

Upgrade To Keep Pace

Castlewood Farmers Elevator
Castlewood, South Dakota

5 REASONS TO LOVE THIS FACILITY

1 The dry fertilizer equipment update keeps traffic moving. The blender used to run from 5 a.m. to 10 p.m. and take 40 minutes to load a semi/tender. Now, the process takes five minutes or less. Mark Hollmann, director of agronomy, says, "This spring, no floater was waiting on the side of a field."

2 Additional flat storage capacity for the site is the next project. Currently, the warehouse holds urea, MAP, AMS and potash. Micronutrients are added overhead in 1-ton mini bulk bags.

3 When Castlewood Farmers Elevator built the facility new in 2005, the co-op aimed to move 3,500 tons per year. Last year, it sold 9,300 tons. Nate Reznechek, director of fertilizer for GSI, says he sees a lot of fertilizer operations relying on turning their warehouses three or more times a year.

4 This project used Murray ControlPro automation—the same system the team uses for liquid systems. It's connected with Agvance accounting, so all blend tickets—dry or liquid—are tracked from order, loading and invoicing.

5 The site was functional by May 1, but 12 days later, it was in the direct line of an EF2 tornado with 125 mph winds. The storm did minor damage to the facility—blowing off some plastic sheeting and turning over a semi. Blending operations promptly resumed.



TWO VERTICAL BLENDERS AND A BYPASS

Of the 50,000 acres applied each spring or fall, a majority is variable-rate. The blenders and blender bypass are used to load separate products and blends on each hopper of the truck. In particular, the bypass sped up the process by going direct to the semi/tender when needed.



200-TON STAINLESS STEEL TOWER

The site switched from on-floor to tower blending with this project. Although 150 tons was the original target, the team realized an extra 50 tons would add the needed speed and surge capacity on-site.



OVERHEAD 12-TON WEIGH HOPPER

Weigh hoppers are fed by GSI's dual-stage pneumatic Salem gates to control flow. All mixers and weigh hoppers are on scales.



INDIVIDUAL FLOW

Each weigh hopper is fed by a separate spout. There are two level sensors per bin. A control room on-site is used for operations and monitoring.



TWO BATCHES READY TO GO

All Castlewood trucks have Verizon GPS tracking, so when approaching the fertilizer site, two batches—one in each hopper—can be ready for filling. The third can be ready and loaded in less than five minutes.



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