

Country Feed Mill

STATELINE COOPERATIVE MOVES NON-RUMINANT PRODUCTION TO NEW SITE



StateLine Cooperative
Burt, IA • 515-924-3266

Founded: 1996
Milling capacity: 500,000 tpy at two locations
Feed products: Complete line of beef, dairy, sheep, swine, and poultry feeds
Annual sales: \$281 million
Number of members: 2,500+
Number of employees: 140

Key personnel:

- Cherilyn Krichau, feed dept. mgr.
- Michael Jensen, location manager
- Ken Van Ginkel, mill operator
- Keith Goertz, office manager
- Dan Eades, grain superintendent

Supplier List

- Aeration fans**..... Caldwell
- Automation and microingredient systems**..... Easy Automation Inc.
- Bin sweeps** Sudenga Industries
- Bucket elevator**Schlagel Inc.
- Contractor**.. EBM Construction Inc.
- Conveyors**Schlagel Inc.
- Distributor**.....Schlagel Inc.
- Dust suppression** ...E.J. Heck & Sons
- Elevator buckets**Maxi-Lift Inc.
- Gates/diverters**Schlagel Inc.
- Grain temp system**..... OPISystems
- Level indicators**..... BinMaster Level Controls
- Magnets**Bunting Magnetics Co.
- Mixer**Scott Equipment Co.
- Motion sensors**..4B Components Ltd.
- Pellet cooler** Bliss Industries LLC
- Pellet mill**..... Bliss Industries LLC
- Roller mill**..RMS Roller-Grinder Inc.
- Samplers**Gamet Mfg. Co.
- Scales**EBM Construction Inc.
- Screeners**..... Baasch & Sons Inc.
- Screw conveyors** ..EBM Construction
- Steel storage**... Chief Agri/Industrial Division
- Truck probe**..... Gamet Mfg. Co.
- Truck scales** ...Cardinal Scale Mfg. Co.



StateLine Cooperative's new feed mill and grain elevator at Halfa, IA produces both mash and pelleted feeds for non-ruminant animals. Aerial photo by JH Photography, Spencer, IA.

Halfa, IA doesn't show up on many state maps, barely a wide spot along a county blacktop about seven miles southwest of Armstrong.

But StateLine Cooperative found it the perfect site for its second feed mill and a small 750,000-bushel grain elevator to service the mill (712-866-2671). The cooperative already had been operating an old wood elevator with a couple of adjacent steel storage tanks at the site and tore most of it down in the fall of 2012 to make room for the new facility.

"We didn't want an in-town location," says Cherilyn Krichau, who has been with StateLine for nine years, the last six as feed department manager. "Emmet County was very supportive of us here with zoning changes and tax abatements, and Alliant Energy (a lo-



Cherilyn Krichau

cal utility) extended a natural gas pipeline out here for us."

StateLine had been operating a feed mill in Lone Rock, IA at full capacity. In order to avoid deterioration in quality and to provide another local market for area corn producers, the cooperative decided to move Lone Rock's non-ruminant production, primarily swine feeds, to the new site. Ruminant feed production remains at Lone Rock.

The new mill, designed to produce approximately 200,000 tpy of pelleted feeds per year, began production in October 2013. StateLine selected EBM Construction Inc., Norfolk, NE (402-371-2945), as general contractor and millwright on the project for an undisclosed sum.

"The managers visited several mills that



Mill Operator Ken Van Ginkel utilizes an Easy Automation control system to operate the feed mill from a central control room. Ground level photos by Ed Zdrojewski.

EBM built before making a final decision,” Krichau says. “We wanted a steel facility, in order to be able to put everything on a single production floor. Now, we can expand production as needed without having to do major remodeling.”

Grain Elevator

After the demolition project in the fall of 2012, all that remained of the old elevator on the site was a single 150,000-bushel steel tank.

To the south of that, EBM constructed a 618,000-bushel Chief tank standing 105 feet in diameter, 75 feet tall at the eave, and 103 feet tall at the peak. The flat-bottom tank is outfitted with outside stiffeners, 12-inch Sudenga Industries bin sweep, 24-cable OPI systems IntegrisPro fully automated grain temperature monitoring system, and BinMaster rotary level indicators. A set of four 40-hp Caldwell centrifugal fans provide 1/10 cfm per bushel of aeration.

Producers deliver grain to the elevator through an 80-foot Cardinal dump-through scale. The pit feeds a 20,000-bph Schlagel leg outfitted with a single row of 20x8 Maxi-Lift CC-MAX buckets mounted on a 22-inch belt. At the top of the leg, grain passes through a five-duct Schlagel distributor and via gravity spout to the older tank and via an overhead 20,000-bph Schlagel drag conveyor to the new tank. There is no

dryer, so the elevator can accept only dry grain.

Grain is sent to the mill via an underground 4,000-bph Schlagel drag conveyor.

Feed Mill

The single-story feed mill sits on

a 90-x-140-foot footprint, with a 80-foot-tall bin tower. The tower includes 24 KC Mfg. ingredient bins holding approximately 1,000 tons and 18 loadout bins with total capacity of 400 tons.

All mill functions are operated from a single control room utilizing an Easy Automation control system.

Incoming corn is ground on a pair of RMS 36-tph roller mills. Each unit has triple rolls for the smallest possible uniform micron particle.

Ingredients are mixed in a Scott 4-ton horizontal double-ribbon mixer at an average of 60 to 90 seconds per batch. Liquids can be added at the mixer, as well as microingredients from a 30-bin Easy Automation system.

Between 50% and 70% of the mill's production is pelleted on a Bliss pellet mill rated at 40 to 45 tph. Pellets are cooled prior to storage in a Bliss counterflow cooler.

Feed trucks are loaded on another Cardinal scale through fixed spouts equipped with Gamet feed samplers.

Ed Zdrojewski, editor



Bliss 45-tph pellet mill is topped by a conditioner that allows up to 51 seconds retention time for incoming mash feed.