

Customer Spotlight: Agriculture

Oklahoma Department of Agriculture

Oklahoma City, Oklahoma oda.state.ok.us

OKLAHOMA
AGRICULTURE
FOOD & FORESTRY



Company Profile

Oklahoma Department of Agriculture, Food and Forestry (ODAFF) provides animal and plant disease control, crop and livestock market reporting, agricultural product marketing, laboratory services, water quality monitoring, animal control, and forestry services. Consumer Protection Services (CPS) provides consumers, agricultural and urban communities with services ensuring and enforcing quality standards for agricultural products, regulating pesticide use, and providing information and technical assistance to consumers. The laws regulated by this division impact the goods and services associated with their apiary, ag-lime, ornamental plant, vegetable plant, feed, seed, fertilizer and pesticide industries. This involves checking manufacturer's guarantees, resolving termite complaints, producing healthy plants, and testing scale accuracies. Additionally, ODAFF is the State/EPA liaison in the development and implementation of the State Management Plan. A major statute responsibility of the agency is to prevent pesticides from polluting the surface and ground waters of Oklahoma. ODAFF Laboratory Services performs a wide variety of agricultural, consumer, and environmental testing that spans across multiple scientific disciplines. These laboratories include General Chemistry, Inorganic Chemistry, Pesticide, Dairy/Food Safety, Serology, Seed, and Bureau of Standards.

Their Challenge

After an internal study of their in-house LIMS, the team determined that they needed to make significant changes. This LIMS lacked essential functionality to fulfill key laboratory LIMS requirements and many processes remained manual. These manual work processes limited the efficiency and throughput of the laboratory and its staff. Their original LIMS, Convergent Technologies Operating System (CTOS), was custom built in-house and was used for 20 years. CTOS could not evolve with their laboratory's changing needs. CTOS replacement LIMS was a commercial web based system that was unable to be deployed as the LIMS was inflexible, and the vendor did not understand the requirements of an agricultural laboratory. The vendor gathered their business and analytical workflows and requirements in a single day. As a result, the final deliverable was not fully functional. The replacement to this commercial system was TLB LIMS. TLB was web-based and was known as **T**ime accounting, **L**IMS, and **B**illing automation system. All LIMS functions were not completed, the Billing function was never created, and TLB LIMS ended up \$400,000 over budget and was in use for 5 years. Final cost was \$1.2 million over its lifespan. After much frustration and enormous expense with TLB LIMS, the Laboratory Team took a well-defined and documented approach before acquiring and implementing another LIMS.

"Our most significant challenge was finding a LIMS solution and partner that could effectively meet our diverse requirements. We provide a wide-variety of agricultural, environmental, and consumer testing services that span across multiple scientific disciplines. This includes label compliance testing on animal feed, fertilizer, agricultural lime, and pesticide formulation samples; pesticide residue testing on environmental samples; water quality testing; seed purity testing; dairy product/food safety testing; and animal disease diagnostic testing. Many commercial LIMS products serve only one particular industry or scientific discipline very well, but we required a system that could handle all of our data within a single platform. Further, the LIMS needed to be able to evolve and grow with our needs without the need of costly, dedicated IT support. We wanted a system that could be maintained and managed in-house by a member of our scientific staff." Keith Keesee, Laboratory Technical Manager.



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Our Solution: Sample Master® Pro

ODAFF clearly identified their business practices and workflows, followed quality assurance and control protocols, analytical testing procedures and standard operating procedures (SOPs). The team had meetings and encouraged open dialogues while establishing milestones, leading to a process and a vision for a new LIMS. With proper planning, and gaining understanding from critically evaluating workflows and avoiding re-creating a deficient system, their team wanted to achieve cost savings, efficiency, productivity, automation and wanted to avoid going over-budget. The information that they gathered was used to create a Request for Proposal that was sent out to bid to identify LIMS vendors that had experience with Agricultural laboratories.

Oklahoma Department of Agriculture, Food and Forestry team evaluated several LIMS, including ATL's Sample Master® as part of their formal selection process. The primary selection criteria included: ISO certification, the quality of the RFP response, references and software design/flexibility. Their IT team, laboratory leadership and end users were involved in the evaluation process. Oklahoma State Government Consolidated IT Services assigned a team that evaluated the technical aspects of Sample Master®. While the IT services team was intimately involved with the project, the laboratory workflow configuration and setup was completed by their laboratory staff. Their new LIMS was live in production within 6 months. The laboratory staff was able to configure new workflows and edit existing ones with ease after onsite training, and attending ATL University Bootcamp training. *"LIMS users have seen the potential in making their respective jobs easier and tasks more efficient, and everyone is very happy using the new Sample Master® LIMS as it continues to offer increased efficiency."* Keith Keesee.

Results

Oklahoma Department of Agriculture, Food and Forestry laboratories gained a great deal of efficiency and streamlined their workflows with Sample Master® LIMS. They realized significant benefits which helped cope with substantial budget reductions and loss of personnel. Tasks that were once manual have been automated and streamlined. Sample login is simpler and faster. The use of barcodes reduces data entry times and helps maintain positive identification of samples. Instrument integration has increased data quality and throughput. Automating most of their Electronic Data Deliverables (EDDs) resulted in accelerated and easier reporting, along with increased customer satisfaction. Sample Master® LIMS has eliminated transcription errors and increased quality significantly via bar-code utilization and instrument integration. Peer reviews are automated and much faster electronically, instead of reviewing paper trails. Demonstrating compliance and traceability is easier using their new LIMS. The laboratory's scientific and technical staff is able to do most of the configuration with little knowledge of the reporting tools or SQL. Sample Master® allows LIMS administrators the capability to perform significant amount of configuration to tailor the system to fit unique needs within a laboratory section. Configurations include custom form captions, user configurable grids, and the ability to easily add forms, tables, and menu items without losing these changes during upgrades. This ability ensures that the laboratory can leverage internal resources to manage new and evolving regulatory and business requirements without having to go back to the vendor.

"With Sample Master®..., we have gained significant efficiencies which have enabled us to better manage budget reductions. Specifically, the sample receiving and login process has been streamlined considerably. It now takes half the time to perform this task compared to our previous system. Further, noteworthy gains were made in the final result approval and reporting processes. Peer reviews were once only performed on paper with our previous system. Now this metric is captured electronically, which is much quicker and increases quality." - Keith Keesee