

## Maintaining a Century Long Reputation for the World's Largest Cereal Mill

“We run a very large operation that covers nearly 2 million square feet under roof with multiple shifts seven days a week. It is imperative that our maintenance system is properly configured to capture, track and manage all activity that we perform to keep our mill running efficiently.”

*Judy Mittan, Facilities Maintenance Planner and Supervisor, Quaker Oats Company*

For more than 100 years, Quaker Oats has been an icon in Cedar Rapids, Iowa. Encompassing more than 45 acres and 1.9 million square feet under roof makes the Cedar Rapids plant the largest cereal mill in the world. Every day, more than 800 personnel across three shifts representing four different unions produce ready-to-eat oatmeal and grits as well as Aunt Jemima syrup. The mill also makes grains to supply sister Quaker Oats plants.

### Growth-fueled advances

Maintaining the production and facility equipment for a plant of this magnitude was a formidable challenge when the task was handled manually. Because of continued company growth, Quaker realized it would be nearly impossible and cost-prohibitive to continue a manual maintenance and materials management process. At the corporate level, an inventory tracking system had been in place and proved beneficial until business growth and technology merged at the cross roads of innovation and fiscal responsibility. Quaker knew that change was required in order to properly manage

growth and sustain competitiveness. Attention was directed to the mill level for tracking and managing materials related primarily to the storeroom.

To address the situation, Quaker embarked on a quest to find a system for the storeroom function and purchasing department. A team comprised mainly of information systems (IS) personnel chose CHAMPS software as the solution for their needs. The original system from the late 1970's was actually DOS-based until Quaker upgraded to a Windows environment several years later. Once the CHAMPS system was implemented, the Quaker IS department took responsibility for maintaining the application.

In the early 1990's, the company expanded their use of the system by implementing the maintenance management functionality of CHAMPS. This included all work order and equipment management functionality. “We had a system that was doing a great job of helping us manage our storeroom and purchasing areas,” states Judy Mittan, Facilities Maintenance Planner for

### Solution Overview

#### Quaker Oats Company

Quaker Oats in Cedar Rapids, Iowa, operates the largest cereal mill in the world with personnel producing ready-to-eat oatmeal, grits, and supplying grains to sister plants

#### Industry

Food Processing

#### Challenges

Maintaining a massive production facility with a manual system while managing growth opportunities

#### Solution

Implementation of CHAMPS CMMS/EAM for maintenance and materials management with interface to accounts payable system

#### Client Value

- Proactive asset management and preventive maintenance to the specific component level
- Efficient, on-demand, web-based work request process
- Seamless interface into existing financial application



Quaker Oats. “When we added the functionality for maintenance management, we were able to gain immediate control of cost information and other important data.”

During this time, Mittan assumed responsibility as the CHAMPS administrator in addition to her responsibilities of planning and scheduling. She continues in this role today which has included more than half of the 35 years she has been employed by Quaker Oats.

Because Quaker has 160 craft with an average of 15 years with the company supporting three operational shifts, implementation was handled internally. This gave the long time employees a comfort level of moving from a manual process to one of automation. The internal team was able to successfully interface CHAMPS with the existing Quaker accounts payable system to allow seamless transfer of financial data between the maintenance and accounting departments.

### Comprehensive maintenance management

The CHAMPS system has blossomed within the maintenance department and materials areas of the mill. The system handles all aspects of work order management from initiation, planning and

scheduling to execution, tracking and completion. Approximately 200 work orders are generated each week varying from planned and preventive to emergency situations. The majority of work orders are initiated directly from production personnel who enter work orders from terminals located near the production lines. Depending on whether the problem will halt production and delay deliveries dictates if the work order is entered as a breakdown or a planned job classified as ‘in-planning state.’ For those in-planning work orders, maintenance planners use CHAMPS to review the jobs and plan the number of craft, skill types and parts required for the work order.

Once materials are made available for a job, maintenance supervisors review the backlog list of work orders and schedule based on work order priorities and production line downtime. The supervisor uses the CHAMPS scheduling module to schedule all work orders and assign craft personnel to execute the stated work required. By printing out schedules, all craft are able to easily see which jobs they have. Production personnel will also receive a copy as notification of work to be performed in their area.

After jobs are completed, craft personnel record the hours they expended for the work order. These hours are then entered into CHAMPS and balanced against the craft personnel’s time card punches as a means for time tracking and accountability.

After work orders are finished by craft personnel, planners review the jobs and close-out the work order in CHAMPS. Once a pre-set number of days have elapsed, the

completed work orders are moved to history and the labor time and material costs are rolled-up to the equipment associated with the work order.

Preventive maintenance (PM) work orders are treated somewhat differently as these are run within CHAMPS as batch jobs. Each PM work order has a detailed job plan which is stored in CHAMPS including attachments that contain additional details. As with other work orders, all associated costs are rolled-up to the equipment where the PM was performed once the PM work order has been completed and closed-out.

### Component level equipment management

Critical plant production equipment including compressors, ovens, conveyors, elevators, blowers and motors are fully maintained within CHAMPS. All repairs on equipment are tracked within the system which includes a hierarchy break-down of the parent / child relationship down to the component level. This enables maintenance personnel to quickly and easily see the component relationship to equipment at any level with complete repair and related cost history of those components and the primary equipment asset.

Labor costing information is also available and can be tied back to specific work orders and equipment where jobs were performed by craft personnel.



CHAMPS captures a complete history on all repairs including labor and materials. Graphical illustrations in the form of charts and specific graphs are available within the system for tracking spending histories. All time of maintenance personnel – whether equipment related or not – is tracked within CHAMPS to provide data for future planning and budgeting.

### Performance improvement

Before implementing the maintenance management system, Quaker was challenged in being able to confidently gather maintenance data and other similar intelligence for analysis. Now, through built-in reports, the system is able to generate numerous data, cost and performance reports for management review. These include open work order reports that show what work needs to be performed and daily inventory reports that summarize storeroom transactions. Other reports generated by CHAMPS include those for showing equipment costs, and those produced on a weekly basis for labor costs, storeroom issues, materials receipts and schedules.

Key performance indicators (KPI's) are tracked for schedule adherence, percentage breakdown and several other performance areas. Routinely, KPI and related data is extracted from the system and analyzed for cost and budgeting purposes.

Over the years, Quaker has realized dramatic changes and improvements to the way they manage maintenance. Specifically, the area of planning and scheduling has become much more effective by using CHAMPS versus the previous manual process.



“We now get better wrench time through more effective planning and scheduling of jobs,” states Mittan. “The system enables us to see immediately what tools and parts are available for each work order. We can also know the associated cost for the job including labor. As a result, we have become better planners and schedulers with an ability to keep maintenance costs minimized.”

### Materials management control

Not only have benefits been realized in maintenance, but in materials management savings. The CHAMPS system has become a critical tool for management of more than 20,000 stock keeping units (SKUs). Each Quaker SKU is set up with a min/max level to control spares inventory levels. CHAMPS automatically creates a purchase request for these SKUs when the reorder levels are reached. The purchase requests for contracts, repair parts, services, etc. are all created in CHAMPS and transferred to purchase orders within the system which automatically faxes them to vendors. This enables Quaker storeroom personnel to fully manage costs and usage of spares required for maintenance jobs eliminating the problems related to stock-outs and excessive inventory items.

### Reliable and functionally rich

Over the years, the CHAMPS system has become an essential tool for managing the maintenance function at Quaker. A recent upgrade brought new functionality for work order management, preventive maintenance, equipment management, scheduling, materials management, and improved administrative functions. As a result, Quaker is able to streamline functions and activities of maintenance supervisors and planners while also expediting their procurement process.

“We understand the value of having a reliable and functionally rich maintenance system,” states Mittan. “CHAMPS is fully integrated with our cost and financial systems and provides the solution we need for managing equipment data, preventive maintenance, project tracking and purchasing. We consider our relationship with the CHAMPS personnel as a partnership. We have every intention of growing with the system.”

Everyone agrees that CHAMPS will continue to play a key role in Quaker’s long-standing reputation of producing some of the world’s most popular brands. And, breakfast tables throughout America will continue to be filled with quality products that millions of people have relied on to start their day for over 100 years. ■

CHAMPS Software, Inc.  
1255 N. Vantage Point Dr.  
Crystal River, FL 34429

Tel: (352) 795-2362  
Fax: (352) 795-9100

For more information, visit  
[CHAMPSInc.com](http://CHAMPSInc.com).