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:
NR233A750004G010		Upon final signature - 03/31/2028	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	UNIVERSITY OF MISSOURI SYSTEM CURATORS OF THE UNIVERSITY OF MISSOURI 601 TURNER AVENUE, TURNER AVENUE GARAGE - ROOM 201 COLUMBIA MO 65211-0001 UEI Number / DUNS Number: SZPJL5ZRCLF4 / 153890272

7. NRCS Program Contact	8. NRCS Administrative Contact	9. Recipient Program Contact	10. Recipient Administrative Contact
Name: ERIC HANSEN	Name: Melanie Krizmanich	Name: Rob Myers	Name: Jeremiah Lotven
(b)(6)			

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

15. Project Title/ Description: Expands markets in MO for climate-smart corn, soy, grains, cotton, beef, dairy, other livestock, pulses, and specialty crops; supports producer implementation and monitoring of climate-smart practices

16. Entity Type: H = Public/State Controlled Institution of Higher Education

17. Select Funding Type

Select funding type:	☒ Federal	☒ Non-Federal
Original funds total	$25,000,000.00	$16,099,103.00
Additional funds total	$0.00	$0.00
Grand total	$25,000,000.00	$16,099,103.00

18. Approved Budget

Personnel	$1,706,212.00	Fringe Benefits	$635,430.00
Travel	$103,270.00	Equipment	$60,001.00
Supplies	$38,889.00	Contractual	$90,000.00
Construction	$0.00	Other	21,358,444.00
Total Direct Cost	$23,992,246.00	Total Indirect Cost	$1,007,754.00
		Total Non-Federal Funds	$16,099,103.00
		Total Federal Funds Awarded	$25,000,000.00
		Total Approved Budget	$41,099,103.00

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 Katina Hanson, Acting Senior Advisor for Climate-Smart Commodities	Signature KATINA HANSON Digitally signed by KATINA HANSON Date: 2023.04.18 16:04:21 -05'00'	Date
Name and Title of Authorized Recipient Representative Jeremiah Lotven Pre-Award Manager Sponsored Programs Admin.	Signature Jeremiah Lotven Digitally signed by Jeremiah Lotven Date: 2023.04.18 10:19:43 -05'00'	Date 4/18/2023

MU Project 00078863

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 The Curators of the University of Missouri (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 $ 41,009,103

PERSONNEL $1,706,212
FRINGE BENEFITS $635,430
TRAVEL $103,270
EQUIPMENT $60,001
SUPPLIES $38,889
CONTRACTUAL $90,000
CONSTRUCTION (usually n/a) $0
OTHER $21,358,444 (including PRODUCER INCENTIVES $17,500,000)
TOTAL DIRECT COSTS $23,992,246
INDIRECT COSTS $1,007,754
Recipient has an approved Negotiated Indirect Cost Rate Agreement (NICRA) with a rate of 33 percent of Modified Total Direct Costs (MTDC); the base amount is $3,053,801.
TOTAL FEDERAL FUNDS $25,000,000

PERSONNEL $254,762
FRINGE BENEFITS $94,980
TRAVEL $0
EQUIPMENT $0
SUPPLIES $0
CONTRACTUAL $0
CONSTRUCTION (usually n/a) $0
OTHER $15,749,361
PRODUCER INCENTIVES $0
TOTAL DIRECT COSTS $16,099,103
INDIRECT COSTS $0
TOTAL NON-FEDERAL FUNDS $16,099,103

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.

Ensure that equipment purchased with Federal funds is used until no longer needed as described in the General Terms and Conditions and 2 CFR 200. If the residual value of the equipment is $5,000 or more at the time it is no longer needed, the recipient must request disposition instructions. The disposition instructions may direct the recipient to: 1) sell the equipment and return a proportionate share of the proceeds to the Federal agency; 2) transfer title to another eligible entity identified by the Federal agency; or 3) keep the equipment if desired and compensate the Federal agency for its proportionate share of the value.

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)

- SF429 Real Property Status Report: Due within 120 calendar days of the period of performance end date. Send as an attachment to email to FPAC.BC.GAD@usda.gov.

Expected Accomplishments and Deliverables

See attached Benchmarks Table and associated Project Narrative.

Resources Required

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

Milestones

See attached Benchmarks Table 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 Table
Climate-Smart Practices List and Limitations
Data Dictionary
Climate-Smart Specific Terms and Conditions

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AN INTEGRATED APPROACH TO SCALING-UP CLIMATE-SMART PRACTICES FOR CROP, LIVESTOCK AND AGROFORESTRY PRODUCTION

Section I. Executive Summary

A. Contact Information

Lead PI and Technical Contact: Dr. Rob Myers, Director, Center for Regenerative Agriculture, University of Missouri. Phone 573-882-1547, Email myersrob@missouri.edu
Business Contact: Brenda Leuenberger, Associate Director, Pre-Award, Sponsored Programs Administration. Phone: 573-882-7560, Email: grantsdc@missouri.edu

B. List of Project Partners (26 total partner organizations, with 14 as financial partners)

Proposal Lead: Center for Regenerative Agriculture, University of Missouri-Columbia, working with the Center for Agroforestry, and University of Missouri Extension

University partner: Lincoln University (Jefferson City, MO) and North Carolina State Univ.

Commodity farm organization partners: Missouri Soybean Assoc./Merchandising Council, Missouri Corn Growers Assoc./Merchandising Council, and Missouri Cattlemen's Association

NGO partners: Missouri Association of SWCDs, Missouri Farm Bureau, The Nature Conservancy, Columbia Center for Urban Agriculture, EarthDance, STAR Program and ESMC

Agency partners: Missouri Department of Agriculture, Missouri Department of Natural Resources, and Missouri Department of Conservation

Agribusiness partners: Missouri Agribusiness Association, MFA Inc., Missouri Fertilizer Control Board, Kansas City Food Hub, FarmRaise, MARC-IV Consulting, Nestle-Purina, Show-Me Ethanol, Mid-America Biofuels, and MO Prime Beef Packers

C. List of underserved/minority-focused project partners

Lincoln University – an 1890 institution in Jefferson City, MO. They have outreach staff located state-wide working with small and underserved farmers.

EarthDance – a non-profit organization in St. Louis that provides training for minority beginning farmers, including urban farmers, and for minority youth.

Columbia Center for Urban Agriculture – a non-profit organization that provides training and outreach on urban agriculture, including for veterans, small, and beginning farmers

Kansas City Food Hub – a network of diverse farms, including urban and minority farmers, in the KC area who collaborate on marketing and supporting new farmers

D. Compelling need for the project

Missouri faces significant climate-related challenges in agriculture starting with reduced productivity and resiliency of its soil resources. These soil constraints are due to decades of erosion and organic matter loss on fields with already-thin topsoil. The remaining topsoil has been degraded in a way that limits root growth, whether of field crops, vegetables, fruits, nut trees, or pasture, and creating a situation where plants are easily hurt by climate stresses. These stresses on plant growth affect productivity of a wide range of cash crops as well as impacting forage for livestock production. More resilient climate-smart soils, cropping systems, and livestock practices are needed to provide prosperity for farmers and meet societal needs.

Missouri is more diversified than most Midwest states, creating opportunity to integrate a variety of climate-smart practices, as proposed for this project. Missouri has mostly small farms, being 2nd in number of farms (with over 90% being under $350,000 in annual income, the USDA definition for small farms). Missouri is 3rd among states in beef cow numbers, 5th in soybeans,

6th in cotton, and 9th in corn. Missouri farms have significant pastureland, with 6.9 million acres of permanent pasture and another 2 million in temporary pasture. Of the 27.8 million acres in farmland in Missouri, about 4 million acres on those farms is woodland. Overall, there is both a need and opportunity to better integrate crops, livestock and trees on Missouri farms.

The **compelling need and motivation** for this project is based on implementing diverse climate-smart practices in a way that helps build climate-resilient cropping and livestock systems. We will integrate crop and livestock production and in some cases agroforestry practices. Most of the climate-smart practices to be incentivized in this project contribute to building soil health and sequestering soil carbon, while nutrient management approaches will reduce fertilizer use and impacts on fossil fuels and nitrous oxide. The project's climate-smart practices will be supported through a highly coordinated technical assistance and training program in conjunction with financial incentives. This will create great opportunities for expanding climate-smart markets. **The creative scaling-up approaches piloted in this project will have a lasting impact not only in Missouri but also can serve as models for approaches in other U.S. regions.**

E. Approach to minimize transaction costs associated with project activities

The biggest financial component of this project will be incentive payments for climate-smart practices, specifically cover crops, regenerative grazing, agroforestry, nutrient management, and climate-smart fieldscapes. To reduce farmer time in signing up for incentive payments (with time being a transaction cost), we will have over 100 staff from multiple organizations trained to support the enrollment process. Farmers will be able to sign up through a project-specific, customized, and easy-to-use software application developed by FarmRaise. This app will allow farmers to sign up for payments through their phone, tablet, or computer and will not require an office visit. This simple signup approach will also reduce barriers to participation for small and underserved farmers, who may be more reluctant to go into a government office. University of Missouri will charge no indirect costs (overhead) on administering the incentive payments. **A total of $16,110,222 million in matching funds** will also contribute to project efficiency; total funding request is $25 million, with $17.5 million for incentive payments (70% of funds).

Another key to minimizing farmer transaction costs will be a stream-lined system for monitoring, verification, and reporting. Farmers will contribute to monitoring and verification by entering key information through their personalized FarmRaise phone/tablet/computer app, such as photo documentation of field/pasture activities, receipts for purchases of cover crop seed, pasture seed, tree seedlings, or nutrient management practices, and other documentation. Other monitoring and verification will be done to support farmers as described in more detail in Section III, including satellite remote sensing of cover crops, soil sampling on a subset of fields, and field spot checks by project staff and cooperators to confirm practices have been implemented.

To facilitate marketing of these climate-smart commodities, we will minimize transaction costs for both the producers and purchasers of the commodities by having an easy-to-document system. This includes a points-based system to be piloted with one or more biofuel facilities (described in Section IV Part B), an opportunity for producers to enroll in the Ecosystem Service Market Consortium program, and other methods of tracking the climate-smart commodities.

F. Approach to reduce producer barriers to implementing CSAF practices for the purpose of marketing climate-smart commodities

There are a number of barriers that prevent producers from adopting climate-smart practices in Missouri, including financial considerations, labor and time factors, and awareness of how to best implement new practices. Incentive payments, such as will be offered by this project, have been effective in Missouri and other states in motivating farmers to try new practices. For best success in adopting new practices, those incentives need to be paired with education and training efforts for producers, including for small and underserved farmers. The lead PI on this project has coordinated the multi-year national SARE/CTIC farmer cover crop survey, and the survey

has shown that while farmers benefit from incentives they also want more educational assistance when considering cover crops. For these reasons, the lead PI has worked with a variety of collaborators including the regional cover crop councils to offer extensive cover crop training programs. For this project, we will provide coordinated education programs on each of the climate-smart practices to Missouri producers who sign up for incentives or are considering signing up. Details on the training approaches are in Section II Part C of this proposal.

G. Geographic focus

This highly integrated project will work state-wide with producers from across Missouri, with financial participation limited to Missouri producers. Missouri has the second highest number of farms in the nation (95,320) after Texas and has one of the largest numbers of small farms in the nation, with over 90% of Missouri farmers falling into USDA's small farm category of under $350,000 in annual sales (based on 2017 USDA Census of Agriculture data).

A further breakdown of Missouri farms by size was done as part of the 2021 Economic Contribution Study of Missouri Agriculture and Forestry Report (Decision Innovation Solutions, 2021). In that report, small farms were classified as under $99,999, medium farms between $100,000-499,999, and large farms as $500,000 and more in annual income. Based on those classifications, 86% had $99,000 or less in income and another 9% were in the $100,000 to $499,999 range. This would fit with the Census data summary that slightly over 90% of farms in Missouri had less than $350,000 in annual income in 2017, which is the small farm definition for purposes of this program.

Besides having a very high percentage of small farmers, Missouri also has a substantial number of farmers in the underserved category according to the 2017 Census of Agriculture, including female farmers (58,164), beginning farmers (41,416) and minority farmers (2,573). Data on limited resource farmers is not readily available. There are also a substantial number of veterans in farming (19,419), many of whom would fall into the beginning farmer category.

	All producers	American Indian or Alaska Native	Asian	Black or African American	Native Hawaiian or other Pacific Islander	White only	More than one race reported	New and beginner producers	Producers with military service
Total	160,715	1,544	576	355	98	158,212	1,087	41,416	19,419
Male	102,551	916	270	236	64	101,116	660	24,650	18,534
Female	58,164	628	306	119	34	57,096	427	16,766	885

Table 1. Missouri producer demographics from 2017 USDA Census of Agriculture

H. Project management capacity of partners

The project will be managed through the Center for Regenerative Agriculture at the University of Missouri working in close cooperation with the University's Center for Agroforestry, and with substantial involvement from most of the major agriculture organizations in Missouri. The project lead PI is Dr. Rob Myers, Director of the Center for Regenerative Agriculture. He is a crop and soil scientist and conservation leader with 27 years of federal grant administrative experience, including serving as a former National Program Leader for Sustainable Agriculture at USDA-CSREES (now NIFA). He is known as one of the top national experts on cover crops, sustainable agriculture, and conservation approaches. He will be assisted in project management by Dr. Kelly Wilson, Assistant Director of the Center for Regenerative Agriculture and an expert in agriculture extension and education methodology. Additional project management assistance will come from additional hires. Other members of the core project management team include:

- Dr. Ashley Conway, a silvopasture and grazing expert
- Dr. Morgan Davis, soil scientist and expert on greenhouse gas measurement
- Dr. Jordon Wade, director of the Missouri Soil Health Assessment Center
- Dr. Ranjith Udawatta, an expert in soil health for agroforestry systems
- Dr. John Lory, state soil fertility specialist and nutrient management expert
- Dr. Teng Lim, manure extension specialist and agriculture engineer
- Dr. Jordan Thomas, Missouri state beef reproduction extension specialist
- Dr. Derek Brake, ruminant nutrition specialist
- Dr. Eric Bailey, Missouri state beef extension specialist
- Dr. Harley Nauman, Missouri forages extension specialist
- Dr. Laura McCann, an agricultural economist and expert in environmental economics
- Mr. Joe Horner, a livestock economics expert and extension specialist
- Mr. Dan Downing, state water quality and sustainable ag extension specialist
- Mr. Alan Weber, an economics and biofuels consultant, also farms with cover crops
- Dr. Babu Valliyodan, genetics and sustainable ag expert, Lincoln U.
- Dr. Sougata Bardhan, agroforestry specialist, Lincoln U.
- Dr. Tunsisa Hurisso, soil health specialist, Lincoln U.
- Dr. Clement Akotsen-Mensah, Innovative Small Farm Outreach director, Lincoln U.
- Dr. Chris Reberg-Horton, cover crop expert, North Carolina State University

Besides the technical experts above, we will involve representatives of the partner organizations in monthly strategy meetings. We will also form a farmer advisory committee for this project with individuals recommended through the state commodity associations and including small and underserved farmers recommended by Lincoln outreach specialists and partner NGOs.

A real strength of this project is the combined expertise and pre-existing relationships of the project partners with Missouri producers. This comes first and foremost through the partnerships with the three largest commodity organizations in Missouri, namely the state commodity groups for soybeans, corn, and cattle, along with Missouri Farm Bureau's Young Farmer and Rancher program. Each of these organizations has a large membership list of Missouri producers and staff who are in regular communication with their farmer members.

The University of Missouri will also work closely with Lincoln University through their joint extension system to reach out to their extensive networks of farmers, including small and underserved farmers across the state. Other groups helping reach small and underserved farmers include EarthDance in St. Louis, which specializes in providing farm training programs for minority and urban beginning farmers, Columbia Center for Urban Agriculture, working with urban farmers in the central part of the state as well as veterans, and Kansas City Food Hub, which works with minority, limited resource, and other small farmers in the Kansas City area.

All three of Missouri's state agencies with an agriculture portfolio will participate in the project and help promote it to producers. Missouri Department of Agriculture will help with communications and marketing. Missouri Department of Natural Resources runs a large conservation incentive program called the MO soil and Water Conservation Program; they will help with incentive strategies. Missouri Department of Conservation has over 70 Private Lands staff who interface with farmers and landowners and can help publicize the incentives.

Additionally, we will coordinate systematic outreach to farm advisors through both university extension and by regular and extensive communications with Missouri NRCS. We will also work with private sector ag retailers through the Missouri Agribusiness Association, Missouri Fertilizer Control Board, and MFA, Inc., which is the largest ag retailer in Missouri with fertilizer/chemical/seed dealerships and grain elevators across the state.

Section II. Plan to pilot climate-smart agriculture and/or forestry practices on a large scale

A. Description of practices to be deployed

As part of the proposal planning process, the project leadership held over two dozen meetings with 20 different farm organizations and agencies in Missouri. We concluded that offering a diverse and complimentary set of incentive programs would be most effective in catalyzing overall progress toward adoption of climate-smart practices **on a large-scale (490,667 acres) in Missouri**. Specific climate-smart practices that will be incentivized through the project include the following (additional details are in Part D below on financial incentives):

1. Cover crop planting and termination – Farmers will receive a per acre incentive to plant cover crops with corn, soybeans, cotton, sorghum, rice, or other annual cash crops, and either keep them growing longer to accumulate more biomass (late termination) and/or plant a high biomass, diverse mix of cover crops to improve soil carbon. $7.6 million

2. Cover crop grazing – Provide an incentive payment to graze cover crops, incentivizing integration of crops and livestock for soil health and soil carbon benefits. $1.2 million

3. Regenerative grazing of perennial pastures – Provide an incentive payment for intensive management grazing on biodiverse pastures and have producers participate in a multi-day regenerative grazing school. $5.0 million

4. Silvopasture – Provide an incentive payment to plant trees in pasture under a "Grow Your Edges" program where native trees are planted into pasture near existing woodlands, sequestering carbon and providing shade and other advantages for grazing. $1.0 million

5. Nutrient management – Expand a current pilot 4R fertilizer program from two counties to the rest of Missouri, offering an incentive payment to do precision application of fertilizer and manure, including grid-sampling and split nitrogen fertilizer application. $1.2 million

6. Climate-smart fieldscapes – Working with MDC, NGO farmer groups and other partners, incentivize 100 demonstration fields with stacked climate-smart practices that maximize soil carbon while maintaining productivity and profitability. Participation will be targeted entirely to small and underserved producers. $1.5 million

B. Plan to recruit producers and landowners, including estimated scale of the project

We have an extremely active and aggressive plan to recruit producers and landowners for this project, engaging key partners to help us recruit a diverse range of farmers. Working through University of Missouri Extension and with our many partners, we will undertake the following coordinated effort to connect with thousands of producers and landowners across Missouri.

1) Press releases. Provide regular press releases to ag and rural media on both incentive signup opportunities and supporting educational programs being offered on the practices.

2) Extension outreach. Work with our county extension offices to do direct emails to the extensive number of farmers on their county email lists.

3) Commodity organization communication. Working with the Missouri corn, soybean, and cattlemen's state commodity organizations (all financial partners in the project), we will have direct email and social media postings on incentives and education programs.

4) State agency partnerships. Missouri's Department of Agriculture, Department of Conservation, and Department of Natural Resources have all agreed to help recruit farmers for the program. We have also met twice with Missouri NRCS leadership about how they could help make agency staff and farmers aware of the climate-smart incentive opportunities.

5) Small and underserved farmers. Lincoln University (1890 institution), Columbia Center for Urban Agriculture, Kansas City Food Hub, and EarthDance (St. Louis NGO) will actively reach out to small and underserved farmers (see Part E below in this section for details).

6) Beginning farmers outreach. Missouri Farm Bureau has agreed to promote the climate-smart incentives to their extensive Young Farmers and Ranchers network on a regular basis.

7) Farmer networking. We will encourage the initial rounds of farmers who sign up for the program to share information about the program with their neighbors and relatives so that we can reach more and more producers and landowners over time.

A detailed breakdown of the number of acres and farms impacted by climate-smart practices in the project is in Table 2 on page 12 of this proposal. To summarize, **we expect to impact up to 547,500 acres in Missouri through incentives,** and additional acres through education and outreach programs. Total number of farms expected to sign up for participation is approximately 3,425 if every farm just signs up for one practice, but some farms likely will sign up for two, making the total number more likely to be in the range of 2,500 to 3,000 farms involved in incentivized practices. **Approximately 100,000 beef cattle will be impacted** based on a stocking rate of just under two acres per cow and grazing acreage enrollment of 195,000 acres.

C. Plan to provide technical assistance, outreach, and training, including timeline

A comprehensive technical assistance, outreach, and training effort will be led by experienced educators at University of Missouri working with outreach staff at Missouri commodity groups, Lincoln University, and non-profit organizations working with small and underserved farmers. Dr. Myers, lead PI, has worked for three decades in extension, including leading extensive outreach programs on cover crops. He, Dr. Sarah Lovell, and Dr. Kelly Wilson will work with existing MU center staff and a team of three extension specialists to be hired with expertise in cover crops and soil nutrient management, agroforestry, and regenerative grazing systems. **All farmers signing up to receive incentive payments will be required to participate in at least one educational program on the topic relevant to that particular climate-smart practice.**

Cover crops: Experienced cover crop educators working with the MU Center for Regenerative Agriculture will work with Missouri extension staff, Missouri NRCS staff, and Missouri corn and soybean association staff to offer workshops and field days throughout the project on cover crop selection, management, termination, and cash crop planting techniques in cover crops. We will use peer-reviewed training modules we have already developed in conjunction with the Midwest Cover Crop Council for workshop activities and involve Missouri farmers already experienced in cover crops as part of our educational team. Dr. Myers will work with extension staff to design and deliver these programs with the help of the Center's cover crop educator, Bethany Wohrley, and farmer speakers expert in cover crops. Technical assistance will include full-day winter workshops, early spring and mid-summer field tours, and periodic webinars on cover crops, with at least six educational events to be held per year in Missouri for this project.

Regenerative grazing: Missouri farmers and ranchers who sign up for regenerative grazing will participate in a two-day regenerative grazing school to receive the incentive payments under the program. This short-course school will be offered through University of Missouri extension and will involve the Missouri Cattlemen's Association. It will be modeled after the highly successful grazing school currently offered through University of Missouri extension but updated to reflect current thinking on regenerative grazing approaches that can help sequester more carbon in the soil and reduce overall greenhouse gas impacts. Dr. Jordan Thomas, a state beef extension specialist, and his colleagues will work with a new full-time regenerative grazing extension specialist to be hired; together, they will implement "regenerative grazing schools" as two-day intensive training programs, including pasture walks, for producers who sign up for the incentive payments. The regenerative grazing schools will be offered at least two to three times per year, with a goal of keeping participant numbers per session manageable.

Agroforestry: The MU Center for Agroforestry will coordinate an education and outreach program on the Grow Your Edges management approach. Individuals signing up for incentive payments will participate in an initial education program and will be offered the opportunity to attend follow-up field days and workshops. This topic area will be led by Dr. Ashley Conway working with Dr. Sarah Lovell and a new agroforestry educator to be hired. We anticipate about five educational events will be held annually that provide information on the Grow Your Edges approach, including workshops, field days, and webinars.

Nutrient management: MU agronomy extension staff will work with the Missouri Agribusiness Association to provide outreach to Missouri producers signing up for the nutrient management program. The training will specifically encompass the 4R nutrient management approach (right source, right time, right rate, and right place), the benefits of grid sampling and precision nutrient application, and approaches to split application of nitrogen (split between spring and early summer applications). Dr. Myers, Dr. John Lory (MU soil fertility specialist), and Dr. Teng Lim (MU manure specialist) will work with MU extension agronomists and the MO Agribusiness Association to provide information on appropriate nutrient management techniques including the 4R program, grid sampling, precision nutrient management, and split nitrogen applications. We anticipate at least four educational events encompassing these topics will be held annually.

Climate-smart fieldscapes: Small and underserved farmers signing up for climate-smart fieldscapes will go through a training program to familiarize them with the climate-smart options appropriate to their farm situation and to help them select the best practices to implement. Ongoing educational support will be provided to these producers throughout the project on techniques to maximize carbon sequestration and overall profitability and resiliency with the practices. Training programs will be coordinated through the Center for Regenerative Agriculture and coordinated by Dr. Wilson working with other Center staff. They will include other members of University of Missouri extension, including agroforestry staff, along with partners such as Lincoln University, The Nature Conservancy, Department of Conservation, Missouri NRCS, and other collaborators. We anticipate having four or more educational events per year that support farmers participating in the climate-smart fieldscapes program.

Project Timeline					
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Technical Assistance, Outreach, and Training					
Cover crop TA & outreach	Workshops in winters, field days in early spring and mid-summer, webinars seasonally				
Grazing TA & outreach	Regenerative grazing 2-day "school" offered 2-3X/year plus webinars				
Agroforestry TA & outreach	Workshops in winters, field days in early spring and mid-summer, webinars seasonally				
Nutrient mgt. TA & outreach	Winter trainings and webinars, field days in summer				
Climate-smart fieldscape TA	Demonstration implementations		Ongoing technical assistance, field days		
Financial Assistance					
Development of signup "app"	App developed	Ongoing refinements to farmer incentive app and data collection			
Signup schedules developed	Sched. developed	Annual implementation of signup schedules, adjustments as needed			
Enrollment for incentives	Enrollments start in winter of first year than continue to fifth year for annual programs				
Farmer incentive payments	Incentive payments occur after signup and in conjunction with practice verification				
Monitoring, Verification, and Reporting					
Filling out COMET-Planner	Staff will complete COMET-Planner for each field or pasture enrolled for incentives				
Soil sampling	Subset of sites will be soil carbon sampled when practice starts and near end of project				
Greenhouse gas verification	Field sampling at subset of sites with portable FTIR gas analyzer				

Marketing of Climate-Smart Commodities	
Climate-smart grain markets	Work with biofuel and other grain outlets on expanding climate-smart grain markets
Climate-smart beef markets	Work with Missouri slaughtering facilities on climate-smart premiums for beef
Other climate-smart markets	Assist small and underserved farmers with expanding climate-smart market opportunities
STAR & ESMC enrollment	Help farmers expand market opportunities through enrollment in STAR &/or ESMC

D. Providing financial assistance for producers/landowners implementing CSAF practices

An extensive planning process was undertaken from the time the NOFA was released until mid-April. Over two dozen planning meetings were held involving nearly 20 different farm and conservation organizations, gathering their input on climate-smart practices and incentives. Repeated meetings were held with Missouri NRCS leadership (twice) and the leadership of the Missouri Soil and Water Conservation Program (four meetings) to gain advice from the main two Missouri agency programs offering large incentive programs. These collaborations allowed us to design a creative set of incentive programs that complement existing farmer incentives and also serve to pilot new approaches in motivating adoption of climate-smart practices.

All signups will be to provide incentives covering one year of climate-smart practice implementation, but in the case of cover crops, a given field can be signed up two consecutive years. We will work with Missouri NRCS to make sure that no farmers receive simultaneous or overlapping payments (such as for cover crops or grazing systems) on the same unit of land. We will also work with the Missouri Soil and Water Conservation Programs (MSWCP) staff to avoid duplication of payments. All incentive programs will require signup through a customized application developed under contract by FarmRaise. The software signup app can be used by farmers on phones, tablets, or computers, and will gather all the essential signup information and allow follow-up verification (see Section III for details). Signup each year will be required to be done by designated dates (will vary by practice) and will be done on a first come, first served basis up to the dollar amount available each year. Maximum annual payment per farm will be limited to $10,000 to make sure thousands of farmers can participate in the project.

Financial payments will be made by fiscal staff in the University of Missouri College of Agriculture, Food and Natural Resources, with a full-time business officer coordinating processing of farmer incentive payments in conjunction with other accounting staff and managed according to strict financial and audit standards, including maintaining privacy of farmer data. Specific incentive payment approaches are outlined below by climate-smart practice.

1. <u>Cover crop planting incentive</u> – (CPS 340, Cover Crop)
   Soy-rye initiative. Missouri farmers can currently obtain EQIP or MSWCP payments for cover crops, and while progress has been made with approximately 10% of row crop acres planted to cover crops, much more progress is needed. By far the largest acreage crop in Missouri is soybeans. Cereal rye as a cover crop planted prior to soybeans is a very proven system in the state. Rye is perhaps the best single species of cover crop for building soil carbon through large amounts of roots and biomass, and greatly helps with control of erosion and troublesome herbicide-resistant weeds. Despite the many benefits of cereal rye before soybeans, less than 20% of soybean farmers are currently using the system. In discussions with the Missouri Soybean Association staff, it was determined that a coordinated "Soy-rye" initiative could help attract attention among soybean producers and greatly expand the number of farmers using cereal rye before soybeans. Therefore, we will offer a $30 per acre incentive payment for fields where cereal rye is fall planted before soybeans.

High-biomass mix initiative. Missouri row crop producers have been more reluctant to use cover crops in front of corn than soybeans, with an estimated 5% or less of corn acres having cover crops preceding corn planting. Some farmers have tried cereal rye before corn with mixed success, sometimes experiencing problems with nitrogen tie-up from rye allowed to grow too long before corn planting (rye and corn can work together with careful nitrogen management but it can be a challenge for first time cover crop users). To help more corn and other cash crop producers get comfortable with cover crops while still meeting climate-smart goals with good soil carbon sequestration potential, we will encourage producers of corn, sorghum, and other relevant grains to use a high-biomass cover crop mix that is fall planted, where at least three cover crop species are planted in the fall and with at least one being an overwintering species. We will also make the program available to producers of annual horticultural crops. Farmers will normally be encouraged to use one of two mixes (future additions to the list may be added based on varieties and species availability). Those mixes are as follows: Mix A – intended for fields that have crop rotations with no winter wheat for grain – is winter wheat with crimson clover and hairy vetch; and, Mix B – intended for rotations that include wheat harvested for grain – is oats with crimson clover and winter rapeseed (or radishes or turnips instead of rapeseed if planted by mid-September, with the turnips or rapeseed preferred for situations where grazing is to be done).

Since winter wheat is still a somewhat common grain crop in Missouri, it's best to avoid winter wheat or hairy vetch as cover crops where winter wheat will later be grown as a grain crop. Thus, Mix B is intended for those situations. Both Mix A and Mix B have been used successfully before corn and other crops in Missouri with fewer issues on nitrogen tie-up compared to cereal rye alone, while still producing good amounts of biomass and having grazing potential. Farmers will have the option of adding additional species to the mixes above but will be required to use the core species for one of the mixes listed above. The incentive payment for the high-biomass cover crop mix will be $40 per acre and can be used in front of any summer cash crop.

2. Cover crop late-termination incentive – (CPS 340, Cover Crop)
"Planting green," where a cover crop is left alive until planting a cash crop, and other late-termination approaches with cover crops have become more common but could be more widely used in Missouri. This later termination, if properly managed, can build more soil carbon, help with weed control, better manage soil moisture in wet springs, provide extended erosion control, and can provide more of a residue blanket on the soil in early summer, reducing moisture evaporation and keeping soils cooler. Maryland has successfully implemented a late-termination option for cover crops and we seek to pilot a similar effort in Missouri through this "late termination" cover crop add-on incentive payment. Farmers who document that they have done late termination (verified with ground photos and/or satellite image analysis done as part of the overall project) will be eligible for a $10 per acre supplemental payment on their cover crop acres.

3. Cover crop grazing – (CPS 340, Cover Crop)
With the large amount of both row crop fields and grazing animals in Missouri, particularly beef cattle (Missouri ranks third in number of beef cattle in the U.S.), it makes sense to have more farmers grazing cover crops, especially since many Missouri row crop producers either have their own grazing livestock or have a neighbor with livestock. Properly managed cover crop grazing can accelerate buildup of soil carbon and provides positive economic returns for producers, along with other environmental benefits. To incentivize more use of cover crop grazing, producers will be eligible for a $20 per acre supplemental payment on their cover crop acres where grazing has been done (as verified with ground photos, site visits and/or satellite image analysis done as part of the overall project). The cover crop grazing incentive can be used by the producer to partially offset costs with increasing cover crop seeding rate

to maximize forage potential and/or purchasing materials for temporary fencing or water supply for grazed fields.

4. Regenerative grazing of perennial pastures –
(CPS 528 Prescribed Grazing, and/or CPS 512 Pasture and Hay Planting, and/or CPS 614 Watering Facility, and/or CPS 382 Fencing, and/or CPS 340 Cover Crop)
A majority of Missouri farms include at least some land devoted to perennial pasture, yet little of that pasture is managed very well. In most cases, the grazing animals (primarily beef cows) are placed in a sizable pasture for a multi-month period with little focus on ensuring diverse and productive mixes of pasture species or maximizing net returns per acre. Fortunately, where appropriately managed intensive grazing is implemented, both profit and soil carbon can be increased. The goal of this incentive option is to train more farmers to do regenerative grazing approaches with biodiverse forage species, managed animal rotation, and low-cost watering and fencing approaches. To partially offset costs of implementing regenerative grazing, farmers who attend the regenerative grazing school and implement managed grazing will be eligible for a $50 per acre payment.

5. Silvopasture/agroforestry – (CPS 381, Silvopasture)
Another climate-smart practice opportunity relevant to Missouri livestock producers is expanded use of agroforestry practices like silvopasture. While some farmers have thinned native woodlands and underplanted with herbaceous forages, we will not be incentivizing that approach because of questionable carbon impacts. Instead, we will incentivize farmers to plant trees in existing pastures through a novel **Grow Your Edges program**. This idea reflects the currently common practice of farmers allowing livestock to seek shade along the woods at field edges, which encroaches detrimentally on existing woodlands. With proper technical support, this program will not only encourage enhanced woodland management, but expand wooded acres using agroforestry management practices. We will incentivize planting of trees on pastures bordering woodlands by providing a $200 per acre payment, with the producers required to participate in a training program and verification of the sustained practice. The $200 will not cover full cost of trees, labor, water, and tree protection (tree tubes, stakes or fencing), but can cover much of the cost of establishing and protecting tree seedlings, such as the native tree seedlings through Missouri Department of Conservation tree program, which sells tree seedlings in bulk at $60 per 100 tree seedlings.

6. Nutrient management – (CPS 590, Nutrient Management)
One of the significant greenhouse gas issues with agriculture production is the extensive use of nitrogen fertilizers. While these fertilizers are important for maximum productivity, they are a concern both because of fossil fuels used in producing the fertilizers and potential for nitrous oxide release, a serious greenhouse gas. To help reduce both use of nitrogen fertilizer and release of nitrous oxide, we will incentivize farmers to implement appropriate nutrient management practices that include use of the 4R nutrient stewardship approach (right source, right rate, right time, and right place), use of grid sampling, precision application of fertilizers and manure, and split-nitrogen application in corn (or other nitrogen-using crops). Farmers will be expected to participate in appropriate education programs on this nutrient management approach and will receive a $20 per acre payment to partially offset costs with implementing the approach, particularly grid sampling. This program will build off a recently implemented 2-county pilot effort of this type through the Missouri Soil and Water Conservation program and make it a state-wide program.

7. Climate-smart fieldscapes – (Multiple practices, see below)
A creative and flexible approach will be offered to small and underserved farmers to engage them with climate-smart production opportunities. Although Missouri small and underserved farmers will be eligible for any of the incentives described above, small acreage farmers in particular seldom sign up for per acre payment programs because of their limited number of

acres and reluctance to deal with government program paperwork for a small financial return. To better engage small farmers, including underserved farmers, we will offer at least100 farmers the opportunity to create a demonstration **climate-smart fieldscape** on their farm. This fieldscape area can be any size appropriate to the farm but should represent a significant portion of their production acreage and can include the whole farm. The term fieldscape is being used here to capture the idea that the enrolled area may be larger than a field and that we want producers to take a holistic landscape perspective in evaluating climate-smart practices to implement. The idea is for the producer to implement a mix of three or more climate-smart practices on a field or overall fieldscape chosen for the demonstration. In addition to participating in supporting education programs, the participating farmers will be encouraged to host a field day at their farm at some point during the 5-year project period. Payments will be $10,000 per farm over a 3-year contract. In most cases, participants will receive $5000 the first year of the contract, then $2500 each in years 2 and 3. Participants will select at least three of the following climate-smart practices to implement on their climate-smart fieldscapes:

- CPS 311, Alley Cropping
- CPS 317, Composting Facility
- CPS 327, Conservation Cover
- CPS 328, Conservation Crop Rotation
- CPS 329, Residue and Tillage Management, No Till
- CPS 332, Contour Buffer Strips
- CPS 336, Soil Carbon Amendment
- CPS 340, Cover Crop
- CPS 345, Residue and Tillage Management, Reduced Till
- CPS 379, Multi-story cropping
- CPS 380 Windbreak/shelterbelt Establishment and Renovation
- CPS 381, Silvopasture
- CPS 382, Fencing
- CPS 390, Riparian Herbaceous Cover
- CPS 391, Riparian Forest Buffer
- CPS 420, Wildlife Habitat Planting
- CPS 422, Hedgerow Planting
- CPS 484, Mulching
- CPS 490, Tree and Shrub Preparation
- CPS 512, Pasture and Hay Establishment
- CPS 528, Prescribed grazing
- CPS 585, Stripcropping
- CPS 595, Pest Management Conservation System
- CPS 612, Tree/Shrub Establishment
- DIA 148, Pollinator Enhancement

E. Plan to enroll underserved and small producers, including estimated number of underserved and small producers participating and associated dollar amounts anticipated to go directly to producers, in the form of technical and financial assistance

Small and underserved producers will be a major focus for this project, as reflected both by the five partner organizations specifically focusing on outreach in this area and the collective effort of all partner organizations to recruit small and underserved farmers. **We anticipate at least half of the farmers who enroll in the project will represent one or more of the small or underserved categories**, with the biggest portions being the small (under $350,000 in annual income – making up over 90% of Missouri producers), female (making up over 35% of Missouri producers), and beginning farmer categories (making up over 25% of Missouri producers).

Working with Lincoln University (including their Innovative Small Farm Outreach Program staff), Columbia Center for Urban Agriculture, EarthDance, and the Kansas City Food Hub, we will build a database of small and underserved farmers and a multi-faceted strategy to reach those farmers, including directly through these well-established programs already working with these types of farmers Missouri Farm Bureau's Beginning Farmer and Rancher Program will also help us reach many of the beginning farmers in the state. Communication strategies will include direct emailing, social media, presentations at relevant events for small and underserved farmers, and outreach through statewide agriculture media and extension.

A significant portion of the financial assistance will also go towards small and underserved farmers. This will happen in two ways, through both a dedicated pool of $1.5 million in incentive funds for small and underserved farmers participating in climate-smart fieldscape demonstrations and by reserving at least 30% of the remaining $16 million incentive funds for small and underserved farmers, meaning that **at least $6.3 million of the total incentive funds will go to small and underserved farmers**.

Section III. Measurement/quantification, monitoring, reporting, and verification

A. Approach to greenhouse gas benefit quantification, including methodology approach
We have an integrated approach to quantify greenhouse gas benefits, complimenting COMET-Planner with direct measurements of GHG and soils at selected locations. Farmers that sign up for incentive payments will provide data through the signup app on relevant farm management, including tillage, cover crops, rotation, nutrient management, and other practices for COMET-Planner assessment of each site. The COMET-Planner tool will allow us to make greenhouse gas benefit estimates for large scale areas (Major Land Resource Areas). Appropriate staff time will be devoted to making sure COMET-Planner data is compiled.

Additional quantification will be achieved through use of soil sampling on a portion of the participating sites at the beginning of practice implementation and near the end of the project, evaluating soil carbon and other measures. We will also measure GHG emissions using a portable FTIR gas analyzer. Methodology for soil sampling and greenhouse gas measurement is provided in Section III Part D below.

B. Approach to monitoring of practice implementation, including the anticipated number of farms and acres reached through project activities
We will contract with an experienced remote sensing group through North Carolina State University to monitor cover crop acreage, cover crop termination date, and cover crop grazing. This research team has extensive prior experience evaluating cover crop acreage with remote sensing algorithms evaluating satellite images for the mid-Atlantic as well as calibrated for Midwest conditions from previous work in Iowa.

For all practices incentivized, we will ask farmers to attach verification data of practice implementation, such as photos of implemented practices through the software app compatible with their phone or tablet, geotagged to the field or pasture. Photos of receipts for purchase of cover crop or pasture seed, trees, fencing or water supplies (regenerative grazing), or grid sampling costs will be one piece of evidence for practice monitoring. We will also have project staff and extension personnel, along with collaborating personnel from commodity associations and county soil and water districts, do visual verification and reporting on site visits for at least 20% of sites annually (and likely a higher percentage).

The number of acres and farms expected to be impacted directly through incentive programs is outlined in Table 2 below. Additional acres/farms will be impacted through education programs.

Table 2. Expected number of acres and farms to be impacted by project incentive payments.

	Payment per acre	Acres incentivized	Farmer incentive payments (millions)	Estimated # of farms impacted*
Soy-rye program (cereal rye before soybeans)	$30	120,000	3.6	550
High biomass cover crop mix	$40	75,000	3.0	375
Late termination practice	$15	66,667	1.0	333
Cover crop grazing	$20	60,000	1.2	400
Regenerative grazing practice	$50	100,000	5.0	500
Grow your Edges - agroforest.	$200	5,000	1.0	100
Nutrient management 4R and precision fertilizer program	$20	60,000	1.2	600
Climate-smart fieldscapes		4,000	1.5	100
Total acres incentivized		490,667	17.5	2958

*There will likely be some farms signing up for more than one type of incentive, impacting total.

C. Approach to reporting and tracking of greenhouse gas benefits

All of the data collected on the project will be compiled into one privacy-protected database encompassing all the enrolled field sites in Missouri. This includes data from the software app used by farmers to sign up for practice incentives and providing their production practices on the field or pasture, remote sensing data from relevant sites for cover crops planting, termination, and cover crop grazing, nutrient management data from ag retailers including aggregate data from grid sampling and adjusted fertilizer rates, tree planting data, and other practice implementation data and soils data.

All the data will be available to project scientists and USDA (with farmer privacy protected), allowing reporting and tracking of greenhouse gas benefits through estimates calculated as described in other parts of this section. Data will be summarized annually with interpretative reports prepared for USDA. GHG benefit estimates will be prepared for each commodity involved in relation to the dollars expended on the project and in relation to the number of farms enrolled. Estimated GHG benefits based on expected acres enrolled were calculated using representative Missouri counties from each MLRA through COMET-Planner (for practices where sufficient data existed): soy-rye cover crop system – 69,092 CO_2e (metric tons of carbon dioxide equivalent), high biomass cover crops – 43,108 CO_2e, late-terminated cover crops – 38,317 CO_2e, regenerative grazing – 3215 CO_2e. The total of these annual GHG estimates is 153,732 CO_2e, so assuming at least five years of practice use, **total GHG reduction is estimated at 768,661 CO_2e**. This does not include silvopasture, fertilizer reduction, and climate-smart fieldscape practice impacts. Evaluation of the potential longevity of GHG benefits for all practices will be completed by project staff and reported as part of the project.

D. Approach to verification of greenhouse gas benefits and estimated GHG benefits

Using the COMET-Planner tool and field measurements, we will develop and validate greenhouse gas estimations. Utilizing new high-throughput Fourier Transformed Infrared (FTIR) gas analyzer technologies and soil carbon stock measures will prove vital for a comprehensive understanding the impact of climate-smart practices. Monitoring and verification for the project

will be done in a cost-effective plan, utilizing technological and methodological innovations along with COMET-Farm to provide site verification of COMET-Planner GHG estimates.

To ground-truth results from COMET-Planner and COMET-Farm, greenhouse gas monitoring will take place for the duration of the project. To maximize efficiency, we will collect soil gas flux data using a portable FTIR gas analyzer to simultaneously quantify cumulative emissions of carbon dioxide, methane, ammonia, nitrous oxide, nitrogen oxide, and nitrogen dioxide. Utilizing the FTIR, we will be able to sample a greater spatial and temporal density compared to traditional sample collection and analysis. The University of Missouri is centrally located in the state with access to multiple major land resource areas where greenhouse gas sample collection will take place on farms and private forests. Sampling will take place weekly at three to five locations during the growing season and monthly for the remaining portions of the year.

To validate the soil C contribution to greenhouse gas benefits, soil samples will be collected at the time of practice implementation and shortly before the end of the project where practices are ongoing. These samples (0 to 15 cm depth) will be analyzed for bulk density and soil organic carbon (SOC) to quantify SOC stocks and serve as the basis for the proposed C markets. Sample collection will be completed through soil scientist partnerships at the University of Missouri, Lincoln University, and SWCD county staff. Sample analysis will be conducted through the University of Missouri's Soil Health Assessment Center to ensure high throughput and rapid turnaround. Our program is expected to implement climate-smart practices on 2,500 to 3,000 fields and pastures. We will collect soil samples from 2 to 3% of these sites to quantify changes to SOC stocks. This will equate to soil sampling 50 to 75 operations across the state of Missouri. Individual sample collection will range from 10 to 15 samples per location depending on field size and soil spatial variability. This sampling strategy optimizes breadth of sampling contexts with the intensity needed for accurate soil C stock estimation underpinning the carbon markets.

E. Agreement to participate in the Partnerships Network

University of Missouri as the lead organization agrees to participate in the Partnerships Network.

Section IV. Plan to develop and expand markets for climate-smart commodities

A. Partnerships designed to market resulting climate-smart commodities

Out of the 26 partners on this project, 9 are private companies that will help with marketing, as will the three commodity organizations and the Missouri Department of Agriculture. Specific markets to be engaged include biofuels, beef, specialty crop markets, and ESMC.

Biofuel partnerships for climate-smart grains. Biodiesel and ethanol producers in Missouri currently market products almost exclusively within Missouri or surrounding states. Yet, premium opportunities exist in other markets such as states with Low Carbon Fuel Standards (LCFS) in California, Oregon, and Washington. These markets reward biofuels that have a lower carbon footprint as calculated through a carbon intensity score. Currently, carbon intensity values only consider direct carbon emissions and impacts from induced land use change. Through this project, we will generate credible data to validate the potential for carbon sequestration. Missouri biofuels producers like SME and Mid-America Biofuels have indicated their support for the program and noted that documenting carbon reductions through climate-smart practices can enable them to purchase climate-smart commodities. The economics team will work with our biofuel partners to evaluate changes in carbon intensity values from climate-smart practices and resulting value in regulated markets such as west coast LCFS programs. We will also pilot develop a whole-farm scoring approach based on points from using various climate-smart practices incentivized in this project; that will be piloted with one or more buyers.

Beef marketing options for regeneratively grazed cattle. We will work with Missouri Prime Beef Packers to track cattle produced with regenerative grazing and other climate-smart practices

(such as cover crop grazing or silvopasture systems) and evaluate the opportunity to market climate-smart beef as a consumer preferred product. At a minimum the project will leverage our emphasis on cover crop grazing/regenerative grazing to help expand opportunities for grass-finished beef, but our ambition is to work with Missouri-based firms to evaluate the potential for a climate-smart beef branding program. Additional market opportunities exist outside of the direct beef value chain. For example, Nestle Purina's PetCare division has expressed an interest in evaluating beef (and grain) for their pet foods that has been produced with climate-smart practices (letters from the various companies listed here are attached to grant).

Specialty crop sales based on climate-smart practices. A majority of the farmers engaged in specialty crop production in Missouri are directly retailing to consumers, selling primarily vegetables and fruits, but in some cases nuts, herbs, flowers, and other products. We will work with the farmers in our climate-smart fieldscapes program to do a survey evaluation of consumers and market outlets, and with Missouri Department of Agriculture, Kansas City Food Hub, and other marketers on expanding climate-smart opportunities for specialty crops.

B. Plan to track climate-smart commodities through the supply chain

Our plan to track climate-smart commodities through the supply chain includes multiple approaches. First, farm management practices documented by our partner, FarmRaise, will enable biofuels processors and other markets to track climate-smart commodities. Each farmer participating will have a personalized identification number that can be provided to buyers of the climate-smart commodities from a relevant field or pasture (or animal unit). The climate-smart practices can be reflected in an overall farm carbon score which would enable multiple downstream industries to procure climate-smart commodities and products. We will develop a "whole farm" carbon scoring system which incorporates all of the project climate-smart practices and then evaluate the system with project partners, including grain elevators (e.g., MFA), biofuel partners, and other manufacturers. The intent will be to minimize transaction costs and utilize the existing supply to market climate- smart commodities with premium attributes. Another approach will be with beef cattle to track those produced through regenerative agriculture and gain market premiums, either as grass-finished beef or other premium branded labels.

C. Estimated economic benefits for participating producers including market returns

To provide estimated economic benefits, we show below published return values for the climate-smart practices to be incentivized. Farmers may also gain additional income through signing up for soil carbon payments or other programs, such as the ESMC opportunity we will provide.

Cover crops – A USDA-SARE report shows a net profit of $17 per acre for corn and $10 per acre for soybeans after five years of cover cropping, taking the first three years to break even. With this project's cover crop incentive of $30-40 per acre, the transition period is addressed. For cover crop grazing, the same SARE report shows calculated return of $49 per acre from cover crop grazing. Incentive payment of $20 per acre to help with first year fencing/watering costs. Cover crop acres also have good potential for private sector carbon payments.

Regenerative grazing – Regenerative grazing approaches benefit from both higher productive forages and more intensive utilization of available forage. Estimated economic benefit from switching to regenerative grazing from unmanaged grazing is $40 to $60 per acre after transition costs for portable electric fencing and paddock watering are addressed (U of MO Extension data). The incentive payment of $50 per acre will help defray part of the transition costs.

Silvopasture "Grow Your Edges" – Silvopasture and other agroforestry practices provide several potential economic and environmental benefits over time. Project Drawdown estimates globally a 440% increase in profit for silvopasture compared to conventional land management, and an average carbon sequestration rate of 1.1 tons of C per acre per year. The incentive payment of $200 per acre will help defray part of the establishment and protection costs for tree planting.

Climate-smart fieldscapes – given the range of practices that can be used in the climate-smart fieldscapes program, it is not possible to pin down any specific numbers. However, net economic benefits can be assumed for several of the practices, such as cover crops. The national SARE survey showed a majority of horticulture producers had net profit improve by more than $5 per acre with cover crops. A key question to be determined is what consumers may be willing to pay for climate-smart practices, which we will evaluate through surveys and other methodology.

With the grain crops, farmers will have the opportunity to sign up for additional programs, with staff support for enrolling in the STAR program or the Ecosystem Services Market Consortium. The STAR program is proving to be a valuable tool in Illinois for farmers seeking to gain additional land to rent and/or favorable rental rates. By implementing the STAR program in Missouri, it will give farmers an additional way to gain recognition for their climate-smart practices. The Ecosystem Services Market Consortium signup will give farmers an opportunity to gain an extra premium, with payment level determined at the time of signup.

D. Post-project potential, including anticipated ability to scale project activities, and likelihood of long-term viability beyond project period

This Missouri project has excellent potential for long-term viability for three key reasons. First, the Missouri DNR Soil and Water Conservation Program is a unique state program with over $40 million a year in state funding from a state sales tax. Leaders of that program have said they are excited about the potential of the proposed project to help them identify new ways of incentivizing producer activities for coming years, such that they may long-term adopt incentive approaches we are piloting. Second, Missouri has great potential for long-term integration of crop, livestock, and forestry practices, being one of the few Midwest states that is strong in all three of those production bases. Third, the U. of Missouri project team has organized an excellent partner network of state commodity groups, state agencies, non-profits, agribusinesses, and other organizations. Enthusiasm among project partners is very high for this proposed effort, which will launch effective collaborations, strong farmer engagement, and pilot innovative approaches on climate-smart practices with long-term greenhouse gas benefits.

BENCHMARKS AND MILESONES

An Integrated Approach to Scaling-Up Climate-Smart Practices for Crop, Livestock and Agroforestry Production

University of Missouri and other Partners

Lead PI: Rob Myers

Activity areas on this project encompass the following, with benchmarks and milestones for each activity area outlined by year and quarterly targets indicated.

- Project coordination and planning activities – shortened to "Coordination"
- Technical assistance, outreach, and training – abbreviated to "TA"
- Monitoring, reporting, and verification – abbreviated to "MRV"
- Market development and marketing assistance - shortened to "Marketing"
- Number of producers enrolled (including underserved producers). acres enrolled, and dollars provided to producers– shortened to "Enrollment"

For quarters, we are assuming our grant starts April 1, 2023, with annual grant cycle for this project having quarter one as April – June, quarter two as July – September, quarter three as October – December, and quarter four as January – March. If the project starts later, quarters will be adjusted accordingly.

Most details are provided by quarter, but cumulative reductions in greenhouse gases (stated as metric tons of carbon dioxide equivalents) are provided for the fourth quarter of each project year.

Year 1

Quarter 1

Coordination—Hold all-partner meeting to coordinate launch of year 1 activities. Establish sub-group monthly meeting schedule and expectations for reporting back to project lead. Begin sub-group monthly meetings and report back to project lead. Sub-groups develop policies for their respected program area. Submit quarterly report to USDA. Work on development of a signup application system. Develop incentive policies.

TA—Plan schedule of TA events through the rest of the year and process for individual TA with farmers. Develop training for project partners on using the signup application and providing farmer support. Compile resources for educational activities and develop and maintain living list of educational activities of various partners.

MRV—Develop process for gathering MRV information, including plan for completion of COMET Planner information for each field.

Marketing—Develop plan for marketing. Hold discussions with possible marketing collaborators (1-2).

Enrollment—Develop recruitment process for year 1 with the following targets for each incentive payment program.

Quarter 2
Coordination—Hold all-partner update meeting. Hold monthly sub-group meetings and report back to project lead. Sub-groups review and possibly revise incentive policies with support from project lead. Submit quarterly report to USDA. Test pilot app with sample of farmers. Finalize development of the sign-up application.

TA—Train project partners on using the incentive application and providing farmer support. Conduct 1-2 field days, webinars, and workshops for selected climate-smart practices. Add to resources for educational activities and develop and maintain living list of educational activities offered by various partners.

MRV—Continue development of processes for gathering MRV information, including completion of COMET Planner for each field. Measurement tools used: COMET-Planner tool for all enrolled producers. Measurement tools used: COMET-Planner tool for all enrolled producers, GHG sampling with portable FTIR analyzer.

Marketing—Develop plan for marketing. Hold discussions with possible marketing collaborators (1-2).

Enrollment—Begin recruitment of producers for incentive payment program. Enroll 50 producers in incentive payment programs, at least 18 of which are small and/or undeserved producers (18 small/underserved), 9813 new acres, $350,000 to producers.

Quarter 3
Coordination—Hold monthly sub-group meetings and report back to project lead. Sub-groups revise policies with support from project lead. Submit quarterly report to USDA. Incorporate feedback from piloting of app with farmers to improve functionality.

TA—Conduct 1-2 field days, webinars, and workshops for selected climate-smart practices. Add to resource list for educational activities and maintain living list of educational activities held by various partners.

MRV—Continue development of processes for gathering MRV information, including completion of COMET Planner for each field. Begin gathering baseline soils and GHG data on cover crop fields enrolled for incentives. Measurement tools used: COMET-Planner tool for all enrolled producers, GHG sampling with portable FTIR analyzer, soil sampling.

Marketing—Continue planning on marketing and hold discussions with possible marketing collaborators. Plan to integrate marketing opportunities into farming TA events.

Enrollment—Enroll 100 new producers in incentive payment programs, at least 36 small and/or undeserved producers, 14720 new acres, $525,000 to producers. Cumulative totals: 150 producers enrolled (54 small/undeserved), 24533 acres enrolled, $875,000 to producers.

Quarter 4

Coordination—Hold monthly sub-group meetings and report back to project lead. Sub-groups revise policies with support from project lead. Submit quarterly report to USDA.

TA—Conduct 1-2 webinars, and workshops for selected climate-smart practices. Add to resource list for educational activities and maintain living list of educational activities held by various partners.

MRV—Begin aggregating and evaluating data from baseline measurements, and work on remote sensing applications with cover crop fields. Work with farmers enrolled for incentives to collect photo documentations of practices and receipts as part of verification activities, and do periodic site visits to selected fields and pastures to verify practice implementation. Measurement tools used: COMET-Planner tool for all enrolled producers. Cumulative GHG Benefits (Metric Tons of CO2e Reduced or Sequestered): 15,535 CO_2e.

Marketing— Hold discussions with possible marketing collaborators (1-2). Start to integrate marketing opportunities into farming TA events as appropriate.

Enrollment—Enroll 145 new producers in incentive payment programs, at least 52 small and/or undeserved producers, 24533 new acres, $875,000 to producers. Cumulative totals: 295 producers enrolled (106 small/underserved), 49,067 acres enrolled, $1,750,000 to producers.

Year 2

Quarter 1

Coordination—Hold annual all-partner meetings to review year 1 progress and plan for year 2. Continue monthly sub-group meetings and report back to project lead. Sub-groups review and revise policies with support from project lead. Submit quarterly report to USDA.

TA—Provide refresher/update training to project partners and new staff on use of app and providing farmer support. Offer 1-2 field days, webinars, and workshops for selected climate-smart practices throughout the year. Provide individual consulting with farmers and farm advisors (target minimum of 10). Add to resources for educational activities and develop and maintain living list of educational activities offered by various partners.

MRV—Aggregate COMET-Planner information collected to date. Work with farmers enrolled for incentives to collect photo documentations of practices and receipts as part of verification activities, and do periodic site visits to selected fields and pastures to verify practice implementation. Continue with regular GHG measurements. Measurement tools used: COMET-Planner tool for all enrolled producers, remote sensing, FTIR analyzer for GHG measurements.

Marketing—Hold discussions with possible marketing collaborators (1-2). Incorporate marketing opportunities into TA events with climate-smart commodities.

Enrollment—Enroll 148 new producers in incentive payment programs, at least 53 small and/or undeserved producers, 24533 new acres, $875,000 to producers. Cumulative totals: 295 producers enrolled (159 small/underserved), 73,600 acres enrolled, $2,625,000 to producers.

Quarter 2
Coordination—Hold monthly sub-group meetings and report back to project lead. Submit quarterly report to USDA.

TA—Offer 1-2 field days, webinars, and workshops for selected climate-smart practices throughout the year. Provide individual consulting with farmers and farm advisors (target minimum of 10). Add to resources for educational activities and develop and maintain living list of educational activities

MRV—Review and update progress with remote sensing of cover crop acres. Work with farmers enrolled for incentives to collect photo documentations of practices and receipts as part of verification activities, and do periodic site visits to selected fields and pastures to verify practice implementation. Continue with regular GHG measurements. Measurement tools used: COMET-Planner tool for all enrolled producers, GHG sampling with portable FTIR analyzer.

Marketing—Hold discussions with possible marketing collaborators (1-2). Incorporate marketing opportunities into TA events with climate-smart commodities.

Enrollment—Enroll 148 new producers in incentive payment programs, at least 53 small and/or undeserved producers, 24533 new acres, $875,000 to producers. Cumulative totals: 591 producers enrolled (213 small/underserved), 98133 acres enrolled, $3,500,000 to producers.

Quarter 3
Coordination—Hold monthly sub-group meetings and report back to project lead. Submit quarterly report to USDA.

TA—Offer 1-2 field days, webinars, and workshops for selected climate-smart practices throughout the year. Provide individual consulting with farmers and farm advisors (target minimum of 10). Add to resources for educational activities and develop and maintain living list of educational activities offered by various partners.

MRV— Work with farmers enrolled for incentives to collect photo documentations of practices and receipts as part of verification activities and do periodic site visits to selected fields and pastures to verify practice implementation. Continue with regular GHG

measurements. Measurement tools used: COMET-Planner tool for all enrolled producers, GHG sampling with portable FTIR analyzer, soil sampling.

Marketing—Hold discussions with possible marketing collaborators (1-2). Incorporate marketing opportunities into TA events with climate-smart commodities.

Enrollment—Enroll 148 new producers in incentive payment programs, at least 53 small and/or undeserved producers, 24533 new acres, $875,000 to producers. Cumulative totals: 739 producers enrolled (266 small/underserved), 12,2667 acres enrolled, $4,375,000 to producers.

Quarter 4

Coordination—Hold monthly sub-group meetings and report back to project lead. Submit quarterly report to USDA.

TA—Offer 1-2 webinars or workshops for selected climate-smart practices throughout the year. Provide individual consulting with farmers and farm advisors (target minimum of 10). Add to resources for educational activities and develop and maintain living list of educational activities offered by various partners.

MRV—Continue gathering soils and GHG data on fields enrolled for incentives. Work with farmers enrolled for incentives to collect photo documentations of practices and receipts as part of verification activities and do periodic site visits to selected fields and pastures to verify practice implementation. COMET-Planner tool for all enrolled producers. Cumulative GHG Benefits (Metric Tons of CO2e Reduced or Sequestered): 61,640 CO_2e.

Marketing—Hold discussions with possible marketing collaborators (1-2). Incorporate marketing opportunities into TA events with climate-smart commodities.

Enrollment—Enroll 148 new producers in incentive payment programs, at least 53 small and/or undeserved producers, 24533 new acres, $875,000 to producers. Cumulative totals: 887 producers enrolled (319 small/underserved), 147,200 acres enrolled, $5,250,000 to producers.

Year 3

Quarter 1

Coordination—Hold annual all-partner meetings to review year 1 and 2 progress and plan for year 3. Continue monthly sub-group meetings and report back to project lead. Submit quarterly report to USDA.

TA—Provide refresher/update training to project partners and new staff on use of app and providing farmer support. Offer 1-2 field days, webinars, and workshops for selected climate-smart practices throughout the year. Provide individual consulting with farmers and farm advisors (target minimum of 10). Add to resources for educational activities and develop and maintain living list of educational activities offered by various partners.

MRV—Aggregate COMET-Planner information collected to date. Work with farmers enrolled for incentives to collect photo documentations of practices and receipts as part of verification activities and do periodic site visits to selected fields and pastures to verify practice implementation. Measurement tools used: COMET-Planner tool for all enrolled producers, remote sensing, FTIR analyzer for GHG measurements.

Marketing—Hold discussions with possible marketing collaborators (1-2). Incorporate updated marketing opportunities into TA events with climate-smart commodities. Help at least 50% of enrolled farmers gain access to a new marketing channel or ways of getting additional incentives for their climate-smart practices.

Enrollment—Enroll 148 new producers in incentive payment programs, at least 53 small and/or undeserved producers, 24,533 new acres, $875,000 to producers. Cumulative totals: 1,035 producers enrolled (373 small/underserved), 171,733 acres enrolled, $6,125,000 to producers.

Quarter 2

Coordination—Continue monthly sub-group meetings and report back to project lead. Submit quarterly report to USDA.

TA—Review and update progress with remote sensing of cover crop acres. Provide refresher/update training to project partners and new staff on use of app and providing farmer support. Offer 1-2 field days, webinars, and workshops for selected climate-smart practices throughout the year. Provide individual consulting with farmers and farm advisors (target minimum of 10). Add to resources for educational activities and develop and maintain living list of educational activities offered by various partners.

MRV— Review and update progress with remote sensing of cover crop acres. Work with farmers enrolled for incentives to collect photo documentations of practices and receipts as part of verification activities and do periodic site visits to selected fields and pastures to verify practice implementation. Continue gathering GHG data on fields enrolled for incentives. Measurement tools used: COMET-Planner tool for all enrolled producers, GHG sampling with portable FTIR analyzer.

Marketing—Hold discussions with possible marketing collaborators (1-2). Incorporate updated marketing opportunities into TA events with climate-smart commodities. Help at least 50% of enrolled farmers gain access to a new marketing channel or ways of getting additional incentives for their climate-smart practices. 1 marketing channel expanded (total=1).

Enrollment—Enroll 148 new producers in incentive payment programs, at least 53 small and/or undeserved producers, 24,533 new acres, $875,000 to producers. Cumulative totals: 1,183 producers enrolled (426 small/underserved), 196,267 acres enrolled, $7,000,000 to producers.

Quarter 3
Coordination—Continue monthly sub-group meetings and report back to project lead. Submit quarterly report to USDA.

TA—Provide individual consulting with farmers and farm advisors (target minimum of 10) Continue compiling resources for educational activities and develop and maintain living list of educational. Offer 1-2 webinars or workshops for selected climate-smart practices.

MRV—Continue gathering soils and GHG data on cover crop fields enrolled for incentives. Work with farmers enrolled for incentives to collect photo documentations of practices and receipts as part of verification activities and do periodic site visits to selected fields and pastures to verify practice implementation. Measurement tools used: COMET-Planner tool for all enrolled producers, GHG sampling with portable FTIR analyzer, soil sampling.

Marketing—Hold discussions with possible marketing collaborators (1-2). Incorporate updated marketing opportunities into TA events with climate-smart commodities. Help at least 50% of enrolled farmers gain access to a new marketing channel or ways of getting additional incentives for their climate-smart practices. Total marketing channels expanded: 1. 1 new marketing channel created (total= 1)

Enrollment—Enroll 148 new producers in incentive payment programs, at least 53 small and/or undeserved producers, 24,533 new acres, $875,000 to producers. Cumulative totals: 1,331 producers enrolled (479 small/underserved), 220,800 acres enrolled, $7,875,000 to producers.

Quarter 4
Coordination—Continue monthly sub-group meetings and report back to project lead. Submit quarterly report to USDA.

TA—Provide individual consulting with farmers and farm advisors (target minimum of 10) Continue compiling resources for educational activities and develop and maintain living list of educational. Offer 1-2 webinars or workshops for selected climate-smart practices.

MRV—Work with farmers enrolled for incentives to collect photo documentations of practices and receipts as part of verification activities and do periodic site visits to selected fields and pastures to verify practice implementation. COMET-Planner tool for all enrolled producers. Cumulative GHG Benefits (Metric Tons of CO2e Reduced or Sequestered): 137,815 CO_2e.

Marketing—Hold discussions with possible marketing collaborators (1-2). Incorporate updated marketing opportunities into TA events with climate-smart commodities. Help at least 50% of enrolled farmers gain access to a new marketing channel or ways of getting additional incentives for their climate-smart practices. 1 marketing channel expanded (total=2). Total new marketing channels created: 1.

Enrollment—Enroll 148 new producers in incentive payment programs, at least 53 small and/or undeserved producers, 24,533 new acres, $875,000 to producers. Cumulative totals: 1,479 producers enrolled (532 small/underserved), 245,334 acres enrolled, $8,750,000 to producers.

Year 4

Quarter 1

Coordination—Hold annual all-partner meetings to review year 1-3 progress and plan for year 4. Continue monthly sub-group meetings and report back to project lead. Submit quarterly report to USDA.

TA—Provide refresher/update training to project partners and new staff on use of app and providing farmer support. Offer 1-2 field days, webinars, and workshops for selected climate-smart practices throughout the year. Provide individual consulting with farmers and farm advisors (target minimum of 10). Add to resources for educational activities and develop and maintain living list of educational activities offered by various partners.

MRV— Aggregate COMET-Planner information collected to date. Work with farmers enrolled for incentives to collect photo documentations of practices and receipts as part of verification activities and do periodic site visits to selected fields and pastures to verify practice implementation. Take soil samples and GHG samples at appropriate times for each practice. Measurement tools used: COMET-Planner tool for all enrolled producers, remote sensing, FTIR analyzer for GHG measurements.

Marketing—Hold discussions with possible marketing collaborators (1-2). Incorporate updated marketing opportunities into TA events with climate-smart commodities. Help at least 50% of enrolled farmers gain access to a new marketing channel or ways of getting additional incentives for their climate-smart practices. Total expanded marketing channels: 2. Total new marketing channels: 1.

Enrollment—Enroll 185 new producers in incentive payment programs, at least 67 small and/or undeserved producers, 30,667 new acres, $1,093,750 to producers. Cumulative totals: 1,664 producers enrolled (599 small/underserved), 276,000 acres enrolled, $9,843,750 to producers.

Quarter 2

Coordination—Continue monthly sub-group meetings and report back to project lead. Submit quarterly report to USDA.

TA—Provide individual consulting with farmers and farm advisors (target minimum of 10) Continue compiling resources for educational activities and develop and maintain living list of educational. Offer 1-2 webinars or workshops for selected climate-smart practices.

MRV—Review and update progress with remote sensing of cover crop acres. Work with farmers enrolled for incentives to collect photo documentations of practices and receipts as part of verification activities and do periodic site visits to selected fields and pastures to

verify practice implementation. Take GHG samples at appropriate times for each practice. COMET-Planner tool for all enrolled producers, GHG sampling with portable FTIR analyzer.

Marketing—Hold discussions with possible marketing collaborators (1-2). Incorporate updated marketing opportunities into TA events with climate-smart commodities. Help at least 50% of enrolled farmers gain access to a new marketing channel or ways of getting additional incentives for their climate-smart practices. 1 marketing channel expanded (total=3). Total new marketing channels: 1.

Enrollment—Enroll 185 new producers in incentive payment programs, at least 67 small and/or undeserved producers, 30,667 new acres, $1,093,750 to producers. Cumulative totals: 1,849 producers enrolled (666 small/underserved), 306,667 acres enrolled, $10,937,500 to producers.

Quarter 3
Coordination—Continue monthly sub-group meetings and report back to project lead. Submit quarterly report to USDA.

TA—Provide individual consulting with farmers and farm advisors (target minimum of 10) Continue compiling resources for educational activities and develop and maintain living list of educational. Offer 1-2 webinars or workshops for selected climate-smart practices.

MRV— Work with farmers enrolled for incentives to collect photo documentations of practices and receipts as part of verification activities and do periodic site visits to selected fields and pastures to verify practice implementation. Take soil samples and GHG samples at appropriate times for each practice. Measurement tools used: COMET-Planner tool for all enrolled producers, GHG sampling with portable FTIR analyzer, soil sampling..

Marketing—Hold discussions with possible marketing collaborators (1-2). Incorporate updated marketing opportunities into TA events with climate-smart commodities. Help at least 50% of enrolled farmers gain access to a new marketing channel or ways of getting additional incentives for their climate-smart practices. Total marketing channels expanded: 3. Total new marketing channel created: 1.

Enrollment—Enroll 185 new producers in incentive payment programs, at least 67 small and/or undeserved producers, 30,667 new acres, $1,093,750 to producers. Cumulative totals: 2,034 producers enrolled (732 small/underserved), 337,334 acres enrolled, $12,031,250 to producers.

Quarter 4
Coordination—Continue monthly sub-group meetings and report back to project lead. Submit quarterly report to USDA.

TA—Provide individual consulting with farmers and farm advisors (target minimum of 10)

Continue compiling resources for educational activities and develop and maintain living list of educational. Offer 1-2 webinars or workshops for selected climate-smart practices.

MRV— Work with farmers enrolled for incentives to collect photo documentations of practices and receipts as part of verification activities and do periodic site visits to selected fields and pastures to verify practice implementation. COMET-Planner tool for all enrolled producers. Cumulative GHG Benefits (Metric Tons of CO2e Reduced or Sequestered): 251,827 CO_2e.

Marketing—Hold discussions with possible marketing collaborators (1-2). Incorporate updated marketing opportunities into TA events with climate-smart commodities. Help at least 50% of enrolled farmers gain access to a new marketing channel or ways of getting additional incentives for their climate-smart practices. 1 marketing channel expanded (total=4). 1 new marketing channels created (total=2)

Enrollment—Enroll 185 new producers in incentive payment programs, at least 67 small and/or undeserved producers, 30,667 new acres, $1,093,750 to producers. Cumulative totals: 2,219 producers enrolled (799 small/underserved), 368,000 acres enrolled, $13,125,000 to producers.

Year 5

Quarter 1

Coordination—Hold annual all-partner meetings to review year 1-4 progress and plan for year 5. Continue monthly sub-group meetings and report back to project lead. Submit quarterly report to USDA.

TA—Provide refresher/update training to project partners and new staff on use of app and providing farmer support. Offer 1-2 field days, webinars, and workshops for selected climate-smart practices throughout the year. Provide individual consulting with farmers and farm advisors (target minimum of 10). Add to resources for educational activities and develop and maintain living list of educational activities offered by various partners.

MRV—Aggregate COMET-Planner information collected to date. Work with farmers enrolled for incentives to collect photo documentations of practices and receipts as part of verification activities and do periodic site visits to selected fields and pastures to verify practice implementation. GHG samples at appropriate times for each practice. Measurement tools used: COMET-Planner tool for all enrolled producers, remote sensing, FTIR analyzer for GHG measurements.

Marketing—Hold discussions with possible marketing collaborators (1-2). Incorporate updated marketing opportunities into TA events with climate-smart commodities. Help at least 50% of enrolled farmers gain access to a new marketing channel or ways of getting additional incentives for their climate-smart practices. Total marketing channels expanded: 4. Total new marketing channels created: 2

Enrollment—Enroll 185 new producers in incentive payment programs, at least 67 small and/or undeserved producers, 30,667 new acres, $1,093,750 to producers. Cumulative totals: 2,403 producers enrolled (865 small/underserved), 398,667 acres enrolled, $14,218,750 to producers.

Quarter 2
Coordination—Continue monthly sub-group meetings and report back to project lead. Submit quarterly report to USDA.

TA—Offer 1-2 field days, webinars, and workshops for selected climate-smart practices throughout the year. Provide individual consulting with farmers and farm advisors (target minimum of 10). Add to resources for educational activities and develop and maintain living list of educational activities offered by various partners.

MRV—Review and update progress with remote sensing of cover crop acres. Work with farmers enrolled for incentives to collect photo documentations of practices and receipts as part of verification activities and do periodic site visits to selected fields and pastures to verify practice implementation. Take GHG samples at appropriate times for each practice. COMET-Planner tool for all enrolled producers, GHG sampling with portable FTIR analyzer.

Marketing—Hold discussions with possible marketing collaborators (1-2). Incorporate updated marketing opportunities into TA events with climate-smart commodities. Help at least 50% of enrolled farmers gain access to a new marketing channel or ways of getting additional incentives for their climate-smart practices. 1 marketing channel expanded (total=5). Total new marketing channels: 2.

Enrollment—Enroll 185 new producers in incentive payment programs, at least 67 small and/or undeserved producers, 30,667 new acres, $1,093,750 to producers. Cumulative totals: 2,588 producers enrolled (932 small/underserved), 429,334 acres enrolled, $15,312,500 to producers.

Quarter 3
Coordination—Continue monthly sub-group meetings and report back to project lead. Submit quarterly report to USDA.

TA—Offer 1-2 field days, webinars, and workshops for selected climate-smart practices throughout the year. Provide individual consulting with farmers and farm advisors (target minimum of 10). Add to resources for educational activities and develop and maintain living list of educational activities offered by various partners.

MRV— Work with farmers enrolled for incentives to collect photo documentations of practices and receipts as part of verification activities and do periodic site visits to selected fields and pastures to verify practice implementation. Take soil samples and GHG samples at appropriate times for each practice. Measurement tools used: COMET-Planner tool for all enrolled producers, GHG sampling with portable FTIR analyzer, soil sampling..

Marketing—Hold discussions with possible marketing collaborators (1-2). Incorporate updated marketing opportunities into TA events with climate-smart commodities. Help at least 50% of enrolled farmers gain access to a new marketing channel or ways of getting additional incentives for their climate-smart practices. Total marketing channels expanded: 5. Total new marketing channel created: 2.

Enrollment—Enroll 185 new producers in incentive payment programs, at least 67 small and/or undeserved producers, 30,667 new acres, $1,093,750 to producers. Cumulative totals: 2,588 producers enrolled (998 small/underserved), 460000 acres enrolled, $16,406,250 to producers.

Quarter 4

Coordination—Hold all-partner planning meeting (if necessary). Hold monthly sub-group meetings and report back to project lead. Submit quarterly report to USDA.

Coordination—Continue monthly sub-group meetings and report back to project lead. Sub-groups review and revise policies with support from project lead. Submit quarterly report to USDA.

TA—Provide individual consulting with farmers and farm advisors (target minimum of 10). Add to resources for educational activities and develop and maintain living list of educational activities offered by various partners.

MRV—Continue gathering soils and GHG data on cover crop fields enrolled for incentives Work with farmers enrolled for incentives to collect photo documentations of practices and receipts as part of verification activities and do periodic site visits to selected fields and pastures to verify practice implementation. COMET-Planner tool for all enrolled producers. Cumulative GHG Benefits (Metric Tons of CO2e Reduced or Sequestered): 403,428 CO_2e. *

Marketing—Help at least 50% of enrolled farmers gain access to a new marketing channel or ways of getting additional incentives for their climate-smart practices. 1 marketing channel expanded (total=6). 1 new marketing channels created (total=3)

Enrollment—Enroll 185 new producers in incentive payment programs, at least 67 small and/or undeserved producers, 30,667 new acres, $1,093,750 to producers. Cumulative totals: 2,958 producers enrolled (1,065 small/underserved), 490,667 acres enrolled, $17,500,000 to producers.

* While the cumulative greenhouse gas offset is shown as 403,428 CO_2e at the end of year five on the project, due to the way acres are signed up, we estimate that overall greenhouse gas impact will be 768,661 CO_2e by the time each practice has been in place a full five years. Some practices will not be started until the latter part of the project, affecting how much impact will have occurred at the end of the initial five years. Of course, not all farmers may continue all practices for five years, but our goal is to have a very high rate of continued practice use even after incentive funding has ended.

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
331	Alley Cropping
317	Composting Facility
327	Conservation Cover
328	Conservation Crop Rotation
329	Residue and Tillage Management, No Till
332	Contour Buffer Strips
336	Soil Carbon Amendment
340	Cover Crop
345	Residue and Tillage Management, Reduced Till
379	Multi-story cropping
380	Windbreak/shelterbelt Establishment and Renovation
381	Silvopasture
382	Fencing
390	Riparian Herbaceous Cover
391	Riparian Forest Buffer
420	Wildlife Habitat Planting
422	Hedgerow Planting
484	Mulching
490	Tree and Shrub Preparation
512	Pasture and Hay Establishment
528	Prescribed grazing
585	Stripcropping
595	Pest Management Conservation System
612	Tree/Shrub Establishment
DIA 148	Pollinator Enhancement

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

Practice Name	Alternative Practice Standards

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."

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.