# **CFAES**

## OHIO AGRICULTURAL RESEARCH AND DEVELOPMENT CENTER



### **HISTORY**

Dedicated in August 2009, OARDC's Feedstock Processing Research Facility was built to replace the Grain Storage and Feed Processing Facility that had been in operation since 1965.

Groundbreaking for the \$5.5 million, state-of-the-art steel building took place in June 2007. Funding for the project was provided by the state of Ohio through capital funds and through OBIC (an Ohio State endeavor created by a Third Frontier Project grant in 2005); and by gifts from Sweet Manufacturing Co.

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## **SERVING DIVERSE RESEARCH NEEDS**

The Ohio Agricultural Research and Development Center's (OARDC) state-of-the-art Feedstock Processing Research Facility provides the quality, nutritional value, and mixing precision of feeds needed to support OARDC's internationally recognized livestock and poultry research programs. The ability to produce specialty diets according to exact specifications on-site boosts the quality of research and gives scientists a competitive edge to attract grants. Students receive hands-on experience as they learn about feed and grain handling in the field of animal nutrition.

The facility supports the work of researchers in The Ohio State University College of Food, Agricultural, and Environmental Sciences' (CFAES) Department of Animal Sciences; Department of Food, Agricultural and Biological Engineering; Food Animal Health Research Program; and Ohio State ATI. It produces both general herd rations and experimental diets for the livestock and poultry operations in CFAES on the Wooster and Columbus campuses and at three outlying agricultural research stations throughout the state.



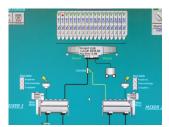
## **ENHANCED CAPABILITIES**

Among other features and capabilities, the Feedstock Processing Research Facility offers:

#### PRODUCTION CAPACITY AND MIXING CAPABILITIES

The facility has the ability to handle 8,000 tons of feed per year. Four sizes of mixers allow the preparation of various batch sizes for research purposes, including two in-floor-mounted Hayes and Soltz

twin-ribbon-horizontal shaft mixers with 4,000- and 1,000-pound capacities. For smaller batches, the facility provides both 140-quart and 30-quart Hobart paddle-style mixers. All mixers are vacuumed between batches to prevent crosscontamination of different feeds.





#### **GRINDING AND PELLETING**

Precise grinding of major ingredients is achieved through a Reskamp DP999-36 roller mill, providing researchers the ability to compare  $\,$ 



the effect of different particle sizes on digestibility and animal performance. Feeds can be pelleted through a California Pellet Mill PM1116-4, rated at seven tons per hour and fitted with a PC837SS crumbler unit.



#### **BUCKET ELEVATORS AND CONVEYORS**

Feed ingredients are moved throughout the facility by four Sweet Manufacturing Co. bucket elevators and 16 round-bottom drag conveyors, which provide for a maximum cleanout of material to prevent cross-contamination between batches.

#### **FLOOR PLAN**

In addition to the mill floor, warehouse, grain receiving, and loadout areas, the facility includes a 250-square-foot manager's office, a 1,200-square-foot premix room, a 120-square-foot control room, restrooms, an employee room, mechanical rooms, and a separate warehouse and truck garage.

#### **GREATER STORAGE CAPACITY**

Storage is provided by 17 Abel Manufacturing Co. ingredient bins with a total capacity for 400 tons, two bins dedicated to the bagging line, an outside 5,000-bushel Brock steel tank for corn, and a 20-bin Abel microingredient system. Two separate 1,500-bushel bins with air flow systems and a grain auger provide storage for certified organic grain crops.

## COMPUTER-CONTROLLED AUTOMATION AND FIRE SAFETY SYSTEMS

A state-of-the-art, computerized control system from WEM Automation runs much of the equipment in the facility. The facility incorporates the latest safety equipment, including bearing temperature monitors, smoke and heat detection and alarm systems, and other structures required by Ohio building codes.

#### STAFF

An operations manager coordinates procurement and production schedules for the facility, consults with researchers to assist them in meeting experimental objectives, and keeps records to maintain the facility's FDA license. The Feedstock Processing Research Facility is staffed by seven full-time operators and student employees.

