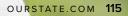
FROM SOUP to KNOTS

Local NC Cooperative Extension experts preserve cherished recipes and introduce kids to the thrill of summer camp — and that's just a taste of what they provide to their communities.

written by TODD DULANEY



Extension teaches home cooks how to safely can a garden's bounty (opposite). This skill is also taught through many Extension 4-H programs, along with lessons on animals, the environment, and science and technology - which is why 4-H members always keep safety goggles handy.



hile its history is long and its presence in the state extensive, the core mission of NC Cooperative Extension is, and always has been, pretty straightforward: solving problems.

Where the waters get muddy and the weeds get thick is the sheer scope and scale of its problemsolving — from food and agriculture to health and nutrition to youth development. (And, yes, Extension has experts who can suggest solutions for that muddy water and those tangled weeds.)

Its more than 1,200 experts – together with

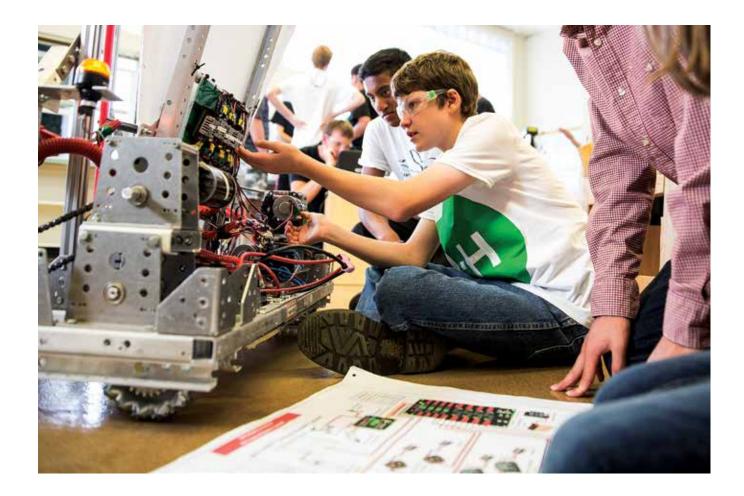
In Watauga County, farmer Joey Clawson (left) discusses the health of his Fraser firs with Extension agent Eddy Labus. In Raleigh, Empire zoysia sod (above) is on display during Turfgrass Field Day at NC State.



a statewide army of volunteers, partner organizations, and agencies — tap into a wealth of scientific research and firsthand knowledge to answer just about any question that folks throw at them. *Are these bugs in my yard fire ants?* An Extension entomologist can tell you for sure. *Why do my azaleas look peaked?* There are horticulturists who can help. *My green thumb is* very *green. Can I grow vegetables for a living?* Yes, Extension even has economists who can help with an agribusiness start-up.

You could find an answer — or 1,000 — to your questions on the Internet, but in addition to comprising some of the smartest scientists and researchers around, Extension is bound to have a center nearby — one in every county plus the Qualla Boundary. Extension agents, staff, and volunteers are the wise neighbors that you didn't even know you had, who know about the place where you live — its weather and topography, what grows well in your backyard and what doesn't — better than Google does.

WHILE MANY PEOPLE ENGAGE DIRECTLY WITH Extension experts at our two land-grant universities — NC State and NC A&T State University the majority interact with local founts of wisdom, including the state's more than 3,000 Extension Master Gardener volunteers, who help beautify their communities and give novice gardeners the tools they need to grow their own food. Their knowledge is critically important in places where the future of traditional foodways is imperiled,



Extension works with the state's future gardeners and future chefs, scientists, and engineers — through 4-H.



an issue affecting Cherokee in the Qualla Boundary as well as residents in our cities, where food insecurity is a major concern.

And even though gardens and lawns and pests around the house are a significant part of Extension's focus, don't be fooled into thinking that its expertise is limited to backyards.

Extension works with many of the state's future gardeners — and future chefs, scientists, and engineers — through 4-H. Programs include community clubs and school enrichment projects that range from raising animals to working on computers and building rockets. Extension 4-H programs attract kids from communities of every size, as well as from military bases through Operation Military Kids, a partnership to develop a support network for the children of deployed soldiers.

Science and nature are key components of Extension. As part of the Extension 4-H program, kids put their engineering skills to the test building robots (above). The NC State apiary (left) on Centennial Campus is one of many resources for aspiring beekeepers. A highlight of 4-H for more than 11,000 kids from across the state is having the opportunity to participate in camping programs at North Carolina's three 4-H educational centers. There, kids from all backgrounds experience the fun of summer camp together. Extension works with growers of every size. At the annual Northeast Ag Expo, NC State Extension soil science specialist Carl Crozier shares the latest on 21st-century farming based on data collected from research plots, like this soybean field in Currituck County. Many of those campers return as counselors, and some may find careers with Extension, which will no doubt be solving problems for many future generations of North Carolinians.

MUCH LIKE HOMEOWNERS WHO WANT TO KNOW

what's nibbling on their peonies, the state's farmers and agribusinesses rely on Extension for answers, too — just on a much larger scale. Agriculture is a \$93 billion industry in North Carolina, and includes everything from oysters on the coast to sod farms in the Piedmont to Christmas trees out west — not to mention 43,000 farms that raise and tend row crops, livestock, and orchards.

AN EXTENSION PARTNERSHIP

R apid industrialization during the Civil War brought to light a pressing need in the United States: higher education specializing in agriculture and technology. In 1862, the Morrill Act provided each state with 30,000 acres of public land to sell or develop to fund universities that would teach "such branches of learning as are related to agriculture and the mechanic arts ... in order to promote the liberal and practical education of the industrial classes."

As a result, "land-grant" colleges sprung up across the country, including what is now North Carolina State University, which was founded in 1887. In 1890, a second Morrill Act provided funds for African American land-grant colleges, and what is now North Carolina Agricultural and Technical State University — our state's only other land-grant university — was established the following year.

From the beginning, these schools connected farmers and rural communities with agricultural guidance and technology. That role was made official with the passing of the 1914 Smith-Lever Act, which founded the NC Agricultural Extension Service — now NC Cooperative Extension.

With Extension offices in all 100 counties and the Qualla Boundary, the partnership among NC State, NC A&T, and local, state, and federal governments continues to grow and innovate to meet the diverse needs of people in our state. As its mission states, Extension "extends research-based knowledge to all North Carolinians, helping them transform science into everyday solutions that improve their lives and grow our state." — *Elizabeth Riddick*





North Carolina Agricultural and Technical State University



Extension is the authority on the basics of large-scale farming, including when and how to spray chemicals on fields, how to keep vulnerable row crops safe from frost and freezes, and how to promote healthy bee colonies.

Small and midsize farms look to Extension for help figuring out ways to get their eggs and vegetables to market, how to adapt their crops to a changing climate, and how to better promote what they grow — in the areas where they grow it. Initiatives that include the NC Oyster Trail and a movement to diversify Christmas tree farms by introducing corn mazes and pumpkin patches are all part of broader agritourism efforts among Extension, its local partners, and growers. Sometimes, the close relationships that Extension staff share with farmers lead to unexpected opportunities, including resurrecting crops — like Ashe County pole beans — that were thought to be extinct.

Preparing the food produced by growers from across the state is also a focus for Extension. Experts teach safe and proper preparations for meats and canned vegetables, as well as regional specialties that might otherwise be lost to time.

Looking to the future, Extension continues to address 21st-century challenges. Climate change has impacted how plants grow, and how farmers in North Carolina grow them. Tropical storms are more powerful and their aftermaths more deadly. Crops that are new to modern North Carolina farmers, namely hemp, require instruction beyond just when to plant and when to harvest. And finding ways to put food on the table requires creativity with budgets and menus.

Facing these hurdles, and many more, experts and volunteers with Extension engage with their respective communities to find solutions and help their neighbors. **Og**

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