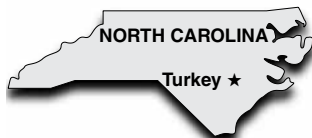


# Mill Adds Pelleting Line

BUTTERBALL, LLC UPGRADES FORMER MASH FEED OPERATION IN NORTH CAROLINA



**Butterball, LLC**  
Turkey, NC • 910-299-0645

**Acquired:** 2010  
**Grain storage capacity:** 750,000 bushels  
**Feed production:** 8,000 tpw  
**Feeds produced:** Full line of turkey feeds  
**Number of employees:** 18

#### Key Personnel:

- Terry Mercer, feed mill manager
- Lorenz Falls, feed division manager
- Elijah Sanderson, daytime supervisor
- Scott Barnett, nighttime supervisor
- Tiffany Highsmith, coordinator

#### Supplier List

**Aeration system** ..... Safe-Grain Inc.  
**Bin level monitors** .... Monitor Technologies LLC, Bindicator, Dyna-Trol  
**Bin sweeps** ..... Brock Grain Systems  
**Boiler** ..... Cleaver-Brooks  
**Bucket elevators** ..... Intersystems  
**Contractor**... W.L. Port-Land Systems, Inc.  
**Control system**..... Repete Corp.  
**Conveyors (drag/belt)** . Intersystems  
**Distributors** ..... Hayes & Stolz Ind. Mfg. Co. Inc.  
**Elevator buckets** ..... Maxi-Lift Inc.  
**Engineering** ..... W.L. Port-Land Systems, Inc.  
**Fat coater** .. Hayes & Stolz Ind. Mfg. Co. Inc.  
**Gates/diverters**.. Tom-Cin Metals Inc.  
**Grain temperature system**... Safe-Grain Inc.  
**Liquid fat tanks**.. CP Metal Crafters Inc.  
**Motion sensors** ..... Maxi-Tronic Inc., 4B Components Ltd., Ramsey Electronics  
**Pellet cooler** ..... Bliss Industries Inc.  
**Pellet crumbler** .. Bliss Industries Inc.  
**Pellet mill**..... CPM Roskamp Champion  
**Pellet screeners**..... Rotex Inc.  
**Screw conveyors** ..... Conveyors Inc.  
**Steam conditioner**..... Andritz Inc.  
**Steel storage**... Brock Grain Systems



Looking towards the southeast is a Butterball, LLC pelleted turkey feed production facility, Turkey, NC. Photo by Terry Mercer. Additional photos by Karl Ohm.

In early 2010, a rare opportunity presented itself to Butterball, LLC, Garner, NC (919-255-7900), which is one of the largest turkey producers and processors in the United States (see timeline below).

The opportunity came in the form of an existing mash feed facility in Turkey, NC that was slated for liquidation due to the bankruptcy of its original owner, Coharie Hog Farms, Inc., Clinton, NC.

Although it had experienced better times in years past and had been ranked as one of the top 25 hog-producing operations in the United States, Coharie Hog Farms filed for bankruptcy in late 2009, when the entire hog

industry was taking an economic beating from extremely low market prices.

But for Butterball, the decision to purchase the Coharie facility in 2010 proved to be a good fit in terms of its strategy to have the ability to supply a variety of feed formulations efficiently to 145 turkey farms all within a 32-mile radius of Turkey.

Instead of building an entirely new feed mill to supply its turkey operations, Butterball chose the more economical and expeditious route by choosing W.L. Port-Land Systems, Inc., Pittsburgh, PA (412-344-1408), as de-



Feed Mill Manager Terry Mercer (left) and Feed Division Manager Lorenz Falls are standing next to a Model 735 Shuttlewagon railcar mover owned by the facility.

#### Formation of Butterball, LLC

• **2006** - Carolina Turkeys, Mount Olive, NC, buys Butterball Turkey from ConAgra Foods, with Smithfield Foods owning 49% of the company and Maxwell Farms owning 51%. Name is changed to Butterball, LLC. (Established in 1986, Carolina Turkeys is a joint venture of Smithfield Foods Inc., Smithfield, VA, and Maxwell Farms Inc, an affiliate of Goldsboro Milling Co., Goldsboro, NC.)

• **2008** - Butterball, LLC moves headquarters to Garner, NC.

• **2010** - Maxwell Farms, Inc. partners with Seaboard Corporation, Shawnee Mission, KS, to buy out Smithfield Foods' shares of the business plus 1% allowing Seaboard and Maxwell Farms to own equal parts in Butterball, LLC.



Top photo: Annex building for pellet production; fat liquid storage tanks in foreground, and truck receiving on right (ground level). Bottom photo: Fat liquid receiving and piping to facility.

sign engineer and general contractor, to convert and upgrade the facility to produce 16 formulations of pelleted turkey feed, as well as expand its railcar receiving/unloading and grain storage capacities up to 20,000 bph and 750,000 bushels, respectively.

“Besides our past and great working relationship with W.L. Port-Land Systems on other projects, this general contractor had designed and built the Coharie mill, so it had the original blueprints and was in a good position to meet all our needs in converting the mill to produce pellets,” says Lorenz Falls, feed division manager for Goldsboro Milling Company, Goldsboro, NC, and Butterball, LLC.

Construction on the \$11 million project began in October 2010, and the 416,000-tpy facility began producing pelleted feed in July 2011, utilizing a five-day, two-shift work week.

### New Rail Layout

A major part of the project involved reconfiguring and adding 9,000 feet of new siding track, which was done by Queen City Railroad Construction,



Inc., Knoxville, TN (865-692-1902), so the facility could receive more grain and capture better shipping rates from its rail carrier, CSX, by handling 90-railcar unit trains instead of 65-railcar units.

“The big challenge was designing the track layout to fit within the facility’s property boundaries and still meet CSX’s specifications for a maximum 12-degree curvature,” says Terry Mercer, feed mill manager, who joined the Butterball facility in Turkey in June 2011 but is an 18-year feed milling industry veteran. “With everyone’s cooperation, the final track layout worked out very well, with three 30-railcar tracks for grain and one 20-railcar track for other bulk commodities.”

### Mill Specifications

Grain and other bulk ingredients like dried distillers’ grains and soybean meal are unloaded in a pair of enclosed receiving pits, one for rail and one for truck, each feeding either of two 15,200-bph InterSystem legs outfitted with one row of 16x8 Maxi-Lift Tiger-Tuff buckets mounted on a 16-inch belt.

The grain storage includes the original four 62,500-bushel slipform concrete silos with interstice bins plus a pair of new 250,000-bushel Brock tanks, which are equipped with Brock sweeps and a SafeGrain temperature monitoring system, standing 72 feet in diameter and 70 feet tall at the eaves.

From storage, grain is ground on a pair of 300-hp Champion hammermills,



Using an average of 1.15 therms of energy per ton of finished product has been possible with a high-efficiency Cleaver Brooks boiler.

which were already in place at the former Coharie mill. Other equipment inherited from Coharie included: a six-ton, double-ribbon Scott mixer, with an average mixing time of 2 minutes 30 seconds; Roskamp feed cleaner; Hayes & Stolz distributors; Toledo truck scales; Ingersoll Rand air compressors; and a Beta Raven microingredient system.

However, in converting the mash mill to a pelleting feed mill, a new 50-foot-tall structural steel annex was built to house two pellet lines using two 500-hp CPM 9042 pellet mills rated at 80-85 tph.

Steam is supplied by a 500-hp, high-efficiency Cleaver Brooks boiler, which is equipped with an advanced Cleaver-Brooks Hawk PLC control system and heat recovery unit, to the pellet mill through an Andritz 1101 conditioner. The pellets then are cooled in a Bliss counterflow cooler with AIRLANCO cyclones for dust control. A new Hayes & Stolz fat coater also was added, along with a Bliss pellet crumbler for producing starter feeds.

From receiving to loadout, the facility’s entire production is controlled by an operator using a Repete automation system.

Additional storage inside the slipform structure includes four 2-ton ingredient tote bags, 24 microingredient bins holding six tons, and 18 loadout bins holding 2,200 tons of finished feeds. Deliveries are made using eight trucks leased from the Penske Corporation. Outside and adjacent to the structure in a concrete spill-control basin are three liquid fat tanks, two with a storage capacity of 20,000 gallons and one with 25,000 gallons.

Karl Ohm,  
associate  
editor



Sixteen pelleted turkey feed formulations are produced at the facility, and shown above is a sample of one finished product. Shown at the left is the facility’s two 500-hp CPM pellet mills.