

2008 Award Recipient

Cargill Corn Milling North America

Cargill Corn Milling North America (CCM), a business unit within privately held Cargill Incorporated, began operating in 1967 when Cargill, an international provider of food, agricultural, and risk management products and services, acquired a small corn-milling plant located in Cedar Rapids, Iowa. CCM manufactures corn- and sugar-based food, including whole-grain corn meal and corn oil; animal feed; and fermentation products, including ethanol, dextrose, and acidulants (substances added to food or beverages to increase their acidity).

More than 2,300 employees work across CCM's head-quarters in Wayzata, Minn., nine manufacturing facilities, and 11 distribution terminals located throughout the United States. Over the past four decades, CCM has grown from processing 10,000 bushels of corn each day to processing more than 1 million bushels of corn each day.

This is the second time in four years, and the third time overall, that a Cargill business unit has received the Baldrige Award. Cargill's egg-processing business—first called Sunny Fresh and now known as Cargill Kitchen Solutions—received the award in 1999 and 2005.

Partner of Choice

CCM's vision clearly is focused on its more than 3,000 customers. Its purpose, "to be a partner of choice of the customers we serve," and mission, "to deliver distinctive value to customers," drive its organizational culture. CCM is focused on customers and maintains a strong commitment to its values—Demonstrate Integrity, Be Injury Free, Expand Customer Focus, Be Innovative, Develop Talent, Promote Collaboration, Demand Accountability, and Strengthen Communities—yielding outstanding financial and market results. For example:



Highlights

- CCM's team-based culture and matrix organization foster an environment of cooperation, communication, skill sharing, and leveraging of diverse ideas. Since 2006, CCM has saved more than \$15 million from ideas generated by employees.
- From 2005 to 2008, CCM maintained an error-free delivery rate of 99 percent or above.
- CCM's operational reliability effectiveness rate, a ratio between actual production and commercial demand, is at 95 percent, three points shy of the world-class benchmark of 98 percent set by the Society of Maintenance and Reliability Professionals.
- Using methods such as real-time and predictive monitoring
 of equipment health, stringent maintenance, and careful
 energy usage, CCM was able to maintain steady per-bushel
 costs from FY 2006 to FY 2008 even though energy costs
 increased by 50–80 percent, chemical costs rose by 30
 percent, and maintenance costs increased by 10 percent.
- CCM's earnings after tax, a key financial goal, nearly tripled from 2003 to 2007.
- CCM's selling, general, and administration expense per gross profit—the cost of doing business—improved from about 35 percent in 2005 to 30 percent in 2008, exceeding competitive benchmarks by at least 5 percent between 2005 and 2007.
- Between 2002 and 2008, CCM's compound annual growth rate with key customers increased significantly. For example, sugar customers increased 44 percent, corn oil customers and ethanol customers increased 28 percent, and dry-corn-processing customers increased 20 percent.

Everyone in the organization, from technical service representatives to CCM's president, is a "touch point" for listening and learning about customer requirements and expectations. Among the successes are the following:

- From 2005 to 2008, CCM maintained an error-free delivery rate of about 99 percent.
- Complaints per shipment declined from approximately 0.3 percent in 2005 to less than 0.2 percent in 2008—even as the number of shipments has increased by 18 percent since 2003.
- Customer incidents, including rejections and complaints, per 1,000 shipments declined from 10.5 in 2005 to 3.3 in 2008.
- CCM has received numerous awards from customers, including "supplier of the year" from Coors Brewing Company in 2007 and from Frito-Lay and H.J. Heinz in 2008.

Driving Continuous Improvement

To remain successful and find ways to continuously improve business processes, services, and products, CCM places a high priority on well-trained, engaged, and innovative employees. All employees are provided with the tools and training needed to do their jobs and are empowered to make decisions based on CCM's values. With its team-based culture, every CCM employee is a member of at least one team, fostering cooperation, communication, skill sharing, and leveraging of diverse ideas. CCM actively identifies and develops future leaders through discussions of career and developmental plans, training, and mentoring.

CCM has established a variety of methods to improve performance, including a process used by many Cargill business units called *Idea to Innovation*, or *i2i*, to capture and track improvement ideas. "Idea mentors" help advance feasible suggestions through the process. Employee teams also use a nine-step Best Practice Model to plan, evaluate, analyze, and refine work processes. Process Development Groups facilitate collaboration and sharing of knowledge to increase the effectiveness of the improvement process. The CCM scorecard—posted monthly on the employee Intranet—keeps everyone in the organization informed on performance in four key categories: engaged employees, satisfied customers, enriched communities, and profitable growth. Among the achievements are the following:

- Since 2006, CCM has saved more than \$15 million from ideas generated by employees.
- From 2004 to 2008, scores from CCM's *Employee Engagement Survey* (EES) showed that overall employee engagement increased from 37 percent to 65 percent.
- Sixty percent or more of employees agree that they "enjoy day-to-day work activities" and that "Cargill offers development opportunities to build valuable skills."
- Employee turnover at CCM is about 8 percent, well below the industry average of 12 percent reported by the Bureau of National Affairs.

CCM employees are supported by senior leaders who are visible and who demonstrate the CCM value of integrity. The leaders make regular plant visits, interact directly with employees, and empower employees to be both innovative and entrepreneurial. To improve their own performance, the senior leaders receive feedback on their effectiveness through the EES and "360 degree" feedback ratings from peers, subordinates, and supervisors. Results from the EES show that more than 60 percent of employees agree that leaders are effective, and more than 80 percent agree that supervisors "act with integrity and in an ethical manner."

Safety is No Accident

In a 24/7, 365-day-a-year manufacturing environment, the safety of CCM's people, products, and facilities is paramount. CCM strives for a safety standard of excellence rather than just compliance and has an explicit goal to be injury free. To reach this standard, CCM uses a proactive, employee-driven

approach called *behavioral-based safety* to examine and analyze at-risk behaviors and create plans for improvement. Other safety processes include monthly inspections at all facilities and monthly meetings of managers and employees to review safety statistics, address safety issues, and plan safety events. The results? Take a look:

- CCM's measure of safety awareness stands at 92, well above the world-class standard of 85 set by Behavioral Science Technology Inc.
- CCM pays strict attention to food safety requirements, including implementing a preventative approach known as Hazard Analysis Critical Control Points, and product-security and raw-material receiving procedures.
- Since 2003, CCM has received a superior food safety rating from the American Institute of Baking.

All CCM facilities are networked and include computerized systems to control production and distribution, troubleshoot equipment and processes, and monitor energy usage. Keeping these technologically advanced systems up and running around the clock is vital to CCM's competitiveness and safety. The company's commitment to manufacturing excellence ensures that this happens and helps it achieve impressive operational results. For example:

- CCM's operational reliability effectiveness rate, a ratio between actual production and commercial demand, is at 95 percent, three points shy of the world-class benchmark of 98 percent set by the Society of Maintenance and Reliability Professionals.
- Energy usage declined 7.9 percent on a BTU/bushel (a unit of energy needed to process a bushel of corn) basis from 2005 to 2008.
- From 2006 to 2008, CCM maintained steady per-bushel costs although energy costs increased by 50–80 percent, chemical costs rose by 30 percent, and maintenance costs increased by 10 percent.

To ensure that CCM is prepared for disasters—including severe weather, spills, or personal injury—an emergency action plan details chains of command, actions, notifications, and requirements for resuming operations. While regular drills are conducted, CCM underwent a real-life testing of its plan after severe floods in June 2008 shut down its Cedar Rapids, Iowa, facility. CCM quickly implemented disaster recovery processes, rebuilt the plant, assisted employees and the community, and minimized operational and customer impacts. CCM employed its workforce through the entire period, demonstrating its commitment both to its employees and to the community in which it operates.

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