

# Two Feed Mills in One

WAYNE FARMS' NEW FEED MILL USES DUAL BATCHING SYSTEM TO SERVE SOUTH ALABAMA



**Wayne Farms LLC**  
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**Founded:** 1965  
**Poultry production:** 2.6 billion lbs. per year  
**Feed production:** 2.7 million tpy at 11 locations  
**Feed products:** Full line of poultry feeds  
**Annual sales:** \$2.2 billion  
**Number of employees:** 10,000

**Key personnel at Ozark:**

- Kris Torbert, area live operations manager
- Brad Williams, area complex manager
- Jimmy Fraser, feed mill manager

**Supplier List**

**Air compressors** .....Ingersoll Rand  
**Batch control system**.....Beta Raven  
**Bearing sensors** .....Maxi-Tronic  
**Bin level monitors**.....Monitor Technologies LLC  
**Boilers**.....Cleaver-Brooks  
**Bucket elevators**..... InterSystems  
**Contractor** .....Todd & Sargent, Inc.  
**Conveyors** ..... InterSystems  
**Dust collection system** ..... AirCon Corp.  
**Dust filters**.....Schenck Process LLC  
**Electrical contractor**..... Interstates  
**Elevator buckets** ..... Maxi-Lift Inc.  
**Engineering** ...Todd & Sargent, Inc.  
**Gates and diverters** ..... PMI  
**Hammermills**..... CPM  
**Liquid tanks** ..... FabTech  
**Manlift**.....Schumacher Elevator Company  
**Mass flow meters** ..... Emerson  
**Meal bin unloading system** ... Laidig Systems, Inc.  
**Micro-ingredient system** .....Beta Raven  
**Mixers**..... Hayes & Stolz  
**Motion sensors**..... 4B Components



Wayne Farms' new 25,000-tpw poultry feed mill in Ozark, AL features three receiving systems, two 500,000-bushel concrete storage silos, two batching systems, and three pelleting lines. Photo courtesy of Wayne Farms LLC.

When Wayne Farms began production in mid-February at its new 25,000-tpw poultry feed mill near Ozark, AL, the company accomplished its two primary goals for the project: modernizing Wayne Farms' southern Alabama operations and establishing a more centralized location in relation to its customers, producers, and the CSX main line, which runs through Ozark.

According to Brad Williams, area complex manager, the Ozark feed mill was built to be a state-of-the-art replacement for Wayne Farms' older poultry feed production facilities in Enterprise and Troy, AL, and DeFuniak Springs, FL.

**Pellet coolers**.....CPM  
**Pellet crumblers**.....CPM  
**Pellet mills** .....CPM  
**Screw conveyors** ..... WAM Inc.  
**Screw feeders**..... Conveyors, Inc.  
**Speed reducers** ..... Dodge  
**Truck scales**..... Rice Lake Weighing Systems  
**Truck probe** .....Gamet Mfg.  
**Weigh lorreys**..... InterSystems

“We began planning for this project in early 2014, and construction began June 2015,” says Williams.

After taking bids from several companies, Wayne Farms hired Todd & Sargent, Inc., Ames, IA (515-232-0442), as general contractor on the \$55 million project.

“It was our first time working with Todd & Sargent, and they did a wonderful job,” says Area Live Operations Manager Kris Torbert. “I was impressed with how organized and well-managed the site was throughout the entire process.”

Wayne Farms personnel (from left): Frank Singleton, media relations; Kris Torbert, area live operations manager; Brad Williams, area complex manager. Ground-level photos by Tucker Scharfenberg.





*One of three CPM 600-hp pellet mills.*

Torbert also acknowledged the project's electrical contractor, Interstates, Sioux Center, IA (712-722-1662), for "very neat, clean work."

### Mill Details

The mill, which rests on 165 acres neighboring Fort Rucker, a U.S. Army base, features a dual batching system. This allows the facility to produce and load out two different products simultaneously without risk of cross-contamination. "It's like having two mills in one," says Torbert.

To manage the complex flow of ingredients and finished products, Wayne Farms installed a Beta Raven mill automation system. "If you want, you can set parameters, and the system will run itself," he adds.

To help keep different types of ingredients and finished products separate, three receiving and loadout systems were built. Incoming railcars dump at a twin bay of dump pits – one pit is designated for dumping corn at 50,000 bph, and the other, a rail/truck combination pit with a hard car unloader, is for dumping soft stocks at 17,500 cubic feet per hour.

Incoming trucks first are weighed on a Rice Lake 80-foot pitless truck scale and sampled with a Gamet Apollo truck probe. A robotic sampling arm in the scalehouse can gather samples from incoming loads. Trucks then are sent to dump soft stocks at the rail/truck combination pit or corn at a third dump pit.

After receiving, specific commodities are routed to the appropriate storage. Corn is stored in two 500,000-bushel slipform concrete silos measuring 74 feet in diameter and 144 feet tall. Soybean meal is stored in a concrete silo measuring 55 feet in diameter and 112 feet tall. Distillers dried grains with solubles are

sent to two 641-ton concrete silos, and ingredients are stored in 28 ingredient bins with a total capacity of 5,400 tons.

### Poultry Feed Production

Stored ingredients are sent to the appropriate batching system, where they are weighed – each batch has a major, minor, and mineral scale. After weighing, ingredients are mixed in one of two Hayes & Stolz 10-ton twin-shaft mixers. Average mix time per batch is approximately three minutes.

Once a batch has been made, feed is elevated via a mixed feed leg, through a CPM Gyro sifter, and directed to six 164-ton mash feed bins for storage ahead of pelleting or conveyed to loadout bins via a WAM screw conveyor.

Next, mash feeds flow to a steam conditioner, where steam is supplied by one of two Cleaver-Brooks 600-hp boilers, another steam conditioner for additional hold time, and then to one of three pelleting lines.

Once conditioned, mash feed flows to a 600-hp CPM 9042-12 pellet mill that runs at 90 tph.

After pelleting, product is cooled through a CPM top-deck, free-flow, horizontal cooler and then crumbled as needed through a CPM single-stand



*The mill is controlled by Beta Raven automation software.*

16x84 crumbler. After crumbling, feed is spouted to an APEC fat coater and enzyme addition system and then on to 30 206-ton loadout bins as finished product. Trucks staged in two loadout lanes are loaded using an InterSystems weigh lorry system.

### Rail Design

Torbert says Wayne Farms worked with CSX when designing the mill's 16,675 feet of track to optimize efficiency.

"We designed the track to handle 100-car trains, even though CSX only has 90-car trains in this region. We will be prepared, when they eventually move up to 100," he explains. Additionally, a ladder track railyard was built to hold an additional 80 railcars.

*Tucker Scharfenberg, associate editor*



*Two Cleaver-Brooks 600-hp boilers supply steam for conditioning during the pelleting process.*