

Year-Round River Market

URSA FARMERS COOP LINKS MISSOURI PATRONS TO THE MISSISSIPPI BARGE MARKET

Ursa Farmers Cooperative
Ursa, IL • 217-964-2111

Founded: 1920
Storage capacity: 9 million
Number of members: 2,400
Number of employees: 74
Crops handled: Corn, soybeans
Services: Barge loading

Key personnel:

- Roger Hugenberg, manager
- Brenda Wright, office manager
- Kim Lambert, superintendent

Supplier List

Aeration fans.....Rolfes@Boone
Aeration system.....Brock Grain Systems
Bearing sensors.....CMC Industrial Electronics
Bin sweeps..... Brock Grain Systems
Bucket elevators... Riley Equipment
Bulk weigh scaleIntersystems
Catwalk.....LeMar Industries Corp.
Cleaner.....Intersystems
Contractors.....Shaffer Enterprises, Industrial Systems of Cape Girardeau, Janney Builders Supply and Construction, Inc.
Control system...KDJ Sales & Service
Conveyors.....Hi Roller Conveyors, Riley Equipment Inc.
Consulting engineer...SKS Engineers
Distributor..... Schlagel Inc.
Dust collection system..... Aircon
Distributor..... Schlagel Inc.
Electrical Contractor..KDJ Sales & Services
Elevator buckets Tapco Inc., Maxi-Lift Inc.
Grain dryer ... Brock Grain Systems
Grain probeGamet Mfg. Co.
Level indicators.....Monitor Technology
Liner.....Tandem Products
ManliftSchumacher Elevator Company
Moisture meterGSF – Perten
Motion sensors.... Electro Sensors Inc.
Samplers.....Gamet Mfg. Co.
Steel storage.. Brock Grain Systems
Steel bin erectionRon Smith Construction
Tower support system..... LeMar Industries Corp.
Truck scaleCardinal Scale Mfg.
Truck dump building Schulte Building Systems



The Canton Grain Terminal, a division of Ursa Farmers Coop, provides its Missouri patrons access to the barge market on the Mississippi River at Canton, MO. The new facility provides an alternative market to patrons who previously crossed the river on a small ferry at Canton. Photo supplied by Ursa Farmers Coop.

Four million bushels of grain move from Missouri to Illinois annually on the ferry at Canton, MO, but how much more grain could the coop originate, if barges could be loaded directly on the Missouri side of the Mississippi River? That was the question begging to be answered by Ursa Farmers Cooperative, Ursa, IL (217-964-2111).



After constructing an \$11 million barge loading facility at Canton, the coop hopes to load 8-12 million bushels of grain on barges without having to ferry semi trailer trucks across the river to Illinois.

The ferry, owned by the Missouri Department of Transportation, has been subsidized by the Ursa Farmers Coop since 1992. Free to grain trucks and Ursa patrons, all other passengers pay a \$5 fee for the 7-minute ride.

In the final stage of completion of phase one when *Grain Journal* visited the Canton Grain Terminal in early March, Industrial Systems, of Cape Girardeau, Inc., Cape Girardeau, MO

(573-334-5766), was completing work on a Hi Roller enclosed belt conveyor that carries 30,000 bph from the facility's Brock steel storage tanks to the barge-loading river belt 1,100+ feet away. The conveyor crosses a wetland and a Burlington Northern Santa Fe rail line, before reaching the barge dock. Over 20,000 tons of river rock was removed by blasting and regulatory permitting assistance from consultant Jim Upchurch of



Roger Hugenberg



The barge-loading conveyor is 1,136 feet in length and served by a 36-inch, single-piece, rubber belt conveyor. Grain is conveyed at 30,000 bph, with barges loaded in less than three hours.

Upchurch and Associates, Canton, MO.

Ursa Farmers Coop designed the terminal to provide speed to trucks unloading. “We can unload a truck in four minutes,” says Roger Hugenberg, Ursa’s assistant general manager and manager of the Canton Grain Terminal (573-288-0311).

Pilot Location for Technology

What provides the Canton barge facility its speed is a combination of technologies that were pilot-tested at the location. Hugenberg says a truck will drive onto 70-foot-long electronic Cardinal pitless scale, which is equipped with a radio frequency identification (RFID) reader from Fairbanks Scales, Inc. The reader detects an electronic chip affixed to the truck windshield.

The weight and truck identification are assimilated through an “electronic front gate” created by AgVantage Software Inc., which displays the information for driver confirmation and provides directions to the proper grain dump pit.

“We are set up for speed, but we will not force too much technology on a customer at once. However it is the future of the industry,” says Hugenberg. “We are a coop, and we want to talk to our customers, but when they want to be fast, we can be fast.”

Construction Detailed

Working with consulting engineer Jerry Shaffer of SKS Engineers, LLC, Decatur, IL (217-877-2100), and construction manager Roger Dowdy (618-838-5800), Ursa designed a multi-

phase project that eventually will add to the present 500,000 bushels of steel storage now in place. Hugenberg said three additional 1.1-million-bushel storage bins are planned.

To receive inbound grain, Canton utilizes three 1,000-bushel dump pits, two of which unload into on-site storage, and a third that can transfer grain directly to the barge-loading belt. The first 180 feet of the belt out to the dock is a Hi Roller enclosed belt, with an open belt comprising the rest.

The facility was constructed by Shaffer Enterprises, Inc., Ursa, IL (217-964-2334), which include a 210,000-bushel Brock bin 60 feet in diameter and 100-1/2 feet tall and two 142,000-bushel bins which are 48 feet in diameter and 101 feet tall at the peak. An additional 60,000-bushel bin is planned for construction this summer.

The bins are filled by two 15,000-bph Riley legs outfitted with 18x8 Maxi-Lift buckets, with two 7,500-bph Riley legs fitted with 14x7 Tapco buckets serving as wet and dry legs for the dryer. The receiving legs empty into a six-hole, swing-type, triple Schlagel distributor.

The facility is equipped with a 4,700-bph Brock continuous flow dryer (five points removal) utilizing natural gas. Dry grain then is distributed into storage by the 7,500-bph Riley dry leg through the Schlagel distributor, but dry grain also may be sent directly to the river belt to be loaded into a barge without an elevation.

The storage tanks empty onto 30,000-bph Hi Roller enclosed belt con-

veyors in above-ground tunnels. These carry grain either back to the receiving legs or directly onto the barge-loading conveyor.

Brock Grain Systems supplied the 12-inch diameter bin sweeps in the tank and aeration system, powered by fans from Rolfes@Boone. Each bin has two 25-hp centrifugal fans and two exhaust fans on the top. Fans on the larger bins produce 1/7 cfm.

Electrical assembly was done by KDJ Sales and Service, Mackinaw, IL (309-359-3611).

Grain trucks unload without moving three 28-foot-long pits. Once unloaded, the empty trucks return to the outbound 70-foot-long Cardinal pitless scale, where information about the load is retrieved automatically via the card reader, and a scale ticket is created and dispensed to the trucker. He never has to get out of his truck.”

Preparing For The Future

Planning for the future, Hugenberg says Ursa Coop is preparing for patrons who will farm more acreage with 24-hour harvest operation. This necessitates a customer-friendly design on its nine-acre site and a high-speed terminal operation.

Hugenberg said Ursa Farmers Coop annually ships about 25 million bushels of grain from its Warsaw and Meyer, IL river locations. While Meyer is only two miles upriver from Canton, that facility is above Lock and Dam 20 on the Mississippi River, where the water typically is frozen in the winter. Construction of the barge facility at Canton will allow Ursa to have year-round access to open water.

Twelve-month barge service is important to the marketing plan of the coop, which will handle 9 million bushels of non-GMO corn in 2013, in addition to multiple barge loads of non-GMO soybeans, white corn, and other specialty crops, which comprise 30% of the coop’s business. Ursa Farmers Coop has 9 million bushels of storage over seven locations. ■

Stu Ellis, contributing editor