

# Landward Side of the Levee

DREYFUS SITES NEWEST RIVER TERMINAL WITH EYE TOWARD EXTENDING RAIL SERVICE



**Louis Dreyfus Commodities**  
Wilton, CT • 203-761-2000

**Founded:** 1851  
**Annual sales:** \$64.7 billion  
**Annual volume:** 80 million tons  
**Asset network:** 270+ processing and logistics assets globally  
**Number of employees:** 22,000  
**Platforms:** Oilseeds, grains, rice, feed, freight, finance, coffee, cotton, sugar, juice, dairy, fertilizers and inputs, metals

**Key personnel at West Memphis:**

- Shane Martin, plant superintendent
- Bill Shaw, assistant plant superintendent
- Kris Tillie, commercial manager
- Rick Shannon, junior merchandiser
- Lisa Rhodes, merchandising assistant
- Kelli Walker, office administrator

**Supplier List**

- Aeration fans**.....AIRLANCO, Chief Agri/Industrial Division
- Bearing sensors**..... CMC Industrial Electronics
- Bin sweep**.....GSI Group LLC
- Bucket elevators**.....InterSystems
- Catwalks** ..... Warrior Mfg. LLC
- Contractor/millwright**..... Younglove Construction L.L.C.
- Control system**.. CompuWeigh Corp.
- Conveyors** .....InterSystems
- Distributor**.....InterSystems
- Dust collection system** ..... Imperial Systems
- Elevator buckets** .....Maxi-Lift Inc.
- Grain dryer** ..... Zimmerman Grain Dryers
- Grain temperature system** ....Rolfes@Boone
- Leg belting**..Goodyear Conveyor Belting



*Louis Dreyfus Commodities' new 800,000-bushel river terminal at West Memphis, AR sends grain more than half a mile via covered belt conveyor (left) out to moored barges. Photos by Ed Zdrojewski.*

Barge-loading terminals usually are built as close to the river bank as feasible. Limiting the distance from the elevator to the loadout spout also can minimize costs and potential damage to grain.

Louis Dreyfus Commodities took a different approach when building its new 800,000-bushel river terminal on the Mississippi River in West Memphis, AR (870-394-7454).

The slipform concrete and steel facility is actually a little over half a mile from the west bank of the Mississippi, on the west side of the river levee. The elevator is connected to the barge-loading station via an overhead

- Level indicators**..... BinMaster, Siemens
- Loadout spout** ..... Premier Fabrication
- Moisture meter** ..... DICKEY-john Corp.
- Motion sensors** ..... CMC Industrial Electronics
- Steel storage**.....Chief Agri/Industrial Division
- Surge tank** ..... Warrior Mfg. LLC
- Tower support system** ..... Warrior Mfg. LLC
- Truck scales**..... Rice Lake Weighing Systems



*Plant Superintendent Shane Martin*

60,000-bph covered belt conveyor running 2,900 feet out to the water's edge.

This offers a number of advantages over building right next to the river. For one thing, having a levee between the elevator and the river helps prevent flooding the facility, when the Mississippi periodically overflows its banks.

But perhaps more importantly, says Plant Superintendent Shane Martin, is the location



*New 12,000-bph Zimmerman continuous-flow tower dryer, the largest that manufacturer makes, is serviced by 15,000-bph InterSystems wet and dry legs.*

on the west side of the levee will allow Louis Dreyfus to bring in rail service, which is not possible in West Memphis between the levee and the river. (The Burlington Northern Santa Fe Railway serves West Memphis.)

“That’s something our competitors aren’t able to do,” says Martin, who came to Dreyfus in 2015 after being part of the management team at an ADM export terminal in Ama, LA.

“It’s going to be a big change,” Martin commented when *Grain Journal* visited in mid-August. “It is going to be a big change from when I worked at Ama.”

### Flexible Design

The West Memphis facility, which was slated to begin receiving grain Sept. 1, is much smaller than Ama, of course, but it also has a different function as a delivery point for crops grown around the mid-Delta region.

Martin says the new terminal is similar in design to a river terminal Dreyfus constructed four years ago at Rosedale,

MS. “We’re the ‘big brother,’” he says. “We’re a little bigger, a little faster, and have more options available.

“We’ll be able to handle anything local growers can bring us. This year it will be strictly beans and corn. After that, we’ll be able to put through rice and wheat, then more after we get rail in.”

To emphasize versatility, he explains, the terminal features a four-pack of 77,000-bushel slipform concrete tanks, two of which will be aerated for grain awaiting loadout and the other two for wet grain awaiting drying in a 12,000-bph Zimmerman tower dryer. The elevator also includes a 500,000-bushel Chief corrugated steel tank for large-volume crops that don’t require many separations such as corn and soybeans.

Dreyfus selected frequent partner Younglove Construction L.L.C., Sioux City, IA (712-277-3906), as contractor and millwright on the project. Younglove has been the lead contractor on a number of other Dreyfus terminals on the Mississippi including Rosedale; Natchez, MS; and portions of an upgrade at Port Allen, LA.

Construction on the \$XX million project began in early 2015 and was scheduled for completion Sept. 1, 2016.

### Terminal Description



*Half-mile-plus-long covered belt conveyor in a 10-foot Warrior box bridge runs out to the river-side, where a Warrior stair tower over the water supports a Warrior/Micada surge bin and a Premier Fabrication loadout spout (not visible).*



*InterSystems 60,000-bph shipping leg deposits grain onto an overhead 60,000-bph covered belt conveyor out to the river.*

The four main slipform concrete tanks stand 32 feet in diameter and 140 feet tall. They are outfitted with 45-degree steel hopper bottoms eliminating the need for workers to enter the tanks to empty them. All are equipped with BinMaster capacitance probe level indicators.

The two dry-grain storage tanks are outfitted with three-cable Rolfes@Boone grain temperature monitoring systems. Each tank has a 50-hp AIR-LANCO centrifugal fan with silencer that provides 1/7 cfm per bushel of aeration with the assistance two 2-hp roof exhausters.

The two wet tanks have no temperature monitoring or aeration, since the grain they hold will proceed directly to the dryer.

The Chief tanks stands 90 feet in diameter, 88 feet tall at the eave, and 114 feet tall at the peak. The flat bottom tank has outside stiffeners, a 16-inch GSI Series II sweep auger, 18-cable Rolfes@Boone grain temperature monitoring system, and BinMaster capacitance probe level monitors. A set of four 40-hp Caldwell centrifugal fans provide 1/10 cfm per bushel of aeration through in-floor ducting.

### Routing

Dreyfus currently is originating most of the grain coming to West Memphis locally. Grain trucks are routed through the facility by a CompuWeigh Smart-Truck automated system using RFID scanners, digital display boards, and an automatic scale ticket printer next to the outbound truck scale.

Incoming trucks are sampled with one of two InterSystems truck probes then routed onto one of two 110-foot Rice Lake pitless inbound scales adjacent to the facility office building. Inside the building, samples are tested with a DICKEY-john moisture meter, Carter-Day dockage tester, and Charm Systems mycotoxin strips.

From there, the SmartTruck system automatically routes trucks to one of four 1,000-bushel enclosed mechanical receiving pits in a two-story 50-foot-x-100-foot slipform concrete structure. Two of the pits feed 20,000-bushel InterSystems receiving legs. The other two pits feed directly to the shipping leg.

The receiving legs are outfitted with two rows of 12x8 Maxi-Lift TigerTuff orange buckets mounted on a 27-inch Goodyear belt. The legs are enclosed in a 10-foot-x-14-foot-x-120-foot Warrior support tower.

Empty trucks proceed to a 11-foot-x-75-foot Rice Lake outbound scale where they are again automatically identified by the SmartTruck system for their tare weights and scale tickets.

The receiving legs deposit grain into a six-duct InterSystems rotary dual distributor, which sends grain to concrete storage via gravity spouts or to steel storage via an overhead 40,000-bph InterSystems enclosed belt conveyor.

The wet tanks deliver grain to the dryer via a 15,000-bph InterSystems wet leg equipped with 18x8 Maxi-Lift Tiger-Tuff orange buckets on a 20-inch Goodyear belt. The 12,000-bph continuous-flow tower dryer, the largest Zimmerman makes, in turn, sends grain back to storage via another InterSystems 15,000-bph leg.

Storage tanks empty onto above-ground 40,000-bph InterSystem enclosed belts, all of which send grain to a 60,000-bph InterSystems jump leg used for shipping. This leg is outfitted with two rows of 28x10 Maxi-Lift Tiger-Tuff orange buckets on a 60-inch belt.

This leg drops grain onto an overhead

Continental Conveyor 60,000-bph covered (but not enclosed) belt conveyor running 2,900 feet, more than half a mile, out to the river. The conveyor is enclosed in a 10-foot Warrior box bridge, which includes a 250-foot clear span section over the top of the levee as required by the Army Corps of Engineers.

At the riverside, up to two barges can dock at dolphin-style moorings. The shipping belt deposits grain into a 4,000-bushel Warrior/Micada surge bin mounted over the water on an 18-foot-x-18-foot-x-80-foot Warrior stair tower. A separate Premier Fabrication tower supports a Premier 60,000-bph telescoping, steering, and lifting spout that delivers that grain to the barges.

“Everything went pretty smoothly,” Martin reports. “The high water we had on the Mississippi in December 2015 actually helped us by making it easier to set the bridges.”

*Ed Zdrojewski, editor*