

Phased Expansion Strategy

ALLIANCE COOP NEARS COMPLETION OF MULTI-YEAR, \$10.5 MILLION PROJECT



Alliance Grain Co.

Gibson City, IL • 217-784-4284

Founded: 1991

Storage capacity: 23 million bushels at 13 locations

Annual volume: 36 million bushels

Annual revenues: \$300 million

Number of members:

Number of employees: 50

Crops handled: Corn, soybeans, soft red winter wheat

Services: Grain handling, storage, trucking, and drying.

Key personnel:

- Joe Thompson, general manager
- Gary Allen, operations manager
- Jamie Stein, safety director
- J.B. Daughenbaugh, merchandising
- Garry Cole, outside supervisor
- Teresa Steidinger, office coordinator

Supplier List

Aeration system ...Decatur Aeration

Bearing sensors 4B Components Ltd.

Bin sweepsHutchinson

Bucket elevators..... Union Iron

Bulk weigh scaleC & A Scales

Catwalks LeMar Industries Corp.

Cleaner Intersystems

Concrete Craig's Concrete Inc.

Contractor/millwrightKoehl Brothers, Inc.

Control system.....Schneider Electric

ConveyorsThe GSI Group

Distributor.....Schlagel Inc.

Electrician.....J.R. Electric

Elevator buckets Maxi-Lift Inc.

Grain dryer Zimmerman Grain Dryers

Grain probe Union Iron

Grain temperature system Integris

Leg belting..All State Industries Inc.

Manlift.....Sidney Mfg. Co.



Alliance Coop upgraded its Anchor, IL facility in 2011-13 with four steel tanks, four bucket elevators, a dryer, and two dump pits. Photos by Ed Zdrojewski.

With the increase in specialty grains, corn and soybean yield increase, and overall added grain volume, Alliance Grain Cooperative needed to increase grain storage and rail shipping capacity at its Anchor, IL location.

In 2011, the central Illinois-based cooperative with 12 elevators, began a three-phase \$10.5 million project at Anchor that is scheduled to be completed in 2014.

The cooperative, which began in 1991 from the merger of two other cooperatives, hired Koehl Brothers, Inc., Fairbury, IL (815-692-2326) to design and build the project.

“Steve Meister of Koehl Brothers, which is just 10 miles up the road, drew up a plan to show how the available space could be used,” says Operations Manager Gary Allen.

He and General Manager Joe Thompson say Koehl had been the primary contractor on some other Alliance projects over the years, and they were satisfied with the company performance.

Three-Phase Project

According to Allen, the three-phase multi-

year strategic project is designed to increase the site's storage capacity from 1.3 million bushels to 3.5 million bushels and increase rail loading from three to 10 cars per hour.

“The expansion at Anchor, which previously had been unable to accommodate semi-trucks, takes the pressure off our Cropsey and Colfax elevators, as well as our headquarters elevator at Gibson City,” says Allen. “Anchor is one of the eight Alliance locations on the Bloomer Line short line railroad, and now we



Operations Manager Gary Allen, left, and General Manager Joe Thompson.

have a great facility for quickly loading railcars.”

Alliance is a 70% owner of the 52-mile Bloomer Line, which links eight of its facilities to the Norfolk Southern and Canadian National, as well as the Toledo, Peoria, and Western Railroad. Corn originated in Anchor and other Alliance facilities is marketed primarily to the One Earth Energy ethanol refinery at nearby Gibson City.

However, the rail connections also provide flexibility to deliver to Decatur, IL processors; Gulf export terminals; and the Southeast poultry market.

Phase One in 2011

According to Operations Manager Allen, the project started in the summer of 2011 with the razing of two old steel tanks and a flat storage building and the construction of a 105-foot-diameter Brock steel tank, 91-feet-tall at the eave, with a 720,000-bushel capacity. The tank has a flat bottom with a 12-inch Hutchinson bin sweep and is filled by an overhead GSI drag conveyor rated at 20,000-bph.

A new above-ground reclaim conveyor operating at 20,000 bph empties into a 40,000-bph GSI belt conveyor which delivers grain to the rail loadout. The GSI conveyor uses an enclosed 48-inch belt, which is 123 feet long, and is designed to service a second 105-foot tank to be built as part of the 2013 expansion.

The tank's aeration system was de-



An enclosed manlift provides access to the top of multiple legs serving wet and dry bins.

signed by Decatur Aeration and consists of four 60-hp fans producing 1/7 cfm per bushel and outfitted with variable speed drives and silencers to maintain good public relations with the community. Decatur Aeration also added 12 roof exhausters.

Additionally, an electrical control room was installed.

The project was completed in time for the 2011 harvest.

Phase Two in 2012

The 2012 phase of the project called for the construction of two additional Brock tanks to supply wet grain to the dryer.

- A 148,000-bushel tank, 48 feet in diameter and 93 feet tall at the eave is outfitted with two 40-hp fans with silencers producing 1/6 cfm per bushel and a 15,000-bph reclaim conveyor delivering grain to a new shipping leg.

- Adjacent is a 235,000-bushel tank, which is 60-feet in diameter and 93-feet in height and feeds a 20,000-bph reclaim conveyor, which also provides grain to the shipping leg. Aeration is generated by four 40 hp fans with silencers, which produce 1/5.7 cfm per bushel. A 12-inch Hutchinson sweep is installed in both tanks.

- A 7,000 bph Zimmerman natural gas dryer was installed.

At the center of this project is a pair of 20,000-bph Union Iron receiving bucket elevators, 226-feet tall each, which distribute grain through a Schlagel 20-inch, 8-duct double SwingSet distributor.

Each leg has a single row of Maxi-Lift 22x8 Tiger-Tuff buckets mounted on a 22-inch All-State belt and driven by a 200-hp motor.

A 15,000 bph leg was erected to feed the dryer and the reclaim. The leg has a single row of Maxi-Lift CC-MAX 18x8 buckets on a 20-inch belt with 9-inch spacings.

The Union Iron 40,000 bph shipping leg is 140 feet tall, ceramic-lined, with two rows of Maxi-Lift Tiger-Tuff 22x8 buckets, driven by two 125-hp motors.

Outbound grain can flow through an Intersystems gravity screener with a 40,000-bph capacity, which was installed to address aflatoxin concerns with the 2012 drought-damaged corn crop.

To increase rail shipping capacity, a C & A Scale 40,000 bph bulkweigher was installed.



A 7,000-bph Zimmerman Dryer was installed in 2012.

The bulk weigher is controlled by an AGRIS one weigh bulk scale control unit, which aligns with other Alliance elevators. Grain flow to the bulkweigher is fed by a GSI 40,000-bph enclosed belt conveyor.

Other projects in the phase included a wooden-frame office building, a new 70-foot-x-12-foot Cardinal Scale pit truck scale installed by Decatur-Danville Scale Co., and a Gamet Mfg. JaHam truck probe.

A Sidney enclosed manlift was installed to access the top of the legs.

Future Expansion Plans

During 2013, Alliance will construct another 105-foot-diameter Brock tank, along with a 20,000 bph drag filling conveyor. An additional 60-foot-diameter bin will be constructed after the 2013 harvest.

Allen says the two 105-foot tanks would displace four smaller bins and an old dump pit. Depending on the evolution of grain flow, he says more storage and grain drying capacity may be needed.

On order but not yet installed will be 5-car-long fall protection system for employees working on railcar loading. The company practice has been to load five cars at a time and build 50-car trains on its siding at Anchor. A radio frequency identification (RFID) system also is being planned for tracking railcars.

Stu Ellis, contributing editor