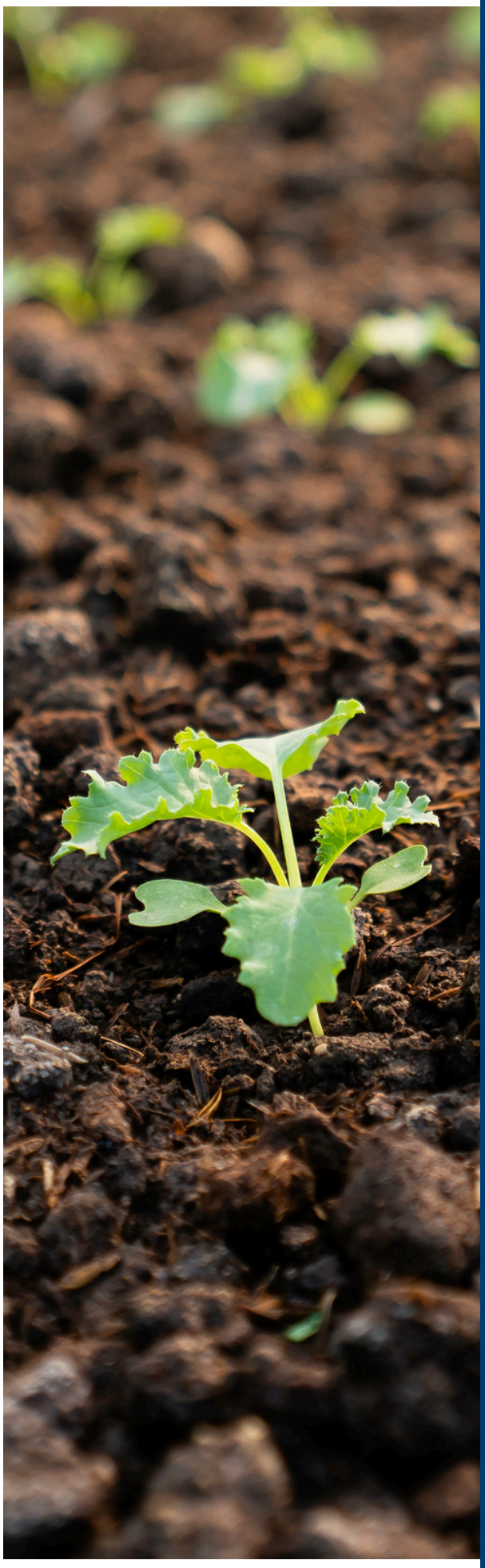


Alliance to Advance Climate-Smart Agriculture

2025 Annual Report

(540) 231-3990
allianceforcsa@vt.edu
www.allianceforcsa.org

OUR MISSION

In September 2023, Virginia Tech's College of Agriculture and Life Sciences (CALS) was awarded an $80 million grant from the United States Department of Agriculture to pilot a program that compensates producers for adopting climate-smart practices across farms of various sizes and commodities, which will increase adoption of conservation practices and increase soil carbon sequestration. Led by CALS Global at Virginia Tech, the Alliance is supported by USDA's Advancing Markets for Producers initiative with participation from more than 14 state and national partners.

Over three years, Virginia Tech will allocate over $57 million directly to producers to assist them in implementing these climate-smart agricultural practices for both crop and animal production. This grant, the largest in the university's history, establishes pilot programs in Arkansas, Minnesota, North Dakota, and Virginia, and will assess the viability of scaling the program nationwide.

Alliance to Advance Climate-Smart Agriculture

COLLEGE OF AGRICULTURE AND LIFE SCIENCES
VIRGINIA TECH

1

INCREASE AGRICULTURAL PRODUCTIVITY

Agricultural productivity plays a crucial role in achieving climate objectives and maintaining global food security; unfortunately, it is often excluded as a key consideration in conservation initiatives.

The Alliance utilizes findings from Virginia Tech's Global Agricultural Productivity Reports© to deliver recommendations on integrating productivity into conservation programs.

2

DEVELOP STRONG MARKETS

As consumer demand for sustainable food continues to rise, producers can enhance their market competitiveness by implementing conservation practices.

Through the Alliance, producers will be able to access opportunities to access new climate-smart markets, demonstrating their dedication to sustainable agriculture.

3

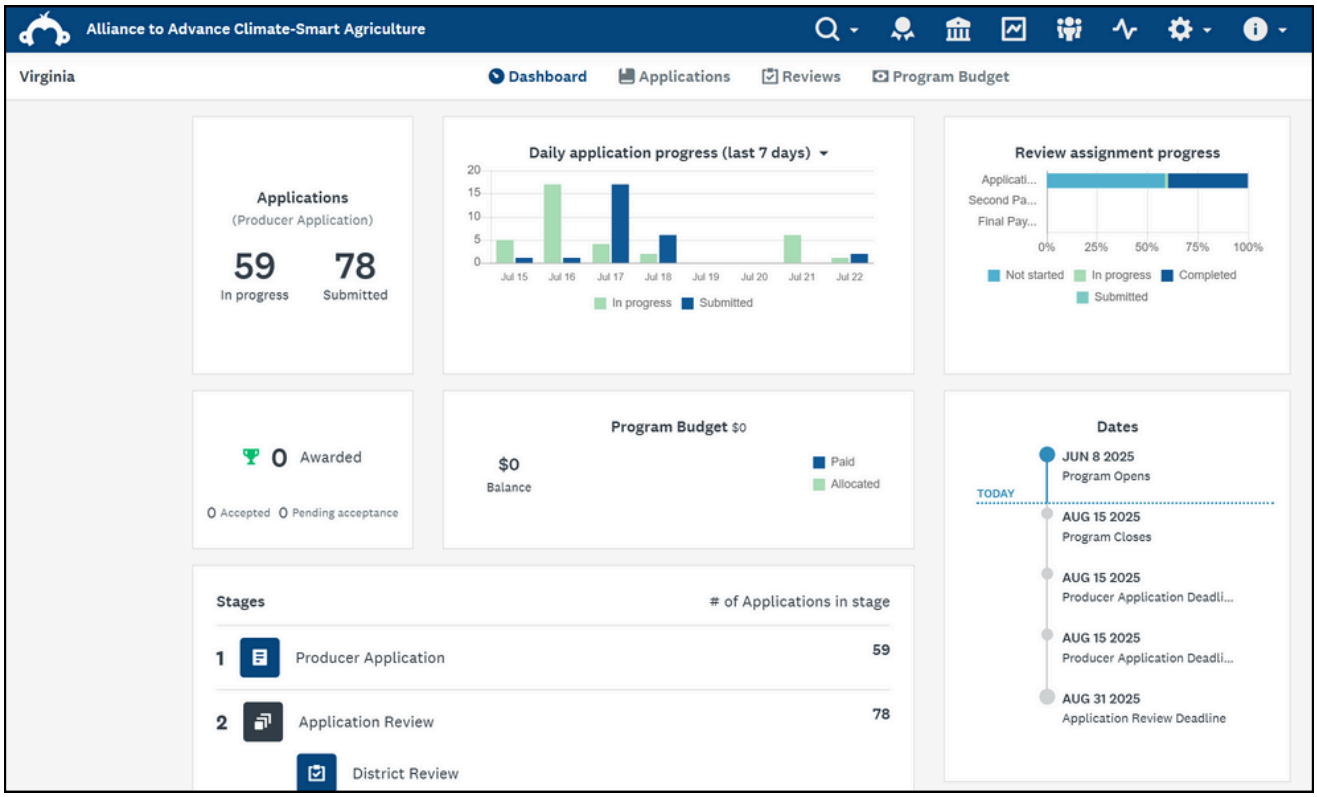
ENHANCE CLIMATE RESILIENCE

Conservation agriculture is an integrated approach that manages cropland, livestock, forests, and fisheries to address the intertwined challenges of food security and climate change. This approach aims to reduce greenhouse gas emissions and sequester carbon, providing benefits that extend beyond individual farms and ranches.

Climate-smart farming practices help farms better withstand extreme weather, allowing them to maintain consistent yields.

DASHBOARD AND DATA MANAGEMENT

In January 2024, the first applications in North Dakota and Virginia were launched using a custom dashboard on the Alliance website. After several months of technical difficulties, the Alliance entered into a contract with SurveyMonkey Apply (SMA) to develop a new dashboard and applicant tracking system to streamline the application and enrollment process for producers.



The new dashboard, hosted by SurveyMonkey Apply.

The first applications for North Dakota and Virginia will remain in the original dashboard through the end of the grant, but all applications from 2025 onwards are managed in the SMA dashboard.

The new dashboard provides a more efficient system to capture application data and additional tasks required of producers throughout their contract, including:

- automated enrollment tasks,
- streamlined review process between district partners and Virginia Tech,
- shared documentation of notes,
- effective communication to producers,
- accessible producer agreements and practice worksheets,
- centralized data reporting in one portal, and
- customized reports for required data collection.

Feedback from program participants indicates that the new dashboard provides an improved experience for both producers and district staff.

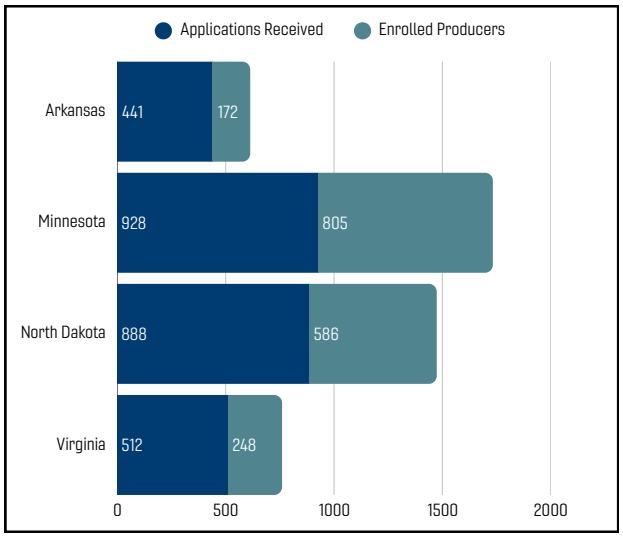
APPLICATION AND ENROLLMENT

The Alliance is commited to enrolling over 4,000 producers to receive over $57M in funding to support conservation practice implementation on over 400,000 acres or animal units in Arkansas, Minnesota, North Dakota, and Virginia. By fall of 2024, all four states had held application periods and the project was poised to enroll 1,320 producers.

In January 2025, a federal review paused funding to all grants under the USDA's Partnerships for Climate-Smart Commodities grant, and canceled the contract responsible for reviewing CPA-52 Environmental Evaluations. The impact to the Alliance's work was significant. The pause forced the delay of enrollment of producers in Arkansas, Minnesota, and North Dakota who had plans for early spring 2025 implementation and the opening of the second round of applications in Arkansas and Virginia. It also witheld pending producer payments; the inability to make timely producer payments and delayed approvals of the CPA-52 worksheet eroded trust and resulted in producers leaving the program.

Payments were delayed as the Alliance worked to develop an approved method of paying producers that satisfied both USDA and Virginia Tech accounting procedures. Instead of issuing debit cards to enrolled producers, as described in the project narrative, the Alliance opted to mail checks directly to producers.

In April 2025, the Alliance was approved to continue under the new USDA Advancing Markets for Producers (AMP) initiative. In June, all delayed producer payments were settled and pending contracts were finalized for the second cohort of applicants in North Dakota. New enrollment began in Minnesota and Virginia.



A new expectation from USDA, and feedback from partners about concerns enrolling small or beginning producers, led to a reconfiguration of the producer application to lift the restriction of (2) Farm Service Agency farm identification numbers per producer. This allows producers to enroll as many farms as they wish to reach the maximum acre/animal unit limit.

As of August 1, 2025, we have 1,811 producers under contract and more application periods underway or scheduled in Arkansas, Minnesota, and Virginia. All enrolled producers who are current on their contractual obligations have been paid.

Regaining trust requires creative and more time intensive outreach as we work with producers through the life of their contracts and recruit new producers to the program. In fall of 2025, the Alliance anticipates submitting a request to the USDA for a one-year no-cost extension. If approved, the program will continue until September 2027 providing an opportunity to enroll producers for the spring 2026 growing season and recoup the loss of enrollment during the program pause.

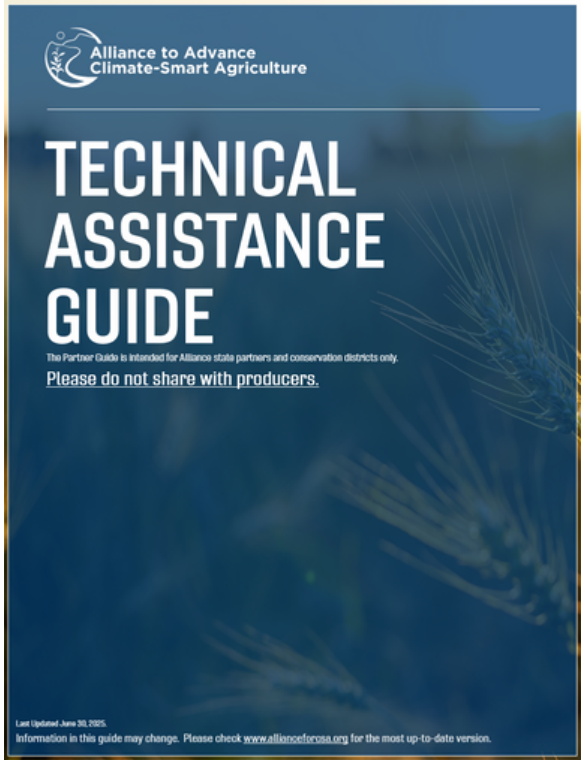
TECHNICAL ASSISTANCE FOR PRODUCERS

One of the primary strengths of the Alliance is the comprehensive technical assistance available to producers through the Alliance Technical Specialist, local soil and water conservation district staff, webinars, and printed resources.

Practice worksheets were developed for each practice specific to each state and adapted to be considered implemented within the Alliance's one-year contract, while fulfilling the state-level and USDA-NRCS Conservation Practice Standards.

Guides have been developed to support producers and technical assistance partners throughout each phase of the contract, from planning and implementing the practice to reporting the resulting environmental benefits.

Webinar trainings have been conducted on COMET-Planner, COMET-Farm, Field to Market's FieldPrint Calculator, and RUSLE2.



All producers enrolled in a practice requiring the CPA-52 Environmental Evaluation worksheets must receive approval from USDA prior to receiving the financial incentive. The review process proved to be inconsistent, with some producers waiting months for approval. The USDA's termination of the contractor responsible for managing the review process compounded the delay, as only a handful of pending CPA-52 forms had been approved. Without a clear timeline for the review, many producers changed practices, while others opted out of the project entirely.

Challenges in staff availability and capacity at the NRCS, FSA, and local soil and water conservation district offices made it difficult to access necessary documents and fully meet the technical assistance needs of producers.

ELIGIBLE CONSERVATION PRACTICES UNDER THE ALLIANCE

Cover Crop (340)
Conservation Crop Rotation (328)
Residue & Tillage Management, No Till (329)
Residue & Tillage Management, Reduced Till (345)
Nutrient Management (590)
Silvopasture (381)*
Riparian Herbaceous Cover (390)*
Riparian Forest Buffer (391)*
Tree/Shrub Establishment (612)*
Pasture and Hay Planting (512)*
Irrigation Water Management, Alternative Wetting and Drying (449)
Prescribed Grazing (528)
Feed Management (592)

*Requires CPA-52 Environmental Evaluation

DATA REPORTING AND PRODUCER SURVEYS

Over 550 producers have completed the 50 question Exit Survey, required as part of the producer agreement and as part of the Alliance's reporting requirements to the USDA. The survey captures the producer experience and expectations related to their participation in the project and seeks to evaluate the expected impacts of the current program and help inform the design of future programs and opportunities. Preliminary results will be shared soon.

Beginning this fall, Renewing the Countryside and the Sustainable Farming Association will host producer and stakeholder listening sessions across Minnesota. Topics will include the pilot model, livestock pilot, insights related to enrollment and technical assistance, recommendations going forward and how to continue to engage producers once the Alliance program ends.

DATA REPORTING TOOLS

The Carbon Management and Emissions Tool (COMET-Planner) is a measurement tool designed to provide the estimated greenhouse gas impacts of NRCS conservation practices, without extensive on-site sampling.

The Fieldprint® Platform is an assessment framework that measures the environmental impacts of commodity crop production, developed by Field to Market. Arkansas crop producers will utilize FieldPrint instead of COMET-Planner for conservation practices.

Revised Universal Soil Loss Equation 2 (RUSLE2) estimates rates of rill and interrill soil erosion caused by rainfall and its associated overland flow and is required for cropland practices.

The COMET-Farm™ tool is a whole farm and ranch carbon and greenhouse gas accounting system that enables producers to estimate carbon sequestration and greenhouse gas emissions related to annual crop production, livestock, and on-farm energy use. Around 50 producers in North Dakota and Virginia will report through COMET-Farm. Focused outreach will need to be done to reach the goal of 10% of enrolled producers who meet the minimum requirements to complete the tool.

CIBO TECHNOLOGIES

As our MMRV Partner, CIBO Technologies is providing additional modeling to supplement greenhouse gas data for producers who select eligible practices. By leveraging CIBO's advanced modeling capabilities, we are able to quantify the environmental impact of the adoption of these practices and work to bring financial benefits to producers.

MARKET OPPORTUNITIES

One of the key outcomes of the Alliance is to provide producers access to markets that reward the production of climate-smart commodities. Following the announcement of the award, the Alliance received inquiries from numerous organizations and companies eager to connect with enrolled producers. In the past year, members of the Alliance team participated in significant industry events such as Field to Market, the Sustainable Agriculture Summit, Commodity Classic, and the USDA Ag Outlook Forum. They attended educational sessions and established new marketing connections for enrolled producers.

Through its own market analysis, the Alliance team identified and evaluated companies that align with our vision and the opportunities available for all commodities, practices, and states. The selection of **Indigo Ag** as the marketing partner for the Alliance involved formulating a scope of work for the remainder of the project. This will provide existing opportunities, create new pathways, and generate reports from the Alliance's data collection for partners regarding market value access and additional economic benefits.

Efforts are underway to develop an online platform or portal for the Alliance website, which will showcase the identified and established marketing opportunities available to enrolled Alliance producers. This will be released externally online in the upcoming year of the program.

AGRICAPTURE

AgriCapture generates additional revenue for producers enrolled in their program through carbon markets, specifically as carbon credits from improved irrigation management in rice cultivation. Arkansas producers only.

Eligibility survey is available at www.tinyurl.com/AgriCaptureOptIn.

AGSPIRE

AgSpire has several programs available to producers, designed to enhance productivity and boost profitability by rewarding producers for sustainable practices and environmental outcomes.

Eligibility survey is available at www.agspire.com/producers/sign-up/.

BAYER CARBON PROGRAM

The Bayer Carbon Program is part of ForGround by Bayer, and provides U.S. growers opportunities to get paid for adopting cover crops and/or select conservation tillage practices that can help support soil health.

Eligibility survey is available at www.bayerforground.com.

CARGILL REGENCONNECT

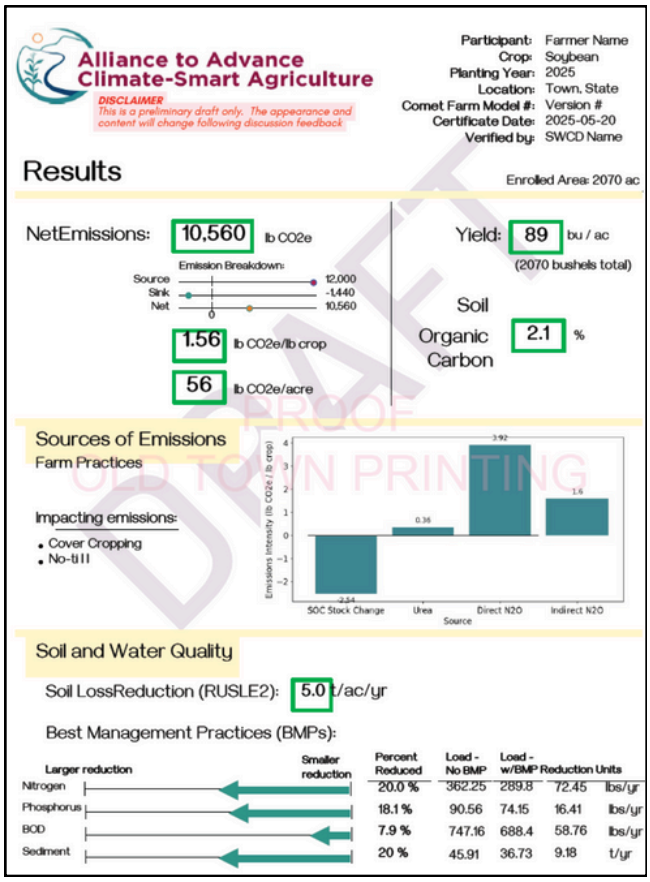
Cargill offers farmers the opportunity to earn income through adoption of regen-ag practices like cover crops, tillage intensity reduction, residue management, nutrient optimization and more.

Eligibility survey is available at www.regenconnect.cargill.com.

CLIMATE-SMART CERTIFICATE

In partnership with the Sustainable Food Lab, the Alliance is developing a climate-smart certificate that illustrates the environmental benefits delivered by the adoption of conservation practices to support the market of the climate-smart commodity or the greenhouse gas benefits delivered. Upon completion of their contract, each producer will receive a certificate detailing the outcomes they have achieved as part of the program, including soil and water quality and emissions results.

A companion document is under development to support producers' interpretation and use of the climate-smart certificate. The certificate and companion document will guide producers on how to move from the Alliance program to other programs available through public and private funding.



Climate-smart certificate prototype, developed by Sustainable Food Lab.

The full white paper is available on the Alliance website..

The Sustainable Food Lab has created a white paper based on interviews and research regarding various certification programs, such as carbon markets, corporate insetting, and Scope 3. It also incorporates insights from interviews and virtual workshops with corporate leaders, as well as discussions with organizations that support farmers.

This white paper will be shared with partners, stakeholders, and producers, guiding the development of climate-smart certification and marketing opportunities.

VIRGINIA TECH RESEARCH

In summer of 2025, the Alliance Livestock Pilot Project, led by the School of Animal Sciences, is launching a targeted effort to support the development and implementation of Comprehensive Nutrient Management Plans (CNMPs) for livestock producers in Virginia and Minnesota. This approach aims to improve nutrient balance, promote sustainable management practices, and provide a foundation for ongoing environmental stewardship at the farm level.

A budget of $4M will compensate producers to offset the costs of CNMP development and to support partial implementation of nutrient management practices outlined in the plan. Producers will receive a supplemental payment of $3,000 to engage in research related to the livestock pilot.

The Virginia Tech agronomy team is charged with evaluating efficacy of cover cropping and grazing on overall soil health and greenhouse gas sequestration potentials. They worked towards establishing project protocols and data collection parameters to be implemented on-farm. Multiple on-farm sites have been located to conduct paired field and nitrogen rate trials, to estimate soil carbon changes under different management practices and improve COMET-Farm cover crop nitrogen reduction model data. New equipment was tested for its ability to map soil carbon across large acreage and generate new datasets to evaluate and improve COMET-Farm modeling.

Faculty from Virginia Tech's Department of Agricultural and Applied Economics began designing the methodology for a study to assess consumer willingness to pay for various climate-smart labels to help assess the size of the private market and label effectiveness. Literature was reviewed to develop effective evaluation tools for the ecosystem service benefits of climate-smart agricultural practices. A manuscript has been published that evaluates the structure of and planned expenditures indicated among projects in the former Partnership for Climate Smart Commodities program relative to other major conservation programs that received significant additional funding through the Inflation Reduction Act.

AGRICULTURAL AND APPLIED ECONOMICS
VIRGINIA TECH

EASTERN SHORE AGRICULTURAL RESEARCH AND EXTENSION CENTER
VIRGINIA TECH

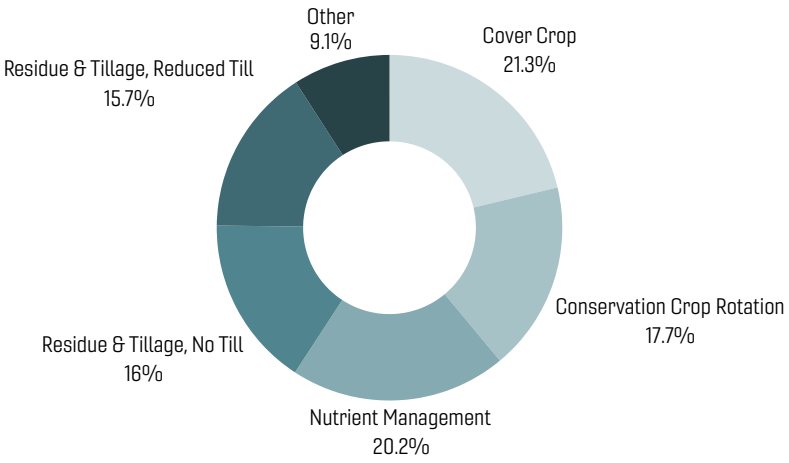
SCHOOL OF ANIMAL SCIENCES
VIRGINIA TECH

SCHOOL OF PLANT AND ENVIRONMENTAL SCIENCES
VIRGINIA TECH

BY THE NUMBERS

1,811	787	33	69	300,000	$16.2M
Producers Under Contract	Historically Underserved Producers	Limited Resource Producers	Socially Disadvantaged Producers	Enrolled Acres or Animal Units	Direct Payments to Producers

TOP 5 CONSERVATION PRACTICES



PROJECT GOALS

Total Producers	4,400
Total Acres	419,730
Total Animal Units	55,570
Total Payments to Producers	$57.4M

The impact of the Alliance is most effectively illustrated in the context of its role in shaping a program that will have substantial effects during the pilot, and may influence larger-scale initiatives. It is projected that if 80% of operations throughout the United States engaged in a conservation program that offers payments surpassing policy costs, agricultural emissions could decrease by as much as 55%, leading to an 8% reduction in total U.S. emissions, by employing existing effective climate-smart methods. Agricultural methane emissions are predicted to drop by 32%, while total U.S. methane emissions would experience an 8% decline compared to 'business as usual' forecasts.

This program is expected to produce a benefit:cost ratio of 9:1, resulting in an overall environmental gain of $415 billion, assuming that various climate-smart practices are implemented on the same cropland acres and animal units after a decade of the program.

PARTNERSHIPS

Recruiting farmers and ranchers into a new agricultural initiative, particularly those that involve changes in practices and data gathering, can often be challenging. It requires the establishment of trust, an understanding of the local landscape, and proof of clear advantages to the producer. The Alliance has achieved remarkable success in enrolling a wide variety of producers largely due to the strategic and careful development of strong partnerships. The success of the Alliance is attributed to the dedication and effort of our partners and their affiliated soil and water conservation district staff. These collaborations are essential to the project's successes in outreach, recruitment, and enrollment.

IMPLEMENTING PARTNERS

These partners lead the state-level programs in partnership with soil and water conservation district staff.

SUPPORTING PARTNERS

OUTREACH PARTNERS

Outreach strategy is supported by several key individuals, including Michael Carter, Jr., Frank Gladue, Sharon Mallory, Tessa Parks, and Charley Williams.

TECHNICAL EXPERTS and CONSULTANTS

Technical experts and consultants bring essential advisory services to support effective project implementation. Consultant support is provided by Kevin Norton, Doyle Karr, and Brad Karmen.

LOOKING AHEAD

As we approach September 20th, which signifies the official start of a new year for the Alliance, we take this opportunity to express our profound gratitude and pride as we reflect on our journey thus far. This significant milestone serves as a powerful reminder that the progress we have made is the result of the combined strength, dedication, and steadfast commitment of each and every partner involved. The endorsement from the USDA's Advancing Markets for Producers initiative to continue our program is a testament to this achievement.

We eagerly anticipate:

- Visting each state and connecting directly with districts and producers, gaining insights into their specific needs and fostering stronger relationships.
- Gathering producers testimonials, highlighting the real-world effects of our programs and motivating others to participate.
- Establishing new market partnerships, broadening our reach, and ensuring the long-term economic viability of our producers.
- Finalizing the innovative climate-smart certificate and rolling it out to producers, providing a concrete symbol of quality and sustainability.

PRINCIPAL INVESTIGATOR

Thomas L. Thompson, Ph.D.
Associate Dean and Director - CALS Global
College of Agriculture and Life Sciences
tlthomps@vt.edu

CO-INVESTIGATOR

Mark S. Reiter, Ph.D.
Director, Eastern Shore Agricultural Research and Extension Ctr.
Virginia Tech
mreiter@vt.edu

Phone Number

(540) 231-3990

Email Address

allianceforcsa@vt.edu

Website

www.allianceforcsa.org

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