

Another Loop Track for Illinois

GRAIN HANDLER INSTALLS A CONCRETE ANNEX FOR LOADING SHUTTLE TRAINS



Farmers Elevator Co.
Lowder, IL • 217-435-9023

Founded: 1905
Storage capacity: 5.5 million bushels at two locations
Annual volume: 5-6 million bushels
Annual revenues: \$20 million
Number of stockholders: 110
Number of employees: 20
Crops handled: Corn, soybeans, soft red winter wheat
Services: Grain handling and merchandising, agronomy

Key personnel:

- Greg Dolbeare, general manager
- Kenny Tate, agronomy manager
- Larry Sharp, operations foreman
- Andrew Paluska, merchandiser

Supplier List

Aeration system AIRLANCO
Bin sweep Sudenga Industries Inc.
Bucket elevators Schlagel Inc.
Bulk weigh scale.... CompuWeigh
Cleaner Intersystems Inc.
Concrete tank builder Hoffmann Inc.
Contractor Grain Flo Inc.
Control system KDJ Sales & Service Inc.
Conveyors The GSI Group, Schlagel Inc., Hi Roller Conveyors
Distributor Schlagel Inc.
Dust collection system Decatur Aeration
Elevator buckets Tapco Inc.
Grain dryer The GSI Group
Level indicators Bindicator
Manlift Sidney Mfg. Co.
Motion sensors 4B Components Ltd.
Receiving pit installation Copper Coin Construction
Samplers InterSystems Inc.
Steel storage The GSI Group
Tower support system .. Johnson System Inc.



Aerial view of the Farmers Elevator Co. elevator at Lowder, IL, with new rail terminal annex nearing completion at left. Aerial photos by B&M Studio of Photography, Pekin, IL.



BNSF shuttle train at left awaits loading in mid-September. Photo shows two new Hoffmann jumpform concrete tanks, two Schlagel legs, CompuWeigh bulk weigh loadout system, and Big Chief steel tank constructed in 2001. Ground-level photos by Ed Zdrojewski.

The day in mid-September when *Grain Journal* came to visit Farmers Elevator Co.'s new 650,000-bushel rail-loading concrete annex in Lowder, IL, an empty 110-car shuttle train was parked adjacent to the facility's new bulk weigh scale waiting to be loaded. It was the second Burlington Northern Santa Fe (BNSF) train since the facility opened for business earlier in the month.

The new shuttle loader is the sixth loop track facility to open in Illinois since late 2003 and is located just a mile down the BNSF line from another loop track shuttle loader operated by Johnson Grain LLC, which began loading trains in February 2004.

But the close proximity doesn't worry General Manager Greg Dolbeare, who is helping to celebrate the cooperative's 100th anniversary in business. He notes that the company had been planning some sort of unit train-loading operation at least since



Key personnel, from left: Merchandiser Andrew Paluska, Operations Foreman Larry Sharp, and General Manager Greg Dolbeare.

2001, when it constructed a 1.5-million-bushel Big Chief corrugated steel storage tank, 232 feet in diameter with a 24-foot sidewall, at the west end of its property in Lowder. (Note: Farmers Elevator Co. is an Illinois Class C corporation closely held by about 120 local producers.)

"This area is a good 50 miles from the (Illinois) river, and it can support two loop track facilities,"

Dolbeare comments. "There are 140 million bushels of corn produced in the four-county area (Sangamon, Morgan, Macoupin, and Montgomery). With the BNSF shuttle rate, we'll be fine."

\$5.5 Million Project

For the shuttle train project, Farmers Elevator purchased another 140 acres of farmland to the west of its Lowder property and southwest of the BNSF line for less \$1 million of the \$5.5 million project cost.

The rest paid for a new 650,000-bushel jumpform concrete rail-loading annex and equipment connecting to the Big Chief tank, with 60,000 bph loadout capacity, and a 7,500-foot loop track. Land inside the loop track will continue to be rented out for crop production.

Farmers Elevator selected Grain Flo Inc., Heyworth, IL (800-842-4875), as general contractor on the project. "They gave us a good bid," Dolbeare says, "and we looked at similar loop ►

CONCRETE STORAGE SILOS

Jumpform and Slipform / Equipment Installation / Design and Engineering

Hoffmann, Inc. congratulates



Farmer's Elevator Co. of Lowder and Ludlow Cooperative Elevator Co. on their facility expansions.



HOFFMANN, INC.

Muscataine, Iowa / 563.263.4733 / hoffmann@hoffmanninc.com
visit us at www.hoffmanninc.com



Aerial view shows entire 7,500-foot loop track built on a 140-acre tract to the west of Farmers Elevator Co.

track projects they'd done for Ruff Bros. Grain Co. near Toluca (IL) and Lincolnland Rail in Galva (IL) and liked what we saw."

For the concrete storage, the company selected Hoffmann Inc., Muscatine, IA (563-263-4733). Dolbear notes that Hoffmann is the closest contractor specializing in jumpform concrete construction and has a strong reputation for quality.

KDJ Sales & Service Inc., Mackinaw, IL (309-359-3611), served as electrical contractor and provider of the elevator control system. Ironhorse Inc., Baldwin, IL (618-785-2221), constructed the loop track. And John Wilham, Hopedale, IL (309-473-3026), served as consulting engineer.

Construction on the project began in November 2004, and the facility loaded its first shuttle train on Sept. 6, 2005.

Concrete Storage

Two Hoffmann jumpform concrete tanks comprise the bulk of the new storage on the site.

The larger of the two tanks, for dry grain, stands 72 feet in diameter and 140 feet tall, holding 470,000 bushels. The tank is outfitted with a 12-inch Sudenga bin sweep and Bindicator level monitoring. Grain temperature monitoring may be added at a later date, if needed.

Four AIRLANCO 50-hp centrifugal fans and ten 2-hp roof exhausters provide a hefty 1/7 cfm per bushel worth of aeration.

The smaller tank, which will hold primarily wet corn, stands 44 feet in diameter and 140 feet tall, holding

160,000 bushels. Instead of a flat bottom, this tank has a 40-degree concrete one-way hopper, which eliminates the need for a sweep auger. It also has Bindicator level monitoring and a pair of 50-hp AIRLANCO centrifugal fans providing 1/7 cfm.

In addition, the annex includes a 12,000-bushel GSI corrugated steel hopper tank for screenings, which can be metered back into the product flow to meet contract specifications via Screw Conveyor variable-speed auger.

Grain Handling

Dolbear comments that the grain handling equipment installed in the rail-loading annex is a mix of new equipment and used equipment that was salvaged from an Archer Daniels Midland river terminal in Florence, IL, which was closed in 2003.

Equipment includes a pair of enclosed 1,200-bushel mechanical receiving pits located in between the annex and the Big Chief tank. Each pit feeds into one of two Schlagel legs, one rated at 15,000 bph and the other at 20,000 bph. The larger of the two legs is outfitted with Tapco 20x8 heavy-duty low-profile buckets mounted on a 22-inch Goodyear Pathfinder belt. The smaller leg has 18x8 buckets on a 20-inch belt.

In addition, Grain Flo installed a 15,000-bph below-ground Hi Roller belt conveyor from the Big Chief tank to reach the new legs.

The two legs feed into a pair of six-hole Schlagel electronic distributors. These distributors can reach all three of the annex tanks via gravity spout plus a

35,000-bph Schlagel drag conveyor running out to the loadout system. The distributor on the 20,000-bph leg also can send grain through a 25,000-bph InterSystems gravity screener.

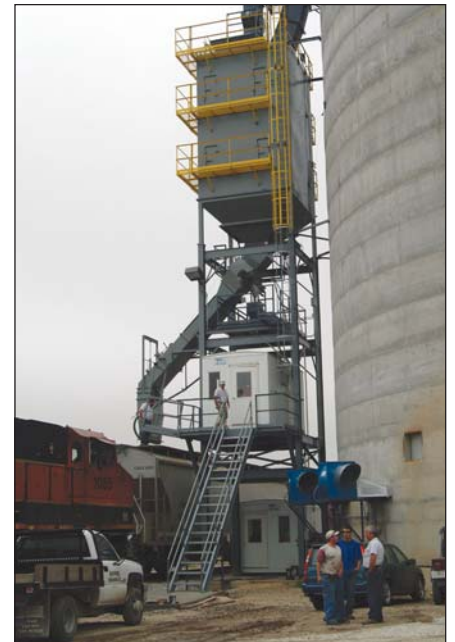
In addition to this equipment, the company installed a new 7,000-bph natural gas-fired GSI/Zimmerman tower dryer, the largest that manufacturer makes.

Origin weights are measured by a 60,000-bph CompuWeigh bulk weigh loadout scale, which can take grain simultaneously from the overhead drag conveyor and a gravity spout from the large concrete tank. The scale is under the control of CompuWeigh's CD 4000 scale controller, with a GMS-4000 computer workstation, and also includes a CompuWeigh SmartRead tag reader system, which provides capacity data from railcar-mounted tags.

Employees operate the bulk weigh loadout system from a shed directly beneath the loader, while a second, ground-level shed houses a grain inspection lab. Plans call for the addition of a fall protection system for workers atop railcars and possibly a loadout enclosure.

Dolbear comments that even with some bugs still being worked out of the system and a power outage, his staff still loaded its second train within the 15-hour BNSF time limit.

Ed Zdrojewski, editor



New 60,000-bph CompuWeigh bulk weigh loadout scale at top, with operator shed and grain inspection shed below.