

## Station Facts

The Tidewater Research Station was established in 1943 in Washington County to serve a large area of North Carolina lying between the Coastal Plain region and coastal North Carolina. It replaced the Blackland Test Farm near Wenona, established in 1912. This region of North Carolina has expanded rapidly in agricultural enterprises during the past 35 years. Extensive land clearing and drainage occurred in this region from the early 1960s to the 1980s, and the need for research grew with increased crop acreage. The station concentrates primarily on research involving grain and swine production — the major focus of agriculture in the area.

## Infrastructure

The station is on 1,558 acres — 840 acres of woodland, 428 acres of cropland, 195 acres of pastures, and 95 acres in ponds, buildings, roads, and related areas.

The station is also home to the Vernon G. James Research and Extension Center. This 32,000 square-foot facility houses research and extension specialists in the swine, beef, soils, entomology, plant pathology, crop science, horticulture science, and aquaculture disciplines, as well as related staff. Seven modern research laboratories and a conference center seating over 300 people are also part of this facility.

## Events

The Tidewater Research Station hosts many education and training events annually. The onsite greenhouse facilities provide tours to local groups and schools. The onsite septic system project provides hands on training. Annual events include a Farm Safety Day and an Organic Field Day.

## Research Programs

**Field Crops** Corn genetic studies evaluate breeding lines, yields, diseases, lodging, grain quality and drydown. Commercial varieties are evaluated for yield, lodging, and maturity. Field corn insect, weed and fertility studies are also of ongoing importance. Soybean breeding lines are evaluated for yield, disease, insect resistance, lodging and shattering. Other studies of soybeans include official variety test of commercial varieties for similar agronomic characteristics. Small grain studies include breeding research, investigation of the Cereal Leaf Beetle and fertility. Other agronomic tests look at the relationships among tilling, fertility, and yields. Cotton research includes insect studies and weed control on organic soils.



Long-term studies of grain cropping systems involve corn, soybeans, and wheat, along with tillage, water level control, fertility and the measurement of cropping inputs in ground water through a system of wells and tile drains. Other activities include Irish potato breeding, cabbage, Global Positioning Systems and Precision Farming, screening rice varieties and Fescue grass fertilization.

**Aquaculture** The aquaculture research program includes ponds, raceways and tank culture of finfish. Pond production is conducted in 18 quarter-acre ponds with studies focused on striped hybrid bass and yellow perch. The raceways are used to hold, grade, and feed train yellow perch. Tank culture studies involve only flounder. Both flounder and yellow perch are spawned at this location, and both species are used for fingerling and grow-out studies. Phase II fingerlings are purchased for the striped hybrid bass; studies involving feeding and water quality are conducted in the grow-out phase with this species. A cooperative research study, with industry participation in the production of flounder fingerlings, began in January 2001.

**Livestock** Beef cattle research involves crossbreeding of a 160-cow herd using several major breeds. Research projects evaluate growth and feeder calf quality traits for crossbred calves, reproductive and maternal traits and evaluation of terminal sires mated to crossbred cows. Beef steers are used to evaluate alternative protein sources for over wintering. These same steers are then used in summer grazing trials. Swine studies from a 200-sow herd of white line/black line breeds develop and evaluate maternal and paternal lines using litter size, weight and lean growth as selection criteria.



**Headhouse/Greenhouse** A state-of-the art glass and masonry headhouse/greenhouse was completed in 1995 and serves the N.C. State University faculty located at the Vernon G. James Research and Extension Center located on the station grounds. Current studies conducted there include Irish potato breeding, cabbage diseases, cotton insects, bT corn insects, blackberries, blueberries and soil fertility of cereal grain crops.

**Water, Forestry** Major studies of agriculture and forestry water quality are being conducted. Quantity and quality of all inputs which include both naturally occurring and production inputs are measured. Ground water contamination and input movements are observed.

## Community Partnership

The uniqueness of soils and climate in this area offers tremendous potential for crop, vegetable, and livestock production. Strategically located to stimulate vegetable production, the station serves the commercial Irish potato growing region of North Carolina. Current research involves field crops, horticultural crops, soil, water, livestock, and aquaculture. TRS is increasing its emphasis on regional aquaculture research including hybrid striped bass and yellow perch studies. The extensive system of canals, open ditches, and drainage tile on the station have demonstrated how low-lying, undeveloped land could be made productive and has served as a pattern for area landowners.

In addition to the ongoing research programs that support area landowners and agriculture in the tidewater region of the state, the state plays an important role in the local community. For several years the station has hosted the Washington County Relay for Life event and resulting in the county being ranked number 1 in the South Atlantic Region and number 3 in the nation.



## Research Stations Division

*Working together for one cause*

### Mission

To manage crop and livestock facilities that serve as a platform for agriculture research to make farming more efficient, productive, and profitable, while maintaining a sound environment and providing consumers with safe and affordable products.

### Partnership

Agriculture research in North Carolina dates back to 1877, when state legislation established the N.C. Department of Agriculture along with “Experiment Stations” as a division of the department. Since that time, the N.C. Department of Agriculture and Consumer Services’ Research Stations Division, in partnership with N.C. State University, has established 18 statewide locations. Each facility has unique climate and soil conditions, giving researchers a living laboratory in which to investigate a variety of regional crops, forestry concerns, livestock, poultry, and aquaculture. The Division supports these studies by providing land, water, equipment, buildings, and staff who work around the clock to help build a stronger foundation for the future of agriculture.

### Contact

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## Tidewater

### RESEARCH STATION

*Washington County*



**RESEARCH STATIONS DIVISION**

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**NC DEPARTMENT OF AGRICULTURE**

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