

A Successful Formula

GLACIAL PLAINS COOP ADDS JUMPFORM CONCRETE SILO FOR SOYBEAN STORAGE



Glacial Plains Cooperative
Murdock, MN • 320-875-2811

Founded: 2002
Storage capacity: 10.1 million bushels at five locations
Annual volume: 25 million bushels
Annual revenues: \$165 million
Number of members: 1,500
Number of employees: 65
Crops handled: Corn, soybeans, red spring wheat
Services: Grain handling and merchandising, feed, agronomy, energy, and convenience store

Key personnel at Murdock:

- Tom Traen, general manager
- Doug Kavanagh, operations manager
- Keith Bebler, merchandiser
- Craig Kavanagh, merchandiser

Supplier List

Aeration fans.....AIRLANCO
Aeration system.....AIRLANCO
Bin sweepsBrock Grain Systems
Bucket elevators.....Schlagel, Inc.
Catwalk.....Warrior Mfg. LLC
Concrete silo builder..Hoffmann Inc.
Contractor ..Thorstad Construction
Control system ..Freetly Electric, Inc.
ConveyorsSchlagel, Inc.
Elevator bucketsMaxi-Lift Inc.
Leg belting.....Goodyear Conveyor Belting
Level indicators.....BinMaster Level Controls
Liner.....Tandem Products, Inc.
Millwright... Thorstad Construction
MotorsToshiba International, Emerson Power Transmission Co.
Speed reducersBaldor-Dodge
Tower support systemThorstad Construction



A new 450,000-bushel jumpform concrete silo built at Glacial Plains Cooperative at Murdock, MN in 2011 is visible at the far right. Aerial photo taken by R. DuMont/New Horizons Aerial Photography.

When Glacial Plains Cooperative of Murdock, MN needed additional soybean storage, it decided to repeat a successful formula.

So, the coop had a 450,000-bushel jumpform concrete silo erected by Hoffmann Inc., Muscatine, IA (563-263-4733), at its headquarters' location.

"We've had good success with the two other jumpform concrete silos that Hoffmann had built for us in 2010, so we decided to continue with them," says Operations Manager Doug Kavanagh.

Thorstad Construction, Maynard, MN (320-367-2159), was the general contractor and millwright for the project.

Freetly Electric, Inc., Kerkhoven, MN (320-264-3121), supplied the electronic control systems.

Positive Experience

In 2010, the coop added a 220,000-bushel Hoffmann jumpform concrete silo plus new drying capacity of 12,500 bph between the Murdock facility and a branch elevator in Milan, MN, along with related legs and

conveyors. Because of its positive experience with that project, Kavanagh says, Glacial Plains decided to order another Hoffmann silo for its 2011 addition.

The \$2.3 million project was needed because Glacial Plains' 1,500 farmer-members keep increasing their crop production, according to Kavanagh.



Operations Manager Doug Kavanagh.

“Our farmers are hauling most of their soybeans to town right out of the field,” Kavanagh says. That meant the coop needed more storage space to handle the soybeans that were being hauled across the coop’s scales.

Glacial Plains wanted to be able to receive the soybeans and load 110-car shuttle trains on the Burlington Northern Santa Fe in 15 hours or less so it could receive the most favorable shipping rates, Kavanagh said. The new storage allowed the coop to meet that need.

Footings for the most recent concrete tank were poured in late March 2011, and the work was completed Sept. 15, just in time for the 2011 harvest.

Project Specifications

The newest Hoffmann silo is 74 feet in diameter and 148 feet tall, with a flat bottom.

The silo is outfitted with a Brock ABC zero-entry bin sweep, which handles 10,000 bph with a track drive and a 16-inch diameter screw. Equipment also includes a BinMaster rotary level indicator. Four AIRLANCO 50-hp

centrifugal fans rated at 3,450 rpm each supply 1/10 cfm per bushel of aeration through in-floor ducting, with the assistance of six 2-hp roof exhausters.

Thorstad erected a Schlagel 12,500-bph leg on the opposite end of its row of existing concrete storage from the newest tank. The leg is fed from an exist-

“We can dump farmers’ soybeans a lot faster, because we have the capacity to do it.”

-Doug Kavanagh, Glacial Plains Cooperative

ing receiving pit and is outfitted with a single row of Maxi-Lift 18x8 CC-MAX buckets mounted on a 20-inch belt on 10-inch centers.

At the top of the leg, an automated two-way valve allows grain to be sent via gravity spouts to existing conveyors and storage or onto a new Schlagel 12,500-bph overhead drag conveyor running

out to the new silo.

The new silo is equipped with a side-draw spout for loading trucks. When grain drops below that level, it empties onto a 15,000-bph Schlagel drag conveyor in an above-ground tunnel running back to the new leg.

The 450,000-bushel concrete silo has been used for two soybean harvests.

“It’s been excellent,” Kavanagh states. “We can dump farmers’ soybeans a lot faster, because we have the capacity to do it.” He adds that because the operation is automated by a computerized system, one person can run the whole operation, “so we don’t need extra employees.”

Future Plans

According to Kavanagh, Glacial Plains might add more storage at the elevator, if its farmer-members keep increasing their volume of crop production.

“We have a spot where we can put a future silo the same size,” Kavanagh says. “We’ll probably be adding another one in the next few years.”

Jerry Perkins, associate editor