



P.O. Box 27766
Raleigh, North Carolina 27611
919.782.1705

Non-Profit Organization
U.S. Postage
PAID
Raleigh, N.C.
Permit No. 825

the
LEADER

MODERN FARMS ARE CONNECTED FARMS

Recommendations from the *Internet Connectivity and Farms in North Carolina* report:

1. Continue focus on solutions for last-mile connectivity for unserved and underserved areas and continue funding support for last-mile infrastructure investments through programs such as GREAT and ReConnect.
2. Continue support for emerging technologies that reduce costs or otherwise assist in reaching rural areas with increased connectivity.
3. Continue to adopt policies that can reduce costs to deploy infrastructure, offer new opportunities, or otherwise support reaching rural areas with increased connectivity.
4. Continue discussions with farmers on whether community internet access sites would be useful for them and if so, what type would best meet their needs.
5. Develop data and mapping practices to allow analysis of where farms are located in relation to broadband infrastructure.
6. Encourage and convene partners in the agriculture and broadband space to work together to plan for current and future needs for data connectivity in-the-fields. Develop and identify models and best practices for providing wireless internet access among the farm fields.
7. Encourage and convene partners in the agriculture, vendor, and technology space to work together to plan for current and future digital inclusion needs for farmers in terms of digital literacy, adoption, and use of new technologies.

Read the full report at:
ncbroadband.gov/data-reports/internet-connectivity-farms-nc

MODERN FARMS ARE CONNECTED FARMS

MODERN FARMS ARE CONNECTED FARMS

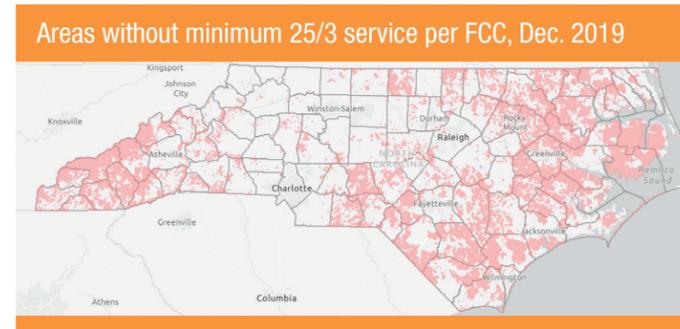
Many people picture American farms as bucolic landscapes with old red barns, well-worn tractors, and perhaps fields dotted with a few dozen cows grazing aimlessly. To be fair, these scenes do still exist all across North Carolina, giving character to our countryside and reminding us of our strong agricultural heritage. But we know not to judge a book by its cover, and the farm is no exception.

Those of us involved in agriculture know first-hand that while farms may often appear low-tech and old fashioned, those tractors, fields and barns are home to some amazing cutting-edge technologies that are changing the way we grow our food and fiber. And with ever increasing media attention on precision agriculture practices, the public is gradually becoming more aware of the modern farming technologies many farmers use today – fields being plowed and harvested by GPS guided (or even self-driving) tractors; drones collecting data to allow precise use of inputs like water, fertilizer, and pesticides; and devices that monitor the health and well-being of livestock, just to name a few.

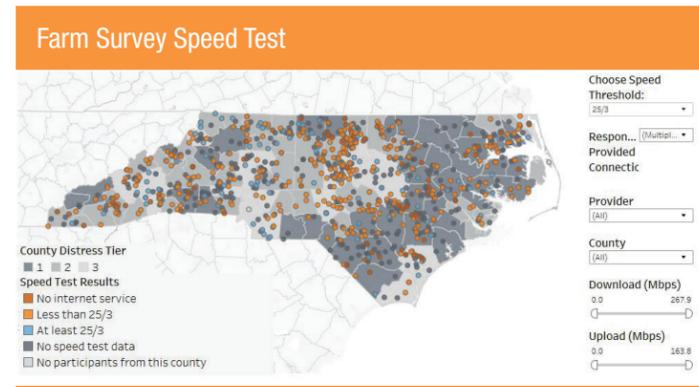
As farmers tackle the challenges of the next generation – feeding and clothing a rapidly growing population while using fewer resources and limiting environmental impacts – technologies like those above will become increasingly essential to success. The NC Department of Information Technology’s Broadband Infrastructure Office (BIO) report entitled *Internet Connectivity and Farms in North Carolina* said “The technology required to support farm operations has evolved exponentially and data collection has become vital to successful farming operations.”

This technology isn’t sitting out there collected dust either – as our friends at American Farm Bureau rightly point out, “America’s farmers and ranchers embrace technology that allows their farming businesses to be more efficient, economical and environmentally friendly.” According to a 2019 study commissioned by the United Soybean Board, most farmers plan on (59 percent) or are considering (28 percent) incorporating more data into making day-to-day decisions within the next year.

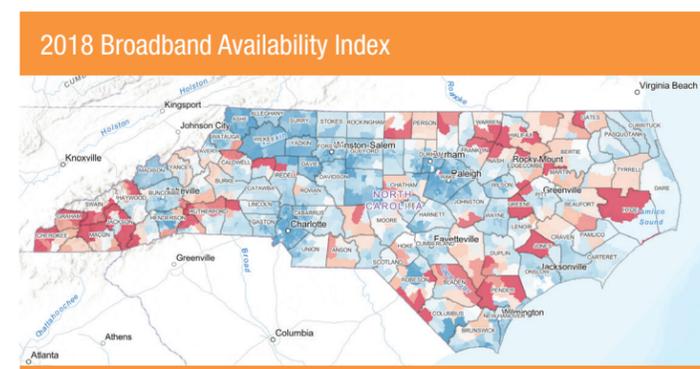
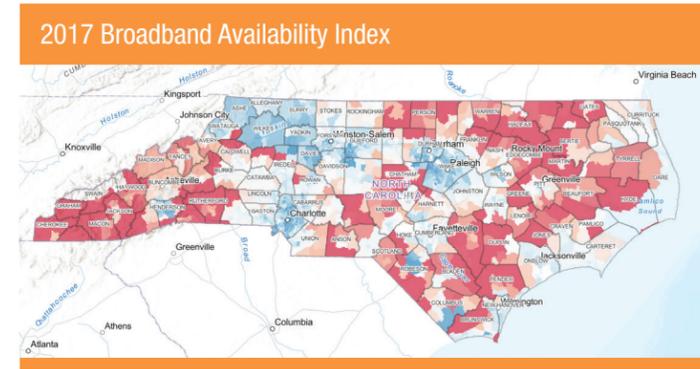
It’s promising to see all of this technological advancement in agriculture and exciting to see the enthusiasm with which farmers are adopting it. Yet there are some significant impediments that are preventing both the wider adoption and maximum benefit of these new tools. I’m reminded of when our State Board visited Brazil back in 2019 — one of the biggest takeaways was that the immense raw potential of Brazilian agriculture was being limited by the lack of suitable transportation infrastructure. In North Carolina and across much of America’s rural farm communities, our farmers’ productivity and efficiency is being limited by the lack of suitable broadband infrastructure.



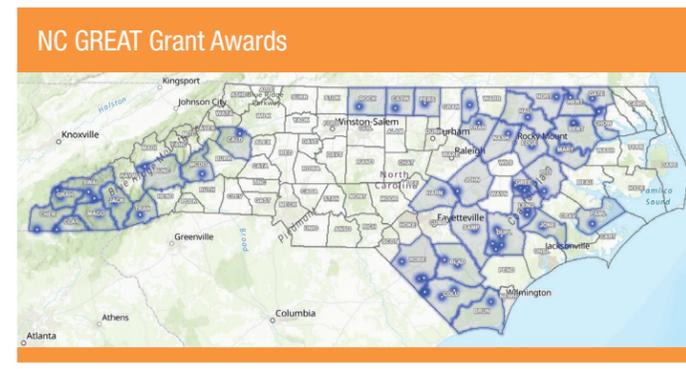
According to a USDA report (Farm Computer Usage and Ownership, 2017), 29 percent of US farms have no access to the internet. In North Carolina, the BIO report noted that “Some farms offices lack any connectivity at all” while “many of the existing broadband connections at farm offices in this survey do not meet the speed threshold of 25 Mbps download/3 Mbps upload, as defined by the Federal Communications Commission as an availability threshold for households. Many also do not meet the prior 10 Mbps down/1 Mbps up criteria.” Out of 632 survey respondents who completed the BIO speed test, only 18 percent registered speeds over 25 Mbps/3 Mbps. Meanwhile in Wake County, 99.41 percent of the population has 25 Mbps/3 Mbps and 99.36 percent of the population have access to 100 Mbps/10 Mbps.



Broadband access shouldn’t be a luxury for today’s farmers and expecting mass adoption of new technologies by farmers without the requisite infrastructure is putting the cart before the horse. Just like their counterparts in urban areas, businesses in rural communities are coming to view reliable and responsive internet as a necessity for business management, including basic yet important tasks like doing online research, reading and sending emails, buying supplies, and managing finances. Yet according to the FCC, 39 percent of rural Americans lack access to 25 Mbps/3 Mbps service, compared to only 4 percent of urban Americans. The disparity in access to affordable broadband is creating a “Digital Divide” in which rural residents lag behind in education, health care, and overall quality of life.



All maps available at nconemap.gov/pages/broadband



The good news is that there seems to be real determination locally and nationally to find ways to improve rural broadband access, and Farm Bureau supports using a combination of tax incentives, grants and/or regulation to increase broadband access in rural areas. In North Carolina, nearly \$60 million in GREAT grants have been awarded and almost \$300 million of federal CAF funding has been disbursed. We are beginning to see improved broadband availability in underserved areas because of those grants, but service to farm operations should be emphasized due to their substantial data demands and inability to relocate to areas where better service may be available. Plus, farms are the economic engine in many rural communities and we should equip them with the tools to run at their very best.

After all, farmers can overcome tomorrow’s challenges, but we can’t expect them to do it with yesterday’s technology.