes and vitamins, and integrate the micro-scaling operation with a bar coding feature that ensures the integrity of each batch,” says Monroe.

The ICSI hand-add system continues to prove itself as an asset in inventory control, quality assurance and food safety.

Inventory automation

Hand-feed system operators first scan a formula’s Stock Keeping Unit (SKU) — a code used to identify unique items containing information on what quantities of vitamins or medications it requires. Then he scans the SKU on the ingredient container and scoops the medication onto a scale. The system only accepts it if the correct ingredient SKU is scanned and the weight compares within roughly 1/100 pound of the formula’s specification.

“Previously, you could read the scale incorrectly and add too much or too little to a formula, but there’s no way of doing that now,” recalls Gary Huddleston, plant manager. “And the bar code scanning

COMPANY PROFILE

*SOUTHERN STATES COOPERATIVE*

Established: 1923

Farmer owners: More than 300,000

Retail: 1,200 locations in 23 states

Feed Division: Established in 1925

Feed mills: Eight in five states

Total feed production: 910,851 tons for fiscal year 2011

Awards: IT Innovation Award, 2012
feature eliminates the risk of adding the wrong ingredient entirely. It won’t let you dump the wrong hand-add into a batch.”

The elimination of mistakes has vastly improved the company’s medications inventory management.

“Since implementation, we’ve seen a dramatic increase in the accuracy of our monthly inventories, where we count nearly 100 different ingredient SKUs for our fiscal count,” says Huddleston.

**Safety in lot numbers**

The ICSI hand-add system includes a lot number tracking feature, giving Southern States the ability to fully trace where a product lands downstream.

Automated lot number tracking is not a specific requirement of the FDA’s new Food Safety Modernization Act (FSMA), but in the case of a recall, it is required to inform all customers along the supply chain. ICSI’s lot number tracking feature would quickly and easily handle this type of situation.

“We’re better prepared to manage a recall because of the lot tracking,” says Huddleston. “If there’s ever a medication recall, our system knows where every pound of that lot number went, what feed it went into, what customers it went to, when they were loaded and what day it went out.”

The ability to quickly and effectively handle safety or quality concerns is particularly important for a cooperative because its customers are its owners. That’s why all Southern States feed mills have dedicated quality control supervisors, whose sole responsibility is to test and keep records of all incoming ingredients and outgoing products.

**Quality commitment**

Larry Rone, Park City’s quality control supervisor, has been with Southern States for more than 15 years.

Rone manages everything from incoming grain samples, finished feed records and samples, production records, formula master record files, and the internal QA program and Hazard Analysis and Critical Control Points (HACCP) systems.

Drug handling record keeping is an enormous responsibility for medicated feed mills and Huddleston acknowledges the vital role Rone plays in day-to-day operations.

“I feel at ease knowing we have a dedicated staff member looking at nothing but quality every day from the time he comes in until he leaves,” says Huddleston. “We’re owned by our customers and have a vested interest in their satisfaction, so it’s important to have someone focused only on quality control.”

Monroe adds that customer satisfaction isn’t the only driver of Southern States’ commitment to quality. All Southern States feed mills are HACCP certified and Safe Feed/Safe Food certified by the AFIA.

The company’s existing quality control program helped facilitate the certification with both programs and gives Monroe confidence that his feed division is a step ahead of FSMA regulatory compliance.

“When you’re Safe Feed/Safe Food and HACCP certified, you have to sustain a high level of commitment to quality control,” says Monroe. “Those programs require constant vigilance, but they ask even more from the day-to-day controls that prevent serious situations from occurring.”

In addition to establishing quality assurance SOPs and documentation, HACCP certification requires facilities to have a written pest control program, defined critical control points, related countermeasures and maintenance tracking records.

In true Southern States form, the co-op relies on cutting-edge mobile technology integrated with its CMMS to track all maintenance activities at each of its eight mills.

**Winning with maintenance**

In 2005, Southern States began using an automated CMMS by Coupeville, WA-based Benchmate Systems, Inc. The program stores maintenance logs for all the equipment and components at every mill. Benchmate has sophisticated reporting capabilities that can show what activities were completed and how much time was spent on preventive and emergency maintenance; however, manually inputting the information was time-consuming.
Southern States eliminated paper logs in favor of Janam XM65 devices that scan equipment and parts SKUs, electronically capture data and easily retrieve maintenance records during agency inspections.

Using the hand-held devices increased recorded maintenance activity by 25% and planned activity to above 80%. The payoff is the assurance that all equipment is maintained per Southern States’ QA and HACCP requirements and is in service when needed to avoid inhibiting production.

Additionally, the integrated PDA-CMMS program can quickly provide government agencies like OSHA, DOT or FDA with maintenance records to confirm regulatory compliance during inspections.

“For example, if EPA is in for an air permit and asks for the last time we serviced our bag filter, Robbie [Toms] can show them not only exactly when it was last serviced, but everything that’s ever been done to that machine,” says Monroe.

Southern States’ IT Innovation Award application for its integrated PDA-CMMS may have earned first prize from AFIA, but the feed division’s entire operation deserves high honors for embracing technology in everything it does from receiving to manufacturing to quality control.

If the past is any indication of the future, continue looking to Southern States Cooperative for new ways to apply the latest technology to feed manufacturing operations.

Southern States Cooperative

Cover Story

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