HIGH-QUALITY, APPLIED EDUCATIONAL EXPERIENCES

The Grace L. Drake Agricultural Laboratory (GDAL) is integral to Ohio State ATI’s degree programs in animal agriculture and agronomy, through courses such as Principles of Weed Control, Dairy Cattle Feeding Management, Schooling and Training the Riding Horse, and Livestock Selection and Evaluation. Many of the production units are equipped with a classroom to enable relevant classes to be taught on-site. Most programs include a practicum course that enables students to participate in the day-to-day operation of the facility, from animal care and feeding to planting and harvesting. Students also have the opportunity to participate in or observe faculty research occurring at the facility.
UNDERGRADUATE TEACHING FOCUS

The agronomy and livestock programs at Ohio State ATI are among the largest programs at the institute, and the Grace L. Drake Agricultural Laboratory (GDAL) is an integral part of those programs. The GDAL consists of a beef facility, a dairy facility, an equine center, a land laboratory, and a swine facility. ATI students also have access to the small ruminant facility maintained by the adjoining Ohio Agricultural Research and Development Center (OARDC).

Emphasis is placed on learning by doing and on preparing technically proficient individuals for various careers in agriculture.

KEY FACILITIES AT THE GDAL

BEef FACILITY

GDAL’s beef cattle handling facility is the first of its kind in Ohio. Designed by renowned animal behaviorist Temple Grandin, the facility helps students learn animal handling methods that are both humane and efficient. The facility includes a corral, a dual-chute system with a hydraulic squeeze chute, and sorting pens. The beef herd includes crossbred and registered Angus cattle and nationally recognized Murray Grey cattle. Breeding stock includes 100 brood cows, replacement heifers, and bulls. Students assist in the daily care of the herd.

DAIRY FACILITY

The GDAL dairy facility includes a free-stall barn that houses a registered herd of 100 high-producing Holstein and Jersey milking cows. A fully automated double-8 parallel milking parlor is equipped with electronic identification and computerized milk-weight recording. The computerized feeding system monitors TMR ration mixing, feeder efficiency, and feed inventory. It also calculates economic ratios. Students assist in the milking, feeding, recordkeeping, health, reproduction, genetics, and housing management of the dairy farm laboratory.

EQUINE CENTER

The GDAL equine center consists of an indoor and an outdoor riding arena. It also has a 46-stall barn with foaling stalls, a tack room, a feed room, and a wash rack. The barn contains a fully equipped breeding laboratory and breeding shed for hands-on instruction in foaling, breeding, and subsequent mare and foal care. The breeding herd includes Quarter Horse and Standardbred broodmares and foals, while approximately 18 lesson horses used in equitation courses represent a variety of breeds including Quarter Horses, Paints, and Thoroughbreds.

LAND LABORATORY

The GDAL encompasses 1,700 acres, including 815 tillable acres and 350 acres of pasture, with the balance in woodlands, facilities, lawns, and open areas. The entire 815 tillable acres are used for student experiences and are planted with corn, soybeans, wheat, alfalfa, and mixed hay. This acreage consists of classrooms in the field with numerous agronomic and conservation experiments and demonstrations. Students gain hands-on experience with the cultural practices necessary to produce high-yielding forage and field crops. Enough corn is grown at the GDAL to meet the feed needs for all GDAL livestock. A grain handling facility and grain bins provide students hands-on grain handling experience.

SWINE FACILITY

GDAL’s swine herd consists of 18 purebred and commercial Yorkshire sows. All sows are bred artificially utilizing the best boars available from the GDAL herd, as well as various A.I. studs. The farm produces more than 360 pigs annually, with approximately 60 of those being finished on the farm. Students assist in the daily operation of the herd and the facilities. Pigs are weaned at 18 days of age. They then go through the facility’s 200-pig, two-stage environmentally controlled raised deck nursery. The finishing unit is a partially slatted, double-curtained, naturally ventilated facility with an automated feed delivery system.

SMALL RUMINANT FACILITY

ATI students have access to a small goat herd at GDAL, as well as a 300-head sheep flock maintained by the adjoining Ohio Agricultural Research and Development Center. Students learn about various breeds, sheep handling, health basics, ration formulations, and general management and reproduction techniques. They assist with everything from vaccinations and lambing to shearing and pasture management.