Added Storage, More Flexibility

Major grain storage expansion completed at Chelsea Milling, Chelsea, MI.

Chelsea Milling broke ground in September 2010 on six new slipform concrete grain storage silos (shown in foreground), with a combined total capacity of 300,000 bushels. The project was completed in April 2011. Aerial photo on cover and this photo by Bublitz Photography.

Chelsea, MI, which lies about 50 miles southeast of Lansing, is a close-knit community with small-town charm and also home to the 124-year-old Chelsea Milling Company, which now produces more than 22 flour mixes packaged in iconic blue and white Jiffy Mix boxes.

Chelsea Milling has a long history dating back to 1887, when it was known as the Chelsea Roller Mill *(see brief history on page 8)*.

"While our core business has long been the Jiffy Mix line of products, largely for the retail market, in the past few years, the mill has expanded into the foodservice and institutional markets," said Howdy Holmes, 63, president and CEO of Chelsea Milling Company. ►

The key management team of Chelsea Milling are: Front row: Howdy Holmes, president and CEO. Back row from left: John Powers, chief financial officer; Jack Kennedy, vice president and general manager; and Utpal Patel, project engineer.

Chelsea Milling Co.

Chelsea, MI • 734-475-1361

Original plant built: 1887
Grain storage capacity: 1.2 million bushels
Milling capacity: 4,400 cwts. per day
Products: Retail, foodservice and institutional mixes made from soft white and soft red wheat, including cereal bran
Number of employees: 312

Key personnel:
- Howdy Holmes, president/owner
- Jack Kennedy, vice president/general manager
- John Powers, chief financial officer
- Utpal Patel, project engineer
- Bill Besson, quality assurance manager

Supplier List

Aeration/unloading systems....AIRLANCO
Blowers ..... Blower Engineering Inc.
Elevators legs ..... Schlagel
Contractor.... Adams Building Contractors
Conveyors ..... Schlagel
Designer.....Sunfield Engineering
Dust Collection.....MAC Equipment
Electrical engineering...Hopp Electric, Inc.
Engineering .....Sunfield Engineering
Finished product bins ... Imperial Industries
Magnets..... Magnetic Products, Inc.
Pneumatic system ..... Imperial
Precleaning system.....Rotex Global, LLC
Scale ..... Fairbanks Scales
Screener ..... Rotex Global, LLC.
Screenings Bins ..... Imperial Industries
Temperature Monitors .... Safe-Grain, Inc.

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For 86 hours straight, concrete was poured into slipforms for the six grain storage silos at Chelsea Milliing. Photo by Adams Building Contractors.

The milling facility's rated daily capacity is 4,400 cwts., he added, and annual sales have now reached from $115 to $130 million.

Launched Two New Divisions

"While the retail trade was the mainstay of Chelsea Milling's business for years, we launched an institutional division in 2007, which now offers 14 different products in 50-pound bags," said Holmes.

Chelsea Milling also started a foodservice division in early 2008, according to Holmes, but instead of offering a 30-pound case made up of six five-pound bags, which is considered standard for the foodservice industry, the company offers a case comprised of twelve 2-1/2-pound boxes, which stack much better and are more stable on the pallet.

"By using a 2-1/2-pound box instead of a five-pound sack, we think this caters to the smaller establishments like the mom-and-pop type restaurants better," explained Holmes. "Also, the box allows us to retain the very familiar Jiffy Mix brand graphics, which aids in product recognition."

Need to Expand Grain Storage

But as Chelsea Milling's sales grew with the two new divisions so did its need to expand grain storage significantly.

"Besides a growth in sales, there were a few other key factors that led to constructing new grain storage silos," explained Jack Kennedy, vice president and general manager, who has been with Chelsea Milling for 16 years.

First, the existing eighteen 24-by-125-foot slipform concrete grain storage silos – which included nine interstices, with a total capacity of nearly 980,000 bushels built in 1963 – were developing age-related structural issues, forcing Chelsea Milling to fill them only to 60-80% capacity, according to Kennedy. Each silo's capacity was approximately 49,000 bushels, 11,000 bushels for each interstice.

"This situation made it imperative that we begin making plans on how and when we would repair and upgrade these older silos," said Kennedy. "But way before any work could start, we obviously needed enough new grain storage capacity on hand to help maintain optimum production and to coincide with the maintenance and repair work of the older silos on an orderly basis."

More grain storage also would provide some added flexibility in procuring wheat during more opportune times in the marketplace, especially during harvest time, and aid in managing wheat blending better.

Quick Turnaround on Construction

Employing the engineering and design services of Sunfield Engineering, Inc., Cedar, MI (231-228-4400), Chelsea Milling broke ground on the construction of six new slipform grain storage silos with two interstices in September 2010.

With a total capacity of more than 300,000 bushels, each 28-by-100-foot silo can hold 46,000 bushels, and each interstice can store another 12,000 bushels.

"The project was completed by April 2011 at a cost of approximately $3.5 million, which was the first and biggest grain storage expansion for Chelsea Milling since the early 1960s," said Andrew Markwart, project manager, for Adams Building Contractors (ABC), Jackson, MI (517-748-9099), the general contractor on the project.

"Due to our soil conditions and to make sure things were solid, a somewhat unique feature of this particular project was the special footings that were installed," explained Kennedy. "Before any slipform concrete was poured above ground, 122 auger-cast piles or concrete columns were poured nearly 40 feet below the soil surface and allowed to cure before the 21-inch-thick pads, which sat on top of those auger columns.

A Good Fit

"Adams Building Contractors and all the other suppliers on this project were excellent and wonderful people to work with," said Holmes. "In fact, Dave Adams who founded ABC actually worked for Chelsea Milling during the mid-1950s. ABC also is just 20 miles from our location, so that worked out very well for us logistically. They are really adept at concrete structures. I'm very proud of the job they did. I wouldn't be hesitant to recommend them in that capacity."

The project also provided some interest to the small community of Chelsea, added Holmes, since it was a continuous pour project that spanned 86 hours. "I'm very proud that it was done on time and on budget," he said.

Efficient Precleaning System

According to Utpal Patel, Chelsea Milling project engineer, in the past, wheat cleaning was performed at the flour mill. So, as part of this grain storage expansion project, Chelsea Milling installed a Megatex wheat screening/precleaning system by Rotex Global, LLC, Cincinnati, OH, in the new elevator section. The system separates the wheat kernel from other foreign materials using associated dust collection equipment.

"Any wheat received now goes through the screening system, before being stored in any of the new or existing silo bins," explained Patel, who has been with Chelsea Milling for two years.

The screenings coming out of the grain cleaner are stored in a screenings bin before being transferred to ▶

Located next to the new grain storage structures, Chelsea Milling intalled a Rotex Megatex wheat screening/precleaning system that also improved the efficiency of the flour mill. Photo by Adams Building Contractors.

the flour mill, where it gets grinded using a hammer mill, according to Patel. There also is a provision to rescreen the stored grain from any bins, before being transferred to the flour mill.

"The grain screening system helps to improve the efficiency and yield in the flour mill," said Patel.

Blower Engineering equipment was used in the new grain screening and precleaning system, which was part of the grain storage expansion project. Photo by Adams Building Contractors.

Aeration/Bin Unloading System

While most flat bottom storage silos use a sweep auger system to unload grain material, according to Kennedy, Chelsea Milling decided early on in the design phase to use an AIRLANCO AIRAUGER® unloading and aeration system, Falls City, NE (402-245-2325).

"We felt that such a system would be safer and less prone to mechanical problems and allow us to clean out the silo bottoms better," added Kennedy.

According to Patel, the AIRAUGER system is rated to unload wheat at 8,000 bph compared to the current 5,000 bph in the existing silos. The system also is used for aeration (1/12.7 cfm per bushel).

Wheat Procurement

Wheat inventory is turned over nearly twice yearly. "If you look at our total inventory, we can theoretically have 1.2 million bushels of wheat on hand," said Kennedy.

Chelsea Milling procures wheat from about a 150-mile radius around Chelsea. Although rail is an option, the majority of grain is delivered almost exclusively by truck.

"While some wheat is procured from surrounding areas near Detroit, Battle Creek, and Jackson, most of our wheat is coming from the Thumb area of Michigan," said Kennedy. "Some wheat comes from Ontario, but this varies from year to year, comprising from 10% to 35% of our supplies. It depends on the quality of Michigan vs. Ontario wheat and the varieties being grown."

According to Kennedy, a single Fairbanks Scales 100-foot static weigh scale is used, before the live bottom trucks dump their grain into a pit. Every incoming load is tested for DON and other potential crop problems. An automatic probing system for sample testing is used, and dockage testers are utilized in the scale house.

Two Classes of Wheat

"The added grain storage capacity also has been great from the standpoint that it's now easier to manage and maintain the two classes of wheat, which we procure regularly from Michigan wheat growers—namely, soft white and soft red wheat," said Kennedy.

"Presently, Michigan is having a wonderful, trouble-free growing season for wheat. But that's not always the situation. Some years, you might have low falling numbers or vomitoxin problems, or it may be other quality issues.

"In those cases, we needed to have an improved blending capacity—the ability to blend off different deliveries of wheat, in order to produce a homogenous kind of blend to use in our product lines. The recently added grain storage capacity has allowed us to do that more efficiently."

Karl Ohm, associate editor

A Brief History of the Chelsea Milling Company

The Chelsea Milling Company's roots date back to 1887, when the mill was known as The Chelsea Roller Mills.

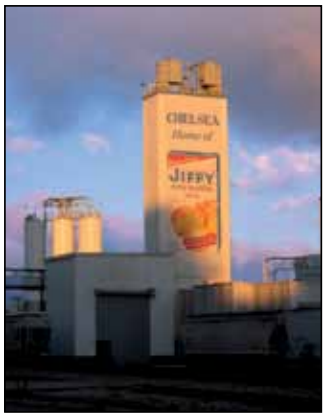
Howdy Holmes' great grandfather, Harmon Samuel Holmes, moved from Dexter, MI to Chelsea in the late 1890s at the age of 18.

He soon got involved in several businesses in Chelsea, which included banking, and later became one of the principals owners of Chelsea Roller Mills. He bought out the other partners in the early 1900s and renamed the firm Chelsea Milling Company.

During this period, the company ground flour for local consumption until 1927, when Mabel White Holmes started to experiment with recipes to create a new product, a premixed blend of flour, baking powder, and other ingredients. Mabel's husband was Howard Samuel Holmes, who had become the mill's president in 1911.

After several attempts, Mabel developed a formula that could be produced at the family-owned mill. The multi-purpose baking mix was named Jiffy Mix.

The story has it that Mabel drew upon her childhood experiences and recalled how the family's cook often had used the phrase, "they'll be ready in a jiffy," when preparing biscuits for meals.



Chelsea Milling's iconic Jiffy Mix box painted on the ele-vator in Chelsea, MI.

Throughout the years, President and CEO Howard Sumner Holmes and his twin brother, Dudley Holmes, ran the company.

In 1977, Mabel White Holmes who had created the Jiffy Mix brand passed away.

Although Howard Sumner Holmes was now 75, no succession plan had been made to select a new president. However, in 1987 Howard began to transfer some authority to his eldest son, Howdy.

Howdy had spent the previous 20 years involved in automobile racing. His successful career had included six Indianapolis 500 races, where he had been named Rookie of the Year.

Howdy also had managed a sports marketing firm and had written a book and a number of magazine articles related to car racing.

His racing career provided him a wealth of experience in the field of public relations, marketing, and management. When he joined "Team Jiffy," as he came to call it, he quickly applied these valuable experiences to the company. ■