

No More Lines

NEW STORAGE, RECEIVING, DRYING EQUIPMENT IMPROVES EFFICIENCY AT ILLINOIS ELEVATOR



Ag-Land FS Inc.
Pekin, IL • 309-346-4145

Founded: 1991
Storage capacity: 9.2 million bushels at five locations
Annual volume: 13 million bushels
Number of members: 3,200
Number of employees: 130
Crops handled: Corn, soybeans, soft red winter wheat
Services: Grain handling and merchandising, agronomy, energy

Key personnel at Green Valley:

- Chad Markley, grain division manager
- Rex Orton, elevator manager
- Jennie Canada, administrative assistant
- Tony Homerin, outside foreman

Supplier List

Aeration fans.....Decatur Aeration
Bin sweeps.....Sudenga Industries, GSI
Bucket elevator..... GSI
Catwalks Grain Flo Inc.
Concrete.....Wagenbach Builders
Contractor Grain Flo Inc.
Control system.. KDJ Sales & Service Inc.
Conveyors GSI, The Essmueller Co.
Elevator buckets Maxi-Lift Inc.
EngineeringSKS Engineers LLC
Grain dryer Zimmerman Grain Dryers
Grain temp. system..Rolfes@Boone
Level indicators.....VEGA Americas
Millwright.....Grain Flo Inc.
Motion sensors...Electro-Sensors, Inc.
Steel storage..... GSI
Tower support system.. Warrior Mfg. LLC



New addition at Ag-Land FS in Green Valley, IL includes, from left: 330,000-bushel GSI wet tank, 4,700-bph Zimmerman dryer, 20,000-bph GSI receiving leg enclosed in a Warrior support tower, 788,000-bushel GSI dry tank, and single-bay enclosed receiving pit. Photos by Ed Zdrojewski.

Old-time customers at the Ag-Land FS elevator in Green Valley, IL (309-352-2442), can remember when grain trucks and wagons during harvest would line up across the town of 728 the length of Main Street snarling traffic.

The lines haven't been that long in decades, says Elevator Manager Rex Orton, who joined Ag-Land in 2014 as a "second career" after retiring from Caterpillar Inc. in nearby Peoria, IL. Until 2016, however, they remained a fact of life in Green Valley during harvest.

That's when Ag-Land added approximately 1.2 million bushels in new steel storage at the elevator plus a new 20,000-bph receiving pit and leg and a 4,742-bph grain dryer, the facility's third.

"The farmers have been very happy with the addition," Orton says. "There was no waiting in line in 2016."

That was in spite of record yields in Taze-

well County, 220-plus bushels per acre for corn and 65-70 bushels per acre for soybeans.

Ag-Land hired Grain Flo Inc., Heyworth, IL (309-473-2512), as general contractor and millwright on the \$4.7 million construction project. Also contributing to the 2016 construction project:

- KDJ Sales & Service Inc., Mackinaw, IL (309-359-3611), served as the electrical contractor and installed the automation systems, the Green Valley facility's first-ever PC-based control system.

- SKS Engineers, LLC, Decatur, IL (217-877-2100), performed engineering work.

- Wagenbach Builders, Tremont, IL (309-925-5205), did the concrete foundation work.

Construction began around April 1 with the demolition of two old flat storage buildings and was completed Oct. 1, though Orton notes that the new addition was fully operational around Sept. 1.



Western view of the 1.2 million bushels of new steel storage at the west end of Green Valley.

Storage and Handling

The new GSI dry tank holding approximately 788,433 bushels stands 105 feet in diameter, 99 feet tall at the eave, and 126 feet tall at the peak. It is the largest tank GSI makes in the 105-foot-diameter range.

The tank includes outside stiffeners, 16-inch Sudenga zero-entry bin sweep, 24-cable Rolfes@Boone grain temperature monitoring system, and VEGA level indicators. A set of four 60-hp centrifugal fans supplied by Decatur

Aeration and equipped with silencers provide 1/7 cfm per bushel through in-floor ducting.

The smaller GSI wet tank holding 305,815 bushels stands 72 feet in diameter, 83 feet tall at the sidewall, and 100 feet tall at the peak. It has a 12-inch GSI Series X sweep, nine-cable Rolfes@Boone temperature monitoring system, and VEGA level indicators. Four 30-hp centrifugal fans supply 1/7 cfm per bushel of aeration.

Adjacent to the new tanks is a new 1,000-bushel enclosed mechanical

receiving pit. This feeds a 20,000-bph GSI leg outfitted with a single row of 20x8 Maxi-Lift heavy-duty buckets mounted on a 22-inch belt. The leg is housed inside a Warrior 14-foot-x-14-foot-x-165-foot support tower with switchback stairs. The structure also includes two rigs for hauling equipment and materials to the top without having to carry it up.

The leg deposits grain into an electric valve system, which in turn, sends grain out to storage via 20,000-bph GSI overhead drag conveyors or via gravity to the new dryer.

For unloading, the big tank is outfitted with two sidedraw spouts, and the smaller tank has one sidedraw. Both tanks empty onto 12,000-bph GSI drag conveyors in above-ground tunnels.

The Zimmerman dryer is fired by natural gas through a four-inch pipe from a gas main running along Main Street/Toboggan Road. The dryer, which empties into a 12,000-bph GSI dry leg, comes with a control panel that Orton calls “almost foolproof.”

Ed Zdrojewski, editor