

# Replacement Soy Annex

IOWA COOPERATIVE REBUILDS STEEL SOYBEAN FACILITY AFTER WINDSTORM



Rebuilt 700,000-bushel soybean annex in foreground at Gold-Eagle Cooperative in Renwick, IA. Original was destroyed in a windstorm in July 2016. Aerial photo courtesy of Sukup Mfg. Co.



**Gold-Eagle  
Cooperative**



**Gold-Eagle Cooperative**  
Goldfield, IA • 515-825-3161

**Founded:** 1908  
**Storage capacity:** 31 million bushels at nine locations  
**Annual volume:** 45 million bushels  
**Annual revenues:** \$310 million  
**Number of members:** 1,200  
**Number of employees:** 200+  
**Crops handled:** Corn, soybeans  
**Services:** Grain handling and merchandising, feed, agronomy, trucking, ethanol

**Key personnel at Renwick:**

- Brad Davis, general manager
- Cory Donahe, branch manager

**Supplier List**

|   |  |
|---|--|
| <b>Aeration fans</b> .....Sukup Mfg. Co.                        | <b>Level indicators</b> .....BinMaster Level Controls        |
| <b>Bearing sensors</b> ..... SchlageI Inc.                      | <b>Motion sensors</b> .....Maxi-Tronic Inc.                  |
| <b>Bin sweeps</b> ..... Springland Mfg.                         | <b>Motors</b> ..... Toshiba International                    |
| <b>Bucket elevator</b> ..... SchlageI Inc.                      | <b>Receiving/loadout building</b> ... Sukup Mfg. Co.         |
| <b>Catwalks</b> ..... Tri-Co Fabrication                        | <b>Steel storage</b> .....Sukup Mfg. Co., Meridian Mfg. Inc. |
| <b>Contractor/millwright</b> .....Buresh Building Systems Inc.  | <b>Steel tank erection</b> .....Global Bin Builders          |
| <b>Control system</b> .....in-house                             | <b>Tower support system</b> ..... Tri-Co Fabrication         |
| <b>Conveyors</b> ..... SchlageI Inc.                            |  |
| <b>Electrical systems</b> ..... in-house                        |  |
| <b>Elevator buckets</b> ..... Tapco Inc.                        |  |
| <b>Engineering</b> ....Buresh Building Systems Inc.             |  |
| <b>Grain temp system</b> ... Tri-States Grain Conditioning Inc. |  |



*Branch Manager Cory Donahe*

The tall new steel soybean elevator that towers over State Highway 17 in the town of Renwick, IA is the second one to stand on that spot.

The first was largely destroyed in July 2016 during a storm with high winds that may have been a small tornado, says Branch Manager Cory Donahe (515-824-3214), an employee with Gold-Eagle Cooperative since 2012.

Donahe's corner of north central Iowa is prime soybean country, so there was no question about rebuilding, with the specification that the rebuild would make use of the most up-to-date storage tanks and grain handling equipment available.



*End view of the soybean annex at Renwick showing one of three Sukup 231,000-bushel tanks, 20,000-bph Schlagel receiving leg, TriCo tower with switchback stairs, receiving shed, and Meridian surge tank. Ground-level photos by Jerry Perkins.*

Gold-Eagle took bids shortly after the storm and awarded a contract for an undisclosed sum to a long-time construction partner, Buresh Building Systems Inc., Hampton, IA (641-656-5262). Buresh served as general contractor and millwright and also did engineering on the project.

"They've done a lot of work for us in the past," Donahe says. "Their performance on this job was excellent."

Also on the project, Global Bin Builders, Sioux Falls, SD (320-413-0312), erected the upright steel storage, and Gold-Eagle supplied its own in-house automation system.

Removal of the storm debris began in that July, and the replacement annex went into operation in September 2017.

### **Annex Description**

The bulk of the storage in the annex consists of a trio of Sukup 231,000-bushel corrugated steel tanks. Donahe says Gold-Eagle opted for height rather than width on the tanks to have as much bushel capacity possible in a limited space. The three tanks stand 60 feet in diameter, 106-1/2 feet tall at the eaves, and an overall 124-1/2 feet in peak height.

The tanks have outside stiffeners,

flat floors, 12-inch Springland sweep augers, 11-cable TSGC grain temperature monitoring systems, and BinMaster SmartBob level indicators.

Each tank has a pair of Sukup 50-hp centrifugal fans generating 1/8 cfm per bushel of aeration through in-floor ducting, with the assistance of a pair of 2-hp roof exhausters per tank.

Adjacent to the tanks is a single 1,100-bushel receiving pit enclosed in a Sukup receiving/loadout building. The mechanical pit feeds a 20,000-bph Schlagel receiving leg equipped with a single row of Tapco 20x8 low-profile heavy-duty buckets on 7-inch centers mounted on a 22-inch belt. The leg is enclosed in a TriCo 12-foot-x-12-foot-x-145-foot support tower with switchback stairs.

A two-way valve at the top of the leg can send grain either to storage via 20,000-bph Schlagel drag conveyors or to a 5,000-bushel Meridian surge tank atop the receiving shed for truck loadout via gravity spout.

The tanks empty onto Schlagel 8,500-bph above-ground reclaim conveyors in 6-foot-5-inch tall tunnels. These return grain to the receiving leg.

*Ed Zdrojewski, editor*



*Ground-level view of the entire soybean annex in Renwick, rebuilt after a July 2016 storm.*