CARVEL RESEARCH AND EDUCATION CENTER:

70 YEARS OF Service

IN THE LOBBY OF THE UNIVERSITY OF DELAWARE’S Elbert N. and Ann V. Carvel Research and Education Center in Georgetown, the warm and welcoming smiles of Delaware’s former Governor and Mrs. Carvel have been greeting visitors since 2006. The Carvels’ life-sized portrait serves as a public reminder of the Carvel family’s generosity, affection and commitment to Delaware citizens and agriculture. That tradition of service remains a constant with the 52 full-time employees of the center who carry out the mission to make a difference in the lives of Delawareans.

What began in 1941 as the UD’s agricultural experimental “substation” has evolved into an influential, multi-faceted complex. The Carvel facility’s 26,000 square feet of office, labs and classroom space, is surrounded by 344 acres of agricultural research land, and the adjacent Lasher Laboratory, a world-class poultry diagnostic lab. In addition, the Carvel Research and Education Center (REC) is home to Sussex County Cooperative Extension, whose agents and volunteers deliver university-based knowledge to a diverse group of people.

“Our facility continues the strong tradition of serving our agricultural clientele and their families, as well as the citizens of Delaware,” said Mark Isaacs, REC director.

This 70 years of service, the last five in the new building, has coincided with innovations in research and programs that contribute to Delaware’s agricultural growth.
Expanding fruit, vegetable opportunities for Delaware

Growth could be Gordon Johnson’s middle name. After serving 11 years as agricultural agent for Cooperative Extension in Kent County, in January 2009, Johnson accepted a new position as Extension fruit and vegetable specialist with a new home at the REC. “It is very nice to have the research farm right outside my door,” said Johnson. Taking full advantage of his location, he and his team of researchers and students conduct ambitious programs studying the effects of soil amendments and fertility, alternative composts and cover crops, pest and irrigation management and cultural practices.

Using traditional crossbreeding methods, an improved variety of lima bean for instance, undergoes a process that can take 7 to 12 years. Examining 8 to 9 generations, under various growing traditions, is typical before a new variety can be brought to market. Johnson noted the promising work of his Extension colleague Emmalea Ernest, in lima bean research and trials. The REC’s acreage is also a backdrop to production sweet corn, snap beans, peas and watermelons.

In addition to these well-known Delaware crops, new trials are underway to expand market opportunities with seed onion, blueberries, blackberries and wine and table grapes. Johnson is keen to explore the potential of new varieties and cultural practices that could help farmers extend beyond Delaware’s summer range and produce fruits and vegetables that can grow from spring until fall, and successfully overwinter. Johnson’s efforts at Carvel provide a crucial contribution toward this goal that could provide options to growers and bolster what is already a thriving agri-business industry.

Johnson partners with his Extension colleagues throughout the state in family and consumer science, agriculture and horticulture, instructing small and wholesale growers on safe produce harvesting and handling, and through associations such as the Fruit and Vegetable Growers Association of Delaware, which helps growers navigate industry regulation and safety audits mandated by retail outlets.

Water use matters

Those traveling along Southern Delaware’s scenic roads will soon encounter long, gate-like structures that stretch across lush fields of corn, soybean and other First State crops. Center pivot irrigation systems are an integral part of Delaware’s agricultural panorama, the lifeblood for crops when weather does not deliver desired results.

An 11-year veteran in agricultural engineering, James Adkins’ new position as associate research scientist in irrigation resulted from a strong need for irrigation resources and education. Adkins estimates that approximately 125,000 acres of Delaware farmland use center pivot systems. Unlike private residential sprinkler systems that operate by timer at regular intervals, a Delaware farmer must know both when and how to apply irrigation. Adkins provides the education through Extension workshops and grower site instruction on system calibration, irrigation scheduling, management and instructions on how water may move through various soil profiles. Partnering with Cory Whaley, Sussex County agriculture agent, they provide in-depth reviews of high-tech moisture sensor equipment that are available to growers.

“How we use water matters,” said Adkins. “We are looking to improve irrigation efficiency.” Adkins says that too much irrigation can adversely influence crop yields and waste water. Likewise, too little irrigation reduces yields and can concentrate nutrients in the soil that may affect watershed quality. In workshops, growers learn their local soil characteristics and the most effective way that plants can maximize the utilization of the applied water and improve nutrient use efficiencies.
A blizzard or two blows in

Water quality was one of many issues that Bill Brown had placed on his agenda when he accepted the position of poultry extension agent in February 2010. Brown had spent most of his life as a poultry grower and 21 years with Perdue Farms, where he served as flock supervisor, ventilation specialist, hatchery manager, poultry housing specialist, area supervisor and grow-out manager. Armed with enthusiasm and a lifetime of knowledge to share, Brown was ready to hit the ground running. But he had not exactly planned on wearing snow boots!

With barely enough time to unpack in his new office and remember his new email password, Brown and the Delmarva poultry industry were hit with back-to-back historic winter storms. Immediately, the integrity of poultry-house construction was pushed to the top of his agenda, as several structures fell to the weight of the record snowfall. Since then, Brown has traveled the region providing valuable construction advice to growers.

As state Extension agent, Brown serves a large constituency of individual poultry growers and businesses who have a stake in what is the largest economic driver in agriculture in the region. Although poultry is the mainstay of Delaware industry, contributing $3.2 billion dollars to Delaware economy, the industry faces many challenges in public perception. Brown provides assistance for growers to navigate through proposed and pending legislation regarding nutrient management and environmental issues, controlling energy costs, and maintaining Delmarva's lead on bio-security diligence.

"I am eager to let the people know what this industry has done to contribute to the general welfare of the people in the Delmarva region," said Brown. As Brown looks to the future, he is eager to encourage 4-H and FFA youth to consider a career in an industry that contributes so much to the area.

In March 2011, UD presented a comprehensive study, Impact of Agriculture on Delaware's Economy, to Delaware Gov. Jack Markell. The report determined that agriculture and related industries generate $7.5 billion for Delaware. "Agriculture is important to our economy and important to our future," said Markell, upon receiving the study.

Many decades ago, Governor Carvel anticipated Delaware agriculture's prosperous future and invested in it. The Carvel family's vision continues to significantly contribute to its success story. The Elbert N. and Ann V. Carvel Research and Education Center, its dedicated staff, cutting-edge research and outreach mission ensure that the beneficiaries of Delaware agriculture are fully realized.

Free marine research tours offered through the summer

For anyone intrigued by the ocean or interested in a marine science career, a free tour of the University of Delaware College of Earth, Ocean, and Environment's (CEOE) research complex in Lewes is the perfect summer activity.

Tour topics at the Hugh R. Sharp Campus include a broad variety of issues and solutions in marine and coastal environments.

Tours begin with a 15-minute video showcasing ways in which CEOE and Delaware Sea Grant researchers explore the coastal environment in Delaware and throughout the world. Next, guides lead a walking tour of the research buildings, often including stops at the greenhouse, local fish and tropical reef tanks, as well as multiple posters and exhibits.

In the two-hour tour, led by UD's docent guides, the discussion is tailored to the interests of each visiting group, which may include kids ages 10 and up.

Tours take place from June until early September—at 10 a.m. on Fridays in June and on Tuesdays and Fridays in July and August. To reserve a place, call 302-645-4346, no later than noon the day before.