

# Second Rail Access

JOINT VENTURE BUILDS A RAIL TERMINAL IN KANSAS' BIGGEST WHEAT-PRODUCING COUNTY



**Mid-Kansas Cooperative**  
Moundridge, KS • 620-345-6328

**Founded:** 1965  
**Storage capacity:** 70.498 million bushels at 65 locations  
**Annual volume:** 60 million bushels  
**Annual revenues:** \$500 million  
**Number of members:** 8,000+  
**Number of employees:** 300  
**Crops handled:** Corn, soybeans, hard red winter wheat, sorghum, canola  
**Services:** Grain handling and merchandising, feed, agronomy, petroleum, risk management

**Key personnel at Milan:**

- Jeff Jones, director-southern operations
- Lawson Hemberger, grain manager
- Ryan O'Neal, superintendent
- Todd Schultz, grain marketing specialist
- Cole Lies, crop insurance specialist
- Chelsea Hargett, scale/counter specialist
- Matt Gress, grain specialist
- Garrett Thompson, grain specialist
- Zachary Blake, grain specialist
- Alec Stanley, grain specialist

**Supplier List**

- Aeration fans.....**AIRLANCO
- Aeration system .....**AIRLANCO
- Bucket elevators ..** Bulk Conveyors Inc.
- Bulk weigh scale .....** C&A Scales
- Bulk weigh scale controls..**Proceres/  
Cultura
- Catwalk.....**Warrior Mfg. LLC
- Cleaners .....** InterSystems
- Contractor/millwright ...**SMA LLC
- Control system.....** Kasa Controls &  
Automation
- Conveyors (belt).....** Hi Roller  
Conveyors, Straightline
- Conveyors (drag) ...** Bulk Conveyors Inc.
- Distributors .....**Schlagel Inc.
- Dockage testers.....** Mid-Continent  
Industries Inc.
- Dust collection sys.....**AIRLANCO
- Elevator buckets .....** Maxi-Lift Inc.
- Engineering .....** VAA LLC
- Fall protection .....**Fall Protection  
Systems Corp.
- Flat storage .....**CHIEF Buildings



*Producer Ag LLC, a joint venture between CHS and Team Marketing Alliance, has opened this rail loading terminal at Milan, KS, with 2.7 million bushels of upright slipform concrete storage at right and a 4.5-million-bushel flat storage building. The terminal is under the operation of Mid-Kansas Cooperative. Aerial photo by Steve Brown Photography.*

Early in 2015, Mid-Kansas Cooperative (MKC) began operating its first loop-track rail terminal at Canton in central Kansas. The facility on the Union Pacific Railroad was built under the name Producer Ag LLC, a joint venture between CHS, the nation's largest farmer cooperative, and Team Marketing Alliance (TMA), the merchandising arm of MKC and several other cooperatives.

The terminal at Canton was such a success that more storage space had to be added in less than a year.

- Grain temp system...** Rolfes@Boone, CMC Industrial Electronics
- Magnets .....** Puritan Magnetics Inc.
- Manlift .....** LiftCo Manlift
- Moisture meter .....** DICKEY-john
- Monitoring equipment .....** CMC Industrial Electronics
- NIR tester .....** Foss North America
- Sampler.....** Gamet Mfg. Inc.
- Tower support system .....** Warrior Mfg. LLC
- Truck probes.....** Gamet Mfg. Inc.
- Truck scales.....** Mettler Toledo, LLC

Now, in 2017, a second Producer Ag rail terminal has gone into operation, again with MKC at the helm of day-to-day operations. This one is accessing new markets on the Burlington Northern Santa Fe Railway (BNSF) in Milan, KS.

The location, along U.S. Highway 160 about 13 miles west of Wellington, KS, is as far south an elevator as MKC has ever managed, a dozen miles from the Oklahoma state line.

“There are shuttle-loading elevators in the area, but this part of the state is underserved

*Grain Manager Lawson Hemberger (right) and MKC Director of Southern Operations Jeff Jones.*





*Dual Gamet Apollo truck probes (bottom right) and a pair of METTLER TOLEDO inbound/outbound scales (right) are set up to service two lanes of truck traffic simultaneously. Above, dual grain testing labs are dedicated each to one lane of traffic. Ground photos by Ed Zdrojewski.*



*Above, grain handling equipment at the elevator include a rail loading station at left, serviced by an 80,000-bph C&A bulk weigh loadout scale inside the slip and a pair of 25,000-bph receiving legs from Bulk Conveyors Inc. Visible at the top are two Schlagel Swingset distributors and a pair of 25,000-bph Hi Roller conveyors running left toward a flat storage building.*



*Left, two 25,000-bph Bulk Conveyor Inc. bucket elevators, in a Warrior support tower, feed two Hi-Roller enclosed belt conveyors to fill storage.*



*A 4.5-million-bushel CHIEF Buildings flat storage building is fed by a pair of Straightline open top 25,000-bph belt conveyors equipped with laser-guided trippers.*

by cooperatives,” says Location Manager Jeff Jones, who came to Milan recently from MKC’s Haven, KS facility to be terminal manager and promoted this year by MKC to director of southern operations for the coop. “A lot of wheat was going to private firms or being trucked to millers in the Wichita area.

“Sumner County is the biggest wheat producer in the state,” he continues. “We’ve been able to draw wheat from a 55- or 60-mile radius. And we’re looking for the soybean harvest to be big this fall.”

### **Eighteen-Month Project Done in 12**

MKC took bids from several potential contractors and awarded the contract to SMA LLC, Monticello, MN (888-259-9220).

“It was their first project for us, but we developed a fantastic relationship,” Jones says. “The project broke ground on May 25, 2016, and we were ready to go on June 1, 2017. They did an 18-month job in 12.”

Additional contractors with portions of the project:

- VAA LLC, Plymouth, MN (763-559-9100), provided structural engineering work.
- Kansas Electric, Newton, KS (316-283-4750), served as electrical contractor.
- Kasa Controls & Automation, Salina, KS (800-755-5272), supplied the control systems.
- Railworks Corp., Lakeville, MN (952-469-4906), built the loop track.
- Bulk Conveyors Inc. (BCI), Wichita, KS (316-201-3158), coordinated much of the grain handling equipment such as conveyors and legs.

The resulting 7.2-million-bushel facility is similar in many ways to the terminal at Canton. One major exception is instead of temporary storage piles, the Milan terminal has a single 4.5-million-bushel flat storage building.

### **Grain Storage**

All of the upright storage at Milan consists of slipform concrete, including three 500,000-bushel tanks and an eight-pack of 150,000-bushel tanks with interstices.

The three big tanks stand 74 feet in diameter and 140 feet tall. They are equipped with 12-cable Rolfes@Boone grain tem-

perature monitoring systems and AIRLANCO AIRAUGER air-assisted unloading floors with center sumps. A set of four AIRLANCO 50-hp centrifugal fans per tanks supply 1/7 cfm per bushel for aeration purposes, with the assistance of 12 roof exhausters (eight power, four gravity) per tank.

The smaller tanks in the eight-pack stand 40 feet in diameter and 140 feet tall. They also have AIRAUGER air-assist floors, as well as five-cable Rolfes@Boone temperature monitoring systems. Two of the eight tanks are equipped with a single AIRLANCO 100-hp centrifugal fan and three roof exhausters supplying 1/7 cfm per bushel of aeration. The six each have a single AIRLANCO 50-hp centrifugal fan and two roof exhausters supplying 1/10 cfm per bushel.

The large CHIEF Buildings flat storage building stands 700 feet long by 200 feet wide, with aeration supplied by 48 five-hp Chief Agri axial fans. This building is fed from the distributor by a pair of 25,000-bph Hi Roller enclosed belt conveyors that run to pair of chutes mounted in a Warrior tower. The chutes deposit grain onto a pair of Straightline belt conveyors running into the building. A set of laser-guided trippers direct grain to the correct part of the building.

Workers use front-end loaders to empty the flat storage onto a 60,000-bph Hi Roller enclosed belt conveyor in an 8-foot-x-10-foot below-ground tunnel. This conveyor runs back to grain handling equipment in the main elevator. Two smaller egress tunnels, required by a state fire code, run southeast from the main tunnel to exit ladders outside the building.

### **Grain Handling**

To maximize grain volume, especially during the busiest times like wheat harvest and fall crop harvest, Producer Ag routes incoming trucks into two lanes of traffic, with equipment to match.

Trucks are sampled with a pair of side-by-side Gamet Apollo probes, then proceed to a pair of inbound METTLER TOLEDO 80-foot pitless scales. These are under the control of a Proceres/Cultura oneWeigh™ scale automation with RFID tag readers for truck identification.

Two lanes of traffic for trucks are becoming more common in the grain industry, but Producer Ag speeds up the process further with dual grain labs on either side of a room in the facility office building. The labs are equipped with DICKEY-john GAC 2500 moisture meters, Foss Infratec grain testers, Ohaus scales, and MCI Kicker dockage testers.

Trucks then are routed to one of four mechanical receiving pits. Three 1,200-bushel pits are housed in an enclosed steel building, while the fourth 600-bushel pit is located outside but adjacent to the building.

Three of the receiving pits empty into 25,000-bph Hi Roller enclosed belt conveyors and one onto a 60,000-bph Hi Roller equipped with Hi Roller-built ladder gates. These, in turn, feed into quad BCI 25,000-bph receiving legs, which are outfitted with a single row of Maxi-Lift 26x10 orange buckets mounted on a 28-inch Goodyear belt. The legs are encased in a Warrior 21-x-24-foot tower. A switchback staircase is mounted up an adjacent slipform wall, then continues up to the top portion of the tower.

The legs deposit grain into a pair of Schlagel electronic 12-duct Swingset distributors. From there, a pair of 25,000-bph

BCI overhead drag conveyors carry grain out to storage. Empty trucks are finally weighed on a second set of METTLER TOLEDO scales at the far north end of the property.

Upright storage tanks empty onto 60,000-bph Hi Roller enclosed belt conveyors in a below-ground tunnel, which run back to the receiving legs. Any or all of these legs can double as shipping legs.

Grain for shipping runs from the legs through an 80,000-bph C&A Scales bulkweigher housed inside a slipform concrete structure and under the control of a oneWeigh scale automation system. When operating at full capacity, the bulk weigh scale is receiving grain from the four receiving legs. The operator has the option of routing grain through one or both of a pair of 25,000-bph Intersystems gravity screeners above the scale.

Workers atop railcars are protected by a trolley system from Fall Protection Systems running the length of three cars. At the time of *Grain Journal's* visit, the first train to be loaded at Milan was scheduled for July 7.

The facility currently has no grain dryer, but a concrete pad is in place to add one later, as needed.

*Ed Zdrojewski, editor*