U.S. Department of Agriculture
Natural Resources Conservation Service

NOTICE OF GRANT AND AGREEMENT AWARD

1. Award Identifying Number	2. Amendment Number	3. Award /Project Period	4. Type of award instrument:
NR233A750004G027		Date of final signature - 04/07/2028	Grant Agreement

5. Agency (Name and Address)	6. Recipient Organization (Name and Address)
USDA Partnerships for Climate-Smart Commodities c/o FPAC-BC Grants and Agreements Division 1400 Independence Ave SW, Room 3236 Washington, DC 20250 Direct all correspondence to FPAC.BC.GAD@usda.gov	VANGUARD (OTE) CONSORTIUM 401 E SONTERRA BLVD STE 375 SAN ANTONIO TX 78258-4321 UEI Number / DUNS Number: C3MDRKY1FWH9 / 040296301 EIN:

7. NRCS Program Contact	8. NRCS Administrative Contact	9. Recipient Program Contact	10. Recipient Administrative Contact
Name: MUSTAPHA ABOUALI	Name: CHARLENE WINTERS	Name: Sharilynne Hudson	Name: Jo Archer
(b)(6)			

11. CFDA	12. Authority	13. Type of Action	14. Program Director
10.937	15 USC 714 et seq	New Agreement	Name: Gregory Hudson (b)(6)

15. Project Title/ Description: Expands markets for climate-smart hay, beef, row crops and specialty crops in MS and supports farmers, and ranchers, implementation and monitoring of climate-smart practices.

16. Entity Type: M = Nonprofit with 501C3 IRS Status (Other than Institution of Higher Education)

17. Select Funding Type

Select funding type:	☒ Federal	☒ Non-Federal
Original funds total	14,833,814.000	$245,240.00
Additional funds total	$0.00	$0.00
Grand total	14,833,814.000	$245,240.00

18. Approved Budget

Personnel	$2,768,918.00	Fringe Benefits	$690,065.00
Travel	$555,255.00	Equipment	$0.00
Supplies	$53,519.00	Contractual	$3,423,435.00
Construction	$0.00	Other	$7,342,622.00
Total Direct Cost	14,132,650.000	Total Indirect Cost	$701,164.00
		Total Non-Federal Funds	$245,240.00
		Total Federal Funds Awarded	14,833,814.000
		Total Approved Budget	15,079,054.000

This agreement is subject to applicable USDA NRCS statutory provisions and Financial Assistance Regulations. In accepting this award or amendment and any payments made pursuant thereto, the undersigned represents that he or she is duly authorized to act on behalf of the awardee organization, agrees that the award is subject to the applicable provisions of this agreement (and all attachments), and agrees that acceptance of any payments constitutes an agreement by the payee that the amounts, if any, found by NRCS to have been overpaid, will be refunded or credited in full to NRCS.

Name and Title of Authorized Government Representative	Signature	Date
KATINA HANSON Acting Senior Advisor for Climate-Smart Commodities	KATINA HANSON Digitally signed by KATINA HANSON Date: 2023.04.10 16:50:52 -05'00'	04/10/2023
Name and Title of Authorized Recipient Representative	Signature	Date
GREGORY R. HUDSON Executive Director	Gregory R. Hudson Digitally signed by Gregory R. Hudson Date: 2023.04.10 16:23:05 -05'00'	04/10/2023

NONDISCRIMINATION STATEMENT

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, SW., Washington, DC 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

PRIVACY ACT STATEMENT

The above statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. Section 522a).

Statement of Work

Purpose

The purpose of this agreement, between the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) and Vanguard (OTE) Consortium (Recipient), is to build markets for climate-smart commodities and invest in America's climate-smart producers to strengthen U.S. rural and agricultural communities.

Objectives

The objectives of this project are to support the production and marketing of climate-smart commodities by providing voluntary incentives to producers and landowners, including early adopters, to implement climate-smart agricultural production practices, activities, and systems on working lands; measure/quantify, monitor and verify the carbon and greenhouse gas (GHG) benefits associated with those practices; and develop markets and promote the resulting climate-smart commodities.

Budget Narrative

The official budget summarized below and described in the attached Budget Narrative will be considered the total budget as last approved by the Federal awarding agency for this award.

Amounts included in this budget narrative are estimates. Reimbursement or advance liquidations will be based on actual expenditures, not to exceed the amount obligated.

TOTAL BUDGET $15,079,054.00

TOTAL FEDERAL FUNDS $14,833,814.00
PERSONNEL $2,517,198.00
FRINGE BENEFITS $627,332.00
TRAVEL $504,777.00
EQUIPMENT $0
SUPPLIES $48,654.00
CONTRACTUAL $3,112,213.00
CONSTRUCTION $0
OTHER $7,322,476 (includes PRODUCER INCENTIVES $4,684,500)
TOTAL DIRECT COSTS $14,132,650.00
INDIRECT COSTS $701,164.00

TOTAL NON-FEDERAL FUNDS $245,240.00
PERSONNEL $0
FRINGE BENEFITS $0
TRAVEL $0
EQUIPMENT $0
SUPPLIES $0
CONTRACTUAL $0
CONSTRUCTION $0
OTHER $245,240.00 (PRODUCER INCENTIVES $0)
TOTAL DIRECT COSTS $0
INDIRECT COSTS $0

Recipient has elected to use the de minimis indirect cost rate.

Responsibilities of the Parties:

If inconsistencies arise between the language in this Statement of Work (SOW) and the General Terms and Conditions attached to the agreement, the language in this SOW takes precedence.

RECIPIENT RESPONSIBILITIES

Perform the work and produce the deliverables as outlined in this Statement of Work and attachments.

Ensure Paperwork Reduction Act (PRA) clearance is obtained prior to conducting data collection from producers or other project participants, including data collection performed by subrecipients.

Comply with the applicable version of the General Terms and Conditions.

Submit reports and payment requests to the ezFedGrants system as outlined in the applicable version of the General Terms and Conditions. Reporting frequency is as follows:

Performance Reports: Quarterly

SF425 Financial Reports: Quarterly

Detailed Progress Report: Quarterly
(The detailed progress report is in addition to the performance and financial reports referenced above and described in the general terms and conditions)

Expected Accomplishments and Deliverables

See attached Benchmarks and associated Project Narrative.

Resources Required

See the Responsibilities of the Parties section for required resources, if applicable.

Milestones

See attached Benchmarks and associated Project Narrative.

GENERAL TERMS AND CONDITIONS

Please reference the below link(s) for the General Terms and Conditions pertaining to this award:
https://www.fpacbc.usda.gov/about/grants-and-agreements/award-terms-and-conditions/index.html

Attachments:
Budget Narrative
Project Narrative
Benchmarks
Climate-Smart Practices List and Limitations
Data Dictionary
Climate-Smart Specific Terms and Conditions

Page 006

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Page 007

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Page 008

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Page 009

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Page 010

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Page 011

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Page 012

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Page 013

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Page 014

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Page 015

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Page 016

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Page 017

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Page 018

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Page 019

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Page 020

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of the Freedom of Information and Privacy Act

Page 021

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(b)(4)

of the Freedom of Information and Privacy Act

Page 022

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of the Freedom of Information and Privacy Act

Page 023

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(b)(4)

of the Freedom of Information and Privacy Act

Page 024

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of the Freedom of Information and Privacy Act

Page 025

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Page 026

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Page 027

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Page 028

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Page 029

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Page 030

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of the Freedom of Information and Privacy Act

Page 031

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Page 032

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(b)(4)

of the Freedom of Information and Privacy Act

Page 033

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(b)(4)

of the Freedom of Information and Privacy Act

Page 034

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(b)(4)

of the Freedom of Information and Privacy Act

Page 035

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of the Freedom of Information and Privacy Act

Page 036

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(b)(4)

of the Freedom of Information and Privacy Act

Page 037

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Page 038

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Page 039

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of the Freedom of Information and Privacy Act

Page 040

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of the Freedom of Information and Privacy Act

Page 041

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of the Freedom of Information and Privacy Act

Page 042

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of the Freedom of Information and Privacy Act

Page 043

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Page 044

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Page 045

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Page 046

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Page 047

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of the Freedom of Information and Privacy Act

Page 048

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(b)(4)

of the Freedom of Information and Privacy Act

Page 049

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Page 050

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Page 051

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Table of Contents

1.0 EXECUTIVE SUMMARY

Vanguard (OTE) Consortium (VC) is a 501(c)3 non-profit organization with a GuideStar Status of Gold-Level and located in San Antonio, TX. At VC, we are committed to building a trusted partnership with the United States Department of Agriculture (USDA). VC's contact information and Pilot Partners are listed below:

CONTACT INFORMATION

ORGANIZATION: Vanguard (OTE) Consortium, C3MDRKY1FWH9

PHONE: 210-451-5101 CAGE CODE: 7WVK4

POC: Gregory Hudson EMAIL: gregory@vanguardempowerment.org

SUB-AWARDEES INFORMATION

ACADEMIA

1. Alcorn State University (ASU) Extension
2. Mississippi Valley State University (MVSU)

BUSINESSES/CONSULTANTS

1. Heifer International
2. Amerimac Chem
3. Dr. David Powell, DVM
4. Enviro-Remediation Educational Svc, LLC

VC with two (2) higher learning institutions, three (3) corporate entities, and one (1) consultant proposes to combine our technical capabilities, competencies, and experience to form Team Vanguard in support of the Partnerships for the USDA-NRCS Climate-Smart Commodities opportunity.

1.1 Understanding of the Partnerships for Climate-Smart Commodities (PCSC) Program

Team Vanguard recognizes and understands the equity and environmental climate challenges facing America's agriculture producers, particularly in Mississippi.

1) *Mission:* The purpose of this requirement is to expand the markets for America's climate-smart commodities, leverage the benefits of greenhouse gas (GHG) reduction and carbon sequestration of climate-smart commodity production, and provide direct, meaningful benefits to production agriculture which includes small and underserved producers.
2) *Current Challenge(s):* According to Executive Order 14008, the US and the world face a profound climate crisis. Currently, there is a narrow moment to pursue action to avoid the catastrophic impacts of this crisis and seize an opportunity to tackle the challenges of climate change. In response to the climate crisis, USDA is pursuing actions within the agriculture sector to support the production of climate-smart commodities and agricultural practices that reduce greenhouse gas emissions and sequester carbon.
3) *Success Goal(s):* Build markets and invest in America's Climate-Smart Farmers, Ranchers & Forest Owners to Strengthen U.S. and Mississippi Congressional

District 2 Rural and other surrounding Agricultural Communities of Mississippi. No Tribal Lands will be a part of this pilot.

1.2 Team Vanguard's SmartAgGro Pilot Synopsis

The SmartAgGro Pilot will steer underserved agriculture producers towards improving business operations management and increasing produce yield into new markets by implementing USDA Climate-Smart Agriculture and Forestry (CSAF) Practices. Team Vanguard will blend current USDA resources/technologies and our SmartWay Incentive Program resources/technologies to execute our intent. The SmartAgGro Pilot will focus on four (4) USDA Climate-Smart Agriculture (CSAF) Mitigation Activities (Subsets): 1) Soil Health – Codes 340 & 345, 2) Nitrogen Management – Code 590, 3) Grazing and Pasture – Code 528, and 4) Pasture and Hay Planting – Code 512.

The Intent/Objectives of the SmartAgGro Pilot will specifically:

1) Assist **underserved** agriculture producers of Mississippi Congressional District 2 and surrounding Mississippi areas in accessing resources and becoming credentialed in Climate-Smart Agriculture (CSAF) Practices.

2) Support **underserved** agriculture producers to plan and establish new markets to promote climate-smart commodities with the Smart-Way Incentive Program resources.

3) Establish a soil health monitoring network to verify and quantify climate-smart practices and measure on-farm production outcomes against carbon sequestration and greenhouse gas (GHG) reduction benefits metrics across Mississippi Congressional District 2 and surrounding Mississippi areas.

Team Vanguard will use an integrated and robust framework – the Balanced Scorecard & Strategy Map to demonstrate how our team will create value for producers and the USDA (**See Appendix A** – The SmartAgGro Strategy Map). The Balanced Scorecard will allow our team to implement a strategic performance management tool, while the Strategy Map will allow us to translate our strategy into operational action.

1.2.1 The SmartAgGro Pilot Action Plans Synopsis

Team Vanguard is committed to providing the USDA with the continuity of experienced experts, reliable specialists, and high-quality action plans. The SmartAgGro Pilot will execute three (3) Integrated SAFe® Technical & Strategy-Focused Program Management Approach Action Plans (**See Appendices B-E:** The SmartAgGro Action Plans), which are summarized as follows:

1) Operations Excellence Action Plan – The intent/purpose of this action plan focuses on implementing the SmartAgGro Pilot by using project management best practices to ensure the proper distribution of equity and environmental justice (EJ) and reach minority-serving institutions (MSI).

2) Climate-Smart Excellence Action Plan – The intent/purpose of this action plan focuses on the following:

a) Increase Agriculture producer adoption of CSAF practices, activities, and systems using USDA-approved sub-sets in the Executive Summary, Section 1.2. These selected subsets will be accomplished through the SmartWay Incentive Program found in Section 2.1.2. , Step 7.

b) Measure, quantify, monitor, and verify (M-Q-M-V) the carbon and greenhouse gas (GHG) benefits.

3) Brand and Compliance Excellence Action Plan – The intent/purpose of this action plan focuses on developing markets and promoting climate-smart commodities generated as a result of the SmartAgGro Pilot activities.

1.2.2 Our Program Director

Team Vanguard's proposed Program Director, Gregory Hudson, is a trusted advisor among government decision-makers and a former Texas Small Business Person of the Year. He is known for his 21st Century and strategic mindset, tireless work ethic, energetic presentation, and process alignment to consultative services. Gregory Hudson has blazed a trail of multimillion-dollar projects across industry channels, including government, defense, and manufacturing.

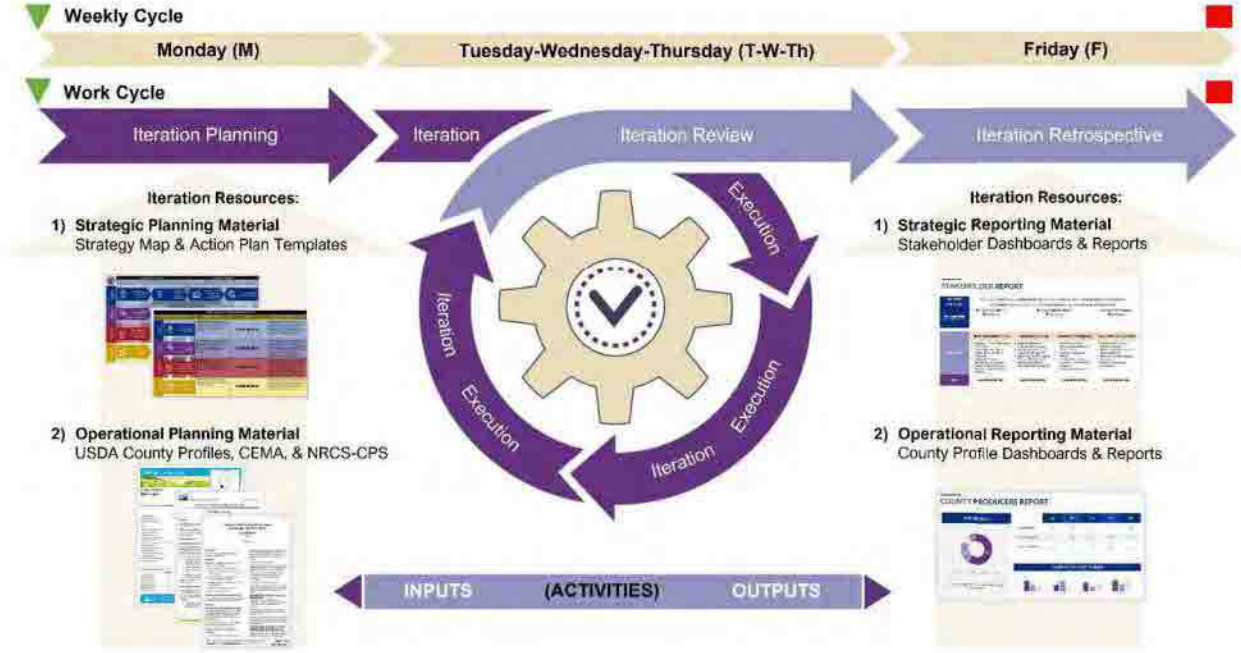
Specifically, Mr. Hudson has relevant capabilities in the following areas:

- **Certified Balanced Scorecard Practitioner –** Develops and translates strategy through best practice alignment methodologies and techniques, implementing and monitoring design and performance using the Strategy map and Balanced Scorecard framework.
- **Certified SAFe® Program Consultant (SPC)** – Leads all levels of organizational change through a Lean-Agile transformation at scale by training, coaching, facilitating, and mentoring.
- **Program Portfolio Management** – Enables and equips customers with the ability to allocate resources to program processes that directly affect the achievement of their strategy.
- **Program Diagnostics –** Designs solutions to reduce performance interruptions and allows customers to look ahead at performance quality by closely watching process performance output and personnel wear.
- **Program Delivery** – Offers enhanced demand and distribution management, communication synergy, performance monitoring, data computation, and synchronized project control competencies and skills.

Gregory retired from the U.S. Army after 21 years of exemplary service as a non-commissioned and commissioned officer. He was an effective team builder and organizational leader of large-scale projects and programs. In addition, Gregory served as a U.S. Army Commander, Chief of Individual Training & Policy, and Operational Readiness Evaluator. He earned a Bachelor of Science from Fitchburg State University, MA. with Magna Honors and as a Distinguished Military Graduate.

1.3 Our Integrated SAFe® Technical & Strategy-Focused Program Management Approach Synopsis

Team Vanguard will utilize our Integrated SAFe® Technical & Strategy-Focused Program Management Approach to execute our SmartAgGro Pilot Project (**Figure 1**).



***Graphic 1** – Our model is based on a Balanced Scorecard Strategy Map and SAFe® best practices to meet rigorous project and risk management requirements.*

With more than 60 years of collective experience in government contracts and grants, Team Vanguard has delivered our Integrated SAFe® Technical & Strategy-Focused Program Management Approach to the kick-off and execute contracts with highly specialized professional services, expertise, and performance in a timely fashion by using the traditional five (5) step project management phases.

1.4 Team Vanguard's Grant Risk Aversion

Team Vanguard's Risk Management Methodology is interwoven into our Grant Program Management Approach and comprises continuous risk identification, analysis, planning, tracking, and risk control. The objective is proactively identifying and mitigating risks on each task order before they become major issues and problems. Team Vanguard's Risk Mitigation Plan will identify costs, required resources, schedule, technical concerns, and an action plan to reduce potential risks at each installation.

1.5 Summary

We have the experience, personnel, and knowledge to provide the most comprehensive and cost-effective Climate-Smart services for the USDA. We look forward to building a partnership with producers and our USDA client in the management and execution of this effort.

2.0 TECHNICAL APPROACH

Team Vanguard's technical approach uses the five (5) traditional phases of program/project management: Initiate, Plan, Execute, Control, and Close. We will provide all technical assistance where mentioned in this project narrative.

2.1 Initiate Phase

Team Vanguard's Initiate Phase activities for the SmartAgGro Pilot will analyze this project's scope and key factors that aid in gaining beneficial insights into external and internal influences that can positively or negatively impact service delivery. For this project, we have examined seven (7) factors to collect valuable data and information for decision support in the Planning Phase listed as follows: 1) Compelling Needs, 2) Minimizing Cost, 3) Geographic Focus, 4) Reduction of Barriers, 5) Management Capacity, 6) Planning Scale, and 7) Client Base.

To gain beneficial insights from these factors, Team Vanguard will employ two adopted military concepts – Intelligence Preparation of Battle Space (IPB) and Operational Preparation of the Battle Space (OPB). To align with commercial practice utilization, we have substituted the word "Battle" with "Business" in the naming convention to read "Intelligence Preparation of the Business Space (IPBS) and Operational Preparation of the Business Space (OPBS).

IPBS is our systematic process of analyzing the seven factors for this grant to determine their impact on operations. On the other hand, OPBS consists of a full range of capacity-building activities in our operational area, including engagement and training activities, soil assessments, lab testing, and mobile team operations (MTO). When combined or integrated, Team Vanguard coins these integrated concepts as I&OPBS. By integrating these two approaches into I&OPBS, Team Vanguard will successfully achieve SmartAgGro Pilot objectives and reduce associated risks.

1) IPBS Factors

Factor 1: The Compelling Need for the Project

First, the land of opportunity, where upward mobility is as much a birthright as fundamental freedoms, economic and historic barriers have stood in the way of progress. There are questions of racial disparity in this nation whose economy was founded on slavery and did not fully recognize the voting rights of African Americans until the 1960s.

Second, the U.S. Economic Development Administration has assessed 27 of 30 counties pending new Mississippi Congressional District 2 expansion as Persistent Poverty Counties. In other words, these counties are experiencing a prolonged low economic well-being trend which may result from poor equity distribution; and a historical extreme poverty rate. According to U.S. News 2019 report, Mississippi ranked #49 in best states.

Factor 2: Approach to Minimizing Transaction Cost

Team Vanguard understands that Government Agencies make substantial investments in contract support. Concerning this investment, we view our role as that of fiduciary

stewards, and it is our responsibility to protect this investment by cultivating and performing premier contract accountability practices. Through our budget activities, accounting practices, associated policies, and procedures, Team Vanguard has established, documented, and implemented a proven Accounting Management System that will support accounting operations and transaction management to minimize transaction costs.

All transactions recorded in our Accounting Management System will be appropriately authorized and accurately represent the documented transaction. The timing and amount of the transaction will be per corporate accounting policies. In addition, proper vendor selection and utilization will assist in controlling expenses and provide quality inputs to Team Vanguard's reporting.

Purchasing Procedures will utilize internal controls for all purchases and acquisition transactions. Our continuous supervision will ensure that internal control objectives are met. This standard will require managers to continuously review and approve the assigned work of their staff and provide the necessary training guidance to minimize errors, waste, and wrongful acts to reduce transaction volume.

Factor 3: Geographic Focus

Team Vanguard's geographic primary focus is Mississippi Congressional District 2 and other surrounding counties of Mississippi. Mississippi Congressional District 2 is forecasted to expand to 30 counties, and as mentioned earlier, 27 of the 30 counties are Persistent Poverty Counties per the 2022 US Economic Development Administration Report. Team Vanguard has divided the support area into four (4) sectors. Sectors 1 – 3 have ten (10) counties each, and Sector 4 has fifty-two (52) counties. The remaining fifty-two (52) will make-up a fourth (4^{th}) sector. Team Vanguard will roll out producer credentialing in the Base and 1^{st} years. Year 3 will consist of our Control (monitoring) and Close Phases of the pilot.

Factor 4: Approach to Reduce Producer Implementation Barriers of CSAF Practices

Team Vanguard will use the three Lines of Effort (LOEs) listed below to reduce implementation barriers:

LOE 1 – Establish Strategic and Operational Clarity. Team Vanguard uses an integrated strategic planning and operational performance management system to communicate our organization's vision, mission, and strategy to team members and stakeholders. We will align our day-to-day work to our vision and strategy, provide a framework for prioritizing task activities, services, and resources, and use performance measures and targets to quantify progress. Team Vanguard will schedule town hall meetings to inform farmers about the key environmental benefits of climate-smart production practices, activities, systems, and funding incentives.

LOE 2 – Adequate Resources. Team Vanguard's SmartAgGro Pilot will provide a unique opportunity to **underserved small farmers** interested in utilizing climate-smart strategies. With access to SmartAgGro Pilot education & training, technical assistance in developing a SmartAgGro Pilot Business Plan, and cash incentives to acquire the proper resources for climate-smart farming.

LOE 3 – SmartAgGro Sustainment. The purpose of SmartAgGro Sustainment is twofold: 1) building underserved producers' operational capacity and 2) maintaining a commercialization process to diversify producer operations while improving their market competitiveness. The potential market outlets include casinos, school systems, restaurants, state institutions, and wholesale/retail produce clients within and outside county and state lines.

2) OPBS Factors

Factor 1: Project Management Capacity of Partners

Team Vanguard's program/project management personnel have received outstanding past performance ratings supporting large, medium, and small contracts from various Federal Government Agencies in 2002. This competency will scale and cascade throughout our workforce using Bench Marks and Milestones (See **Appendix F**) designed around our Customer-Centric practices.

a) Description of Existing Relationships with Producers or Land Owners

Team Vanguard will use an effective customer engagement strategy through meaningful relationships that date back over ten years. At the center of these current relationships are trusted partnerships and value-based engagements.

Our Intent: Implement climate-smart production practices, activities, and systems on land only used for agricultural production;

b) Experience Promoting Climate-Smart Activities

Team Vanguard has extensive experience advocating Climate-Smart activities. Our team of experts has completed the groundwork for campaigning for green-based products, i.e., Micronutrients, soil amendments, feed management, and prescribed grazing. Our teaming partner, Amerimac Chemical, executed these tasks by introducing microbial best practices to many of our farmers every quarter and on demand. The promotion modalities included the Internet of Things, Information Rack Cards, mailouts, and conference face-to-face engagements.

Our Intent: Measure/quantify, monitor, and verify the carbon and greenhouse gas benefits associated with those practices.

c) Experience Marketing Climate-Smart Commodities

Team Vanguard will apply our vast marketing knowledge and experience to increase our farmers' production and sales rate as described in IPBS Factor 4 - LOE 3. Team Vanguard has marketed crops, Micronutrients, soil amendments, feed management, and prescribed grazing for over 10 Years to the following industries: wastewater, chemicals, agriculture, paper mills, and farmers – crops, and livestock with superior results through practical marketing efforts.

Our Intent: Develop markets and promote the resulting climate-smart commodities.

Factor 2: Large-Scale Plan to Pilot Climate-Smart Agriculture

Team Vanguard's Climate Change Mitigation Practice Categories for the SmartAgGro Pilot include five (5) approved USDA Mitigation Practices for Mississippi listed below:

Throughout the thirty (30) counties of Mississippi Congressional District 2 and fifty-two remaining counties. Team Vanguard will use practices (soil monitoring probes) involving ground disturbance below the plow zone. The depth is 28". We will not use concentrated animal feeding operations (CAFOs). **See Appendix I Section 2 for an update.**

a) Soil Health – Mississippi Code: 340 MS CPS Cover Crop 2016

b) Soil Health – Mississippi Code: 345 MS CPS Residue and Tillage Management Reduced Till 2016

c) Pasture and Hay Planting – Mississippi Code: 512 MS CPS Pasture & Hay Planting 2022

d) Grazing and Pasture – Mississippi Code: 528 MS CPS Prescribed Grazing 2022

e) Nitrogen Management – Mississippi Code: 590 MS CPS Nutrient Management 2013

Factor 3: Recruitment & Enrollment Plan for Producers

Team Vanguard's recruitment and enrollment goals for the number of producers is two hundred-seventy underserved producers from the 30 counties (27 Persistent Poverty Counties) of Mississippi Congressional 2 District and the remaining 52 counties of Mississippi. The estimated acreage is ninety-eight thousands one-hundred seventy-two (98,172). During the recruitment and enrollment (initial engagement) phase with producers, Team Vanguard will conduct a credentialing process with each county service center to determine if producers are participating in other Climate-Smart projects associated with this NFO to eliminate duplication of payments. Our farming prospects will come from four sectors:

Team Vanguard will conduct recruitment and enrollment activities for **Sector 1** across twenty-four (24) months (Base Year and Year 1). Sector 1 includes ten counties: Issaquena, Warren, Hinds, Claiborne, Copiah, Jefferson, Adams, Franklin, Wilkinson, and Amite. We will enroll up to sixty (60) producers during this period. Each prospect is required to complete a screening process and a mandatory credentialing process to become eligible for the Smart-Way Incentive Program.

Team Vanguard will conduct recruitment & enrollment activities for **Sector 2** across twenty-four (24) months (Base Year and Year 1). Sector 2 includes ten counties: Washington, Humphreys, Holmes, Carroll, Montgomery, Sharkey, Yazoo, Madison, Attala, and Leake. We will enroll up to sixty (60) producers during this period. Each prospect is required to complete a screening process and a mandatory credentialing process to become eligible for the Smart-Way Incentive Program.

Team Vanguard will conduct recruitment & enrollment activities for **Sector 3** across twenty-four (24) months (Base Year and Year 1). Sector 3 includes ten counties: Tunica, Coahoma, Quitman, Panola, Bolivar, Sunflower, Leflore, Tallahatchie, Yalobusha, and Grenada. Each prospect is required to complete a screening process

and a mandatory credentialing process to become eligible for the Smart-Way Incentive Program.

Team Vanguard will conduct recruitment & enrollment activities for **Sector 4** across twenty-four (24) months (Base Year and Year 1). Sector 3 includes fifty-two counties. Each prospect is required to complete a screening process and a mandatory credentialing process to become eligible for the Smart-Way Incentive Program.

2.2 Plan Phase

Team Vanguard's Plan Phase activities for the SmartAgGro Pilot estimate the work needed to manage risk during project execution by effectively planning time, cost, and resources. This section uses a step sequence to describe our planning activities. The final deliverable of this stage will consist of a Strategic and Operational Project Plan.

Step 1 – Identification of Success Targets

Team Vanguard's Success Goals for Climate-Smart Program are listed as follows:

1) Corporate Success Targets
   - Build markets and invest in America's Climate-Smart Farmers & Ranchers to Strengthen U.S. and Mississippi Congressional District 2 and other Mississippi Rural and Agricultural Communities.
   - Prepare USDA to quantify, track, and report the benefits of CSAF activities.
   - Develop a CSAF strategy for all farmers and ranchers.
   - Leverage existing USDA programs to support CSAF strategies.
   - Strengthen education, training, and technical assistance for CSAF practices.
   - Support new and better markets for agriculture products generated through CSAF practices.
   - Develop a forest and wildfire resilience strategy.
   - Improve research.
2) Climate-Smart Success Targets
   - Increase markets (supply and demand) for climate-smart commodities.
   - Increase adoption of Climate-Smart Agriculture (CSAF) practices and systems that reduce agricultural greenhouse gas emissions (GHG) and increase carbon sequestration from the farming sector.
   - Demonstrate scalable, low-cost measurement/quantification, monitoring, reporting, and verification systems (MMRV).
   - Increase innovation and consistency in measuring/quantifying farm-level GHG benefits.
   - Test and evaluate efficient traceability through supply chains from the production of the commodity to delivery to the consumer.
   - Improve understanding and communication of economic and adaptation benefits and ancillary environmental benefits.
   - Equity administration includes small and underserved producers and early adopters (i.e., producers who have already used some climate-smart approaches).
   - Understand marketability advantages for a variety of farm types.

- Empower farmers, ranchers, and forest land owners to drive CSAF markets and practice adoption.
- Develop additional public-private partnerships to foster and develop CSAF markets.

Step 2 – Identification of Objectives

Team Vanguard's SmartAgGro Objectives are listed as follows:

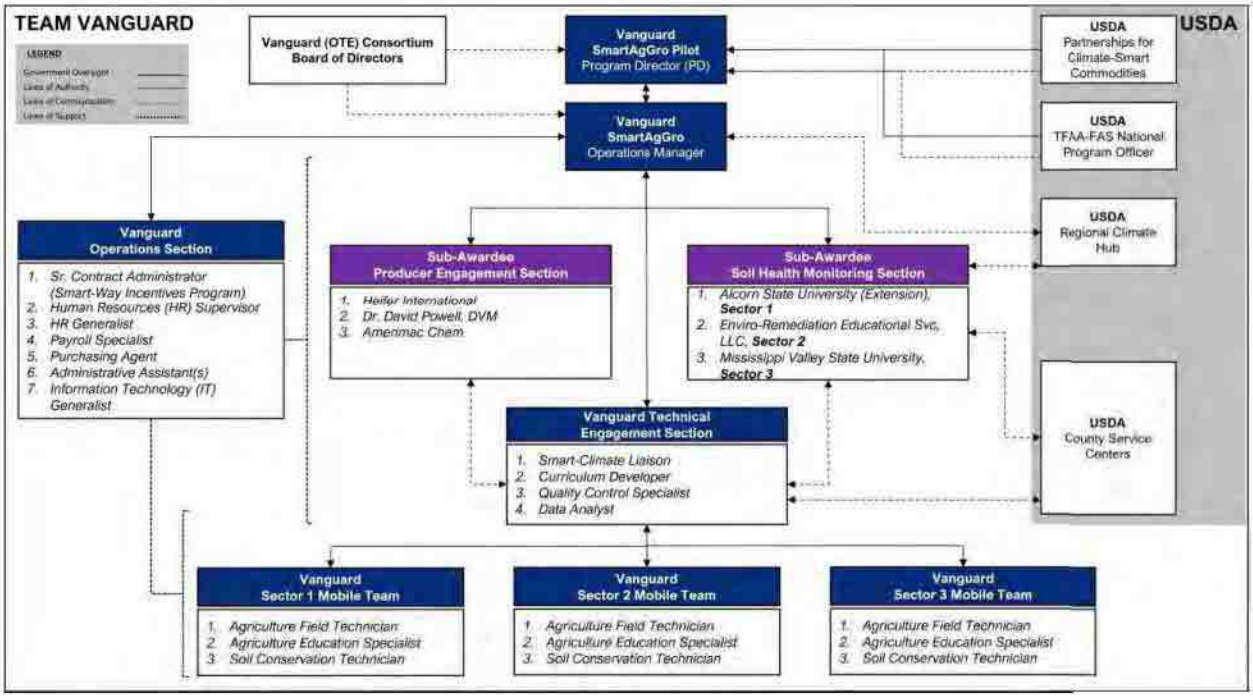
1) SmartAgGro Objectives
   - Assist underserved agriculture producers of Mississippi Congressional District 2 gain access to resources and become credentialed in Climate-Smart Agriculture and Forestry (CSAF) Practices.
   - Support underserved agriculture producers to plan and establish new markets to promote climate-smart commodities with the Smart-Way Incentive Program resources.
   - Establish a soil health monitoring network to support verifying and quantifying climate-smart practices and measuring on-farm production outcomes against carbon sequestration and greenhouse gas (GHG) reduction benefits metrics across Mississippi Congressional District 2.

Team Vanguard's SmartAgGro Strategy Map Objectives are listed as follows:

1) Achieve Operations Excellence
   - Maximize USDA Infrastructure Investment
   - Reduce Barriers/Improve Support to Underserved Producers
   - Implement PM & Technical Assistance Best Practices
   - Acquire a High-Performance Workforce
2) Achieve Climate-Smart Excellence
   - Maximize Support to Underserved Producers
   - Increase Adoption of CSAF Practices and Systems
   - Implement CSAF Production PASs on Working Land
   - Integrate Modernized Information Technology (IT)
   - Maximize Carbon Sequestration & Reduce GHG Emission
   - Increase Data-Driven Results
   - Implement Innovative, Scalable & Reliable MMRV Systems
   - Integrate Modernized (IT)
3) Achieve Brand and Compliance Excellence
   - Maximize USDA & Producers' Value
   - Build Trusted Partnerships & Brand Awareness
   - Implement Unquestionable Compliance
   - Build An Accountable Organization

Step 3 – Define the Organizational Structure

Team Vanguard's Organizational Chart



***Graphic 2** – Team Vanguard's Organizational Chart for the SmartAgGro Pilot*

Figure 2 illustrates Team Vanguard's Organizational Chart for managing the SmartAgGro Pilot along with the responsibility flows, management oversight, lines of authority, and communication with the USDA's Executive, Contracts, Technical, and Program Management personnel.

Team Vanguard's SmartAgGro Pilot has multiple task areas and requires an organizational structure that demonstrates various levels of authority, total dedication to the USDA, and the capability to mitigate risk in task performance. Based on the size of the SmartAgGro Pilot, we propose the organization structure which will provide the full coverage needed for the requirements of this grant. Figure 3 illustrates Team Vanguards' Program Management Organization Chart for managing the SmartAgGro Pilot's budget along with the flows of responsibility, management oversight, lines of authority, and communication.

Program Director (PD)

Our PD, Mr. Gregory Hudson, will be responsible and accountable for meeting the Partnerships for Climate-Smart Commodities grant's cost, schedule, and technical objectives. Our PD has over 25 years of Program and Project Management experience. The **key roles and responsibilities** of Team Vanguard's PD are detailed below:

- Organize, direct, and coordinate planning and production of all grant support activities.
- Formulate, review, implement, and manage strategic marketing.

- Responsible for program and project management, resource management, staffing, schedule management, cost management, quality management, subcontracting management, risk management, and mitigation.
- Communicate and coordinate with USDA and other stakeholder Agencies.
- Explain organizational objectives and policies and terms and conditions of the SmartAgGro Pilot to our SmartAgGro team personnel.
- Manage the reports-generating activities and meet with USDA and other stakeholder agencies' technical and management personnel.
- Conduct negotiations and bind Team Vanguard to grant modifications and sub-awardee contracts.
- Identify, escalate, and resolve issues throughout the grant period.
- Ensure compliance with all terms and conditions of the Partnerships for Climate-Smart Commodities grant, including quarterly and annual reporting to the USDA.

Step 4 – A Proven Program Management, Built-In Quality Control, and Risk Management Approach

Team Vanguard utilizes proven Integrated SAFe® Technical (IST) & Strategy-Focused Program Management Approach (IST & SFPM) or (IST & SFPMA) to manage the SmartAgGro Pilot. This management approach ensures all tasks are completed on time and within budget while maintaining continuous quality deliverables throughout the grant period.

Our IST & SFPMA includes SAFe®, Balanced Scorecard & Strategy Map, and Project Management Institute's (PMI) PMBOK 5th Edition principles; involves an effective organizational structure with solid management and continuous oversight of each action plan activities; ongoing Iteration Management, Quality Management, Risk Management, Communication, and Sub-Awardee Management throughout the performance period.

Our IST & SFPMA will drive task planning, staffing, organizing, directing, conducting, producing, monitoring, and reporting for each task order and contract-wide programs to ensure on-time and within-budget completion and enable us to meet the objectives of the Partnerships for Climate-Smart Commodities program. Our organizational processes and quality management procedures are ISO 9001:2012 compliant, and our management methodologies and processes comply with CMMI SVC Level 3 requirements.

Step 4A – The Integrated SAFe® Technical & Strategy-Focused Program Management Approach Synopsis

Team Vanguard will utilize our Integrated SAFe® Technical & Strategy-Focused Program Management Approach to execute our SmartAgGro Pilot Project (**Figure 3**).

***Graphic 3** – Our model adopts Project Management Institute, Balanced Scorecard Strategy Map, and SAFe® best practices to meet rigorous project and risk management requirements.*

With more than 60 years of collective experience in government contracts and grants, Team Vanguard has delivered our Integrated SAFe® Technical & Strategy-Focused Program Management Approach to kick-off and execute contracts with highly specialized professional services, expertise, and performance in a timely fashion by using the traditional five (5) step project management phases.

Step 4A-1a Our Repeatable Two-Week Sprint Iteration Cycle Synopsis

As illustrated in **Figure 3**, we highlight **Step 3** of our Integrated SAFe® Technical & Strategy-Focused Program Management Approach level efforts and operational control to support the objectives of the SmartAgGro Pilot. Every two weeks, Team Vanguard's Program Director and Operations Manager will schedule and facilitate an iteration planning meeting with Team Vanguard, typically lasting 2 hours.

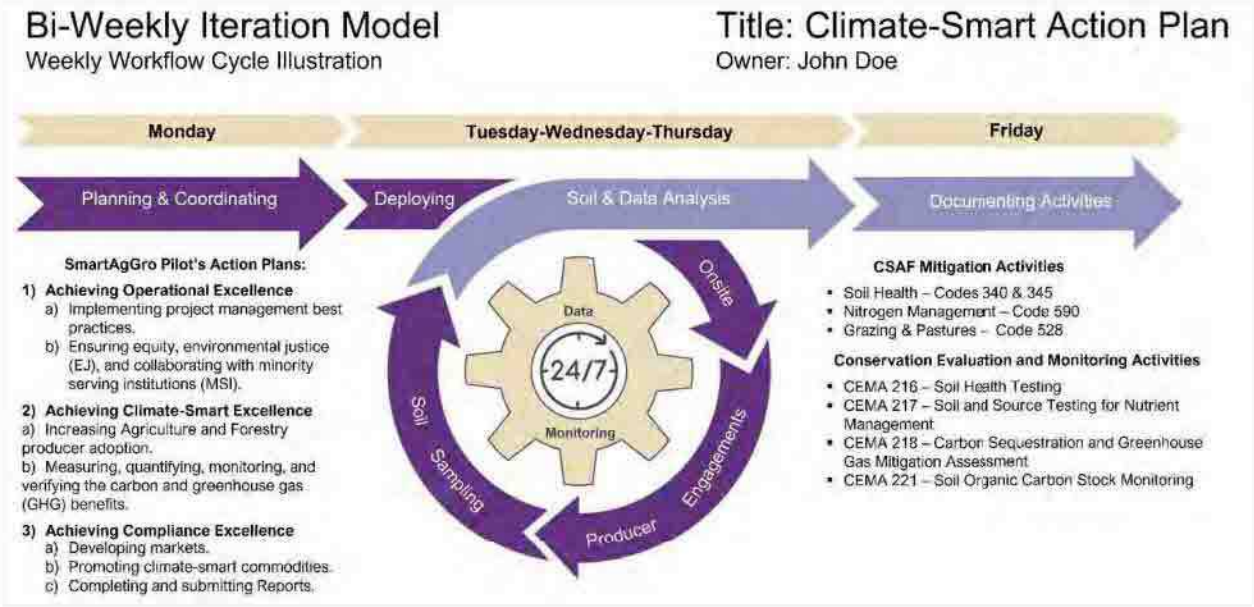
This meeting will occur on the first Monday of each iteration and includes VC's designated personnel, Team Vanguard Key personnel, sub-awardee POCs, and our SmartAgGro mobile team leaders. The meeting's agenda will cover the SmartAgGro Portfolio:

- Grant Objectives; Performance Requirements and Objectives
- Achieve Operations Excellence Priorities, Initiatives Updates, and Action Plan Activities
- Achieve Climate-Smart Excellence Priorities, Initiatives Updates, and Action Plan Activities

- Achieve Compliance Excellence Priorities, Initiatives Updates, and Action Plan Activities

Step 4A-1b Our Weekly Iteration Cycle Model Summary

Our weekly iteration cycle is a critical success enabler of our Integrated SAFe® Technical Approach. **Figure 4** provides a sample.



***Graphic 4** – A Sample Action Plan model of our Integrated SAFe® Technical Approach*

Each Action Plan Team (APT) will engage in daily 15-minute meetings called "Standups," where every team member reports on what they completed since the last "Standup" and what they plan to accomplish by the following "Standup" and any issues that they are encountering.

Standup meeting operations procedure saves time, ensures rapid and effective collaboration, and completes each performance requirement ahead of schedule. We will use "Burndown Charts" to track the progress of our APTs against each iteration's backlog. The Program Director "Product Owner" updates are conducted at the end of each iteration to gain validation of task completion and reduce the chances of missed requirements or incorrect information. This workflow cycle will allow the Program Director or any key personnel to participate in Standup meetings that may require attention and assistance at any given time.

The iterative execution and deliverable release model will make it easier for us to provide quick updates to USDA stakeholders and get input on any required changes to meet producer needs. Our SAFe® (Scrum) methodology for managing support services will result in significant project time and cost savings to USDA stakeholders while giving them the flexibility to change requirements and add additional updates to the deliverables even mid-way through the SmartAgGro Pilot.

Team Vanguard will use USDA resources and technologies such as USDA Climate Hubs, COMET-Farmer, COMET-Planner, the Climate Change Resource Center, and

other technologies such as Teralytic Soil Monitoring System and Microsoft Teams to support work management. These solutions will assist our entire team with producing high-quality products by utilizing standardized workflows, performance monitoring, and establishing collaborative communication to support rapid and consistent outcomes.

Step 5 Built-In Quality Control

Team Vanguard's members will report to our SmartAgGro Operations Manager (OM), conduct random quality assurance audits, and maintain the quality of all grant activities and deliverables per the Quality Control Surveillance Plan (QASP). Each member will also identify the root causes of variances and recommend measures to eradicate such conflicts to the SmartAgGro OM and PD promptly.

Team Vanguard's Built-In Quality practices will ensure that all requirements of the SmartAgGro Pilot, at every iteration, will meet appropriate quality standards throughout the Partnerships for Climate-Smart Commodities Program period of performance.

Team Vanguard's ability to deliver services with the shortest sustainable lead time, and adapt to rapidly changing business environments, depends on our service quality. So, built-in quality will be one of Team Vanguard's SAFe® Core Values, ensuring technical excellence and good service delivery. Built-in quality will also serve as a core principle of Team Vanguard's Lean-Agile Mindset, which will aid mitigation cost of delays (COD) associated with reworking and fixing defects.

Our SAFe® built-in quality philosophy will apply systems thinking to optimize and ensure a fast flow across the entire Service Delivery Value Stream and will make quality everyone's job. All staff and sub-awardees will share the goals and principles of built-in quality. Building high-quality from Team Vanguard will require ongoing training and commitment, but the business benefits warrant the investment:

- Higher customer satisfaction
- Improved velocity and delivery predictability
- Better system performance
- Improved ability to innovate, scale, and meet compliance requirements

Team Vanguard's staff and sub-awardees will integrate and use three subsets: 1) Flow, 2) Action Plan Quality, and 3) Production and Expansion Quality for service delivery. We will use them to apply built-in quality practices to our Action Plans.

1) Establishing **Flow** will be fundamental to all teams to remove the errors, rework, and other waste that slows throughput. Team Vanguard will operate in a fast, flow-based system to develop and release high-quality business capabilities that enable fast, reliable execution.
2) Team Vanguard's **Action Plan Quality** will determine how well our services can support current and future business needs. Our quality will make future requirements easy to implement, data easy to verify, and helps to satisfy deliverables.
3) As production and expansion as service delivery requirements evolve, Team Vanguard's **Production and Expansion Quality** will grow to support them. Applying good production and expansion coupling/cohesion and appropriate abstraction/encapsulation will make implementing production and expansion

quality standards easier to understand, modify, and support current and new requirements. Poor production and expansion quality may be challenging to understand and change, resulting in slower service delivery.

Step 6 Lines of Authority and Communication Flow

The lines of reporting authority and communication for the Partnerships for Climate-Smart Commodities grant are clear and direct. Team Vanguard's PD will have ultimate control, responsibility, and accountability to manage all of our resources, including the SmartAgGro Pilot staff and sub-awardees, and meet the cost, schedule, and technical objectives of the Partnerships for Climate-Smart Commodities grant. The PD will also be the sole authority on all aspects of USDA grant management, including communication, risk management, issue resolution, staffing, sub-awardee, and quality management. Operational issues that are unresolvable at the PD level will escalate to the Executive Leadership.

Based on our experience managing multiple contracts of similar or larger size and complexity, Team Vanguard has instituted an organizational structure customized and dedicated to addressing the SmartAgGro Pilot. Our organizational structure will enable us to complete all requirements under the Partnership for Climate-Smart Commodities on time and within budget through **dedicated and sustained management oversight** and well-defined, **direct, and clear lines of reporting, authority, and communication**.

Step 7 – The Smart-Way Incentive Program

Purpose. The Smart-Way Incentive Program (SWIP) aims to provide financial assistance and support to socially disadvantaged and underserved producers in agriculture and ranching to improve soil health and business operations management.

Goals and Objectives. The Smart-Way Incentive Program (SWIP) aims to improve soil health using CSAF, increase business operations' efficiency, and reduce production's environmental impact. Through the SWIP, we hope to increase crop yields, reduce the need for chemical inputs, and improve producers' profit margins. To achieve these goals, the SmartAgGro Pilot will provide materials and financial assistance for soil health improvements, training on business management practices, and market access opportunities.

Eligibility. Producers must be registered with the USDA and operate within Mississippi Congressional District 2 or surrounding state areas. Each prospective producer must complete a Current and Pending Funds Forms to mitigate duplicate funding receipt.

Criteria for Selecting Producers. Producers are selected based on completing learning requirements on time with the highest passing scores, demonstrating a need, and not participating or receiving funds from another USDA initiative for activities similar to the SmartAgGro Pilot.

Participation. To participate in the SWIP, producers must complete a one-week online course and develop a SmartAgGro Business Plan with technical assistance from Team Vanguard. Producers can enroll in the program during the enrollment period, which begins in the second month of each performance period, except for the first year, when

the enrollment period starts in the first month. A Funding Selection Board will review funding applications, and awardees will be required to sign an agreement affirming their compliance with the terms of the program. Non-selects may request feedback and recommendations for improvement.

Rewards and Incentives. The incentives offered through the SWIP include a combination of materials and a cash stipend valued at $26,500.00. These incentives support soil health and business operations management.

Tracking and Evaluation. Team Vanguard will track participant progress and evaluate the program's effectiveness using metrics such as the number of participants, the number of incentives earned, and the overall impact on soil health and business operations management. Team Vanguard will use two robust web-platforms (LMS365 and Monday) to support these activities.

Communication and Marketing. Team Vanguard will develop a communication plan to promote the SWIP and keep participants informed of their progress and any updates or changes.

Administration. The SWIP will be administered by Team Vanguard, with support from staff, a budget, and technology: LMS365 and Monday. The Partnerships will provide funding for Climate-Smart Commodities Grant.

Completion of Online Courses and Business Plans Timeline. Producers must complete the online course within a one-week timeframe. After completing their studies, prospective awardees have an additional two-week timeframe to finish their business plan. Once all producers submit their packets, a Selection Board will convene to review documentation and select awardees.

Disbursement Process. This process consists of phases: Phase 1 – Disbursement of Technology Bundle and Phase 2 – Disbursement of Funds. The technology bundle aims to equip producers with resources to improve their ability and capacity to manage and monitor farm operations and climate-smart practices. The cash bundle will aid the producers with the operational support of their farms or ranches. The disbursement process includes a 50% advance payment request option and a series of cash payments for each implemented practice. Eligible producers based on USDA guidelines, may request advance payments after completing Phase 1 specified tasks. These tasks include Teralytic training, pilot site operations setup, and demonstration of applying the selected Climate-Smart practices for their farm and ranch geo-space.

Fair and Equitable Distribution. To ensure equitable distribution of incentives, Team Vanguard will use a selection process that entails 1) Demonstrating Climate-Smart competency scores and interview questions (principles and quality centric).

Technical Support. To maximize the impact and sustainability of the program, Team Vanguard will provide ongoing support and technical assistance to participants after the initial funding period has ended. Our technical assistance includes computer and monitoring device support, online learning management system support, advisory support for agriculture and veterinary, and accessibility to markets to help producers sustain the improvements made through the SWIP.

Step 8 – Action Plans Development

Team Vanguard will provide details of our three (3) Action Plans in the following Execute Phase. We have placed a definitive version of each action plan in **Appendices B-E**.

As mentioned earlier, The SmartAgGro Action Plans) which are summarized as follows:

1) Operations Excellence Action Plan – The intent/purpose of this action plan focuses on implementing the SmartAgGro Pilot by using project management best practices to ensure the proper distribution of equity and environmental justice (EJ) and reach minority-serving institutions (MSI).
2) Climate-Smart Excellence Action Plan – The intent/purpose of this action plan focuses on the following:
    - Increasing Agriculture producer adoption of CSAF practices, activities, and systems by using USDA-approved sub-sets
    - Measuring, quantifying, monitoring, and verifying (M-Q-M-V) the carbon and greenhouse gas (GHG) benefits.
3) Brand and Compliance Excellence Action Plan – The intent/purpose of this action plan focuses on developing markets and promoting climate-smart commodities generated as a result of the SmartAgGro Pilot activities.

Step 9 –Transition Phases

Team Vanguard recognizes the importance of planning and executing a successful transition into new operations and subsequent performance optimization of the workforce to establish a high level of confidence with a particular emphasis on the smooth onboarding and growth of Team Vanguard. The team's priority is ensuring that the transition is expeditious and non-disruptive. The team will manage the transition activity and communicate to the USDA all events.

Critical portions of our transition team are already formed and ready to hit the ground running upon contract award notification to guarantee a smooth transition from grant award to full operational status. Key members of our team include our transition team lead and PD, who are already in place and ready to execute our transition plan upon notification to proceed. One of the significant risks associated with any transition is ensuring continuity of onboarding and communication, combined with task execution, grant performance, and responsibilities. Ensuring complete continuity of operations is our highest priority!

Step 9A Phase I - Pre-Award Activities

We believe the number one task to make this transition successful is capturing a high-performance workforce to maintain and enhance the quality of operations. To ensure we can accomplish this:

- We have selected our Program Director, a trusted advisor among government decision-makers, for his 21st Century and strategic mindset accompanied by tireless work ethic, energetic presentation, and process alignment competencies.

Mr. Gregory Hudson has blazed a trail of multimillion-dollar projects across industry channels, including government and defense.

- Our transition team is in place, and upon delivery of this proposal, we will have completed the initial planning for the SmartAgGro Pilot transition.
- Upon notification of a grant award, we will formally engage with key academic, business, and consulting sub-awardees.

Step 9B Phase II - Pre-Transition Phase

Pre-Transition Phase is a kickoff meeting to synchronize our transition efforts with specific UDSA requirements. During the kickoff meeting, our objective is to:

- Ensure mutual understanding of high-priority programmatic and technical issues.
- Schedule regular interaction among USDA, Team Vanguard management, and technical personnel.
- Review details of current/planned task schedules, support performance/special requirements, and identify work on the critical path during the transition period.
- Discuss liaison procedures between award notification and transition and provide a collaborative forum to introduce leadership.
- Clarify any additional USDA guidance for inclusion into the transition plan

The output of this session will be an agreed-upon transition plan ready for execution.

Step 9C Phase III - Transition Phase

We anticipate the start of the transition period to begin immediately upon grant award. As our team has often demonstrated, even though the transition has not yet occurred, we have already started the extensive planning required to execute a successful, smooth transition. The primary objectives associated with the change are staffing, knowledge transfer, and accomplishing required transition tasks. Coordination and cooperation with Mississippi Congressional District 2 and USDA Service Centers are essential to our transition planning.

Our transition team will maintain open lines of communication and cooperation with USDA's Partnership for Climate-Smart Commodities management throughout the transition period. We will communicate with onboarding personnel continually to ensure the process is proceeding on schedule, to gain complete familiarity with the tasks, and to identify any potential problems. In **Graphic 6**, Team Vanguard provides an example summary of the tasks we will accomplish before and during the transition.

Activities and Key Milestones	TACT		
	Pre-Award	Post-Award Notification	Transition
Dates per Solicitation	01/02/2023	02/01/2023	02/01/2023
Assign Genesis Team PM and Transition Team Leader	x		
Customer Visits (Determine Customer Req.)(ongoing process)		x	x
Establish Site Database (visits and research)	x	x	x
Identify Skill levels, employee contingency hire arrangements and Resource Requirements	x	x	
Select Genesis Team Members	x	x	
Develop Transition Plans	x	x	
Build Genesis Team/Site Resource Pools	x	x	
Place Recruiting Ads (if required)	x	x	x
Identify Transition Team Members	x	x	
Transition Team In Place	x	x	x
Meet/Brief HRC and Other Sites		x	x
Review Applicable Installation Regulations and Finalize Workflow, Scheduling, and Reporting Procedures		x	x
Interview, Screen, and Hire New Employees		x	x
Process Security Clearances		x	x
Employee Presentations, Meetings, Discussions		x	x
Conduct Mandatory Training/Provide Employee Training		x	x
Meet with incumbent contractor to discuss technical transition and employee welfare		x	x
Provide Required Documentation (Transition Products)			x
Initiate New Access or Escort Requirements			x
Transfer Functional Area Control and Responsibilities			x
Complete all Elements of Transition Plan; Develop Lessons Learned			x
Assume Full Responsibility of SFL-TAP Contract			03/13/2023

***Graphic 6** – Example Summary of Transition Activities*

It is not an all-inclusive list, and Team Vanguard knows there may be other activities we will perform. We will work hard with the USDA in the post-award period to identify and complete all tasks.

Our team will dedicate the necessary resources to partner with the USDA stakeholders to accomplish a seamless transition. Team Vanguard is committed to observing the government's priorities throughout the change and will work to resolve any issues that may adversely impact these priorities. These considerations will contribute to developing a firm schedule, which the USDA will document and approve. Team Vanguard will implement approaches to transition that are successful in our other similar projects. Our policy will be specifically tailored and adapted to the Partnerships for Climate-Smart Commodities Program requirements. We will draw upon many years of

experience to complete transition activities within the 1.5-month allowance proposal. We understand the processes involved and will implement them effectively and efficiently.

Our successful and proven approach to managing transition is the surest way to provide service stability for the SmartAgGro Pilot. The Transition Phase will have a kickoff meeting shortly after the contract award. Some additional key transition activities include:

- Becoming thoroughly familiar with work requirements and SOPs
- Completing staffing requirements, including hiring and orientation of new personnel
- Obtaining/verifying/transferring security clearances
- Completing employee in-house training requirements
- Developing or tailoring necessary work plans, processes, and procedures
- Completing any required equipment, facilities, and stock inventories or surveys
- Reviewing background materials on functional areas, including related work in progress
- Incumbent interface and data requirements
- Delivering required transition products

The transition team will meet with the USDA regularly to ensure the transition flows smoothly and efficiently with little impact on ongoing support functions and missions. Our PD will establish regular meetings with the USDA program administrator and government Grant Administrator. These meetings will identify potential risks/problems and develop and implement risk mitigation measures.

Also, these meetings will serve as a forum for tracking and briefing government officials on the status of the transition as well as identifying potential problems. This phase also allows the USDA and Team Vanguard to exchange critical information in support of initial transition meetings and contract execution.

Our team is particularly sensitive to the impact on grant personnel when an "onboarding" occurs. Team Vanguard's management will maintain open lines of communication and cooperation with the government management throughout the transition period.

We will continually communicate with hired and onboarding personnel to ensure the process is on schedule, gain complete familiarity with the tasks, and identify potential problems. Team Vanguard's Transition Timeline provides high-level duties during the transition process. In addition, this table highlights the role and responsibilities of Team Vanguard and the USDA.

Team Vanguard's managers will meet with the SmartAgGro Pilot sub-awardees to fully understand their responsibilities for their functional areas that support day-to-day operations.

Step 9D Phase IV - Continuity of Services & Operations Phase

The Continuity of Services and Operations Phase starts after the initial transition phase and runs throughout the contract's life. Throughout this period, Team Vanguard, after having accepted mission support responsibilities smoothly, will expand cross-training of similar specialties, execute all mission scope activities, implement continuous improvement initiatives, and provide status monitoring and reporting.

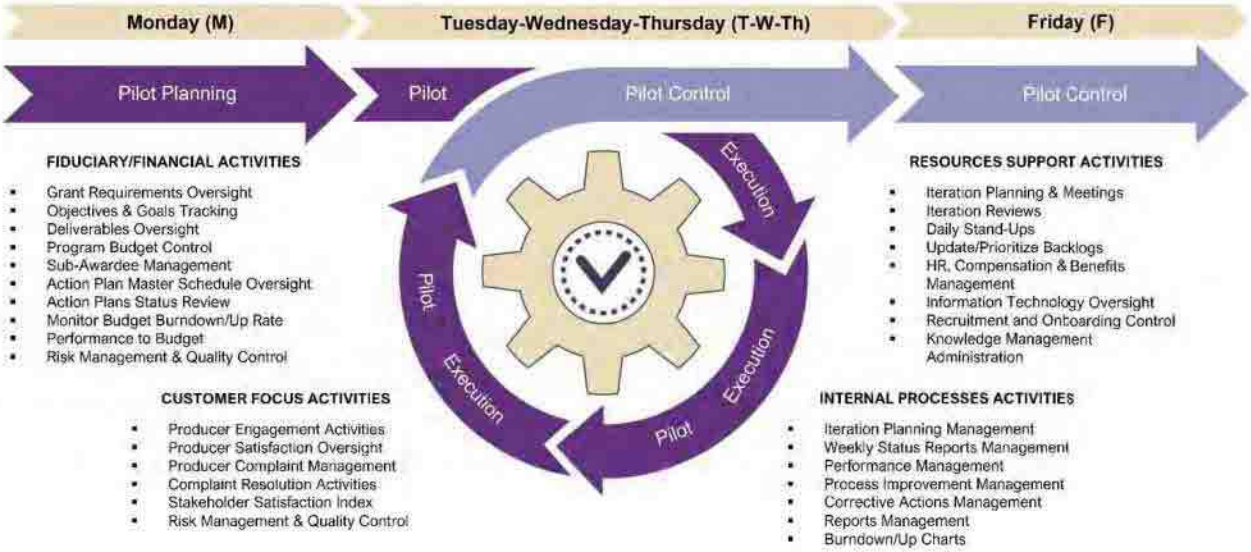
Team Vanguard realizes that specific dependencies among critical services, information resources, technical capabilities, locations, and equipment may exist when planning a transition phase. This sequencing will be identified and integrated into the scheduling and transition processes to maintain all operational performance requirements.

2.3 Execute Phase

2.3.1 Operations Excellence Action Plan

Purpose of Action Plan: In this Action Plan, we will focus on implementing the SmartAgGro Pilot by using project management best practices to ensure the proper distribution of equity and environmental justice (EJ) and reach minority-serving institutions (MSI).

Technical Approach and Methodology: Team Vanguard will apply our SAFe® infused Strategy-Focused approach, illustrated in **Graphic 6** below, to deliver quality services, products, and deliverables promptly.



***Graphic 6** – Team Vanguard's SAFe® infused Strategy-Focused Approach*

Team Vanguard's PD and Operations Manager will direct our onboarding team to mine our deep pool of experienced internal and external resources. These resources include experienced IT specialists, Analysts, Subject Matter Experts (SMEs), and Historical Black Colleges & Universities (HBCU) Scientists. Our team is skilled in Climate-Smart competencies, cutting-edge IT tools, technologies, methodologies, and standards (***USDA, ISO, SDLC, PMBOK, SAFe®, Balanced Scorecard (BSC), and SEI CMMI***) used at various Federal Agencies – to staff this pilot rapidly.

Each Action Plan has a dedicated Owner who will apply our ***Integrated SAFe® Technical (IST) & Strategy-Focused Program Management Approach*** as detailed in Section 2.1.2 Plan Phase-Step 4. In addition, these plans are based on **SAFe®, BSC, PMI, and SEI CMMI** best practices to meet the rigorous project and risk management requirements of the USDA and other Federal Agencies and complete tasks on time and within budget while maintaining the excellent quality of all deliverables.

Subtask 1: Maximize USDA Funding

Task Objective: To distribute funds to eligible rural producers to acquire essential resources that enable business operations through CSAF practices and innovative technology, ensuring underserved producers remain engaged and market competitive.

Feasibility Statement: Our approach will aid historical-underserved producers through an equitable distribution model by utilizing recognized fiduciary practices to avoid and minimize risks that could impact USDA's investments.

Subtask Owner(s): Program Director, Operations Manager, Sr. Contracts Administrator, Quality Control Specialist

Management Activity/Priority/Time:

1. Grant Requirements Oversight | Priority: High | Phases: Plan, Execute, Control, & Close (PECC)
2. Program Budget Control | Priority: High to Medium | Phases: PECC
3. Deliverables Oversight | Priority: High | Phases: PECC
4. Sub-Awardee Management | Priority: High to Medium | Phases: PECC

Pilot Scope Activity/Priority/Time:

1. Identify County USDA Service Centers | Priority: High | Phase: Initiate, Plan (IP)
2. Conduct Meeting Coordination | Priority: High | Phase: IP
3. Meet County USDA Service Centers POCs | Priority: High | Phase: IP
4. Obtain a List of USDA-verified Underserved Producers | Priority: High | Phase: IP

Risks:

1. Eligibility issues: There may be confusion or disagreement about which rural producers can receive funds. It may be challenging to determine who qualifies as an "underserved producer."
2. Misuse of funds: Some producers may use the funds for purposes other than acquiring essential resources or business operations. The abuse of funds could lead to inefficiencies or waste.
3. Lack of awareness about CSAF practices: Some producers may not be familiar with CSAF (community-supported agriculture) practices or the benefits they offer. The lack of understanding could hinder the effectiveness of the program.
4. Technology challenges: There may be difficulties in implementing innovative technology, such as if the technology is not user-friendly or if there are compatibility issues with existing systems.

Milestones:

1. Monthly and Quarterly Performance Outcome Reports
2. Monthly and Quarterly Budget Burn-Rate and Deviation Reports
3. Monthly and Quarterly Forecast Reports
4. Monthly and Quarterly Inventory Reports

Subtask 2: Reduce Barriers/Improve Support to Underserved Producers

Task Objective: To develop action plans to facilitate broad access to socially disadvantaged farmers and ranchers producers by implementing equitable opportunities to strengthen engagement activities.

Feasibility Statement: Our approach facilitates coordination and collaboration between our planning team and county-level USDA Service Centers to identify USDA-verified underserved producers for the SmartAgGro Pilot – Smart-Way Incentive Program.

Subtask Owner(s): Program Director, Operations Manager, Sr. Contracts Administrator, IT Specialist, Designated Sub-awardees

Management Activity/Priority/Time:

1. Create a streamlined verification workflow | Priority: High | Phases: PECC
2. Design an effective credentialing workflow | Priority: High | Phases: PECC
3. Utilize USDA Service Centers and resources | Priority: High | Phases: PECC
4. Use an LMS to develop, monitor, & assess producers | Priority: High | Phases: PECC

Pilot Scope Activity/Priority/Time:

1. Conduct producer verification for SWIP | Priority: High | Phases: Plan, Execute (PE)
2. Enroll eligible producers in SWIP credentialing program | Priority: High | Phases: PECC
3. Conduct knowledge & competency assistance | Priority: High | Phases: PECC
4. Conduct selection process for SWIP | Priority: High | Phases: PECC

Risks:

1. Equity issues: There may be challenges in ensuring that the action plans truly offer "equitable opportunities" to all socially disadvantaged farmers and ranchers producers. Some groups may experience disadvantages without proper planning and oversight.
2. Accessibility challenges: The action plans may not be widely accessible, primarily if they do not address the needs and capabilities of all socially disadvantaged producers in mind. Accessibility could limit the reach and impact of the program.
3. Implementation difficulties: There may be difficulties in implementing the action plans, such as insufficient resources or logistical challenges. These difficulties could hinder the effectiveness of the program.
4. Engagement issues: It may be challenging to strengthen engagement activities, especially if the socially disadvantaged producers have other priorities or challenges that prevent them from participating. These issues could reduce the overall impact of the program.

Milestones

1. Monthly and Quarterly Verification Process Report & Verified List of Producers.
2. Monthly and Quarterly Credentialing Process & Monthly and Quarterly Engagement Reports
3. Monthly and Quarterly Learning and Competency Statistical Reports

Subtask 3: Implement Program Management & Technical Assistance Best Practices

Task Objective: To utilize a repeatable two-week increment cycle to define, build, and execute essential program management workflows, activities, and automation capabilities that meet appropriate quality standards.

Feasibility Statement: Our approach will ensure the SmartAgGro Pilot integrates and implements industry best practices and standards for accurate planning and budgeting, program operations and scheduling; collecting and monitoring metrics and targets; issue & risk management, personnel & deliverables management, and quality assurance (QA) & quality control (QC).

Subtask Owner(s): Program Director, Operations Manager, Curriculum Developer, Designated sub-awardees.

Activity/Priority/Time:

1. Action Plan Master Schedule Oversight | Priority: High | Phase: PECC
2. Iteration Planning Management | Priority: High | Phase: PECC
3. Budget Operations Oversight | Priority: High | Phase: PECC
4. Risk Management & Quality Control | Priority: High | Phase: PECC

Pilot Scope Activities/Priority/Time:

1. Site Visit to Farms of County Selected Producers | Priority: High | Phase: PECC
2. Site Orientation and one (1) plot selection | Priority: High | Phase: PECC
3. Conduct Producer technical (equipment) training | Priority: High | Phase: PECC
4. Conduct validation of producers' technical skills | Priority: High | Phase: PECC

Risks:

1. Time constraints: The two-week increment cycle may not be sufficient to fully define, build, and execute all essential program management workflows, activities, and automation capabilities. These constraints could lead to incomplete or rushed work, which may not meet appropriate quality standards.
2. Quality standards: There may be challenges in ensuring that the work meets appropriate criteria, mainly if there are limited resources or the standards are unclear. The lack of standards could hinder the effectiveness of the program.
3. Automation issues: There may be difficulties in implementing automation capabilities, such as if the technology is not user-friendly or if there are compatibility issues with existing systems.
4. Workflow disruptions: The repeatable increment cycle may disrupt existing workflows or cause confusion among team members. These disruptions could lead to inefficiencies or delays.

Milestones:

1. Monthly & Quarterly Action Plan Status Reports
2. Monthly & Quarterly Iteration Planning Management Reports
3. Monthly & Quarterly Budget Operations Oversight Reports
4. Monthly & Quarterly Risk Management & Quality Control Reports

Subtask 4: Acquire a High-Performance Workforce

Task Objective: To implement an ongoing talent acquisition approach focusing on finding skilled candidates long-term to support the SmartAgGro Pilot's operations, customer learning journey, technical assistance, and compliance management.

Feasibility Statement: Our approach will facilitate processes for reviewing and updating our talent sourcing strategy, total benefits packages, working arrangements, role/task diversity, professional development, organizational reputation, and culture discriminators to ensure alignment with our hiring process to attract high-performers.

Subtask Owner(s): Operations Manager, HR Team, IT Specialist, Mobile Team, and ASU

Activity/Priority/Time:

1. Compliance & Performance Management | Priority: High | Phase: PECC
2. Reports Management | Priority: High | Phase: PECC
3. Corrective Actions Management | Priority: High | Phase: PECC
4. Climate-Smart Commodities Marketing | Priority: Medium | Phase: PECC

Pilot Scope Activity/Priority/Time:

1. Distribute SWIP Bundles to producers | Priority: High | Phase: PECC
2. Setup probe monitoring systems | Priority: High | Phase: PECC
3. Test probe monitoring systems | Priority: High | Phase: PECC
4. Execute soil enhancer application strategy | Priority: Medium | Phase: PECC

Risks:

1. Talent acquisition challenges: There may be difficulties in finding skilled candidates, especially if there is a limited pool of qualified candidates or if the talent competition is high. These challenges could hinder the success of the program.
2. Retention issues: Even with the identification of skilled candidates, there may be challenges in retaining them on a long-term basis. These issues could lead to persistent talent gaps and disruptions to program operations.
3. Customer satisfaction: If the program does not have sufficient skilled candidates to support the customer learning journey, it may negatively impact customer satisfaction.
4. Compliance risks: If the program does not have sufficient skilled candidates to manage compliance effectively, it may be at risk for non-compliance, leading to legal or financial consequences.
5. Technical assistance: If the program does not have enough skilled candidates to provide practical technical assistance, it may not be able to support its customers and partners fully.

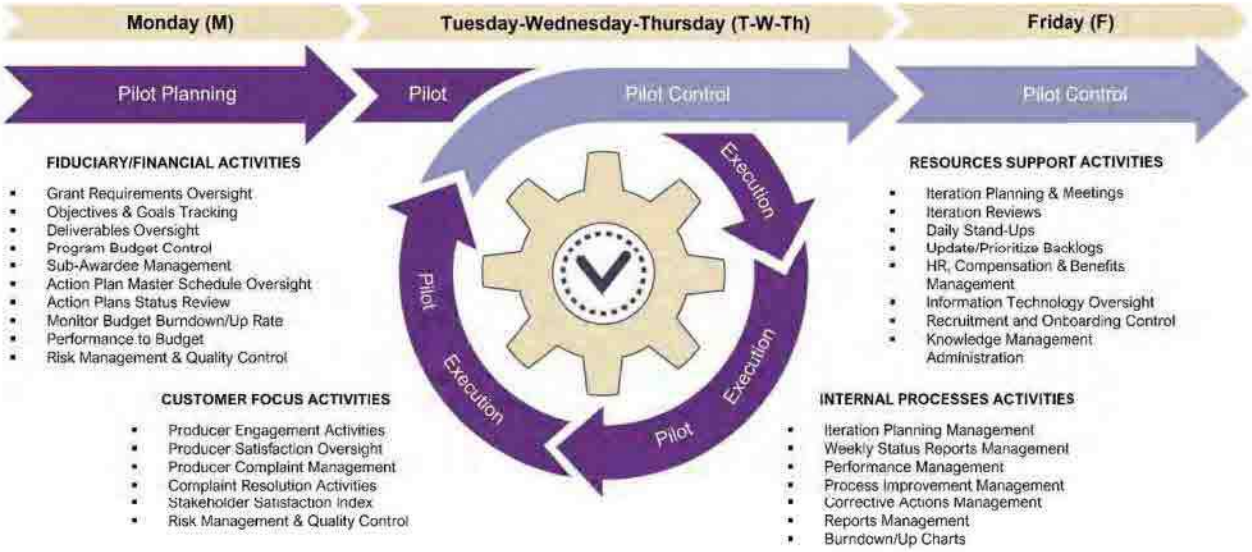
Milestones:

1. Monthly & Quarterly Compliance & Performance Reports
2. Quarterly Submission of Mandatory & Corrective Action Reports
3. Quarterly Climate-Smart Commodities Marketing & Distribution Reports

2.3.2 Climate-Smart Excellence Action Plan

Purpose of Action Plan: In this Action Plan, we will focus on increasing the adoption of Climate-Smart Agriculture and Forestry (CSAF) practices and systems that reduce agricultural greenhouse gas emissions (GHG); increasing carbon sequestration from the agriculture sector; demonstrating scalable and low-cost measurement/quantification, monitoring, reporting, and verification (MMRV) systems; and increasing innovation and consistency in measuring/quantifying farm-level GHG benefits.

Technical Approach and Methodology: Team Vanguard will apply our SAFe® infused Strategy-Focused approach, illustrated in **Graphic 6** below, to deliver quality services, products, and deliverables promptly.



***Graphic 6** – Team Vanguard's SAFe® infused Strategy-Focused Approach*

Team Vanguard's PD and Operations Manager will direct our onboarding team to mine our deep pool of experienced internal and external resources. These resources include experienced IT specialists, Analysts, Subject Matter Experts (SMEs), and Historical Black Colleges & Universities (HBCU) Scientists. Our team is skilled in Climate-Smart competencies, cutting-edge IT tools, technologies, methodologies, and standards (***USDA, ISO, SDLC, PMBOK, SAFe®, Balanced Scorecard (BSC), and SEI CMMI***) used at various Federal Agencies – to staff this pilot rapidly.

Each Action Plan has a dedicated Owner who will apply our ***Integrated SAFe® Technical (IST) & Strategy-Focused Program Management Approach*** as detailed in Section 2.1.2 Plan Phase-Step 4. In addition, these plans are based on **SAFe®, BSC, PMI, and SEI CMMI** best practices to meet the rigorous project and risk management requirements of the USDA and other Federal Agencies and complete tasks on time and within budget while maintaining the excellent quality of all deliverables.

Subtask 1: Maximize Support to Underserved Producers

Task Objective: To increase equitable enrollment of underserved/small producers by increasing producer understanding/awareness of CSAF practices & economic benefits and tracking implementation & Quantify Benefits of CSAF practices.

Feasibility Statement: Our approach will increase producer understanding and awareness of CSAF practices and the economic benefits they can provide, be able to attract more small, underserved producers to participate in the program, and give us the ability to track the implementation and quantify the benefits of these practices, which could further increase enrollment.

Subtask Owner(s): Operations Manager, ASU Extension, Curriculum Developer, IT Specialist, Mobile Teams, & Other Sub-awardees

Activity/Priority/Time:

1. Project Management Tasks | Priority: High | Phase: PECC
2. Track and Measure Tasks | Priority: High | Phase: PECC
3. Conduct Coordination Effort with Stakeholders | Priority: High | Phase: PECC
4. Climate-Smart Commodities Marketing | Priority: High | Phase: PECC

Pilot Scope Activity/Priority/Time:

1. Identify & Assess Barriers to Enrollment | Priority: High to Medium | Phase: PECC
2. Identify and Review CSAF Practices | Priority: High | Phase: PECC
3. Develop Marketing & Outreach Material | Priority: High | Phase: PECC
4. Initiate CSAF Training & Technical Support | Priority: High | Phase: Execute, Control & Close (ECC)

Risks:

1. Enrollment challenges: There may be challenges in increasing equitable enrollment of underserved/small producers, especially if there are eligibility issues or a lack of awareness about the program.
2. Understanding and awareness: There may be difficulties in increasing producer understanding and awareness of CSAF (community-supported agriculture) practices and their economic benefits, especially if limited resources are available for outreach and education.
3. Implementation tracking: There may be challenges in tracking the implementation of CSAF practices, especially if limited resources are available for monitoring and data collection.
4. Quantifying benefits: There may be difficulties in accurately quantifying the benefits of CSAF practices, especially if there are limited resources or the appropriate tools and methods are not in place.

Milestones:

1. Monthly and Quarterly Performance Outcome Reports
2. Monthly and Quarterly Tracking and Measurement Reports
3. Monthly and Quarterly Barriers to Accessing Reports
4. Monthly and Quarterly Marketing and Outreach Reports

Subtask 2: Increase Adoption of CSAF Practices & Systems

Task Objective: To expand the involvement of small or historically underserved producers by developing effective outreach and engagement strategies to minimize barriers to access, demonstrating consistency with the spirit of the Justice40 initiative, Building-On/ Expanding Current Education & Outreach Efforts, and strengthening/Increasing Technical Assistance.

Feasibility Statement: Our approach will address barriers to access and provide targeted outreach and engagement efforts to attract more small or historically underserved producers to participate by demonstrating consistency with the Justice40 initiative that promotes justice and equity. While building on current education and outreach efforts, strengthening technical assistance will also be effective in supporting the participation and success of these producers.

Subtask Owner(s): Operations Manager, ASU Extension, Curriculum Developer, IT Specialist, Mobile Teams, & Other Sub-awardees

Activity/Priority/Time:

1. Project Management Tasks | Priority: High | Phase: PECC
2. Track and Measure Tasks | Priority: High | Phase: PECC
3. Conduct Coordination Effort with Stakeholders | Priority: High | Phase: PECC
4. Climate-Smart Commodities Marketing | Priority: High | Phase: PECC

Pilot Scope Activity/Priority/Time:

1. Conduct Outreach and Engagement Planning | Priority: High | Phase: PECC
2. Conduct CSAF Mitigation Activities Planning | Priority: High | Phase: ECC
3. Conduct CEMA Activities Planning | Priority: High | Phase: ECC
4. Monitor & Assess Justice40 Initiative | Priority: High | Phase: PECC

Risks:

1. Access barriers: There may be challenges in minimizing barriers to access for small or historically underserved producers, especially if the outreach and engagement strategies are ineffective or if other structural or systemic barriers are in place.
2. Justice40 compliance: There may be challenges in demonstrating consistency with the spirit of the Justice40 initiative, especially if there are unclear guidelines or conflicting priorities.
3. Education and outreach: There may be challenges in building on or expanding current education and outreach efforts, especially if there are limited resources or a lack of engagement from target audiences.
4. Technical assistance: There may be challenges in strengthening or increasing technical assistance, especially if there are limited resources or issues with capacity.

Milestones:

1. Monthly and Quarterly Performance Outcome Reports
2. Monthly and Quarterly Budget Burn-Rate and Deviation Reports
3. Monthly and Quarterly Forecast Reports / Marketing and Outreach Reports

Subtask 3: Implement CSAF Production PASs on Working Land

Task Objective: To provide technical and financial assistance to producers to voluntarily implement climate-smart production practices and adaptation activities on working lands by mobilizing a scalable strategy to reduce risks and vulnerabilities, build resilience and help maintain productivity.

Feasibility Statement: Our approach will offer scalable technical and financial assistance to support producers with implementing climate-smart production practices and adaptation, which will help reduce risks and vulnerabilities, build resilience, and maintain productivity in a changing climate.

Subtask Owner(s): Operations Manager, ASU Extension, Curriculum Developer, IT Specialist, Mobile Teams, & Other Sub-awardees

Activity/Priority/Time:

1. Project Management Tasks | Priority: High | Phase: PECC
2. Track and Measure Tasks | Priority: High | Phase: PECC
3. Conduct Coordination Effort with Stakeholders | Priority: High | Phase: PECC
4. Climate-Smart Commodities Marketing | Priority: High | Phase: PECC

Pilot Scope Activity/Priority/Time:

1. Conduct Outreach and Engagement Activities | Priority: High | Phase: ECC
2. Conduct CSAF Mitigation Activities Training | Priority: High | Phase: ECC
3. Conduct CEMA Activities Training | Priority: High | Phase: ECC
4. Conduct Technology Training Activities | Priority: High | Phase: ECC

Risks:

1. Access challenges: There may be challenges in providing technical and financial assistance to producers, especially if there are eligibility issues or a lack of awareness about the program.
2. Voluntary participation: The program's success may depend on the voluntary involvement of producers, which may be difficult to secure if there is a lack of understanding or incentives for participating.
3. Implementation challenges: There may be difficulties in implementing climate-smart production practices and adaptation activities, especially if there are limited resources or logistical difficulties.
4. Scalability: It may be difficult to mobilize a scalable strategy that can effectively reduce risks and vulnerabilities, build resilience, and maintain productivity for many producers.
5. Funding constraints: There may not be enough financial assistance available to support the program's implementation by all eligible producers, which could lead to disappointment or resentment.

Milestones:

1. Monthly and Quarterly Performance Outcome Reports
2. Monthly and Quarterly Budget Burn-Rate and Deviation Reports
3. Monthly and Quarterly Forecast, Marketing, and Outreach Reports

Subtask 4: Integrate Modernized Information Technology

Task Objective: To utilize modernized technological tools: 1) COMET-Farm™ – an online carbon capture calculator; 2) COMET-Planner - a digital carbon sequestration and greenhouse gas mitigation and evaluation tool; and 3) Teralytic Soil Management Solution – an online data-driven precision agriculture solution that allows customers to understand plant nutrient(s) absorption and lose.

Feasibility Statement: Our approach will help producers calculate carbon capture, evaluate carbon sequestration and greenhouse gas mitigation, and understand plant nutrient absorption and loss, respectively, will be able to provide valuable information and support to producers in managing their operations more sustainably and efficiently.

Subtask Owner(s): Operations Manager, ASU Extension, Curriculum Developer, IT Specialist, Mobile Teams, & Other Sub-awardees

Activity/Priority/Time:

1. Project Management Tasks | Priority: High | Phase: PECC
2. Track and Measure Tasks | Priority: High | Phase: PECC
3. Conduct Coordination Effort with Stakeholders | Priority: High | Phase: PECC
4. Climate-Smart Commodities Marketing | Priority: High | Phase: PECC

Pilot Scope Activity/Priority/Time:

1. Conduct & Execute COMET-Farm™ Training | Priority: High | Phase: ECC
2. Conduct & Execute COMET-Planner Training | Priority: High | Phase: ECC
3. Conduct & Execute Teralytic Training | Priority: High | Phase: ECC
4. Conduct & Execute SumaGro Training | Priority: High | Phase: ECC

Risks:

- Technology adoption: There may be challenges in convincing producers to adopt modernized technological tools, especially if they are unfamiliar with them or if there are issues with user-friendliness.
- Compatibility issues: There may be challenges in integrating the technological tools with existing systems or processes, especially if there are compatibility issues.
- Data Security: There may be concerns about data security, especially if the tools involve collecting and storing sensitive information.
- Cost: The technological tools may be expensive, which could be a barrier for some producers.
- Training: There may be challenges in providing adequate training to producers on how to use the technological tools, especially if limited resources are available for training.

Milestones:

1. Monthly and Quarterly Performance Outcome Reports
2. Monthly and Quarterly Budget Burn-Rate and Deviation Reports
3. Monthly and Quarterly Forecast Reports
4. Monthly and Quarterly Marketing and Outreach Reports

Subtask 5: Maximize Carbon Sequestration & Reduce GHG Emission

Task Objective: To identify and select specific CSAF practices and technologies that deliver climate outcomes, including 1) GHG emission reductions, 2) Carbon sequestration, and 3) Climate adaptation and resilience.

Feasibility Statement: Our approach will focus on CSAF practices and technologies that effectively address climate-related goals that support producers in implementing more sustainable and resilient production systems.

Subtask Owner(s): Operations Manager, ASU Extension, Curriculum Developer, IT Specialist, Mobile Teams, & Other Sub-awardees

Activity/Priority/Time:

1. Project Management Tasks | Priority: High | Phase: PECC
2. Track and Measure Tasks | Priority: High | Phase: PECC
3. Conduct Coordination Effort with Stakeholders | Priority: High | Phase: PECC
4. Climate-Smart Commodities Marketing | Priority: High | Phase: PECC

Pilot Scope Activity/Priority/Time:

1. Ongoing COMET-Farm™ Activities | Priority: High | Phase: ECC
2. Ongoing COMET-Planner Activities | Priority: High | Phase: ECC
3. Ongoing Teralytic Activities | Priority: High | Phase: ECC
4. Ongoing SumaGro & Lab Activities | Priority: High | Phase: ECC

Risks:

1. Selection challenges: There may be challenges in identifying and selecting specific CSAF (community-supported agriculture) practices and technologies that deliver on climate outcomes, especially if there is a lack of information or conflicting priorities.
2. GHG emission reductions: There may be difficulties in accurately measuring and documenting GHG emission reductions, especially if there are limited resources or the appropriate tools and methods are not in place.
3. Carbon sequestration: There may be challenges in accurately measuring and documenting carbon sequestration, especially if there are limited resources or the appropriate tools and methods are not in place.
4. Climate adaptation and resilience: There may be challenges in assessing the effectiveness of CSAF practices and technologies in climate adaptation and stability, especially if there are limited resources or the appropriate tools and methods are not in place.

Deliverables:

1. Monthly and Quarterly Performance Outcome Reports
2. Monthly and Quarterly Budget Burn-Rate and Deviation Reports
3. Monthly and Quarterly Forecast, Marketing, and Outreach Reports

Subtask 6: Increase Data-Driven Results

Task Objective: To promote and influence CSAF practices that result in measurable, quantifiable, qualifiable, and verifiable carbon reductions and sequestration using newly available technologies and satellite connectivity to estimate soil carbon and quantify GHG benefits.

Feasibility Statement: Our approach will use technologies and connectivity to accurately measure and verify the carbon benefits of CSAF practices while demonstrating the effectiveness of these practices in reducing GHG emissions and sequestering carbon. This information will be valuable in convincing producers to adopt CSAF practices and supporting the development of policies and programs that encourage their use.

Subtask Owner(s): Operations Manager, ASU Extension, Curriculum Developer, IT Specialist, Mobile Teams, & Other Sub-awardees

Activity/Priority/Time:

1. Project Management Tasks | Priority: High | Phase: PECC
2. Track and Measure Tasks | Priority: High | Phase: PECC
3. Conduct Coordination Effort with Stakeholders | Priority: High | Phase: PECC
4. Climate-Smart Commodities Marketing | Priority: High | Phase: PECC

Pilot Scope Activity/Priority/Time:

1. Ongoing COMET-Farm™ Activities | Priority: High | Phase: ECC
2. Ongoing COMET-Planner Activities | Priority: High | Phase: ECC
3. Ongoing Teralytic Activities | Priority: High | Phase: ECC
4. Ongoing SumaGro & Lab Activities | Priority: High | Phase: ECC

Risks:

1. Measuring and quantifying benefits: There may be difficulties in accurately measuring, quantifying, qualifying, and verifying the carbon reductions and sequestration resulting from CSAF practices, especially if there are limited resources or the appropriate tools and methods are not in place.
2. Technology adoption: There may be challenges in convincing producers to adopt the new technologies and satellite connectivity needed to estimate soil carbon and quantify GHG benefits, especially if they are unfamiliar with them or if there are issues with user-friendliness.
3. Compatibility issues: There may be challenges in integrating the technological tools with existing systems or processes, especially if there are compatibility issues.
4. Data security: There may be concerns about data security, especially if the tools involve collecting and storing sensitive information.

Milestones:

1. Monthly and Quarterly Performance Outcome Reports
2. Monthly and Quarterly Budget Burn-Rate and Deviation Reports
3. Monthly and Quarterly Forecast Reports / Marketing and Outreach Reports

Subtask 7: Implement Innovative, Scalable, & Reliable MMRV Systems

Task Objective: To provide strategies, methods, and tools built on existing research; scientifically sound; accurately captures real reductions; and flexible enough to facilitate streamlined data collection and research reporting.

Feasibility Statement: Our approach will develop resources that meet the above criteria while supporting producers in accurately measuring and reporting on the carbon benefits of their operations and demonstrating their practices' effectiveness. This information will be valuable in convincing producers to adopt CSAF practices and supporting the development of policies and programs that encourage their use.

Subtask Owner(s): Operations Manager, ASU Extension, Curriculum Developer, IT Specialist, Mobile Teams, & Other Sub-awardees

Activity/Priority/Time:

1. Project Management Tasks | Priority: High | Phase: PECC
2. Track and Measure Tasks | Priority: High | Phase: PECC
3. Conduct Coordination Effort with Stakeholders | Priority: High | Phase: PECC
4. Climate-Smart Commodities Marketing | Priority: High | Phase: PECC

Pilot Scope Activity/Priority/Time:

1. Analyze COMET-Farm™ Data Gathering Activities | Priority: High | Phase: ECC
2. Analyze COMET-Planner Data Gathering Activities | Priority: High | Phase: ECC
3. Analyze Teralytic Data Gathering Activities | Priority: High | Phase: ECC
4. Analyze SumaGro & Lab Data Gathering Activities | Priority: High | Phase: ECC

Risks:

1. Research challenges: There may be challenges in providing strategies, methods, and tools built on existing research, especially if the research is outdated or limited resources are available for review.
2. Scientific soundness: There may be concerns about the stability of the strategies, methods, and tools, primarily if they are based on sound scientific principles or well-supported by research.
3. Real reductions: There may be challenges in accurately capturing actual decreases, especially if there are limitations in the data collection or analysis methods.
4. Data collection and reporting: There may be difficulties in facilitating streamlined data collection and research reporting, especially if there are limited resources or issues with data management or analysis.
5. Flexibility: The strategies, methods, and tools may need to be flexible enough to adapt to changing circumstances or needs, which could be challenging if not designed flexibly.

Milestones:

1. Monthly and Quarterly Performance Outcome Reports
2. Monthly and Quarterly Budget Burn-Rate and Deviation Reports
3. Monthly and Quarterly Forecast, Marketing, and Outreach Reports

Subtask 8: Integrate Modernized Information Technology

Task Objective: To utilize new technology tools and integrated fertilizer & soil amendment: 1) Teralytic Soil Management Solution – an online data-driven precision agriculture solution that allows customers to understand plant nutrient(s) absorption and loss; and 2) SumaGrow - Liquid Microbial Soil Amendment especially designed for crop production by unlocking bound nutrients for plant use; improving fertilizer efficiency; and improving plant stress tolerance.

Feasibility Statement: Our approach will help producers understand plant nutrient absorption and loss and improve fertilizer efficiency and plant stress tolerance, respectively, and will be able to support producers in managing their operations more sustainably and efficiently.

Subtask Owner(s): Operations Manager, ASU Extension, Curriculum Developer, IT Specialist, Mobile Teams, & Other Sub-awardees

Activity/Priority/Time:

1. Project Management Tasks | Priority: High | Phase: PECC
2. Track and Measure Tasks | Priority: High | Phase: PECC
3. Conduct Coordination Effort with Stakeholders | Priority: High | Phase: PECC
4. Climate-Smart Commodities Marketing | Priority: High | Phase: PECC

Pilot Scope Activity/Priority/Time:

1. Analyze COMET-Farm™ Data Gathering Activities | Priority: High | Phase: ECC
2. Analyze COMET-Planner Data Gathering Activities | Priority: High | Phase: ECC
3. Analyze Teralytic Data Gathering Activities | Priority: High | Phase: ECC
4. Analyze SumaGro & Lab Data Gathering Activities | Priority: High | Phase: ECC

Risks:

1. Compatibility issues: There may be challenges in integrating the technology tools, fertilizers, and soil amendments with existing systems or processes, mainly if compatibility issues exist.
2. Data security: There may be concerns about data security, especially if the tools involve collecting and storing sensitive information.
3. Cost: The technology tools, fertilizers, and soil amendments may be expensive, which could be a barrier for some producers.
4. Training: There may be challenges in providing adequate training to producers on using the technology tools, fertilizers, and soil amendments, especially if limited resources are available for training.
5. Performance: There may be issues with the version of the technology tools, fertilizers, and soil amendments, which could impact their effectiveness and adoption by producers.

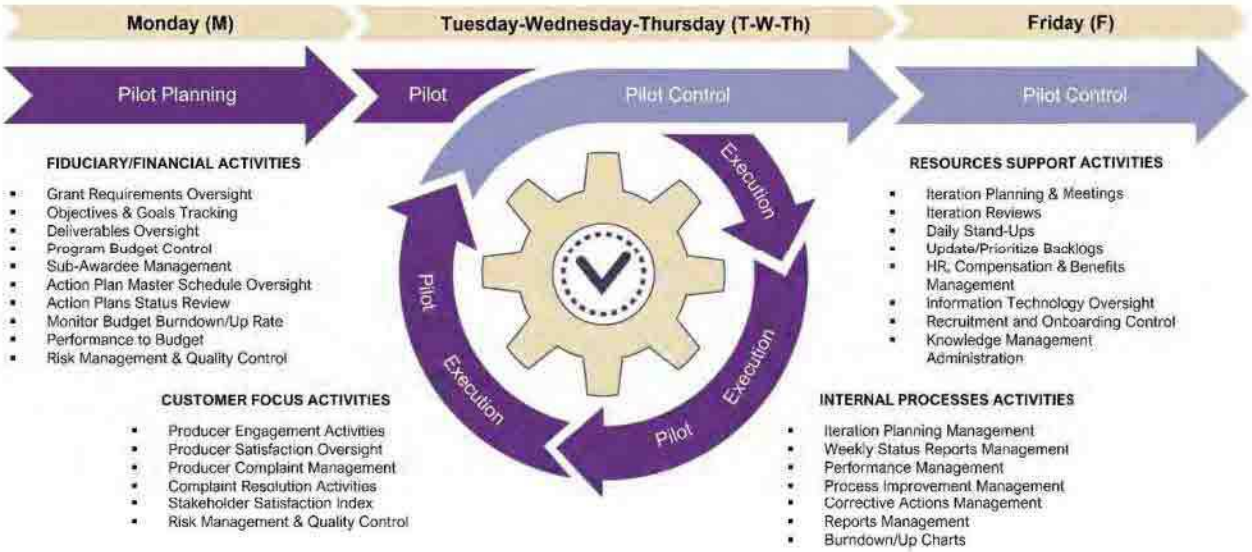
Milestones:

1. Monthly and Quarterly Performance Outcome Reports
2. Monthly and Quarterly Budget Burn-Rate and Deviation Reports
3. Monthly and Quarterly Forecast, Marketing, and Outreach Reports

2.3.3 Brand & Compliance Excellence Action Plan

Purpose of Action Plan: We will focus on increasing the competitive advantage of underserved producers by expanding their market visibility to improve sales and profit margins while demonstrating our capabilities to develop the adoption of CSAF practices and deliver compliant results to the USDA.

Technical Approach and Methodology: Team Vanguard will apply our SAFe® infused Strategy-Focused approach, illustrated in **Graphic 6** below, to deliver quality services, products, and deliverables promptly.



***Graphic 6** – Team Vanguard's SAFe® infused Strategy-Focused Approach*

Team Vanguard's PD and Operations Manager will direct our onboarding team to mine our deep pool of experienced internal and external resources. These resources include experienced IT specialists, Analysts, Subject Matter Experts (SMEs), and Historical Black Colleges & Universities (HBCU) Scientists. Our team is skilled in Climate-Smart competencies, cutting-edge IT tools, technologies, methodologies, and standards (***USDA, ISO, SDLC, PMBOK, SAFe®, Balanced Scorecard (BSC), and SEI CMMI***) used at various Federal Agencies – to staff this pilot rapidly.

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Subtask 1: Maximize USDA & Ag-Producer's Value

Task Objective: To implement a pilot that promotes the adoption of CSAF practices on a large scale; the inclusion of measurement/quantification, monitoring, reporting, and verification planning; and the development of a marketing strategy that creates market expansion for climate-smart commodities generated as a result of SmartAgGro Pilot activities.

Feasibility Statement: Our approach will demonstrate a scalable and low-cost measurement/quantification, monitoring, reporting, and verification (MMRV) system to test and evaluate traceability efficiency from supply chains through commodity production to consumer delivery while simultaneously increasing the competitive advantage of underserved producers.

Subtask Owner(s): PD, Operations Manager, and Designated Key Personnel

Management Activity/Priority/Time:

1. Project Management Tasks | Priority: High | Phase: PECC
2. Track and Measure Tasks | Priority: High | Phase: PECC
3. Conduct Coordination Effort with Stakeholders | Priority: High | Phase: PECC
4. Climate-Smart Commodities Marketing | Priority: High | Phase: PECC

Pilot Scope Activity/Priority/Time:

1. Compliance Management | Priority: High | Phase: ECC
2. Monitor Marketing Strategy Performance | Priority: High | Phase: PECC
3. Evaluate Supply Chains Traceability Efficiency | Priority: High | Phase: PECC
4. Monitor MMRV System Performance | Priority: High | Phase: PECC

Risks:

1. Measurement/quantification issues: There may be difficulties in accurately measuring and quantifying the impact of the pilot, especially if there are limited resources or the appropriate tools and methods are not in place.
2. Monitoring and reporting challenges: There may be challenges in effectively monitoring and reporting on the pilot's progress, especially if there are limited resources, data collection, or analysis issues.
3. Verification planning: There may be challenges in developing a thorough verification plan, especially if the appropriate methods and protocols are not in place.
4. Marketing strategy: There may be challenges in developing and implementing an effective marketing strategy, especially if there is a limited understanding of target markets or few resources available.

Milestones:

1. Monthly and Quarterly Grant Compliance Reports
2. Monthly and Quarterly Budget Control Reports / Stakeholder Satisfaction Index Reports
3. Monthly and Quarterly Marketing Performance Report
4. Monthly and Quarterly Supply Chain Traceability Efficiency Reports
5. Monthly and Quarterly MMRV Assessment Trend Reports

Subtask 2: Build Trusted Partnership & Brand Awareness

Task Objective: To design and implement a strategy that influences underserved producers to adopt CSAF practices and become reliable climate leaders in soil health. These activities will improve the production of higher yields in quality crops and animals and increase market visibility improve profit margins. See **Appendix G –** Detailed Marketing Plan.

Feasibility Statement: Our approach will facilitate increased market visibility and higher yields in quality crops and animals to increase market visibility and improve profit margins.

Subtask Owner(s): PD, Operations Manager, and Designated Key Personnel

Management Activity/Priority/Time:

1. Project Management Tasks | Priority: High | Phase: PECC
2. Track and Measure Tasks | Priority: High | Phase: PECC
3. Conduct Coordination Effort with Stakeholders | Priority: High | Phase: PECC
4. Climate-Smart Commodities Marketing | Priority: High | Phase: PECC

Pilot Scope Activities/Priority/Time:

1. Monitor Marketing Strategy Performance | Priority: High | Phase: PECC
2. Evaluate Supply Chains Traceability Efficiency | Priority: High | Phase: PECC
3. Monitor MMRV System Performance | Priority: High | Phase: PECC

Risks:

1. Leadership challenges: Establishing underserved producers as reliable climate leaders in soil health improvement may be difficult, especially if facing other challenges or distractions.
2. Yield and quality issues: There may be challenges in achieving higher yields and improving the quality of crops and animals, especially if there are issues with soil health or other factors that impact production.
3. Market visibility: If the strategy does not effectively increase market visibility for the products produced by underserved producers, it may be challenging to improve profit margins.
4. Implementation difficulties: There may be difficulties in designing and implementing an effective strategy, such as insufficient resources or logistical challenges.

Milestones:

1. Monthly and Quarterly Producer Engagement Report
2. Monthly and Quarterly Producer Satisfaction Report
3. Monthly and Quarterly Producer Complaint Report

Subtask 3: Implement Unquestionable Compliance

Task Objective: To implement USDA-approved climate-smart production practices, activities, and systems on working lands; use USDA-approved Conservation Evaluation and Monitoring Activity procedures to guide our MQMV activities to document carbon and greenhouse gas (GHG) benefits; and develop markets to promote the resulting climate-smart commodities.

Feasibility Statement: Our approach will ensure producers understand the economic and adaptation benefits of CSAF practices and how these practices aid with increasing markets (supply and demand) for climate-smart commodities.

Subtask Owner(s): PD, Operations Manager, and Designated Key Personnel

Management Activities/Priority/Time:

1. Administrative Standards-Operations Reviews | Priority: High | Phase: PECC
2. Compliance Reviews | Priority: High | Phase: PECC
3. Compliance Management | Priority: High | Phase: PECC
4. Continuous Improvement & Corrective Actions | Priority: High | Phase: PECC

Pilot Scope Activities/Priority/Time:

1. Monitor Marketing Strategy Performance | Priority: High | Phase: PECC
2. Evaluate Supply Chains Traceability Efficiency | Priority: High | Phase: PECC
3. Monitor MMRV System Performance | Priority: High | Phase: PECC
4. Compliance Reviews | Priority: High | Phase: PECC

Risks:

1. Approval challenges: There may be challenges in obtaining USDA approval for climate-smart production practices, activities, and systems, especially if they are not in line with existing guidelines or if there are other barriers to acceptance.
2. Compliance risks: If the program does not follow USDA-approved Conservation Evaluation and Monitoring Activity procedures, it may be at risk for non-compliance, leading to legal or financial consequences.
3. Carbon and GHG benefits: There may be challenges in accurately documenting the program's carbon and greenhouse gas benefits, especially if there are limited resources or the appropriate tools and methods are not in place.
4. Market development: There may be challenges in developing markets for climate-smart commodities, especially if there is limited awareness or demand for these products.

Milestones:

1. Monthly & Quarterly Administrative Standards-Operations Review Reports
2. Monthly & Quarterly Compliance Review Reports
3. Monthly & Quarterly Compliance Management Reports
4. Monthly & Quarterly Continuous Improvement & Corrective Actions Reports

Subtask 4: Build an Accountable Organization

Task Objective: To establish an organizational culture built on integrity, accountability, responsibility, quality, consistency, reliability, and continuous improvement from committed leaders with a common purpose, shared vision for our mission, passion for team members' welfare, and producers' success.

Feasibility Statement: Our approach will embrace four essential lead indicators (culture, leadership, alignment, and teamwork) to create value by understanding the mission, vision, and values of Team Vanguard; focusing on the customer; being creative and innovative; delivering results, creating accountability, and communicating openly; and working as a team.

Subtask Owner(s): PD, Operations Manager, and Designated Key Personnel

Management Activities Activity/Priority/Time:

1. Project Management Tasks | Priority: High | Phase: PECC
2. Track and Measure Tasks | Priority: High | Phase: PECC
3. Conduct Coordination Effort with Stakeholders | Priority: High | Phase: PECC
4. Climate-Smart Commodities Marketing | Priority: High | Phase: PECC
5. Leadership Accountability Management | Priority: High | Phase: PECC
6. Surveying | Priority Organization Climate Surveying | Priority: High | Phase: PECC

Pilot Scope Activities/Priority/Time:

1. Establish Organizational Culture | Priority: High | Phase: PECC
2. Foster Accountability | Priority: High | Phase: PECC
3. Promote Continuous Improvement | Priority: High | Phase: PECC
4. Ensure Quality | Priority: High | Phase: PECC
5. Support Team Members | Priority: High | Phase: PECC

Risks:

1. Culture change: Establishing a new organizational culture may be challenging, especially if the existing culture is profoundly ingrained or resistant to change.
2. Leadership challenges: It isn't easy to ensure that all leaders are committed to the new culture and willing to model the desired behaviors.
3. Team members' buy-in: Getting all team members on board with the new culture may be challenging, especially if they lack alignment with the common purpose and shared vision.
4. Quality issues: If the new culture does not prioritize quality, maintaining high standards and achieving desired outcomes may be challenging.
5. Consistency and reliability: If the new culture does not prioritize consistency and reliability, it may not be easy to maintain trust and credibility with stakeholders.

Milestones:

1. Monthly & Quarterly Leadership Accountability Reports
2. Quarterly Sensing Session Reports
3. Monthly Quarterly Policy Adherence Reports
4. Quarterly Team Satisfaction Reports

2.4 Control Phase

2.4.1 Control Phase Approach

Team Vanguard's Project Control Phase is the element of our project that will keep it on track, on time, and within budget. The primary objective of this phase is to maintain the schedule, budget, and scope. It consists of a series of processes to observe project execution, identify potential problems, and conduct corrective action if necessary.

This phase of the SmartAgGro Pilot is an essential part of our program management process. It involves monitoring the progress of the SmartAgGro Pilot and making any necessary adjustments to our action plans to ensure that the pilot stays on track.

The Control phase is where Team Vanguard will monitor the execution of activities and produce the required deliverables. During this phase, Team Vanguard will complete the project deliverables—the producers' performance and approval of the work. Our activities will begin after our action plans are approved and allocating the resources necessary for monitoring and controlling tasks.

The Control phase is usually the most extended in our project management life cycle. This phase will end when the deliverable has met the customer's acceptance criteria established in the action plans.

Throughout the performance, we will closely monitor the progress of the SmartAgGro Pilot, managing any changes that may arise and communicating with stakeholders to keep them informed of the pilot's progress. We will also work to identify and address any risks that may impact the SmartAgGro and make necessary adjustments to the project plan to stay on track.

Below are vital activities carried out during the Control Phase of the SmartAgGro Pilot:

1. Monitor Progress. The project manager and the team closely monitor the project's progress and compare it to the project plan. This process may involve using project management software, status reports, and progress meetings to track progress.
2. Manage Changes. The project manager is responsible for managing any changes to the project that stakeholders may request. These changes may involve assessing the impact on the project and determining whether they are feasible to implement.
3. Communicate with Stakeholders. The project manager communicates with stakeholders to inform them of the project's progress and any issues. These communications may involve regular status updates, progress reports, and meetings.
4. Identify and Address Risks. The project manager works with the team to identify and address any risks that may impact the project. These processes may involve developing contingency plans to mitigate the risks and ensure the project stays on track.
5. Adjust the Project Plan. These adjustments may involve adjusting the project's scope, budget, or timeline or finding alternative solutions to problems that arise. If

any deviations from the project plan occur, the project manager and the teamwork to address them promptly.

6. Document Progress and Results. The project manager and the team will document the progress and results of the project to provide a record of completed activities and inform future projects.
7. Evaluate the Project. Once the project is complete, the project manager and the team evaluate the project to determine what went well and what could improve in future projects. These evaluations may involve conducting a post-project review or a lessons-learned session.

During the Control Phase, the PD, Operations Manager, and designated leaders will closely monitor the pilot's progress and compare it to the action plans. We will use various tools and techniques, such as project management software, status reports, and progress meetings.

If any deviations from the plan occur, Team Vanguard will work to address them promptly. This process may involve adjusting the project's scope, budget, or timeline or finding alternative solutions to problems that arise.

The PD will also be responsible for managing any changes to the pilot that stakeholders may request. This action may involve assessing the impact of the changes on the pilot and determining whether they are feasible to implement.

Throughout the Control Phase, the PD will also communicate with stakeholders to inform them of the pilot's progress and any issues that arise. We will do this through regular status updates, progress reports, and meetings.

Finally, the PD will work with the team to identify and address any risks that may impact the pilot. These activities will involve developing contingency plans to mitigate the risks and ensure the project stays on track.

Once the pilot is complete, the Control Phase ends, and the Close Phase begins. During this phase, the PD and the team will complete any remaining work on the pilot, document the results, and formally close the project. We also evaluate the pilot to determine what went well and improvements for future projects.

In the next section, Team Vanguard describes our SAFe® Iteration (the basic building block for our standard, fixed-length two-week timebox), where our Teams demonstrate our ability to deliver incremental value in the form of measurable performance outcomes and deliverables.

2.4.2 Team Vanguard's Project Control Building Block

Iterations are the heartbeat of Team Vanguard's service delivery processes, and they create our cadence for work within a standard, fixed-length timebox. All labor necessary to complete our action plans, objectives, tasks, and milestones (planning, control phase activities, team synchronization, travel, producer engagement visits, monitoring, and iteration reviews occurs within each iteration.

Below is Team Vanguard's annual Iteration Calendar with high-order milestones.

Iteration	Milestone Dates	Quarters	Project Phases
1. Iteration 1	01/01 – 13/2023	1st Quarter	
2. Iteration 2	01/16 – 27/2023		
3. Iteration 3	01/30/2023 – 02/10/2023		
4. Iteration 4	02/13 – 24/2023		
5. Iteration 5	02/27/2023 – 03/10/2023		Projected Award/ Initiate/Plan Phase
6. Iteration 6	03/13 – 24/2023		
7. Iteration 7	03/27/2023 – 04/07/2023	2nd Quarter	
8. Iteration 8	04/10 – 21/2023		Execute Phase
9. Iteration 9	04/24/2023 – 05/05/2023		
10. Iteration 10	05/8 – 19/2023		
11. Iteration 11	05/22/2023 – 06/02/2023		
12. Iteration 12	06/5 – 16/2023		
13. Iteration 13	06/19 – 30/2023		
14. Iteration 14	07/03 – 14/2023	3rd Quarter	Control Phase
15. Iteration 15	07/17 – 28/2023		
16. Iteration 16	07/31/2023 – 08/11/2023		
17. Iteration 17	08/14 – 25/2023		
18. Iteration 18	08/28/2023 – 09/08/2023		
19. Iteration 19	09/11 – 22/2023		
20. Iteration 20	09/25/2023 – 10/06/2023	4th Quarter	
21. Iteration 21	10/9 – 20/2023		
22. Iteration 22	10/23/2023 – 11/03/2023		
23. Iteration 23	11/06 – 17/2023		Close Phase
24. Iteration 24	11/20/2023 – 12/01/2023		
25. Iteration 25	12/4 – 15/2023		
26. Iteration 26	12/18 – 29/2023		

Team Vanguard has discovered that early exposure to our iteration calendar allows our personnel to properly align their action tasks to iteration goals in support of our built-in quality guardrails. Throughout the annual iteration cycle, teams elaborate on the acceptance criteria for each standard, fixed-length timebox, and estimate the effort to

complete it. Each team selects its scheduled activities based on its available capacity for the iteration. Each team will plan the work necessary for each item chosen to create an increment of value that meets the Definition of Done (DoD), ensuring that it can be considered complete. The continuous development of our incremental system functionality requires a scaled definition of done to ensure that work is done right.

2.4.3 Team Vanguard's Automated Project Management

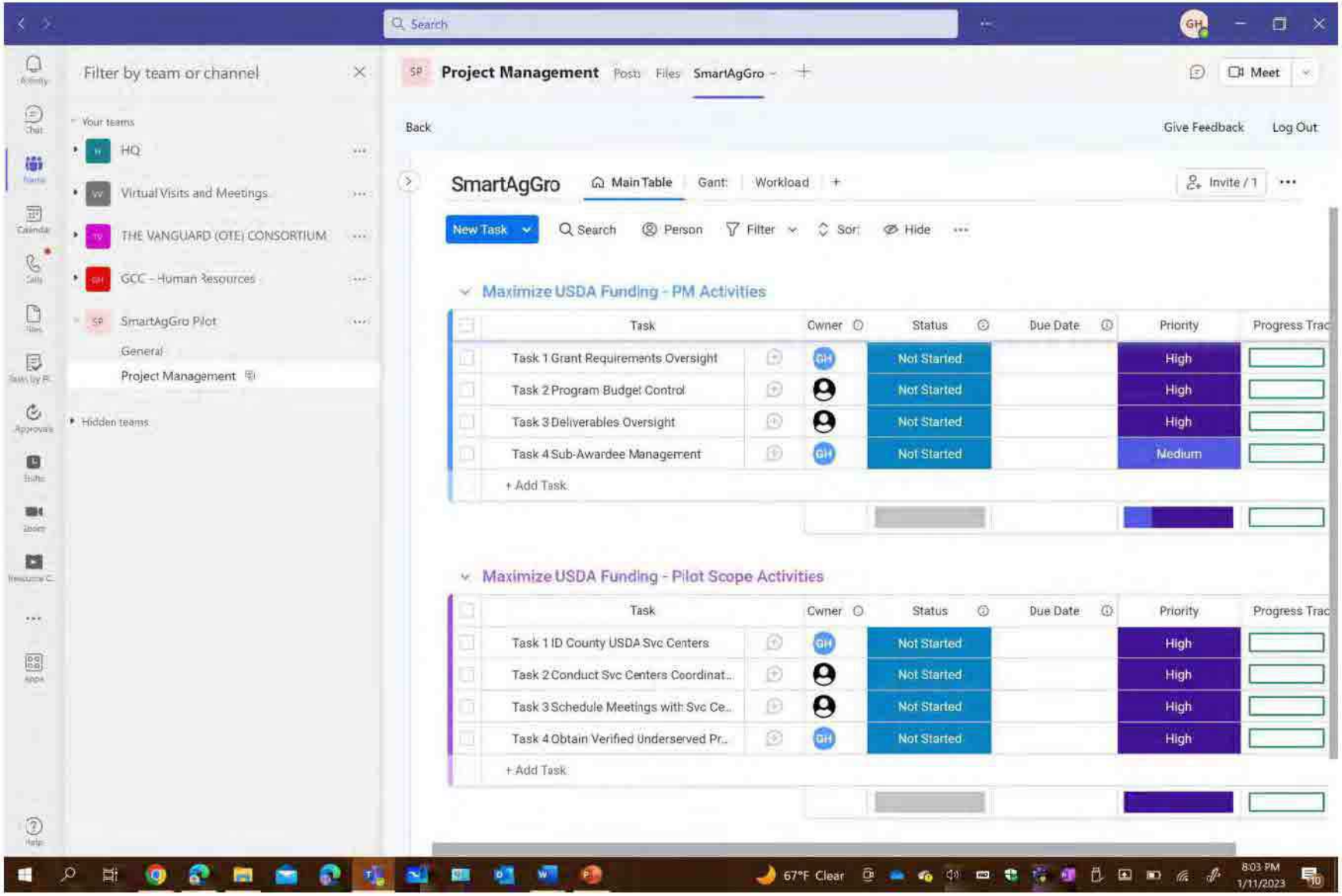
Team Vanguard has chosen Monday.com because it is a credible project management platform enabling our teams to organize and collaborate on tasks and activities. It offers a wide range of features such as task management, communication tools, automation, and integrations with other software. These features, when combined, provide a comprehensive solution that will help Team Vanguard stay on top of our work, improve transparency, and increase collaboration among team members. Additionally, Monday.com will increase productivity by allowing our teams to automate repetitive tasks, streamline workflows, and save time.

Some of the key project management features of the platform include:

- Task management: Users can create and assign tasks, set due dates, and track progress in real-time. Lessons can also be organized into columns, allowing teams to easily see what needs completion, who is working on it, and when it's due.
- Communication and collaboration: Monday.com has a built-in communication system that allows users to share updates, files, and feedback on tasks and projects. Users can also communicate directly through the platform's chat feature, making it easy for team members to stay connected and collaborate effectively.
- Automation: The tool allows users to set up automation to streamline their workflows. For example, tasks are moved to different columns based on status or priority.
- Reporting and analytics: Monday.com provides teams with a clear overview of their progress and detailed analytics and metrics on task completion, team productivity, and more.
- Integrations: The platform will integrate with various other software, including Google Drive, Slack, and Zoom, which makes it easy to use with additional tools to support our teams.

Monday.com's robust project management capabilities and flexible features will help Team Vanguard stay organized, streamline workflows, and collaborate more efficiently.

Team Vanguard provides a screenshot of automated project management with Microsoft Teams integration capabilities on the following page.



Graphic 7 *– Team Vanguard's Microsoft Teams and Monday.com's Project Management Integration.*

As Team Vanguard ends the control phase of a project or period of performance, we reflect on the achieved progress and the results. Our integrated project management solution and regular progress monitoring will assist with keeping the project on track. The communication and risk management strategies will help address any issues and challenges. The change control process will ensure that we adjust the project plan as needed while keeping the project aligned with the project goals and objectives.

At this point, we will complete all project deliverables to achieve project goals. We will conduct a post-project review to evaluate the success and document any lessons learned for future projects. We are confident that the steps we will take during the control phase will aid us in successfully closing the project and delivering the results we set out to achieve.

2.5 Close Phase

The main objectives of this phase are to close the project formally, document the results and lessons learned, and transfer the project's deliverables to the stakeholders. We will have completed the project's objectives and deliverables and be ready to wrap up the remaining tasks and finalize the project's documentation.

We will conduct a final project review to evaluate its overall success and ensure goals and objectives achievement. We will then obtain the stakeholders' acceptance of the project deliverables, ensuring they meet the agreed-upon requirements and specifications.

Once the finalization process for all tasks and project documentation is completed, we will conduct a post-project review to document any lessons learned and identify areas for improvement in future projects. We will also transfer the project deliverables to the stakeholders or the operation team, who will be responsible for maintaining and supporting the deliverables. Finally, we will celebrate the project's completion and acknowledge the hard work and dedication of all team members who will have contributed to the project's success.

The specific activities that will take place during the close phase include:

1. A final review will evaluate the project's success, including achieving goals and objectives.
2. Obtaining acceptance of the project deliverables: This activity ensures the stakeholders have accepted the project's deliverables and meet the requirements and specifications for approval.
3. Finalizing project documentation: This activity includes updating all project-related documents, such as the project charter, scope statement, and project plan, and storing them in an appropriate location for future reference.
4. Wrapping up project tasks includes completing any remaining tasks, such as archiving project files and data and releasing project resources.
5. Conducting a post-project review: This activity includes a formal review of the project to evaluate its overall success, document any lessons learned, and identify areas for improvement in future projects.

6. Transferring the project to the maintenance phase will occur in Year 3. It pertains to moving control of the project deliverables to the stakeholders and the producers, who will maintain and support them.
7. Celebrating the project's completion: this step usually marks the end of the project phase, where all the team members and stakeholders come together to celebrate the completion of the project successfully.

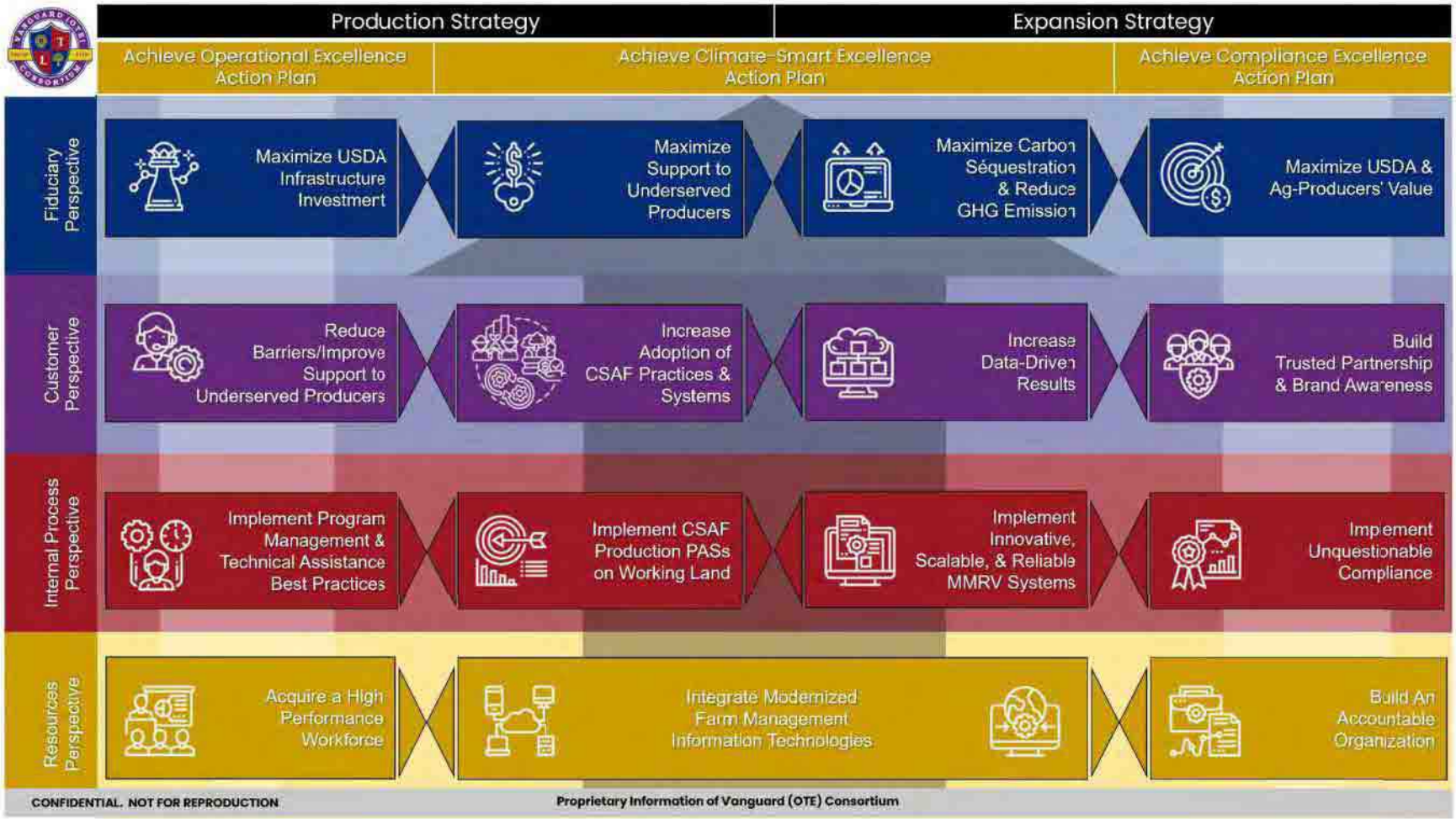
It's worth noting that some steps are executed in parallel but with a defined process to ensure that the project is closed in a controlled and structured way to provide the best outcome for stakeholders and deliverable sustainability.

As we bring the close phase of the project to a close, we will reflect on the successes we will have achieved. The stakeholders will have accepted the project deliverables, and we will have completed the project's objectives and deliverables. We will have also conducted a final review of the project, evaluated its overall success, and identified any areas for improvement in future projects.

Team Vanguard will complete the remaining tasks and all project documentation. The project team will transfer all deliverables to the stakeholders or the operation team, who will be responsible for maintaining and supporting them. We will have also conducted a post-project review and documented any lessons learned.

We will acknowledge the hard work and dedication of all team members who will have contributed to the project's success and brought this project to a successful close. We will look forward to applying the lessons learned to future projects and continuing to deliver successful outcomes.

Appendix A – The SmartAgGro Strategy Map



Vanguard of Transformation & Empowerment Consortium

Appendix B – The SmartAgGro Action Plans (Achieve Operational Excellence)

Action Plan: Achieve Operational Excellence			
Focus: Accountability & Equity	**Description Summary**	**KPIs**	**Management Oversight Activity (s)**
Financial Perspective Maximize USDA Funding	**Description:** Distribute funds to eligible rural producers for the acquisition of essential resources that will support enabling business operations supported by innovative technology which ensures underserved producers remain engaged and market competitive.	**PENDING REVIEW**	**Summary:** Each key leader will participate in monthly & quarterly budget management meetings with the Program Management Team to discuss 1) Performance outcomes, 2) Budget burn-rate and deviation updates, 3) Forecast operational needs for follow-on quarter, 4) Prevention of wasteful spending related to non-essential costs.
Customer Perspective Reduce Barriers/Improve Support to Underserved Producers	**Description:** Develop action plans that offer approaches which facilitate wide accessibility to socially disadvantage farmers, ranchers, and forestry producers by implementing equitable opportunities to strengthen engagement activities.	**PENDING REVIEW**	**Summary:** Each member of the SmartAgGro Team will integrate functional quality into all areas of their individual and collective responsibilities and executable task activities. The Program Director and functional leaders will ensure each member of the SmartAgGro Team can perform their designated job descriptions by performing competency management checks bi-weekly and performance reviews for team members every 6 months.
Internal Process Perspective Implement Program Management & Technical Assistance Best Practices	**Description:** Utilize a repeatable two-week increment cycle to define, build, and execute essential program management workflows, activities, and automation capabilities that meet appropriate quality standards.	**PENDING REVIEW**	**Summary:** At all times, the SmartAgGro Leadership will utilize a repeatable two-week increment cycle to define, build, and execute essential program management workflows, activities, and automation capabilities that meet appropriate quality standards.
Resources Perspective Acquire a High Performance Workforce	**Description:** Implement an on-going talent acquisition approach that focuses on finding skilled candidates for a long-term basis to support the SmartAgGro Pilot.	**PENDING REVIEW**	**Summary:** On a monthly and quarterly cycle, the HR Team will review and update our talent sourcing strategy, Total Benefits Packages, working arrangements, role/task diversity, professional development, organizational reputation and culture discriminators to align with our hiring strategy to attract A-performers.

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Appendix C – The SmartAgGro Action Plans (Achieve Climate-Smart Excellence – Engagement & Production)

Action Plan: Achieve Climate-Smart Excellence			
Focus: Engagement & Adoption	**Description Summary**	**KPIs**	**Management Oversight Activity (s)**
Financial Perspective Maximize Support to Underserved Producers	**Description:** Increase equitable enrollment of underserved/small producers by increasing producer understanding/awareness of CSAF practices & economic benefits and tracking implementation & Quantify Benefits of CSAF practices.	**PENDING REVIEW**	**Summary:** On a bi-weekly, monthly, quarterly, and annual basis, functional and program leaders will ensure that the SmartAgGro staff delivers Climate Solutions anc program essential services by conducting periodic inspections and various reviews within each specified area to ensure all farm, ranch, and forestry clients are provided specified effective services required.
Customer Perspective Increase Adoption of CSAF Practices & Systems	**Description:** Expand involvement of small or historically underserved producers by: • Developing effective outreach and engagement strategies to minimize barriers to access. • Demonstrating consistency with the spirit of the Justice40 initiative. • Building-On/ Expanding Current Education & Outreach Efforts. • Strengthening/Increasing Technical Assistance.	**PENDING REVIEW**	**Summary:** The Program Director will ensure the SmartAgGro Team provides trusted technical assistance; help reduce barriers to USDA programs; help improve support to underserved farmers, ranchers, and foresters; and help expand USDA infrastructure that benefit underserved communities.
Internal Process Perspective Implement CSAF Production PASs on Working Land	**Description:** Provide technical and financial assistance to producers to implement climate-smart production practices and adaptation activities on a voluntary basis on working lands by mobilizing a scalable strategy to reduce risks and vulnerabilities, build resilience and help to maintain productivity.	**PENDING REVIEW**	**Summary:** On a monthly and quarterly basis, the Program Director and key staff leaders will ensure that the SmartAgGro staff delivers program essential services by conducting periodic inspections and various reviews within each specified area of responsibility to ensure each farmer, rancher, or forester are provided specified services required.
Resources Perspective Integrate Modernized Information Technology	**Description:** Utilize existing USDA-NRCS tools: • COMET-Farm™ – an online carbon capture calculator • COMET-Planner - a digital carbon sequestration and greenhouse gas mitigation evaluation tool specific to conservation practices implemented through USDA's Natural Resources Conservation Service.	**PENDING REVIEW**	**Summary:** Key leaders and IT personnel will ensure continuous availability, reliability, and security of the SmartAgGro IT network by installing required system updates and conducting weekly system function tests in compliance with Federal, State, and local guidelines.

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Appendix D – The SmartAgGro Action Plans (Achieve Climate-Smart Excellence – MMRV Activities)

Action Plan: Achieve Climate-Smart Excellence

Focus: MMRV Activities	Description Summary	KPIs	Management Oversight Activity (s)
Financial Perspective Maximize Carbon Séquestration & Reduce GHG Emission	**Description:** Identify and select specific CSAF practices and technologies that deliver on climate outcomes that include: • GHG emission reductions • Carbon sequestration • Climate adaptation and resilience	**PENDING REVIEW**	**Summary:** On a bi-weekly, monthly, quarterly, and annual basis, functional and program leaders will ensure that the SmartAgGro staff delivers Climate Solutions and program essential services by conducting periodic inspections and various reviews within each specified area to ensure all farm, ranch, and forestry clients are provided specified effective services required.
Customer Perspective Increase Data-Driven Results	**Description:** Promote and influence CSAF practices that result in measurable, quantifiable, qualifiable, and verifiable carbon reductions and sequestration using newly available technologies and satellite connectivity to estimate soil carbon and quantify GHG benefits.	**PENDING REVIEW**	**Summary:** The SmartAgGro Soil Conservation and Academia Teams will use innovative and cost-effective methods for quantification, monitoring, reporting, verifying greenhouse gas reduction, and working land engaged in climate-smart production practices such as cover crops, no-till and nutrient management.
Internal Process Perspective Implement Innovative, Scalable & Reliable MMRV Systems	**Description:** Provide strategies, methods, and tools that are built on existing research; scientifically sound; accurately captures real reductions; and flexible enough to facilitate streamlined data collection and research reporting	**PENDING REVIEW**	**Summary:** The SmartAgGro Team will ensure scalable technologies are utilized to consistently collect data; filter the data into operational information; and make the information available across specified communication channels in a timely and actionable manner.
Resources Perspective Integrate Modernized Information Technology	**Description:** Utilize new technology tools and integrated fertilizer & soil amendment: Teralytic Soil Management Solution – an online data-driven precision agriculture solution that allow customers to understand plant nutrient(s) absorption and lose. SumaGrow - Liquid Microbial Soil Amendment especially designed for crop production by unlocking bound nutrients for plant use; improving fertilizer	**PENDING REVIEW**	**Summary:** Key leaders and IT personnel will conduct monthly network disaster and recovery plan to ensure the security of critical data, information, and network applications remain compliant with Federal, State, and local guidelines.

Vanguard of Transformation & Empowerment Consortium

Appendix E – The SmartAgGro Action Plans (Achieve Brand & Compliance Excellence)

Action Plan: Achieve Brand & Compliance Excellence			
Focus: Growth and Reporting	**Description Summary**	**KPIs**	**Management Oversight Activity (s)**
Financial Perspective Maximize USDA & Ag-Producers' Value	**Description:** Implement a pilot that promotes the adoption of CSAF practices on a large scale; the inclusion of measurement/quantification, monitoring, reporting, and verification planning; and the development of a marketing strategy that creates market expansion for climate-smart commodities generated as a result of SmartAgGro Pilot activities..	**PENDING REVIEW**	**Summary:** The Program Director will conduct program management that includes effective oversight of financial, customer-centricity, constant delivery of operations, and scalable resources. Other activities will focus on compliance management of USDA policies and procedures; routine internal monitoring/reviews on a quarterly basis.
Customer Perspective Build Trusted Partnership & Brand Awareness	**Description:** Design and implement a strategy which influences underserved producers to adopt CSAF practices and become reliable climate leaders in soil health improvement in order to produce a higher yield in quality crops, animals, and forestry and increase market visibility and improve profit margins.	**PENDING REVIEW**	**Summary:** All leaders of the SmartAgGro Team will assess adherence to USDA and Vanguard (OTE) Consortium's policies and procedures on a monthly basis through process and operational reviews. This ensures that work processes meet or exceed standards of care as outlined in the cooperative/partnership agreement.
Internal Process Perspective Implement Unquestionable Compliance	**Description:** Implement USDA approved climate-smart production practices, activities, and systems on working lands; use USDA approved Conservation Evaluation and Monitoring Activity procedures to guide our MQMV activities to document carbon and greenhouse gas (GHG) benefits; and develop markets to promote the resulting climate-smart commodities.	**PENDING REVIEW**	**Summary:** At least annually, key leaders will ensure unquestionable conformity by reviewing and approving all policies/procedures introduced or revised from each functional section to ensure accuracy of current practices and inclusion of all regulatory requirements.
Resources Perspective Build An Accountable Organization	**Description:** Establish an organizational culture that is built on integrity, accountability, responsibility, quality, consistency, reliability, and continuous improvement from committed leaders who have a common purpose, shared vision for our mission, passion for team members welfare, and producers' success.	**PENDING REVIEW**	**Summary:** Key leaders will conduct monthly QA reviews and QC checks using internal review and inspection checklists to ensure compliance with Federal, State and local requirements.

Appendix F – Benchmark and Milestones

Milestones/Benchmarks.

Required Quantitative Targets by Quarter (Cumulative) – some initial quarters may be zero:

- Number of producers involved:

  Year 1 (Quarter 1 = 0, Quarter 2 = 45, Quarter 3 = 90, Quarter 4 = 135).
  Year 2 (Quarter 1 = 168, Quarter 2 = 202, Quarter 3 = 236, Quarter 4 = 270).
  Year 3 (Quarter 1 = 270, Quarter 2 = 270, Quarter 3 = 270, Quarter 4 = 270).

- Number of underserved producers involved:

  Year 1 (Quarter 1 = 0, Quarter 2 = 45, Quarter 3 = 90, Quarter 4 = 135).
  Year 2 (Quarter 1 = 168, Quarter 2 = 202, Quarter 3 = 236, Quarter 4 = 270).
  Year 3 (Quarter 1 = 270, Quarter 2 = 270, Quarter 3 = 270, Quarter 4 = 270).

- Number of acres involved:

  Year 1 (Quarter 1 = 0, Quarter 2 = 2,970, Quarter 3 = 6,000, Quarter 4 = 9,105).
  Year 2 (Quarter 1 = 11,340, Quarter 2 = 13,635, Quarter 3 = 15,930, Quarter 4 = 18,225).
  Year 3 (Quarter 1 = 18,225, Quarter 2 = 18,225, Quarter 3 = 18,225, Quarter 4 = 18,225).

- Number of heads involved (if applicable):

  Year 1 (Quarter 1 = 0, Quarter 2 = 8,910, Quarter 3 = 18,000, Quarter 4 = 27,315).
  Year 2 (Quarter 1 = 34,020, Quarter 2 = 40,905, Quarter 3 = 47,790, Quarter 4 = 54,675).
  Year 3 (Quarter 1 = 54,675, Quarter 2 = 54,675, Quarter 3 = 54,675, Quarter 4 = 54,675).

- Dollars provided to producers:

  Year 1 (Quarter 1 = $0, Quarter 2 = $1,167,922.76, Quarter 3 = $2,335,845.53, Quarter 4 = $3,503,768.30).
  Year 2 (Quarter 1 = $4,379,571.37, Quarter 2 = $5,255,374.44, Quarter 3 = $6,131,177.52, Quarter 4 = $7,006,980.60).
  Year 3 (Quarter 1 = $7,006,980.60, Quarter 2 = $7,006,980.60, Quarter 3 = $7,006,980.60, Quarter 4 = $7,006,980.60).

- GHG Benefits (Metric Tons of CO2e Reduced or Sequestered):

  Year 1 (Quarter 1 = 0, Quarter 2 = 18,480, Quarter 3 = 37,200, Quarter 4 = 56,520).
  Year 2 (Quarter 1 = 70,560, Quarter 2 = 84,840, Quarter 3 = 99,120, Quarter 4 = 113,400).
  Year 3 (Quarter 1 = 113,400, Quarter 2 = 113,400, Quarter 3 = 113,400, Quarter 4 = 113,400).

- Number of new marketing channels* established:

  Year 1 (Quarter 1 = 0, Quarter 2 = 23, Quarter 3 = 46, Quarter 4 = 69).
  Year 2 (Quarter 1 = 92, Quarter 2 = 116, Quarter 3 = 140, Quarter 4 = 164).
  Year 3 (Quarter 1 = 188, Quarter 2 = 212, Quarter 3 = 236, Quarter 4 = 260).

  Explain: See Appendix G, Section G-8. It outlines our initial market analysis outcomes.

- Number of marketing channels* expanded:

  Year 1 (Quarter 1 = 0, Quarter 2 = 23, Quarter 3 = 46, Quarter 4 = 69).
  Year 2 (Quarter 1 = 92, Quarter 2 = 116, Quarter 3 = 140, Quarter 4 = 164).
  Year 3 (Quarter 1 = 188, Quarter 2 = 212, Quarter 3 = 236, Quarter 4 = 260).

  Explain: See Appendix G, Section G-8. It outlines our initial market analysis outcomes.

  *Note to NPOs: Marketing channels can be a wide range, e.g., selling to food processors, distributors, and direct to consumers.

- Number of measurement tools utilized:

  Year 1 (Quarter 1 = 0, Quarter 2 = 1, Quarter 3 = 2, Quarter 4 = 4).
  Year 2 (Quarter 1 = 4, Quarter 2 = 4, Quarter 3 = 4, Quarter 4 = 4).
  Year 3 (Quarter 1 = 4, Quarter 2 = 4, Quarter 3 = 4, Quarter 4 = 4).

  Explain: The four (4) measurement tools include: COMET-Planner, COMET-Farm, Teralytic Soil Monitoring Solution, and Suma Gro.

Other Required Benchmarks that may be quantitative or qualitative:

- Outreach, training, and other technical assistance:

  Year 1 (Quarter 1 = 0, Quarter 2 = 135, Quarter 3 = 270, Quarter 4 = 405).
  Year 2 (Quarter 1 = 504, Quarter 2 = 606, Quarter 3 = 708, Quarter 4 = 810).
  Year 3 (Quarter 1 = 1,314, Quarter 2 = 2,628, Quarter 3 = 5,256, Quarter 4 = 10,512).

  Explain: At a minimum, each producer will receive at least one session of outreach, training, and technical assistance annually. Each session will be conducted virtually, telephonically, or on-site. For example, 30 (producers) x 3 (sessions) = 90 sessions).

- Other MMRV and Supply Chain Traceability Attributes:

  Year 1 (Quarter 1 = 0, Quarter 2 = 1,080, Quarter 3 = 2,160, Quarter 4 = 3,240).
  Year 2 (Quarter 1 = 4,032, Quarter 2 = 4,848, Quarter 3 = 5,664, Quarter 4 = 6,480).
  Year 3 (Quarter 1 = 10,512, Quarter 2 = 15,360, Quarter 3 = 21,024, Quarter 4 = 27,504).

  Explain **MMRV:** In our model, three (3) months or ninety (90) days equals one (1) quarter. We use a Measurement, Monitoring, Reporting, and Verification (MMRV) solution that provides a 24/7 (hrs.) capability. For example, 24 (MMRV) hrs. x 45 producer locations = 1,080 hrs. of MMRV capability.

  Supply Chain Traceability Attributes No projected data at this time. However, as Appendix G (G-13) indicates, Team Vanguard has selected a solution of interest: IBM Food Trust TM. We are reviewing the IBM Food Trust TM solution for utilization. Trace Benefits include: 1) the Ability to quickly identify when food is contaminated and react immediately 2) the ability to prove your product is safe during a foodborne outbreak, 3) Reducing product waste, and 4) Direct insight into inventory and supply chain inefficiencies.

- Other measurements of work related to the marketing of commodities:

  Year 1 (Quarter 1 = 0, Quarter 2 = 9, Quarter 3 = 18, Quarter 4 = 28).
  Year 2 (Quarter 1 = 38, Quarter 2 = 48, Quarter 3 = 58, Quarter 4 = 68).
  Year 3 (Quarter 1 = 78, Quarter 2 = 88, Quarter 3 = 98, Quarter 4 = 108).

  Explain: See Appendix G, Section G-8. It outlines our initial market analysis outcomes.

- Demonstrated engagement of major partners:

  Year 1 (Quarter 1 = 0, Quarter 2 = 8, Quarter 3 = 16, Quarter 4 = 24).
  Year 2 (Quarter 1 = 32, Quarter 2 = 40, Quarter 3 = 48, Quarter 4 = 56).
  Year 3 (Quarter 1 = 64, Quarter 2 = 72, Quarter 3 = 80, Quarter 4 = 88).
  Explain: See Appendix G, Section G-8. It outlines our initial market analysis outcomes.

- Climate-Smart technologies employed (if applicable):

  Year 1 (Quarter 1 = 0, Quarter 2 = 1, Quarter 3 = 2, Quarter 4 = 4).
  Year 2 (Quarter 1 = 5, Quarter 2 = 6, Quarter 3 = 7, Quarter 4 = 8).
  Year 3 (Quarter 1 = 9, Quarter 2 = 10, Quarter 3 = 11, Quarter 4 = 12).

  Explain: The four (4) measurement tools include: COMET-Planner, COMET-Farm, Teralytic Soil Monitoring Solution, and Suma Gro.

Appendix G – Detailed Marketing Plan

G-1 Introduction

Team Vanguard will introduce a new line of SmartAgGro Foods produced from climate-smart agriculture practices and sourced from underserved producers. We are also committed to minimizing our environmental impact and supporting underserved producers. We believe these new climate-smart-grown commodities will exemplify these values.

Our SmartAgGro Foods will be grown using methods that minimize greenhouse gas emissions, reduce the need for synthetic fertilizers and pesticides, and conserve natural resources. We aim to attain a Climate-Smart certification, ensuring that the producers who grow SmartAgGro Foods are treated fairly and allowed to improve their livelihoods.

In this marketing plan, we will outline the environmental and social impacts of our SmartAgGro Foods and the steps we have taken to minimize those impacts. We will also describe the ecological benefits of our SmartAgGro Foods, such as its carbon footprint and water usage, and explain how it fits into our more comprehensive strategy for sustainability. We will define our marketing strategies and channels for reaching our target audience and tracking the effectiveness of our marketing efforts. Finally, Team Vanguard will outline our plan to develop and expand markets for climate-smart commodities generated as a result of project activities, including

A. Preparing Producers with Success Skills to Operate Beyond the Pilot,
B. Partnerships designed to market resulting climate-smart commodities,
C. Tracking climate-smart items through the supply chain, if appropriate,
D. Estimated economic benefits for participating producers, including market returns, and
E. Post-project potential includes the anticipated ability to scale project activities, the likelihood of long-term viability beyond the project period, and the ability to inform future USDA actions to encourage climate-smart commodities.

G-2 Target Audience

Our target audiences for our SmartAgGro Foods are environmentally conscious individuals in Mississippi who are interested in purchasing products that are produced in a climate-smart and socially responsible manner. These audiences include individuals between 20 and 60, but we are particularly interested in reaching younger consumers who are more likely to prioritize environmental issues.

We will target our marketing efforts towards individuals in major cities in Mississippi, such as Jackson, Gulfport, Southaven, Biloxi, Hattiesburg, Olive Branch, Tupelo, Meridian, and Greenville, as well as surrounding suburbs and rural areas. Our target audience will likely be educated, with at least some college education, and have a diverse income range. They are also likely to be interested in health and wellness and

prioritize buying products grown using climate-smart practices, minimizing environmental impact, and supporting underserved producers.

We will reach our target audience through various advertising channels to support the marketing plan, promote awareness, facilitate access to targeted audiences, and comply with the program's requirements to report, measure, and monitor the marketing throughout the project. Team Vanguard will use the power of broadcast television and digital marketing from Fox40 (WDBD) and My on LOO! 35 (WLOO). WDBD and WLOO digital products have the potential to reach 100% of Mississippi's 2nd congressional district. Through digital marketing, we can target audiences based on their geography, occupations, interests/behaviors, income levels, etc. This capability and capacity will equip the SmartAgGro Pilot to utilize platforms such as Facebook, YouTube, Google, Streaming TV, and much more to help get the Climate-Smart message in front of the right audience.

Broadcast Recap

- Campaign Run Dates, February- December 2023. (***NOTE.** The date will adjust to Award Date.)
- Two thousand nine hundred ten commercial messages, PSA messages, Weather sponsor elements, Business minute segment, and Logo on the News ticker will deliver our message to over 20 million Adults 18+ people and reach 98.6% of the TV market in the Jackson Digital Market Area (DMA).

Digital Recap

- Campaign Run Dates, February- December 2023. (***NOTE.** The date will adjust to Award Date.)
- Targeted banner ads, social media campaigns, and streaming commercials will deliver our message to over 1.4 million people across multiple platforms and devices.

G-3 Production Methods

Our SmartAgGro Foods will be produced using climate-smart agriculture practices that minimize greenhouse gas emissions and reduce the need for synthetic fertilizers and pesticides. We will source our raw materials from underserved Mississippi producers trained in climate-smart methods and committed to protecting the environment.

In addition to using climate-smart agriculture practices, we will prioritize water conservation in our production processes. We will use a microbial soil enhancer to increase moisture retention and provide good microbes that improve soil nutrients.

We are committed to supporting underserved producers by ensuring they receive fair treatment. Our raw materials will be used and sourced through a Fair-Trade program, guaranteeing producers a reasonable price and helping improve their livelihoods.

Finally, we will constantly look for ways to reduce our environmental impact and improve the sustainability of our production processes. We will regularly review our practices and invest in innovative technologies and techniques to help us achieve these goals.

G-4 Environmental Benefits

- Low carbon footprint: Our SmartAgGro Foods use climate-smart agriculture practices that minimize greenhouse gas emissions, resulting in a low carbon footprint compared to conventionally produced products.
- Microbial soil enhancers: We will use microbial soil enhancers and other climate-smart techniques to improve soil nutrients and reduce water usage in our producers' production processes, conserving valuable minerals and resources.
- Reduced reliance on synthetic fertilizers and pesticides: By using climate-smart agriculture practices, we can reduce our dependence on synthetic fertilizers and pesticides, which can negatively impact the environment.
- Support for underserved farmers: we source our raw materials through a Fair-Trade program, which helps improve the livelihoods of underserved producers and supports their communities.
- Recycling and waste reduction: We will implement several recycling and waste reduction initiatives at our production facility, including recycling water and using biodegradable packaging materials.
- Certifications: We will pursue several certifications demonstrating our commitment to sustainability, including Fair-Trade and USDA Climate-Smart certifications.

G-5 Sustainability Strategy

Team Vanguard's SmartAgGro Foods will be committed to minimizing environmental impacts and supporting underserved producers in Mississippi. These underserved producers use climate-smart agriculture practices to broaden our sustainability strategy.

There are several ethical and sustainable practices that our underserved farmers will adopt to improve the environmental and social impacts of their farming operations:

- Implement integrated climate-smart and organic farming practices. Our Integrated climate-smart and organic farming will use natural methods to grow crops and raise animals rather than rely on synthetic pesticides and fertilizers. This action will help reduce the environmental impacts of agriculture and improve soil health.
- Use conservation tillage. Our conservation tillage will involve farming practices that minimize soil disturbance, such as using minimal or no-till methods. This action will help reduce soil erosion and improve soil health.
- Use cover crops. Our cover crop strategy will include options such as legumes or grasses for planting between regular crops to improve soil health and reduce erosion.
- Implement animal welfare practices. Our ethical animal welfare practices will help improve the health and well-being of farm animals through adequate access to pasture and space to support the well-being of farm animals.

By implementing these practices, underserved farmers will improve their farming operations' sustainability and ethical impacts.

Finally, we believe engaging with and educating our customers about climate-smart agricultural practices will be necessary. We will participate in local community events and partner with organizations that share our values and mission. We will also provide information about our SmartAgGro efforts on our website and through other marketing channels so our customers can make informed decisions about the products they purchase.

G-6 Preparing Producers with Success Skills to Operate Beyond the Pilot

Team Vanguard recognizes that producers must operate beyond the Partnerships for Climate-Smart Commodities grant successfully. Producers must stay informed about the latest policies and programs impacting their operations and acquire business competencies to make their operations more resilient. The SmartAgGro Pilot's Smart-Way Incentive Program includes a Climate-Smart Learning Journey for each producer awardee.

Demand Analysis is one of the critical competencies producers will acquire from the Climate-Smart Learning Journey curriculum is understanding the role of the USDA Agricultural Marketing Service (AMS) website. Producers will learn about AMS's vital role in shaping the United States agricultural landscape. By learning about the content of AMS, producers will make informed decisions that can help their operations thrive in today's rapidly changing agriculture landscape.

In retrospect, the Agricultural Marketing Service (AMS) offers demand analysis services to improve the efficiency and fairness of agricultural marketing systems and increase American agriculture's competitiveness in domestic and international markets. Team Vanguard will facilitate a knowledge acquisition process for understanding the beneficial aspects of AMS demand analysis services to collect and publish market data analysis capabilities on various agricultural products, including grains, livestock, fruits, vegetables, and specialty crops.

We believe this information will help producers understand market trends and conditions, including forecasting demand to help farmers and producers market and sell their products, including marketing assistance, technical assistance, and research and development support. Below is a sample learning plan outline for a producer who wants to use demand analysis to identify opportunities to increase sales:

1. Identify the goal. The goal is to increase sales by 10% over the next six months by identifying and targeting high-demand products.
2. Identify the target market. The target market is local consumers, including individuals and restaurants.
3. Research consumer demand. Research consumer demand by gathering data from various sources, including market reports, industry trends, and customer feedback.
4. Identify high-demand products. Based on the research, identify the items in high demand among the target market.

5. Develop a marketing plan. Develop a marketing plan to target the high-demand products, including strategies for promoting the products and reaching potential customers.
6. Set specific, measurable, achievable, relevant, and time-bound (SMART) objectives:
    - Increase sales of high-demand products by 15% over the next three months
    - Secure partnerships with three local restaurants over the next six months
7. Develop a timeline and budget. The timeframe for implementing the marketing plan will be six months, and the budget will be $5,000.
8. Identify the resources needed. The resources necessary to implement the marketing plan will include a budget for marketing efforts, time to build relationships with local restaurants and promote the products, and potentially hiring a part-time marketing assistant.
9. Responsibilities of Producers. The farmer will manage the budget and oversee the marketing efforts. In contrast, the marketing assistant (if hired) will be responsible for implementing the marketing plan and building relationships with local restaurants.
10. Establish milestones and checkpoints. Milestones will include achieving the sales goal and securing partnerships with local restaurants. We will schedule checkpoints every two months to review progress and make any necessary adjustments to the action plan.

G-7 Support to Producers Entering A Local Market on A Small-Scale

Team Vanguard experts will orient producers to the USDA's Farmer.gov site, "How to Start a Farm: Beginning Farmers and Ranchers." This resource provides information on planning and financing a farm or ranch, choosing the right location and farm type, and managing and marketing a farm or ranch. It is a resource the USDA provides to help individuals interested in starting a farm or ranch get the information and support they need to succeed.

It also includes links to additional resources and tools, such as programs and services offered by the USDA, which can help beginning farmers and ranchers get started. The resource is intended to be a comprehensive guide for anyone interested in creating a farm or ranch and aims to provide the information and support needed to help these individuals succeed in the agricultural industry.

G-8 A Strategy to Retain Higher Farm-to-Consumer Margins by Identifying both Wholesale and Retail Marketing Channels

One way Team Vanguard will support our producers in retaining higher farm-to-consumer margins is by identifying wholesale and retail markets for their products. Wholesale markets refer to the sale of agricultural products to intermediaries such as supermarkets or restaurants, while retail markets refer to the direct sale of products to consumers. By selling to wholesale and retail markets, our climate-smart producers will

potentially increase their margins by reaching a more extensive customer base and finding the best product prices. Team Vanguard will also use our IbisWorld US Business Environment Profiles search engine. This search engine provides insight into key drivers, including exchange rates, commodity prices, interest rates, weather conditions, consumer attitudes, demographics, etc.

Demand acceleration for meat products will result from general economic recovery from the COVID-19 (coronavirus) pandemic. Lingering effects of supply chain shocks and persistent business closures from case resurgence have stymied demand, particularly from restaurants and other eating places. As these establishments recover over the five years to 2027, demand for meat products will follow suit. For example, per capita meat consumption growth is expected to remain steady over the five years to 2027. Additionally, broader economic recovery will benefit consumer spending and disposable income levels, bolstering demand for meat products from both the food service end and grocery purchases. Overall, per capita meat consumption will increase at an annualized rate of 0.5% over the five years to 2027, reaching an estimated 224.1 pounds.

Marketing Channels

Producers in the SmartAgGro Pilot will research local supermarkets, restaurants, and other food outlets to identify potential wholesale and retail markets to see if they are interested in purchasing their products.

1. Here is a list of identified grocery store chains that operate in the SmartAgGro Pilot area: 1) Walmart, 2) Kroger, 3) Supervalu (which operates the Albertsons, Cub Foods, Hornbacher's, and Shoppers brands), 4) Aldi, 5) Save-A-Lot, 6) Publix, 7) Winn-Dixie, 8) Family Dollar, 9) Dollar General and 10) Dollar Tree.
2. Here is a list of identified school systems in the SmartAgGro Pilot area: 1) DeSoto County Schools, 2) Gulfport School District, 3) Hattiesburg Public School District, 4) Jackson Public School District, 5) Ocean Springs School District, 6) Oxford School District, 7) Petal School District, 8) Starkville Oktibbeha Consolidated School District, and 9) Tupelo Public School District.
3. Here are some examples of the many marketing channels available to farmers in Mississippi:

   Farmers' Markets. Team Vanguard will use farmers' markets as a popular marketing channel for fresh produce, allowing farmers to sell directly to local consumers. Mississippi has many farmers' markets, including the Mississippi Farmers Market in Jackson and the Canton Farmers Market.

   Local Grocery Stores. Many grocery stores in Mississippi sell locally sourced produce and meat. By building relationships with local grocers, Team Vanguard will assist farmers with supplying fresh produce and meat products to their communities and support the local food economy.

   Community-Supported Agriculture (CSA) Programs. Mississippi's CSA programs will allow consumers to purchase a share of a farm's harvest in advance, providing farmers with a reliable market for their products and giving consumers

access to fresh, locally sourced produce. Essential CSA programs operate in Mississippi, for example, the Two Dogs Farms CSA in Rankin County.

Livestock auctions. Like the Hinds County Livestock Auction in Jackson, livestock auctions allow farmers to sell their livestock in bulk to buyers like meat processors and other farmers. Farmers can sell large quantities of their products by working with these markets and reaching a wider audience beyond their local communities.

Online marketplaces. Online marketplaces like the Mississippi Market-Maker and twenty-nine state-level market channels will allow farmers to connect with consumers and buyers across the state and country. By listing their products on such websites, farmers can market their produce and livestock to a broader audience and reach consumers who may not be able to attend farmers' markets or visit their farms.

Wholesale markets. Wholesale markets, like the Jackson International Food Terminal in Jackson, allow farmers to sell their produce and livestock in bulk to buyers like grocery stores, restaurants, and processors. Farmers can sell large quantities of their products by working with these markets and reaching a wider audience beyond their local communities.

Agritourism. Agritourism activities like farm tours, pumpkin patches, and corn mazes will provide farmers with additional income and help promote their products. Farmers in Mississippi will use the area's scenic beauty and agricultural heritage to attract tourists and showcase their products.

4. Several food distribution centers in the SmartAgGro Pilot area oversee food storage, distribution, and transportation, including agricultural products. Some specific examples of food distribution centers in Mississippi include:
    - **Amazon**: Amazon operates a distribution center in Olive Branch that manages the storage and distribution of various products, including agricultural products.
    - **FedEx**: FedEx operates a distribution center in Memphis that oversees the storage and distribution of various products, including agricultural products.
    - **Grocery Distribution Center of America**: This company operates a distribution center in Flowood that manages the storage and distribution of grocery products, including agricultural products.
    - **McLane**: McLane operates a distribution center in Hattiesburg that oversees the storage and distribution of a wide range of products, including agricultural products.
    - **Target**: Target operates a distribution center in Southaven that manages the storage and distribution of a wide range of products, including agricultural products.

- **Grocery Distribution Center of America**: This company operates a distribution center in Flowood that oversees the storage and distribution of grocery products, including agricultural products.
- **Sysco**: Sysco operates a distribution center in Jackson that manages the storage and distribution of a wide range of food products, including agricultural products.
- **US Foods**: US Foods operates a distribution center in Flowood that oversees the storage and distribution of a wide range of food products, including agricultural products.
- **Performance Food Group**: This company operates a distribution center in Olive Branch that manages the storage and distribution of a wide range of food products, including agricultural products.

Distribution Channels

Team Vanguard's sub-awardee (Heifer, USA/International) will provide our producers with market access. Heifer USA recognizes that small-scale farmers struggle to find profitable and predictable markets in our current food system.

Heifer USA empowers farmers by connecting them to a cooperative value chain. By providing a market that guarantees to buy products months in advance at fair prices, access to the highest quality processing services, credit support, and more. Heifer USA enables farmers to do what they do best — providing the highest quality product —— while Heifer USA and our partners take care of the rest.

Heifer USA's work to connect farmers to markets and to integrate them into a short, profitable, direct-to-consumer supply chain relies on their partnerships with Cypress Valley Meat Company and Grass Roots Farmers.

Grass Roots started with the support of Heifer USA in 2014. Grass Roots Farmers' Cooperative is at the heart of how Heifer USA works to integrate small farmers into profitable, localized value chains. Grass Roots sells pasture-raised meat direct-to-consumer, using an e-commerce platform. Structured as a farmer-owned cooperative, Grass Roots purchases and sells only small-batch livestock grown using regenerative farming. Grass Roots is also committed to ethically sound farming and humanely raising all livestock.

Grass Roots farmers benefit from producing for Grass Roots in several ways, including the ability to purchase on credit, buying and price guarantees, business support, and loans for equipment and livestock. Because Grass Roots sells nationally, its market is not in competition with local outlets. Farmers can sell additional products to local grocers, customers, and restaurants.

By keeping the welfare of small farmers at the heart of their business model, Grass Roots is making it possible for more families across the Mid-South to hold onto their farms and earn a good living while improving their communities and ecosystems.

Cypress Valley has access to high-quality and affordable USDA-inspected meat processing services. Their services are critical for livestock farmers to succeed. Unfortunately, gaining access to these services can often pose a challenge. One of the

significant ways that Heifer USA supports small-scale farmers is by connecting them to Cypress Valley Meat Company, located in central Arkansas.

Since 2011, Cypress Valley has offered diverse farmers the highest-quality USDA-inspected meat processing services. The team at Cypress Valley is committed to supporting small-scale farmers working to produce premium products using regenerative farming methods. They do everything they can to provide the best quality services to the farmers at a low cost, and their processing services are in increasingly high demand.

Each associated small-scale farmer of Grass Roots is guaranteed access to Cypress Valley's services, and the business goes out of its way to accommodate them. All Grass Roots products shipped from Cypress Valley are grown to the highest standards and processed and packaged with equal care. Their exceptional humane handling, sanitation, natural processing, and quality packaging standards are nationally recognized.

By taking a proactive approach to identifying and targeting wholesale and retail markets, Mississippi farming producers can potentially increase their farm-to-consumer margins and improve the profitability of their operations. Team Vanguard will provide advisory guidance on how producers should consider participating in farmers' markets or direct-to-consumer sales, such as through a farm stand or community-supported agriculture (CSA) program. In addition, Team Vanguard will assist underserved producers with the decision to join local or regional agricultural associations or cooperatives, which could help connect them with potential buyers and provide support and resources for marketing and selling their products.

The Mississippi Department of Agriculture and Commerce-Market Development

Team Vanguard will work with the Market Development Division of the Mississippi Department of Agriculture and Commerce to promote and heighten the public's awareness of Mississippi's agriculture commodities and the farmers and ranchers who produce them. We accomplish these marketing activities by participating in trade shows, conferences and fairs, international trade, presentations to schools and civic organizations, promotion of local farmers markets, contact with other agricultural organizations and commodity groups, and various other communication outlets. The Market Development Division has subsets assets that will aid in market development:

Genuine MS®, International Trade, Specialty Crop Block Grant Program, Federal Marketing Improvement Program, Mississippi Agritourism, Mississippi Market Maker, and Mississippi Local Food Purchase Assistance Program.

G-9 Strategy for Building Relationships with Buyers

One strategy that Team Vanguard will offer our producers for building relationships with buyers centers around a focus on providing high-quality products and excellent customer service. This approach helps establish trust and create a positive reputation with buyers, which can lead to long-term business relationships.

Another strategy that Team Vanguard will offer is to establish regular communication with buyers and seek feedback on the products and services provided. This strategy will

help identify any issues or areas for improvement and demonstrate a willingness to listen and respond to buyers' needs.

We will also encourage producers to consider offering value-added products or services, such as custom packaging or delivery options, to differentiate their business and make it more attractive to buyers.

In addition, another strategy for producers will be to consider building relationships with buyers through networking and relationship-building activities, such as attending industry events or joining trade organizations. This action will help establish connections with potential buyers and create opportunities for collaboration and mutual success.

Overall, Team Vanguard understands that building relationships with buyers is crucial to running a successful farming business. We have a variety of promotion strategies to employ, establish, and strengthen these relationships for our producers over time.

G-10 Standard Procedures for Properly Packaging and Labeling of Products

Proper packaging and labeling of products is an essential aspect of selling agricultural products, as it helps protect the products during transportation and storage and provides vital information to customers. Here are a few standard procedures that Team Vanguard will employ to ensure proper packaging and labeling of products:

1. Use appropriate packaging materials: Utilize packaging materials suitable for the type of product sold and the intended storage and transportation conditions. For example, perishable products may require refrigeration or insulation, while non-perishable products may need protection from moisture or other environmental factors.
2. Use clear and informative labels: Label products with accurate and relevant information, such as the name of the product, the ingredients or contents, the weight or volume, and any appropriate warnings or disclaimers. Make sure the label is clear and easy to read and consider using a barcode or other identifying information to make it easier to track and manage the product.
3. Consider the presentation: The packaging and labeling of our products will also impact the overall production and perceived value of SmartAgGro Food products. Consider using attractive and eye-catching packaging and labels to increase the appeal of your products to customers.
4. Follow any relevant regulations: There will be specific regulations or standards for packaging and labeling agricultural products, depending on the product type and the location where it is sold.

G-11 Securing Competitive Pricing for Producers' Products

Team Vanguard uses multiple sources to obtain market research information and data. One reference for market research is IBISWorld. IBISWorld is a market research firm that provides industry reports and analyses on various industries and sectors. Our membership offers access to an extensive database of industry reports covering everything from agriculture to healthcare and technology. These reports provide detailed information on market size, growth trends, industry structure, key players, and

the latest industry trends and developments. These reports permit Team Vanguard to gain insights into specific industries and make informed decisions about strategy, operations, and investments. Team Vanguard will also offer tools and resources for conducting market research and analysis, such as industry benchmarks, market share data, and industry risk ratings.

G-12 Reporting, measuring, and monitoring the marketing throughout the project.

Here is Team Vanguard's Approach to how we will conduct reporting, measuring, and monitoring a marketing strategy throughout a project:

1. Our marketing goals and objectives. Before implementing our marketing strategy, our team must clearly define what we want to achieve. We want to achieve the following:
    - Increase brand awareness. Our goal of increasing brand awareness will involve creating and distributing content that showcases the benefits of our underserved producers' climate-smart agriculture products and building relationships with key influencers in the agriculture industry.
    - Generate leads. Our goal of generating leads will involve creating targeted ads and landing pages to attract potential customers and offering free samples of climate-smart products.
    - Drive sales. Our goal of driving sales will involve developing sales collateral and training materials to help our producers effectively sell their climate-smart agriculture products and implementing promotions and discounts to encourage customers to purchase.
    - Improve customer retention. Our goal of improving customer retention will involve implementing a customer loyalty program, providing excellent customer service, and regularly soliciting customer feedback to identify areas for improvement.
    - Expand into new markets. Our goal of expanding into new markets will involve conducting market research to identify new opportunities, developing marketing activities specifically tailored to the needs of our targeted markets, and building relationships with key players in these markets.

    By setting specific and measurable marketing goals, we will be able to track our progress and determine the effectiveness of our marketing efforts.
2. Progress Measurements. Team Vanguard uses a comprehensive e-commerce platform with many features and capabilities to support marketing efforts. Some of the critical marketing-related capabilities and features include:
    - Customizable website. The platform is a customizable website builder that we will use to create a professional-looking website that reflects our brand and showcases our products.

- SEO tools. The platform includes several SEO tools to help us optimize our website for search engines, such as customizable page titles and descriptions and the ability to create custom URLs for designated pages.
- Marketing automation. The platform integrates with several marketing automation tools, such as Mailchimp and Klaviyo, allowing us to automate and track our marketing efforts, such as email marketing and social media marketing.
- Social media integration. The platform integrates with social media platforms, such as Facebook and Instagram, allowing us to share our products and promotions on social media easily.
- Advertising. The platform integrates with advertising platforms, such as Google Ads and Facebook Ads, allowing us to create and run targeted advertising campaigns to reach potential customers.
- Customer reviews: The platform will allow customers to leave reviews for our products, which will help to build trust and credibility with potential customers.
- Email marketing: The platform will include an email marketing tool allowing us to send customers newsletters and promotional emails.

Overall, the platform will provide a wide range of tools and features to help us conduct regular and effective reporting, measuring, and monitoring of our marketing strategy throughout the project. We can make informed decisions about our marketing efforts and ensure we are on track to achieve our goals.

G-13 Supply Chain Traceability System

Team Vanguard has selected a solution of interest: IBM Food Trust ™. We have a pending meeting with an IBM Food Trust ™ solution specialist.

G-14 Estimated Economic Benefits for Participating Producers, including Market Returns

Agriculture is Mississippi's number one industry, employing approximately 17.4% of the state's workforce directly or indirectly. Agriculture in Mississippi is an $8.33-billion-dollar industry. There are about 34,700 farms in the state covering 10.4 million acres. The average farm comprises 300 acres. Agriculture significantly contributes to all 82 counties. Below is the latest overview of Mississippi's top 15 crops:

1. Poultry/Eggs - $2.65 Billion
2. Soybeans - $1.49 Billion
3. Forestry - $1.3 Billion
4. Corn - $748.3 Million
5. Cotton - $558 Million
6. Cattle/Calves - $282 Million
7. Catfish - $232 Million
8. Hay - $160 Million
9. Sweet Potatoes - $110 Million

10. Horticultural Crops - $108 Million
11. Hogs - $96 Million
12. Rice - $92 Million
13. Wheat - $27.2 Million
14. Milk - $22 Million
15. Peanuts - $14.2 Million

The SmartAgGro Pilot has the potential to boost producers growth moving forward, with there being room for organic-grown vegetables and meats consumption to expand between 5 – 10 % annually. Accordingly, anticipated revenue will rise at an annualized rate of 3 - 8%.

G-15 Timeline

36-Month Version

- Here is an example of a 36-month timeline for a climate-smart product in Mississippi:
- Month 1-6: Develop a marketing plan and identify a target audience
- Month 7-12: Launch social media campaigns and targeted ads to reach the target audience
- Month 13-18: Partner with local organizations and events to increase visibility and reach
- Month 19-24: Conduct customer surveys to gather feedback and identify areas for improvement
- Month 25-30: Implement new recycling and waste reduction initiatives at a production facility
- Month 31-36: Review and update the marketing plan based on feedback and performance data

12-Month Version

- Month 1-3: Develop a marketing plan and identify a target audience
- Month 4-6: Launch social media campaigns and targeted ads to reach the target audience
- Month 7-9: Partner with local organizations and events to increase visibility and reach
- Month 10-12: Conduct customer surveys to gather feedback and identify areas for improvement

G-16 Summary

SmartAgGro Foods is proud to introduce a new line of climate-smart commodities produced using climate-smart agriculture practices and sourced from underserved producers in Mississippi. We will be committed to minimizing our environmental impact and supporting underserved produces, and we believe that our new SmartAgGro Foods will exemplify these values.

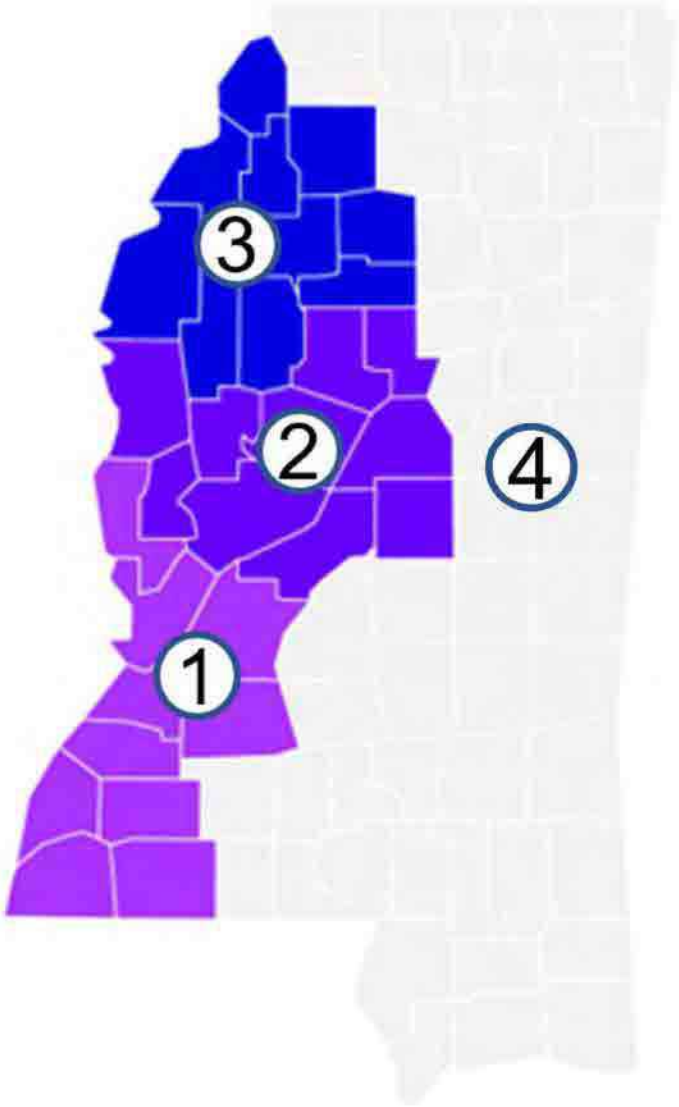
In this marketing plan, we have outlined the environmental and social impacts of our SmartAgGro and the steps we will take to minimize those impacts. We have also described the environmental benefits of our climate-smart commodities, such as their

low carbon footprint and soil enhancement efforts, and explained how they fit into our more comprehensive sustainability strategy.

We have identified our target audience as environmentally conscious individuals in Mississippi who are interested in purchasing climate-smart products in a socially responsible manner. We will reach these audiences through various marketing channels, including social media campaigns, targeted ads, and partnerships with local organizations and events.

We are committed to transparency and continuous improvement, and we will regularly review our marketing plan and make updates based on customer feedback and performance data. We believe that our climate-smart commodities will be an essential part of a broader strategy for sustainability, and we are excited to share them with our customers.

Appendix H – Area of Responsibility (AOR) Map: Mississippi Congressional District 2 and Other Support Areas



Legend

	Sector 1. AOR Data Manager – Alcorn State University
	Sector 2. AOR Data Manager – Enviro-Remediation Educational Svc, LLC
	Sector 3. AOR Data Manager – Mississippi Valley State University
	Sector 4. Other Support Areas

Appendix I – Applicant Feedback to USDA Renegotiation Review

Purpose. In this appendix, we aim to respond to USDA questions associated with emails dated: 2/4/2023, 2/7/2023, and 2/8/2023.

Section 1: Email 1 – Dated 2/4/2023

Team Vanguard recognizes that projects which result from this program will face intense scrutiny. We must maintain strong internal controls, well-documented complaint procedures, and rigorous record-keeping. Additionally, we will comply with all NOFO (including FAQs incorporated by reference) and the General T&C and Specific T&C for Partnerships.

1. **Mitigate Duplication of Payments.** Clarification added to the Project Narrative in Step 7 – The Smart-Way Incentive Program, Eligibility Criteria on pages 16 & 17.
2. **Statement of Compliance to Terms & Conditions.** As a condition for this award, Team Vanguard certifies that it will comply with the requirements contained in the following statutes and regulations, as applicable to the U.S. Department of Agriculture, Farm Production and Conservation General Terms and Conditions for Grants & Cooperative Agreements, dated November 2022.
3. **Reasonableness.** During our IPBS (Intelligence Preparation of the Business Space), we identified a variant of the work, "market," forty-two (42) times throughout the NOFO. The associated variants include: build, develop, increase, drive, expand, returns (more significant), emerging, new, future, target, demand, or in some cases, in conjunction with invest, promote, expansion of domestic …, different, supply and demand, foster and develop, new and expanded, intended expansion outcomes, the purpose of, and outreach, and economic impact.

   This indicator represents a high expectation to support the intended overarching outcomes, intended expansion outcomes, and considerations for a successful project. Team Vanguard has provided a strategy within a necessary budget amount, exhibits sound business practices, and is supported by prudent market research to ensure the accomplishment of the high demand of marketing and profit improvement emphasis for underserved producers under this grant.
4. **General Terms & Conditions.** Each member and sub-awardee must maintain a copy of this document. To receive the document, each individual or sub-awardee representative will sign a letter acknowledging receipt. Team Vanguard will include a clause in each sub-awardee contract that references a clause that addresses this subject.

Section 2: Email 2 – Dated 2/7/2023

Team Vanguard is updating this email's six (6) items and five (5) subitems.

1. **Shapefiles.** Team Vanguard will email 30 county-level shapefiles that comprise our proposed area of responsibility (AOR). These shapefiles will be in zip files for electronic transmission.
2. **Letters of Support (Commitment).** Team Vanguard has received six (6) of six (6) updated Letters of Support from each of your sub-awardees that includes the dollar amount (accepted), which corresponds to our updated budget narrative.
3. **SF – 424A Update.** Vanguard (OTE) Consortium will submit an updated SF – 424A corresponding to our updated budget narrative.
4. **Current and Pending Support Spreadsheet.** No changes.
5. **Current NICRAs for Vanguard (OTE) Consortium and sub-awardees.** No changes.
6. **Requirement for Environmental Assessments.** By (IAW) Fiscal Year (FY) 2022 Partnerships for Climate-Smart Commodities National Funding Opportunity (NFO) - # USDA-NRCS-COMM-22-NOFO0001139, paragraph F. FEDERAL AWARD ADMINISTRATION INFORMATION - 2. Administrative and National Policy Requirements, Team Vanguard understands that projects performed according to this opportunity may be subject to the National Environmental Policy Act (NEPA).

   Team Vanguard understands this project involves on-the-ground activities following the issuance of the award. Our team will not start any ground-disturbing activities related to the Partnerships for Climate-Smart Commodities project before the local Natural Resources Conservation Service (NRCS) field office completes an Environmental Evaluation (EE).

   Depending on the Environmental Evaluation outcome, Team Vanguard understands the project may proceed as planned; proceed under an alternative designed to avoid, minimize, or mitigate potential adverse impacts. Awardees may be required to prepare or pay for the preparation of an environmental assessment (EA) or environmental impact statement (EIS) should the EE find that an EA or EIS is required. However, if an EA at the project level is needed, we understand that the USDA will hire contractors to finish the EA.
7. **Negotiation Letter Questions and Responses.**

   Question 1 – Will all climate-smart agriculture practices implemented through this project meet NRCS practice standards? What is your process for ensuring that the implementation of the practices meets NRCS standards?

   Response 1. Team Vanguard has selected climate-smart practices from the USDA, Natural Resources Conservation Service, Climate-Smart Agriculture and Forestry (CSAF) Mitigation Activities List FY2023 (See pg. 8 and mapped them to the NRCS Field Technical Guide – Mississippi below). The Mississippi CSAF Mitigation Activities are Team Vanguard ‘s selected practice for this pilot.

a) USDA Climate Change Mitigation Practice Category

Name: Soil Health

Code 1: 340 – Cover Crops $200.00 per acre

Mississippi Code: 340_MS_CPS_Cover_Crop_2016

Name: Soil Health

Code 2: 345 – Residue and Tillage Management, Reduced Till $150.00 per acre

Mississippi Code: 345 MS CPS Residue and Tillage Management Reduced Till 2016

b) USDA Climate Change Mitigation Practice Category

Name: Nitrogen Management

Code 1: 590 – Nutrient Management $300.00

Mississippi Code: 590 MS CPS Nutrient Management 2013
590 MS GD Nutrient Management Soils Information 2007

c) USDA Climate Change Mitigation Practice Category

Name: Grazing and Pasture

Code 1: 528 – Prescribed Grazing $290.00 per acre

Mississippi Code: 528 MS CPS Prescribed Grazing 2022

d) USDA Climate Change Mitigation Practice Category

Name: Pasture and Hay Planting

Code 1: 512 – Pasture and Hay Planting $800.00 per acre

Mississippi Code: 512 MS CPS Prescribed Grazing 2022

Response 1A. To ensure the implementation of practices that meet NRCS standards, Team Vanguard has used the NRCS Field Office Technical Guide for Mississippi. Team Vanguard will convert five (5) Mississippi Codes into an online learning course to support producers' didactical competency validation and a hands-on experience in a field setting to verify the implementation of the practices. Our operations manager (Agronomist), Curriculum Developer, and mobile teams will oversee these activities.

Question 2. Are you proposing to implement practices on land not currently used for agricultural production?

Response 2. Team Vanguard will not implement practices on land not currently used for agricultural production. Clarification on this point has been added to the

Project Narrative in section 2.1 Initiate Phase, OPBS Factor 1, a) Our Intent (page 7).

Question 3. Will any practices, such as fencing, involve ground disturbance below the plow zone?

Response 3. Team Vanguard will use practices (soil monitoring probes) involving ground disturbance below the plow zone. The depth is 28". Clarification on this point has been added to the Project Narrative in section 2.1 Initiate Phase, OPBS Factor 2, paragraph 1 (page 8).

Question 4. Please describe any potential project activities involving concentrated animal feeding operations (CAFOs).

Response 4. Team Vanguard will not use project activities involving concentrated animal feeding operations.

Question 5. Technical assistance is the responsibility of the grant recipient. Please clarify in your proposal which will be providing the technical assistance.

Response 5. Details on this point are included in the Project Narrative in section 2.0 Technical Approach, Paragraph 1 (page 5) and 2.2 Plan Phase-Step 7, Participation (page 17)

Section 3: Email 3 – Dated 2/8/2023

As mentioned previously, Team Vanguard recognizes that projects which result from this program will face intense scrutiny. We know that we must explain and outline details of our pilot to minimize concerns and maintain strong internal controls, well-documented complaint procedures, and rigorous record-keeping. We are providing our updates in the following paragraphs.

1. **Overhead Expenses Modification Update.** Team Vanguard initially intended to demonstrate the use of industry best practices to support this project. Our proposed Program Management approach and structure is a mission-essential component of our core program delivery framework for command & control. We must demonstrate a fixed location to centralize and direct all project activities while ensuring adequate mobile internal controls through a remote hybrid model.

We recognized that the pricing associated with a traditional brick & mortar model would raise concerns because it carried a significant overhead and reduced the cash incentive amount to the producers. After receiving the renegotiation feedback, we propose a hybrid model to maintain effective command & control and increase the cash funding to the producers.

a. **Revised Overhead.** The below graph displays our revised overhead of 33% compared to our previous estimated overhead of 56%.

EXPENSE	Base Year	2nd Year	3rd Year	Three-Year Totals	Minus outside Contracts/Subawards/Incentive Payments	Revised Estimated Overhead	Previous Estimated Overhead
Personnel	$ 839,066.00	$ 839,066.00	$ 839,066.00	$ 2,517,198.00		$ 2,517,198.00	$ 4,400,076.00
Fringe Benefits	$ 209,110.80	$ 209,110.80	$ 209,110.80	$ 627,332.40		$ 627,332.40	$ 1,164,432.00
Travel	$ 168,258.98	$ 168,258.98	$ 168,258.98	$ 504,776.94		$ 504,776.94	$ 534,276.00
Equipment	$ -	$ -	$ -	$ -		$ -	$ -
Supplies	$ 33,488.00	$ 7,583.00	$ 7,583.00	$ 48,654.00		$ 48,654.00	$ 91,920.00
Contractual	$ 1,422,919.68	$ 1,423,586.79	$ 265,706.43	$ 3,112,212.90	$2,333,280.60 to Technology bundles and $324,735.00 to Advertising	$ 464,997.30	$ 1,031,048.30
Construction	$ -	$ -	$ -	$ -		$ -	$ -
Other	$ 3,221,925.62	$ 3,221,225.62	$ 879,325.62	$ 7,322,476.86	$2,586,512.16 to Subawardees & $4,866,671.94 to Farmer Incentive payments	$ 51,462.00	$ 67,832.70
Total Direct	$ 5,894,769.08	$ 5,868,831.19	$ 2,369,050.83	$ 14,132,651.10		$ 4,214,420.64	$ 7,289,585.00
Indirect	$ 277,008.44	$ 274,168.34	$ 158,037.11	$ 709,213.89		$ 709,213.89	$ 974,063.89
Total Budget Base Year	$ 6,171,777.52	$ 6,142,999.53	$ 2,527,087.94	$ 14,841,864.99		$ 4,923,634.53	$ 8,263,648.89
				Under $15M Ceiling		Revised % of Overhead	Previous % of Overhead
				$ 158,135.01		33%	56%

b. **Producers Funding Breakdown.**

Smart-Way Incentive Program Materials	$2,322,480.60
Smart-Way Incentive Program Advertising	$324,735.00
Smart-Way Incentive Program Cash Incentive	$4,684,500.00
3-Year Total for Incentive Program	**$7,331,715.60**

c. **Team Vanguard's Revised Personnel & Fringe Total.** The revised number of Team Vanguard's personnel is reduced from 21 to 12 (including 4 are part-time employees). This cost was reduced from $5,564,508.00 to $3,144,530.40. These 12 personnel are mission critical for effective personnel ratio to producer numbers and ensure the success of our farmer engagement, onsite quality control & assurance,

education, Smart-Way Incentive Program material distribution, probe monitoring & data collection, soil collection, and help desk operations. As mentioned above, we will support 90 different producers each year for a pilot total of 270 producers across three sectors and surrounding areas outside the sectors.

d. **Team Vanguard's Revised Contractual Overhead Cost.** The contractual overhead cost is reduced from $1,031,054.30 to $464,997.30. As previously mentioned, our proposed Program Management approach and structure is a mission-essential component of our core program delivery framework for command & control. We must demonstrate a fixed location to centralize and direct all project activities while ensuring adequate mobile internal controls through a remote hybrid model.

e. **Team Vanguard's Advisory Board Travel.** Utilizing a hybrid work plan reduces this cost from $61,056.00 to $6,784.00.

f. **Number of Producers.** Team Vanguard has increased the funding amount to producers from $13,000.00 to $26,500.00. As mentioned earlier, we will support 90 different producers each year for a pilot total of 270 producers across 3 sectors and surrounding areas outside the sectors. Although the producers will differ each year, our engagement team will continue with engagement activities to maintain climate-smart traceability requirements to retain their SmartAgGro product processing and distribution network membership.

   As mentioned, the revised 12 personnel and sub-awardees are mission-critical for effective personnel ratio to producer numbers. This course of action ensures the success of our farmer engagement, onsite quality control & assurance, education, Smart-Way Incentive Program material distribution, probe monitoring & data collection, soil collection, and help desk operations.

g. **Personnel to Support the Project's Scope.** The revised 12 personnel are indeed allocable and necessary for the pilot's implementation. To achieve the various USDA objectives, Team Vanguard must implement climate-smart production practices, activities, and systems on working lands; measure/quantify, monitor, and verify the carbon and greenhouse gas benefits associated with those practices. To develop markets that promote the resulting climate-smart commodities as well as intended overarching outcomes and intended market expansion outcomes, Team Vanguard has structured a mix of personnel, sub-awardees, and outsourced capacity to accomplish the scope with minimal risks.

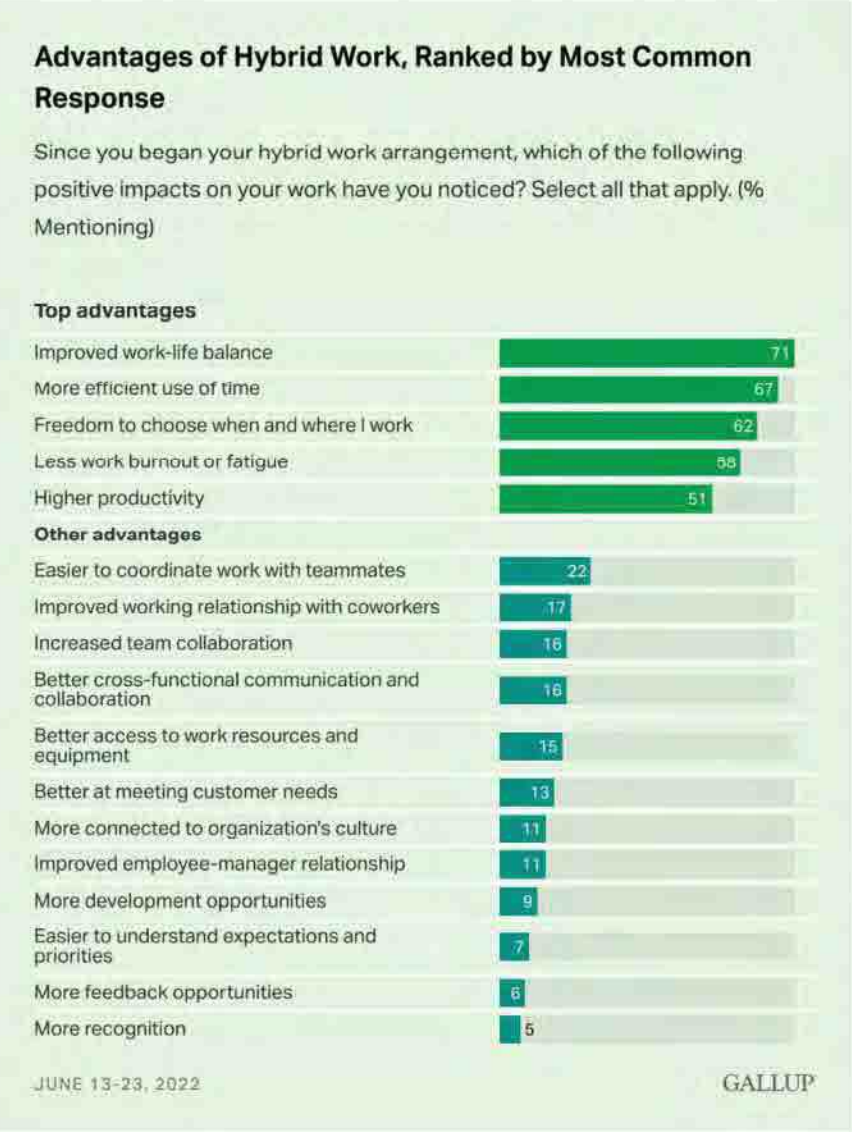
   The revised labor categories are:

   1) Program Director – Remote
   2) Operations Manager (Agronomist) – Office
   3) Curriculum Developer (P/T) – Hybrid
   4) IT Generalist (P/T) – Office
   5) Purchasing & Distribution Coordinator (P/T) – Office
   6) Incentive Program Technician (P/T) – Remote
   7) Agricultural Field Technicians (3) – Hybrid
   8) Soil Conservation Technicians (3) – Hybrid

h. **Requirement for a Physical Office.** Team Vanguard is proposing a hybrid work and workplace model for this project. The most significant advantages of our hybrid work and hybrid workplace model are:

- Improved work-life balance.
- More efficient use of time.
- Better control over work hours and work location.
- Burnout mitigation.
- Higher productivity.

In a recent Gallup Poll, personnel expressed their belief that hybrid arrangements improved their well-being and productivity at work.



Team Vanguard's hybrid model will provide the flexibility for team members to work in ways that are most effective for them.

i. **Board Members Travel.** Utilizing a hybrid work plan reduces this cost from $61,056.00 to $6,784.00. Only the Program Director will travel.

j. **The Teralytic Bundle.** There is no profit associated with this material. It is related to Requirements for (1) quantification, and (2) monitoring and verification of GHG benefits such as:

- Deployment of innovative, cost-effective methods for quantifying greenhouse gas and carbon sequestration benefits.
- Monitoring and verification to help facilitate the deployment of climate-smart agriculture at scale and provide information critical to adapting quantification models in the future.

The request for a justification letter is updated to reflect subscription only for the period of performance.

k. **Funded Climate-Smart Practices and Funding Breakdown.** The funded practices are listed below:

- Soil Health – Mississippi Code: 340 MS CPS Cover Crop 2016
- Soil Health – Mississippi Code: 345 MS CPS Residue and Tillage Management Reduced Till 2016
- Pasture and Hay Planting – Mississippi Code: 512 MS CPS Pasture & Hay Planting 2022
- Nitrogen Management – Mississippi Code: 590 MS CPS Nutrient Management 2013
- Grazing and Pasture – Mississippi Code: 528 MS CPS Prescribed Grazing 2022

Team Vanguard's Smart-Way Incentive Program will provide technology materials and cash incentives as follows:

	Farmer Bundles	Rancher Bundles
Materials	$8,529.78	$8,673.78
Cash	$17,970.22	$17,826.22
Total	$26,500.00	$26,500.00

l. **Mobile Teams Personnel Requirements.** Team Vanguard has reduced the number of team personnel from nine (9) to six (6). Because learning and training are essential to the success of this project, we must utilize an effective instructor-to-adult-learner ratio. The instructor-to-student ratio is 1:22 which is ideal for small group instruction. Each sector will have a ceiling level of 45 producers, and our mobile team will consist of two (2) labor categories with instructor duties: one (1) Agricultural Field technician and one (1) Soil Conservation Technician This model increases retention and reduces burnout.

Our advisory team has used this model to support the Department of Army. The global training mission encompassed learning and training for an adult audience. Each team consisted of two instructors with an annual mission load of five (5) trips

per quarter annually. Using a 1:22 instructor-to-student ratio, we anticipate students' measured competency retention rate will average above 85% didactically and 90% hands-on proficiency. These outcomes translate into fast adoption of new knowledge acquisition and increased practical utilizations of the new skills. We believe that we will obtain similar results for our Smart-Way Incentive Program.

m. **Veterinary Support Requirement**. For many years, farmers have had to deal with a lack of rural veterinarian presence at national and state levels. In Mississippi, rural veterinary presence is almost nonexistent for underserved producers. In 2022, the U.S. Department of Agriculture stated that 500 counties in 46 states reported critical shortages of veterinary presence. On Dec. 6, 2022, Sen. Cindy Hyde-Smith (R-Miss.) said at a hearing of the Senate Committee on Agriculture, Nutrition, and Forestry, *"We are losing animals because no one can get to the farm in time to save them." "There are counties in Mississippi where there isn't even a vet for big animals."*

   Also, starting in June 2023, farmers will need a prescription to buy antibiotics like penicillin and tetracycline that they have been able to buy over the counter for a long time. Our veterinary support will benefit producers with early detection of issues and the measurement of meat quality through lab testing, soil improvement and training. Veterinary support is essential for the success of our producers and the achievement of the program's goals and objectives.

Appendix J – Targeted Commodities Breakdown by County

Data Source: 2017 Census of Agriculture Mississippi County Profiles.

A. Sector 1

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
1	Adams	1. Forage (hay/haylage) 2. Soybeans 3. Cotton, all 4. Corn 5. Grains, oilseeds, dry beans, dry peas 6. Vegetables, melons, potatoes, sweet potatoes 7. Fruits, tree nuts, berries 8. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 3 2. Reduced till 3 3. Intensive till 4 4. Cover crop 3	1. Cropland 31 2. Pastureland 12 3. Woodland 42
	Amite	1. Forage (hay/haylage), all 2. Soybeans for beans 3. Land in berries 4. Vegetables harvested, all 5. Blueberries, all 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco 8. Cotton and cottonseed 9. Vegetables, melons, potatoes, sweet potatoes 10. Fruits, tree nuts, berries 11. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 4 2. Reduced till 2 3. Intensive till 5 4. Cover crop 3	1. Cropland 21 2. Pastureland 26 3. Woodland 43
	Claiborne	1. Forage (hay/haylage), all 2. Soybeans for beans 3. Cotton, all 4. Corn for grain	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 4 2. Reduced till 3 3. Intensive till 6 4. Cover crop 5	1. Cropland 26 2. Pastureland 21 3. Woodland 48

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
		5. Peanuts for nuts 6. Cattle and calves	**MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management			
	Copiah	1. Forage (hay/haylage), all 2. Cotton, all 3. Corn for grain 4. Soybeans for beans 5. Vegetables harvested, all Grains, oilseeds, dry beans, dry peas 6. Tobacco 7. Vegetables, melons, potatoes, sweet potatoes 8. Fruits, tree nuts, berries 9. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 1 2. Reduced till 1 3. Intensive till 5 4. Cover crop 3	1. Cropland 18 2. Pastureland 22 3. Woodland 56
	Franklin	1. Forage (hay/haylage), all 2. Soybeans for beans 3. Corn for grain 4. Pecans, all 5. Land in berries 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco 8. Cotton and cottonseed 9. Vegetables, melons, potatoes, sweet potatoes 10. Fruits, tree nuts, berries 11. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 4 2. Reduced till 4 3. Intensive till 12 4. Cover crop 7	1. Cropland 7 2. Pastureland 18 3. Woodland 55
	Hinds	1. Forage (hay/haylage), all 2. Soybeans for beans	**MS 340**-Cover Crop	See the Project Narrative,	1. No till 2 2. Reduced till 5 3. Intensive till 6	1. Cropland 25 2. Pastureland 26 3. Woodland 40

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
		3. Corn for grain 4. Cotton, all 5. Grains, oilseeds, dry beans, dry peas 6. Tobacco 7. Vegetables, melons, potatoes, sweet potatoes 8. Fruits, tree nuts, berries 9. Cattle and calves	**MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	Appendix G, Paragraph G-8	4. Cover crop 2	
	Issaquena	1. Soybeans for beans 2. Corn for grain 3. Cotton, all 4. Forage (hay/haylage), all 5. Wheat for grain, all 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco 8. Vegetables, melons, potatoes, sweet potatoes 9. Fruits, tree nuts, berries 10. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 3 2. Reduced till 24 3. Intensive till 44 4. Cover crop 1	1. Cropland 66 2. Pastureland (D) 3. Woodland 32
	Jefferson	1. Forage (hay/haylage), all 2. Soybeans for beans 3. Cotton, all 4. Corn for grain 5. Grains, oilseeds, dry beans, dry peas 6. Tobacco 7. Vegetables, melons, potatoes, sweet potatoes 8. Fruits, tree nuts, berries 9. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 3 2. Reduced till 3 3. Intensive till 4 4. Cover crop 2	1. Cropland 19 2. Pastureland 24 3. Woodland 53
	Warren	1. Soybeans for beans 2. Cotton, all	**MS 340**-Cover Crop	See the Project Narrative,	1. No till 6 2. Reduced till 4	1. Cropland 41 2. Pastureland 8

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
		3. Forage (hay/haylage), all 4. Corn for grain 5. Peanuts for nuts 6. Cattle and calves	**MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	Appendix G, Paragraph G-8	3. Intensive till 9 4. Cover crop 4	3. Woodland 47
	Wilkinson	1. Forage (hay/haylage), all 2. Soybeans for beans 3. Pecans, all 4. Short-rotation woody crops 5. Corn for silage or green chop 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 4 2. Reduced till 3 3. Intensive till 4 4. Cover crop 2	1. Cropland 13 2. Pastureland 12 3. Woodland 73

Appendix J – Targeted Commodities Breakdown by County (Continued)

B. Sector 2

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
2	Attala	1. Forage (hay/haylage), all 2. Soybeans for beans 3. Cotton, all 4. Corn for grain 5. Corn for silage or green chop 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco 8. Vegetables, melons, potatoes, sweet potatoes 9. Fruits, tree nuts, berries 10. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 5 2. Reduced till 3 3. Intensive till 5 4. Cover crop 6	1. Cropland 19 2. Pastureland 12 3. Woodland 63
	Carroll	1. Cotton, all 2. Forage (hay/haylage), all 3. Soybeans for beans 4. Corn for grain 5. Peanuts for nuts 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco 8. Vegetables, melons, potatoes, sweet potatoes 9. Fruits, tree nuts, berries 10. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 5 2. Reduced till 7 3. Intensive till 10 4. Cover crop 5	1. Cropland 41 2. Pastureland 16 3. Woodland 39
	Holmes	1. Cotton, all 2. Soybeans for beans 3. Corn for grain	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 2 2. Reduced till 5 3. Intensive till 13 4. Cover crop 4	1. Cropland 49 2. Pastureland 14 3. Woodland 31

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
		4. Forage (hay/haylage), all Peanuts for nuts 5. Grains, oilseeds, dry beans, dry peas 6. Tobacco 7. Vegetables, melons, potatoes, sweet potatoes Fruits, tree nuts, berries 8. Cattle and calves	**MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management			
	Humphreys	1. Soybeans for beans 2. Cotton, all 3. Corn for grain 4. Rice Peanuts for nuts 5. Grains, oilseeds, dry beans, dry peas 6. Tobacco 7. Vegetables, melons, potatoes, sweet potatoes, Fruits, tree nuts, berries 8. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 9 2. Reduced till 30 3. Intensive till 37 4. Cover crop 1	1. Cropland 82 2. Pastureland 4 3. Woodland 8
	Leake	1. Forage (hay/haylage), all 2. Cotton, all 3. Soybeans for beans 4. Short-rotation woody crops 5. Grains, oilseeds, dry beans, dry peas 6. Tobacco 7. Vegetables, melons, potatoes, sweet potatoes Fruits, tree nuts, berries 8. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 3 2. Reduced till 2 3. Intensive till 6 4. Cover crop 1	1. Cropland 29 2. Pastureland 26 3. Woodland 37
	Madison	1. Soybeans for beans 2. Corn for grain	**MS 340**-Cover Crop	See the Project Narrative,	1. No till 3 2. Reduced till 5 3. Intensive till 5	1. Cropland 32 2. Pastureland 15 3. Woodland 47

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
		3. Forage (hay/haylage), all 4. Cotton, all 5. Peanuts for nuts 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco 8. Vegetables, melons, potatoes, sweet potatoes Fruits, tree nuts, berries 9. Cattle and calves	**MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	Appendix G, Paragraph G-8	4. Cover crop 3	
	Montgomery	1. Forage (hay/haylage), all 2. Cotton, all 3. Corn for grain 4. Soybeans for beans Vegetables harvested, all 5. Grains, oilseeds, dry beans, dry peas 6. Tobacco 7. Vegetables, melons, potatoes, sweet potatoes, Fruits, tree nuts, berries 8. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 9 2. Reduced till 4 3. Intensive till 7 4. Cover crop	1. Cropland 31 2. Pastureland 17 3. Woodland 47
	Sharkey	1. Soybeans for beans 2. Corn for grain 3. Cotton, all 4. Peanuts for nuts 5. Forage (hay/haylage), all 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco 8. Vegetables, melons, potatoes, sweet potatoes	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 6 2. Reduced till 12 3. Intensive till 41 4. Cover crop 6	1. Cropland 82 2. Pastureland 3. Woodland 14

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
		9. Fruits, tree nuts, berries 10. Cattle and calves				
	Washington	1. Soybeans for beans 2. Corn for grain 3. Cotton, all 4. Rice 5. Wheat for grain, all 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 9 2. Reduced till 46 3. Intensive till 44 4. Cover crop 7	1. Cropland 94 2. Pastureland 3. Woodland 3
	Yazoo	1. Soybeans for beans 2. Corn for grain 3. Cotton, all 4. Forage (hay/haylage), all Peanuts for nuts 5. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 6 2. Reduced till 9 3. Intensive till 17 4. Cover crop 2	1. Cropland 54 2. Pastureland 9 3. Woodland 33

Appendix J – Targeted Commodities Breakdown by County (Continued)

C. Sector 3

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
3	Bolivar	1. Soybeans for beans 2. Rice Corn for grain 3. Cotton, all 4. Wheat for grain, all 5. Grains, oilseeds, dry beans, dry peas 6. Vegetables, melons, potatoes, sweet potatoes 7. Fruits, tree nuts, berries 8. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 22 2. Reduced till 33 3. Intensive till 41 4. Cover crop 10	1. Cropland 92 2. Pastureland 1 3. Woodland 5
	Coahoma	1. Soybeans for beans 2. Cotton, all 3. Corn for grain 4. Rice Wheat for grain, all 5. Grains, oilseeds, dry beans, dry peas 6. Tobacco 7. Vegetables, melons, potatoes, sweet potatoes Fruits, tree nuts, berries 8. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 15 2. Reduced till 44 3. Intensive till 30 4. Cover crop 8	1. Cropland 89 2. Pastureland (D) 3. Woodland 8
	Grenada	1. Forage (hay/haylage), all 2. Cotton, all 3. Corn for grain 4. Soybeans for beans 5. Vegetables harvested, all 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 4 2. Reduced till 3 3. Intensive till 2 4. Cover crop 3	1. Cropland 29 2. Pastureland 20 3. Woodland 42

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
		8. Vegetables, melons, potatoes, sweet potatoes 9. Fruits, tree nuts, berries 10. Cattle and calves				
	Leflore	1. Soybeans for beans 2. Cotton, all 3. Corn for grain 4. Peanuts for nuts 5. Rice 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco 8. Vegetables, melons, potatoes, sweet potatoes 9. Fruits, tree nuts, berries 10. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 13 2. Reduced till 30 3. Intensive till 33 4. Cover crop	1. Cropland 82 2. Pastureland 3. Woodland 10
	Panola	1. Soybeans for beans 2. Cotton, all 3. Forage (hay/haylage), all 4. Corn for grain 5. Rice 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco 8. Vegetables, melons, potatoes, sweet potatoes 9. Fruits, tree nuts, berries 10. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 11 2. Reduced till 6 3. Intensive till 9 4. Cover crop 2	1. Cropland 50 2. Pastureland 19 3. Woodland 24
	Quitman	1. Soybeans for beans 2. Cotton, all 3. Rice 4. Corn for grain 5. Wheat for grain, all	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 19 2. Reduced till 19 3. Intensive till 25 4. Cover crop 4	1. Cropland 76 2. Pastureland 1 3. Woodland 17

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
		6. Grains, oilseeds, dry beans, dry peas 7. Tobacco 8. Vegetables, melons, potatoes, sweet potatoes Fruits, tree nuts, berries 9. Cattle and calves	**MS 528**-Prescribed Grazing **MS 590**-Nutrient Management			
	Sunflower	1. Soybeans for beans 2. Corn for grain 3. Cotton, all (D) 4. Rice Vegetables harvested, all 5. Grains, oilseeds, dry beans, dry peas 6. Tobacco 7. Vegetables, melons, potatoes, sweet potatoes (D) 8. Fruits, tree nuts, berries 9. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 13 2. Reduced till 29 3. Intensive till 42 4. Cover crop 10	1. Cropland 84 2. Pastureland (D) 3. Woodland 11
	Tallahatchie	1. Grains, oilseeds, dry beans, dry peas 2. Cotton 3. Tobacco 4. Vegetables, melons, potatoes, sweet potatoes 5. Fruits, tree nuts, berries 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 12 2. Reduced till 15 3. Intensive till 22 4. Cover crop 5	1. Cropland 76 2. Pastureland 4 3. Woodland 17
	Tunica	1. Soybeans for beans 2. Cotton, all 3. Rice 4. Corn for grain 5. Wheat for grain, all 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 43 2. Reduced till 40 3. Intensive till 41 4. Cover crop 9	1. Cropland 95 2. Pastureland (D) 3. Woodland 3

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
		8. Vegetables, melons, potatoes, sweet potatoes 9. Cattle and calves	**MS 590**-Nutrient Management			
	Yalobusha	1. Forage (hay/haylage), all 2. Soybeans for beans 3. Cotton, all 4. Vegetables harvested, all 5. Sweet potatoes, melons 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco 8. Fruits, tree nuts, berries 9. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 6 2. Reduced till 6 3. Intensive till 6 4. Cover crop 3	1. Cropland 33 2. Pastureland 19 3. Woodland 43

Appendix J – Targeted Commodities Breakdown by County (Continued)

D. Sector 4

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
4	Alcorn	1. Soybeans for beans 2. Forage (hay/haylage), all 3. Corn for grain 4. Cotton, all Wheat for grain, all (D) 5. Grains, oilseeds, dry beans, dry peas 6. Tobacco 7. Vegetables, melons, potatoes, sweet potatoes Fruits, tree nuts, berries 8. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 5 2. Reduced till 2 3. Intensive till 7 4. Cover crop 2	1. Cropland 48 2. Pastureland 16 3. Woodland 30
	Benton	1. Soybeans for beans 2. Forage (hay/haylage), all 3. Corn for grain 4. Cotton, all (D) 5. Wheat for grain, all (D) 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco 8. Vegetables, melons, potatoes, sweet potatoes Fruits, tree nuts, berries 9. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 5 2. Reduced till 3 3. Intensive till 6 4. Cover crop 6	1. Cropland 34 2. Pastureland 28 3. Woodland 35
	Calhoun	1. Soybeans for beans 2. Vegetables harvested, all 3. Sweet potatoes 4. Forage (hay/haylage), all 5. Cotton, all	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 10 2. Reduced till 5 3. Intensive till 14 4. Cover crop 4	1. Cropland 50 2. Pastureland 12 3. Woodland 32

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
		6. Grains, oilseeds, dry beans, dry peas 7. Tobacco 8. Vegetables, melons, potatoes, sweet potatoes 9. Fruits, tree nuts, berries 10. Cattle and calves	**MS 528**-Prescribed Grazing **MS 590**-Nutrient Management			
	Chickasaw	1. Soybeans for beans 2. Forage (hay/haylage), all 3. Vegetables harvested, all 4. Sweet potatoes 5. Corn for grain 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco 8. Cotton and cottonseed 9. Vegetables, melons, potatoes, sweet potatoes Fruits, tree nuts, berries 10. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 8 2. Reduced till 5 3. Intensive till 9 4. Cover crop 4	1. Cropland 54 2. Pastureland 15 3. Woodland 24
	Choctaw	1. Forage (hay/haylage), all 2. Corn for grain 3. Soybeans for beans 4. Sod harvested 5. Cotton, all (D) 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco 8. Vegetables, melons, potatoes, sweet potatoes, Fruits, tree nuts, berries 9. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 8 2. Reduced till (Z) 3. Intensive till 5 4. Cover crop 3	1. Cropland 16 2. Pastureland 16 3. Woodland 60

Vanguard of Transformation & Empowerment Consortium

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
	Clarke	1. Forage (hay/haylage), all 2. Grapes (D) 3. Peaches, all 4. Corn for grain 5. Vegetables harvested, all 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco 8. Cotton and cottonseed 9. Vegetables, melons, potatoes, sweet potatoes Fruits, tree nuts, berries 10. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 6 2. Reduced till 7 3. Intensive till 5 4. Cover crop 6	1. Cropland 9 2. Pastureland 11 3. Woodland 77
	Clay	1. Forage (hay/haylage), all 2. Soybeans for beans 3. Corn for grain 4. Cotton, all 5. Pecans, all 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco 8. Vegetables, melons, potatoes, sweet potatoes 9. Fruits, tree nuts, berries 10. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 2 2. Reduced till 1 3. Intensive till 8 4. Cover crop 3	1. Cropland 25 2. Pastureland 29 3. Woodland 40
	Covington	1. Forage (hay/haylage), all 2. Soybeans for beans 3. Cotton, all 4. Peanuts for nuts Vegetables harvested, all 5. Grains, oilseeds, dry beans, dry peas	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 6 2. Reduced till 2 3. Intensive till 8 4. Cover crop 2	1. Cropland 19 2. Pastureland 41 3. Woodland 36

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
		6. Tobacco 7. Vegetables, melons, potatoes, sweet potatoes Fruits, tree nuts, berries 8. Cattle and calves	**MS 590**-Nutrient Management			
	Desoto	1. Soybeans for beans 2. Forage (hay/haylage), all 3. Cotton, all 4. Corn for grain 5. Rice 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco 8. Vegetables, melons, potatoes, sweet potatoes 9. Fruits, tree nuts, berries 10. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No-till 9 2. Reduced till 8 3. Intensive till 7 4. Cover crop 4	1. Cropland 61 2. Pastureland 13 3. Woodland 20
	Forrest	1. Forage (hay/haylage), all 2. Cotton, all 3. Peanuts for nuts 4. Vegetables harvested, all 5. Land in berries 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco 8. Vegetables, melons, potatoes, sweet potatoes Fruits, tree nuts, berries 9. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 5 2. Reduced till 2 3. Intensive till 8 4. Cover crop 4	1. Cropland 22 2. Pastureland 21 3. Woodland 50
	George	1. Forage (hay/haylage), all 2. Peanuts for nuts 3. Cotton, all	**MS 340**-Cover Crop	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 6 2. Reduced till 4 3. Intensive till 12 4. Cover crop 3	1. Cropland 45 2. Pastureland 19 3. Woodland 30

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
		4. Soybeans for beans 5. Short-rotation woody crops 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco 8. Vegetables, melons, potatoes, sweet potatoes 9. Fruits, tree nuts, berries 10. Cattle and calves	**MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management			
	Greene	1. Forage (hay/haylage), all 2. Vegetables/potatoes /sweet potatoes harvested, all 3. Watermelons 4. Pecans, all 5. Corn for grain 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco 8. Cotton and cottonseed 9. Fruits, tree nuts, berries 10. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 7 2. Reduced till 1 3. Intensive till 15 4. Cover crop 4	1. Cropland 13 2. Pastureland 22 3. Woodland 59
	Hancock	1. Forage (hay/haylage), all 2. Pecans, all 3. Soybeans for beans 4. Pears, all 5. Vegetables harvested, all 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco 8. Cotton and cottonseed 9. Fruits, tree nuts, berries 10. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 1 2. Reduced till 1 3. Intensive till 8 4. Cover crop 3	1. Cropland 22 2. Pastureland 37 3. Woodland 31

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
	Harrison	1. Forage (hay/haylage), all 2. Pecans, all 3. Short-rotation woody crops 4. Vegetables harvested, all 5. Cultivated Christmas trees 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco 8. Cotton and cottonseed 9. Fruits, tree nuts, berries 10. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 4 2. Reduced till 1 3. Intensive till 8 4. Cover crop 2	1. Cropland 26 2. Pastureland 39 3. Woodland 25
	Itawamba	1. Soybeans for beans 2. Forage (hay/haylage), all 3. Cotton, all 4. Wheat for grain, all 5. Corn for grain 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco 8. Vegetables, melons, potatoes, sweet potatoes 9. Fruits, tree nuts, berries 10. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 9 2. Reduced till 6 3. Intensive till 11 4. Cover crop 2	1. Cropland 34 2. Pastureland 14 3. Woodland 46
	Jackson	1. Forage (hay/haylage), all 2. Peanuts for nuts 3. Cotton, all 4. Corn for grain 5. Pecans, all 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 7 2. Reduced till 3 3. Intensive till 3 4. Cover crop 6	1. Cropland 23 2. Pastureland 30 3. Woodland 38

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
		8. Vegetables, melons, potatoes, sweet potatoes 9. Fruits, tree nuts, berries 10. Cattle and calves	**MS 590**-Nutrient Management			
	Jasper	1. Forage (hay/haylage), all 2. Short-rotation woody crops 3. Corn for grain 4. Vegetables harvested, all 5. Pecans, all 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco 8. Cotton and cottonseed 9. Fruits, tree nuts, berries 10. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 3 2. Reduced till 1 3. Intensive till 3 4. Cover crop 4	1. Cropland 14 2. Pastureland 25 3. Woodland 57
	Jefferson Davis	1. Forage (hay/haylage), all 2. Soybeans for beans 3. Corn for grain 4. Short-rotation woody crops 5. Vegetables harvested, all 6. Grains, oilseeds, dry beans, dry peas 7. Tobacco 8. Cotton and cottonseed 9. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 9 2. Reduced till 1 3. Intensive till 5 4. Cover crop 6	1. Cropland 23 2. Pastureland 27 3. Woodland 43
	Jones	1. Forage (hay/haylage), all 2. Soybeans for beans 3. Corn for grain 4. Wheat for grain, all 5. Pecans, all 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 2 2. Reduced till 1 3. Intensive till 7 4. Cover crop 2	1. Cropland 18 2. Pastureland 25 3. Woodland 49

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
			MS 528-Prescribed Grazing **MS 590**-Nutrient Management			
	Kemper	1. Forage (hay/haylage), all 2. Corn for grain 3. Short-rotation woody crops 4. Peanuts for nuts 5. Vegetables harvested, all 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 3 2. Reduced till 4 3. Intensive till 4 4. Cover crop 3	1. Cropland 14 2. Pastureland 19 3. Woodland 61
	Lafayette	1. Forage (hay/haylage), all 2. Soybeans for beans 3. Cotton, all 4. Corn for grain Vegetables harvested, all 5. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 5 2. Reduced till 2 3. Intensive till 7 4. Cover crop 4	1. Cropland 28 2. Pastureland 20 3. Woodland 47
	Lamar	1. Forage (hay/haylage), all 2. Soybeans for beans 3. Pecans, all 4. Corn for grain Land in berries 5. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 3 2. Reduced till 1 3. Intensive till 7 4. Cover crop 3	1. Cropland 15 2. Pastureland 22 3. Woodland 56
	Lauderdale	1. Forage (hay/haylage), all	**MS 340**-Cover Crop	See the Project Narrative,	1. No till 3 2. Reduced till 3	1. Cropland 22 2. Pastureland 17

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
		2. Soybeans for beans 3. Pecans, all 4. Vegetables harvested, all Corn for grain 5. Cattle and calves	**MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	Appendix G, Paragraph G-8	3. Intensive till 7 4. Cover crop 9	3. Woodland 56
	Lawrence	1. Forage (hay/haylage), all 2. Soybeans for beans 3. Corn for grain 4. Short-rotation woody crops 5. Vegetables harvested, all 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 3 2. Reduced till 2 3. Intensive till 5 4. Cover crop 3	1. Cropland 31 2. Pastureland 28 3. Woodland 37
	Lee	1. Soybeans for beans 2. Forage (hay/haylage), all 3. Cotton, all 4. Corn for grain 5. Sod harvested 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 13 2. Reduced till 5 3. Intensive till 13 4. Cover crop 3	1. Cropland 59 2. Pastureland 20 3. Woodland 15
	Lincoln	1. Forage (hay/haylage), all 2. Corn for grain 3. Short-rotation woody crops 4. Soybeans for beans 5. Vegetables harvested, all	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 3 2. Reduced till 2 3. Intensive till 6 4. Cover crop 3	1. Cropland 15 2. Pastureland 39 3. Woodland 41

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
		6. Cattle and calves	**MS 528**-Prescribed Grazing **MS 590**-Nutrient Management			
	Lowndes	1. Soybeans for beans 2. Cotton, all 3. Forage (hay/haylage), all 4. Corn for grain 5. Wheat for grain, all 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 7 2. Reduced till 10 3. Intensive till 13 4. Cover crop 6	1. Cropland 46 2. Pastureland 14 3. Woodland 31
	Marion	1. Forage (hay/haylage), all 2. Corn for grain 3. Soybeans for beans 4. Corn for silage or green chop 5. Short-rotation woody crops 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 4 2. Reduced till 2 3. Intensive till 5 4. Cover crop 3	1. Cropland 23 2. Pastureland 20 3. Woodland 49
	Marshall	1. Soybeans for beans 2. Forage (hay/haylage), all 3. Corn for grain 4. Cotton, all 5. Wheat for grain, all 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 9 2. Reduced till 4 3. Intensive till 8 4. Cover crop 3	1. Cropland 34 2. Pastureland 25 3. Woodland 36

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
	Monroe	1. Soybeans for beans Forage (hay/haylage), all 2. Corn for grain 3. Cotton, all 4. Peanuts for nuts 5. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 8 2. Reduced till 6 3. Intensive till 12 4. Cover crop 4	1. Cropland 49 2. Pastureland 16 3. Woodland 28
	Neshoba	1. Forage (hay/haylage), all 2. Short-rotation woody crops 3. Sorghum for grain 4. Vegetables harvested, all Floriculture and bedding crops 5. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 1 2. Reduced till 2 3. Intensive till 5 4. Cover crop 2	1. Cropland 23 2. Pastureland 31 3. Woodland 38
	Newton	1. Forage (hay/haylage), all 2. Soybeans for beans 3. Corn for grain 4. Corn for silage or green chop 5. Short-rotation woody crops 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 5 2. Reduced till 3 3. Intensive till 8 4. Cover crop 3	1. Cropland 24 2. Pastureland 24 3. Woodland 43
	Noxubee	1. Corn for grain 2. Cotton, all 3. Soybeans for beans 4. Forage (hay/haylage), all Short-rotation woody crops	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 5 2. Reduced till 13 3. Intensive till 11 4. Cover crop 9	1. Cropland 48 2. Pastureland 18 3. Woodland 27

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
		5. Cattle and calves	**MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management			
	Oktibbeha	1. Forage (hay/haylage), all 2. Soybeans for beans 3. Corn for silage or green-chop 4. Short-rotation woody crops 5. Cotton, all 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 3 2. Reduced till 1 3. Intensive till 4 4. Cover crop 5	1. Cropland 22 2. Pastureland 35 3. Woodland 37
	Pearl River	1. Forage (hay/haylage), all 2. Sod harvested 3. Land in berries 4. Blueberries, all 5. Pecans, all 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 3 2. Reduced till 5 3. Intensive till 4 4. Cover crop 2	1. Cropland 17 2. Pastureland 30 3. Woodland 47
	Perry	1. Forage (hay/haylage), all 2. Cotton, all 3. Peanuts for nuts 4. Vegetables harvested, all 5. Corn for grain 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 5 2. Reduced till 4 3. Intensive till 8 4. Cover crop 4	1. Cropland 24 2. Pastureland 26 3. Woodland 43

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
	Pike	1. Forage (hay/haylage), all 2. Soybeans for beans 3. Short-rotation woody crops 4. Pecans, all 5. Corn for grain 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 1 2. Reduced till 2 3. Intensive till 4 4. Cover crop 5	1. Cropland 24 2. Pastureland 30 3. Woodland 39
	Pontotoc	1. Soybeans for beans 2. Forage (hay/haylage), all 3. Corn for grain 4. Cotton, all 5. Vegetables harvested, all 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 5 2. Reduced till 5 3. Intensive till 14 4. Cover crop 4	1. Cropland 47 2. Pastureland 17 3. Woodland 30
	Prentiss	1. Soybeans for beans 2. Forage (hay/haylage), all 3. Cotton, all 4. Corn for grain 5. Wheat for grain, all 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 9 2. Reduced till 5 3. Intensive till 12 4. Cover crop 4	1. Cropland 38 2. Pastureland 21 3. Woodland 35
	Rankin	1. Forage (hay/haylage), all 2. Soybeans for beans 3. Cotton, all 4. Corn for grain 5. Peaches, all	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 4 2. Reduced till 3 3. Intensive till 6 4. Cover crop 2	1. Cropland 31 2. Pastureland 20 3. Woodland 44

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
		6. Cattle and calves	**MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management			
	Scott	1. Forage (hay/haylage), all 2. Soybeans for beans 3. Corn for grain 4. Cotton, all 5. Short-rotation woody crops 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 2 2. Reduced till 5 3. Intensive till 6 4. Cover crop 3	1. Cropland 26 2. Pastureland 32 3. Woodland 35
	Simpson	1. Forage (hay/haylage), all 2. Soybeans for beans 3. Corn for grain 4. Vegetables harvested, all 5. Watermelons 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 5 2. Reduced till (Z) 3. Intensive till 8 4. Cover crop 3	1. Cropland 23 2. Pastureland 32 3. Woodland 38
	Smith	1. Forage (hay/haylage), all 2. Cotton, all 3. Soybeans for beans 4. Peanuts for nuts 5. Vegetables harvested, all 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 2 2. Reduced till 2 3. Intensive till 7 4. Cover crop 6	1. Cropland 29 2. Pastureland 28 3. Woodland 31

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
	Stone	1. Forage (hay/haylage), all 2. Cotton, all 3. Peanuts for nuts 4. Corn for grain 5. Nursery stock crops 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 5 2. Reduced till 2 3. Intensive till 13 4. Cover crop 5	1. Cropland 23 2. Pastureland 29 3. Woodland 40
	Tate	1. Soybeans for beans 2. Forage (hay/haylage), all 3. Cotton, all 4. Corn for grain 5. Peanuts for nuts 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 9 2. Reduced till 5 3. Intensive till 8 4. Cover crop 3	1. Cropland 43 2. Pastureland 28 3. Woodland 22
	Tippah	1. Soybeans for beans 2. Forage (hay/haylage), all 3. Cotton, all 4. Corn for grain 5. Nursery stock crops 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 4 2. Reduced till 4 3. Intensive till 10 4. Cover crop 3	1. Cropland 36 2. Pastureland 16 3. Woodland 41
	Tishomingo	1. Cotton, all 2. Forage (hay/haylage), all 3. Soybeans for beans 4. Vegetables harvested, all Corn for grain	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 5 2. Reduced till 1 3. Intensive till 8 4. Cover crop 4	1. Cropland 41 2. Pastureland 17 3. Woodland 38

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
		5. Cattle and calves	**MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management			
	Union	1. Soybeans for beans 2. Forage (hay/haylage), all 3. Corn for grain 4. Cotton, all 5. Sod harvested 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 10 2. Reduced till 4 3. Intensive till 11 4. Cover crop 3	1. Cropland 40 2. Pastureland 15 3. Woodland 41
	Walthall	1. Forage (hay/haylage), all 2. Soybeans for beans 3. Corn for grain 4. Short-rotation woody crops 5. Peanuts for nuts 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 4 2. Reduced till 4 3. Intensive till 6 4. Cover crop 5	1. Cropland 30 2. Pastureland 28 3. Woodland 36
	Wayne	1. Forage (hay/haylage), all 2. Corn for grain 3. Land in berries 4. Blueberries, all 5. Peanuts for nuts 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 8 2. Reduced till 2 3. Intensive till 6 4. Cover crop 5	1. Cropland 29 2. Pastureland 23 3. Woodland 43

Sector	County	Top Crops in Acres	CSAF Practice(s)	Market Channel(s)	Land Practice (%)	Land Use (%)
	Webster	1. Soybeans for beans 2. Cotton, all 3. Forage (hay/haylage), all 4. Vegetables harvested, all Sweet potatoes 5. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative, Appendix G, Paragraph G-8	1. No till 8 2. Reduced till 4 3. Intensive till 8 4. Cover crop 5	1. Cropland 40 2. Pastureland 12 3. Woodland 44
	Winston	1. Forage (hay/haylage), all 2. Cotton, all 3. Soybeans for beans 4. Corn for grain 5. Wheat for grain, all 6. Cattle and calves	**MS 340**-Cover Crop **MS 345**-Residue and Tillage Management **MS 512**-Pasture & Hay Planting **MS 528**-Prescribed Grazing **MS 590**-Nutrient Management	See the Project Narrative Appendix G Paragraph G-8 See the Project Narrative, Appendix G, Paragraph G-8	1. No till 5 2. Reduced till 1 3. Intensive till 8 4. Cover crop 4	1. Cropland 16 2. Pastureland 24 3. Woodland 52

Appendix F – Benchmark and Milestones

Milestones/Benchmarks.

Required Quantitative Targets by Quarter (Cumulative) – some initial quarters may be zero:

- Number of producers involved:

  Year 1 (Quarter 1 = 0, Quarter 2 = 45, Quarter 3 = 90, Quarter 4 = 135).
  Year 2 (Quarter 1 = 168, Quarter 2 = 202, Quarter 3 = 236, Quarter 4 = 270).
  Year 3 (Quarter 1 = 270, Quarter 2 = 270, Quarter 3 = 270, Quarter 4 = 270).

- Number of underserved producers involved:

  Year 1 (Quarter 1 = 0, Quarter 2 = 45, Quarter 3 = 90, Quarter 4 = 135).
  Year 2 (Quarter 1 = 168, Quarter 2 = 202, Quarter 3 = 236, Quarter 4 = 270).
  Year 3 (Quarter 1 = 270, Quarter 2 = 270, Quarter 3 = 270, Quarter 4 = 270).

- Number of acres involved:

  Year 1 (Quarter 1 = 0, Quarter 2 = 2,970, Quarter 3 = 6,000, Quarter 4 = 9,105).
  Year 2 (Quarter 1 = 11,340, Quarter 2 = 13,635, Quarter 3 = 15,930, Quarter 4 = 18,225).
  Year 3 (Quarter 1 = 18,225, Quarter 2 = 18,225, Quarter 3 = 18,225, Quarter 4 = 18,225).

- Number of heads involved (if applicable):

  Year 1 (Quarter 1 = 0, Quarter 2 = 8,910, Quarter 3 = 18,000, Quarter 4 = 27,315).
  Year 2 (Quarter 1 = 34,020, Quarter 2 = 40,905, Quarter 3 = 47,790, Quarter 4 = 54,675).
  Year 3 (Quarter 1 = 54,675, Quarter 2 = 54,675, Quarter 3 = 54,675, Quarter 4 = 54,675).

- Dollars provided to producers:

  Year 1 (Quarter 1 = $0, Quarter 2 = $1,167,922.76, Quarter 3 = $2,335,845.53, Quarter 4 = $3,503,768.30).
  Year 2 (Quarter 1 = $4,379,571.37, Quarter 2 = $5,255,374.44, Quarter 3 = $6,131,177.52, Quarter 4 = $7,006,980.60).
  Year 3 (Quarter 1 = $7,006,980.60, Quarter 2 = $7,006,980.60, Quarter 3 = $7,006,980.60, Quarter 4 = $7,006,980.60).

- GHG Benefits (Metric Tons of CO2e Reduced or Sequestered):

  Year 1 (Quarter 1 = 0, Quarter 2 = 18,480, Quarter 3 = 37,200, Quarter 4 = 56,520).
  Year 2 (Quarter 1 = 70,560, Quarter 2 = 84,840, Quarter 3 = 99,120, Quarter 4 = 113,400).
  Year 3 (Quarter 1 = 113,400, Quarter 2 = 113,400, Quarter 3 = 113,400, Quarter 4 = 113,400).

- Number of new marketing channels* established:

  Year 1 (Quarter 1 = 0, Quarter 2 = 23, Quarter 3 = 46, Quarter 4 = 69).
  Year 2 (Quarter 1 = 92, Quarter 2 = 116, Quarter 3 = 140, Quarter 4 = 164).
  Year 3 (Quarter 1 = 188, Quarter 2 = 212, Quarter 3 = 236, Quarter 4 = 260).

  Explain: See Appendix G, Section G-8. It outlines our initial market analysis outcomes.

- Number of marketing channels* expanded:

  Year 1 (Quarter 1 = 0, Quarter 2 = 23, Quarter 3 = 46, Quarter 4 = 69).
  Year 2 (Quarter 1 = 92, Quarter 2 = 116, Quarter 3 = 140, Quarter 4 = 164).
  Year 3 (Quarter 1 = 188, Quarter 2 = 212, Quarter 3 = 236, Quarter 4 = 260).

  Explain: See Appendix G, Section G-8. It outlines our initial market analysis outcomes.

  *Note to NPOs: Marketing channels can be a wide range, e.g., selling to food processors, distributors, and direct to consumers.

- Number of measurement tools utilized:

  Year 1 (Quarter 1 = 0, Quarter 2 = 1, Quarter 3 = 2, Quarter 4 = 4).
  Year 2 (Quarter 1 = 4, Quarter 2 = 4, Quarter 3 = 4, Quarter 4 = 4).
  Year 3 (Quarter 1 = 4, Quarter 2 = 4, Quarter 3 = 4, Quarter 4 = 4).

  Explain: The four (4) measurement tools include: COMET-Planner, COMET-Farm, Teralytic Soil Monitoring Solution, and Suma Gro.

Other Required Benchmarks that may be quantitative or qualitative:

- Outreach, training, and other technical assistance:

  Year 1 (Quarter 1 = 0, Quarter 2 = 135, Quarter 3 = 270, Quarter 4 = 405).
  Year 2 (Quarter 1 = 504, Quarter 2 = 606, Quarter 3 = 708, Quarter 4 = 810).
  Year 3 (Quarter 1 = 1,314, Quarter 2 = 2,628, Quarter 3 = 5,256, Quarter 4 = 10,512).

  Explain: At a minimum, each producer will receive at least one session of outreach, training, and technical assistance annually. Each session will be conducted virtually, telephonically, or on-site. For example, 30 (producers) x 3 (sessions) = 90 sessions).

- Other MMRV and Supply Chain Traceability Attributes:

  Year 1 (Quarter 1 = 0, Quarter 2 = 1,080, Quarter 3 = 2,160, Quarter 4 = 3,240).
  Year 2 (Quarter 1 = 4,032, Quarter 2 = 4,848, Quarter 3 = 5,664, Quarter 4 = 6,480).
  Year 3 (Quarter 1 = 10,512, Quarter 2 = 15,360, Quarter 3 = 21,024, Quarter 4 = 27,504).

  Explain **MMRV:** In our model, three (3) months or ninety (90) days equals one (1) quarter. We use a Measurement, Monitoring, Reporting, and Verification (MMRV) solution that provides a 24/7 (hrs.) capability. For example, 24 (MMRV) hrs. x 45 producer locations = 1,080 hrs. of MMRV capability.

  Supply Chain Traceability Attributes No projected data at this time. However, as Appendix G (G-13) indicates, Team Vanguard has selected a solution of interest: IBM Food Trust TM. We are reviewing the IBM Food Trust TM solution for utilization. Trace Benefits include: 1) the Ability to quickly identify when food is contaminated and react immediately 2) the ability to prove your product is safe during a foodborne outbreak, 3) Reducing product waste, and 4) Direct insight into inventory and supply chain inefficiencies.

- Other measurements of work related to the marketing of commodities:

  Year 1 (Quarter 1 = 0, Quarter 2 = 9, Quarter 3 = 18, Quarter 4 = 28).
  Year 2 (Quarter 1 = 38, Quarter 2 = 48, Quarter 3 = 58, Quarter 4 = 68).
  Year 3 (Quarter 1 = 78, Quarter 2 = 88, Quarter 3 = 98, Quarter 4 = 108).

  Explain: See Appendix G, Section G-8. It outlines our initial market analysis outcomes.

- Demonstrated engagement of major partners:

  Year 1 (Quarter 1 = 0, Quarter 2 = 8, Quarter 3 = 16, Quarter 4 = 24).
  Year 2 (Quarter 1 = 32, Quarter 2 = 40, Quarter 3 = 48, Quarter 4 = 56).
  Year 3 (Quarter 1 = 64, Quarter 2 = 72, Quarter 3 = 80, Quarter 4 = 88).
  Explain: See Appendix G, Section G-8. It outlines our initial market analysis outcomes.

- Climate-Smart technologies employed (if applicable):

  Year 1 (Quarter 1 = 0, Quarter 2 = 1, Quarter 3 = 2, Quarter 4 = 4).
  Year 2 (Quarter 1 = 5, Quarter 2 = 6, Quarter 3 = 7, Quarter 4 = 8).
  Year 3 (Quarter 1 = 9, Quarter 2 = 10, Quarter 3 = 11, Quarter 4 = 12).

  Explain: The four (4) measurement tools include: COMET-Planner, COMET-Farm, Teralytic Soil Monitoring Solution, and Suma Gro.

Appendix G – Detailed Marketing Plan

G-1 Introduction

Team Vanguard will introduce a new line of SmartAgGro Foods produced from climate-smart agriculture practices and sourced from underserved producers. We are also committed to minimizing our environmental impact and supporting underserved producers. We believe these new climate-smart-grown commodities will exemplify these values.

Our SmartAgGro Foods will be grown using methods that minimize greenhouse gas emissions, reduce the need for synthetic fertilizers and pesticides, and conserve natural resources. We aim to attain a Climate-Smart certification, ensuring that the producers who grow SmartAgGro Foods are treated fairly and allowed to improve their livelihoods.

In this marketing plan, we will outline the environmental and social impacts of our SmartAgGro Foods and the steps we have taken to minimize those impacts. We will also describe the ecological benefits of our SmartAgGro Foods, such as its carbon footprint and water usage, and explain how it fits into our more comprehensive strategy for sustainability. We will define our marketing strategies and channels for reaching our target audience and tracking the effectiveness of our marketing efforts. Finally, Team Vanguard will outline our plan to develop and expand markets for climate-smart commodities generated as a result of project activities, including

A. Preparing Producers with Success Skills to Operate Beyond the Pilot,
B. Partnerships designed to market resulting climate-smart commodities,
C. Tracking climate-smart items through the supply chain, if appropriate,
D. Estimated economic benefits for participating producers, including market returns, and
E. Post-project potential includes the anticipated ability to scale project activities, the likelihood of long-term viability beyond the project period, and the ability to inform future USDA actions to encourage climate-smart commodities.

G-2 Target Audience

Our target audiences for our SmartAgGro Foods are environmentally conscious individuals in Mississippi who are interested in purchasing products that are produced in a climate-smart and socially responsible manner. These audiences include individuals between 20 and 60, but we are particularly interested in reaching younger consumers who are more likely to prioritize environmental issues.

We will target our marketing efforts towards individuals in major cities in Mississippi, such as Jackson, Gulfport, Southaven, Biloxi, Hattiesburg, Olive Branch, Tupelo, Meridian, and Greenville, as well as surrounding suburbs and rural areas. Our target audience will likely be educated, with at least some college education, and have a diverse income range. They are also likely to be interested in health and wellness and

prioritize buying products grown using climate-smart practices, minimizing environmental impact, and supporting underserved producers.

We will reach our target audience through various advertising channels to support the marketing plan, promote awareness, facilitate access to targeted audiences, and comply with the program's requirements to report, measure, and monitor the marketing throughout the project. Team Vanguard will use the power of broadcast television and digital marketing from Fox40 (WDBD) and My on LOO! 35 (WLOO). WDBD and WLOO digital products have the potential to reach 100% of Mississippi's 2nd congressional district. Through digital marketing, we can target audiences based on their geography, occupations, interests/behaviors, income levels, etc. This capability and capacity will equip the SmartAgGro Pilot to utilize platforms such as Facebook, YouTube, Google, Streaming TV, and much more to help get the Climate-Smart message in front of the right audience.

Broadcast Recap

- Campaign Run Dates, February- December 2023. (***NOTE.** The date will adjust to Award Date.)
- Two thousand nine hundred ten commercial messages, PSA messages, Weather sponsor elements, Business minute segment, and Logo on the News ticker will deliver our message to over 20 million Adults 18+ people and reach 98.6% of the TV market in the Jackson Digital Market Area (DMA).

Digital Recap

- Campaign Run Dates, February- December 2023. (***NOTE.** The date will adjust to Award Date.)
- Targeted banner ads, social media campaigns, and streaming commercials will deliver our message to over 1.4 million people across multiple platforms and devices.

G-3 Production Methods

Our SmartAgGro Foods will be produced using climate-smart agriculture practices that minimize greenhouse gas emissions and reduce the need for synthetic fertilizers and pesticides. We will source our raw materials from underserved Mississippi producers trained in climate-smart methods and committed to protecting the environment.

In addition to using climate-smart agriculture practices, we will prioritize water conservation in our production processes. We will use a microbial soil enhancer to increase moisture retention and provide good microbes that improve soil nutrients.

We are committed to supporting underserved producers by ensuring they receive fair treatment. Our raw materials will be used and sourced through a Fair-Trade program, guaranteeing producers a reasonable price and helping improve their livelihoods.

Finally, we will constantly look for ways to reduce our environmental impact and improve the sustainability of our production processes. We will regularly review our practices and invest in innovative technologies and techniques to help us achieve these goals.

G-4 Environmental Benefits

- Low carbon footprint: Our SmartAgGro Foods use climate-smart agriculture practices that minimize greenhouse gas emissions, resulting in a low carbon footprint compared to conventionally produced products.
- Microbial soil enhancers: We will use microbial soil enhancers and other climate-smart techniques to improve soil nutrients and reduce water usage in our producers' production processes, conserving valuable minerals and resources.
- Reduced reliance on synthetic fertilizers and pesticides: By using climate-smart agriculture practices, we can reduce our dependence on synthetic fertilizers and pesticides, which can negatively impact the environment.
- Support for underserved farmers: we source our raw materials through a Fair-Trade program, which helps improve the livelihoods of underserved producers and supports their communities.
- Recycling and waste reduction: We will implement several recycling and waste reduction initiatives at our production facility, including recycling water and using biodegradable packaging materials.
- Certifications: We will pursue several certifications demonstrating our commitment to sustainability, including Fair-Trade and USDA Climate-Smart certifications.

G-5 Sustainability Strategy

Team Vanguard's SmartAgGro Foods will be committed to minimizing environmental impacts and supporting underserved producers in Mississippi. These underserved producers use climate-smart agriculture practices to broaden our sustainability strategy.

There are several ethical and sustainable practices that our underserved farmers will adopt to improve the environmental and social impacts of their farming operations:

- Implement integrated climate-smart and organic farming practices. Our Integrated climate-smart and organic farming will use natural methods to grow crops and raise animals rather than rely on synthetic pesticides and fertilizers. This action will help reduce the environmental impacts of agriculture and improve soil health.
- Use conservation tillage. Our conservation tillage will involve farming practices that minimize soil disturbance, such as using minimal or no-till methods. This action will help reduce soil erosion and improve soil health.
- Use cover crops. Our cover crop strategy will include options such as legumes or grasses for planting between regular crops to improve soil health and reduce erosion.
- Implement animal welfare practices. Our ethical animal welfare practices will help improve the health and well-being of farm animals through adequate access to pasture and space to support the well-being of farm animals.

By implementing these practices, underserved farmers will improve their farming operations' sustainability and ethical impacts.

Finally, we believe engaging with and educating our customers about climate-smart agricultural practices will be necessary. We will participate in local community events and partner with organizations that share our values and mission. We will also provide information about our SmartAgGro efforts on our website and through other marketing channels so our customers can make informed decisions about the products they purchase.

G-6 Preparing Producers with Success Skills to Operate Beyond the Pilot

Team Vanguard recognizes that producers must operate beyond the Partnerships for Climate-Smart Commodities grant successfully. Producers must stay informed about the latest policies and programs impacting their operations and acquire business competencies to make their operations more resilient. The SmartAgGro Pilot's Smart-Way Incentive Program includes a Climate-Smart Learning Journey for each producer awardee.

Demand Analysis is one of the critical competencies producers will acquire from the Climate-Smart Learning Journey curriculum is understanding the role of the USDA Agricultural Marketing Service (AMS) website. Producers will learn about AMS's vital role in shaping the United States agricultural landscape. By learning about the content of AMS, producers will make informed decisions that can help their operations thrive in today's rapidly changing agriculture landscape.

In retrospect, the Agricultural Marketing Service (AMS) offers demand analysis services to improve the efficiency and fairness of agricultural marketing systems and increase American agriculture's competitiveness in domestic and international markets. Team Vanguard will facilitate a knowledge acquisition process for understanding the beneficial aspects of AMS demand analysis services to collect and publish market data analysis capabilities on various agricultural products, including grains, livestock, fruits, vegetables, and specialty crops.

We believe this information will help producers understand market trends and conditions, including forecasting demand to help farmers and producers market and sell their products, including marketing assistance, technical assistance, and research and development support. Below is a sample learning plan outline for a producer who wants to use demand analysis to identify opportunities to increase sales:

1. Identify the goal. The goal is to increase sales by 10% over the next six months by identifying and targeting high-demand products.
2. Identify the target market. The target market is local consumers, including individuals and restaurants.
3. Research consumer demand. Research consumer demand by gathering data from various sources, including market reports, industry trends, and customer feedback.
4. Identify high-demand products. Based on the research, identify the items in high demand among the target market.

5. Develop a marketing plan. Develop a marketing plan to target the high-demand products, including strategies for promoting the products and reaching potential customers.
6. Set specific, measurable, achievable, relevant, and time-bound (SMART) objectives:
    - Increase sales of high-demand products by 15% over the next three months
    - Secure partnerships with three local restaurants over the next six months
7. Develop a timeline and budget. The timeframe for implementing the marketing plan will be six months, and the budget will be $5,000.
8. Identify the resources needed. The resources necessary to implement the marketing plan will include a budget for marketing efforts, time to build relationships with local restaurants and promote the products, and potentially hiring a part-time marketing assistant.
9. Responsibilities of Producers. The farmer will manage the budget and oversee the marketing efforts. In contrast, the marketing assistant (if hired) will be responsible for implementing the marketing plan and building relationships with local restaurants.
10. Establish milestones and checkpoints. Milestones will include achieving the sales goal and securing partnerships with local restaurants. We will schedule checkpoints every two months to review progress and make any necessary adjustments to the action plan.

G-7 Support to Producers Entering A Local Market on A Small-Scale

Team Vanguard experts will orient producers to the USDA's Farmer.gov site, "How to Start a Farm: Beginning Farmers and Ranchers." This resource provides information on planning and financing a farm or ranch, choosing the right location and farm type, and managing and marketing a farm or ranch. It is a resource the USDA provides to help individuals interested in starting a farm or ranch get the information and support they need to succeed.

It also includes links to additional resources and tools, such as programs and services offered by the USDA, which can help beginning farmers and ranchers get started. The resource is intended to be a comprehensive guide for anyone interested in creating a farm or ranch and aims to provide the information and support needed to help these individuals succeed in the agricultural industry.

G-8 A Strategy to Retain Higher Farm-to-Consumer Margins by Identifying both Wholesale and Retail Marketing Channels

One way Team Vanguard will support our producers in retaining higher farm-to-consumer margins is by identifying wholesale and retail markets for their products. Wholesale markets refer to the sale of agricultural products to intermediaries such as supermarkets or restaurants, while retail markets refer to the direct sale of products to consumers. By selling to wholesale and retail markets, our climate-smart producers will

potentially increase their margins by reaching a more extensive customer base and finding the best product prices. Team Vanguard will also use our IbisWorld US Business Environment Profiles search engine. This search engine provides insight into key drivers, including exchange rates, commodity prices, interest rates, weather conditions, consumer attitudes, demographics, etc.

Demand acceleration for meat products will result from general economic recovery from the COVID-19 (coronavirus) pandemic. Lingering effects of supply chain shocks and persistent business closures from case resurgence have stymied demand, particularly from restaurants and other eating places. As these establishments recover over the five years to 2027, demand for meat products will follow suit. For example, per capita meat consumption growth is expected to remain steady over the five years to 2027. Additionally, broader economic recovery will benefit consumer spending and disposable income levels, bolstering demand for meat products from both the food service end and grocery purchases. Overall, per capita meat consumption will increase at an annualized rate of 0.5% over the five years to 2027, reaching an estimated 224.1 pounds.

Marketing Channels

Producers in the SmartAgGro Pilot will research local supermarkets, restaurants, and other food outlets to identify potential wholesale and retail markets to see if they are interested in purchasing their products.

1. Here is a list of identified grocery store chains that operate in the SmartAgGro Pilot area: 1) Walmart, 2) Kroger, 3) Supervalu (which operates the Albertsons, Cub Foods, Hornbacher's, and Shoppers brands), 4) Aldi, 5) Save-A-Lot, 6) Publix, 7) Winn-Dixie, 8) Family Dollar, 9) Dollar General and 10) Dollar Tree.
2. Here is a list of identified school systems in the SmartAgGro Pilot area: 1) DeSoto County Schools, 2) Gulfport School District, 3) Hattiesburg Public School District, 4) Jackson Public School District, 5) Ocean Springs School District, 6) Oxford School District, 7) Petal School District, 8) Starkville Oktibbeha Consolidated School District, and 9) Tupelo Public School District.
3. Here are some examples of the many marketing channels available to farmers in Mississippi:

   Farmers' Markets. Team Vanguard will use farmers' markets as a popular marketing channel for fresh produce, allowing farmers to sell directly to local consumers. Mississippi has many farmers' markets, including the Mississippi Farmers Market in Jackson and the Canton Farmers Market.

   Local Grocery Stores. Many grocery stores in Mississippi sell locally sourced produce and meat. By building relationships with local grocers, Team Vanguard will assist farmers with supplying fresh produce and meat products to their communities and support the local food economy.

   Community-Supported Agriculture (CSA) Programs. Mississippi's CSA programs will allow consumers to purchase a share of a farm's harvest in advance, providing farmers with a reliable market for their products and giving consumers

access to fresh, locally sourced produce. Essential CSA programs operate in Mississippi, for example, the Two Dogs Farms CSA in Rankin County.

Livestock auctions. Like the Hinds County Livestock Auction in Jackson, livestock auctions allow farmers to sell their livestock in bulk to buyers like meat processors and other farmers. Farmers can sell large quantities of their products by working with these markets and reaching a wider audience beyond their local communities.

Online marketplaces. Online marketplaces like the Mississippi Market-Maker and twenty-nine state-level market channels will allow farmers to connect with consumers and buyers across the state and country. By listing their products on such websites, farmers can market their produce and livestock to a broader audience and reach consumers who may not be able to attend farmers' markets or visit their farms.

Wholesale markets. Wholesale markets, like the Jackson International Food Terminal in Jackson, allow farmers to sell their produce and livestock in bulk to buyers like grocery stores, restaurants, and processors. Farmers can sell large quantities of their products by working with these markets and reaching a wider audience beyond their local communities.

Agritourism. Agritourism activities like farm tours, pumpkin patches, and corn mazes will provide farmers with additional income and help promote their products. Farmers in Mississippi will use the area's scenic beauty and agricultural heritage to attract tourists and showcase their products.

4. Several food distribution centers in the SmartAgGro Pilot area oversee food storage, distribution, and transportation, including agricultural products. Some specific examples of food distribution centers in Mississippi include:
    - **Amazon**: Amazon operates a distribution center in Olive Branch that manages the storage and distribution of various products, including agricultural products.
    - **FedEx**: FedEx operates a distribution center in Memphis that oversees the storage and distribution of various products, including agricultural products.
    - **Grocery Distribution Center of America**: This company operates a distribution center in Flowood that manages the storage and distribution of grocery products, including agricultural products.
    - **McLane**: McLane operates a distribution center in Hattiesburg that oversees the storage and distribution of a wide range of products, including agricultural products.
    - **Target**: Target operates a distribution center in Southaven that manages the storage and distribution of a wide range of products, including agricultural products.

- **Grocery Distribution Center of America**: This company operates a distribution center in Flowood that oversees the storage and distribution of grocery products, including agricultural products.
- **Sysco**: Sysco operates a distribution center in Jackson that manages the storage and distribution of a wide range of food products, including agricultural products.
- **US Foods**: US Foods operates a distribution center in Flowood that oversees the storage and distribution of a wide range of food products, including agricultural products.
- **Performance Food Group**: This company operates a distribution center in Olive Branch that manages the storage and distribution of a wide range of food products, including agricultural products.

Distribution Channels

Team Vanguard's sub-awardee (Heifer, USA/International) will provide our producers with market access. Heifer USA recognizes that small-scale farmers struggle to find profitable and predictable markets in our current food system.

Heifer USA empowers farmers by connecting them to a cooperative value chain. By providing a market that guarantees to buy products months in advance at fair prices, access to the highest quality processing services, credit support, and more. Heifer USA enables farmers to do what they do best — providing the highest quality product —— while Heifer USA and our partners take care of the rest.

Heifer USA's work to connect farmers to markets and to integrate them into a short, profitable, direct-to-consumer supply chain relies on their partnerships with Cypress Valley Meat Company and Grass Roots Farmers.

Grass Roots started with the support of Heifer USA in 2014. Grass Roots Farmers' Cooperative is at the heart of how Heifer USA works to integrate small farmers into profitable, localized value chains. Grass Roots sells pasture-raised meat direct-to-consumer, using an e-commerce platform. Structured as a farmer-owned cooperative, Grass Roots purchases and sells only small-batch livestock grown using regenerative farming. Grass Roots is also committed to ethically sound farming and humanely raising all livestock.

Grass Roots farmers benefit from producing for Grass Roots in several ways, including the ability to purchase on credit, buying and price guarantees, business support, and loans for equipment and livestock. Because Grass Roots sells nationally, its market is not in competition with local outlets. Farmers can sell additional products to local grocers, customers, and restaurants.

By keeping the welfare of small farmers at the heart of their business model, Grass Roots is making it possible for more families across the Mid-South to hold onto their farms and earn a good living while improving their communities and ecosystems.

Cypress Valley has access to high-quality and affordable USDA-inspected meat processing services. Their services are critical for livestock farmers to succeed. Unfortunately, gaining access to these services can often pose a challenge. One of the

significant ways that Heifer USA supports small-scale farmers is by connecting them to Cypress Valley Meat Company, located in central Arkansas.

Since 2011, Cypress Valley has offered diverse farmers the highest-quality USDA-inspected meat processing services. The team at Cypress Valley is committed to supporting small-scale farmers working to produce premium products using regenerative farming methods. They do everything they can to provide the best quality services to the farmers at a low cost, and their processing services are in increasingly high demand.

Each associated small-scale farmer of Grass Roots is guaranteed access to Cypress Valley's services, and the business goes out of its way to accommodate them. All Grass Roots products shipped from Cypress Valley are grown to the highest standards and processed and packaged with equal care. Their exceptional humane handling, sanitation, natural processing, and quality packaging standards are nationally recognized.

By taking a proactive approach to identifying and targeting wholesale and retail markets, Mississippi farming producers can potentially increase their farm-to-consumer margins and improve the profitability of their operations. Team Vanguard will provide advisory guidance on how producers should consider participating in farmers' markets or direct-to-consumer sales, such as through a farm stand or community-supported agriculture (CSA) program. In addition, Team Vanguard will assist underserved producers with the decision to join local or regional agricultural associations or cooperatives, which could help connect them with potential buyers and provide support and resources for marketing and selling their products.

The Mississippi Department of Agriculture and Commerce-Market Development

Team Vanguard will work with the Market Development Division of the Mississippi Department of Agriculture and Commerce to promote and heighten the public's awareness of Mississippi's agriculture commodities and the farmers and ranchers who produce them. We accomplish these marketing activities by participating in trade shows, conferences and fairs, international trade, presentations to schools and civic organizations, promotion of local farmers markets, contact with other agricultural organizations and commodity groups, and various other communication outlets. The Market Development Division has subsets assets that will aid in market development:

Genuine MS®, International Trade, Specialty Crop Block Grant Program, Federal Marketing Improvement Program, Mississippi Agritourism, Mississippi Market Maker, and Mississippi Local Food Purchase Assistance Program.

G-9 Strategy for Building Relationships with Buyers

One strategy that Team Vanguard will offer our producers for building relationships with buyers centers around a focus on providing high-quality products and excellent customer service. This approach helps establish trust and create a positive reputation with buyers, which can lead to long-term business relationships.

Another strategy that Team Vanguard will offer is to establish regular communication with buyers and seek feedback on the products and services provided. This strategy will

help identify any issues or areas for improvement and demonstrate a willingness to listen and respond to buyers' needs.

We will also encourage producers to consider offering value-added products or services, such as custom packaging or delivery options, to differentiate their business and make it more attractive to buyers.

In addition, another strategy for producers will be to consider building relationships with buyers through networking and relationship-building activities, such as attending industry events or joining trade organizations. This action will help establish connections with potential buyers and create opportunities for collaboration and mutual success.

Overall, Team Vanguard understands that building relationships with buyers is crucial to running a successful farming business. We have a variety of promotion strategies to employ, establish, and strengthen these relationships for our producers over time.

G-10 Standard Procedures for Properly Packaging and Labeling of Products

Proper packaging and labeling of products is an essential aspect of selling agricultural products, as it helps protect the products during transportation and storage and provides vital information to customers. Here are a few standard procedures that Team Vanguard will employ to ensure proper packaging and labeling of products:

1. Use appropriate packaging materials: Utilize packaging materials suitable for the type of product sold and the intended storage and transportation conditions. For example, perishable products may require refrigeration or insulation, while non-perishable products may need protection from moisture or other environmental factors.
2. Use clear and informative labels: Label products with accurate and relevant information, such as the name of the product, the ingredients or contents, the weight or volume, and any appropriate warnings or disclaimers. Make sure the label is clear and easy to read and consider using a barcode or other identifying information to make it easier to track and manage the product.
3. Consider the presentation: The packaging and labeling of our products will also impact the overall production and perceived value of SmartAgGro Food products. Consider using attractive and eye-catching packaging and labels to increase the appeal of your products to customers.
4. Follow any relevant regulations: There will be specific regulations or standards for packaging and labeling agricultural products, depending on the product type and the location where it is sold.

G-11 Securing Competitive Pricing for Producers' Products

Team Vanguard uses multiple sources to obtain market research information and data. One reference for market research is IBISWorld. IBISWorld is a market research firm that provides industry reports and analyses on various industries and sectors. Our membership offers access to an extensive database of industry reports covering everything from agriculture to healthcare and technology. These reports provide detailed information on market size, growth trends, industry structure, key players, and

the latest industry trends and developments. These reports permit Team Vanguard to gain insights into specific industries and make informed decisions about strategy, operations, and investments. Team Vanguard will also offer tools and resources for conducting market research and analysis, such as industry benchmarks, market share data, and industry risk ratings.

G-12 Reporting, measuring, and monitoring the marketing throughout the project.

Here is Team Vanguard's Approach to how we will conduct reporting, measuring, and monitoring a marketing strategy throughout a project:

1. Our marketing goals and objectives. Before implementing our marketing strategy, our team must clearly define what we want to achieve. We want to achieve the following:
    - Increase brand awareness. Our goal of increasing brand awareness will involve creating and distributing content that showcases the benefits of our underserved producers' climate-smart agriculture products and building relationships with key influencers in the agriculture industry.
    - Generate leads. Our goal of generating leads will involve creating targeted ads and landing pages to attract potential customers and offering free samples of climate-smart products.
    - Drive sales. Our goal of driving sales will involve developing sales collateral and training materials to help our producers effectively sell their climate-smart agriculture products and implementing promotions and discounts to encourage customers to purchase.
    - Improve customer retention. Our goal of improving customer retention will involve implementing a customer loyalty program, providing excellent customer service, and regularly soliciting customer feedback to identify areas for improvement.
    - Expand into new markets. Our goal of expanding into new markets will involve conducting market research to identify new opportunities, developing marketing activities specifically tailored to the needs of our targeted markets, and building relationships with key players in these markets.

    By setting specific and measurable marketing goals, we will be able to track our progress and determine the effectiveness of our marketing efforts.
2. Progress Measurements. Team Vanguard uses a comprehensive e-commerce platform with many features and capabilities to support marketing efforts. Some of the critical marketing-related capabilities and features include:
    - Customizable website. The platform is a customizable website builder that we will use to create a professional-looking website that reflects our brand and showcases our products.

- SEO tools. The platform includes several SEO tools to help us optimize our website for search engines, such as customizable page titles and descriptions and the ability to create custom URLs for designated pages.
- Marketing automation. The platform integrates with several marketing automation tools, such as Mailchimp and Klaviyo, allowing us to automate and track our marketing efforts, such as email marketing and social media marketing.
- Social media integration. The platform integrates with social media platforms, such as Facebook and Instagram, allowing us to share our products and promotions on social media easily.
- Advertising. The platform integrates with advertising platforms, such as Google Ads and Facebook Ads, allowing us to create and run targeted advertising campaigns to reach potential customers.
- Customer reviews: The platform will allow customers to leave reviews for our products, which will help to build trust and credibility with potential customers.
- Email marketing: The platform will include an email marketing tool allowing us to send customers newsletters and promotional emails.

Overall, the platform will provide a wide range of tools and features to help us conduct regular and effective reporting, measuring, and monitoring of our marketing strategy throughout the project. We can make informed decisions about our marketing efforts and ensure we are on track to achieve our goals.

G-13 Supply Chain Traceability System

Team Vanguard has selected a solution of interest: IBM Food Trust ™. We have a pending meeting with an IBM Food Trust ™ solution specialist.

G-14 Estimated Economic Benefits for Participating Producers, including Market Returns

Agriculture is Mississippi's number one industry, employing approximately 17.4% of the state's workforce directly or indirectly. Agriculture in Mississippi is an $8.33-billion-dollar industry. There are about 34,700 farms in the state covering 10.4 million acres. The average farm comprises 300 acres. Agriculture significantly contributes to all 82 counties. Below is the latest overview of Mississippi's top 15 crops:

1. Poultry/Eggs - $2.65 Billion
2. Soybeans - $1.49 Billion
3. Forestry - $1.3 Billion
4. Corn - $748.3 Million
5. Cotton - $558 Million
6. Cattle/Calves - $282 Million
7. Catfish - $232 Million
8. Hay - $160 Million
9. Sweet Potatoes - $110 Million

10. Horticultural Crops - $108 Million
11. Hogs - $96 Million
12. Rice - $92 Million
13. Wheat - $27.2 Million
14. Milk - $22 Million
15. Peanuts - $14.2 Million

The SmartAgGro Pilot has the potential to boost producers growth moving forward, with there being room for organic-grown vegetables and meats consumption to expand between 5 – 10 % annually. Accordingly, anticipated revenue will rise at an annualized rate of 3 - 8%.

G-15 Timeline

36-Month Version

- Here is an example of a 36-month timeline for a climate-smart product in Mississippi:
- Month 1-6: Develop a marketing plan and identify a target audience
- Month 7-12: Launch social media campaigns and targeted ads to reach the target audience
- Month 13-18: Partner with local organizations and events to increase visibility and reach
- Month 19-24: Conduct customer surveys to gather feedback and identify areas for improvement
- Month 25-30: Implement new recycling and waste reduction initiatives at a production facility
- Month 31-36: Review and update the marketing plan based on feedback and performance data

12-Month Version

- Month 1-3: Develop a marketing plan and identify a target audience
- Month 4-6: Launch social media campaigns and targeted ads to reach the target audience
- Month 7-9: Partner with local organizations and events to increase visibility and reach
- Month 10-12: Conduct customer surveys to gather feedback and identify areas for improvement

G-16 Summary

SmartAgGro Foods is proud to introduce a new line of climate-smart commodities produced using climate-smart agriculture practices and sourced from underserved producers in Mississippi. We will be committed to minimizing our environmental impact and supporting underserved produces, and we believe that our new SmartAgGro Foods will exemplify these values.

In this marketing plan, we have outlined the environmental and social impacts of our SmartAgGro and the steps we will take to minimize those impacts. We have also described the environmental benefits of our climate-smart commodities, such as their

low carbon footprint and soil enhancement efforts, and explained how they fit into our more comprehensive sustainability strategy.

We have identified our target audience as environmentally conscious individuals in Mississippi who are interested in purchasing climate-smart products in a socially responsible manner. We will reach these audiences through various marketing channels, including social media campaigns, targeted ads, and partnerships with local organizations and events.

We are committed to transparency and continuous improvement, and we will regularly review our marketing plan and make updates based on customer feedback and performance data. We believe that our climate-smart commodities will be an essential part of a broader strategy for sustainability, and we are excited to share them with our customers.

Climate-Smart Practices and Limitations

Climate-Smart practices under this grant shall be limited to the following practices:

NRCS Practice Code (if applicable)	Practice Name
340	Cover Crop
345	Residue and Tillage Management, Reduced Till
512	Pasture and Hay Planting
528	Prescribed Grazing
590	Nutrient Management

All practices applied under this grant will follow NRCS practice standards unless noted below:

N/A

Partnerships for Climate-Smart Commodities Data Dictionary for Recipients

February 2023

Version 1.0

Partnerships for Climate-Smart Commodities Data Dictionary for Recipients
February 2023

Table of Contents

Overview of Reporting Requirements

Grant recipients are required to submit reports to document their performance under the *Partnerships for Climate-Smart Commodity* funding opportunity. These submissions will be required to use the Microsoft Excel workbook templates provided by USDA. The workbooks contain a series of worksheets that collect data in a standardized format to ensure data quality and allow for aggregation and summary of this information. The entire workbook must be submitted quarterly, with updates to all applicable worksheets. This guide is divided into three sections. The *Overview of Reporting Requirements* section summarizes the layout of the reporting workbook and presents the data elements included in each worksheet. It also describes additional documents that must be submitted to supplement the performance reports. The *Data Definitions* section provides descriptions and allowable response options for each data element. The guide also indicates whether each data element is required, applicable at times, or optional; as well as how frequently each data element must be updated. Finally, the *Appendices* contain practice and commodity lists that will be used for these reports. Reporting is necessary for USDA oversight of this effort. The data elements required for inclusion in the quarterly performance reports allow USDA to conduct selected audits to review whether producers are receiving federal funds from multiple sources for the same purpose; to determine whether GHG benefits from implementation of climate-smart agriculture and forestry (CSAF) practices are being estimated accurately; and for other purposes deemed appropriate by USDA.

The reporting worksheets collect information at four levels: project, partner, producer, and field. Descriptions of each level:

> **Project level**: Information about activities and impacts at a whole project/aggregate level (i.e., reflecting all activities under the grant agreement). Some project-level reporting is further subdivided by commodity type or a combination of commodity and CSAF practice(s) (commodity x practice).
> **Partner level:** Information about activities related to a single organization (recipient, subrecipient, contractor, or other partner) within a project.
> **Producer level**: Information about individual producers who have one or more farms enrolled in a project.
> **Field level**: Information about individual fields enrolled in a project.

Certain data elements are required to be reported for each producer and field enrolled in a project. In order to minimize the burden associated with data collection and to enable USDA to match data to existing records, these producer- and field-specific records must use the producer's established FSA Farm, Tract and Field IDs, and report the State and County associated with the Farm ID. Associated data entered in conjunction with these data elements, such as Producer Name, must match the data contained in the customer's Business Partner record, and the Farm Operating Plan in Business File for that Farm ID. Disclosure of this information is protected under Section 1619 of the Food, Conservation, and Energy Act of 2008 (PL 110- 246), 7 U.S.C. 8791. Additionally, Departmental Regulation 4370-001 provides USDA's policies for collecting demographic data, including race, ethnicity and gender. Providing demographic information is voluntary and at the discretion of the customer. Demographic information is used by USDA for statistical purposes only and will not be used to determine an applicant's eligibility for programs or services for which they apply.

Note: For purposes of this guide, "farm" refers to the operation from which climate-smart commodities are produced and may represent farms, ranches, forests or other operations. Similarly, "field" refers to the individual land units at which climate-smart practices are being implemented to produce climate-smart commodities and may represent lots, farmsteads or other units, depending on the type of operation and commodity. The use of "Farm", "Tract" and "Field" align with the FSA definitions; for example, "A field is a part of a farm that is separated from the balance of the farm by a permanent boundary, such as; fences, permanent waterways, woodlands, croplines in cases where farming practices make it probable that this cropline is not subject to change, and other similar features."

Partnerships for Climate-Smart Commodities Data Dictionary for Recipients
February 2023

The following tables list the data elements included in each reporting worksheet, along with a brief description of each item.

Project Summary

These data will be collected about each project. Cumulative results are reported each quarter. Report last quarter's entry if there has been no change in this quarter.

Table 1. Project Summary elements

Data element name	Description	Frequency
Commodity type	Type of commodity(ies) incentivized by the project	Quarterly
Commodity sales	Indicates sales of the commodity(ies) related to the project occurred this quarter	Quarterly
Farms enrolled	Indicates enrollment activities occurred this quarter	Quarterly
GHG calculation methods	Methods used to calculate greenhouse gas (GHG) benefits	Quarterly
GHG cumulative calculation	Method used to calculate cumulative GHG benefits	Quarterly
Cumulative GHG benefits	Whole project estimate of total GHG (CO2e) emission reductions	Quarterly
Cumulative carbon stock	Whole project estimate of total carbon sequestration	Quarterly
Cumulative CO2 benefit	Whole project estimate of total CO2 emission reductions	Quarterly
Cumulative CH4 benefit	Whole project estimate of total CH4 emission reductions	Quarterly
Cumulative N2O benefit	Whole project estimate of total N2O emission reductions	Quarterly
Offsets produced	Amount of carbon offsets produced by project	Quarterly
Offsets sale	Name of marketplace where carbon offsets were sold	Quarterly
Offsets price	Price of carbon in offset sales	Quarterly
Insets produced	Amount of carbon insets produced by project	Quarterly
Cost of on-farm TA	Cost of on-farm technical assistance (TA) provided to producers	Quarterly
MMRV cost	Cost of measurement, monitoring, reporting, and verification (MMRV) activities	Quarterly
GHG monitoring method	Methods used by project to monitor GHG benefits (up to 5)	Quarterly
GHG reporting method	Methods used by project to report on GHG benefits (up to 5)	Quarterly
GHG verification method	Methods used to verify GHG benefits (up to 5)	Quarterly

Partner Activities

These data will be collected at the project level. Each row in this worksheet will represent one organization involved in the project, including the recipient and all contributing partners. A partner is any organization that is receiving project funds or providing matching contributions (funds or in-kind contributions) to the project. While the recipient must complete one row for their own organization, not all data elements apply to the recipient. These exceptions are noted in the detailed descriptions of the specific elements in the *Data Definitions* section of this guide. Data are reported cumulatively each quarter. Report last quarter's entry if there has been no change in this quarter.

Table 2. Partner Activities elements

Data element name	Description	Frequency
Partner ID	Unique ID for each partner	One-time
Partner name	Name of partner organization	One-time
Partner type	Type of organization	One-time
Partner POC	Partner point of contact name	As applicable
Partner POC email	Partner point of contact email	As applicable
Partnership start date	Start of partnership on project	One-time
Partnership end date	End of partnership on project	As applicable
New partnership	Indicator for partner organizations that have no prior work with the recipient	As applicable
Partner total requested	Total amount requested to date by partner from recipient	Quarterly
Total match contribution	Total amount of match contribution by partner to date	Quarterly
Total match incentives	Total amount of match contribution by partner for incentives	Quarterly
Match type	Top 3 types of match contribution by partner, other than incentives	Quarterly
Match amount	Value of match contributions by type	Quarterly
Training provided	Top 3 types of training provided to the partner through project	Quarterly
Activity by partner	Top 3 types of activities provided by this partner to producers or other partners	Quarterly
Activity cost	Approximate cost per activity type provided by partner to producers or other partners	Quarterly
Products supplied	Names of products supplied to producers as part of project activities or incentives	Quarterly
Product source	Supplier or source of products supplied to producers as part of project activities or incentives	Quarterly

Marketing Activities

These data will be collected at the project level. Each row in this worksheet will correspond to one commodity for which the project enrolls fields and one marketing channel used to sell that commodity by the project or producers enrolled in the project. Data are reported for the current quarter and are not cumulative. If no sales of the commodity were reported during a quarter, do not complete this worksheet for that quarter.

Table 3. Marketing Activities elements

Data element name	Description	Frequency
Commodity type	Type of commodity incentivized by the project	Quarterly
Marketing channel type	Type of marketing channels used	Quarterly
Number of buyers	Number of buyers per marketing channel	Quarterly
Names of buyers	Names of buyers in the marketing channel	Quarterly
Marketing channel geography	Geography of marketing channel	Quarterly
Value sold	Value of commodity sold by marketing channel	Quarterly
Volume sold	Volume of commodity sold by marketing channel	Quarterly
Price premium	Price premium of commodity by marketing channel	Quarterly
Price premium to producer	Percent of price premium that goes to the producer	Quarterly
Product differentiation method	Top 3 types of product differentiation methods used	Quarterly
Marketing method	Top 3 types of marketing methods used	Quarterly
Marketing channel identification method	Top 3 ways marketing channel was identified	Quarterly
Traceability method	Top 3 types of supply chain traceability methods used	Quarterly

Producer Enrollment

These data will be collected at the producer level about each farm enrolled in the project. In this worksheet, each row will correspond to one farm that has at least one field enrolled in the project. Data are reported when a producer first enrolls one or more fields in the project. If a producer is enrolled in the project for multiple years, review the farm characteristics each time a new contract is signed and provide any necessary updates. The quarterly submission should contain information about each farm initially enrolled in the project during that quarter and for updates to farms that have re-enrolled during that quarter, as applicable. If no farms are enrolled during that quarter, do not complete this worksheet for that quarter.

Table 4. Producer Enrollment elements

Data element name	Description	Frequency
Farm ID	Unique Farm ID assigned by FSA	
State or territory	State name (must match FSA farm enrollment data)	
County of residence	County name (must match FSA farm enrollment data)	
Producer data change	Indicator that producer data was updated at re-enrollment	As applicable
Producer start date	Contract start date	Enrollment
Producer name	Name of primary operator	Enrollment
Underserved status	Indicator the primary operator is considered underserved and/or a small producer	Enrollment
Total area	Total area of enrolled operation	Annual
Total crop area	Total crop area in enrolled operation enrolled	Annual
Total livestock area	Total livestock confinement, pasture and rangeland in enrolled operation	Annual
Total forest area	Total forest area in enrolled operation	Annual
Livestock type	Top 3 types of livestock on enrolled operation	Annual
Livestock head	Total livestock currently managed (by type)	Annual
Organic farm	Indicator that part of the farm is certified or transitioning organic	Annual
Organic fields	Indicator that any of the enrolled fields are certified or transitioning organic	Annual
Producer motivation	Motivation for participation	Annual
Producer outreach	Top 3 types of outreach provided to producer	Annual
CSAF experience	Indicator of prior implementation of CSAF practices at this farm	Annual
CSAF federal funds	Indicator of prior receipt of federal funds for CSAF practices	Annual
CSAF state or local funds	Indicator of prior receipt of state funds for CSAF practices	Annual
CSAF nonprofit funds	Indicator of prior receipt of nonprofit funds for CSAF practices	Annual
CSAF market incentives	Indicator of prior receipt of market incentives for CSAF practices	Annual

Field Enrollment

These data will be collected about each field enrolled in the project. In this worksheet, each row corresponds to one field x commodity combination enrolled in the project. Generally, data are reported once for each field, at its initial enrollment. The quarterly submission should contain information about each field initially enrolled in the project during that quarter. If no fields are enrolled during that quarter, do not complete this worksheet for that quarter. If a field is enrolled for multiple years, any relevant changes, such as a new ID number or changes to the commodity or practice combinations should be entered in this worksheet during the quarter it is re-enrolled, or as applicable.

Table 5. Field Enrollment elements

Data element name	Description
Farm ID	Unique Farm ID assigned by FSA
Tract ID	Unique Tract ID assigned by FSA
Field ID	Unique Field ID assigned by FSA
State or territory of field	State name
Physical County of field	Physical county name must match FSA farm records
Prior Field ID	Previous Field ID when reconstitution of farm results in new Field IDs
Field data change	Indicator that field data has changed from initial enrollment
Contract start date	Start date of contract
Total field area	Size of enrolled field
Commodity category	Category of commodity(ies) produced
Commodity type	Type of commodity(ies) produced
Baseline yield	Average yield of commodity in 3 years prior to enrollment
Baseline yield location	Location for which baseline yield is provided
Field land use	Most common land use in field in past 3 years
Field irrigated	Most common irrigation type in field in past 3 years
Field tillage	Most common tillage in field in past 3 years
Practice past extent - farm	Extent of operation that implemented this practice prior to project enrollment
Field any CSAF practice	Indicator for prior CSAF practices in this field in past 3 years
Practice past use - this field	Indicator of prior use of this practice in this field in the past 3 years
Practice type	CSAF practice(s) that will be implemented in enrolled field (up to 7)
Practice standard	Organization that developed CSAF practice standard implemented in field
Planned practice implementation year	Year that practice is planned to be implemented
Practice extent	Area or number of animals for which practice is implemented
Follow-on questions	Follow-on questions by practice type (see Table 11)

Farm Summary

These data will be collected about each farm enrolled in the project. In this worksheet, each row will correspond to one farm that has at least one field enrolled in the project. The quarterly submission should contain updates to any data elements that have changed for each farm enrolled in the project during that quarter. If there are no changes from the previous quarter, do not complete this worksheet for that quarter. Data are not cumulative.

Table 6. Farm Summary elements

Data element name	Description	Frequency
Farm ID	Unique Farm ID assigned by FSA	
State or territory	State name	
County of residence	County name	
Producer TA received	Type of technical assistance provided to producer	Quarterly
Producer incentive amount	Total financial incentive provided to the producer	Quarterly
Incentive reason	Top 4 reason(s) for financial incentives provided to producer	Quarterly
Incentive structure	Top 4 units on which financial incentives are structured	Quarterly
Incentive type	Top 4 type(s) of financial incentives provided to producer	Quarterly
Payment on enrollment	Extent of payment provided to producer upon enrollment	Quarterly
Payment on implementation	Extent of payment provided to producer upon implementation of CSAF practices	Quarterly
Payment on harvest	Extent of payment provided to producer upon harvest or slaughter	Quarterly
Payment on MMRV	Extent of payment provided to producer upon reporting or verification	Quarterly
Payment on sale	Extent of payment provided to producer upon sale of commodity	Quarterly

Field Summary

These data will be collected about each field enrolled in the project for a commodity x practice(s) combination. In this worksheet, each row will correspond to one field x commodity x practice(s) combination enrolled in the project. Data for each field will be reported quarterly and are not cumulative. Report data for any elements that have an update in that quarter. Greenhouse gas benefit estimates must be entered upon practice completion or annually, as appropriate. If there are no changes from the previous quarter, do not complete this worksheet for that quarter. This worksheet includes a section to report the "official" estimate of GHG benefits – amounts of greenhouse gas emissions reduced and carbon sequestered – for the field. These quantities refer to the estimates that are used to calculate the project's aggregate impact (reported in Table 1). Tables 8 and 9 are used to report alternate estimates of the field-level GHG benefits when additional methods are used to model (Table 8) or measure (Table 9) these impacts. Any field that can use COMET-Planner must submit those results, either as the official or alternate model.

Table 7. Field Summary elements

Data element name	Description	Frequency
Farm ID	Unique Farm ID assigned by FSA	
Tract ID	Unique Tract ID assigned by FSA	
Field ID	Unique Field ID assigned by FSA	
State or territory of field	State name	
County of field	County name	
Commodity type	Type of commodity produced from field	Quarterly
Practice type	Type of practice(s) incentivized in field (up to seven)	Quarterly
Date practice complete	Date that practice implementation is certified complete	Quarterly
Contract end date	End date of contract	Quarterly
MMRV assistance provided	Indicator that MMRV assistance is provided to field	Quarterly
Marketing assistance provided	Indicator that marketing assistance provided for commodity from field	Quarterly
Incentive per acre or head	Indicator that a per acre/head incentives is provided for the CSAF practice(s) on this field	Quarterly
Field commodity value	Value of commodity produced from field	Quarterly
Field commodity volume	Volume of commodity produced from field	Quarterly
Cost of implementation	Total cost of practice implementation in field	Quarterly
Cost coverage	Percent of total cost of implementation of practice covered by project incentives	Quarterly
Field GHG monitoring	Methods used to monitor GHG benefits in field (up to 3)	Quarterly
Field GHG reporting	Methods used to report on GHG benefits for field (up to 3)	Quarterly
Field GHG verification	Methods used to verify GHG benefits for field (up to 3)	Quarterly
Field GHG calculations	Methods used to calculate GHG benefits for field	Quarterly
Field official GHG calculation	Method used to calculate official GHG benefits for field	Quarterly
Field official GHG ER	Official estimate of total GHG emission reductions for field	Quarterly
Field official carbon stock	Official estimate of total carbon sequestration for field	Quarterly
Field official CO2 ER	Official estimate of total CO2 emission reductions for field	Quarterly
Field official CH4 ER	Official estimate of total CH4 emission reductions for field	Quarterly
Field official N2O ER	Official estimate of total N2O emission reductions for field	Quarterly
Field offsets produced	Amount of carbon offsets produced in field	Quarterly
Field insets produced	Amount of carbon insets produced in field	Quarterly
Other field measurements	Indicator that field data was collected for reasons other than GHG benefit estimation	Quarterly

GHG Benefits - Alternate Modeled

If greenhouse gas benefits are modeled for the same field using multiple methods, the results for the alternate models are reported in this worksheet. The "alternate" models refer to those model results that were not used in the calculation of the project's aggregate impact (as reported in Table 1). Any field that can use COMET-Planner must submit those results, either as the official or alternate model. These data will be collected about the modeled GHG benefits for each field x commodity x practice(s) combination. In this worksheet, each row will correspond to one field enrolled in the project. Data are not cumulative. Each quarterly submission should include information for all fields that have new modeled data. Greenhouse gas benefit estimates must be entered upon practice completion or annually, as appropriate.

Table 8. GHG Benefits – Alternate Modeled elements

Data element name	Description	Frequency
Farm ID	Unique Farm ID assigned by FSA	
Tract ID	Unique Tract ID assigned by FSA	
Field ID	Unique Field ID assigned by FSA	
State or territory of field	State name	
County of field	County name	
Commodity type	Type of commodity(ies) produced from the field (up to 6)	Annual
Practice type	Type of practice(s) incentivized in field (up to 7)	Annual
GHG model	Model used to calculate GHG benefits	Annual
Model start date	Start date of model run	Annual
Model end date	End date of model run	Annual
Total GHG benefits estimated	Estimate of total GHG benefits for field	Annual
Total carbon stock estimated	Estimate of total change in carbon stock for field	Annual
Total CO2 estimated	Estimate of total CO2 emission reductions for field	Annual
Total CH4 estimated	Estimate of total CH4 emission reductions for field	Annual
Total N2O estimated	Estimate of total N2O emission reductions for field	Annual

GHG Benefits - Measured

Projects must report the results of any carbon stock or greenhouse gas emission measurements in this worksheet. These data will be collected at the field level. Each row will represent a separate measurement method used to calculate GHG benefits for a given field. Data are reported once per year of measurement and are not cumulative. Each quarterly submission should include information for any field for which there are new soil samples or new calculations of annual GHG benefits based on actual measurements.

Table 9. GHG Benefits - Measured data elements

Data element name	Description	Frequency
Farm ID	Unique Farm ID assigned by FSA	
Tract ID	Unique Tract ID assigned by FSA	
Field ID	Unique Field ID assigned by FSA	
State	State name	
County	County name	
GHG measurement method	Method of measurement	Annual
Lab name	Entity that conducted analysis	Annual
Measurement start date	Start date of measurements	Annual
Measurement end date	End date of measurements	Annual
Total CO2 reduction calculated	Calculation of total CO2 reduction	Annual
Total carbon stock change calculated	Calculation of change in carbon stock	Annual
Total CH4 reduction calculated	Calculation of total CH4 reduction	Annual
Total N2O reduction calculated	Calculation of total N2O reduction	Annual
Soil sample result	Numeric result from soil sample	Annual
Measurement type	Type of analysis conducted	Annual

Additional Environmental Benefits

Projects that track additional environmental benefits (e.g., water quality improvements) from enrolled fields report results in this worksheet. These data will be collected about each field. Each row in this worksheet will correspond to an enrolled field. Data are not cumulative. Estimates of environmental benefits must be entered upon practice completion or annually, as appropriate.

Table 10. Additional Environmental Benefits elements

Data element name	Description	Frequency
Farm ID	Unique Farm ID assigned by FSA	
Tract ID	Unique Tract ID assigned by FSA	
Field ID	Unique Field ID assigned by FSA	
State	State name	
County	County name	
Environmental benefits	Indicator that project tracks other environmental benefits	Annual
Reduction in nitrogen loss	Indicator that project tracks reductions in nitrogen loss	Annual
Amount	Amount	Annual
Purpose	Purpose of tracking those co-benefits	Annual
Reduction in phosphorus loss	Indicator that project tracks reductions in phosphorus loss	Annual
Amount	Amount	Annual
Purpose	Purpose of tracking those co-benefits	Annual
Other water quality	Indicator that project tracks other water quality improvements	Annual
Type	Type of water quality metric being tracked	Annual
Amount	Amount	Annual
Purpose	Purpose of tracking those co-benefits	Annual
Water quantity	Indicator that project tracks reduced water use	Annual
Amount	Amount	Annual
Purpose	Purpose of tracking those co-benefits	Annual
Reduced erosion	Indicator that project tracks reductions in soil erosion	Annual
Amount	Amount	Annual
Purpose	Purpose of tracking those co-benefits	Annual
Reduced energy use	Indicator that project tracks reductions in energy use	Annual
Amount	Amount	Annual
Purpose	Purpose of tracking those co-benefits	Annual
Avoided land conversion	Indicator that project tracks reductions in land conversion	Annual
Amount	Amount	Annual
Purpose	Purpose of tracking those co-benefits	Annual
Improved wildlife habitat	Indicator that project tracks improvements in wildlife habitat	Annual
Amount	Amount	Annual
Purpose	Purpose of tracking those co-benefits	Annual

Supplemental Data Submission

Project MMRV Plan

Definition of MMRV elements:

Measurement: Quantification of the greenhouse gas benefits (reduction or capture) using mathematical models and/or direct physical measurements in the field

Monitoring: Ongoing review and confirmation that the climate-smart practice has been implemented according to the agreed upon standard and documentation of any changes in the site, implementation, or GHG emissions impacts over time

Reporting: Documenting and sharing monitoring and measurement results with project partners, the recipient, and any third-party verification organization

Verification: Independent confirmation that measurement, monitoring and reporting information are complete, accurate and reliable.

Projects must submit an MMRV plan that includes details about how each of the following are addressed:

- Quantification approach, including:
  - GHG models used
  - GHG measurement plan (if applicable)
  - Approach to quantifying additional environmental benefits, if applicable (e.g., water quality, habitat)
- Verification approach:
  - Compliance criteria
  - Verification plan/methodology
- Approach to ensuring:
  - Additionality
  - Permanence
  - Leakage
  - Impacts of weather
- Plan for non-compliance

If the project is using a specific MMRV methodology or approach developed by the recipient, a project partner, or an outside organization, the project can submit documentation associated with the methodology as long as the documentation addresses each of the above categories.

If the project is tracking other environmental benefits (as reported in the *Additional Environmental Benefits* worksheet), include a description of the methodology and tools used to track and report on these benefits.

Field modeled GHG benefit reports

Results from any models besides COMET-Planner used to estimate GHG benefits must also be submitted as a separate report. This includes projects running COMET-Farm. The full results of any model can be submitted in the native/standard format generated by the modeling tool and must include the following Unique IDs in the report or in the file name: State, County, Farm ID, Tract ID, Field ID.

Field direct measurement results

For any direct physical measurements in the field, measurement results must be submitted as a separate report and must include the following Unique IDs in the report or in the file name: State, County, Farm ID, Tract ID, Field ID. Measurement results reports must include the name of the equipment used for sampling or data collection, the name of the lab that analyzed the data, and the analytical method used.

Sample report types include soil analysis reports, summarized results of portable emissions analyzers or flux towers, water quality analyses, and plant species counts. These could be collected for the purposes of determining GHG emission reductions or carbon sequestration amounts, for calibration of tools or models, for tracking other environmental benefits, or for other reasons.

Data Descriptions

This section provides descriptions and allowable response options for each data element. The guide also indicates whether each data element is required, applicable at times, or optional; as well as how frequently each data element must be updated.

Unique IDs

Project ID: Unique ID at the project level – "Award Identifying Number" shown on award documentation
Partner ID: Unique ID at the partner level – use EIN; if no EIN, a unique ID will be assigned for use in these reports
State or territory of operation: State or territory name
County of operation: Physical county name
Farm ID: Unique ID at the operation level assigned by Farm Service Agency (FSA)
Tract ID: Unique ID at the tract level assigned by FSA
Field ID: Unique ID at the field level assigned by FSA

Project Summary

Commodity type

Data element name: Commodity type

Reporting question: What climate-smart commodity types are produced by this project?

Description: Type of commodity incentivized by the project. These commodities include those for whom farmers are directly receiving incentives or other types of marketing support. See full list of commodity options in Appendix B. List one commodity per row.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values: FSA commodity list

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Commodity sales

Data element name: Commodity sales

Reporting question: Did project activities result in sales this quarter of the commodity(ies) produced by this project?

Description: Indicator of sales of commodity(ies) related to project activities. If sales are reported, complete the *Marketing Activities* worksheet (Table 3) as part of the quarterly performance report.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Farms enrolled

Data element name: Farms enrolled

Reporting question: Did the project enroll any producers or fields this quarter?

Description: Indicator that the project enrolled producers or fields. If enrollment activities occurred this quarter, complete the *Producer Enrollment* and *Field Enrollment* worksheets (Tables 4 and 5) as part of the quarterly performance report.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

GHG calculation methods

Data element name: GHG calculation methods

Reporting question: What methods is the project using to calculate GHG benefits?

Description: List the way(s) that GHG benefits are being measured and calculated by the project this quarter.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Models
- Direct field measurements
- Both

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

GHG cumulative calculation

Data element name: GHG cumulative calculation

Reporting question: What method(s) was used to calculate the total cumulative GHG benefits reported here?

Description: List the method(s) that was used to calculate the total cumulative GHG benefits reported by the project this quarter.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:
- Models
- Direct field measurements
- Both

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Cumulative GHG benefits

Data element name: Cumulative GHG benefits

Reporting question: What are the project's estimated total GHG emission reductions (CO2eq) to date?

Description: Total cumulative estimated greenhouse gas emission reductions from practice implementation. This is updated quarterly. If there are no changes, enter the same number as the previous quarter.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Cumulative carbon stock

Data element name: Cumulative carbon stock

Reporting question: How much carbon has the project sequestered to date?

Description: Estimated total cumulative change in carbon stock based on practice implementation. This is updated quarterly. If there are no changes, enter the same numbers as the previous quarter. Conversion rate is one ton of carbon = 3.67 tons of CO_2eq.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Cumulative CO2 benefit

Data element name: Cumulative CO2 benefit

Reporting question: What are the project's estimated total cumulative CO2 emission reductions to date?

Description: Estimated total cumulative carbon dioxide emission reductions based on practice implementation. This is updated quarterly. If there are no changes, enter the same number as the previous quarter.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Cumulative CH4 benefit

Data element name: Cumulative CH4 benefit

Reporting question: What are the project's estimated total CH4 emission reductions to date?

Description: Estimated total cumulative methane reduction based on practice implementation. This is updated quarterly. If there are no changes, enter the same numbers as the previous quarter. Conversion rate is one ton of CH_4 = 25 tons of CO_2eq.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CH4 reduced in CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Cumulative N20 benefit

Data element name: Cumulative N2O benefit

Reporting question: What are the project's estimated total N2O emission reductions to date?

Description: Estimated total cumulative nitrous oxide reduction based on practice implementation. This is updated quarterly. If there are no updated numbers enter the same number as the previous quarter. Conversion rate is one ton of N_2O = 298 tons of CO_2eq.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons N2O reduced in CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Offsets produced

Data element name: Offsets produced

Reporting question: How many carbon offsets have been produced in the project?

Description: Total carbon offsets produced by enrolled project fields during the quarter. Offsets are defined as having been verified and certified using an accepted standard and sold into the carbon marketplace.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Offsets sale

Data element name: Offsets sale

Reporting question: To what marketplace(s) were carbon offsets sold?

Description: Marketplaces to which carbon offsets produced by enrolled project fields were sold. Offsets are defined as having been verified and certified using an accepted standard and sold into the carbon marketplace. List each marketplace name. Separate names with commas.

Data type: Text

Select multiple values: NA

Measurement unit: Name

Allowed values: Text

Logic: Respond if >0 to 'Offsets produced'

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Offsets price

Data element name: Offsets price

Reporting question: What was the average price of carbon received for offsets?

Description: Average price per metric ton paid for carbon offsets produced by enrolled project fields. Offsets are defined as having been verified and certified using an accepted standard and sold into the carbon marketplace.

Data type: Decimal

Select multiple values: No

Measurement unit: Dollars per metric ton

Allowed values: 0-500

Logic: Respond if >0 to 'Offsets produced'

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Insets produced

Data element name: Insets produced

Reporting question: How many carbon insets have been produced in the project?

Description: Total carbon insets produced by enrolled fields during the quarter. Insets are defined as having been verified and certified using an accepted standard and accounted for within Scope 3 emissions for a firm.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Cost of on-farm TA

Data element name: Cost of on-farm TA

Reporting question: What is the total amount that has been spent to provide on-farm TA?

Description: Total cost of any field- or practice-specific technical assistance provided by the project (by recipient or partners) to any producers. This is updated quarterly. If there are no changes, enter the same number as the previous quarter.

Data type: Decimal

Select multiple values: No

Measurement unit: Dollars

Allowed values: $0-$50,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

MMRV cost

Data element name: MMRV cost

Reporting question: What is the total amount that has been spent on MMRV activities?

Description: Total cost of all MMRV activities paid for by the project (recipient or partners). MMRV components are defined as measurement (calculations or estimations of GHG emissions), monitoring (ongoing review and confirmation that the climate-smart practices have been implemented according to the agreed upon standard and documentation of any changes in the site, implementation, or GHG emissions impacts over time), reporting (documenting and sharing monitoring and measurement results with project partners, the recipient, and any third-party verification organization), and verification (independent confirmation that measurement, monitoring and reporting information are complete, accurate and reliable). This is updated quarterly. If there are no changes, enter the same number as the previous quarter.

Data type: Decimal

Select multiple values: No

Measurement unit: Dollars

Allowed values: $0-$50,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

GHG monitoring method

Data element name: GHG monitoring 1-5

Reporting question: How did the project monitor GHG benefits?

Description: Up to the five most common forms of monitoring GHG benefits used this quarter as part of MMRV requirements. Monitoring is defined as ongoing review and confirmation that the climate-smart practice has been implemented according to the agreed upon standard and documentation of any changes in the site, implementation, or GHG emissions impacts over time. Include up to 5 methods, based on which methods are most commonly used for this project. The worksheet provides five columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 5 GHG monitoring methods are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other GHG monitoring methods as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Drones
- Ground-level photos and videos
- On-farm visit
- Plot-based sampling
- Producer records or attestation
- Satellite monitoring or remote sensing
- Soil metagenomics
- Soil sensors
- Water sensors
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

GHG reporting method

Data element name: GHG reporting 1-5

Reporting question: How did the project track and report implementation of practices to reduce GHG emissions?

Description: Up to the five most common forms of tracking and reporting on practice implementation used this year as part of MMRV requirements. Reporting is defined as documenting and sharing monitoring and measurement results with project partners, the recipient, and any third-party verification organization. Include up to 5 methods, based on which methods are most commonly used for this project. The worksheet provides five columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 5 GHG reporting methods are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other GHG reporting methods as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Automated devices
- Email
- Mobile app
- Paper
- Third-party actors
- Website
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

GHG verification method

Data element name: GHG verification method 1-5

Reporting question: How did the project verify implementation of practices to reduce GHG emissions?

Description: Up to the five most common forms of verifying practice implementation used this year as part of MMRV requirements. Verification is defined as independent confirmation that measurement, monitoring and reporting information are complete, accurate and reliable. Include up to 5 methods, based on which methods are most commonly used for this project. The worksheet provides five columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 5 GHG verification methods are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other GHG verification methods as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Artificial intelligence
- Audit by recipient
- Computer modeling
- Photos
- Record audit
- Satellite imagery
- Site or field visit
- Third-party audit
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Partner Activities

Unique IDs	
Partner ID	Unique Project ID for each partner

Partner name	
Data element name: Name of partner organization	**Reporting question:** What is the official name of the recipient or partner organization?
Description: Legal name of recipient or partner organization	
Data type: Text	**Select multiple values**: NA
Measurement unit: NA	**Allowed values:** Text
Logic: None – all respond	**Required:** Yes
Data collection level: Partner	**Data collection frequency:** Partnership initiation

Partner type	
Data element name: Type of partner organization	**Reporting question:** What type of organization is this?
Description: Legal/financial structure of recipient or partner organization	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Commodity groups (501c5) • For-profit • Individual • Nonprofit • State or local agency • Tribal agency • University
Logic: None – all respond	**Required:** Yes
Data collection level: Partner	**Data collection frequency:** Partnership initiation

Partner POC	
Data element name: Partner POC	**Reporting question:** Who is the point of contact for this project at the recipient or partner organization?
Description: Name of a point of contact for the recipient or partner organization	
Data type: Text	**Select multiple values**: NA
Measurement unit: NA	**Allowed values:** Text
Logic: None – all respond	**Required:** Yes
Data collection level: Partner	**Data collection frequency:** Partnership initiation; update as necessary

Partner POC email	
Data element name: Partner POC email	**Reporting question:** What is the point of contact's email address?
Description: Email of the point of contact for the recipient or partner organization	
Data type: Text	**Select multiple values**: NA
Measurement unit: NA	**Allowed values:** Text
Logic: None – all respond	**Required:** Yes
Data collection level: Partner	**Data collection frequency:** Partnership initiation; update as necessary

Partnership start date

Data element name: Partnership start date | **Reporting question:** When did the partnership start?

Description: Date that the partner organization and the recipient began formally partnering on the project

Data type: Date | **Select multiple values**: NA

Measurement unit: MM/DD/YYYY | **Allowed values:** 01/01/2023 – 12/31/2030

Logic: No response for recipient | **Required:** Yes

Data collection level: Partner | **Data collection frequency:** Partnership initiation

Partnership end date

Data element name: Partnership end date | **Reporting question:** When did the partnership end?

Description: Date that the partner organization and the recipient stopped formally partnering on the project

Data type: Date | **Select multiple values**: NA

Measurement unit: MM/DD/YYYY | **Allowed values:** 01/01/2023 – 12/31/2030

Logic: No response for recipient | **Required:** Yes

Data collection level: Partner | **Data collection frequency:** Partnership end quarter

New partnership

Data element name: New partnership | **Reporting question:** Is this a new partnership?

Description: A new partnership means that the recipient and the partner organization have not had a formal working relationship (under contract or on a grant) prior to the start of the project.

Data type: List | **Select multiple values**: No

Measurement unit: Category | **Allowed values:**

- Yes
- No
- I don't know

Logic: No response for recipient | **Required:** Yes

Data collection level: Partner | **Data collection frequency:** Partnership initiation

Partner total requested

Data element name: Partner total requested | **Reporting question:** What is the total amount of funding the partner has requested to date from this project?

Description: Cumulative (total) amount of funds that the partner has requested reimbursement for from the recipient from the start of the partnership to the end of the reporting quarter. For each quarter's data entry, the value must be the sum of all previous entries plus the amount of funds requested in the reporting quarter. If there are no changes, report the value from the previous quarter.

Data type: Decimal | **Select multiple values**: NA

Measurement unit: Dollars | **Allowed values:** $0-$100,000,000

Logic: No response for recipient | **Required:** Yes

Data collection level: Partner | **Data collection frequency:** Quarterly

Total match contribution

Data element name: Total match contribution

Reporting question: What is the total match value the organization has contributed to the project to date?

Description: Cumulative (total) value of funds and in-kind contributions (e.g., staff time, inputs, equipment rental, marketing support) that the partner has provided as a project match contribution from the start of the partnership to the end of the reporting quarter. For each quarter's data entry, the value must be the sum of all previous entries plus match contributions in the reporting quarter. If there are no changes, report the value from the previous quarter.

Data type: Decimal

Select multiple values: NA

Measurement unit: Dollars

Allowed values: $0-$100,000,000

Logic: None – all respond

Required: Yes

Data collection level: Partner

Data collection frequency: Quarterly

Total match incentives

Data element name: Total match incentives

Reporting question: What is the total value of match provided by this organization for producer incentives?

Description: Cumulative (total) value of funds for incentive payments directly to producers that the partner has provided as a project match contribution from the start of the partnership to the end of the reporting quarter. For each quarter's data entry, the value must be the sum of all previous entries plus match incentives in the reporting quarter. If there are no changes, report the value from the previous quarter.

Data type: Decimal

Select multiple values: NA

Measurement unit: Dollars

Allowed values: $0-$100,000,000

Logic: None – all respond

Required: Yes

Data collection level: Partner

Data collection frequency: Quarterly

Match type

Data element name: Match type 1-3

Reporting question: What types of match contributions has the organization provided to the project?

Description: Types of match contributions *other than incentives* provided directly to producers by the organization from the start of the partnership to the end of the reporting quarter. Enter up to the top three (in dollar value) types of match contributions provided. In-kind staff time could be used for technical assistance, marketing assistance, or other support to producers. Production inputs include seed, fertilizer, pesticides, equipment and other inputs for use in the field. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 3 match types are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other match types as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Equipment rental or use
- In-kind staff time
- Production inputs (reduced cost or free)
- Program income
- Software
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Partner

Data collection frequency: Quarterly

Match amount

Data element name: Match amount 1-3

Reporting question: What is the value of the match contributions the organization provided to the project?

Description: Cumulative (total) value of funds for each match type that the organization has provided as a project match contribution from the start of the partnership to the end of the reporting quarter. Enter amounts for up to the top three (in dollar value) match types. The worksheet provides three columns for this data element. Enter one value for each column. If fewer than 3 match types are used, leave unnecessary columns blank.

Data type: Decimal

Select multiple values: NA

Measurement unit: Dollars

Allowed values: $0-$100,000,000

Logic: None – all respond

Required: Yes

Data collection level: Partner

Data collection frequency: Quarterly

Training type provided

Data element name: Training type 1-3 provided

Reporting question: What types of training has the organization provided to project partners?

Description: Types of training provided to the project partner as a result of participating in the project during the past quarter. Training can come from the recipient, a project partner organization (including other divisions of their own organization, or an outside organization. Enter up to the top three (in dollar value) types of partner training provided. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 3 training types are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other training types as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Data collection
- Grant reporting
- Marketing opportunities
- Providing financial assistance
- Providing technical assistance
- Writing producer contracts
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Partner

Data collection frequency: Quarterly

Activity by partner

Data element name: Activity 1-3 by partner

Reporting question: What types of activities has the organization provided to the project?

Description: Types of activities that the recipient or partner organization has provided during the reporting quarter. Enter up to the top three (in dollar value) types of activities undertaken. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 3 activity types are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other activity types as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Marketing support
- MMRV support
- Producer outreach for enrollment
- Technical assistance to producers
- Training to other partner organizations
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Partner

Data collection frequency: Quarterly

Activity cost

Data element name: Activity cost 1-3	**Reporting question:** What is the value of the activities this organization has provided to the project?
Description: Cumulative (total) cost of each activity type that the organization has undertaken or offered from the start of the partnership to the end of the reporting quarter. Enter amounts for up to the top three (in dollar value) activity types. The worksheet provides three columns for this data element. Enter one value for each column. If fewer than 3 activity types are provided, leave unnecessary columns blank.	
Data type: Decimal	**Select multiple values**: NA
Measurement unit: Dollars	**Allowed values:** $0-$100,000,000
Logic: None – all respond	**Required:** Yes
Data collection level: Partner	**Data collection frequency:** Quarterly

Products supplied

Data element name: Products supplied	**Reporting question:** What products or supplies were provided to enrolled fields?
Description: Name(s) of products supplied to enrolled producers as incentives or matching contributions. Enter the name of each product, including its brand. Separate each product name with a comma. If no products or supplies were provided by the organization, leave the column blank.	
Data type: Text	**Select multiple values**: NA
Measurement unit: Name	**Allowed values:** Text
Logic: None – all respond	**Required:** Yes
Data collection level: Partner	**Data collection frequency:** Quarterly

Product source

Data element name: Product source	**Reporting question:** Which companies provided the supplies?
Description: Name of firm or company from which supplies were obtained.	
Data type: Text	**Select multiple values**: NA
Measurement unit: Name	**Allowed values:** Text
Logic: Respond if text entered for 'Products supplied'	**Required:** Yes
Data collection level: Partner	**Data collection frequency:** Quarterly

Marketing Activities

Commodity type	
Data element name: Commodity type	**Reporting question:** What type of commodity is produced by the farmers enrolled in this project?
Description: List a single commodity produced or marketed through incentives from this project. If multiple commodities are produced by the project, use additional rows of the worksheet to report each commodity. Use the FSA commodity list in Appendix B and choose the commodity from the list.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** FSA commodity list
Logic: None – all respond	**Required:** Yes
Data collection level: Project	**Data collection frequency:** Quarterly

Marketing channel type	
Data element name: Marketing channel type	**Reporting question:** What type of marketing channel is used to sell this commodity?
Description: List a single type of marketing channel used to sell the commodity produced by farmers enrolled in the project. If a single commodity is marketed through multiple channels, use additional rows of the worksheet to report each combination of commodity and marketing channel. If "other" is chosen, use the additional column to enter the other marketing channel type(s) as free text.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Agricultural marketing board • Biorefinery • Commodity broker • Direct to consumer • Direct to institution • Direct to restaurant • Distributor (including grain elevators) • Food hub or cooperative • Food processor • Non-food byproducts processor • Retailer • USDA • Other (specify)
Logic: None – all respond	**Required:** Yes
Data collection level: Project	**Data collection frequency:** Quarterly

Number of buyers	
Data element name: Number of buyers	**Reporting question:** How many buyers are there in this marketing channel?
Description: List the number of individual firms or buyers in this marketing channel.	
Data type: Integer	**Select multiple values**: No
Measurement unit: Count	**Allowed values:** 1-500
Logic: None – all respond	**Required:** Yes
Data collection level: Project	**Data collection frequency:** Quarterly

Names of buyers

Data element name: Names of buyers	**Reporting question:** What are the names of all of the buyers in this marketing channel?
Description: Provide the names of all buyers in this marketing channel. Separate each name with a comma.	
Data type: Text	**Select multiple values**: NA
Measurement unit: Name	**Allowed values:** Text
Logic: None – all respond	**Required:** Yes
Data collection level: Project	**Data collection frequency:** Quarterly

Marketing channel geography

Data element name: Marketing channel geography	**Reporting question:** What is the primary geography of the marketing channel?
Description: The primary geography of the type of marketing channel. Primary geography means the scale at which most of the activity of buying and selling happens. Local means within a single state or directly neighboring states. Regional means within a five-to-ten state area. National means across the United States. International means specific locations outside of the United States. Global means across the world or not to a specific international location.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Local • Regional • National • Global
Logic: None – all respond	**Required:** Yes
Data collection level: Project	**Data collection frequency:** Quarterly

Value sold

Data element name: Value sold	**Reporting question:** What is the value of the commodity sold in this marketing channel?
Description: The dollar value of the commodity sold in this marketing channel this quarter (non-cumulative).	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Dollars	**Allowed values:** $1-$100,000,000
Logic: None – all respond	**Required:** Yes
Data collection level: Project	**Data collection frequency:** Quarterly

Volume sold

Data element name: Volume sold	**Reporting question:** What is the volume of the commodity sold in this marketing channel?
Description: The volume of the commodity sold in this marketing channel this quarter (non-cumulative).	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Number	**Allowed values:** 1-100,000,000
Logic: None – all respond	**Required:** Yes
Data collection level: Project	**Data collection frequency:** Quarterly

Volume sold unit

Data element name: Volume sold unit

Reporting question: What is the unit of volume?

Description: The unit associated with the volume of the commodity sold in the marketing channel. If "other" is chosen, use the additional column to enter the appropriate unit as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Bales (500 pounds)
- Bushels
- Carcass pounds
- Gallons
- Kilograms
- Linear board feet
- Liveweight pounds
- Metric tons
- Pounds
- Short tons
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Price premium

Data element name: Price premium

Reporting question: What price premium is received for the commodity sold in this marketing channel?

Description: The price premium received for the commodity sold in this marketing channel this quarter. Price premium is the amount received above a 'business as usual' price.

Data type: Decimal

Select multiple values: No

Measurement unit: Dollars

Allowed values: $0.01-$10,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Price premium unit

Data element name: Price premium unit

Reporting question: What is the unit for the price premium?

Description: The unit associated with the price premium for the commodity sold in the marketing channel. If "other" is chosen, use the additional column to enter the appropriate unit as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Per bale (500 pounds)
- Per bushel
- Per carcass pound
- Per gallon
- Per kilogram
- Per linear board foot
- Per live pound
- Per metric ton
- Per ounce
- Per short ton
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Price premium to producer

Data element name: Price premium to producer

Reporting question: What percent of the price premium is provided to the producer for the commodity sold in this marketing channel?

Description: The percent of the price premium provided to the producer for the commodity sold in this marketing channel this quarter. Price premium is the amount received above a 'business as usual' price.

Data type: Decimal

Select multiple values: No

Measurement unit: Percent

Allowed values: 0-100

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Product differentiation method

Data element name: Product differentiation method 1-3

Reporting question: What methods are used to differentiate climate-smart commodities in this marketing channel?

Description: Provide the methods used to differentiate the climate-smart commodity in this market channel. Product differentiation methods are ways to distinguish or differentiate the climate-smart commodity in the marketplace. Include up to 3 methods, based on which methods are most commonly used for this project. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 3 product differentiation methods are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other product differentiation methods as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Certification/verification for internal insetting
- Farm certification
- Label or badge used on packaging or marketing
- Third party certification/verification
- Trademark
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Marketing method

Data element name: Marketing method 1-3

Reporting question: What methods are used to market climate-smart commodities in this marketing channel?

Description: Provide the method(s) used to market this commodity in this market channel. Marketing method is the way that potential buyers of the climate-smart commodity are engaged by the project partners as the sellers or facilitators of sale. Include up to 3 methods, based on which methods are most commonly used for this project. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 3 marketing methods are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other marketing methods as free text

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Label or badge used on packaging or marketing materials
- Marketing partnership (e.g., promotion by buyer)
- Print marketing campaign
- Social media and digital marketing campaign
- Verbal marketing campaign (e.g., radio, word of mouth)
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Marketing channel identification method

Data element name: Marketing channel identification method 1-3

Reporting question: What methods are used to generate interest in climate-smart commodities in this marketing channel?

Description: Provide the marketing channel identification method(s) used for this commodity in this market channel. Market channel identification methods are the ways that producers and project partners generate interest in purchasing the climate-smart commodity. Include up to 3 methods, based on which methods are most commonly used for this project. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 3 marketing channel identification methods are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other marketing channel identification methods as free text

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Educational tours for buyers
- In-person lead generation
- Negotiated contracts with buyers
- Partnership network or project partner
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Traceability method

Data element name: Traceability method 1-3

Reporting question: What traceability methods are used for climate-smart commodities in this channel?

Description: Provide the traceability method(s) used for the climate-smart commodity in this market channel. Traceability methods are ways to trace the climate-smart commodity or the climate-smart claims through the supply chain. Include up to 3 methods, based on which methods are most commonly used for this project. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 3 traceability methods are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other traceability methods as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Barcode or unique ID
- Blockchain
- Book and claim
- Chain of custody
- Mass balance
- Recordkeeping
- Registry with certification
- Segregation
- Supply shed
- Volume proxy
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Producer Enrollment

Unique IDs	
Farm ID	Unique Farm ID assigned by FSA
State or territory	State name (must match FSA farm enrollment data)
County of residence	County name (must match FSA farm enrollment data)

Producer data change

Data element name: Producer data change

Reporting question: Is there new/updated information for a producer who is re-enrolling in the project?

Description: Indicates that there is new or updated information for a producer who had previously enrolled in the project and is re-enrolling.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Re-enrollment

Producer start date

Data element name: Producer start date

Reporting question: When did the producer enroll in the project?

Description: Date that the producer enrolled in the project by signing their first contract.

Data type: Date

Select multiple values: NA

Measurement unit: MM/DD/YYYY

Allowed values: 01/01/2023 – 12/31/2030

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

Producer name

Data element name: Producer name

Reporting question: What is the name of producer enrolled in the project?

Description: Name of the producer enrolled in the project; the name must match the name contained in the customer's Business Partner record and the Farm Operating Plan in FSA Business File for that Farm ID.

Data type: Text

Select multiple values: NA

Measurement unit: NA

Allowed values: Text

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

Underserved status

Data element name: Underserved status

Reporting question: Is this producer considered an underserved and/or a small producer?

Description: Underserved status of the primary operator of the enrolled operation. Underserved producers generally include beginning farmers, socially disadvantaged farmers, veteran farmers, and limited resource farmers; women farmers and producers growing specialty crops are generally also included in these categories. Small farms are generally those with less than $350,000 in annual gross cash farm income. Indicate whether this producer is considered underserved, a small producer, or both underserved and a small producer. Use "I don't know" if the producer declines to answer. Departmental Regulation 4370-001 provides USDA's policies for collecting demographic data, including race, ethnicity and gender. Providing demographic information is voluntary and at the discretion of the customer. Demographic information is used by USDA for statistical purposes only and will not be used to determine an applicant's eligibility for programs or services for which they apply.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes, underserved
- Yes, small producer
- Yes, underserved and small producer
- No
- I don't know

Logic: None – all respond

Required: No

Data collection level: Producer

Data collection frequency: Initial enrollment

Total area

Data element name: Total area

Reporting question: What is the total area of the farm?

Description: Total area of the farm associated with the Farm ID. Report total area of the farm, even if only a portion of the farm is enrolled in the project. If a producer is enrolled in the project for multiple years, review the total area each time a new contract is signed and provide any necessary updates.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Less than 1 acre
- 1 to 9 acres
- 10 to 49 acres
- 50 to 69 acres
- 70 to 99 acres
- 100 to 139 acres
- 140 to 179 acres
- 180 to 219 acres
- 220 to 259 acres
- 260 to 499 acres
- 500 to 999 acres
- 1,000 to 1,999 acres
- 2,000 to 4,999 acres
- 5,000 or more acres

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment and subsequent enrollment(s), if applicable

Total crop area

Data element name: Total crop area	**Reporting question:** What percent of the current operation is cropland?
Description: Area of the total farm that is currently used as cropland. If a producer is enrolled in the project for multiple years, review the total crop area each time a new contract is signed and provide any necessary updates.	
Data type: Integer	**Select multiple values:** No
Measurement unit: Acres	**Allowed values:** 0-100,000
Logic: None – all respond	**Required:** Yes
Data collection level: Producer	**Data collection frequency:** Initial enrollment and subsequent enrollment(s), if applicable

Total livestock area

Data element name: Total livestock area	**Reporting question:** What amount of the current operation is used for livestock (by area)?
Description: Area of the total farm that is currently used for pasture, grazing, rangeland; or animal housing, feeding or milking. If a producer is enrolled in the project for multiple years, review the total livestock area each time a new contract is signed and provide any necessary updates.	
Data type: Integer	**Select multiple values:** No
Measurement unit: Acres	**Allowed values:** 0-100,000
Logic: None – all respond	**Required:** Yes
Data collection level: Producer	**Data collection frequency:** Initial enrollment and subsequent enrollment(s), if applicable

Total forest area

Data element name: Total forest area	**Reporting question:** What amount of the current operation is forested (by area)?
Description: Area of the total farm that is currently considered forest land use. Forest land use means that at least 10% of the land area is covered in trees that will be at least 13 feet tall when mature. If a producer is enrolled in the project for multiple years, review the total forest area each time a new contract is signed and provide any necessary updates.	
Data type: Integer	**Select multiple values:** No
Measurement unit: Acres	**Allowed values:** 0-100,000
Logic: None – all respond	**Required:** Yes
Data collection level: Producer	**Data collection frequency:** Initial enrollment and subsequent enrollment(s), if applicable

Livestock type

Data element name: Livestock type 1-3

Reporting question: What types of livestock are raised on the farm?

Description: Up to top three types of livestock (by head count) on the farm. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If there are fewer than 3 livestock types, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other livestock types as free text. If a producer is enrolled in the project for multiple years, review the livestock type each time a new contract is signed and provide any necessary updates.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Alpacas
- Beef cows
- Beefalo
- Buffalo or bison
- Chickens (broilers)
- Chickens (layers)
- Dairy cows
- Deer
- Ducks
- Elk
- Emus
- Equine
- Geese
- Goats
- Honeybees
- Llamas
- Reindeer
- Sheep
- Swine
- Turkeys
- Other (specify)

Logic: Respond if 'Total livestock area' >0

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment and subsequent enrollment(s), if applicable

Livestock head

Data element name: Livestock head 1-3

Reporting question: How many livestock (by type) are on this operation?

Description: Average annual head count for each type of livestock. Enter amounts for up to the top three livestock types by number. The worksheet provides three columns for this data element. Enter one value for each column. If there are fewer than 3 livestock types, leave unnecessary columns blank. If a producer is enrolled in the project for multiple years, review the average annual head count each time a new contract is signed and provide any necessary updates.

Data type: Integer

Select multiple values: NA

Measurement unit: Head count

Allowed values: 1-10,000,000

Logic: Respond if 'Total livestock area' >0

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment and subsequent enrollment(s), if applicable

Organic farm

Data element name: Organic farm

Reporting question: Is any part of the farm currently USDA-certified organic or transitioning to USDA-certified organic?

Description: USDA-certified organic means that the farm has been certified by an accredited organic certifying agent or is transitioning to USDA-certified organic by not using any of the prohibited substances. Yes means that some or all of the farm is certified organic or transitioning to certified organic. No means that no part of the farm is certified organic or transitioning to certified organic. If a producer is enrolled in the project for multiple years, review the organic certification status of the farm each time a new contract is signed and provide any necessary updates.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: None – all respond

Required: No

Data collection level: Producer

Data collection frequency: Initial enrollment and subsequent enrollment(s), if applicable

Organic fields

Data element name: Organic fields

Reporting question: Are any of the fields enrolled in the project currently USDA-certified organic or transitioning to USDA-certified organic?

Description: USDA-certified organic means that the operation has been certified by an accredited organic certifying agent or is transitioning to USDA-certified organic by not using any of the prohibited substances. Yes means that some or all of the fields enrolled in the project are certified organic or transitioning to certified organic. No means that no part of the fields enrolled in the project are certified organic or transitioning to certified organic. If a producer is enrolled in the project for multiple years, review the organic certification status of the enrolled fields each time a new contract is signed and provide any necessary updates.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: Respond if yes to 'Organic operation'

Required: No

Data collection level: Producer

Data collection frequency: Initial enrollment and subsequent enrollment(s), if applicable

Producer motivation

Data element name: Producer motivation

Reporting question: Which of the following was the primary reason the producer enrolled in this project?

Description: Primary operator's motivation for enrolling in the project.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Financial benefit
- Environmental benefit
- New market opportunity
- Partnerships or networks
- Other

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

Producer outreach

Data element name: Producer outreach 1-3

Reporting question: What types of outreach were provided to producers?

Description: Up to three most common types of outreach provided to producer prior to enrollment. Outreach activities are those focused on identifying and enrolling producers in the project. Outreach can come from the recipient or project partners. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If there are fewer than 3 outreach types, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other outreach types as free text.

Data type: List

Select multiple values: Yes

Measurement unit: Category

Allowed values:

- Commodity organizations
- Conferences
- Cooperative extension
- Digital communications and resources
- Education workshops, field days, and town halls
- Existing partner networks
- Farm visits and one-on-one meetings
- General advertising
- Peer referrals and producer groups
- Phone calls
- Print communications and resources
- Retailers
- State agencies
- Targeted messaging using proprietary data
- Technical service providers
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

CSAF experience

Data element name: CSAF experience

Reporting question: Has the primary operator implemented CSAF practices in the last ten years anywhere on the farm?

Description: Has this farm implemented climate-smart agriculture or forestry (CSAF) practices anywhere on the farm in the past 10 years or since the current primary operator took control (whichever time period is shorter)? CSAF practices are included in a list in Appendix A.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

CSAF federal funds

Data element name: CSAF federal funds

Reporting question: Were prior CSAF practices supported by federal funds?

Description: If this farm (under the primary operator) has implemented CSAF practices in the last ten years, was implementation supported by federal funds? Federal funds are defined as being from programs including, but not limited to, those from the Natural Resources Conservation Service ((NRCS), including through Environmental Quality Incentives Program (EQIP), Conservation Stewardship Program (CSP), Regional Conservation Partnership Program (RCPP), or related programs), the Farm Service Agency Conservation Reserve Program (CRP), as well as funds from other USDA programs or other federal agencies.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: Respond if yes to 'CSAF experience'

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

CSAF state or local funds

Data element name: CSAF state or local funds

Reporting question: Were prior CSAF practices supported by state or local funds?

Description: If this farm (under the primary operator) has implemented CSAF practices in the last ten years, was implementation supported by state funds? State or local funds are those from state departments of agriculture or other state agencies, local water quality districts and other local agencies.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: Respond if yes to 'CSAF experience'

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

CSAF nonprofit funds

Data element name: CSAF nonprofit funds

Reporting question: Were CSAF practices supported by nonprofit funds?

Description: If this farm (under the primary operator) has implemented CSAF practices in the last ten years, was implementation supported by nonprofit funds? Nonprofit funds are those offered directly from a nonprofit organization to a producer.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: Respond if yes to 'CSAF experience'

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

CSAF market incentives

Data element name: CSAF market incentives	**Reporting question:** Were CSAF practices supported by market incentives?
Description: If this farm (under the primary operator) has implemented CSAF practices in the last ten years, was implementation supported by market incentives? Market incentives include premiums paid by a commodity buyer or by a consumer based on branding or labeling as a climate-smart commodity.	
Data type: List	**Select multiple values:** No
Measurement unit: Category	**Allowed values:** • Yes • No • I don't know
Logic: Respond if yes to 'CSAF experience'	**Required:** Yes
Data collection level: Producer	**Data collection frequency:** Initial enrollment

Field Enrollment

Unique IDs

Farm ID	Unique Farm ID assigned by FSA
Tract ID	Unique Tract ID assigned by FSA
Field ID	Unique Field ID assigned by FSA
State or territory of field	State name (must match FSA farm enrollment data)
County of field	County name (must match FSA farm enrollment data)
Prior Field ID, if applicable	Prior Field ID assigned by FSA if there has been reconstitution of the farm resulting in a new Field ID during the field's enrollment in the project

Field data change

Data element name: Field data change

Reporting question: Has the information previously reported for this field changed?

Description: Indicator that this entry is being used to report any relevant changes, such as a new Field ID number or changes to the commodity or practice combinations, for a field that has previously been enrolled in the project.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Re-enrollment

Contract start date

Data element name: Contract start date

Reporting question: What is the start date of the contract with the producer that includes this field?

Description: Start date listed on the contract that enrolls the field in the project.

Data type: Date

Select multiple values: NA

Measurement unit: MM/DD/YYYY

Allowed values: 01/01/2023 – 12/31/2030

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Total field area

Data element name: Total field area

Reporting question: What is the total size of the enrolled field?

Description: Total size of the field enrolled with the project.

Data type: Decimal

Select multiple values: No

Measurement unit: Acres

Allowed values: .01-500

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Commodity category

Data element name: Commodity category	**Reporting question:** What category of commodity(ies) is (are) produced from this field?
Description: Category of commodity(ies) produced in field enrolled in the project	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Crops • Livestock • Trees • Crops and livestock • Crops and trees • Livestock and trees • Crops, livestock and trees
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Initial enrollment

Commodity type

Data element name: Commodity type	**Reporting question:** What type of commodity is produced from this field?
Description: Type of commodity produced in field enrolled in the project. See full list in Appendix B. The worksheet provides a drop-down list of the allowed values. Choose the appropriate value. Enter additional commodities in subsequent rows.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** FSA commodity list
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Initial enrollment

Baseline yield

Data element name: Baseline yield	**Reporting question:** What is the baseline yield of this field?
Description: Average annual yield of commodity in 3 years prior to enrollment. Provide yield for the enrolled field if possible. If not at field level, provide average annual yield for the specific commodity for the operation.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Production per acre or animal	**Allowed values:** .01-100,000
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Initial enrollment

Baseline yield unit

Data element name: Baseline yield unit

Reporting question: Baseline yield unit

Description: Unit of average annual yield of commodity in enrolled field in 3 years prior to enrollment. The worksheet provides a drop-down list of choices for this data element. If "other" is chosen, use the additional column to enter the appropriate yield unit as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Animal units per acre
- Bushels per acre
- Carcass pounds per animal
- Head per acre
- Hundred-weights (or pounds) per head
- Linear feet per acre
- Liveweight pounds per animal
- Pounds per acre
- Tons per acre
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Baseline yield location

Data element name: Baseline yield location

Reporting question: For what portion of the operation is the baseline yield being reported?

Description: Location of the reported average annual yield of commodity in 3 years prior to enrollment. If "other" is chosen, use the additional column to enter the appropriate location as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Enrolled field
- Whole operation
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Field land use

Data element name: Field land use

Reporting question: What is this field's land use history?

Description: Prior to enrollment, what was the most common land use for this field in the past 3 years?

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Crop land
- Forest land
- Non-agriculture
- Other agricultural land
- Pasture
- Range

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Field irrigated

Data element name: Field irrigated	**Reporting question:** What is this field's irrigation history?
Description: Prior to enrollment, what was the most common irrigation practice on this field the past 3 years?	
Data type: List	**Select multiple values:** No
Measurement unit: Category	**Allowed values:** • No irrigation • Center pivot • Drip-subsurface • Drip-surface • Flood/border • Furrow/ditch • Lateral/linear sprinklers • Micro-sprinklers • Seepage • Side roll • Solid set sprinklers • Supplemental • Surface • Traveling gun/towline • Wheel Line • Other
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Initial enrollment

Field tillage

Data element name: Field tillage	**Reporting question:** What is this field's tillage history?
Description: Prior to enrollment, what was the most common tillage approach during the past 3 years?	
Data type: List	**Select multiple values:** No
Measurement unit: Category	**Allowed values:** • None • Conventional, inversion • Conventional, vertical • No-till, direct seed • Reduced till, inversion • Reduced till, vertical • Strip till • Other
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Initial enrollment

Practice past extent - farm

Data element name: Practice past extent - farm

Reporting question: What percent of the farm has implemented this CSAF practice (combination) previously?

Description: Prior to enrollment, on what portion of the whole farm had this (these) CSAF practice(s) ever been used by the primary operator? If multiple practices are planned to be implemented in this field, enter the value that best corresponds to the farm's prior experience with the planned set of practices.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Never used
- Used on less than 25% of operation
- Used on 25-50% of operation
- Used on 51-75% of operation
- Used on more than 75% of operation

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Field any CSAF practice

Data element name: Field any CSAF practice

Reporting question: What is this field's prior experience with CSAF practices?

Description: Prior to enrollment, have any CSAF practice or practices been used in this field in the past 3 years? CSAF practices are included in a list in Appendix A.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Practice past use - this field

Data element name: Practice past use - this field

Reporting question: Have this CSAF practice (combination) been implemented previously in this field?

Description: Prior to enrollment, had this (these) CSAF practice(s) been used in this field in the in the past 3 years? Enter yes if all of the practices had been used previously in this field; enter some if multiple practices are being implemented and one or more, but not all of the practices had been used previously in this field; and enter no if none of the practices had been used previously in this field.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- Some
- No
- I don't know

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Practice type

Data element name: Practice type 1-7

Reporting question: What CSAF practice is being implemented in this field through the project?

Description: Which CSAF practice or practices will be implemented on this field as part of enrollment in the project? CSAF practices are included in a list in Appendix A. The worksheet provides seven columns for this data element. Enter one value for each column. If there are fewer than 7 practices being implemented on this field through enrollment in the project, leave unnecessary columns blank.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values: See list in Appendix A

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Practice standard

Data element name: Practice standard 1-7

Reporting question: What standard does the CSAF practice follow?

Description: Is the CSAF practice being implemented on the field as part of enrollment in the project following a defined practice standard? The worksheet provides seven columns for this data element. Enter one value for each column, corresponding to the practice types entered in the previous columns. If there are fewer than 7 practices being implemented on this field through enrollment in the project, leave unnecessary columns blank.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- NRCS
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Planned practice implementation year

Data element name: Practice 1-7 implementation year

Reporting question: What year is the CSAF practice planned to be implemented?

Description: Year that the CSAF practice is planned to be implemented on the field. Use 2022 for early adopters, defined as fields that have the practice actively implemented in 2022 (prior to contract being signed for this project). The worksheet provides seven columns for this data element. Enter one value for each column, corresponding to the practice types entered in the previous columns. If there are fewer than 7 practices being implemented on this field through enrollment in the project, leave unnecessary columns blank.

Data type: Integer

Select multiple values: No

Measurement unit: Year

Allowed values: 2022-2030

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Practice extent

Data element name: Practice 1-7 extent

Reporting question: To what extent is the practice implemented?

Description: Total area, length, or head where the practice is being implemented in the field specified by the contract.

Data type: Decimal

Select multiple values: No

Measurement unit: Extent

Allowed values: .01-100,000

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Practice extent unit	
Data element name: Practice 1-7 extent unit	**Reporting question:** Unit for extent of practice implementation
Description: Unit for extent of practice implementation on the field specified by the contract. If "other" is chosen, use the additional column to enter the appropriate unit.	
Data type: List	**Select multiple values:** No
Measurement unit: Category	**Allowed values:** • Acres • Head of livestock • Linear feet • Square feet • Other (specify)
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Initial enrollment

CSAF Practice Sub-questions

For certain practices, additional questions are asked that provide information necessary to estimate greenhouse gas benefits from implementation of the practice. See Table 11 in the *CSAF Practice Sub-questions* section for descriptions of individual questions to be answered depending on the CSAF practices selected.

Farm Summary

Unique IDs

Farm ID	Unique Farm ID assigned by FSA
State or territory	State name (must match FSA farm enrollment data)
County of residence	County name (must match FSA farm enrollment data)

Producer TA received

Data element name: Producer TA received 1-3

Reporting question: What types of technical assistance were provided to this producer?

Description: Did the recipient or any partner provide technical assistance (TA) to the producer this year? Technical assistance is any training, education, capacity building or other support provided by any project partner(s) directly to producers enrolled in the project. List up to the top three most common types of TA provided to this producer. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If there are fewer than 3 TA types, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other TA types as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Demonstration plots
- Equipment demonstrations
- Group field days or in-person field workshops
- Hotline
- One-on-one enrollment assistance
- One-on-one field visits
- One-on-one producer mentorship
- Producer networks and peer-to-peer groups
- Retailer consultation
- Social media/digital tools
- Train-the-trainer opportunities
- Virtual meetings or field days
- Webinars and videos
- Written materials
- None
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Producer incentive amount

Data element name: Producer incentive amount

Reporting question: What is the total value of financial incentives provided to this producer?

Description: Total incentive payment received by the producer from USDA project funds for the year (non-cumulative). Do not include incentive payments made with partner match funds.

Data type: Decimal

Select multiple values: NA

Measurement unit: Dollars

Allowed values: $0-$5,000,000

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Incentive reason

Data element name: Incentive reason 1-4

Reporting question: Why were incentives provided to this producer?

Description: List up to four reasons for producer incentive payments. List the top 4 based on total value of the incentive for each reason. The worksheet provides four columns with a drop-down list of the allowed values. Choose one value for each column. If there are fewer than 4 reasons, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other reasons as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Avoided conversion
- Conference or training attendance
- Demographics/equity payment
- Enrollment
- Foregone revenue
- Historic data collection
- Identity preservation (supply chain tracing)
- Implementation of practices
- MMRV (e.g., data collection, reporting)
- Passing audit
- Price premium on output
- Yield change
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Incentive structure

Data element name: Incentive structure 1-4

Reporting question: What are the units for the financial incentives provided to this producer?

Description: List the structures (units) corresponding to the top 4 (by dollar value) incentive payments to producers. Production unit is weight or volume (bushel, kilogram, ton). The worksheet provides four columns with a drop-down list of the allowed values. Choose one value for each column. If there are fewer than 4 structure types, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other structure types as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Flat rate
- Per animal head
- Per area
- Per length
- Per production unit
- Per ton GHG
- Per tree
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Incentive type

Data element name: Incentive type 1-4

Reporting question: What type of incentives were provided to each producer?

Description: List the top 4 types of incentive payments to producers (based on dollar value). The worksheet provides four columns with a drop-down list of the allowed values. Choose one value for each column. If there are fewer than 4 incentive types, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other incentive types as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Cash payment
- Equipment loan
- Guaranteed commodity premium payment
- Inputs and supplies
- Land rental
- Loan
- Paid labor
- Post-harvest transportation
- Tuition or fees for training
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Payment on enrollment

Data element name: Payment on enrollment

Reporting question: What portion of the financial incentive is provided to the producer upon enrollment in the project?

Description: Any incentive payment provided to the producer upon enrollment/signing a contract, and not related to any implementation, MMRV or sales activities. Full payment means the full incentive amount for any contract held by the producer is paid upon enrollment. Partial payment means that only part of the full incentive amount for any contract held by the producer is paid upon enrollment. No payment means that none of the full incentive amount for any contract held by the producer is paid upon enrollment.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Full payment
- Partial payment
- No payment

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Payment on implementation

Data element name: Payment on implementation

Reporting question: What portion of the financial incentive is provided to the producer upon implementation of the practices?

Description: Any incentive payment provided to the producer upon implementing the practices included in the contract. Full payment means the full incentive amount for any contract held by the producer is paid upon implementation. Partial payment means that only part of the full incentive amount for any contract held by the producer is paid upon implementation. No payment means that none of the full incentive amount for any contract held by the producer is paid upon implementation.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Full payment
- Partial payment
- No payment

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Payment on harvest

Data element name: Payment on harvest

Reporting question: What portion of the financial incentive is provided to the producer upon harvest of the commodity?

Description: Any incentive payment provided to the producer upon harvesting or slaughtering the commodity included in the contract. Full payment means the full incentive amount for any contract held by the producer is paid upon harvest. Partial payment means that only part of the full incentive amount for any contract held by the producer is paid upon harvest. No payment means that none of the full incentive amount for any contract held by the producer is paid upon harvest.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Full payment
- Partial payment
- No payment

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Payment on MMRV

Data element name: Payment on MMRV

Reporting question: What portion of the financial incentive is provided to the producer upon completing MMRV requirements?

Description: Any incentive payment provided to the producer upon completing the annual MMRV requirements included in the contract. Full payment means the full incentive amount for any contract held by the producer is paid upon MMRV being complete. Partial payment means that only part of the full incentive amount for any contract held by the producer is paid upon MMRV being complete. No payment means that none of the full incentive amount for any contract held by the producer is paid upon MMRV being complete.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Full payment
- Partial payment
- No payment

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Payment on sale

Data element name: Payment on sale

Reporting question: What portion of the financial incentive is provided to producer upon sale of the commodity?

Description: Any incentive payment provided to the producer upon sale of the commodity included in the contract. Full payment means the full incentive amount for any contract held by the producer is paid upon sale. Partial payment means that only part of the full incentive amount for any contract held by the producer is paid upon sale. No payment means that none of the full incentive amount for any contract held by the producer is paid upon sale.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Full payment
- Partial payment
- No payment

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Field Summary

Unique IDs

Farm ID	Unique Farm ID assigned by FSA
Tract ID	Unique Tract ID assigned by FSA
Field ID	Unique Field ID assigned by FSA
State or territory of field	State name (must match FSA farm enrollment data)
County of field	County name (must match FSA farm enrollment data)

Commodity type

Data element name: Commodity type

Reporting question: What type of commodity is produced from this field?

Description: Type of commodity produced in field enrolled in the project. See full list in Appendix B. The worksheet provides multiple columns with a drop-down list of the allowed values. Choose one value for each column. Leave unnecessary columns blank.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values: FSA commodity list

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Practice type

Data element name: Field practice type 1-7

Reporting question: What CSAF practice is being implemented in this field through the project?

Description: Which climate-smart agriculture or forestry (CSAF) practice or practices are being implemented in this project? CSAF practices are included in a list in Appendix A. The worksheet provides seven columns for this data element. Enter one value for each column. If there are fewer than 7 practices being implemented on this field through enrollment in the project, leave unnecessary columns blank.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values: See list in Appendix A

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Date practice complete

Data element name: Date practice complete

Reporting question: When did the project certify CSAF practice implementation as complete?

Description: Date that the project certifies that implementation of the CSAF practice is complete on the field. Use January of the year prior to contract year for early adopters, defined as fields that have the practice actively implemented in the year prior to a contract associated with this project is signed). The worksheet provides seven columns for this data element. Enter one value for each column, corresponding to the practice types entered in the previous columns. If there are fewer than 7 practices being implemented on this field through enrollment in the project, leave unnecessary columns blank.

Data type: Date

Select multiple values: No

Measurement unit: MM/DD/YYYY

Allowed values: 01/01/2023 – 12/31/2030

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Contract end date

Data element name: Contract end date

Reporting question: Contract end date

Description: End date listed on the contract that enrolls the field in the project. If contract end date changes, submit updated end date during the next quarter's reporting.

Data type: Date

Select multiple values: No

Measurement unit: MM/DD/YYYY

Allowed values: 01/01/2023 – 12/31/2030

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

MMRV assistance provided

Data element name: MMRV assistance provided

Reporting question: Was MMRV assistance provided?

Description: Was any MMRV assistance provided to the primary operator for this field? MMRV assistance includes in-field support for the use of technologies, consultation on data collection and input, and other support related to MMRV. MMRV is defined a measurement (calculations or estimations of GHG emissions), monitoring (ongoing review and confirmation that the climate-smart practice has been implemented according to the agreed upon standard and documentation of any changes in the site, implementation, or GHG emissions impacts over time), reporting (documenting and sharing monitoring and measurement results with project partners, the recipient, and any third-party verification organization), and verification (independent confirmation that measurement, monitoring and reporting information are complete, accurate and reliable).

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Marketing assistance provided

Data element name: Marketing assistance provided

Reporting question: Was marketing assistance provided?

Description: Was any marketing assistance provided to the primary operator for the commodity(ies) produced from this field? Marketing assistance includes guaranteeing the sale of the commodity(ies), providing a platform for the sale of the commodity(ies), providing a label, branding, or other support related to marketing.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Incentive per acre or head

Data element name: Incentive per acre or head

Reporting question: Is this field receiving a per-acre or per-head incentive?

Description: Is this field receiving an incentive payment to implement a specific CSAF practice or set of practices on a per-acre or per-head (livestock) basis?

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field commodity value

Data element name: Field commodity value	**Reporting question:** What is the value of the commodity produced on the enrolled field?
Description: The dollar value of the commodity produced on the enrolled field.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Dollars	**Allowed values:** $1-$10,000,000
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Quarterly

Field commodity volume

Data element name: Field commodity volume	**Reporting question:** What is the volume of commodity produced on the enrolled field?
Description: The volume of the commodity produced on the enrolled field	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Number	**Allowed values:** 1-10,000,000
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Quarterly

Field commodity volume unit

Data element name: Field commodity volume unit	**Reporting question:** What is the unit of volume?
Description: The unit associated with the volume of the commodity produced on the enrolled field. If "other" is chosen, enter the appropriate value in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Bushels • Carcass weight pounds • Gallons • Head • Linear feet • Liveweight pounds • Pounds • Tons • Other (specify)
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Quarterly

Cost of implementation

Data element name: Cost of implementation	**Reporting question:** What is the cost of practice implementation in the field?
Description: Total annual estimated cost per unit of implementing the practice(s) in the enrolled field.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Dollars	**Allowed values:** $1-$10,000,000
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Quarterly

Cost unit

Data element name: Cost unit

Reporting question: What is the unit for cost?

Description: The unit associated with the cost of implementing CSAF practices in the field. If "other" is chosen, enter the appropriate value in the additional column.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Per acre
- Per bushel
- Per head
- Per linear foot
- Per pound
- Per ton
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Cost coverage

Data element name: Cost coverage

Reporting question: What percent of the practice cost is covered by the incentive?

Description: Estimated proportion of total annual cost of implementing the practice(s) that is covered by project incentives.

Data type: Integer

Select multiple values: No

Measurement unit: Percent

Allowed values: 0-100

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field GHG monitoring

Data element name: Field GHG monitoring 1-3

Reporting question: How were GHG impacts monitored in this field?

Description: Up to the top three forms of monitoring GHG benefits as part of MMRV requirements. Monitoring is defined as ongoing review and confirmation that the climate-smart practice has been implemented according to the agreed upon standard and documentation of any changes in the site, implementation, or GHG emissions impacts over time. Include up to 3 methods, based on which methods are most commonly used for this field. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 3 GHG monitoring methods are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other GHG monitoring methods as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Drones
- Ground-level photos and videos
- On-farm inspection
- Plot-based sampling (e.g., soil, water)
- Producer records or attestation
- Satellite monitoring or remote sensing
- Soil metagenomics
- Soil sensors
- Water sensors
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field GHG reporting

Data element name: Field GHG reporting 1-3

Reporting question: How were GHG benefits reported for this field?

Description: Up to the top three forms of reporting on GHG benefits as part of MMRV requirements. Reporting is defined as documenting and sharing monitoring and measurement results with project partners, the recipient, and any third-party verification organization. Include up to 3 methods, based on which methods are most commonly used for this field. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 3 GHG reporting methods are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other GHG reporting methods as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Automated devices
- Email
- Mobile app
- Paper
- Third-party actors
- Website
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field GHG verification

Data element name: Field GHG verification 1-3

Reporting question: How was implementation of practices to reduce GHG emissions verified for this field?

Description: Up to the top three of verification of GHG benefits as part of MMRV requirements. Verification is defined as independent confirmation that measurement, monitoring and reporting information are complete, accurate and reliable. Include up to 3 methods, based on which methods are most commonly used for this field. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 3 GHG verification methods are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other GHG verification methods as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Artificial intelligence
- Computer modeling
- Recipient audit
- Photos
- Record audit
- Satellite imagery
- Site or field visit
- Third-party audit
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field GHG calculations

Data element name: Field GHG calculations

Reporting question: What methods are used to calculate GHG benefits in this field?

Description: List the method(s) used to calculate GHG benefits in this field. If yes to direct physical measurements, submit result reports (see *Supplemental Data Submission – Field direct GHG measurement results*).

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:
- Models
- Direct field measurements
- Both

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field official GHG calculation

Data element name: Field official GHG calculation

Reporting question: What method was used to calculate the official GHG benefits in this field?

Description: List the method used to calculate the official GHG benefits in this field that are reported as part of the project's aggregate impact.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:
- Models
- Direct field measurements

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field official GHG ER

Data element name: Field official GHG emission reductions

Reporting question: What are the estimated total GHG emission reductions (CO2eq) in this field?

Description: Estimated greenhouse gas emission reductions from practice implementation in this field that are reported as part of the project's aggregate impact. This data element must be entered upon practice completion or annually, as appropriate.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field official carbon stock

Data element name: Field official carbon stock

Reporting question: How much carbon has been sequestered in this field?

Description: Estimated total change in carbon stock based on practice implementation in this field. This data element can be reported in any quarter and is cumulative for the year. Conversion rate is one ton of carbon = 3.67 tons of CO_2eq.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field official CO2 ER

Data element name: Field official CO2 emission reductions	**Reporting question:** What are the estimated total CO2 emission reductions in this field?
Description: Estimated total carbon dioxide emission reductions based on practice implementation in this field that are reported as part of the project's aggregate impact. This data element must be entered upon practice completion or annually, as appropriate.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons CO_2	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Quarterly

Field official CH4 ER

Data element name: Field official CH4 emission reductions	**Reporting question:** What are the estimated total CH4 emission reductions in this field?
Description: Estimated total methane emission reductions based on practice implementation in this field that are reported as part of the project's aggregate impact. This data element must be entered upon practice completion or annually, as appropriate. Conversion rate is one ton of CH_4 = 25 tons of CO_2eq.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons CH4 reduced in CO_2eq	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Quarterly

Field official N20 ER

Data element name: Field official N2O emission reductions	**Reporting question:** What are the estimated total N2O emission reductions in this field?
Description: Estimated total nitrous oxide emission reductions based on practice implementation in this field that are reported as part of the project's aggregate impact. This data element must be entered upon practice completion or annually, as appropriate. Conversion rate is one ton of N_2O = 298 tons of CO_2eq.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons N2O reduced in CO_2eq	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Quarterly

Field offsets produced

Data element name: Field offsets produced	**Reporting question:** How many carbon offsets have been produced in this field?
Description: Total carbon offsets produced in the field during the quarter (not cumulative). Offsets are defined as having been verified and certified using an accepted standard and sold into the carbon marketplace.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons CO_2eq	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Quarterly

Field insets produced

Data element name: Field insets produced	**Reporting question:** How many carbon insets have been produced in this field?
Description: Total carbon insets produced in the field during the quarter (not cumulative). Insets are defined as having been verified and certified using an accepted standard and accounted for within Scope 3 emissions for a firm.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons CO_2eq	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Quarterly

Other field measurement

Data element name: Other field measurement	**Reporting question:** Were data collected from the field for reasons other than GHG benefit estimation?
Description: Direct physical measurements or data collection taken in the field for any reason other than GHG benefits estimation. These reasons could include calibration of GHG estimation tools or models, tracking other environmental benefits (see Field environmental benefits report), and other reasons. If yes, submit corresponding reports (see *Supplemental data submission - Field direct measurement results*).	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Yes • No • I don't know
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Quarterly

GHG Benefits - Alternate Modeled

Unique IDs	
Farm ID	Unique Farm ID assigned by FSA
Tract ID	Unique Tract ID assigned by FSA
Field ID	Unique Field ID assigned by FSA
State or territory of field	State name (must match FSA farm enrollment data)
County of field	County name (must match FSA farm enrollment data)

Commodity type

Data element name: Commodity type 1-6 **Reporting question:** What type of commodity(ies) is produced from this field?

Description: Type of commodity(ies) produced in field enrolled in the project. See full list of commodity options in Appendix B. The worksheet provides multiple columns with drop-down lists of the allowed values. Choose one value for each column. Leave unnecessary columns blank

Data type: List **Select multiple values**: No

Measurement unit: Category **Allowed values:** FSA commodity list

Logic: None – all respond **Required:** If project calculates GHG benefits using multiple methods

Data collection level: Field **Data collection frequency:** Annual

Practice type

Data element name: Practice type 1-7 **Reporting question:** What CSAF practice is being implemented by this project?

Description: Which CSAF practice or practices are being implemented in this project? CSAF practices are included in a list in Appendix A. The worksheet provides seven columns for this data element. Enter one value for each column. If there are fewer than 7 practices being implemented by the project, leave unnecessary columns blank.

Data type: List **Select multiple values:** No

Measurement unit: Category **Allowed values:** See list in Appendix A

Logic: None – all respond **Required:** If project calculates GHG benefits using multiple methods

Data collection level: Field **Data collection frequency:** Annual

GHG model

Data element name: GHG model

Reporting question: What model was used for alternate calculation of GHG benefits?

Description: Select the model used for the alternate calculation of the field's GHG benefits.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- ACC Calculator
- Agriculture, Forestry and Other Land Use (AFOLU) Carbon Calculator
- AIRES
- APEX
- Bowen Ratio Energy Balance
- Carat-Calculator
- CArPE
- CDFA web-based calculator
- COMET-Farm
- COMET-Planner
- CoolFarm
- Cover Crop Explore
- CropTrak
- CultivateAI's FMIS
- DayCent-CR
- DNDC
- DSSAT
- Earth Optics
- EcoPractices
- EPIC
- Extrapolation based on literature
- FieldPrint
- Granular
- GREET
- gTIR
- IFSM
- IPCC default emissions factors & models
- itree
- Nitrogen Balance
- Nutrient Tracking Tool (NTT)
- RCD Project Tracker
- Revised Universal Soil Loss equation 2 (RUSLE2)
- RuFaS
- SAFE-Link
- SALUS (CIBO)
- SNAPGRAZE
- SquareRoots
- SWAT-C
- SYMFONI
- Truterra Sustainability Tool
- Verra
- WEPP
- YardStick
- Other (specify)

Logic: None – all respond

Required: If project calculates GHG benefits using multiple methods

Data collection level: Field

Data collection frequency: Annual

Model start date

Data element name: Model start date	**Reporting question:** For what time period are the GHG benefits modeled (model start date)?
Description: Date that the model parameters begin.	
Data type: Date	**Select multiple values**: NA
Measurement unit: MM/DD/YYYY	**Allowed values:** 01/01/1950 – 12/31/2030
Logic: None – all respond	**Required:** If project calculates GHG benefits using multiple methods
Data collection level: Field	**Data collection frequency:** Annual

Model end date

Data element name: Model end date	**Reporting question:** For what time period are the GHG benefits modeled (model end date)?
Description: Date that the model parameters end.	
Data type: Date	**Select multiple values**: NA
Measurement unit: MM/DD/YYYY	**Allowed values:** 01/01/2023– 12/31/2030
Logic: None – all respond	**Required:** If project calculates GHG benefits using multiple methods
Data collection level: Field	**Data collection frequency:** Annual

Total GHG benefits estimated

Data element name: Total GHG benefits estimated	**Reporting question:** What is the alternate estimate of the field's total GHG emission reductions?
Description: Total greenhouse gas emission reductions from practice implementation in the field estimated using an alternate model.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons CO_2eq	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** If project calculates GHG benefits using multiple methods
Data collection level: Field	**Data collection frequency:** Annual

Total carbon stock estimated

Data element name: Total carbon stock estimated	**Reporting question:** What is the alternate estimate of how much carbon has the field has sequestered?
Description: Total change in carbon stock based on practice implementation in the field estimated using an alternate model. Conversion rate is one ton of carbon = 3.67 tons of CO_2eq.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons CO_2eq	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** If project calculates GHG benefits using multiple methods
Data collection level: Field	**Data collection frequency:** Annual

Total CO2 estimated

Data element name: Total CO2 estimated	**Reporting question:** What is the alternate estimate of the field's total CO2 emission reductions?
Description: Total carbon dioxide emission reductions based on practice implementation in the field estimated using an alternate model.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons CO_2	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** If project calculates GHG benefits using multiple methods
Data collection level: Field	**Data collection frequency:** Annual

Total CH4 estimated

Data element name: Total CH4 estimated	**Reporting question:** What is the alternate estimate of the field's total CH4 emission reductions?
Description: Total methane emission reductions based on practice implementation in the field estimated using an alternate model. Conversion rate is one ton of CH_4 = 25 tons of CO_2eq.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons CH4 reduced in CO_2eq	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** If project calculates GHG benefits using multiple methods
Data collection level: Field	**Data collection frequency:** Annual

Total field N20 estimated

Data element name: Total N2O estimated	**Reporting question:** What is the alternate estimate of the field's total N2O emission reductions?
Description: Total nitrous oxide emission reductions based on practice implementation in the field estimated using an alternate method. Conversion rate is one ton of N_2O = 298 tons of CO_2eq.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons N2O reduced in CO_2eq	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** If project calculates GHG benefits using multiple methods
Data collection level: Field	**Data collection frequency:** Annual

GHG Benefits - Measured

Unique IDs

Farm ID	Unique Farm ID assigned by FSA
Tract ID	Unique Tract ID assigned by FSA
Field ID	Unique Field ID assigned by FSA
State or territory of field	State name (must match FSA farm enrollment data)
County of field	County name (must match FSA farm enrollment data)

GHG measurement method

Data element name: GHG measurement method

Reporting question: What measurement method is used to calculate GHG benefits?

Description: Field-based measurement method used to calculate GHG benefits. If "other" is chosen, enter the appropriate value as free text in the additional column.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Emissions measurement unit
- Flux towers
- Litterbags
- Plant measurements
- Portable emissions analyzers
- Soil flux chambers
- Soil samples
- Soil sensors
- Vehicle-mounted sensors
- Other (specify)

Logic: None – all respond

Required: If a project conducts soil samples or takes carbon stock or greenhouse gas emission measurements in this field

Data collection level: Field

Data collection frequency: Annual

Lab name

Data element name: Lab name

Reporting question: What is the name of the lab that processed the measurement samples?

Description: Name of entity that received data and conducted analysis of samples.

Data type: Text

Select multiple values: No

Measurement unit: NA

Allowed values: Free text

Logic: None – all respond

Required: If applicable

Data collection level: Field

Data collection frequency: Annual

Measurement start date

Data element name: Measurement start date

Reporting question: On what date did the measurement start?

Description: Date that the measurements began. If it was a single point in time, use the same date for start date and end date. If multiple measurements took place over a time period, use the date that the measurements first began.

Data type: Date

Select multiple values: No

Measurement unit: MM/DD/YYYY

Allowed values: 01/01/2023 – 12/31/2030

Logic: None – all respond

Required: If a project conducts soil samples or takes carbon stock or greenhouse gas emission measurements in this field

Data collection level: Field

Data collection frequency: Annual

Measurement end date

Data element name: Measurement end date

Reporting question: On what date did the measurement end?

Description: Date that the measurements began. If it was a single point in time, use the same date for start date and end date. If multiple measurements took place over a time period, use the date that the measurements were completed.

Data type: Date

Select multiple values: No

Measurement unit: MM/DD/YYYY

Allowed values: 01/01/2023– 12/31/2030

Logic: None – all respond

Required: If a project conducts soil samples or takes carbon stock or greenhouse gas emission measurements in this field

Data collection level: Field

Data collection frequency: Annual

Total CO2 reduction calculated

Data element name: Total CO2 reduction calculated

Reporting question: What are the total measured CO2 emission reductions?

Description: Total annual CO2 emission reductions based on practice implementation in the field calculated from in-field measurements.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2

Allowed values: 0-10,000,000

Logic: None – all respond

Required: If a project takes carbon stock or greenhouse gas emission measurements in this field

Data collection level: Field

Data collection frequency: Annual

Total field carbon stock measured

Data element name: Total field carbon stock measured

Reporting question: What is the total amount of carbon sequestered based on repeat measurements in this field?

Description: Change in carbon stock based on practice implementation in the field calculated from repeat soil sampling in this field. (Results for initial field soil samples should be reported in the 'Soil sample result' and 'Measurement type" columns.) Conversion rate is one ton of carbon = 3.67 tons of CO_2eq.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: If a project conducts soil samples or takes carbon stock measurements in this field

Data collection level: Field

Data collection frequency: Annual

Total CH4 reduction calculated

Data element name: Total CH4 reduction calculated	**Reporting question:** What are the total measured CH4 emission reductions?
Description: Total annual methane emission reductions based on practice implementation in the field calculated from in-field measurements. Conversion rate is one ton of CH_4 = 25 tons of CO_2eq.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons CH4 reduced in CO_2eq	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** If a project conducts soil samples or takes carbon stock or greenhouse gas emission measurements in this field
Data collection level: Field	**Data collection frequency:** Annual

Total N20 reduction calculated

Data element name: Total N2O reduction calculated	**Reporting question:** What are the total measured N2O emission reductions?
Description: Total annual nitrous oxide emission reductions based on practice implementation in the field calculated from in-field measurements. Conversion rate is one ton of N_2O = 298 tons of CO_2eq.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons N2O reduced in CO_2eq	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** If a project conducts soil samples or takes carbon stock or greenhouse gas emission measurements in this field
Data collection level: Field	**Data collection frequency:** Annual

Soil sample result

Data element name: Soil sample result	**Reporting question:** What is the numeric result from this soil sample?
Description: Results of measurement(s) taken to determine the carbon stock of a soil (the tons of carbon found in a specified volume of soil).	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Amount	**Allowed values:** .00001-100,000
Logic: None – all respond	**Required:** If a project conducts soil samples in this field
Data collection level: Field	**Data collection frequency:** Annual

Soil sample result unit

Data element name: Soil sample result unit

Reporting question: What is unit for the soil sample result?

Description: Unit for the corresponding soil sample result. The worksheet provides a drop-down list of choices for this data element. If "other" is chosen, use the additional column to enter the appropriate yield unit as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Percent
- Ppm
- Grams
- Grams per cubic centimeter
- Other (specify)

Logic: None – all respond

Required: If a project conducts soil samples in this field

Data collection level: Field

Data collection frequency: Annual

Measurement type

Data element name: Measurement type

Reporting question: What type of analysis was conducted for this soil sample?

Description: Type of soil analysis conducted. The worksheet provides a drop-down list of choices for this data element. If "other" is chosen, use the additional column to enter the appropriate yield unit as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Organic matter
- Total organic carbon
- Bulk density
- Other (specify)

Logic: None – all respond

Required: If a project conducts soil samples in this field

Data collection level: Field

Data collection frequency: Annual

Additional Environmental Benefits

Unique IDs	
Farm ID	Unique Farm ID assigned by FSA
Tract ID	Unique Tract ID assigned by FSA
Field ID	Unique Field ID assigned by FSA
State or territory of field	State name (must match FSA farm enrollment data)
County of field	County name (must match FSA farm enrollment data)

Environmental benefits

Data element name: Environmental benefits

Reporting question: Are environmental benefits other than GHGs being tracked in the field?

Description: Tracking of environmental benefits other than greenhouse gas emission reductions and carbon sequestration in the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Reduction in nitrogen loss

Data element name: Reduction in nitrogen loss

Reporting question: Are reductions in nitrogen losses being tracked in the field?

Description: Tracking reductions in nitrogen losses in the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: Respond if yes to 'Environmental benefits'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Reduction in nitrogen loss amount

Data element name: Reduction in nitrogen loss amount

Reporting question: How much reduction in nitrogen losses have been measured in the field?

Description: Total amount of reduction in nitrogen losses that is measured and reported in the enrolled field.

Data type: Decimal

Select multiple values: No

Measurement unit: Amount

Allowed values: 0-1,000,000

Logic: Respond if yes to 'Reduction in nitrogen loss'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Reduction in nitrogen loss amount unit

Data element name: Reduction in nitrogen loss amount unit	**Reporting question:** What is the unit for how much reduction in nitrogen losses have been measured in the field?
Description: Unit for the total amount of reduction in nitrogen losses that is measured and reported in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Kilograms • Metric tons • Pounds • Other (specify)
Logic: Respond if yes to 'Reduction in nitrogen loss'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Reduction in nitrogen loss purpose

Data element name: Reduction in nitrogen loss purpose	**Reporting question:** What is the purpose of tracking reduction in nitrogen losses?
Description: Purpose of tracking reduction in nitrogen losses in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Commodity marketing • Producing insets • Producing offsets • I don't know • Other (specify)
Logic: Respond if yes to 'Reduction in nitrogen loss'	**Required:** Yes
Data collection level: Project	**Data collection frequency:** Annual

Reduction in phosphorus loss

Data element name: Reduction in phosphorus loss	**Reporting question:** Are reductions in phosphorus losses being tracked in the field?
Description: Tracking of reductions in phosphorus losses in the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Yes • No • I don't know
Logic: Respond if yes to 'Environmental benefits'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Reduction in phosphorus loss amount

Data element name: Reduction in phosphorus loss amount	**Reporting question:** How much reduction in phosphorus losses have been measured in the field?
Description: Total amount of reduction in phosphorus losses that is measured in the field.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Amount	**Allowed values:** 0-1,000,000
Logic: Respond if yes to 'Reduction in phosphorus loss'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Reduction in phosphorus loss amount unit

Data element name: Reduction in phosphorus loss amount unit	**Reporting question:** What is the unit for the reduction in phosphorus losses measured in the field?
Description: Unit for the total amount of reduction in phosphorus losses that is measured in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Kilograms • Metric tons • Pounds • Other (specify)
Logic: Respond if yes to 'Reduction in phosphorus loss'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Reduction in phosphorus loss purpose

Data element name: Reduction in phosphorus loss purpose	**Reporting question:** What is the purpose of tracking reductions in phosphorus losses?
Description: Purpose of tracking reduction in phosphorus losses in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Commodity marketing • Producing insets • Producing offsets • I don't know • Other (specify)
Logic: Respond if yes to 'Reduction in phosphorus loss'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Other water quality

Data element name: Other water quality	**Reporting question:** Are other water quality metrics being tracked in the field?
Description: Project tracking of other water quality metrics in the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Yes • No • I don't know
Logic: Respond if yes to 'Environmental benefits'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Other water quality type

Data element name: Other water quality type	**Reporting question:** What type of other water quality metric have been measured in the field?
Description: Type of other water quality metric (besides nitrogen loss and phosphorus loss reductions) that is measured in the field. If "other" is chosen, enter the appropriate value as free text in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Sediment load reduction • Temperature • Other (specify)
Logic: Respond if yes to 'Other water quality'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Other water quality amount

Data element name: Other water quality amount	**Reporting question:** How much reduction in other water quality metrics have been measured in the field?
Description: Total amount of reduction in other water quality metrics that is measured in the enrolled field.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Amount	**Allowed values:** 0-1,000,000
Logic: Respond if yes to 'Other water quality'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Other water quality amount unit

Data element name: Other water quality amount unit	**Reporting question:** What is the unit for the reduction in other water quality metrics measured in the field?
Description: Unit for the total amount of reduction in other water quality metrics that is measured in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Degrees F • Kilograms • Kilograms per liter • Metric tons • Pounds • Other (specify)
Logic: Respond if yes to 'Other water quality'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Other water quality purpose

Data element name: Other water quality purpose	**Reporting question:** What is the purpose of tracking other water quality benefits?
Description: Purpose of tracking other water quality benefits in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Commodity marketing • Producing insets • Producing offsets • I don't know • Other (specify)
Logic: Respond if yes to 'Other water quality'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Water quantity

Data element name: Water quantity	**Reporting question:** Is water conservation being tracked in the field?
Description: Tracking of water conservation or reduction in use in the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Yes • No • I don't know
Logic: Respond if yes to 'Environmental benefits'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Water quantity amount

Data element name: Water quantity amount	**Reporting question:** How much water conservation has been measured in the field?
Description: Total amount of water conservation or reduction that is measured in the field.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Amount	**Allowed values:** 0-1,000,000
Logic: Respond if yes to 'Water quantity'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Water quantity amount unit

Data element name: Water quantity amount unit	**Reporting question:** What is the unit for the amount of water conservation measured in the field?
Description: Unit for the total amount of water conservation or reduced use that is measured and reported in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Acre-feet • Cubic feet • Other (specify)
Logic: Respond if yes to 'Water quantity'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Water quantity purpose

Data element name: Water quantity purpose	**Reporting question:** What is the purpose of tracking water conservation?
Description: Purpose of tracking water conservation or reductions in water use in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Commodity marketing • Producing insets • Producing offsets • I don't know • Other (specify)
Logic: Respond if yes to 'Water quantity'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Reduced erosion

Data element name: Reduced erosion	**Reporting question:** Is reduced soil erosion being tracked in the field?
Description: Tracking of reduced soil erosion in the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Yes • No • I don't know
Logic: Respond if yes to 'Environmental benefits'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Reduced erosion amount

Data element name: Reduced erosion amount	**Reporting question:** How much erosion reduction has been measured in the field?
Description: Total amount of erosion reduction that is measured in the enrolled field.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Amount	**Allowed values:** 0-1,000,000
Logic: Respond if yes to 'Reduced erosion'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Reduced erosion amount unit

Data element name: Reduced erosion unit	**Reporting question:** What is the unit for the amount of erosion reduction measured?
Description: Unit for the total amount of erosion reduction from enrolled fields that is measured and reported by the project. If "other" is chosen, enter the appropriate value as free text in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Tons • Other (specify)
Logic: Respond if yes to 'Reduced erosion'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Reduced erosion purpose

Data element name: Reduced erosion purpose	**Reporting question:** What is the purpose of tracking reduced erosion in the field?
Description: Purpose of tracking reduced erosion the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Commodity marketing • Producing insets • Producing offsets • I don't know • Other (specify)
Logic: Respond if yes to 'Reduced erosion'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Reduced energy use

Data element name: Reduced energy use	**Reporting question:** Is reduced energy use being tracked in the field?
Description: Tracking of reduced energy use in the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Yes • No • I don't know
Logic: Respond if yes to 'Environmental benefits'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Reduced energy use amount

Data element name: Reduced energy use amount	**Reporting question:** How much energy use reduction has been measured in the field?
Description: Total amount of energy use reduction that is measured in the enrolled field.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Amount	**Allowed values:** 0-1,000,000
Logic: Respond if yes to 'Reduced energy use'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Reduced energy use amount unit

Data element name: Reduced energy use unit	**Reporting question:** What is the unit for the energy use reduction measured in the field?
Description: Unit for the total amount of energy use reduction that is measured in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Kilowatt hours • Other (specify)
Logic: Respond if yes to 'Reduced energy use'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Reduced energy use purpose

Data element name: Reduced energy use purpose

Reporting question: What is the purpose of tracking reduced energy use in the field?

Description: Purpose of tracking reduced energy use in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Commodity marketing
- Producing insets
- Producing offsets
- I don't know
- Other (specify)

Logic: Respond if yes to 'Reduced energy use'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Avoided land conversion

Data element name: Avoided land conversion

Reporting question: Is avoided land conversion being tracked in the field?

Description: Tracking of avoided land conversion in the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits. Land conservation means land use changing from agricultural uses to non-agricultural uses.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: Respond if yes to 'Environmental benefits'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Avoided land conversion amount

Data element name: Avoided land conversion amount

Reporting question: How much avoided land conversion has been measured in the field?

Description: Total amount of avoided land conversion that is measured in the enrolled field.

Data type: Decimal

Select multiple values: No

Measurement unit: Amount

Allowed values: 0-1,000,000

Logic: Respond if yes to 'Avoided land conversion'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Avoided land conversion amount unit

Data element name: Avoided land conversion unit

Reporting question: What is the unit for the amount of avoided land conversion measured in the field?

Description: Unit for the total amount of avoided land conversion that is measured in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Acres
- Other (specify)

Logic: Respond if yes to 'Avoided land conversion'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Avoided land conversion purpose

Data element name: Avoided land conversion purpose

Reporting question: What is the purpose of tracking avoided land conversion in the field?

Description: Purpose of tracking avoided land conversion in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Commodity marketing
- Producing insets
- Producing offsets
- I don't know
- Other (specify)

Logic: Respond if yes to 'Avoided land conversion'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Improved wildlife habitat

Data element name: Improved wildlife habitat

Reporting question: Are improvements to wildlife habitat being tracked in the field?

Description: Tracking of improvements to wildlife in and around the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: Respond if yes to 'Environmental benefits'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Improved wildlife habitat amount

Data element name: Improved wildlife habitat amount

Reporting question: How much improved wildlife habitat has been measured in the field?

Description: Total amount of improved wildlife habitat that is measured in and around the enrolled fields.

Data type: Decimal

Select multiple values: No

Measurement unit: Amount

Allowed values: 0-1,000,000

Logic: Respond if yes to 'Improved wildlife habitat'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Improved wildlife habitat amount unit

Data element name: Improved wildlife habitat unit

Reporting question: What is the unit for the amount of improved wildlife habitat measured in the field?

Description: Unit for the total amount of improved wildlife habitat that is measured in and around enrolled fields. If "other" is chosen, enter the appropriate value as free text in the additional column.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Acres
- Linear feet
- Other (specify)

Logic: Respond if yes to 'Improved wildlife habitat'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Improved wildlife habitat purpose	
Data element name: Improved wildlife habitat purpose	**Reporting question:** What is the purpose of tracking improved wildlife habitat in the field?
Description: Purpose of tracking improved wildlife habitat in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Commodity marketing • Producing insets • Producing offsets • I don't know • Other (specify)
Logic: Respond if yes to 'Improved wildlife habitat'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

CSAF Practice Sub-questions

For some CSAF practices, there is an additional set of questions that are unique to each practice. Responses to these questions are needed to verify estimated GHG benefits of these practices. If a field is implementing a CSAF practice with an NRCS CPS code in Table 11, answer the follow-up questions listed next to the relevant practice name in the table. Use the *Supplemental Reporting Workbook – CSAF Practice Sub-questions* to report the required information.

Table 11. Follow-on questions for select CSAF practices

Practice name and code	Follow-up question	Options (select one)
Alley Cropping (CPS 311)	Species category (select most common/extensive type if using more than one)	Coniferous trees Deciduous trees Shrubs
	Species density (number of trees planted per acre)	1-10,000
Anaerobic Digester (CPS 366)	Waste storage system prior to installing anaerobic digester	Aerobic lagoon Anaerobic digester (complex mix) with energy generation Anaerobic digester (plug flow) with energy generation Anaerobic lagoon Composting Covered lagoon (no energy generation or flaring) Covered lagoon with energy generation Covered lagoon with flaring Daily spread Deep bedding pack Deep pit Dry lot Dry stacking/solid storage Pasture/range/paddock Poultry with bedding Poultry without bedding (e.g., high rise) Slurry tank/basin
	Digester type	Covered lagoon with energy generation Covered lagoon with flaring Covered lagoon (no energy generation or flaring) Complex mix with energy generation Plug flow with energy generation Other (specify)
	Additional feedstock source (select most common if using more than one)	Food waste Straw or bedding Wastewater Other (specify)

Combustion System Improvement (CPS 372)	Fuel type before installation	Coal Diesel Electricity Gasoline Kerosene Liquified petroleum gas (LPG) Natural gas Propane Wood Other (specify)
	Fuel amount before installation	0-1,000,000
	Fuel amount unit before installation	Cubic feet (natural gas) Gallons (diesel, gasoline, propane, LPG, kerosene) Kilowatt-hours (electricity) Pounds (wood, coal) Other (specify)
	Fuel type after installation	Coal Diesel Electricity Gasoline Kerosene Liquified petroleum gas (LPG) Natural gas Propane Wood Other (specify)
	Fuel amount after installation	0-1,000,000
	Fuel amount unit after installation	Cubic feet (natural gas) Gallons (diesel, gasoline, propane, LPG, kerosene) Kilowatt-hours (electricity) Pounds (wood, coal) Other (specify)
Conservation Cover (CPS 327)	Species category (select most common/extensive type if using more than one)	Brassicas Grasses Legumes Non-legume broadleaves Shrubs

Conservation Crop Rotation (CPS 328)	Conservation crop type	Brassica Broadleaf Cool season Grass Legume Warm season
	Change implemented	Added perennial crop Reduced fallow period Both
	Conservation crop rotation tillage type	Conventional (plow, chisel, disk) No-till, direct seed Reduced till Strip till None Other (specify)
	Total conservation crop rotation length in days	1-120
Contour Buffer Strips (CPS 332)	Strip width (feet)	1-100
	Species category	Grasses Forbs Mix
Cover Crop (CPS 340)	Species category (select most common/extensive type if using more than one)	Brassicas Forbs Grasses Legume Non-legume broadleaves
	Cover crop planned management	Grazing Haying Termination
	Cover crop termination method	Burning Herbicide application Incorporation Mowing Rolling/crimping Winter kill/frost
Critical Area Planting (CPS 342)	Species category (select most common/extensive type if using more than one)	Grass Grass legume/forb mix Herbaceous woody mix Perennial or reseeding Shrubs Trees
Feed Management (CPS 592)	Crude protein (percent)	0-100
	Fat (percent)	0-100
	Feed additives/supplements	Chemical Edible oils/fats Seaweed/kelp Other (specify)
Field Border (CPS 386)	Species category (select most common/extensive type if using more than one)	Forbs Grasses Mix Shrubs

Filter Strip (CPS 393)	Strip width (feet)	20-1,000
	Species category (select most common/extensive type if using more than one)	Forbs Grasses Mix Shrubs
Forest Farming (CPS 379)	Land use in previous year	Forest Multi-story cropping Pasture/grazing land Row crops Other agroforestry
Forest Stand Improvement (CPS 666)	Purpose for implementation	Maintain or improve forest carbon stocks Maintain or improve forest health and productivity Maintain or improve forest structure and composition Maintain or improve wildlife, fish, and pollinator habitat Manage natural precipitation more efficiently Reduce forest pest pressure Reduce forest wildfire hazard
Grassed Waterway (CPS 412)	Species category (select most common/extensive type if using more than one)	Flowering Plants Forbs Grasses
Hedgerow Planting (CPS 422)	Species category (select most common/extensive type if using more than one)	Grasses Shrubs Trees
	Species density (number of trees planted per acre)	1-10,000
Herbaceous Wind Barriers (CPS 603)	Species category (select most common/extensive type if using more than one)	Forbs Grasses Mix Shrubs
	Barrier width (feet)	1-1,000
	Number of rows	1-100
Mulching (CPS 484)	Mulch type	Gravel Natural Synthetic Wood
	Mulch cover (percent of field)	0-100

Nutrient management (CPS 590)	Nutrient type with CPS 590	Biosolids Commercial fertilizers Compost EEF (nitrification inhibitor) EEF (slow or controlled release) EEF (urease inhibitor) Green manure Liquid animal manure Organic by-products Organic residues or materials Solid/semi-solid animal manure Wastewater
	Nutrient application method with CPS 590	Banded Broadcast Injection Irrigation Surface application Surface application with tillage Variable rate
	Nutrient application method in the previous year	Banded Broadcast Injection Irrigation Surface application Surface application with tillage Variable rate
	Nutrient application timing with CPS 590	Single pre-planting Single post-planting Split pre- and post-planting Split post-planting
	Nutrient application timing in the previous year	Single pre-planting Single post-planting Split pre- and post-planting Split post-planting
	Nutrient application rate with CPS 590	0-20,000
	Nutrient application rate unit with CPS 590	Gallons per acre Pounds per acre
	Nutrient application rate change	Decrease compared to previous year Increase compared to previous year No change
Pasture and Hay Planting (CPS 512)	Species category (select most common/extensive type if using more than one)	Cool-season broadleaf Cool-season grass Warm-season broadleaf Warm-season grass
	Termination process	Grazing Haying (i.e., cutting and baling) Other (specify)
Prescribed Grazing (CPS 528)	Grazing type	Cell grazing Deferred rotational Management intensive Rest-rotation

Range Planting (CPS 550)	Species category (select most common/extensive type if using more than one)	Forbs Grasses Legumes Shrubs Trees
Residue and Tillage Management – No-till (CPS 329)	Surface disturbance	None Seed row only
Residue and Tillage Management – Reduced Till (CPS 345)	Surface disturbance	None Seed row/ridge tillage for planting Shallow across most of the soil surface Vertical/mulch
Riparian Forest Buffer (CPS 391)	Species category (select most common/extensive type if using more than one)	Coniferous trees Deciduous trees Shrubs
	Species density (number of trees planted per acre)	1-10,000
Riparian Herbaceous Cover (CPS 390)	Species category (select most common/extensive type if using more than one)	Ferns Forbs Grasses Legumes Rushes Sedges
Roofs and Covers (CPS 367)	Roof/cover type	Concrete Flexible geomembrane Metal Timber Other (specify)
Silvopasture (CPS 381)	Species category (select most common/extensive type if using more than one)	Coniferous trees Deciduous trees Forage Shrubs
	Species density (number of trees planted per acre)	1-10,000
Stripcropping (CPS 585)	Strip width (feet)	1-1,000
	Crop category (select most common/extensive type if using more than one)	Erosion resistant crops Fallow Sediment trapping crops
	Number of strips	2-100
Tree/Shrub Establishment (CPS 612)	Species category (select most common/extensive type if using more than one)	Coniferous trees Deciduous trees Shrubs
	Species density (number of trees planted per acre)	1-10,000
Vegetative Barrier (CPS 601)	Species category (select most common/extensive type if using more than one)	Grasses Grass forb mix Grass legume mix
	Barrier width (feet)	3-1,000

Waste Separation Facility (CPS 632)	Separation type	Chemical (e.g., salts, polymers) Mechanical (e.g., screens, presses) Settling basin
	Most common use of solids	Bedding Field applied Other (specify)
Waste Storage Facility (CPS 313)	Waste storage system prior to installing your waste storage facility	Aerobic lagoon Anaerobic digester (complex mix) with energy generation Anaerobic digester (plug flow) with energy generation Anaerobic lagoon Composting Covered lagoon (no energy generation or flaring) Covered lagoon with energy generation Covered lagoon with flaring Daily spread Deep bedding pack Deep pit Dry lot Dry stacking/solid storage Pasture/range/paddock Poultry with bedding Poultry without bedding (e.g., high rise) Slurry tank/basin
Waste Treatment (CPS 629)	Treatment type	Biological Chemical Mechanical
Waste Treatment Lagoon (CPS 359)	Waste storage system prior to installing waste treatment lagoon	Aerobic lagoon Anaerobic digester (complex mix) with energy generation Anaerobic digester (plug flow) with energy generation Anaerobic lagoon Composting Covered lagoon (no energy generation or flaring) Covered lagoon with energy generation Covered lagoon with flaring Daily spread Deep bedding pack Deep pit Dry lot Dry stacking/solid storage Pasture/Range/Paddock Poultry with bedding Poultry without bedding (e.g., high rise) Slurry tank/basin
	Is there a lagoon cover/crust?	Yes No
	Is there lagoon aeration?	Yes No

Windbreak/Shelterbelt Establishment and Renovation (CPS 380)	Species category (select most common/extensive type if using more than one)	Coniferous trees Deciduous trees Shrubs
	Species density (number of trees planted per acre)	1-10,000

Appendix A: Climate-smart Agriculture and Forestry Practices

All NRCS Practice Standards (not limited to climate-smart practices)

309, Agrichemical Handling Facility
311, Alley Cropping
313, Waste Storage Facility
314, Brush Management
315, Herbaceous Weed Treatment
316, Animal Mortality Facility
317, Composting Facility
318, Short Term Storage of Animal Waste and By-Products
319, On-Farm Secondary Containment Facility
320, Irrigation Canal or Lateral
324, Deep Tillage
325, High Tunnel System
326, Clearing and Snagging
327, Conservation Cover
328, Conservation Crop Rotation
329, Residue and Tillage Management, No Till
330, Contour Farming
331, Contour Orchard and Other Perennial Crops
332, Contour Buffer Strips
333, Amending Soil Properties with Gypsum Products
334, Controlled Traffic Farming
336, Soil Carbon Amendment
338, Prescribed Burning
340, Cover Crop
342, Critical Area Planting
345, Residue and Tillage Management, Reduced Till
348, Dam, Diversion
350, Sediment Basin
351, Well Decommissioning
353, Monitoring Well
355, Groundwater Testing
356, Dike and Levee
359, Waste Treatment Lagoon
360, Waste Facility Closure
362, Diversion
366, Anaerobic Digester
367, Roofs and Covers
368, Emergency Animal Mortality Management
371, Air Filtration and Scrubbing
372, Combustion System Improvement
373, Dust Control on Unpaved Roads and Surfaces
374, Energy Efficient Agricultural Operation
375, Dust Management for Pen Surfaces
376, Field Operations Emissions Reduction
378, Pond
379, Forest Farming
380, Windbreak/Shelterbelt Establishment and Renovation
381, Silvopasture
382, Fence
383, Fuel Break
384, Woody Residue Treatment
386, Field Border
388, Irrigation Field Ditch
390, Riparian Herbaceous Cover
391, Riparian Forest Buffer
393, Filter Strip
394, Firebreak
395, Stream Habitat Improvement and Management
396, Aquatic Organism Passage
397, Aquaculture Pond
398, Fish Raceway or Tank
399, Fishpond Management
400, Bivalve Aquaculture Gear and Biofouling Control
402, Dam
410, Grade Stabilization Structure
412, Grassed Waterway
420, Wildlife Habitat Planting
422, Hedgerow Planting
423, Hillside Ditch
428, Irrigation Ditch Lining
428A, Irrigation Water Conveyance, Ditch and Canal Lining, Plain Concrete
428B, Irrigation Water Conveyance, Ditch and Canal Lining, Flexible Membrane
428C, Irrigation Water Conveyance, Ditch and Canal Lining, Galvanized Steel
430, Irrigation Pipeline
432, Dry Hydrant
436, Irrigation Reservoir
441, Irrigation System, Microirrigation
442, Sprinkler System
443, Irrigation System, Surface and Subsurface
447, Irrigation and Drainage Tailwater Recovery
449, Irrigation Water Management
450, Anionic Polyacrylamide (PAM) Application
453, Land Reclamation, Landslide Treatment
455, Land Reclamation, Toxic Discharge Control
457, Mine Shaft and Adit Closing
460, Land Clearing
462, Precision Land Forming and Smoothing
464, Irrigation Land Leveling
466, Land Smoothing
468, Lined Waterway or Outlet
472, Access Control
484, Mulching
490, Tree/Shrub Site Preparation
500, Obstruction Removal
511, Forage Harvest Management
512, Pasture and Hay Planting
516, Livestock Pipeline
520, Pond Sealing or Lining, Compacted Soil Treatment
521, Pond Sealing or Lining, Geomembrane or Geosynthetic Clay Liner
521A, Pond Sealing or Lining, Flexible Membrane
521B, Pond Sealing or Lining, Soil Dispersant
521C, Pond Sealing or Lining, Bentonite Sealant

521D, Pond Sealing or Lining, Compacted Clay Treatment
522, Pond Sealing or Lining - Concrete
527, Sinkhole Treatment
528, Prescribed Grazing
533, Pumping Plant
543, Land Reclamation, Abandoned Mined Land
544, Land Reclamation, Currently Mined Land
548, Grazing Land Mechanical Treatment
550, Range Planting
554, Drainage Water Management
555, Rock Wall Terrace
557, Row Arrangement
558, Roof Runoff Structure
560, Access Road
561, Heavy Use Area Protection
562, Recreation Area Improvement
566, Recreation Land Improvement and Protection
570, Stormwater Runoff Control
572, Spoil Disposal
574, Spring Development
575, Trails and Walkways
576, Livestock Shelter Structure
578, Stream Crossing
580, Streambank and Shoreline Protection
582, Open Channel
584, Channel Bed Stabilization
585, Stripcropping
587, Structure for Water Control
588, Crosswind Ridges
589, Cross Wind Trap Strips
590, Nutrient Management
591, Amendments for Treatment of Agricultural Waste
592, Feed Management
595, Pest Management Conservation System
600, Terrace
601, Vegetative Barrier
602, Equitable Relief
603, Herbaceous Wind Barriers
604, Saturated Buffer
605, Denitrifying Bioreactor
606, Subsurface Drain
607, Surface Drain, Field Ditch
608, Surface Drain, Main or Lateral
609, Surface Roughening
610, Salinity and Sodic Soil Management
612, Tree/Shrub Establishment
614, Watering Facility
620, Underground Outlet
629, Waste Treatment
630, Vertical Drain
632, Waste Separation Facility
633, Waste Recycling
634, Waste Transfer
635, Vegetated Treatment Area
636, Water Harvesting Catchment
638, Water and Sediment Control Basin
640, Waterspreading
642, Water Well
643, Restoration of Rare or Declining Natural Communities
644, Wetland Wildlife Habitat Management
645, Upland Wildlife Habitat Management
646, Shallow Water Development and Management
647, Early Successional Habitat Development-Mgt
649, Structures for Wildlife
650, Windbreak/Shelterbelt Renovation
654, Road/Trail/Landing Closure and Treatment
655, Forest Trails and Landings
656, Constructed Wetland
657, Wetland Restoration
658, Wetland Creation
659, Wetland Enhancement
660, Tree-Shrub Pruning
666, Forest Stand Improvement
670, Energy Efficient Lighting System
672, Energy Efficient Building Envelope
736, Crop By-Product Transfer, interim
724, Water Treatment Facility, interim
735, Waste Gasification Facility, interim
737, Reduced Water and Energy Coffee Conveyance System, interim
740, Pond Sealing and Lining, Soil Cement, interim
751, Individual Terrace, interim
753, Infiltration Ditch, interim
755, Well Plugging, interim
770, Livestock Confinement Facility, interim
775, Drainage Ditch Covering, interim
782, Phosphorus Removal System, interim
800, Controlling Existing Flowing Wells, interim
803, Water Well Disinfection, interim
805, Amending Soil Properties with Lime, interim
808, Soil Carbon Amendment, interim
809, Conservation Harvest Management, interim
810, Annual Forages for Grazing Systems, interim
812, Raised Beds, interim
815, Groundwater Recharge Basin or Trench, interim
817, On-Farm Recharge, interim
818, Water Conservation System, interim
821, Low Tunnel Systems, interim
823, Organic Management, interim

Other CSAF Practices
Traditional or cultural practices
Microbial products
Solar power generation
Grain bin construction
Pre-season drainage

Appendix B: Commodity List

CROPS
ALFALFA
ALMONDS
AMARANTH GRAIN
APPLES
APRICOTS
ARONIA (CHOKEBERRY)
ARTICHOKES
ASPARAGUS
ATEMOYA
AVOCADOS
BAMBOO SHOOTS
BANANAS
BARLEY
BEANS
BEETS
BIRDSFOOT/TREFOIL
BLUEBERRIES
BREADFRUIT
BROCCOFLOWER
BROCCOLI
BROCCOLINI
BRUSSEL SPROUTS
BUCKWHEAT
CABBAGE
CACAO
CACTUS
CAIMITO
CALABAZA MELON
CALALOO
CAMELINA
CANARY MELON
CANARY SEED
CANEBERRIES
CANISTEL
CANOLA
CANTALOUPES
CARAMBOLA (STAR FRUIT)
CARROTS
CASHEW
CASSAVA
CAULIFLOWER
CELERIAC
CELERY
CHERIMOYA
CHERRIES
CHESTNUTS
CHICORY/RADICCHIO
CHINESE BITTER MELON
CHRISTMAS TREES
CHUFAS
CINNAMON
CLOVER
COCONUTS
COFFEE
CORN
COTTON ELS
COTTON UPLAND
CRANBERRIES
CRENSHAW MELON
CRUSTACEAN
CUCUMBERS
CURRANTS
DASHEEN
DATES
DURIAN
EGGPLANT
EINKORN
ELDERBERRIES
EMMER
FIGS
FINFISH
FLAX
FLOWERS
FORAGE SOYBEAN/SORGHUM
GAILON
GARLIC
GENIP
GINGER
GINSENG
GOOSEBERRIES
GOURDS
GRAPEFRUIT
GRAPES
GRASS
GREENS
GROUND CHERRY
GUAMABANA/SOURSOP
GUAR
GUAVA
GUAVABERRY
GUAYULE
HAZEL NUTS
HEMP
HERBS
HESPERALOE
HONEY
HONEYBERRIES
HONEYDEW
HOPS
HORSERADISH
HUCKLEBERRIES
HYBRID POPLAR TREES
IDLE
INDIGO
ISRAEL MELONS
JACK FRUIT
JERUSALEM ARTICHOKES
JICAMA
JOJOBA
JUJUBE
JUNEBERRIES
KENAF
KHORASAN
KIWIBERRY
KIWIFRUIT
KOCHIA (PROSTRATA)
KOHLRABI
KOREAN GOLDEN MELON
KUMQUATS
LAMBS EAR
LEEKS
LEMONS
LENTILS
LESPEDEZA
LETTUCE
LIMES
LONGAN
LOQUATS
LYCHEE
MANGOS
MANGOSTEEN
MAPLE SAP
MAYHAW BERRIES
MEADOWFOAM
MILKWEED
MILLET
MIXED FORAGE
MOHAIR
MOLLUSK
MORINGA
MULBERRIES
MUSHROOMS
MUSTARD
NECTARINES
NIGER SEED
NONI
OATS
OKRA
OLIVES
ONIONS
ORANGES
PAPAYA

PARSNIP
PASSION FRUITS
PAWPAW
PEACHES
PEANUTS
PEARS
PEAS
PECANS
PENNYCRESS
PEPPERS
PERENNIAL PEANUTS
PERIQUE TOBACCO
PERSIMMONS
PINE NUTS
PINEAPPLE
PISTACHIOS
PITAYA/DRAGONFRUIT
PLANTAIN
PLUMCOTS
PLUMS
POMEGRANATES
POTATOES
POTATOES SWEET
PRUNES
PSYLLIUM
PUMMELO
PUMPKINS
QUINCES
QUINOA
RADISHES
RAISINS
RAMBUTAN
RAPESEED
RHUBARB
RICE
RICE SWEET
RICE WILD
RUTABAGA
RYE
SAFFLOWER
SAPODILLA
SAPOTE
SCALLIONS
SESAME
SHALLOTS
SORGHUM
SORGHUM DUAL PURPOSE
SORGHUM FORAGE
SOYBEANS
SPELT
SQUASH
STAR GOOSEBERRY
STRAWBERRIES
SUGAR BEETS
SUGARCANE
SUNFLOWERS
SUNN HEMP
TANGELOS
TANGERINES
TANGORS
TANGOS
TANNIER
TARO
TEA
TEFF
TI
TOBACCO CIGAR WRAPPER
TOBACCO BURLEY
TOBACCO BURLEY 31V
TOBACCO CIGAR BINDER
TOBACCO CIGAR FILLER
TOBACCO CIGAR FILLER BINDER
TOBACCO DARK AIR CURED
TOBACCO FIRE CURED
TOBACCO FLUE CURED
TOBACCO MARYLAND
TOBACCO VIRGINIA FIRE CURED
TOMATILLOS
TOMATOES
TREES TIMBER
TRITICALE
TRUFFLES
TURNIPS
VETCH
WALNUTS
WAMPEE
WASABI
WATERMELON
WAX JAMBOO FRUIT
WHEAT
WILLOW SHRUB
WINTER MELON
WOLFBERRY/GOJI
YAM

LIVESTOCK
ALPACAS
BEEF COWS
BEEFALO
BUFFALO OR BISON
CHICKENS (BROILERS)
CHICKENS (LAYERS)
DAIRY COWS
DEER
DUCKS
ELK
EMUS
EQUINE
GEESE
GOATS
HONEYBEES
LLAMAS
REINDEER
SHEEP
SWINE
TURKEYS

Partnerships for Climate-Smart Commodities Additional Specific Terms and Conditions February 2023

I. Overarching Statement

The following award terms and conditions are applicable to Partnerships for Climate-Smart Commodities agreements and are in addition to the USDA FPAC General Terms and Conditions. The award recipient must abide by all terms of this grant including, but not limited to, the General Terms and Conditions, the terms in the Funding Opportunity and associated Frequently Asked Questions, and this addendum. The recipient must also deliver on the planned objectives in the project narrative and budget narrative associated with this grant.

II. Eligibility and Highly Erodible Lands and Wetlands Compliance

In order to be eligible for an incentive payment as a part of the Partnerships for Climate-Smart Commodities, a producer must:

- Establish Farm Records with the Farm Service Agency (FSA) (have farm, tract, and field numbers in place);
- Complete an AD-2047 (Customer Data Worksheet to facilitate the collection of customer data for Business Partner Record);
- Certify highly erodible land conservation (HEL) and wetland conservation (WC) compliance via Form AD-1026, Highly Erodible Land Conservation (HELC) and Wetland Conservation (WC) Certification; and
- Certify that they are not a foreign person or entity.

Farm, tract, and field numbers are required for the producer, and ultimately the Partnerships for Climate-Smart Commodities recipient, to report climate-smart practice implementation to USDA, as well as to certify and maintain HELC/WC compliance. This will require that some producers who do not already have these numbers, like perennial crop growers or feedlots, establish these records with USDA's FSA. Farm, tract, field numbers, producer name, and Core Customer I.D. (CCID) will be provided by the recipient to the National Program Officer as a part of routine grant reporting. Recipients must ensure that producers receiving financial assistance or incentives through this project use the same name as is included in the relevant FSA Business File for that Farm ID in any contracts or similar documentation kept by the recipient.

Producers are not bound by the payment limitations and the adjusted gross income (AGI) limitations that are in place for other USDA programs.

In order to demonstrate HELC/WC compliance for Partnerships for Climate-Smart Commodities incentive payments, producers will need to request a copy of their subsidiary print from their

USDA FSA field office. The Subsidiary Print includes print year specific eligibility related information about a selected producer. The producer will then provide this documentation to the Partnerships for Climate-Smart Commodities recipients as proof of compliance. A current year subsidiary print will be required for each crop year that the producer receives a payment, and HELC/WC eligibility information is provided under the AD-1026 and Conservation Compliance sections of subsidiary (determined by year, which can change at any time during the year or in a subsequent year). As is the case already, field offices will not be expected to provide documentation to anyone besides the producer themselves (and must always comply with Section 1619 limitations if they ever do provide documentation to third parties). Producers must have control of the land for the term of their beneficiary contract.

Recipients are responsible for determining producer eligibility within the funding opportunity requirements. Recipients must inform producers of eligibility requirements and direct them to local USDA offices for requested information as necessary, including but not limited to, farm and tract establishment and Highly Erodible Land and Wetland Compliance determinations. Privacy of producers is a priority throughout this process, and recipients are responsible for maintaining producer privacy in the process.

At minimum, the recipient will collect and review subsidiary reports from participating producers. They will ensure that the producer is listed as "compliant" in all sections of the conservation compliance portion of subsidiary and "certified" for AD-1026 before an incentive payment is made. If payments to a producer span more than one Federal fiscal year, the recipient will review an updated subsidiary print each fiscal year to ensure that the status is still compliant.

III. Other Environmental and Cultural Resources Reviews

A Finding of No Significant Impact (FONSI) was signed by USDA NRCS on August 26, 2022. A copy of the Programmatic Environmental Assessment for Partnerships for Climate-Smart Commodities is available at www.usda.gov/climate-smart-commodities . USDA may determine that additional environmental and cultural resources review is needed for any particular action under Partnerships for Climate-Smart Commodities. The recipient must not execute any beneficiary contracts under this grant agreement prior to receipt of a letter from USDA that specifically details:

1) further procedures deemed appropriate by the Agency to ensure a completed National Environmental Policy Act (NEPA) review and all appropriate consultation requirements are met, and
2) additional instructions for any unanticipated discoveries or conditions.

A resolution of support is required for projects on Tribal lands from the governing body of the Tribe with jurisdiction over that land, if the applicant is not the Tribe nor an entity owned or

operated by that Tribe. USDA may approve alternative documentation for resolutions when USDA deems necessary and legally sufficient.

IV. Producer Benefits

USDA encourages the recipient to disclose to participating producers the manner and amount for which any market premiums derived from the development of the relevant climate-smart commodity will be shared between participating parties, including producers. USDA will be monitoring producer benefits, in particular those to small and underserved producers, throughout the grant period. Recipients agree that their project(s) will implement a plan for engaging small and underserved producers as laid out in this agreement.

V. Producer Data Protection and Disclosure

Recipients must ensure each producer has convenient access to any data collected from that producer or the producer's land and any associated modeling as part of the project. The recipient must provide each producer applying for benefits under this grant a description in writing of how their information, including but not limited to data about their farm and commodities, will be utilized, protected and shared as applicable.

VI. Other Data and Reporting Requirements

In addition to the reporting information provided in the statement of work and General Terms and Conditions, USDA will provide a template for the Detailed Progress Report, also known as the Partnerships for Climate-Smart Commodities (PSCS) Project Reporting Workbook. Within 30 calendar days of execution of this grant, a copy of this workbook will be posted at www.usda.gov/climate-smart-commodities or an alternative location provided to the recipient by the National Program Officer. USDA may provide updates to the PCSC Project Reporting Workbook or submission methods to streamline the data collection process and/or reduce the burden on the recipient throughout the grant period. Generally, these updates will be provided at least 3 months in advance of any required changes. The recipient must not transfer any data to foreign governments or foreign entities without prior approval from USDA.

USDA will provide a Technical Contact for this grant. The Technical Contact will have the responsibility of technical oversight for USDA for the project. The recipient is responsible for providing the technical assistance required to successfully implement and complete the project. The recipient must comply with any requests for information from the Technical Contact. The Technical Contact for this award is the National Program Officer assigned to this grant.

Prior to execution of this grant, the recipient must provide a shapefile depicting the project boundary for enrollment under this grant. Producer enrollment may not occur outside this boundary without modification of this grant.

Within 30 calendar days of execution of this grant, the recipient must provide to the National Program Officer a website address where enrollment information will be posted for producers for the project associated with this grant. Recipients will be responsible for the following reports:

- Submit quarterly performance reports that include a written progress report, as well as additional reporting on specific data elements contained in the most up-to-date version of the Partnerships for Climate-Smart Commodities Project Reporting Workbook. Additional information about each reported element is described in the Data Dictionary.
- Submit supplemental reports required to validate greenhouse gas (GHG) benefit data, including: (1) an initial project MMRV plan, (2) field-modeled GHG benefit reports, and (3) field-direct GHG measurement results, as applicable. Additional information about these reports is in included in the Data Dictionary.
- Submit copies of project outputs and deliverables (e.g., fact sheets, reports) as attachments in ezFedGrants along with quarterly performance reports.
- Report the version of COMET-Planner used to estimate GHG benefits of the project within each quarterly performance report. As COMET-Planner is updated, recipients must adopt the latest version of the tool as directed by USDA for use in performance reports.

Recipients must designate an individual as a member of the USDA Partnerships for Climate-Smart Commodities Learning Network (Partnerships Network); this representative should be identified in the Project Narrative for this grant. Each project includes a plan for up to two Partnerships Network virtual meetings and two in-person meetings a year during the project duration. Dates and other details on events will be posted at www.usda.gov/climate-smart-commodities or an alternative location provided to the recipient by the National Program Officer.

The Partnerships Network will be co-chaired by representative from the USDA Office of the Chief Economist and the Farm Production and Conservation Mission Area. The Partnerships Network will inform synthesis reports to be assembled by USDA on a range of topics related to the implementation of Partnerships for Climate-Smart Commodities projects, including:

- Lessons-learned as projects are implemented;
- Options for providing technical assistance;
- Procedures for measurement/quantification, monitoring, reporting, and verifying GHG benefits;
- Options for tracing climate-smart commodities through the supply chain;
- Mechanisms for reducing costs of implementation;
- A forum for discussion and learning regarding approaches to climate-smart agriculture and forestry implementation (including but not limited to deployment and

measurement/quantification, monitoring, reporting, tracking, and verification of associated greenhouse gas benefits and marketing of climate-smart commodities).
- Synthesis of outcomes; and
- Opportunities for USDA and others to inform future approaches to generating new and expanded markets for climate-smart commodities.

The Partnerships Network topics to be discussed will cover at minimum the areas described in previous FAQs and will evolve with USDA's ongoing project data analysis efforts and with input from the project recipients on the kinds of sessions that will be most helpful to them in building the diverse climate-smart markets associated with their projects. Participation may include at least one interview a year and include questions related to the following areas:

- Technical assistance approaches, methods, and successes and/or challenges
- Producer outreach approaches, methods, and successes and/or challenges
- Monitoring, measurement, reporting, and verification (MMRV) approaches, methods, and successes and/or challenges
- Marketing approaches, methods, and successes and/or challenges
- Partnership approaches, methods, and successes and/or challenges
- Data collection and storage approaches, methods, and successes and/or challenges
- Supply chain approaches, methods and successes and/or challenges, including approaches to traceability
- Supply chain benefits and demand for climate-smart commodities
- Perspectives on program design, climate-smart commodity definitions, and future approaches or opportunities
- Project successes and stories

USDA may also request producer exit reports at a later date. Additional marketing and branding-related requirements may be provided by USDA, including signage related to Partnerships for Climate-Smart Commodities.

VII. Competition and Anti-Competitive Practices

In connection with this grant, recipients may not prohibit or otherwise limit a producer from changing the provider of other services or materials not included as part of this grant. Recipients may not condition, limit, steer, or discriminate in their provision or sale of non-project business functions or products to producers based on their participation or non-participation in or use of any services provided as part of this grant. Additionally, funds in this agreement shall not be used for purposes or activities related to mergers or acquisitions.

VIII. Suspension and Disbarment

The provisions governing Suspension and Disbarment in subsection 1.a.8 shall also apply to fraud, embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements, or violations of the Federal civil antitrust or unfair trade practice laws.

IX. Special provisions for awards to for-profit entities as recipients

This section contains provisions that apply to awards to for-profit entities. These provisions are in addition to other applicable provisions of these terms and conditions, or they make exceptions from other provisions of the terms and conditions for awards to for-profit entities. For-profit entities that receive awards have two options regarding audits:

1) A financial related audit of a particular award in accordance with Generally Accepted Government Auditing Standards issued by the Comptroller General of the United States, in those cases where the for-profit entity receives awards under only one USDA program; or, if awards are received under multiple USDA programs, a financial related audit of all awards in accordance with Generally Accepted Government Auditing Standards issued by the Comptroller General of the United States; or

2) An audit that meets the requirements contained in 2 CFR 200 subpart F.

For-profit entities that receive annual awards totaling less than the audit requirement threshold in 2 CFR 200 subpart F are exempt from USDA audit requirements for that year, but records must be available for review by appropriate officials of Federal agencies or the Government Accountability Office.

X. Non-Disparagement

Recipients may not engage in any advertising deemed by USDA as disparaging to another agricultural commodity or competing product, or in violation of the prohibition against false and misleading advertising. Disparagement is defined as anything that depicts other commodities in a negative or unpleasant light via overt or subjective video, photography, or statements. Comparative advertising is allowable, provided the presentation of facts is truthful, objective, not misleading, and supported by a reasonable basis.