

# First Eastern Rail Terminal

DEBRUCE GRAIN PURCHASES AND UPGRADES AN ELEVATOR IN NORTHERN INDIANA



**DeBruce Grain Inc.**  
Kansas City, MO • 816-421-8182

**Founded:** 1978

**Storage capacity:** 120 million bushels at 23 locations

**Number of employees:** 500

**Crops handled:** Commercial, white, and waxy corn; soybeans; sorghum; hard and soft red winter wheat; rough long-grain rice

**Key personnel at New Carlisle:**

- Brian Lary, location manager
- Travis Horn, superintendent
- Ben Eisenhart, merchandiser
- Brandon Gotts, merchandiser

## Supplier List

**Aeration fans ....** Decatur Aeration

**Aeration system ....** Safe-Grain Inc.

**Bin sweeps .....** The GSI Group

**Catwalks ..** Union Iron Works (UIW)

**Cleaner .....** Intersystems

**Concrete tank builder .....** Adams Building Contractors

**Contractors/millwrights ..** Industrial Systems of Cape Girardeau Inc., Adams Building Contractors

**Conveyors (belt) .....** Hi Roller Conveyors

**Conveyors (drag) ...** Intersystems, Tramco Inc.

**Elevator buckets ....** Maxi-Lift Inc.

**Engineering .....** Sunfield Engineering

**Gates ...** Premier Components Inc.

**Grain dryer .....** Zimmerman Grain Dryers

**Grain temp system ..** Safe-Grain Inc.

**Leg belting .....** Rubber Belting & Hose/Mill & Elevator Supply

**Level indicators .....** BinMaster Level Controls

**Motion sensors .....** 4B Components Ltd.

**Steel storage .....** The GSI Group

**Tower support system .....** UIW



*DeBruce Grain Inc.'s new rail-loading terminal on the Norfolk Southern in New Carlisle, IN, its first rail terminal east of the Mississippi. Photos by Ed Zdrojewski.*

In recent years, Kansas City, MO-based DeBruce Grain Inc. has turned its expansion sights eastward.

At first, DeBruce focused on taking advantage of the east's river infrastructure. In 2006-07, the company upgraded a barge terminal on the Ohio River near Owensboro, KY, followed by construction of a new terminal on the Mississippi River at Rosedale, MS.

Now, DeBruce is putting the finishing touches on an extensive two-phase upgrade of a rail terminal at New Carlisle, IN (574-

654-3116), near South Bend. The elevator is the company's first rail terminal east of the Mississippi and its first venture into the Eastern Corn Belt.

This project began late in 2008, after DeBruce Grain purchased the New Carlisle elevator from the local firm Lakes Farm Service. DeBruce then leased a fertilizer operation on the property back to Lakes Farm Service, which continues to run that end of the business.

"We liked the volume of grain production in the area (northwest Indiana and southwest Michigan), and there was a lack of rail-loading shippers in the area, as well," says Brian Lary, location manager. Lary is a 12-year veteran of DeBruce, most recently having managed a company elevator in Joice, IA.

No sooner had DeBruce acquired the New Carlisle elevator than the company began an extensive series of upgrades and expansions. The project was so complex that it had to be done in two phases, with two separate general contractors. The cost of the project remains confidential.

## Phase I

The first phase of the upgrade in 2008 and 2009 involved a great deal of millwright work, and as general contractor, DeBruce hired Industrial Systems Inc., Cape Girardeau, MO (573-334-5766), a builder that has worked with DeBruce on several other projects in the past.



*Closeup of two new 435,000-bushel slipform concrete tanks at the east end of the complex, built in 2009-10 by Adams Building Contractors.*



*New 7,500-bph Zimmerman tower dryer sits adjacent to an older 3,500-bph model. The legs to the left were upgraded to 10,000 bph and a Union Iron Works tower with staircase was added.*

With portions of the facility dating back to the 1950s, the project necessarily began with some demolition. Removed were an old wood house with 50,000 bushels of storage, three 36,000-bushel steel tanks, and a quonset hut that held 100,000 bushels.

The next steps in the project included:

- Upgrading two existing low-capacity receiving legs to 10,000 bph each. This was accomplished by installing new XxX Tapco heavy-duty profile buckets, mounted on a new



*Existing office, truck scale, and truck probe remain in service from the facility's days as Lakes Farm Service.*

XX-inch belt supplied by RBH Mill & Elevator.

- Installed a new 10,000-bph Intersystems gravity screener on one of the two legs.
- Replaced lower-capacity conveyors that ran out to three existing Martin steel tanks with new 10,000-bph overhead drag conveyors from Intersystems. Old reclaim conveyors in below-ground tunnels underneath these tanks also were

replaced by 10,000-bph Intersystems drags.

- Installed a new natural-gas-fired Zimmerman grain dryer rated at 7,500 bph at five points of moisture removal. An adjacent, older 3,500-bph Zimmerman grain dryer remains in service.
- Upgraded existing wet and dry legs to 10,000 bph to handle the increased output from the additional dryer. ▶



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Twin Intersystems enclosed belt conveyors run out to the new storage from a pair of existing, upgraded Honeyville legs. However, the Intersystems gravity screener in the background is new.

## Phase II

With much of the mechanical upgrades completed, DeBruce went into expansion mode, with the installation

of a pair of 435,000-bushel slipform concrete tanks with related grain handling equipment and a 2.75-million-bushel temporary ground pile.

The contractor on Phase II was Adams Building Contractors (ABC), Jackson, MI (517-748-9099), the first time this contractor has worked with DeBruce. ABC broke ground on the new tanks in June 2009, and Phase II was just being completed when *Grain Journal* visited the site late in 2010.

The new flat-bottom tanks stand 72 feet in diameter and 120 feet tall. They are equipped with 12-inch GSI sweep augers, 12-cable Safe-Grain grain temperature monitoring systems, BinMaster level indicators, and sidedraw spouts.

A set of four 60-hp Chicago Blower centrifugal fans per tank supply 1/7 cfm per bushel of aeration through in-floor ducting, a volume of air suitable for either coarse grains like corn or small grains like wheat. A Safe-Grain electronic control system monitors and adjusts the aeration.

Serving the new tanks are a pair of 1,300-bushel enclosed mechanical receiving pits. These feed another pair of existing legs, which were upgraded from 28,000 and 15,000 bph, respectively, with XxX Maxi-Lift heavy-duty buckets mounted on a XX-inch belt from RBH Mill & Elevator.

The legs deposit grain directly onto a pair of 20,000-bph Intersystems enclosed belt conveyors. Both run out to the first new tank, allowing it to be filled at up to 40,000 bph as needed, while the second conveyor extends out to the second tank.

The new tanks empty onto 40,000-bph Hi Roller enclosed belt conveyors located in above ground tunnels. These deposit grain onto a 40,000-bph Tramco transfer drag conveyor running back to the newly upgraded legs.

In addition to the upright storage, DeBruce constructed a new (*brand name*) temporary ground pile to the north of the Lakes Farm Service fertilizer plant. The oval-shaped pile measures 190-feet-x-580-feet and has a concrete floor and six-foot perforated sidewalls.

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*Ed Zdrojewski, editor*