

Built For Speed

NEW GAVILON FACILITY UNLOADS TRUCKS AT 55,000 BPH AND LOADS TRAINS AT 80,000 BPH



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:

- Brad Auger, location manager
- Scott Sorrows, superintendent
- Chris Schaffenacker, merchandiser
- Trevor Hamilton, merchandiser

Supplier List

Aeration fans/system .. AIRLANCO

Bearing sensors: .. 4B Components Ltd.

Bin sweeps: LeMar Industries

Bucket elevators..... Intersystems

Bulk weigh scale Intersystems

Catwalk:.... Lemar/Johnson Systems

Cleaner: Intersystems

Contractor:.. Adams Building Contractors

Conveyors-draws: Intersystems

Conveyors-belt:..... Hi Roller

Conveyors-screw:.. Premier Components

Conveyors-open top..... Rapat

Consulting engineer:..... Sunfield

Engineering

Dust collection system:..... Aircon

Elevator buckets: Maxi-Lift

Fall protection: Fall Protection

Systems

Grain dryer: Zimmerman

Grain temp system:.. Rolfes@Boone

Level indicators:.... 4B Components

Liner: Premier Components

Manlift:..... Liftco Inc.

Motion sensors: .. 4B Components Ltd.

Samplers: Intersystems

Tower support system:

Baker-Rullman/Lemar Industries

Truck probe: Gamet Mfg Co.

Truck scale:..... Fairbanks Scales



Gavilon's new Warren, IL train-loading terminal has a 4.2-million-bushel-capacity, with a target speed of unloading trucks and loading railcars at four minutes each. Photos by Stu Ellis.

The only thing slow about Gavilon's new train-loading terminal in Warren, IL is the 3-mph speed limit for the locomotive pulling grain cars around the facility's loop track.



Location Manager Brad Auger, left, and Superintendent Scott Sorrows lead a crew of 12, eight of whom were hired locally.

Otherwise, the loading and unloading rate at this racehorse facility is in jeopardy of a speeding ticket.

The facility can receive grain into three pits at the rate of 55,000 bph and load railcars and trucks at a rate of 80,000 bph. That makes the facility one of the fastest inland terminals in the United States.

That receiving speed benefits the farmer-customers, says Location Manager Brad Auger (815-745-2900). "The target time for a truck to unload is a 3-5-minute process," he explains. "That is a big selling point for us. At harvest time, what matters most to the farmer is his ability to get the trucks back in the field."

Two pits feed a pair of 20,000-bph Intersystems receiving legs. A third pit feeds a 15,000-bph Intersystems wet leg that serves a 7,000-bph, propane-fired Zimmerman tower dryer or can serve as a third receiving leg.

"This facility was designed to be a work-horse," said Auger. "We load and unload at high speeds, so the farmer doesn't sit in line very long. This is how our business is modeled."

The facility has six slipform concrete tanks built by Adams Building Contractors, Jackson, MI (517-748-9099). Four of the tanks standing 76 feet in diameter and 125 feet tall hold



The facility can load railcars and trucks simultaneously at up to 80,000 bph.

500,000 bushels each, and two others standing 38 feet in diameter and 125 feet tall hold 100,000 bushels of wet grain. An adjacent ground pile is designed to hold up to 2 million bushels.

Outbound Loading

With the elevator designed to fill shuttle trains, the reclaim system also was designed for high speed.

“We have been loading at the rate of 3.5 minutes per car, which is good for a new crew,” adds Superintendent Scott Sorrows. He and Auger say 110 cars can be loaded in 6.5-7 hours through a 70,000-bph Intersystems bulk weigh loadout scale utilizing Intersystems software.

To reach that scale, the facility’s concrete storage tanks empty onto a series of above-ground 60,000-bph Hi Roller enclosed belt conveyors that run to a 60,000-bph Intersystems shipping leg. This leg is outfitted with three rows of Maxi-Lift 20x10 Tiger-Tuff buckets mounted on a 64-inch belt.

In addition to the shipping leg, both receiving legs and wet leg can be routed directly to the bulkweigher, as well.

An 8,500-foot loop track connects with a mainline track used by Canadian National and Burlington Northern Santa Fe railroads. Trains can arrive or depart from either direction from the 240-acre site.

Getting Started

Auger and Sorrows were both em-

ployees of DeBruce Grain before its merger with Gavilon and were assigned to the Warren location when construction began April 12, 2012. “Our initial goal was to receive grain in September despite the entire elevator not being fully functional yet,” said Auger.

Sorrows says the elevator is resting on bedrock and had settled only 0.2 inches in four months. The concrete work began June 27, continued over the July 4 holiday and was completed in 11.5 days.

Acquiring Inventory

Auger is a merchandiser at heart and has established a strong relationship with area farmers.

Auger and two other merchandisers visit with hundreds of farmers by phone or face-to-face weekly. “From my first day here, we have been meeting with farmers and building relationships,” he stressed.

Since the elevator was completed Oct. 15, the facility has been filled and emptied four times.

“Three shuttle trains of soybeans have been shipped to the Gulf, and one trainload of corn was shipped to ethanol plants in Indiana,” he says.

Strategic Design

The layout of the facility keeps inbound grain delivered by truck away from the outbound rail-loading operations to ensure trucks are not blocked by railcars. However, three bins have sidedraws for outbound grain being hauled away by truck. An additional truck-loading point was created on the rail side of the elevator to allow trucks to empty a 2-million-bushel LeMar temporary storage pile enclosed within the rail loop.

The oval ground pile measures 200x600 feet, with 4-foot sidewalls and concrete pad. It is fed by a 25,000-bph Intersystems drag conveyor, which in turn, is fed by sidedraws from two of the 500,000-bushel bins.

The two 100,000-bushel wet grain bins are emptied with the use of an AIRLANCO Air Auger bin unloading system, which utilizes baffles to direct forced air toward any grain remaining in the bottom of the tanks. Bottoms are concrete with a 35-degree slope for better cleanout which precludes

the need for tank entry. The larger tanks are outfitted with LeMar sweep augers.

Computer-assisted operations using software developed by Jakes Electric, Clinton, WI (608-295-2470), at the facility allow Sorrows and his crew of six to maintain electronic visual control of the loadout operations.

Interacting with Customers

Arriving trucks stop at a communication box at the office, where they interact by telephone handset or CB radio with the operator of the Fairbanks truck scale and Gamet truck probe. A small video camera displays the license plate of the truck so the weight can be correlated with that from a second scale serving only outbound traffic.

The inbound truck crosses the scale as the grain is graded. A light tree directs the truck to the proper pit, while the scale operator communicates with the pit crews. Two trucks can dump simultaneously, and pit operators have touchscreen computer displays to control the destination of the grain.

Auger says there is a need to avoid truck delays, “With that insight, we have built this elevator with high speed and high capacity. The driver stays in the cab. We do it for him, he weighs out and grabs his ticket.”

Stu Ellis, contributing editor



With the computer-assisted operations, employees have a visual depiction of operations at all times.