

# CONCRETE BUNKER FOR ON-FARM FERTILIZER STORAGE

BY DICK HAGEN

## **\$39,000 SAVINGS WITH \$230,000 STRUCTURE**

Bunkers have a diversified history in American agriculture. Quick and convenient storage for corn silage started with “bunker silos” 40-plus years ago. Construction materials were pretty much whatever was convenient in those early days. That might mean discarded railroad ties, old sheets of plywood, old utility poles, hay bales or even just piled up dirt.

But as the quality of feed product got better, so did the quality of bunker. When ear-corn silage, chopped alfalfa, hay, total mixed rations and shelled corn moved into bunker storage, bunker construction rapidly got substantially better. Concrete soon became the prime catalyst.

So would a bunker work for bulk fertilizer too? Sure, if it’s got water-tight walls, a framed steel water-tight roof and 6-inch concrete floor. Stanley Farms of Grygla, Minn., has just such a bunker.

Todd Stanley general manager of this 12,000-acre operation headquartered in Beltrami County about 38 miles south of Roseau, said, “it looks much like any fertilizer plant you see at your local co-op. “Well, not quite. This one constructed by Hanson Silo Co. of Lake Lillian, Minn., measures 60-feet wide, 104-feet long, has 12-foot concrete walls – solid concrete T panels measuring 12-feet tall, 7-feet wide, 7.5-feet long and each weighing 13,000 pounds and features five separate interior bins, each capable of handling 250 tons of fertilizer.

Including the alley, it has a total storage capacity of 1,500 tons of fertilizer. That’s right: 1,500 tons of fertilizer in a concrete bunker.

A framed, 8-foot stud wall sits right on top of the concrete walls to carry that roof. A brief visit with Stanley soon convinces you that he thrives on

4,000 acres spring wheat, 4,000 acres soybean and 2,000 acres growing various grass seeds such as perennial rye grass for golf courses, roadside and lawn mixes. Last year they had 160 acres of 75-day maturity corn that yielded 155 bushels per acre. Conservation Reserve Program (CRP) land claims another 1,000 acres. That much cropland gobbled up about 1,300 tons of dry fertilizer last year, generating about a \$30 per ton discount price.

We're talking a \$39,000 savings in just one season on the fertilizer bill, plus that all-important 24.7 access to their fertilizer.

They used to store fertilizer in pole buildings after Stanley's dad moved from bagged fertilizer to bulk in 1970. "For several years we bought blends," he said, "then we switched to blending our own (50-50 phosphate and potash). We'd load one semi of phosphate, for example, into the other semi if potash then unload this blend into the shed and with skid loader moved it into a bin in this pole barn.

What triggered the concrete bunker idea? Those salt sheds used by the highway department caught Stanley's eye. "Back when I was feeding cattle I recalled those Hanson silo ads showing different uses of their concrete bunkers. So I called them, told them what I was needing," Stanley said. "Their sales rep said he'd check with their engineers and get back to me. He also sent some photos of different salt sheds they've built. I liked what I saw so we struck a deal."

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Land, Stanley said about two-thirds of his fertilizer was already in the bunker, with the rest being delivered the first week in March.

Besides this fertilizer bunker, he also built five hopper bins, a seed tender unit (for spring wheat and soybean seed) and special conveyor belts to load either seed or fertilizer: All this is their special tender truck gets loaded with both seed and fertilizer – phosphate, potash and ammonium sulfate. Once seeding starts, it's a 24/7 operation so the efficiency of one-stop loading for both products is critical. They use anhydrous ammonium for their nitrogen source for wheat and corn; the grass seed fields get urea.

Stanley Farms spent about \$425,000 for the entire structure and special equipment. The concrete fertilizer facility represents about \$230,000 of that total package.

A 60-foot-wide air seeder does the planting. This rig runs with a five-tank cart accommodating 980 bushels when loaded. Hitched behind this seeder is a fertilizer trailer with three separate tanks for on-the-go variable fertilizer application, depending upon the GPS-directed monitor.

That great success with corn last year is likely triggering a few more acres for next year. Stanley Farms is also growing 350 acres of flax for a "fiber-to-fabric" project in South Carolina.

"We're growing the flax seeds for this project; South Carolina farmers will be growing the fiber," said Stanley, who added that flax is a fairly common crop around Roseau, Minn.

Stanley Farms dates back to 1937 when his Norwegian grandad bought 160 acres for buildings. Today Todd, his son Bill, and cousin Mike Jelle, are operational managers of Stanley Farms. Todd's wife, Debra, is also a key business partner. Todd and Debra started farming on their own in 1975, and built up to about 3,500 acres by the late 1990s."

"My parents also farmed about 3,500 acres and when they retired in 1998 we rented their farm so that doubled us to 7,000 tillable acres. Since then

So why such diversity at Stanley Farms? "We don't want this job to get boring," he chuckled.