



**NC Ag Leads**

A STRATEGIC PLAN  
FOR **NORTH CAROLINA**  
**AGRICULTURE**



## ABOUT THIS REPORT

At many points during the execution of the NC Ag Leads project, representatives of the Golden LEAF Foundation and the NC Ag Leads Steering Committee agreed that the purpose was not to develop a “coffee table book.” Instead, this project was designed to seek out and identify opportunities that are ripe for authentic, industry-led action.

This report, therefore, boldly sets forth the areas in which the agricultural community has developed consensus on the most significant needs facing the industry and the greatest chance for addressing them. The tangible recommendations in this report await earnest execution.

By design, NC Ag Leads does not address every risk and opportunity facing the agricultural sector in North Carolina. Instead, the report largely traces the work undertaken by the NC Ag Leads project staff, including the reduction of feedback into six core work areas (handily summarized in the acrostic HARVEST), followed by recommendations and next steps for forward progress in each of those work areas.

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# INTRODUCTION

The annual economic impact of North Carolina's diverse agriculture and agribusiness industries now stands north of \$110,000,000,000.\*

But can this juggernaut industry be even more significant? NC Ag Leads set out to determine just that and to ensure that the industry is intentional about capitalizing more broadly on its strengths, as well as honestly assessing and addressing its vulnerabilities.

At the time of this report, no other state in the country has engaged in a process to develop a statewide strategic plan for agriculture as rigorous, comprehensive, and action oriented as NC Ag Leads.

But this is just the beginning ...

*\*Economic impact of N.C. agriculture and agribusiness jumps to \$111.1 billion; second straight year of strong growth*  
<https://www.ncagr.gov/news/press-releases/2024/05/18/economic-impact-nc-agriculture-and-agribusiness-jumps-111-billion-second-straight-year-strong>

# NC Ag Leads Leadership

## STEERING COMMITTEE



**Lawrence Davenport**  
**Golden LEAF Foundation**  
Board Member  
**J.P. Davenport & Son, Inc.**  
Owner



**Don Flow**  
**Golden LEAF Foundation**  
Board Member  
**Flow Automotive**  
Chairman & CEO



**Scott T. Hamilton**  
**Golden LEAF Foundation**  
President & CEO



**Shawn Harding**  
**NC Farm Bureau**  
President



**Laurence Lilley**  
**Golden LEAF Foundation**  
Board Member  
**Lilley International**  
President



**Gary Salamido**  
**NC Chamber**  
President & CEO



**The Honorable Steve Troxler**  
**North Carolina**  
Agriculture Commissioner

## PROJECT STAFF



**Ray Starling**  
**NC Chamber**  
General Counsel &  
Legal Institute President



**Laura Kilian**  
**NC Farm Bureau**  
Associate State  
Legislative Director



**Sarah Grace Lee**  
**NC Chamber**  
NC Ag Leads  
Administrator

# NC Ag Leads Working Group Leaders

## HARMONIZE LAND AND RESOURCE USE



**John Burt**  
**Wake County**  
**Farm Bureau**  
*President*

John Burt is a graduate of NC State with a degree in Agronomy and a commission in the Army as an Armored Cavalry officer. He served two tours in Iraq (2004 & 2009) and assisted Customs and Border Protection near Yuma, AZ (2006). He is the owner/operator of Iron Horse Farms in Fuquay-Varina, a land grant farm that traces its heritage 270 years and 10 generations. He currently maintains a cow/calf and finished beef operation, grows 70 acres of Alfalfa and Bermudagrass hay and boards 18 horses.

He currently serves as the President of Wake County Farm Bureau, Chairman of the NC Farm Bureau Equine Advisory Committee, member of the Wake County Water Partnership Advisory Committee and is the former Chairman of the NC Farm Bureau Young Farmers and Ranchers Committee.



**Daniel Hedgecock**  
**Precision Planting**  
*Senior Manager of*  
*Business Intelligence*

Daniel Hedgecock has held various leadership roles in finance, operations, and business development within agriculture companies across food processing, precision agriculture technology, and crop production sectors.

Currently, Daniel serves as Senior Manager of Business Intelligence for Precision Planting. Headquartered in Tremont, IL, Precision Planting is part of PTx, the leading precision agriculture brand of AGCO, a Fortune 500 company and global leader in the design, manufacturing, and distribution of agricultural equipment.

Daniel earned a bachelor's degree in engineering and a master's degree in Soil Science from NC State University, as well as a master's degree in accounting from the University of North Carolina at Chapel Hill.

## ALIGN TECHNOLOGY SUPPLY & DEMAND



**Katherine Drake Stowe**  
**US Soybean Research**  
**Collaborative**  
 Director

Katherine Drake Stowe serves as the Director of the US Soybean Research Collaborative, a multi-state program dedicated to more effective coordination and collaboration among checkoff research programs. In this role she focuses on building partnerships to enhance the impact and efficiency of research initiatives. Katherine grew up on a small family farm in Eastern North Carolina. She attended NC State University where she received a B.S. in Chemistry and a M.S. and Ph.D. in Crop Science. Her passion lies in serving farmers and contributing to their success. She resides in Apex, NC with her husband, Sadler, and two little boys.



**Paul Ulanich**  
**North Carolina**  
**Biotechnology Center**  
 Senior Director of  
 Focused Initiatives

Dr. Paul Ulanich is a member of the Focused Initiative Team at the North Carolina Biotechnology Center, leading efforts to support ag technology stakeholders, enable partnership development, implement solutions that improve the state's life science ecosystem, and foster innovation development in North Carolina. Prior to this role, he served as the Center's Executive Director of the Crop Commercialization Program where he facilitated value-add opportunities to improve crops that result in increased profits for NC growers and strengthen the state's agribusinesses.

Dr. Ulanich received his Ph.D. in Biochemistry from Texas A&M University and MBA from the Katz Executive Program at the University of Pittsburgh, with Beta Gamma Sigma honors. Prior to joining the Center in 2011, he served as Director of Technology Commercialization at the NC SBTDC and as research faculty at the University of Pittsburgh's School of Medicine. He also consulted for and advised industry, commodity groups, and non-profits in areas of science, marketing, and intellectual property.

## REINFORCE FARMER SUPPORT SYSTEMS



**Angie Maier**  
**Valley View Insights**  
 Founder

Angie Maier has worked in and around NC politics for the last twenty-five years. She is the founder of Valley View Insights, a lobbying and government affairs consulting firm in Raleigh, NC. The McDowell County native is a key lobbyist for trade associations representing the cattle, dairy and pork industries.

She previously served as the director of government affairs and sustainability for the NC Pork Council for fifteen years. Before that, Angie worked on staff at the NC General Assembly in several different capacities, including as a policy analyst in the Office of the NC Speaker of the House of Representatives and a legislative assistant to two state senators. Early in her career, she also managed several state legislative races. Angie holds both a bachelor's and master's degree from NC State University.



**Milo Lewis**  
**NC Cattlemen's**  
**Association**  
**& NC Cattlemen's**  
**Beef Council**  
 Executive Director

Milo Lewis grew up on a traditional farm for eastern North Carolina where her family raised row crops, commercial cattle and contract hogs.

She is a 2010 graduate of NC State University with a Bachelor of Science in Agriculture Science and a 2011 graduate of Oklahoma State University with a Master's in International Agriculture with a focus in Economics. After graduating, she interned for Gibbs & Soell Public Relations writing pest management sheets for Syngenta Crop Protection.

In 2012, Milo joined the NC Farm Bureau Federation as a District Field Representative serving 11 counties in eastern North Carolina. Milo transitioned to Director of Livestock with the NC Farm Bureau Federation in 2018. In January of 2024 Milo joined the NC Cattlemen's Association (NCCA) and NC Cattlemen's Beef Council (NCCBC) as their Executive Director.

## VALUE A BUSINESS MINDSET ACROSS THE INDUSTRY



**Nelson Powell**

**First Bank & Trust  
Company, Agricultural &  
Commercial Lending**  
*Senior Vice President*

Nelson Powell is an 8th-generation Sampson County farm boy, raising the 9th generation on his family's Bicentennial farm in Taylors Bridge, NC. He currently holds the position of Senior Vice President, Agricultural & Commercial Lending at First Bank & Trust Company and has over 20 years of experience in agricultural banking. Nelson serves on multiple boards, including the NC State Agricultural Foundation Board, NC State ARE Office of Student Mentoring Board, Sampson Regional Medical Center's Board of Trustees, and Sampson County's Agricultural Advisory Board.

Nelson is a graduate of NC State University with degrees in Agriculture Business Management & Marketing, Global Leadership Development in Banking Graduate and recent graduate of the NC Leadership Forum through Duke University. Nelson has enjoyed a broad career background spanning private business ownership, agricultural consultation, and roles at organizations like USDA, Soil & Water Conservation, Smithfield Foods, Farm Credit, Rabobank, and currently First Bank & Trust.

## EMPOWER AND EQUIP THE AGRICULTURE WORKFORCE



**Vincent Ginski**

**NC Chamber Foundation**  
*Director of Workforce  
 Competitiveness*

Vincent Ginski is the NC Chamber Foundation's director of workforce competitiveness. Ginski leads the organization's Institute for Workforce Competitiveness and develops the long-term strategy and policy on workforce and talent-related issues. Prior to joining the NC Chamber Foundation, Ginski served as vice president of talent and strategic initiatives at the Gaston Business Association.

Working with the NC Chamber Foundation president, Ginski also provides counsel to the NC Chamber on education and talent public policy issues, as well as evaluates and updates Vision 2030 to reflect goal achievement and the changing North Carolina landscape. He is a Belmont Abbey Honors College graduate and an MBA graduate from Charlotte.



**Edward Olive**

**Lois G. Britt Agribusiness  
 Center at University  
 of Mount Olive**  
*Director*

Edward Olive serves as the Director for the Lois G. Britt Agribusiness Center at the University of Mount Olive. Prior to his appointment as Director in 2019, Olive served as Associate Director, Assistant Director, and Project Development Specialist for the Center. Olive also served as a Marketing Program Assistant with the NC Department of Agriculture and Consumer Services. Mr. Olive is a 2012 Agriscience Education graduate of the University of Mount Olive and went on to earn his Master of Business Administration with a focus in Marketing from Regent University.

Edward is currently a Leadership Studies Doctoral Candidate at North Carolina Agricultural and Technical State University. Edward is a vice-chair for the Mount Olive Area Chamber of Commerce, Secretary for the NC Agribusiness Council, a member of the Wayne County Chamber of Commerce Agriculture committee, and a member of the NC A&T State University Cooperative Extension Strategic Planning Committee, among other leadership positions. Edward is a graduate of the NC Rural Center's Homegrown Leaders program and the Karl M. Best Agricultural Leadership Program.

## STREAMLINE MARKET ACCESS EFFORTS



**Bryan Blinson**

***Blinson Strategies***

*Owner*

Bryan Blinson is the owner of Blinson Strategies, from which he provides consulting for farms and other agricultural organizations. He is the retired executive director of the North Carolina Cattlemen's Association. While attending NC State University he was on the Livestock Judging Team and was Chairman of the National Junior Polled Hereford Council and Noble Ruler of Alpha Gamma Rho fraternity. Following college, he was a purebred livestock auctioneer and sold cattle throughout the US and Canada.

In 1994 he became Executive Director of the NC Cattlemen's Association for six years followed by nine years in the Real Estate Auction business. He returned to the NCCA in 2008 as Executive Director and retired in March of 2024. Bryan's emphasis with the NCCA was to strengthen markets for North Carolina Cattle and Beef through Beef Quality Assurance programs, education for efficient production, telling the beef story to build consumer confidence and acceptance, defend the industry in the political arena and encouraging all youth to participate in or at least appreciate the beef Industry.



**Adam Helms**

***Presa Consulting***

*Owner*

Adam Helms leads Presa Consulting, advising clients on agriculture investment, corporate strategy, business development, and product strategy. Previously, he held a key role at Pairwise, leading a \$100 million gene-editing collaboration with Bayer, which was also a multi-round equity investor in Pairwise.

Additionally, he led internal strategic planning and portfolio management, which included investment management into leafy greens and berries. Adam's career also includes strategic and business development roles at Inari, various leadership positions at Bayer, culminating in the management of the global cotton trait business, and leading business development for Texas A&M AgriLife Research.

Adam has a B.S. in Agronomy and a M.S. in Soil Science from Texas A&M University, and MBA from the University of Texas-Austin.

A tractor pulling a trailer in a field at sunset. The scene is silhouetted against a bright orange and yellow sky, with a few trees visible in the distance.

## ACKNOWLEDGMENTS

The NC Ag Leads initiative was shaped by the insight, expertise, and commitment of many partners who share a common goal: to ensure a vibrant future for agriculture in North Carolina.

We are grateful to **North Carolina Agricultural and Technical State University**, the **North Carolina Community College System**, **North Carolina State University** and the **University of Mount Olive** for their engagement throughout this process. Their participation brought academic depth and a critical understanding of agricultural education and workforce needs that have informed many of the recommendations in this report.

We also extend our sincere thanks to the **North Carolina Department of Agriculture & Consumer Services** for their leadership and close collaboration. Their understanding of the industry's evolving landscape helped ground this effort in reality and opportunity.

Special thanks go to **AgCarolina Farm Credit** and **AgSouth Farm Credit** for their steadfast support and early championship of this work. Their belief in the purpose and promise of the NC Ag Leads initiative helped carry it forward.

We are also deeply grateful to **Google** for their generous support of the NC Ag Leads initiative. Their investment in this work reflects a shared commitment to innovation, education, and the long-term strength of North Carolina's agricultural sector. Their contribution has helped expand the reach and impact of this effort across the state.

And above all, we thank **North Carolina farmers**. Their voices guided this process from beginning to end. They are the true leaders of this work, and their role remains essential as we move from planning to action.



**EXECUTIVE  
SUMMARY**

The Golden LEAF Foundation's mission is to increase economic opportunity in North Carolina's rural, tobacco-dependent, and economically distressed communities. The agriculture industry is critical to those communities where it is often the leading economic driver and employer. More broadly, agriculture and agribusiness are North Carolina's leading industry, but more frequently than not the sector finds itself subject to the whims of market and policy forces that lay well outside of its control.

Golden LEAF's leaders boldly asked whether there was a roadmap for the future of this sector in the state, and whether the industry had ever coalesced around an agenda by which to compare initiatives and investments dedicated to supporting its growth. Surprisingly, while known for its strong leadership at the elected, higher education, finance, and commodity association levels, there was no single flagpole around which all these individuals and organizations consistently met to rally.

Golden LEAF built consensus around the idea of addressing that void. In short order, the agriculture community itself leaned into the importance of establishing a focused set of cross-industry priorities to clarify the most critical areas for collective action.

The release of this report represents the culmination of thousands of hours of research, hundreds of intentional, structured conversations, scores of meetings and presentations, and broad and repeated outreach to the most critical component of North Carolina's agri-food value chain: our farmers.

What makes this project unique is not its identification of the pinch points to industry growth and resiliency, as many of the struggles facing our farmers and agribusiness owners are already well known. What is different here is the way NC Ag Leads collected consensus around which of those pinch points should be prioritized and the disciplined focus on crowdsourcing and pressure testing the solutions to those challenges.

Those responsible for leading this project have made every effort to broadly solicit input in a collaborative way, recognizing that on any given day the concerns across the industry can vary considerably, and further recognizing that there are no one-size-fits all solutions to those barriers and risks. Outlined here are the strategic priorities that emerged as the most essential areas for coordinated effort across the industry.

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**“** Golden LEAF is proud to have invested in the shared vision that NC Ag Leads represents. This initiative captures the voices, experiences, and priorities of North Carolina's agricultural community and charts a bold vision for the future. NC Ag Leads establishes a clear and actionable roadmap to guide North Carolina's continued leadership in agriculture for generations to come.”

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— **Scott T. Hamilton**

President & CEO, Golden LEAF Foundation

**FOCUS AREAS****NEXT STEPS**

**Harmonize land and resource use in a growing state.**

Conduct further data analysis on farmland loss and develop consensus on how to prioritize value and articulate the long-term risk of that loss. Capitalize on and sharpen state policy around existing state programs and policies that enhance and protect farmland and increase flood resiliency.

**Align technology with the farmer.**

Pursue existing funding resources to support the notion of a Farmer Engaged Accelerator, or utilize the services of Ag Launch or a similar provider. Securing these funds and kickstarting this process will help capitalize on innovative agricultural technologies and promote collaboration between startups and established farmers to drive growth in the sector, connecting the farmer to the technology.

**Reinforce farmer support systems.**

Continue to engage ag leadership at NC State University and NC A&T University to discuss recommendations and develop a pathway forward for a new extension staffing and funding model. This includes a strategy to engage local and state stakeholders in the advocacy process and ensure transparency in the legislative review for extension services.

**Value a business mindset across the industry, particularly on the farm.**

Create a platform that pulls together the myriad of organizations and entities that offer farmer-centric farm business management education, with the goal of developing engaging content that combines financial education with engaging delivery. Key to this effort will be leveraging existing leadership programs within farmer organizations, trade groups, and NC State College of Agriculture and Life Sciences, addressing potential bureaucratic ownership concerns, and seeking funding support for meaningful programming.

**Empower and equip the agriculture workforce.**

Launch a statewide Talent Pipeline Management (TPM) strategy to align student-centered career pathways and educational outputs with critical off-farm employer talent needs. Further convening of ag commodity groups to create a centralized advocacy body to unify agricultural interests in the on-farm labor space is needed for defining goals for the industry.

**Streamline market access efforts.**

Prioritize existing programs that reduce costs at the farm level, open more efficient pathways to domestic and international markets, and fully capitalize on existing state value-added programs. This can only be realized if the NCDA&CS marketing program makes these efforts a clear priority, aligning its focus with industry-wide goals to expand market access and strengthen farm profitability.

**Teamwork**

Aggregate and convene key thought leaders and decision-makers from both within and outside of agriculture to turn these next steps into action, creating the cross-sector collaboration needed to move NC Ag Leads' vision forward.

Those who have participated in the development of this work understand that there are no easy answers to the challenges facing North Carolina's agricultural sector, and that there are no one-size-fits all solutions. There are, however, broadly recognized risks that repeatedly surfaced throughout the

phases of the project, along with a recognition that the status quo is insufficient to fully mitigate them. Those risks will need to be addressed for this sector to thrive.





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**“** *I never cease to be amazed by the state’s agriculture and agribusiness industry and its collective contributions to the state and the world. I believe it has an even brighter future ahead as we work together to increase production to meet the global demand for food. NC Ag Leads is about coming together, discussing and establishing priorities, identifying things we can control, and building on our deep agricultural foundation to move the industry forward.”*

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**— Steve Troxler**  
*N.C. Agriculture Commissioner*

A close-up photograph of a person's hands writing on a clipboard. The person is wearing a blue and white plaid shirt. The background is blurred, showing another person in a plaid shirt. The text is overlaid on the bottom left of the image.

**LEVEL SET:  
THE 2025  
AGRICULTURAL  
LANDSCAPE**

This document is not designed to capture and address all the complexities of the agricultural landscape in 2025 and beyond. That said, every strategic plan should include some recognition of the operating environment industry players are encountering. For agriculture, there is no denying that this operating environment has grown in its complexity, and that farmers' ability to navigate it is increasingly challenging. It is irresponsible to make statewide recommendations without acknowledging the greater context into which they fit, understanding that such context shapes farmers' capacity to manage resources, assess options, and plan for evolving conditions.

Admittedly, there is also disagreement regarding the source and extent of these increasing challenges. Some farmers boldly assert that the obstacles ahead are more of the same they have navigated for generations, or that most of them are merely cyclical in nature. Others posit that there are emerging threats and friction points that will drastically and permanently change the structure of the industry, and that without careful assessment and strategic planning, North Carolina's farmers will not control their own destiny in the face of compounding obstacles to profitability.

The NC Ag Leads recommendations do not depend on adopting either of those views wholeheartedly. Whether North Carolina agriculture can forge ahead without significant recalibration, or wholesale structural

realignment is afoot, the task is to identify weak links and address them with a consensus approach. Doing so requires an understanding of the current playing field.

The NC Ag Leads initiative has always centered around listening. While broadly drafted agricultural industry risk assessments seem to pop up every day, the list provided in this report is unique in that it was generated almost exclusively from conversations with North Carolina farmers and industry leaders. Some of the threats referenced also exist in other states, or even across the entire agricultural landscape. Others, however, are unique to North Carolina and the structure and nature of the industry here.

Finally, it must be acknowledged that different subsectors of the agriculture and agribusiness family sense different degrees of simultaneous pressure and opportunity. Observations on the agricultural landscape and its impact on the likelihood of long-term financial success are often linked to differing attitudes toward risk and innovation, different assessments of the public policy atmosphere, diverse views regarding the obligations of institutions and associations to address farmers' needs (including very generally the role of government), and, of course, the strength of farmers' balance sheets, which in some instances may reflect more about the generation that preceded them than it does about their own stewardship.

**“** *The leadership and engagement by influential North Carolina leaders in the NC Ag Leads initiative will result in long-term economic and community prosperity for future generations of North Carolinians. The NC Ag Leads initiative is a great step forward for agriculture, but more importantly, it is a giant leap forward for the state of North Carolina. The success of this effort rests on the courage and vision of influential leaders and stakeholders in the state. Now is the time for North Carolina agriculture to lead — the future begins now!*”

**— Dr. Marshall Stewart**

*Vice President for External Engagement and Chief of Staff,  
Kansas State University*

## Profitability

In agriculture the focus is often on quantity of production, using terms like bushels per acre or number (more commonly, “head”) of livestock produced. Economists warn, however, that one of the strongest measures of financial performance is often simple profitability, the difference in the value of

farm goods produced and the cost of the resources used in their production. A more comprehensive measure of North Carolina farmers’ profitability would account not just for input expenses like energy, fuel, fertilizer, and equipment, but also for assets used, and include a measure of the return on equity within the operation.

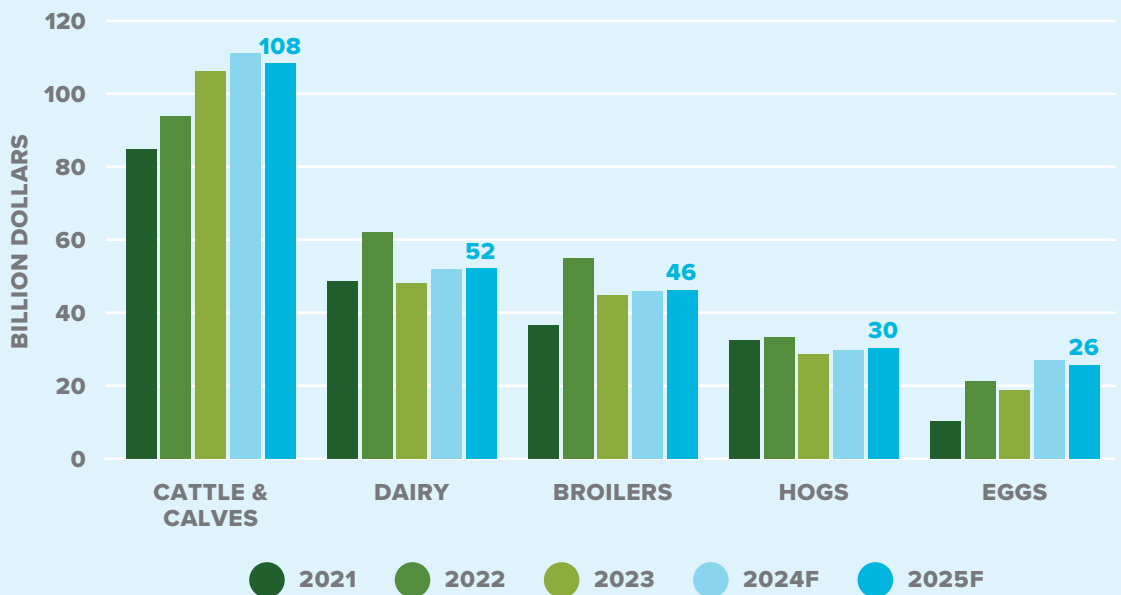
FIGURE 1.

### U.S. OUTLOOK FOR ANIMAL/ANIMAL & PRODUCTS CASH RECEIPTS MIXED IN 2025

RECEIPTS FOR **CATTLE/CALVES** AND **EGGS** FORECAST TO DECLINE.

**PERCENT CHANGE FROM 2024F:**

Cattle/Calves	-2.6%
Dairy	+0.3%
Broilers	+0.6%
Hogs	+2.8%
Eggs	-4.5%



F= forecast. Values are adjusted for inflation using the U.S. Bureau of Economic Analysis Gross Domestic Product Price Index (BEA API series code: A191RG) rebased to 2025 by USDA, Economic Research Service.

**Source**

USDA “2025 USDA Outlook Forum Chief Economist Outlook” February 28, 2025 <https://agmanager.info/grain-marketing/grain-market-outlook-newsletter/2025-usda-outlook-forum-chief-economist-outlook>

Finding such figures for all of North Carolina agriculture is next to impossible. Indeed, it is quite possible (and concerning) that only a minority of individual farmers track their profitability with such attention. There are, however, strong signals that the current environment is more challenging than usual. In comparing the value of certain commodities produced in North Carolina in 2024 as compared to 2023, USDA's NASS data reveals the following:

- **2023** - Soybeans, production measured in dollars: **\$792,099,000**
- **2024** – Soybeans, production measured in dollars: **\$634,179,000**
- **2023** – Corn, production measured in dollars: **\$738,234,000**
- **2024** – Corn, production measured in dollars: **\$350,980,000**
- **2022** – Vegetable totals, production measured in dollars: **\$378,740,000**
- **2024** – Vegetable totals, production measured in dollars: **\$372,111,000**

Current outlooks for gross receipts in the animal agriculture space continue to look promising, as evidenced in USDA projections (Figure 1).

North Carolina's diversity of crops grown and farm size also contribute to the complexity of capturing a comprehensive picture of farm profitability. USDA statistics paint what appears to be a picture of two worlds; a numerical majority of farms that produce annual gross sales less than \$10,000, while approximately one-fifth of North Carolina farms produce

annual gross sales greater than \$100,000 annually. More specifically, of North Carolina's 42,500 farms, only 8,000 of them produce annual gross sales that exceed \$100,000 annually.<sup>1</sup> The overwhelming majority of them, some 23,400, gross less than \$10,000 in sales, with only around 40% of the farms in the state having a positive net income in 2022.

To investigate these numbers further, of North Carolina's 42,500 farms, approximately 1,500 of them have farm sales of more than \$1,000,000. Another 2,000 farms have sales of between \$500,000 and \$999,999.<sup>2 3</sup> **Collectively, these 3,500 farms represent about 9.5% of all farms in the state and contribute approximately 75.5% of North Carolina's total agricultural production value.** And yet, the majority of North Carolina's farms, large or small, are family-owned.

At the risk of being redundant, this data reveals that just 9.5% of North Carolina's farmers contribute \$14.12 billion of the state's \$18.7 billion total gross farm income.

As discussed later in this report, the current trade situation makes predictions around animal protein markets somewhat unreliable, but softening feed costs could raise profitability in this sector. In February, USDA forecasted that cash receipts for animal operations would largely rise in 2025, but that was prior to the release of the reciprocal tariff announcements on April 2, 2025.

1 "2024 North Carolina Agricultural Statistics" USDA NASS & NCDA&CS [https://www.nass.usda.gov/Statistics\\_by\\_State/North\\_Carolina/Publications/Annual\\_Statistical\\_Bulletin/AgStat/NCaStatBook.pdf](https://www.nass.usda.gov/Statistics_by_State/North_Carolina/Publications/Annual_Statistical_Bulletin/AgStat/NCaStatBook.pdf)

2 "Farm Facts" USDA NASS [https://www.nass.usda.gov/Statistics\\_by\\_State/Regional\\_Office/Eastern\\_Mountain/includes/Publications/Farm-Facts/2023/EMRFF0223.pdf?utm\\_source=chatgpt.com](https://www.nass.usda.gov/Statistics_by_State/Regional_Office/Eastern_Mountain/includes/Publications/Farm-Facts/2023/EMRFF0223.pdf?utm_source=chatgpt.com)

3 "2022 Agricultural Census Data: North Carolina" USDA NASS [https://www.nass.usda.gov/Publications/AgCensus/2022/Full\\_Report/Volume\\_1%2C\\_Chapter\\_1\\_State\\_Level/North\\_Carolina/](https://www.nass.usda.gov/Publications/AgCensus/2022/Full_Report/Volume_1%2C_Chapter_1_State_Level/North_Carolina/)



Also relevant to profitability, the current interest rate environment is challenging for many of North Carolina’s leveraged farmers and agribusiness owners. As the following chart demonstrates, many producers had the opportunity to benefit from low borrowing costs for most of the previous two decades, but those lower interest rates seem unlikely to return in the short term.

In sum, there is general consensus that a focus on farm profitability should be the foundation of NC Ag Leads, and that the current environment presents significant headwinds to that effort.

PERIOD	FED POLICY	TYPICAL RATE RANGE	ENVIRONMENT
2001–2008	Loosening	6.5% → 0%	Response to recession and crisis
2009–2015	Ultra-loose	0 to 0.25%	Recovery, stimulus
2016–2019	Gradual tightening	Up to 2.5%	Stronger economy
2020–2021	Emergency easing	0 to 0.25%	COVID shock
2022–2023	Rapid tightening	Up to 5.5%	Inflation response
2024–2025	Holding high rates	5.25 to 5.50%	Disinflation, slower growth

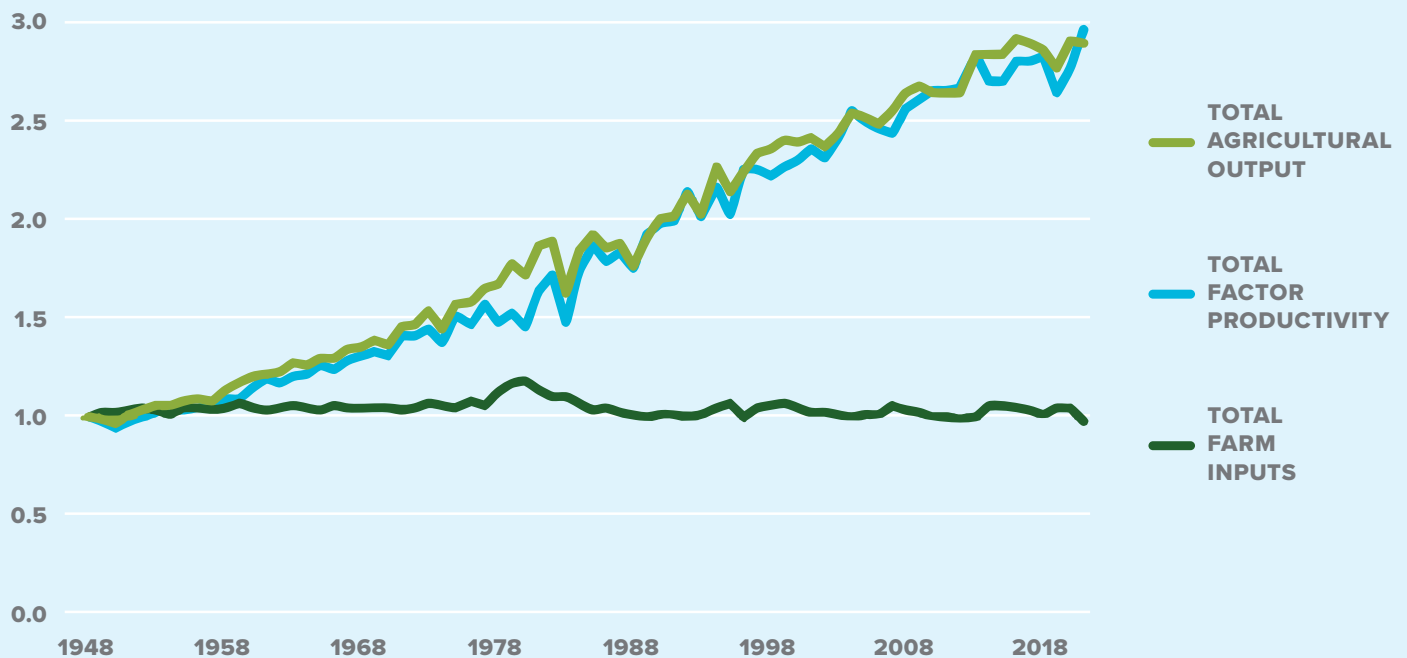
## Agricultural Productivity Gains

American agriculture has produced astonishingly steady gains in productivity since World War II. USDA’s Economic Research Service has noted that “the level of U.S. farm output in 2021 was 190 percent more than in 1948, growing at an average annual rate of 1.46 percent.”<sup>4</sup> Perhaps even more impressive is the fact that aggregate input use in agriculture has decreased by 2 percent overall during that same time period.

These trends are impressive, but they also mean that the United States produces far more agricultural commodities than it can consume in the domestic market, and that commodity prices are vulnerable to global events and trade shocks beyond each individual farmers’ control.

<sup>4</sup> *Agricultural Productivity in the United States - Summary of Recent Findings* USDA ERS <https://www.ers.usda.gov/data-products/agricultural-productivity-in-the-united-states/summary-of-recent-findings>

**FIGURE 2.**  
**U.S. AGRICULTURAL OUTPUT, INPUTS, AND TOTAL FACTOR PRODUCTIVITY, 1948–2021**



**Source**  
USDA ERS “Agricultural Productivity in the United States - Summary of Recent Findings” <https://www.ers.usda.gov/data-products/agricultural-productivity-in-the-united-states/summary-of-recent-findings>

## Farmland Pressure

North Carolina's population has boomed in recent years. In 2010, North Carolina's population was pegged at 9,575,000 people. Just fifteen years later, the United States Census Bureau sets that population number at 11,046,000, noting a consistent predicted growth trajectory for the coming decades. While ranked ninth in U.S. population today, North Carolina will climb to the seventh most populous state by 2030.

This growth presents quite a conundrum for agriculture, as it requires a balance between the growing demands of urbanization and the preservation of the state's farming heritage and number one economic driver. Land competition has increased, with urban sprawl pushing in to what have traditionally been considered key agricultural regions of the state.

According to a CNBC report, North Carolina is one of America's top states for business. This is largely due to critical tax reform and other business friendly legislation passed by the NC General Assembly to protect and promote job growth. American Farmland Trust ranks North

Carolina second in the nation for farmland loss (projected to lose 1.2 million acres of farmland by 2040).

Land prices reflect this increased competition. While data that is both timely and reliable is difficult to obtain, USDA's 2022 land values summary report captured a 9.6% increase in cropland values compared to just one year earlier. Pastureland values also grew rapidly, up 7.2% over the same period.

## Hurricane Helene

Hurricane Helene caused widespread devastation in North Carolina, resulting in total fiscal damages of approximately \$60 billion. At least \$4.9 billion of that total relates to the state's agriculture losses. Crop losses alone are estimated at \$908 million in direct damages and \$782 million in indirect damages.<sup>5</sup> Specialty crops are the focal point of Western North Carolina, and only 5-10% of crop losses of that nature are protected by insurance. Just the nursery business alone had 80% loss and will take 8 years to reestablish.<sup>6</sup>

<sup>5</sup> "Hurricane Helene Recovery" <https://www.osbm.nc.gov/hurricane-helene-recovery-federal-request-feb-2025/open>

<sup>6</sup> *Id.*



Governor Josh Stein, through his Hurricane Relief Federal Funding Request, requested as of February 20, 2025, \$1.87 billion through the United States Department of Agriculture.<sup>7</sup>

According to the North Carolina Department of Agriculture and Consumer Services, on March 19, 2025, through The Disaster Recovery Act of 2025 – Part I (S.L. 2025-2), the NC General Assembly established the Agricultural Disaster Crop Loss Program, a one-time assistance program for agricultural producers who suffered verifiable losses from any declared agricultural disaster in 2024. This includes Hurricane Helene, drought, Tropical Storm Debby, and Potential Cyclone 8. The General Assembly appropriated nearly \$311 million for the program, which will be administered by the NCDA&CS, with \$200 million for verifiable losses from Hurricane Helene in the affected area and about \$111 million for verifiable losses from all other agricultural disasters in 2024.

Notwithstanding the federal and state support, farmers and agribusiness owners in Western North Carolina will long suffer the consequences of Hurricane Helene. Entire land masses and river and stream routes have been displaced or are altogether gone.

The area's bustling local food economy was rocked by the loss of tourism. The redevelopment of critical infrastructure will take years, and Helene unmasked systematic challenges with utility services across the area of impact.

Hurricane Helene was not the only significant natural disaster to impact North Carolina in 2024. Carolina Beach and surrounding inland areas received historic rainfall from an unnamed system in less than two weeks before Hurricane Helene hit. And remnants of Hurricane Debby, better known for its destruction in Florida, spawned ten tornadoes in North Carolina earlier in the season. Another round of drought and scorching heat devastated much of the state's row crop production in the summer of 2024. Asheville, Raleigh, and Wilmington experienced hottest recorded temperatures on record.

In sum, the full benefit of NC Ag Leads is unlikely to be extended into Hurricane Helene impacted areas of the state any time soon, as the individuals in those areas are focused first on their own safety, reconstruction, and an attempted return to normalcy.

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<sup>7</sup> *Id.*





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**“** Ultimately, the competitive advantages the U.S. has historically had are flattening. While all agricultural sectors are impacted, the grains and oilseeds sector has, and will continue to, see significant changes in the near term. The share of global corn and soybean exports from the U.S. has been on the decline for several years. Demand from China has shifted to Brazil, where production margins are more profitable and relationships more favorable, making the U.S. a residual supplier. In addition, the U.S. is becoming the holder of global carryout.”<sup>8</sup>

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<sup>8</sup> 2025 Annual Agri-Food Intelligence Assessment, Strategic Outlook 2025, p. 7, The Directions Group. Copy on file with NC Ag Leads Report authors.

## Rising Global Competition

In late 2024, The Directions Group released its annual agri-food intelligence assessment, which highlighted structural changes in global ag trade. Those structural changes include stronger production out of South America, and steady, but unfortunately no significant gains in U.S. exports to any specific region of the world. In fact, USDA has stated that U.S. agricultural exports trailed U.S. agricultural imports in 2022, 2023, and 2024.<sup>9</sup>

For North Carolina, the unfortunate impact of less global demand for U.S. grain from our row crop farmers may generally be seen as a net positive for the state's robust animal agriculture industry, which consumes more than 300 million bushels of feed grains each year. The obvious point is that North Carolina's sizeable poultry and pork sectors would benefit from lower local grain prices generated by less demand for U.S. grain in the global market.

## The Federal Public Policy Environment

Predicting the next steps of the federal government is always treacherous, but doing so seems even more risky than in recent decades. The following issues add to the complexity of surveying the agricultural landscape in 2025.

- A **fiscal and budget policy** agenda that leaves questions regarding disbursement of USDA dollars devoted to "climate smart" agriculture initiatives, biofuels policy, and USDA-managed initiatives up in the air. The consensus seems to be that fewer incentives will be provided to the farming community during the current administration.

- A **deregulatory climate** that seems to be focused mostly on energy production and which may or may not include adjustments to the innovation pipeline for agriculture.
- A **regulatory climate** that so far reflects an interest in policing food processing more closely, as well as welcoming approaches that allow the government to dictate what food may be purchased for federal food aid programs and what may not.
- A **tax environment** that is uncertain, particularly considering the expiration of many provisions in the 2017 Tax Cuts and Jobs Act. Administration officials, including the President, have also spoken broadly of additional tax cuts that could be financed with tariff income.
- Speaking of **tariffs and trade**, the administration appears to be forging ahead with plans to impose reciprocal tariffs across the board, but also with interest in addressing long-term non-tariff barriers that could result in increased demand for U.S. products abroad. Many economists also contend that the administration's trade agenda could harm the U.S. role in the global marketplace, at least in the short term. USDA has already announced that it is considering using the Commodity Credit Corporation's funding mechanism to support farmers for shocks in the market.
- The fate of the agriculture community's quinquennial signature legislation, the **Farm Bill** remains widely unknown. What is painfully obvious is that the entire agricultural community's pressure and interest in this comprehensive legislative effort has still not been enough to convince Congress to adopt a new farm bill on a predictive schedule. Perhaps no other observation more adroitly summarizes the difficulties the agriculture community can anticipate in interacting with a closely divided Congress in the years to come.

<sup>9</sup> U.S. agricultural import values outpaced export values again in 2024 <https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/agricultural-trade>

- No list of federal policy implications for agriculture would be complete without reference to the increasingly challenging **agricultural labor environment**. The Trump Administration has so far avoided outright hostility toward the federal H-2A temporary guestworker program but also appears reluctant to improve the burdensome regulatory and administrative requirements of using the program, much less the one-way ratcheting of the program's hourly wage floor.
- While not an official government department, the Administration's **DOGE efforts** could create meaningful impacts within the agriculture community. While the plans and direction of DOGE at USDA are largely opaque, farm programs have so far not become a main focus for reform or elimination.

## State Public Policy

North Carolina's agricultural industry continues to thrive, thanks in large part to the steadfast leadership of individuals in the General Assembly and Department of Agriculture and Consumer Services. Through sound fiscal policies, strategic investments, and a deep understanding of the industry's needs, state lawmakers have ensured that agriculture remains a cornerstone of North Carolina's economy. Their commitment to responsible governance has not only provided stability but has also allowed for growth and innovation within the sector.

A prime example of this leadership is the establishment of the state's Rainy Day Fund, a direct result of tax reform and fiscal responsibility. By maintaining a strong reserve, North Carolina has been able to respond swiftly to agricultural disasters, providing critical crop loss aid in the wake of hurricanes and storms such as Florence, Tropical Storm Fred, and most recently, Hurricane Helene.



This financial safety net has given farmers the confidence and support needed to weather unpredictable challenges while continuing to feed the nation.

Beyond immediate relief efforts, the General Assembly has demonstrated a long-term commitment to preserving farmland through the Present Use Value tax program. By maintaining the integrity of this initiative, lawmakers have ensured that North Carolina's rich agricultural lands remain protected for future generations. Additionally, funding for key agricultural initiatives—such as the Ag Manufacturing Value-Added Initiative, farmland preservation easements, and expanded meat processing capacity—reflects a forward-thinking approach that strengthens the entire agricultural supply chain.

To be clear, state legislative leaders' commitment to agriculture goes far beyond appropriations and preservation of the deferred property tax program. Over the last ten years, policymakers have also enacted significant reforms that strengthened the liability environment for farmers, and more support in this area will most certainly be needed.

All this success is no coincidence. The trust established between the agricultural community and legislative leadership, combined with the deep agricultural experience of key policymakers, has ensured that farming remains a top priority on the state's agenda. However, while these efforts have been impactful, they have often been implemented piece by piece. **Moving forward, the recommendations of NC Ag Leads can serve as a roadmap to harmonize these efforts, allowing policymakers to take a more unified and strategic approach.**

To make the most of these opportunities, it is also critical that agricultural industry leaders think big picture when engaging with legislators. Rather than seeking short-term fixes or isolated requests, industry advocates should focus on comprehensive policies that enhance the long-term profitability and resilience of farming in North Carolina.

By aligning legislative asks with initiatives that grow the bottom line for farmers—such as infrastructure investments, market expansion, and workforce development—ag leaders can help ensure that agriculture continues to be a driving force in the state's economy. Thoughtful, strategic engagement with policymakers will not only strengthen individual farms but also elevate North Carolina's agricultural industry as a whole.

## Lawsuits in the Landscape

North Carolina is no stranger to legal attacks on the agriculture sector. In the last decade, a series of nuisance actions filed against the state's largest pork integrator garnered national attention, multiple antitrust attacks have been pursued against pivotal protein sector players, and widely used crop protection tools have become the subject of daytime television ads beckoning ill patients to contact one of many national hotlines.

Animal rights and environmental activists have long been a notable voice of opposition to agriculture in the court system, but more recently the threats have come from strategic litigation that targets the agriculture sector with a theory first approach: "let's develop a claim to lodge against the agriculture industry and we will look for aggrieved plaintiffs later."

The widely dispersed agriculture industry has been slow to develop industry-wide messaging and tactics, much less dedicated legal resources, to counter these litigation trends. Notwithstanding North Carolina's front row seat to the devastation that can be wrought by well-financed trial lawyers, the industry remains unprepared to fight the next attack.

“With its \$110 billion annual contribution to our state’s economy, agribusiness and agriculture drive a major share of North Carolina’s economic success and status as a top state to do business. NC Ag Leads will ensure that North Carolina’s number one industry is positioned for continued competitiveness.”

— Gary J. Salamido  
President & CEO, NC Chamber

## The Food-is-Health Movement

Food has recently taken center stage in the strengthening resolve to face the high costs of health care and the growing incidence of chronic disease in the United States. Multiple consultancies and educational institutions emphasize the role that our diets play in overall wellness, not to mention the advice dispensed by health care providers themselves.

Consumers are more aware of the health profile of the foods they consume, and it appears that America’s obsession with snacking on sugary and salty food is transitioning into a dedication to consuming higher amounts of protein. Glucagon-like peptide-1 drugs (GLP-1) are impacting a growing segment of the population and overall have led patients prescribed such drugs to more carefully monitor the health benefits of the food they do consume, even if they are consuming it in smaller quantities.

As referenced in the federal policy environment section, some of the preferences shared by this movement’s actors may become engrained into federal public policy.

## Input Uncertainty

Most input cost estimates closely examine the trends for seed, fertilizer, chemicals, fuel or energy, and labor. USDA tracks cost and return estimates across the United States and in major production regions for corn, soybeans, wheat, cotton, grain sorghum, rice, peanuts, oats, barley, milk, hogs, and cow-calf production. USDA also makes cost and return data available for organic corn, milk, wheat, and soybean production.<sup>10</sup> Many of these updates will publish again on May 1, 2025, meaning they were not available in time to incorporate into this report.

Many farmers interviewed during the NC Ag Leads process noted the significant increases in their operating costs. Recall that the strategic planning outreach spanned two years in which inflationary increases across the economy were, when compared to recent history, relatively robust. The average seed cost per acre across the United States for soybeans provides an illustrative example of the headwinds farmers face. In 2017, farmers spent about \$58 per acre for soy seeds and by 2023, that number had risen to almost \$75 per acre.<sup>11</sup>

<sup>10</sup> Commodity Costs and Returns, USDA ERS <https://www.ers.usda.gov/data-products/commodity-costs-and-returns>

<sup>11</sup> Commodity Costs and Returns, USDA ERS <https://www.ers.usda.gov/data-products/commodity-costs-and-returns>

### Average Soybeans Seed Cost

YEAR	DOLLARS PER ACRE
2017	\$58.07
2018	\$62.39
2019	\$60.93
2020	\$60.99
2021	\$63.21
2022	\$71.09
2023	\$74.81

That same data paints a more volatile picture for seed costs for corn, but the overall trendline is similar. In 2017, the average costs per acre for seed corn was around \$97, and by 2023 it has risen to almost \$116.

### Average Corn Seed Cost

YEAR	DOLLARS PER ACRE
2017	\$58.07
2018	\$62.39
2019	\$60.93
2020	\$60.99
2021	\$63.21
2022	\$71.09
2023	\$74.81

If historical, United States-wide trendlines (across all seeds, not just corn and soybeans) hold for 2025, farmers can expect that their seed costs will continue to rise approximately 5-7% in 2025. Softening demand may impact this trendline, but it is unlikely to completely reverse it.

For fertilizer, our friends at Texas A&M summed it up succinctly while capturing the uncertainties that shape these costs:

***After reaching record-high prices in 2022, fertilizer prices fell throughout 2023 and 2024. Whether this trend continues depends on three things. First, the balance of global supply and demand. For now, these forces appear to be in balance; there is neither an indication of major shortages nor surpluses of fertilizer. However, Russia, China, and the Middle East are all major producers of fertilizer. An escalation of the Russia-Ukraine war, the Israel-Iran conflict, or the China-Taiwan conflict would likely push prices up. A second related factor to watch is the state of trade relationships between the United States and its global suppliers, including Russia and China. Should the United States increase its trade restrictions (tariffs and sanctions) on these nations, fertilizer prices in the U.S. will likely face upward pressure. Finally, we must keep the local supply and demand situation in mind. Labor disputes and shortages in the transportation sector of the U.S. economy increase the cost of moving fertilizer from ports to local suppliers and put upward pressure on local prices. Then, these suppliers may over- or understock their fertilizer supplies based on what they expect local demand to be. A local shortage situation would put upward pressure on prices, while a local surplus would have the opposite effect.<sup>12</sup>***

Economists predict that chemical inputs will, absent shocks to the system that upset supply chains and production costs, behave similar to fertilizer.

<sup>12</sup> Texas A&M AgriLife Extension, *Ag Economics on the Plains* <https://agriflife.org/agecon/input-costs-in-2025/#:~:text=On%2Dfarm%20energy%20expenditures%20come,in%202025%20compared%20to%20204>

The United States Energy Information Association has projected that energy costs in 2025 will track similar to 2024, except in the area of natural gas, which could be higher.<sup>13</sup> More recent estimates suggest fuel costs may actually fall in 2025, given that global crude oil inventories are set to increase.

Regarding labor, farmers who rely on H-2A labor in North Carolina continue to feel the one-way ratchet of the ever-increasing Adverse Effect Wage Rate, and it is unclear that the new administration will make addressing this throttle on profitability any less oppressive. Some commentators project that 2025 labor costs will remain relatively unchanged,<sup>14 15</sup> but while many North Carolina farmers compete locally for production and sales, many are competing against farmers in parts of the world where labor is both plentiful and cheap. Thus the popular refrain that we pay for agricultural labor per hour what other countries pay daily is not only catchy, it is painfully true.

Beyond traditional inputs, the cost of farm equipment has also risen significantly, adding to the financial pressures faced by producers. Rising raw material costs, labor shortages, and growing demand for more technologically advanced machinery have all contributed to the steady increase in equipment prices. For example, the average price of a 200-horsepower tractor has increased 287% and the price of a new 300-horsepower

tractor, 275%, which is double the rate of inflation from 1990-2024.<sup>16</sup> This rise in capital costs has made it more challenging for farmers to replace or upgrade essential machinery, further tightening margins in an already constrained environment.

By almost any account, forecasting input costs in 2025 (and putting them in a report for all to see) is a risky, no-win proposition. Any such forecast is almost guaranteed to be wrong, particularly in a year in which so many elements of the federal policy atmosphere have the potential to create ripple effects. Tariffs, tax policy, labor policy, and the continuation (or not) of the Farm Bill all have the potential to make outlook calculations obsolete shortly after they are made. The irony should not be lost on anyone reading this report. This is precisely the challenge facing our farmers at the moment, and it is precisely why this strategic plan has to be attentive to the environment in which it is being published.

<sup>13</sup> U.S. Energy Information Administration, *Short-Term Energy Outlook* <https://www.eia.gov/outlooks/steo/>

<sup>14</sup> AgDirect, *2025 Farm Equipment Decisions* <https://www.agdirect.com/resources/learning-center/farm-equipment-purchase-decisions>

<sup>15</sup> Farmers National Company, *2025 Crop Input Outlook: Anticipating Slight Reductions Amidst Stability* <https://www.farmersnational.com/news/real-estate/2025-crop-input-outlook-anticipating-slight-reductions-amidst-stability>

<sup>16</sup> AgDirect, *2025 Farm Equipment Decisions* <https://www.agdirect.com/resources/learning-center/farm-equipment-purchase-decisions>



# METHODOLOGY



## Process

### SURVEYING THE LANDSCAPE: DISCOVERING A VOID

In 2023, members of the Golden LEAF Foundation Board turned to the Foundation's staff and asked whether there was a strategic plan for North Carolina's agriculture industry. After diligent research, those charged with investigating this question concluded that the answer was complicated. While many individual leaders and organizations provide incredible guidance and support for the state's number one industry, there was no comprehensive strategic plan that served as a roadmap for how to develop and promote the growth of agriculture and agribusiness in the state.

### PLANTING A SEED: ASSESSING THE CONCEPT

Determined to change that, the Golden LEAF Board directed the staff to develop a time-limited project that would be farmer-centric, yet comprehensive across the agri-food value chain, and would empower the North Carolina agricultural community to identify and capitalize on its greatest strengths, while spotting and mitigating its most pressing risks.

Perhaps most critically, the project was to be designed in such a way that it would produce a plan to inform the prioritization and deployment of public policy directives to further develop the industry, and public and private investment that could do the same.

### ESTABLISHING ROOTS: PARTNERING WITH LEAD ORGANIZATIONS

By late 2023, Golden LEAF approved a phased plan to partner with the NC Chamber Foundation and North Carolina Farm Bureau to assess the current state of the agriculture industry in North Carolina. The project, dubbed NC Ag Leads, would be overseen by a Steering Committee consisting primarily of Golden LEAF Board members, but with shared leadership with the North Carolina Department of Agriculture and Consumer Services, North Carolina Farm Bureau, and the NC Chamber.

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**“**North Carolina Farm Bureau's mission aligns perfectly with the goals of NC Ag Leads, and I have every confidence this initiative will deliver tools and strategies necessary to strengthen and support North Carolina agriculture, agribusiness and rural communities for the years ahead. We are proud to be part of this team.”

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— Shawn Harding  
President, NC Farm Bureau

## CULTIVATING SOLUTIONS: A TWO-PHASED APPROACH

Phase 1, documented more thoroughly below, came to be known as the “discernment phase,” during which hundreds of North Carolina agricultural sector players were asked for their views on what could be done to alleviate their most pressing challenges. The voice of the farmer was both critical and central to this process, as was the practice of consistently revisiting the data collected throughout.

**At the conclusion of this project, the North Carolina agriculture community will have agreed to a set of priorities that are both aspirational and attainable, and which, if given effect, would significantly strengthen the productivity, economic vitality, and community spirit of our sector.**

In mid-2024, Phase 1 began to wind down, and the executive leadership of NC Ag Leads was tasked with summarizing the most critical learnings from their outreach. The Steering Committee was briefed on the common themes and key data, summarized neatly in the acrostic HARVEST:

- H** → Harmonize Land & Resource Use
- A** → Align the Technology Supply & Demand
- R** → Reinforce Farmer Support Systems
- V** → Value a Business Mindset
- E** → Empower & Equip the Ag Workforce
- S** → Streamline Market Access
- T** → Teamwork & Leadership

Given the clarity around the challenges that surfaced in Phase 1, the Steering Committee unanimously endorsed moving into Phase 2 of the project. Phase 2 would be designed to elicit the best and most viable plans and proposals for dealing with each of the HARVEST challenges.

The NC Ag Leads team established six different working groups to explore solutions to each challenge and secured the services of an impressive array of agricultural thought leaders (Working Group Leaders) to facilitate additional fact finding and to develop recommendations for addressing each of the underlying concerns.

These working groups leaned on the input and guidance of an advisory council, populated with a wide range of individuals who had background and interest in the working group topic, and who graciously provided their time and energy to the discussion.

By late 2024, the working groups began to hone in on specific recommendations that could be acted upon. They repeatedly shared these recommendations encouraging feedback and criticism effectively pressure testing the long-term viability of the recommendations.

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**“***The strength of NC Ag Leads lies in its ability to connect with industry professionals, education institutions, and farmers all at the same time, with the same mission. From our vantage point at the University of Mount Olive, we’ve seen how this effort brings together institutions, producers, and communities in a shared commitment to the future of agriculture in North Carolina. It’s been inspiring to contribute to a plan that honors tradition while embracing innovation – and ensures that the farmer’s voice remain at the heart of North Carolina’s agricultural future.”*

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**— John Matthis**

*Dean, University of Mount Olive School of  
Agriculture and Biological Sciences*





# TIMELINE OF EVENTS

**OCTOBER 2023**  
Kick-Off Luncheon

**FALL 2023 – SPRING 2024**  
Stakeholder Briefings

**FALL 2023 – SPRING 2024**  
Individual Interviews

Before formally launching the project, NC Ag Leads convened agricultural leaders across the state to better understand key perspectives, identify emerging issues, and gauge interest in a strategic plan for the industry. These initial contacts continued to be engaged as the project progressed and additional voices were added to deepen understanding and gather valuable data to inform findings.

**FALL 2023 – SPRING 2024**  
Focus Groups

The NC Ag Leads team traveled the state to facilitate focus groups designed to gather qualitative data from representatives across the ag industry. Facilitators gained insight into threats to the success of the ag industry and opportunities for improvement and growth. Findings shaped the initiatives NC Ag Leads proposed to address in Phase 2 of the project.

NC Ag Leads started by engaging farmers of all profiles and sizes across the state, followed by protein companies, farm service advisors, processors, salesmen, crop consultants, farm equipment companies, as well as representatives from the state’s research institutions, including Extension and the research and development community. The team also met with the ag conservation and ag tech communities, community colleges, and other higher education institutions.

**350+**

MEMBERS OF NORTH CAROLINA’S AGRICULTURE INDUSTRY PARTICIPATED

**23**

FOCUS GROUPS HOSTED

**68**

COUNTIES REPRESENTED



## MARCH 2024

### Imagine Ag Day

Imagine Ag Day brought together agriculture leaders from across the state to hear from national thought leaders within the agriculture industry who provided perspective outside the core of our industry. The day was designed to push people to think bigger about agriculture in North Carolina.

**156**  
ATTENDEES

**97%**  
ATTENDEE  
SATISFACTION  
RATE

## NOVEMBER 2024

### Shark Tank Day

The goal for Shark Tank Day was to hear the latest and best ideas emerging from the NC Ag Leads working groups and to analyze them for viability and potential. The judge panel consisted of an agricultural subject matter expert, a business professional with an economic/budget/political focus, and the Sunbelt Farmer of the Year. A professional facilitator directed the flow of interactions between the judge panel and the working group leaders. A studio audience was also invited to observe and provide feedback to the NC Ag Leads leadership team.

## MAY 2024

### NC Ag Leads Wargame

A team of national experts facilitated an industry-wide “Agricultural Wargame” designed to further explore the challenges discovered during Phase 1 of the project. During the two-day event, industry leaders worked through real-world scenarios, engaged in lively discussions, and collaborated on innovative solutions.

**54**  
ATTENDEES



## FEBRUARY 2025

### Imagine Ag Day, 2.0

Imagine Ag Day, 2.0 was in nature very similar to Imagine Ag Day. Attendees heard from several national ag leaders and heard policy and economic updates. NC Ag Leads working group leaders presented the recommendations that their working groups had developed over the course of Phase 2. The NC Ag Leads team gathered feedback from the event, as well as gathered feedback from the audience. The working group leaders were encouraged to present the recommendations thoroughly, but to also spend just as much time gathering feedback.

**195**  
ATTENDEES

# PHASE ONE: THE DISCERNMENT PHASE



## Defining the Areas of Focus: HARVEST

Phase 1 of NC Ag Leads was a crucial step in the process of understanding the challenges and opportunities facing North Carolina's agricultural industry. It served as a foundation for aligning stakeholders, identifying key risks, and uncovering strategic opportunities that would shape the future of agriculture in the state. The various engagements, interviews, and events sought to answer the critical question: "How can we improve North Carolina agriculture?" There was also a focus on understanding where the industry currently stands, where it wants to go, and the potential roadblocks or opportunities that could define its trajectory.

## Key Activities in Phase One

The activities in Phase 1 were designed to provide comprehensive insights into the current state of North Carolina agriculture and foster collaboration among industry leaders.

The following major initiatives took place during this phase.

### QUIET PHASE INTERVIEWS:

Before formally launching the initiative, the NC Ag Leads team conducted one-on-one interviews with agricultural leaders across the state. These quiet, behind-the-scenes conversations allowed for candid feedback and helped identify early trends, concerns, and priorities, as well as key champions for the work that would follow.

### KICK-OFF LUNCHEON:

A kick-off luncheon, attended by 57 key industry leaders, marked the formal launch of the NC Ag Leads project and set the tone for Phase 1. The NC Ag Leads team shared the vision for the initiative and encouraged participants to think critically about how they could contribute to the process.

### INDIVIDUAL INTERVIEWS:

To ensure broad representation, individuals who were unable to attend larger gatherings were engaged 1:1. These in-depth discussions uncovered vital themes, including challenges in market access, the availability of a skilled workforce, and the need for better communication with consumers, industry peers, and lawmakers.

### VARIOUS BRIEFINGS:

A series of briefings were held to further engage different sectors of the agricultural community. These included the University of Mount Olive Agribusiness program leadership, NC Commodity Conference, NC Soybean Producers Association Board, NC Seedsmen Association, NC Chamber Foundation and NC Chamber Boards, NC Association of Community College Presidents, NC Ag Development Forum, NC Agromedicine Institute, NCSU Ag Communications Program, NC Ag Tech Advisory Council, and Farm Credit leadership. These events garnered diverse perspectives and feedback from subject matter experts, and fostered collaboration across different sectors of the agricultural industry.

“Today reinforced my belief that one solution is not the answer.”

— Imagine Ag Day Attendee

### FOCUS GROUPS:

Over the course of Phase 1, the NC Ag Leads team traveled across North Carolina to host **23 focus groups**, engaging more than **350 participants** from **68 counties**. These sessions were designed to gather input from a diverse group of individuals representing **29 different professions** within the agriculture sector. The focus groups were instrumental in ensuring that no voice went unheard, and that the data collected reflected the full spectrum of experiences and insights from across the state.

### IMAGINE AG DAY:

NC Ag Leads hosted Imagine Ag Day, bringing together 156 industry thought leaders to hear from national experts on various topics that resonated during Phase 1. The event was designed to challenge attendees to think on a larger scale about the role of agriculture in North Carolina’s future. It served as a catalyst for inspiring change and fostering a sense of urgency around the issues facing the industry.

### NC AG LEADS WARGAME:

In collaboration with Aimpoint Research, NC Ag Leads facilitated a Wargame with 54 industry leaders to stress-test some of the key ideas and solutions gathered during Phase 1. The Wargame helped identify areas where existing solutions might need further refinement or where new challenges might emerge.

## Key Findings: Risks & Strategic Opportunities

Through the activities and engagements of Phase 1, six prominent risks and opportunities for North Carolina’s agriculture community emerged. These were discussed extensively with industry leaders and formed the basis for the strategic focus of Phase 2. The following six key themes are now captured under the banner of **HARVEST 2030**.

### *Harmonize land and resource use in a growing state.*

Focus on addressing land and resource use pressure within the state of North Carolina. Farmland competition and water storage and diversion fit here, along with a coordinated and renewed discussion regarding continued strategic management of our animal agriculture footprint.

### *Align technology supply and demand.*

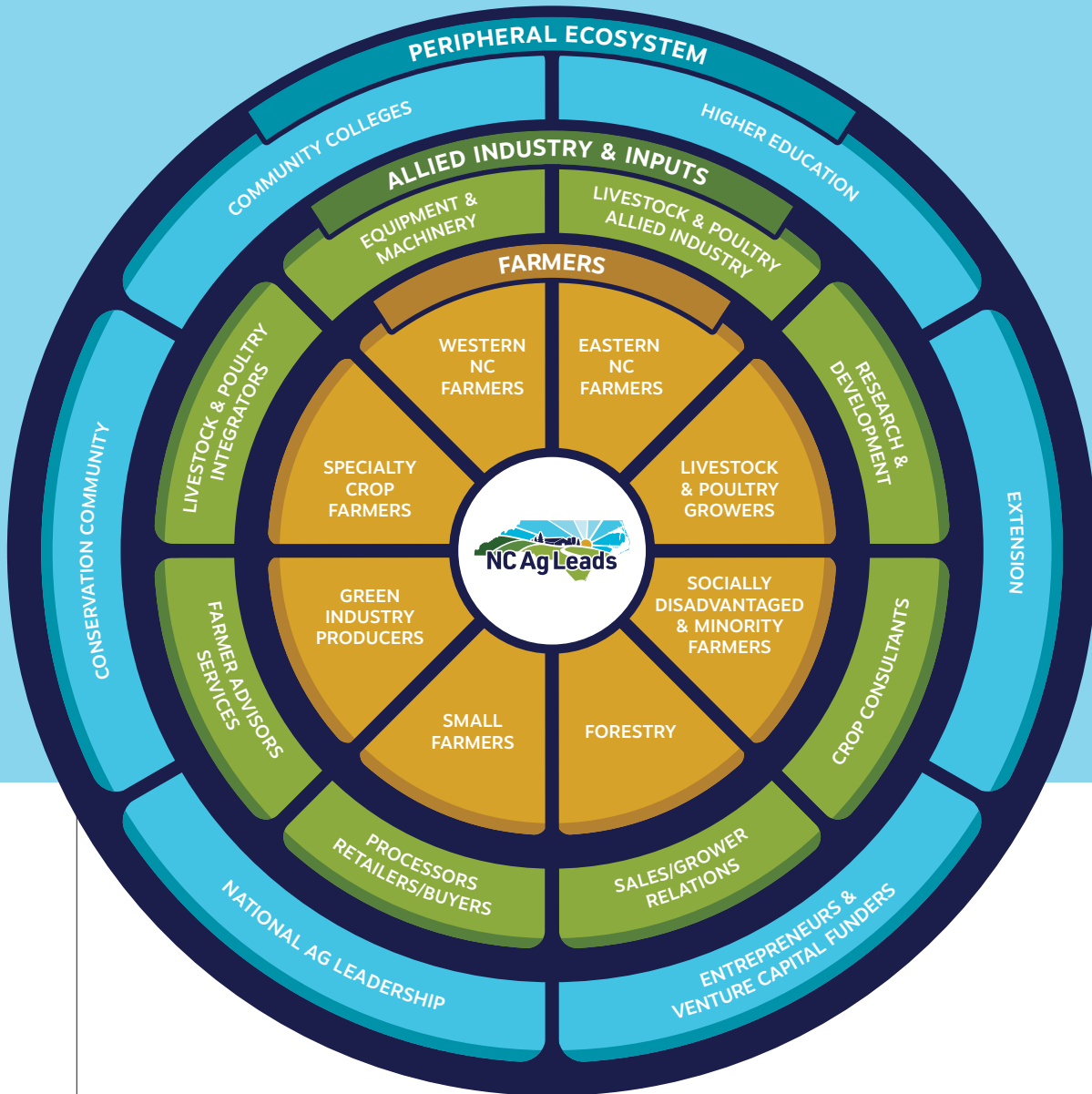
Focus on achieving alignment between the burgeoning agri- and animal-tech industries within North Carolina and the state’s diverse and adaptive farming community.

### *Reinforce farmer support systems.*

Focus on equipping farmers and agribusinesses with tools sufficient to guard against disruption, inclusive of shocks and challenges that may arise on legal and policy fronts.

### *Value a business mindset across the industry, particularly on the farm.*

Focus on ensuring the entire sector embraces an “ag as a business” mindset that enhances growers’ business planning, transition planning, and credit management expertise.



“The wargame was a unique and eye-opening experience for the agriculture field. It pushed us out of our day-to-day silos and forced us to think strategically – not just about our businesses, but about the future of the entire system. NC Ag Leads created a space where farmers, distributors, retailers, and institutions could challenge each other, collaborate, and work towards real opportunities. It was bold, and showed just how serious we are about building a resilient, connected food future in North Carolina.”

— Sandi Kronik  
CEO, Happy Dirt

### ***Empower and equip the agriculture workforce.***

Focus on pursuing alignment among agricultural education efforts so that North Carolina has the best trained and most plentiful labor supply possible. Pursue a Talent Pipeline Management® strategy that results in aligning talent demand with supply.

### ***Streamline market access efforts.***

Focus on removing barriers to key markets, increasing market access (in some instances, establishing greater aggregation), capturing as much of the food dollar as possible on the farm (value-added efforts), and exploring vulnerabilities that could cause mass economic casualties if disruption were to happen quickly (e.g., addressing one buyer issues and vertical ag dependence).

### ***Teamwork and leadership.***

As is mentioned elsewhere in this report, the agriculture industry in the state is diverse and widely dispersed. In fact, during the NC Ag Leads discernment process, many farmers lamented the fact that they are price “takers” and have little capability to engage in price discovery with their customers. For North Carolina’s agriculture community to be the best that it can be, teamwork and leadership are critical to moving from key issues to key outcomes.

These priorities, as outlined in the HARVEST 2030 framework, served as the basis for Phase 2 and the working groups dedicated to developing concrete solutions to these risks and opportunities.



# HARVEST 2030

## Working Groups

H



### Harmonize Land & Resource Use in a Growing State

Focus on addressing land and resource use pressure within the state of North Carolina. Farmland competition and water storage and diversion fit here, along with a coordinated and renewed discussion regarding continued strategic management of our animal agriculture footprint.

A



### Align the Technology Supply & Demand

Focus on achieving alignment between the burgeoning agri- and animal-tech industries within North Carolina and the state's diverse and adaptive farming community.

R



### Reinforce Farmer Support Systems

Focus on equipping farmers and agribusinesses with tools sufficient to guard against disruption, inclusive of shocks and challenges that may arise on legal and policy fronts.

V



### Value a Business Mindset Across the Industry

Focus on ensuring the entire sector embraces an "ag as a business" mindset that enhances our growers' business planning, transition planning, and credit management expertise.

E



### Empower & Equip the Ag Workforce

Focus on pursuing alignment among agricultural education efforts so that we have the best trained and most plentiful labor supply our system can produce. Pursue a Talent Pipeline Management<sup>®</sup> strategy that results in aligning talent demand with supply.

S



### Streamline Market Access

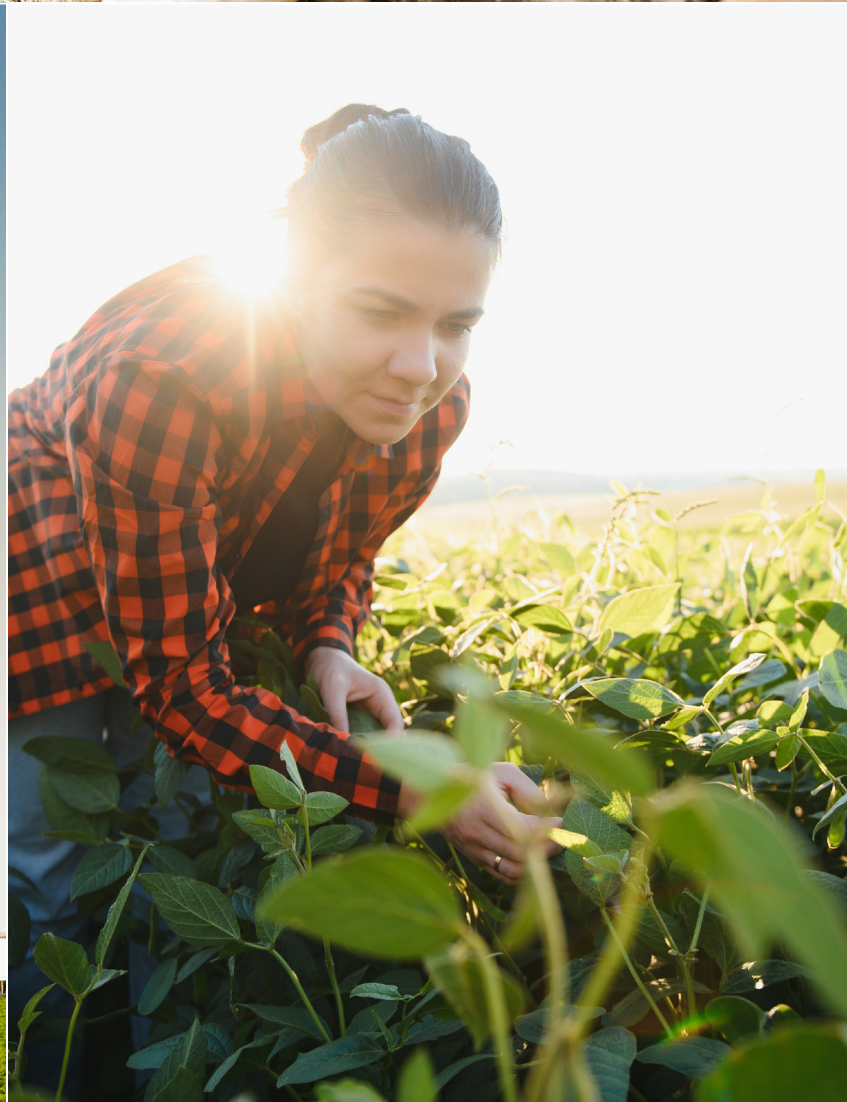
Focus on removing barriers to key markets, increasing market access (in some instances, establishing greater aggregation), capturing as much of the food dollar as possible on the farm (value-added efforts), and exploring vulnerabilities that could cause mass economic casualties if disruption were to happen quickly (e.g., addressing one buyer issues and vertical ag dependence).

T



### Teamwork & Leadership

Teamwork and leadership are the key to moving from key issues to key outcomes.



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“Out here in the mountains, we’ve always believed in working together and looking out for one another – and that’s exactly what NC Ag Leads has done. This process brought folks from every corner of the state to the table, and made sure even small, rural farms had a say. It’s not just a plan on paper – it’s a reflection of who we are and where we’re headed, together.”

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— **Kyle Mayberry**  
Director of Agriculture,  
The Biltmore Company

## Additional Insights and Analysis

While the primary goal of Phase 1 was to identify risks and opportunities, several additional insights and themes emerged throughout the process:

### DATA-DRIVEN NEEDS:

There was a clear call for more robust data collection and analysis to guide future decision-making in agriculture. Stakeholders noted that the absence of up-to-date and accurate data often hampers effective policymaking and industry planning.

### SUSTAINABILITY FOCUS:

A recurring theme in interviews and focus groups was the need to address sustainability – and in this case, not solely in environmental terms but in terms of economic viability and long-term resilience for farming operations.

### PUBLIC PERCEPTION AND ADVOCACY:

There was a significant concern around improving public perception of agriculture, with many stakeholders advocating for a stronger voice in public policy and media.

### COLLABORATION ACROSS SECTORS:

Many stakeholders emphasized the need for deeper collaboration across agriculture, technology, policy, education, and other sectors to address the complex challenges facing the industry.

A person wearing a light blue and white plaid shirt is shown from the chest down, holding a large green leaf in their right hand. They are standing in a field of similar green plants. In the background, a house with a brown roof and some trees are visible, but they are out of focus. The lighting is warm, suggesting late afternoon or early morning. The text "PHASE TWO: CHARTING A COURSE" is overlaid in white, bold, sans-serif font on the left side of the image.

**PHASE TWO:  
CHARTING A COURSE**

## Shifting from Problems to Solutions and Defining Recommendations

Phase 2 of NC Ag Leads focused on solutions. Working groups were formed to analyze the six primary priorities identified in HARVEST 2030, explore actionable and attainable solutions, and pave the way for action-oriented strategies that would drive the future of North Carolina's agricultural community and economic vitality.

## Working Group Structure and Operations

Working Group Leaders, or subject matter experts, were hired to guide the research, analysis, and brainstorming of viable solutions to address key issues in each area.

The Council, a group of 8-15 individuals per working group, acted as advisors to the leaders. These council members represented a broad spectrum of stakeholders within the agricultural community, including farmers, industry leaders, technology providers, and policy experts. Their diverse insights helped to ground solutions in practical, real-world applications.

The Advisory Group, which was much larger, served as an open forum for feedback. With no set membership limit, this group represented the wider agricultural community and contributed perspectives on the solutions being developed. Feedback from the Advisory Group was vital in refining the recommendations and ensuring broad support across stakeholders.

## Working Group Process

Each working group was tasked with conducting a thorough analysis of its priority area, identifying existing challenges and opportunities, reviewing relevant data, and engaging with stakeholders through surveys, interviews, and consultations.

That analysis was then used to develop a list of potential solutions, prioritized based on feasibility, impact, and alignment with the project's overarching vision. After careful consideration and feedback, one to three actionable recommendations were selected to move forward.

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**“***I've spent my entire life in North Carolina agriculture, and I can tell you – we've never had a process quite like this. The NC Ag Leads team didn't just ask for input, they truly listened. It brought people together from every walk of ag life, and made us feel seen, heard, and valued. Being part of this effort reminded me why I fell in love with this work in the first place – it's about people, purpose, and planting the seeds for a stronger tomorrow.”*

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**— Deborah Johnson**  
Communications Director, Prestage Farms

## WORKING GROUP TEAMS

<b>HARMONIZE</b> LAND & RESOURCE USE IN A GROWING STATE	<b>WORKING GROUP LEADERS</b>	John Burt and Daniel Hedgecock
	<b>COUNCIL MEMBERS</b>	Vickie Adamson, Barbara Bleweis, Evan Davis, Teresa Furr, Kendall Paramore, Vicky Porter, Tommy Porter, Reid Smith
	<b>ADVISORY GROUP</b>	Group of 20-25 subject matter experts who provided feedback on ideas generated during the council sessions. This group served as an avenue to continue to get industry feedback.
<b>ALIGN</b> TECHNOLOGY SUPPLY & DEMAND	<b>WORKING GROUP LEADERS</b>	Katherine Drake Stowe & Paul Ulanich
	<b>COUNCIL MEMBERS</b>	Mark Blevins, Debbie Hamrick, Margaret Oldham, Reggie Strickland, Rachel Vann
	<b>ADVISORY GROUP</b>	Group of 20-25 subject matter experts who provided feedback on ideas generated during the council sessions. This group served as an avenue to continue to get industry feedback.
<b>REINFORCE</b> FARMER SUPPORT SYSTEMS	<b>WORKING GROUP LEADERS</b>	Angie Maier & Milo Lewis
	<b>COUNCIL MEMBERS</b>	Rich Bonanno, Ashley Collins, Andy Curliss, Alex Serneo, Bryant Spivey
	<b>ADVISORY GROUP</b>	Group of 20-25 subject matter experts who provided feedback on ideas generated during the council sessions. This group served as an avenue to continue to get industry feedback.
<b>VALUE A</b> BUSINESS MINDSET ACROSS THE INDUSTRY	<b>WORKING GROUP LEADER</b>	Nelson Powell
	<b>COUNCIL MEMBERS</b>	Michael Best, Ethan Lineberger, Sarah Rachels, Reid Smith, Buck Spruill, Neil Westerbeek, Brian Wood
	<b>ADVISORY GROUP</b>	Group of 20-25 subject matter experts who provided feedback on ideas generated during the council sessions. This group served as an avenue to continue to get industry feedback.
<b>EMPOWER &amp; EQUIP THE</b> AGRICULTURE WORKFORCE	<b>WORKING GROUP LEADERS</b>	Vincent Ginski & Edward Olive
	<b>COUNCIL MEMBERS</b>	Antione Alston, Maggie Barefoot, Jason Chester, Alyssa Degreenia, Vernon Felts, Lee Ivy, Kristy Sauls, Stacy Sereno, Maggie Sexton, Catherine Watts, Kevin Wooten
	<b>ADVISORY GROUP</b>	Group of 20-25 subject matter experts who provided feedback on ideas generated during the council sessions. This group served as an avenue to continue to get industry feedback.
<b>STREAMLINE</b> MARKET ACCESS EFFORTS	<b>WORKING GROUP LEADERS</b>	Bryan Blinson & Adam Helms
	<b>COUNCIL MEMBERS</b>	Jamie Ager, Billy Augustine, Brandon Batten, Jose Calderon, Chris Conser Tim Ivey, Tori Rumenik
	<b>ADVISORY GROUP</b>	Group of 20-25 subject matter experts who provided feedback on ideas generated during the council sessions. This group served as an avenue to continue to get industry feedback.

## Key Achievements of Phase Two

### CROSS-SECTOR COLLABORATION:

One of the most significant outcomes of Phase 2 was the level of collaboration achieved across different sectors of the agricultural industry. Folks with different expertise and experience were able to come together to tackle one of the six complex challenges that require actionable solutions.

### DATA-DRIVEN RECOMMENDATIONS:

Through comprehensive research, data analysis, and stakeholder consultations, the working groups produced recommendations that are grounded in both evidence and practical experience.

### INCLUSIVE DIALOGUE:

The process actively included diverse voices from across North Carolina's agricultural community, ensuring that the recommendations reflect the needs and priorities of all those involved. There was also a forum to receive feedback from the industry at the conclusion of Phase 2, which allowed the NC Ag Leads team to further refine the solutions presented by the Working Group Leaders.

## Challenges & Learnings of Phase Two

While Phase 2 was largely successful, it was not without its challenges.

### BALANCING DIVERSE INTERESTS:

Given the varied perspectives and interests of the stakeholders involved, aligning priorities and building consensus around the recommendations was often challenging.

### RESOURCE LIMITATION:

The working groups had to operate within a set time constraint, which sometimes limited the scope of research or the depth of certain solutions.

### COMMUNICATION BARRIERS:

Ensuring clear and consistent communication among the different groups, especially between the Working Group Leaders and their Council and Advisory Group, was crucial in avoiding misunderstandings and keeping everyone aligned.

Despite these challenges, the project team adapted and adjusted its approach to ensure progress continued toward achieving Phase 2's goals.

## Key Findings: Recommendations

The following actionable and attainable solutions are outlined by working group as defined by HARVEST 2030 and each of these priorities focuses on ensuring that North Carolina's agriculture sector, specifically farmers, thrives in an economical and resourceful way, continues to be productive, and is prepared for future consumer demands.

### HARMONIZE LAND & RESOURCE USE

#### *Enhance Streamflow Rehabilitation Assistance Program (StRAP)*

Expand StRAP to cover more areas and provide additional technical support to farmers to improve water quality management. Next steps include working with state legislators to secure multi-year funding, increasing staffing and resources within the NC Division of Soil and Water Conservation, and launching a public awareness campaign to engage local governments.

#### *Pilot EVAD Evolution*

Strengthen Voluntary Ag Districts to make them more adaptive to local growth patterns and provide farmers with clearer protections against encroaching development. Direct payments would be provided to landowners who enroll in the conservation agreement program for farmland preservation.

Key actions include amending legislation to allow local ordinances for direct payments to landowners, recurring funding for the program, and collaboration with local governments to launch the program.

### ALIGN TECHNOLOGY SUPPLY & DEMAND

#### *Create Specialized AgTech Extension Agents*

Establish regional Extension agents dedicated to innovation and ag tech. Right now, frequent turnover among agents necessitates ongoing education, and the current system lacks efficiency as not all agents need expertise in every technology area. Farmers are left without consistent, specialized guidance on new ag-tech solutions.

Leverage a Regional Agent Model to hire 3-5 specialized AgTech Extension Agents who serve as North Carolina's primary experts on agricultural technology. These agents will

- provide farmers with clear, practical guidance on adopting innovative solutions,
- stay connected to the NC agriculture and ag-tech ecosystems to identify emerging challenges and solutions, and
- serve as liaisons between farmers, research institutions, and the broader ag-tech community to ensure consistent dissemination of relevant knowledge.

It is recommended that one of these agents be focused on food-animal innovation.

### Launch a Farmer-Engaged Accelerator

Currently, many ag-tech innovations engage farmers too late in the development process, resulting in impractical solutions that fail to address real farmer needs. Even companies that actively seek farmer feedback often limit engagement to paid contract research trials, which fail to foster authentic collaboration. This disconnect leads to misaligned solutions, slower development cycles, and limited adoption of meaningful innovations. Establishing a farmer-engaged innovation accelerator program that connects farmers with startups early in the process can overcome these barriers.

Through a successful Farmer Engaged Accelerator model,

- farmers identify challenges and vet potential start-up participants,
- startups receive funding, mentorships, and connections to investors,
- startups access a network of partner farms that provide real-world testing environments, and
- farmers receive reimbursement for trial participation and equity stakes to incentivize meaningful input.

### Position Research Stations as Hubs for AgTech Innovation

North Carolina boasts a valuable network of 18 research stations across the state. However, these resources are primarily utilized for academic programs, offering limited pathways for industry access. While some collaborations exist between academia and industry, the expertise at NC State University and NC A&T State University cannot fully meet the diverse needs of companies. Unlocking the potential of these research stations by making them accessible for industry-led research, validation, and product demonstrations would yield significant benefits.

The research stations would provide ag-tech innovators access to agricultural test beds across North Carolina by reducing barriers to using these research stations and farms for research, validation, and demonstration projects, promoting other public/private agricultural operations to expand opportunities for innovators, and develop a streamlined contract framework to facilitate industry engagement.

“What impressed me most about NC Ag Leads was the depth of research behind every decision. This wasn’t a top-down plan – it was built from the ground up, with insights gathered from farmers, entrepreneurs, educators, and families across the state. As someone passionate about using food to solve big problems, I appreciated how the process didn’t just analyze data – it told the stories of real North Carolinians shaping the future of agriculture. That’s what makes this plan so powerful – it feels like us.”

— Will Kornegay  
CEO, Ripe Revival

### *Host a Farmer-First Hackathon*

North Carolina farmers often find themselves disconnected from the state's ag-tech innovation ecosystem, while ag-tech innovators remain unaware of the critical, real-world challenges farmers face. This disconnect hampers the creation of impactful, farmer-focused solutions.

Hosting an innovation challenge that unites farmers, entrepreneurs, and other stakeholders to collaboratively address problems unique to North Carolina could effectively bridge this gap, as farmers and commodity groups present critical problems to a multidisciplinary audience of academics, entrepreneurs, and industry scientists/engineers.

Participants will collaborate intensively over one to two days to brainstorm and prototype potential solutions. Solutions are then presented back to the farmers/commodity groups, with awards for the most promising concepts. Problem selection is guided by organizations willing to fund the awards, aligning with their priorities.

### **REINFORCE FARMER SUPPORT SYSTEMS**

#### *Revise the County Extension Staffing Model*

Aligning the county staffing model and agent placement metrics with current production practices, industry needs, and agricultural diversification is necessary to reflect the evolving needs of all types of agricultural operators.

A proposed model has already been developed by a group of current and former Extension staff, agents, and county directors. This proposed model is the result of hours of thoughtful engagement with successful agents in counties where extension is prioritized by local leaders and is reflective of how much staff time is generally allocated to serving those needs.

The proposed model will need to be reviewed and refined by additional stakeholders and a strong coalition of support will be needed. The new model will require implementation by NC Cooperative Extension Service at NC State and could need additional funding by the General Assembly.





### ***Conduct a Periodic Statutory Review of NC Cooperative Extension***

A regular review of the NC Cooperative Extension that is aligned with the state budget cycle and the publication of new census data will ensure that programming, staffing, and funding can meet the evolving agricultural needs.

Language for the statutory review must link the review process to the release of new census data to ensure the staffing model and resource allocation align with current farming conditions. The review process should align with the state budget cycle to ensure that if additional resources are needed they can be requested in a timely manner.

Engage all stakeholders in the review process, including farmers, agents, and county directors, to gather comprehensive feedback for a complete review. Review the staffing model, agent placement, and program alignment to ensure that the needs of the agriculture community are being met. Conduct a market compensation study to determine salary thresholds that align with industry standards, ensuring Extension can attract and retain skilled staff.

### ***Elevate CALS & NC A&T CAES Deans to Vice Chancellor Positions***

The leadership of NC State's College of Agriculture and Life Sciences and the NC Agricultural and Technical State University's College of Agricultural and Environmental Sciences should be elevated to vice chancellor positions within their respective universities. This would provide these colleges with greater authority, visibility, and influence at the university administration level, helping to underscore the importance of agriculture within the broader institutional framework.

Such a move would align North Carolina with other leading land-grant universities, such as Texas A&M, Missouri, and Oklahoma State, which have placed their agricultural college deans in vice chancellor roles. This change would facilitate stronger institutional support for agricultural research, education, and outreach, while also ensuring that the interests of agriculture are better represented in university governance and external collaborations.



## **VALUE A BUSINESS MINDSET**

### ***Launch Digital Platform: NC Farm Talk***

A digital platform with a collection of ag knowledge-based educational videos and/or podcasts that are focused on farm financial lessons, ag lending metrics, succession planning, and mental health would be a tremendous resource for farmers looking to strengthen the business side of their operation. This could also include farmer interviews discussing real North Carolina stories of failures and successes. This collaborative effort would leverage existing NC ag influencers focused on financial topics.

### ***Develop, Organize, and Maintain a Framework of Peer Groups Statewide***

NC Peer Groups, made up of farmers, agribusiness professionals, and allied industry stakeholders would increase intentional and professional networking for the purpose of education, growth, and organic relationship development in an organized format. The groups will be regionally based and the content organized around a focus on farm financial lessons, ag lending metrics, farm succession planning, mental health, failures and successes, and other relevant financial topics.

### ***Develop, Organize, and Maintain a Framework of Mentorship Pairings Statewide***

An NC Ag Mentorship for farmers, agribusiness professionals, and allied industry stakeholders would increase business acumen and implementation of core business principles, as well as improve net profitability and longevity. Connecting developing farmers with successful farmers would increase farmer success rates. The 1:1 pairings will be regionally based, and the suggested content to be discussed will be organized around a focus on farm financial lessons, ag lending metrics, farm succession planning, mental health, professional/personal failures and successes, and other relevant financial topics.

## EMPOWER & EQUIP THE AG WORKFORCE

### *Launch Talent Pipeline Management® Strategy*

Leverage the proven Talent Pipeline Management® framework to align educational outputs and programs with critical employer needs to establish student-centered career pathways. This effort will

- calibrate and right size educational programming and throughput to address agriculture employers' most critical workforce development needs,
- mitigate the chronic misalignment between employer workforce needs and educational programming, as well as
- establish persistent workforce development coordination and data infrastructures.

### *Establish a Broad-Based, Unified Coalition of Ag Labor Stakeholders*

A coalition established by industry participants will align professionals, agricultural associations, labor experts, and experienced litigators around a long-term ag labor policy agenda. This body will

- advance the unified long-term ag labor policy agenda and litigation strategy,
- act as a legal and educational resource for North Carolina ag employers,
- develop and lead litigation strategies to combat federal regulatory overreach,
- strategically challenge harmful regulations in court, and
- establish a PAC to elect and support ag-focused officials.

## STREAMLINE MARKET ACCESS

### *Align NC Ag Data*

Connect North Carolina agriculture stakeholders and value chain participants through a managed, dynamic central resource. There must be a single source of information on market access, including where to find current market access, value-add processing and supporting infrastructure (rail, roads, ports). This source should leverage North Carolina ag success stories, including the specific challenges, and the actionable steps taken to overcome them, to successfully grow a business. Together these insights can

- increase communication throughout the value chain
- enable informed future investment.

### *Revive NC Co-Op*

Many North Carolina producers do not have adequate access to value added, optimum markets. Producers should cooperate together with professional capital to invest in production-adjacent spaces (storage, processing, marketing). Identifying commodities that have the opportunity for development of a professionally managed value-added co-op in a region, then aligning incentives for growers to deliver the supply to enable the facility to operate at scale would also allow for agility to change with market demands.



# PHASE THREE: SHAPING ACTION

## Defining What is Possible and What is Needed to Execute

Phase 3 marks the pivotal transition from idea generation and evaluation to implementation. After reviewing the priorities proposed during Phase 2, the NC Ag Leads Steering Committee has identified key strategic initiatives that will be prioritized and moved forward for immediate action. These initiatives are not just theoretical concepts but actionable recommendations that will have a significant impact on the future of North Carolina's agricultural industry.

The objective of Phase 3 is to continue the development of the initiatives identified and approved by the Steering Committee, further clarify and define the initiatives and prepare them for larger implementation, and re-engage Working Group leaders, ag organizations and commodity groups, and other stakeholders to advance the initiatives approved by the Steering Committee. Phase 3 will continue until the end of August 2025, with the following key strategic priorities set for implementation.

## Key Priorities in Phase 3: A High-Level Overview

### EXTENSION REVITALIZATION

The revitalization of the NC Cooperative Extension at NC State is essential to addressing the evolving needs of North Carolina farmers. As agriculture practices and challenges change, the Extension service must adapt to remain effective and responsive to the state's diverse agricultural landscape. The following components are crucial to this revitalization.

### 1. *Revise County Extension Staffing Model*

The county Extension model, implemented in the aftermath of budget cuts from the Great Recession, no longer aligns with the current needs of North Carolina's farmers. The original staffing plan, which allocated agricultural agents based on factors such as cash receipts, the number of farmers, and population, fails to adequately address regional differences in agricultural practices and challenges.

To meet the needs of modern farming, this staffing model must be revised.

Proposed is a flexible, targeted approach that allocates resources based on more dynamic and specific agricultural needs, such as crop types, livestock needs, and technological advancements. This revision should include a comprehensive review of staffing at both the county and regional levels, ensuring that every county receives the tailored support it requires. By improving the responsiveness and adaptability of county offices, Extension can better serve farmers and promote more effective agricultural practices statewide.

## 2. Periodic Statutory Legislative Review of NC Cooperative Extension

As a state-supported entity, Cooperative Extension deserves regular and transparent legislative oversight to ensure it receives the necessary resources and support to fulfill its mission. Currently, Extension's needs are often overshadowed by competing priorities in the state budget.

To address this gap, a formal, legislatively mandated review of Extension's needs be conducted every five years. This review would involve input from the dean of the College of Agriculture and Life Sciences at NC State, the dean of the College of Agriculture and Environmental Sciences at NC A&T, along with Extension directors and representatives from county governments, to assess staffing, programming, and the financial resources necessary to meet the state's agricultural challenges. By conducting this review, North Carolina can ensure that Extension remains an integral and effective partner in the agricultural community.

## FARMER-ENGAGED ACCELERATOR

The success of agricultural innovations hinges on a strong partnership between technology developers and farmers. The current model, in which farmers are often engaged too late in the development process, leads to impractical solutions that don't address the real needs of the farming community. To overcome this, NC Ag Leads is exploring the adoption of an AgLaunch-like accelerator model that prioritizes early-stage collaboration between farmers and agtech startups.

In the Farmer-Engaged Innovation Accelerator Model:

- Farmers identify challenges and vet potential start-up participants. This ensures that start-ups are focused on solving the real issues farmers face.
- Start-ups receive funding, mentorship, and connections to investors. This helps them scale their innovations.
- Start-ups test innovations on a network of partner farms for real-world testing environments. This results in actionable feedback that can accelerate product refinement.

Farmers are compensated for their participation and incentivized with equity stakes in the start-ups with which they engage. This creates a two-way collaboration where both farmers and innovators have a stake in the success of the new solutions.

NC Ag Leads is exploring the adoption of a farmer-engaged accelerator model to meet North Carolina's agricultural needs and build a robust ecosystem of farmer-driven innovation.

## TALENT PIPELINE MANAGEMENT® STRATEGY

One of the critical challenges facing North Carolina agriculture is the alignment of workforce training programs with the actual needs of the industry. The Talent Pipeline Management® (TPM) framework, a proven model in other sectors, will be leveraged to address agriculture's workforce needs.

Implementing the TPM framework will create clear career pathways for students, aligning educational programming with employer demands.

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“ The development of this statewide agricultural strategic plan, spearheaded by NC Ag Leads, exemplifies the power of inclusive collaboration. From the outset, their process has thoughtfully engaged a diverse range of stakeholders across North Carolina—our farmers, fellow educators, industry innovators, and key policymakers. At the College of Agriculture and Life Sciences at NC State, we deeply value the opportunity to contribute through NC State Extension, our research capabilities, and our high-demand academic programs. Together, we’re helping shape a forward-thinking, future-proof vision for agriculture and life sciences across our state.”

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— **Garey Fox**

Dean, NC State University College of  
Agriculture & Life Sciences

Key elements of the TPM model include:

- Collaboration with educational institutions to right-size curricula and provide job-ready skills to future agricultural workers.
- Industry-driven data collection to identify critical gaps in the labor market and inform the development of new educational programs.
- Workforce development coordination infrastructure to continuously adjust to the evolving needs of agricultural employers.

This strategic initiative aims to close the gap between agricultural employers’ workforce needs and the output of educational institutions, ultimately ensuring a sustainable pipeline of skilled workers for North Carolina agriculture.

## THOUGHT LEADERSHIP & COLLABORATION STRUCTURE

Phase 3 will focus on establishing a long-term thought leadership and collaboration structure to sustain momentum and foster continuous engagement within the agricultural community. The establishment of an ongoing NC Ag Leads forum will:

- Provide a platform for ongoing dialogue among farmers, industry leaders, researchers, and entrepreneurs.
- Foster collaborative problem-solving to tackle emerging issues and opportunities in the sector.
- Leverage thought leadership from national experts to influence state-level agricultural practices.

This structure will ensure that NC Ag Leads continues to serve as a catalyst for positive change, helping to align stakeholders around shared priorities and actionable outcomes.

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“ NC Ag Leads has been a powerful reminder of what’s possible when everyone has a seat at the table. The process didn’t just invite participation – it encouraged real dialogue and mutual respect. For those of us in agricultural education and research, it’s been exciting to help shape a strategy that reflects the full breadth of voices driving agriculture forward in this state.”

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— **Antoine Alston**

*Associate Dean, NC A&T College of  
Agriculture & Environmental Sciences*

## **BUSINESS MINDSET DEEP DIVE**

To truly transform North Carolina agriculture, a cultural shift toward a business mindset is necessary on-farm. This mindset will emphasize strategic thinking, innovation, and financial literacy across all sectors of the agricultural community.

In Phase 3, NC Ag Leads will focus on hosting additional focus groups to bring together others in the business-mindset educational space in the state and continue to learn about the successes and failures to establish a statewide effort to increase financial literacy on-farm.

By fostering a culture that values agriculture as a dynamic and innovative business sector, NC Ag Leads aims to equip business-mindset educators with the tools necessary to thrive in an increasingly competitive market.

## **LAND & WATER**

As the need for sustainable land and water intensifies, updating data on the production agricultural land that is at risk of being lost/developed is crucial. In Phase 3, NC Ag Leads will work to update and refine the data related to land use and loss. This will help guide future policies and practices that ensure North Carolina’s agricultural sector remains resilient.

## Conclusion

Phase 3 of NC Ag Leads represents a critical step toward implementing the solutions to the priorities of HARVEST 2030. By moving forward with actionable priorities that have been identified and prioritized by the Steering Committee, NC Ag Leads is taking the next step toward transforming North Carolina agriculture into a more sustainable, innovative, and competitive sector.

The initiatives outlined in this phase will help ensure that North Carolina remains at the forefront of agricultural innovation and will support farmers in adapting to the challenges and opportunities of the 21st century.

Quite simply, Phase 3 will secure funding and begin the implementation of solutions. Key activities will include:

- Engaging policymakers and industry stakeholders to secure necessary support.
- Building partnerships with external organizations to leverage additional resources.
- Conducting pilot programs to test and refine the priority recommendations before state-scale implementation.
- Utilizing existing organizations to leverage additional resources.





# CONCLUSION

The pages that precede this conclusion represent months of careful research, meaningful dialogue, and strategic thought about the future of North Carolina agriculture. It was always more than just an effort to issue recommendations. It was about taking a hard look at where we stand—where we are strong, where we are exposed, where new possibilities are taking shape, and where real risks are gathering—and facing those realities with clear eyes and steady hands. It was a serious effort regarding serious issues.

New technologies, shifting market demands (sometimes driven by policy decisions made a long way from our farms), evolving consumer preferences, and increasingly complex regulatory frameworks have always challenged our farmers, and the recommendations we present are informed by a sober recognition of them. We believe these proposals are a solid and responsive first step to what farmers and agribusiness leaders, those on the front lines of dealing with those pressures, have told us they need.

We are also proud of the way in which this work came about. Namely, through support from Golden LEAF, which has worked to increase economic opportunity in North Carolina's rural and tobacco-dependent communities through leadership in grantmaking, collaboration, innovation, and stewardship for more than twenty-five years.

It is one thing for Golden LEAF to sponsor this work, and yet it is another thing for the leaders of that organization to roll up their sleeves and monitor the work closely, bringing an engagement and accountability framework that has added significant value to the effort. To be clear, Golden LEAF and its steering committee representatives have done both.

We began this work knowing that no plan can fully capture the depth, complexity, or volatility of the challenges farmers confront. Strategic plans are, by their nature, incomplete—and this one is no exception. It must be viewed as a

living document, a starting point for continuous work rather than a final answer. And some of the recommendations here may be surprising. Surprising because they are grand and seem too big to tackle, or surprising because they seem small, or too simple, and yet they have not yet been implemented organically. That is why this effort must be ongoing, with a firm commitment to revisit, revise, and renew our strategies as conditions evolve. A static plan cannot hit a moving target.

Finally, what gives us confidence is not the plan itself, but the people behind it. North Carolina's agriculture industry has long been distinguished by a collaborative spirit that puts the collective good ahead of individual gain. Time and again, farmers, agribusinesses, researchers, and policymakers have come together to solve problems and seize opportunities. That cooperation is not a luxury—it is a necessity. The complexity of the challenges outlined in this plan—ranging from labor shortages to infrastructure needs to emerging market competition—cannot be met by any single entity acting alone.

Above all, we must remain clear-eyed about who the real leaders in this work are: the farmers who get up every day to grow the food, fiber, and fuel we all depend on. Farmers are not only the backbone of the agriculture industry; they are the stewards of our rural communities, our natural resources, and our food security. Implementing the strategies in this plan will require maintaining a laser focus on practical solutions that support farm profitability, strengthen farm families and agribusinesses, and ensure that the next generation sees a viable and vibrant future in agriculture.

The voices of farmers have guided this work, and their well-being must be the measure of our success.



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**MAY 2025**