

Access to Delta Grain

PECO FOODS BUILDS A FEED MILL, ELEVATOR TO SERVE NORTHEAST ARKANSAS OPERATIONS



Peco Foods, Inc.
Tuscaloosa, AL • 205-345-4711

Founded: 1937
Poultry production: 24 million lbs. per week
Feed production: 42,000 tpw at six locations
Feed products: Full line of poultry feeds
Annual sales: \$1.2 billion
Number of employees: 5,000

Key personnel at Corning:

- Gerald Noland, feed mill manager
- Duane Weems, live operations manager
- Britt Shields, assistant feed mill manager
- Lisa Winder, feed mill clerk
- James Chester, grain buyer

Supplier List

Aeration systemAIRLANCO
Air compressor.....Sullair
Automation system.....Beta Raven
Bearing sensors.....4B Components Ltd.
Bin unloading system...Laidig Systems, Inc.
Boilers.....Cleaver-Brooks
Bucket elevators.....The Essmueller Co.
Contractor...Younglove Construction, LLC
Conveyors (drag)The Essmueller Co.
Conveyors (trough)..... WAM Inc.
Distributor.....The Essmueller Co.
Dust collection system Aircon Corp.
Elevator buckets Maxi-Lift Inc.
Engineering
Younglove Construction, LLC;
Ebmeier Engineering; VAA, LLC
Gates/diverters.....Tom-Cin Metals, Inc.
Grain dryer Zimmerman Grain Dryers
Grain temp. system..Rolfes@Boone



Peco Foods' new 2.1-million-bushel grain elevator and 18,000-tpw feed mill outside of Corning, AR. Photos by Ed Zdrojewski.

When a major poultry producer and processor builds a big processing complex, plans usually call for that complex to include a feed mill on-site and sometimes a grain elevator, as well.

However, when Peco Foods decided in 2014 to develop a processing complex for northeast Arkansas at Pocahontas, the company decided to locate a new elevator and feed mill 27 miles away at Corning, AR (870-857-0673).

Feed Mill Manager Gerald Noland explains that the Corning location is closer to the heart of grain production in the Delta region.

"Ideally, we want to be able to source all of our corn from local producers," says Noland, who has been with the company for nine years.

The 150-acre site, about two miles north-



Feed Mill Manager Gerald Noland (left) and Live Operations Manager Duane Weems.

east of Corning on a newly-paved county highway, also provides good highway access to U.S. Highway 67 and rail service from the Union Pacific. "There's no rail service at the Pocahontas site," Noland says.

After taking bids, Peco Foods hired Younglove Construction, LLC, Sioux City, IA (712-277-3906), to build the 2.1-million-bushel elevator and the 18,000-tpw feed mill, both of slipform concrete construction. Noland notes that Younglove was the general contractor on a Peco Foods feed mill completed at Lake, MS in 2012 and the Corning mill is similar to that in design.

Groundbreaking at Corning took place in June 2014. The construction plan worked

Hammermills.....CPM Roskamp Champion
Level indicators.....BinMaster Level Controls
Magnets Bunting Magnetics Co.
Manlifts PMI; Schumacher Elevator Co.
Microingredient system Beta Raven
MixerHayes & Stolz Ind. Mfg. Co.
Motion sensors4B Components Ltd.; Maxi-Tronic, Inc.
Pellet coolerCPM Roskamp Champion
Pellet crumblerCPM Roskamp Champion
Pellet millsCPM Roskamp Champion
Scales.....Rice Lake Weighing Systems
Truck probe.....InterSystems

out by Peco Foods and Younglove called for the elevator, including its electrical service, to be completed first, in order to handle the 2015 harvest. That goal was achieved. The feed mill began production in February 2016.

Younglove also did some of the engineering on the project. Additional engineering firms with portions of the project included Ebmeier Engineering, Glenwood, IA (712-527-9202), and VAA, LLC, Plymouth, MN (763-559-9100). Younglove teamed up with Beta Raven, which supplied the feed mill's automation systems.

Grain Elevator

The new grain elevator includes three slipform concrete tanks holding 650,000 bushels each, a wet tank holding 90,000 bushels, and an 80,000-bushel grinding tank over the hammermills. Two of the big tanks also have drawoff spouts that feed directly into the hammermills, as well.

The big tanks stand 84 feet in diameter and 140 feet tall. The flat-bottom tanks are outfitted with Bobcat doors, 16-cable Rolfes@Boone grain temperature monitoring systems, and BinMaster capacitance probes and diaphragm switch level indicators. A set of four 60-hp AIRLANCO centrifugal fans supply 1/10 cfm per bushel of aeration through an in-floor ducting system and with the assistance of nine roof exhausters.

The wet tank stands 35 feet in diameter by 140 feet tall.

Incoming grain is weighed on a 70-foot-x-11-foot Rice Lake pitless truck scale and sampled with an Inter-Systems truck probe. Trucks then are sent to one of two 900-bushel enclosed



One of two CPM 600-hp pellet mills outfitted with dual CPM steam conditioners.

mechanical receiving pits; one of the two pits also can receive from railcars.

The pits feed a pair of 15,000-bph Essmueller legs outfitted with 18x8 Maxi-Lift TigerTuff buckets mounted on a 20-inch PVC belt. The legs feed Essmueller rotary single distributors, which send grain out to storage via 30,000-bph Essmueller overhead drag conveyors.

The elevator also includes a 5,000-bph natural gas-fired Zimmerman tower dryer.

The elevator slip includes space for a pair of 500-hp CPM Roskamp Champion hammermills capable of grinding corn up to 72 tph each. Ground corn and soy meal are directed to the feed mill via 150 tph WAM trough conveyors.

Feed Mill Operations

The slipform feed mill structure is 185 feet tall with a 41-foot-x-87-foot footprint. The tower holds 2,500 tons of ingredients in 20 bins, 425 tons of

mash feed in four bins, and 2,860 tons of finished feed in 20 bins.

Ingredients from the ingredient bins and a 20-bin Beta Raven microingredient system fed by 50-pound bags and 1-ton overhead totes are mixed in a 10-ton Hayes & Stolz double ribbon mixer. Average total mix time currently is 135 seconds per batch.

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

Mash feeds are pelleted through a pair of 600-hp CPM 9042-12 pellet mills at 90 tph each. Each pellet mill is equipped with dual CPM conditioners with steam supplied by a pair of 500-hp Cleaver Brooks boilers.

After pelleting, product is cooled through a 69-foot CPM horizontal cooler and then crumbled as needed through CPM single-stand 84x12 crumblers. After crumbling, the feed is spouted to the APEC fat coating and enzyme addition system and then on to loadout bins as finished product.

Trucks are loaded in a twin bay equipped with mobile lorry systems. The mill currently runs a fleet of 10 trucks, though Noland says that could increase to as many as 20 in the future. Peco Foods utilizes all of the feed produced at Corning in its own operations.

Ed Zdrojewski, editor



Two enclosed truck receiving pits, one of which doubles as a rail pit, are serviced by a heavy-duty Aircon baghouse filter at right.