HISTORY

The Western Agricultural Research Station was established in 1958. It houses one of the world’s oldest no-till experiment plots, started by Ohio State scientists in the early 1960s. The renovated barns that used to house the Station were replaced with new facilities in 2008. Included are offices, a workshop, a conference room, and seed and machinery storage areas.

Joe Davlin, Manager
Western Agricultural Research Station
7721 South Charleston Pike
South Charleston, Ohio 45368
937-462-8016
davlin.1@osu.edu
go.osu.edu/WesternBranch

WESTERN AGRICULTURAL RESEARCH STATION

IMPROVING THE CROP AND LIVESTOCK INDUSTRIES OF WESTERN OHIO

Located on 428 acres north of South Charleston (Clark County), the Western Agricultural Research Station plays an instrumental role in supporting the field crop, specialty crop, and swine industries that are critical to the economy of farm-rich western Ohio.

Ohio Agricultural Research and Development Center (OARDC) scientists and Ohio State University Extension specialists work with Station personnel on innovative research programs that address not only specific production issues of crops and livestock but also better management of natural resources. The knowledge generated at the Western Station is then shared with growers and industry to guarantee they have the latest science-based information available to improve their enterprises and Ohio’s overall economic health.

Hog production gross income is $408 million in Ohio; pork production adds value to the local economy by providing 10,000 jobs.
KEY RESEARCH STUDIES CONDUCTED AT THE STATION INCLUDE:

**IMPROVED CROP AND FORAGE PRODUCTION**

Precision agriculture is the newest research to the Western Station, comparing variable rate seeding with various planting down pressures and seeding depths. Drones are taking aerial imagery photographs throughout the growing season to help farmers make better management decisions.

The number of research projects involving growth regulators, micronutrients, and biologicals in corn, soybeans and wheat is increasing. In-furrow placement of starter fertilizers continues to raise many questions with Ohio farmers. Current studies are evaluating different rates and types of starter fertilizer with other methods of application. Nitrogen stabilizers and late season nitrogen applications are being compared to traditional side-dressing applications at different growth stages in corn.

The Western Station also participates in research aimed at identifying genetic traits in soybeans that can be used for the development of novel industrial products, in collaboration with the university’s Ohio BioProducts Innovation Center (OBIC).

**WEED, INSECT AND DISEASE MANAGEMENT**

Different classes of fungicides are applied to corn and soybeans at different growth stages to determine the best integrated pest management strategy and rate disease control — key information that helps growers apply fungicides only when needed to save on input costs and decrease chemical use.

Fungicide efficacy and IPM strategies are currently being evaluated to give pumpkin growers information they need to try and control powdery mildew, one of their biggest problems.

Current weed studies include management of herbicide-resistant weeds, integration of herbicide-tolerant crops, and evaluation of novel herbicide chemistry. Multi-state research programs seek to determine the critical period of weed control, cumulative stress on non-herbicide tolerant crops, and herbicide application timing in herbicide-tolerant crops.

Research is being conducted in field corn production with stacked corn hybrids, seed treatments, and in-furrow insecticides to reduce insect damage. Bt sweet corn varieties are comparing various spray treatments for control of late season insect pressure in sweet corn.

**SOILS AND THE ENVIRONMENT**

With increasing concerns of fertilizer runoff in Ohio lakes and rivers, OARDC researchers are conducting more studies involving fertilizer rates and placement, application timing, and long-term phosphorus and potassium studies on corn and soybean production. They are evaluating fall vs. spring application, strip-till vs. conventional tillage vs. broadcast applications, and fertilizer runoff.

The Station is instrumental to ongoing internationally recognized studies on soil carbon sequestration. Studies in soil reconditioning, residue management and cover crops are being evaluated in continuous corn environments to improve soil structure. Bio-energy crops, including switchgrass, are also being evaluated at Western.

**SWINE PRODUCTION**

Research focuses on the genetic improvement of swine for carcass and pork quality traits. Current studies utilize purebred Berkshire pigs as a model for understanding genetic variations as they relate to economically important traits.

Additional research deals with animal welfare assessment, swine health, antimicrobial resistance, and alternative production options.

**ECONOMIC IMPACT**

Crops and livestock raised in Ohio’s western counties make a significant contribution to the state’s economy. And the studies and outreach efforts conducted by the Western Agricultural Research Station play a key role in the viability of the region’s and the state’s agricultural industries, also extending its impact into the nation.

Key crops and livestock products supported by Western Station research contribute billions of dollars in production value to Ohio’s economy, in addition to the billions in added value these products help generate:

- Corn has an annual production value of $2.1 billion, supporting food, feed, renewable fuel, and other industries.
- Wheat and pumpkins have an annual production value of $252 million and $33 million, respectively.