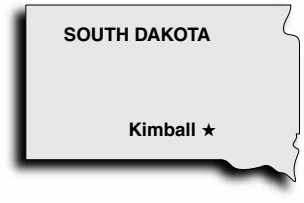
A Grand Entrance

GAVILON OPENS ITS FIRST GRAIN AND FERTILIZER TERMINAL IN SOUTH DAKOTA



Gavilon
Omaha, NE • 402-889-4000

Founded: 2008
Storage capacity: 349 million bushels at 140 locations
Number of employees: 2,100
Crops handled: Corn, soybeans, wheat, sorghum, specialty grains
Services: Origination, storage, and handling; transportation and logistics; marketing and distribution; risk management

Key personnel at Kimball:
- Chad Felderhoff, grain manager
- Paul Palmer, superintendent-grain
- Joseph Williams, superintendent-fertilizer
- Mike Fastnacht, merchandiser

Supplier List

Aeration fans.....AIRLANCO
Bearing sensors..... 4B Components Ltd.
Bin sweeps.....Springland Mfg.
Bucket elevators..... Union Iron
Bulk weigh scale.....Intersystems
Bulk weigh controls.... C&A Scales
Catwalk..... LeMar Industries Corp.
Cleaner.....Intersystems
Contractor/millwright/designer..... Adams Building Contractors
Control system... Hope Electric Inc.
Conveyors .. Union Iron, Tramco Inc., Hi Roller Conveyors
Distributors .. Hayes & Stolz Ind. Mfg.
Dust collection system..Aircon Corp.
Elevator buckets ..... Maxi-Lift Inc.
Engineering ... Sunfield Engineering
Fall protection.....Fall Protection Systems
Grain dryers.... Zimmerman Grain Dryers
Level indicators.....Bindicator
Manlift..... LiftCo Manlift
Samplers..... Intersystems
Scale automation..... Cultura Technologies Inc.
Truck probe..... Intersystems
Truck scales..... Mettler Toledo

Aerial view of Gavilon's new rail terminal near Kimball, SD including a 2.2-million-bushel elevator, 4 million bushels of outdoor temporary storage, 41,590-ton fertilizer plant, and 10,000-foot loop track. Aerial photo by JH Photography, Spencer, IA.

When Gavilon Liberty Grain opened its new grain and fertilizer terminal Nov. 1 near Kimball, SD (605-778-6566), it was a grand affair. More than 500 people visited the new facility, located about halfway across the state along Interstate 90, including South Dakota Gov. Dennis Daugaard and U.S. Sen. Tim Johnson.

The final stages of construction were still underway at the Gavilon and Richland Investment joint venture terminal at the time of the open house, but the facility already was receiving grain from the 2012 harvest.

"We are pleased to see this project, which is significant for the state of South Dakota, become a reality, with the support of federal and state grants and private investments," said investor Chuck Jepson of Richland Investments, LLC. The Kimball-based joint venture was formed in 2011 to invest in the sourcing and distribution of a variety of grains and fertilizers in South Dakota.

The newest Gavilon terminal, which employs 17 people, continues a recent pattern of opening grain facilities along the fringes of the U.S. corn and soybean production areas, where producers are shifting acreage rapidly from wheat to fall crops.

"We're seeing a lot of drought-resistant varieties being planted in this area," says Kimball Grain Manager Chad Felderhoff. "We had a lot of dry weather this year, but we still have a lot of guys making more than 100 bushels per acre of corn in the middle of a drought compared with 30 bushels per acre of wheat."

Ground-level view of the new Gavilon elevator nearing completion in early November, one week after a ribbon-cutting open house and already receiving grain. Ground-level photos by Ed Zdrojewski.

The new terminal, with 2.27 million bushels of upright slipform concrete storage and another 4 million bushels in outdoor piles, also includes a 41,590-ton fertilizer plant and a 10,000-foot loop track off the Dakota Southern short-line railroad.

The Dakota Southern played a major role in the decision to locate at Kimball, Felderhoff says, when it upgraded its line from Chamberlain, SD to Mitchell, SD to handle unit trains. The short line connects to the Burlington Northern Santa Fe at Mitchell.

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Chad Felderhoff

Gavilon also identified this part of South Dakota as underserved for area producers, with the nearest rail terminal about 50 miles away.

Adams Building Contractors (ABC), Jackson, MI (517-748-9099), served as the contractor on the grain-handling portion of the project. ABC has worked with Gavilon on other projects, including a terminal at Rockport, MO, and a major upgrade at Carlisle, IN.

In addition to ABC, Hope Electric, Hope, ND (701-945-2460), served as electrical contractor, and Sunfield Engineering Inc., Cedar, MI (231-228-4400), engineered the slipform, tunnels, pits, bin hoppers, and tower anchorage.

Groundbreaking took place in November 2011.

Grain Storage

The slipform concrete structure includes two 530,000-bushel tanks, eight 113,000 tanks, four 25,000-bushel interstices, and a square tower containing the bulkweigher. All are 140 feet tall. The facility has no grain temperature monitoring, Felderhoff says, since it is intended for fast turnaround.

The two big tanks at the west end of the elevator stand 76 feet in diameter and are equipped with 18-inch Springland sweep augers and a pair of 50-hp AIRLANCO centrifugal fans each supplying 1/14 cfm per bushel of aeration.

To the east of the big tanks is an "eight-pack" of 36-foot-diameter tanks. These have AIRLANCO AIRAUGER air-assist unloading floors powered by two 30-hp centrifugal fans per tank to empty grain through side sumps. In aeration mode, the fans provide 1/11 cfm per bushel.

The facility also includes a pair of 2-million-bushel oval temporary storage pads 150 feet wide by 900 feet long, with four-foot LeMar sidewalls, packed dirt floors, and AIRLANCO 10-hp axial fans for aeration and holding tarps in place. Gavilon is using a pair of LeMar ▶

Grain receiving and rail loadout tower shown with twin Zimmerman 4,700-bph tower dryers.

One of two 2-million-bushel temporary storage piles with four-foot LeMar sidewalls, this one holding 2012-crop corn.

double drive-over transport conveyors, one rated at 25,000 bph and the other at 15,000 bph, for loading the piles.

Grain Handling

Incoming trucks stop at an Intersystems truck probe station adjacent to the facility office building for sampling and for drivers to swipe ID cards as part of a oneWeigh scale automation system from Cultura Technologies Inc. Then, they proceed to a 120-foot Mettler Toledo inbound pitless truck scale. Later, empty trucks are weighed, and drivers receive scale tickets at a similar outbound scale.

Grain is deposited into one of three enclosed 1,400-bushel mechanical receiving pits. Two of the pits send grain to a 40,000-bph Union Iron leg outfitted with three rows of Maxi-Lift Tiger-Tuff 18x8 buckets mounted on a 58-inch belt, while the third goes to a 25,000-bph leg with two rows of 16x8 buckets on a 35-inch belt. This system allows for handling multiple commodities simultaneously.

The two receiving legs deposit grain into a pair of eight-hole Hayes & Stolz rotary distributors, both of which can reach every part of the facility.

The operator has the option of sending grain via 15,000-bph Union Iron drag conveyors to a pair of twin Zimmerman 4,700-bph grain dryers fired by propane. Felderhoff says Gavilon looked at the possibility of installing a single 10,000-bph dryer, which has been popular among South Dakota grain handlers in recent years, but decided on two smaller dryers for added flexibility. Fall crops came in dry in South Dakota this year, so the dryers have yet to be utilized.

The dryers empty onto a 15,000-bph Union Iron drag running to a dry leg that can send grain to storage or to loadout.

On top of the elevator structure, a pair of Tramco drag conveyors, one rated at 25,000 bph and the other at 40,000 bph, carry grain out to storage.

The tanks empty onto a 70,000-bph Hi Roller enclosed belt conveyor in a below ground tunnel, which runs to a 50,000-bph Union Iron shipping leg equipped with three rows of 20x8 Tiger-Tuff buckets mounted on a 64-inch belt.

The operator has the option of running grain through a 40,000-bph Intersystems gravity screener before dropping it into a 70,000-bph Intersystems bulk weigh loadout scale equipped with oneWeigh automation software installed by C&A Scales.

During train-loading operations, workers are protected by a 10-railcar-long trolley unit from Fall Protection Systems.

Ed Zdrojewski, editor