



USDA Cotton Program Picks Spotfire for Accuracy, Efficiency

Employee excitement, and faster, more-efficient, lower-cost operations

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—Darryl Earnest,
Deputy Administrator

CHALLENGE

"We're responsible for grading all cotton grown in the United States," says Darryl Earnest, deputy administrator of USDA's Agricultural Marketing Service Cotton and Tobacco Program. "The quality grade on every pound of cotton is used to market it around the world. The faster we get cotton graded, the faster it gets to the supply chain."

"To ensure all our instruments were accurate and consistent, we would get daily grading results from offices nationwide, then manually develop, read, and analyze reports on the data. Every day we would randomly select samples we had tested and ship them overnight to headquarters in Memphis, Tennessee, retest them, then send data back via email. That data would then be analyzed by the offices to determine whether the machines were accurate and consistent. There was a day or two of lag time before we knew how well they were operating in relation to each other. A lot of employees had been doing it that way for 30 years and were comfortable with it."

"If we weren't able to overcome resistance to change, we would still deliver a good service, but not the kind of service the industry needs to compete globally. They needed us to be more efficient. Our goal was to digitize a lot of our operations."



DETAIL

48 VS. 0

hours spent waiting for test results before and after Spotfire

USDA

The USDA's vision is to provide economic opportunity through innovation, help rural America thrive; promote agriculture production that better nourishes Americans while also feeding others throughout the world; and preserve our nation's natural resources through conservation, restored forests, improved watersheds, and healthy private working lands.

FAST FACTS

Offices: 10
Countries using USDA cotton standards: >50
Value of cotton tested/season: \$6 billion
Samples classified/season: 20 million bales

SOLUTION

"Our program is somewhat unique in that we run just like a business. We have a budget and get paid by the industry for our services. About three years ago, we decided we were going to find a better way to analyze data and make decisions. We looked at a lot of tools and what others used in both the public and private sectors. We needed something that would be easy to put in place, affordable, and user-friendly. One of the key things that attracted us to TIBCO Spotfire® analytics was that it was easy to install, easy to create visualizations that people could use, and easy to learn on the fly. With the Spotfire system, we haven't had to work so hard to incite change.

BENEFITS

FASTER, MORE-EFFICIENT, LOWER-COST OPERATIONS

"Now we use real-time, known-value, cotton data. The offices run that and get feedback instantaneously. They know immediately whether or not they're accurate, whether the readings are correct. There's no packaging, overnight shipping, or waiting to get results. That's the biggest game changer.

"If we can approach 100% optimization, we're approaching maximum efficiency directly related to cost. We've already been able to drop our costs and increase efficiency by using fewer instruments, which means less maintenance. We've reduced staff, but do more in the same amount of time as before. When you're a cotton producer, you're already up against it, so the last thing we want to do is raise fees. So far, with Spotfire analytics, equipment automation, and other things, we're giving customers the best service we can while we improve.

FAST DECISION-MAKING AND NEW KNOWLEDGE

"Quality results are consumed in real time. The machines are talking to our mainframe computer and making decisions triggered by Spotfire data from lab testing.

"We analyze hundreds of millions of data points, several years' worth of data, trends, and how our machines were and are now operating. We look at our finances and utility consumption, all with just a mouse click. Previously, it would have taken us days, weeks, months to analyze that data and see what we needed to change.

EMPLOYEE EXCITEMENT

"For any change to work, especially software, analytics, or big data, it can't be one or two people driving it, it's got to be everybody. I have employees who've worked their whole careers in just our program who have new excitement because of the things we can do now that we couldn't do before. They're teaching other employees and other agencies about what we've done. 'Look what this can do. Let's help you see if you can do it.'

FUTURE

"There are other areas that we haven't yet looked at to see how much more efficient we can be. We're getting ready to move into predictive analytics to help make decisions. We're on the verge of providing a portal so others in the industry and the general public can see market movements, trends, qualities in various regions if they need to source material. Using the information we provide is going to change the way they acquire, utilize, and market cotton."



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06/18/18