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:
NR233A750004G057		Date of Final Signature - 06/01/2028	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	MT. FOLLY ENTERPRISES INC. 1 S MAIN ST WINCHESTER KY 40391 UEI Number: U9BHVSFWUK13 EIN:

7. NRCS Program Contact	8. NRCS Administrative Contact	9. Recipient Program Contact	10. Recipient Administrative Contact
Name: Jade Nield	Name: CHARLENE WINTERS	Name: Alice Melendez	Name: Ben Pasley
(b)(6)			

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

15. Project Title/ Description: Expands markets for climate-smart beef, corn, soy, wheat, sorghum, and hemp in OH, KY, and TN supporting farmers with implementation and monitoring of climate-smart practices.

16. Entity Type: R = Small Business

17. Select Funding Type

Select funding type:	☒ Federal	☐ Non-Federal
Original funds total	$4,998,532.44	$0.00
Additional funds total	$0.00	$0.00
Grand total	$4,998,532.44	$0.00

18. Approved Budget

Personnel	$1,807,520.00	Fringe Benefits	$404,800.00
Travel	$154,698.94	Equipment	$0.00
Supplies	$71,129.30	Contractual	$461,197.00
Construction	$0.00	Other	$2,099,187.20
Total Direct Cost	$4,719,332.40	Total Indirect Cost	$279,200.04
		Total Non-Federal Funds	$0.00
		Total Federal Funds Awarded	$4,998,532.44
		Total Approved Budget	$4,998,532.44

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: 2023.07.19 08:30:20 -05'00'	Date
Name and Title of Authorized Recipient Representative ALICE MELENDEZ Project Lead	Signature *Alice Melendez*		Date 6-15-23

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 Mt. Folly Enterprises, Inc. 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 $ 4,998,532.44

TOTAL FEDERAL FUNDS $ 4,998,532.44
PERSONNEL $ 1,643,200.00
FRINGE BENEFITS $ 368,000.00
TRAVEL $ 140,635.00
EQUIPMENT $ 0.00
SUPPLIES $ 64,663.00
CONTRACTUAL $ 419,270.00
CONSTRUCTION (usually n/a) $ n/a
OTHER $ 933,564
PRODUCER INCENTIVES $ 1,150,000.00
TOTAL DIRECT COSTS $ 4,719,332.40
INDIRECT COSTS $ 279,200.04

TOTAL NON-FEDERAL FUNDS $0.00
PERSONNEL $
FRINGE BENEFITS $
TRAVEL $
EQUIPMENT $
SUPPLIES $
CONTRACTUAL $
CONSTRUCTION (usually n/a) $
OTHER $
PRODUCER INCENTIVES $
TOTAL DIRECT COSTS $
INDIRECT COSTS $

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

Responsibilities of the Parties:

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

RECIPIENT RESPONSIBILITIES

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

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

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

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

Performance Reports: Quarterly

SF425 Financial Reports: Quarterly

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

Expected Accomplishments and Deliverables

See attached Benchmarks 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

Withheld pursuant to exemption

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of the Freedom of Information and Privacy Act

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Building whole-farm designs and market infrastructure to provide premiums for Climate Smart Farming among mid-sized agricultural enterprises in the Ohio River valley

Executive Summary

A. Project Lead, team contact information

Mt. Folly Enterprises, LLC; 1 S. Main Street.; Winchester, KY 40391

Ben Pasley, CEO - ben@laurasmercantile.com 859-749-7710;

Laura Freeman, Chairman of the Board – laura@mtfollyfarm.com   859-983-1142

Alice Melendez, Project Lead - alice@moonshinetrail.com 859-556-0112

B. List of Project Partners

1) *Mt. Folly Enterprises (MFE) Inc.,* **primary applicant**- Creates, retails, and wholesales consumer products manufactured from crops grown by farmers in our CSAF project, promoted as "Products that work, rooted in sustainability," including particularly a new climate-smart beef brand. Administers the farmer technical assistance, cost-share, MMRV, and product aggregation for the grant project.

2) *Mt. Folly Farm,* **flagship farm**- Led by Laura Freeman, Mt. Folly Farm has been pioneering regenerative farming practices for more than 4 decades. Mt. Folly will be the central node for **experimentation** with practices adapted to our bioregion and for **demonstration** of CSAF to other farmers and to the public.

3) *Eastern Kentucky University* will provide **monitoring and verification** support for agricultural practices implemented, **technical support** for implementing CSAF practices particularly integrating crops and livestock and **scientific analysis** of soils on participating farms with intention to progressively improve capacity to measure GHG outcomes**.**

4) *Savory Institute via Hickory Nut Gap*, the North Carolina Ecological Outcomes Verification[tm] (EOV) Hub will provide **contract monitoring, measurement and verification** services to a subset of participating graziers and train our program staff to monitor according to the same protocol in collaboration with the hub.

5) *Riverside Meats*, a small-scale slaughterhouse and butcher recently purchased by Brian and Kelli Mulberry who intend to expand capacity to humanely kill and efficiently **process and package** locally raised cattle and hogs and also to participate as cattle **farmers** implementing CSAF practices; not a recipient of grant funds, rather, a vendor supplying services directly to the beef enterprise, paid with non-Federal funds only.

6) *Scott Shouse*, Sourwood Forestry Consulting will provide **technical assistance in best practices to manage woodlots,** particularly by analyzing aerial and soils data of farms to identify good potential sites to establish shelterbelts, expanded riparian buffers, or other tree planting sites that meet project goals.

7) *Rural Action Appalachian Ohio* will host a train the trainers silvopasture installation class with Austin Unruh of Trees for Graziers including our program staff as students.

8) *Jeremy Mcgill of Gallagher Fence* will offer training in fencing to NRCS standards in exchange for the opportunity to sell fencing through the cost-share to graziers.

9) *Darren Bender-Beauregard of Brambleberry Farms (consultant)*, silvopasture agriculturalist and permaculturist will work with *Oakland Farms Nursery (supplier for cost share trees)*, well-established and growing local tree nursery focused on **hardwoods, nuts and native fruits** and herbalist/non-timber forest products specialist *Andrew Ozinskas (consultant)*. The Tree Team will collaborate with our staff and participating farmers to source adapted and valuable genetics, grow out, and plant seedlings for productive one acre woodlots or buffers for each site, aligned with high per/acre carbon sequestration potential, impacting overall farm GHG benefit profiles through implementation of CSAF practices 381,391, and 612 in ways that are also generating revenue for farmers.

10) *Holistic Management International* will provide **training and mentorship in advanced holistic management principles** for a subset of program staff and highly motivated grazier-participants. Along with Savory Institute, building capacity in holistic management principles which enable an enhancement to the CSAF practice of prescribed grazing.

11) *Sprouted Health and Wellness* will design and produce a **Traditional Foods community education program** that includes a once-annual in-person traditional foods workshop weekend supplemented by webinars that work to **promote** the pasture-raised beef line and other climate-smart project **value-added products attractive to health and earth conscious consumers.**

12) *Ale-8-1 Bottling Company* is investigating **production** of a small batch specialty soft drink which would be designated climate-smart **through our sourcing** and Measurement, Monitoring and Verification services

13) *Brown Foreman* intends to **connect farmer producers with the project with the goal of producing carbon in-sets by reducing their scope 3 emissions in their grain supply chains.**

C. List of underserved/minority-focused project partners

1) *Tiffany Bellfield/el-Amin* at Food Systems Equity Organizer for Community Farm Alliance will **outreach to historically underserved small farmers**.

2) *Jim and Obiora Embry* bring their family's deeply rooted history connecting African-American culture, economy, spirit and health to land, food and farming. Jim and Obiora will be project advisors and assist with outreach.

D. Compelling need for the project

We seek a smaller award to model and develop whole-farm systems of carbon sequestration centered on mid-sized (150-999 acres) polyculture farms. The premiums we offer to our farmer network are linked not only to demonstrated carbon sequestration in soils, but also to the revitalization of regionally-centered food production. Diversified regional food systems, such as the one we are building, will shield the nation from supply chain disruptions impacting our citizenry and vastly decrease fossil fuel use for transportation and logistics. Overall food security benefits from a diversity of farm types, and the trajectory of agriculture in North America shows the difficulty in preserving or restoring mid-sized producers to our landscape, and the benefits-- in terms of climate,

rural vitality, and ecology[1]-- that this could bring. We seek to preserve this farm in the middle, the mid-sized family farm which is too small for economies of scale and too big for farmer's markets.

The same challenges related to size and complexity that one encounters for these mid-scale farms in operations and marketing are replicated in the GHG management space. As USDA authors recognized in Entity-scale Methods[2], "The influence of crop and grazing land management on GHG emissions is not typically the simple sum of each practice's effect. The influence of one practice can depend on another practice. For example, the influence of tillage on soil carbon will depend on residue management...Because of these synergies, estimating GHG emissions from crop and grazing land systems will depend on a complete description of the practices used in the operation, including past management to capture legacy effects on GHG emissions, as well as ancillary variables such as soil characteristics and weather or climate conditions." This complexity is our focus.

E. Approach to minimize transaction costs associated with project activities

Larger monoculture producers who have existing relationships with the giants of agribusiness can incorporate no-till and cover cropping practices with existing equipment into existing nodes in existing supply chains and be considered "climate smart." And yet, diversified farms are likely to take bigger steps, on a per acre basis, to reduce emissions and sequester carbon-- intensive grazing, complex rotations, composting, cover cropping, reduced chemical inputs and fuel use, integrating crops and livestock, and other practices. Mid-sized, diversified farmers in conventional commodity markets bear higher transaction costs-- the inverse of economies of scale. They have no leverage to impact terms of sale because they are small fish, have limited knowledge and time to make alternate decisions, and are therefore price takers whether selling beef, grain, or 'climate-smartness'. At the same time, they are managing too much acreage to effectively market their products through exclusively higher-paying direct to consumer pathways

Our intention is to bridge a resource gap for smaller farmers in our area by using our skill branding and marketing to build new price-premium niche markets, aggregating production from skillful locals to feed these new supply chains. Our founder's experience building a network of contract farmers and our own experience farming will help us to design contracts with the farmer's point of view front of mind. We intend to build a community of farmers who are producing together-- graziers making beef for a regional climate-smart beef line; grain farmers who are producing for distillery markets and learning best practices in more complex conservation rotations, nutrient management, and finer points of cover crops and reduced tillage together; and through both groups, a shared experience producing inputs for value-added products made with regionally adapted fruits, nuts, and herbs in small woodlots.

The fundamental transaction cost of monetizing soil carbon storage and emissions reduction is in proofing, particularly in terms of soil sampling and analysis. The cost of doing this will basically be taken on by EKU/grant funds through the five-year grant period. After this point, our branded supply chains will take on verification costs, not farmers. *Without knowing the nature of future*

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1 Lobao, Linda M. *Locality and Inequality: Farm and Industry Structure and Socioeconomic Conditions.* State University of New York Press, 1990. confirmed these findings: social connectedness, trust and participation in community life were greater where farm scale was smaller.

2 Ogle, S.M., P.R. Adler, F.J. Breidt, S. Del Grosso, J. Derner, A. Franzluebbers, M. Liebig, B. Linquist, G.P. Robertson, M. Schoeneberger, J. Six, C. van Kessel, R. Venterea, T. West, 2014. Chapter 3: Quantifying Greenhouse Gas Sources and Sinks in Cropland and Grazing Land Systems. In *Quantifying Greenhouse Gas Fluxes in Agriculture and Forestry: Methods for Entity-Scale Inventory.* Technical Bulletin Number 1939, Office of the Chief Economist, U.S. Department of Agriculture, Washington, DC.

innovations from those working on this sticky problem and/or other policy determinations and standards which make a given sampling/ proof model more attractive, its hard to know how this will work past Year 5. Whatever the details, it seems clear that our continuing climate-smart designation will be linked to a combination of NRCS practice implementation and projected GHG values, baseline data with statistical analysis extrapolated from more intensive monitoring of the initial grant cohort and other data sets, and ongoing periodic verification that soil organic matter is increasing or stable at a high level.

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

Technical Support is individually targeted to each participating farm because we are working at a regional scale with necessarily diverse mid-sized farms in mind. By investing time upfront to understand existing operations we can move farmers along a spectrum towards greener practices suited to each place. Cost share projects may meet either a mT C02e/acre/project threshold or a total projected mT C02e threshold. GHG benefit values are based on NRCS COMET-farm values averaged from counties in our region. Allowing farmers to meet the practice threshold using a per acre or a per project amount will allow graziers with larger farms under management and lower per acre GHG benefit of prescribed grazing to participate, as well as smaller more diversified farms who can implement higher impact practices in a smaller footprint. Where practices have upfront costs—cover crop seed expense before related gains in organic matter and yield materialize, saplings for silvopasture improvements, electric fence supplies, for example-- participating farmers will have access to cost-share through a subgrant funding pool. Free-to-farmers technical support will be broadly made available using grant funds. Farmers will be paid a sign-on bonus to cover their time related to increased soil monitoring, along with subsidized professional measurements to determine their starting point as they aim to increase and then maintain SOM over time.

G. Geographic Focus

Our project is situated on the western slope of Central Appalachia in the Ohio River Valley. While Kentucky farmers are at the heart of our project, we intend to open outreach from roughly east to Ashland, west to Louisville; north to Columbus, OH, south to Knoxville, TN.

H. Project management capacity of partners

In the late 1980s, Laura Freeman created the standards, farmer-network, process verification procedure with paper-trail (in the early days of computer database storage), negotiated legal definitions, and branded marketing and distribution operation for low-fat beef raised with no antibiotics or added hormones—Laura's Lean Beef. When she sold the company, her products were in more than 6000 grocery stores in the US and Canada, with sales of $135 million wholesale ($220 million retail). Today, we return to the desire to *network conscientious farmers in a way that leverages nationally-recognized branding and appropriately-scaled infrastructure to earn farmers a premium for growing products in a way that takes care of land and people.*

Today, the next company built from Laura's farm, Mt. Folly Enterprises, is run by fifth generation tobacco farmer Ben Pasley. MFE operates a web store and a Main Street store, which mainly sell products grown or raised at Mt. Folly Farm including CBD, beef, eggs, greens, grits and cornmeal, and rye flour. We are now manufacturing and selling herbal tinctures with wildcrafted material sourced by local clinical herbalist and grower, Andrew Ozinskas. We have begun to branch out into other locally-made products including honey, sorghum, jams and jellies, hot sauce, soaps, etc. Opening up the infrastructure and logistics capacity behind both stores is a key action of the

grant, allowing our farmers to access markets through collaboration so they can focus on farming. The hemp brands, made with hemp gown organically at Mt. Folly, include 33 SKUs which are sold online and in 200 retail stores in 16 states. MFE also owns a craft distillery which makes moonshine from Eastern Kentucky sweet potatoes and has rye whiskey currently aging in a tobacco barn and branded Regeneration Rye[tm]. The company is committed to creating a line of climate smart beef, to be available through some of our sales channels this summer. In time, we plan to sell the branded beef to wholesale grocery customers which we have developed through prior marketing efforts.

Since the founding of Laura's Natural (later "Lean") Beef in 1984, our farm has been pioneering regenerative farming practices. These practices include management intensive grazing in all three phases of cattle production: a cow herd; weaned and backgrounded calves; and grain on grass finished steers. In 2011, the farm began transitioning its hay and crop fields to organic production, the initial ground certified USDA organic in 2014. Now, three quarters of Mt. Folly's hay and crop ground is certified organic and the remaining 25% is farmed with no tillage. American Farmland Trust is the lead on this 5-year trial, while Freeman continues to vary practices and measure soil organic matter and soil carbon in managed pasture, crop ground and farm woodlots.

At the time of its sale, Laura's Lean Beef employed more than 100 people and contracted with 1200 farmers. Today we are again growing as a company, building a strong team and forming business relationships with other farmers. We have demonstrated fiduciary responsibility. We have decades of experience connecting environmentally-conscious consumers to trusted products and will use this brand equity to increase knowledge of agriculture's positive role in mitigating the climate crisis.

We are also good at building a network of expertise and facilitating collaboration. Our partners each find ways to play to their strengths and support farmer capacity. Capacity of subawardees is described in each related letter of support. Primary subawardees, Eastern Kentucky University, The Savory Institute, Holistic Management International are introduced here, however.

Eastern Kentucky University is a regional, coeducational, public institution of higher education offering general and liberal arts programs, pre-professional and professional training in education and various other fields at both the undergraduate and graduate levels. Located in Richmond, Madison County, Kentucky, within the Appalachian Regional Commission service area, Eastern has a distinguished record of more than a century of educational service to the Commonwealth. Dr. John Settimi is a full-time, tenured professor in the Agriculture Department at EKU. He has 40+ years of experience in crop and soil sciences. He has worked in extension, research, and teaching. His recent research effort has been with cover cropping. He has received grants from the National Science Foundation and the Appalachian Regional Commission, and has also served as a Co-PI on 5 other grants. He will identify, train and support a graduate student in each of the five years of the grant project, who will be responsible for sampling and field monitoring work during the academic year while Settimi teaches a full schedule. The graduate student will be chosen based on expressed interest in participating in this opening stage of the MMRV work which enables Climate Smart Commodities in the USA, linking research and practice.

The Savory Institute has influenced 30 million acres since 2009 by equipping land managers with innovative tools and curricula to generate the ecological, social, and financial benefits associated with Holistic Management. Operating hubs of accredited professionals and an outcome-based verified-regenerative sourcing solution; our programs are global in scope, grassroots in execution, and holistic in terms of providing the knowledge, resources, and connections necessary for farmers, ranchers, and pastoralist communities to create truly regenerative outcomes.

Holistic Management International, since 1984, has collaborated and worked alongside

government agencies, NGOs, and businesses who work with family farmers, ranchers, tribal members, and pastoralists to support their communities as they grow and thrive. HMI shares educational programs and the knowledge and experience of an international network with these communities to support their adoption and evolution of regenerative agricultural practices that empower them to strengthen their businesses, produce healthier food, improve local wildlife habitats and protect the environment. Their Mission: to envision and realize healthy, resilient lands and thriving communities by serving people in the practice of Holistic Decision Making & Management

Holistic Management International is described here, though their scope of work on the project is relatively limited, because we believe there will be a useful synergy from working with the holistic management material using the modalities of both organizations who are carrying forward its core message and toolbox. In addition, we have designed the project with the intention that intensive training and mentorship to a small group of program staff and early-joining farmers will ripple out to other farmers who do not work directly with HMI in this mentorship. This same train-the-trainers approach is on display in our partnership with Rural Action in Appalachian Ohio/Trees for Graziers to advance silvopasture as a practice in the region.

Work Plan for climate-smart agriculture in the Central Ohio River Valley

A. Plan to pilot climate-smart practices

Each farmer will meet up front with either the Project Lead or the Field Tech to determine which from our matrix of selected NRCS climate smart ag and farming practices will be implemented. Participating farms will plant at least an acre of trees, will implement prescribed grazing if they are livestock producers, and will select from a menu of cropping practices if they raise row crops. Specific technical support personnel linked to each suite of practices will help align the practice to the specificity of the farm organism. All participants will be introduced to the basic principles of holistic management as it applies to goal setting and decision-making. Wherever we can fortify the underlying systems of management at the farm in this way, we are improving the likelihood of long term partnerships in the production and marketing of climate smart products.

practice name	practice codes	average local comet value/acre	multi-year factor Y/N
Conservation Crop Rotation	328	0.22	y
Intensive to No-till, non-irrigated	329	0.47	
Cover Crop, non-irrigated, 25-50% N reduction	340	0.48	y
Intensive to Reduced tillage, non-irrigated	345	0.24	
Silvopasture	381	5.19	
Riparian Forest Buffer, replacing crop or grassland	391	6.15	
cropland to forage or interseeding legume in pasture	512	1.18	
Prescribed Grazing	528	0.15	y
Nutrient Management manure/compost non-irrigated pasture	590	0.22	y
Nutrient Management manure/compost non-irrigated cropland	590	0.32	y
Tree/shrub establishment from crop or grassland	612	16.19	

Practices listed above will be implemented according to all technical documents associated with listed practice codes and relevant state-specific Field Office Technical Guides. For cropping practices, 328, 329, 340, and 345; Professor Settimi will provide input about key elements of implementation relative to the guides. On 391 and 612 the Program Manager responsible on planting day for the 'One Acre Everywhere' project element will ensure standards are met while planning input comes from Consulting Forester Scott Shouse of Sourwood Forestry and the Field Tech initial site scouting. For 381 and 528, the Field Tech will be primary responsible party for ensuring technical standards met. He will be trained in silvopasture installation by Rural Action which has completed silvopasture projects to standards and will focus on this element. He will connect farmers who intend to install temporary or permanent fencing to technician Jeremy McGill from Gallagher fencing who recently led a training event for NRCS personnel in the Tennessee office specifically for installing fence to NRCS specs. Ultimately the Project Lead is responsible for all practices meeting NRCS practice specifications. The following sub-sections offer more detail on each category of NRCS CSAF practices including potential enhancements and implementation elements unique to our project.

1) Nutrient Management – NRCS 590 - Incorporating compost and biochar-

Participating farmers may choose 590 – Nutrient Management interventions to reach their required minimum GHG impact for cost share. A Nutrient Management Plan meeting NRCS standards is required for this selection. The GHG value .22 metric tons C02 equivalent on pasture or .32 mT c02e on cropland for this practice is based on average COMET-farm values in project counties of reducing or replacing synthetic nitrogen with non-synthetic sources: compost or animal manures, potentially with biochar and/or organic microbial/fungal stimulants blended in the nutrient application.

As farmers with acreage in organic row crops, we have developed a dump-truck scale windrow compost set-up, mixing manure from a small nearby feedlot and our winter hay feeding pads, with wood chips picked up at a veneer mill in town. Organic farmers already use compost for soil fertility, and with the rising price of Haber-Bosch produced ammonia, conventional farmers are interested in this resource as well. We feature our composting system in farm tours and web content. *However, the more we read the climate literature, the more we have become convinced that biochar should be in our carbon sequestration toolbox, particularly for organically managed crop soils.* Besides its capacity to transfer carbon from the labile carbon stock to long term pools, it improves soil condition in a way that can show immediate cash crop yield gains, encouraging adoption.

We believe we can use the large volume of trees impacted by the Emerald Ash Borer in our region and the attention around that issue can focus attention and encourage a cultural practice shift around burn piles. We are designing a relatively simple, replicable process to build a soil-capped burn trench that will make quality biochar on the farm scale and encourage this to become the new normal for farmers. The displaced practice-- burning cleared brush and down trees straight to the atmosphere and ignoring the ash, leaving havens for poison hemlock and other aggressive weeds-- is easy to improve upon. We understand that this trench-type biochar may not meet the NRCS standard 336 – Soil Carbon Amendment, but it could be blended with nutrient applications as part of a Nutrient Management practice which otherwise replaces synthetic nitrogen and meets practice standards for the Nutrient Management Plan.

We plan to implement three levels of biochar production. First, we teach 'trench and quench.' Next, we offer a metal barrel variation on the transportable metal kiln built in accordance with the International Biochar Initiative standards. This system costs approximately $700 to build and will be delivered to farmers who select it as part of their cost-share package. Then, these farmers can track

the quantity of total biochar produced and applied to their ground and observe impact in side-by-side tests. Finally, we have been supporting another collaboration which aims to bring commercial-scale biochar[3] production to the racetrack in Lexington, KY. If that goes through, we will have a major source of highly discounted or free-to-our-project biochar to share among those in our network. We will apply farm-made biochar with compost and demonstrate the soil quality and related yield benefits[4]. Long term we plan to develop a bagged biochar product line to sell out of our online and Main Street stores and later through wholesale markets.

2) Cover crops, reduced tillage, and conservation rotations; NRCS Practices 328. 329. 340, 345-

Participating farmers with croplands may choose from the above interventions to reach their required minimum GHG impact for cost share. All practices must meet NRCS practice standards. The GHG values for these practices, shown in the above table and the attached milestones documents are based on average COMET-farm values in project counties. All values are based on non-irrigated lands, as irrigation is not a widely used practice in this region.

Cover crops and reduced tillage are widely accepted practices to improve the balance of GHG sequestration and emissions, though specific circumstances lead to much variation in the actual measurable net changes across different regions, cropping systems, management skill and weather circumstances. Challenges which limit uptake of these practices are both agronomic and economic. Academic literature and anecdotal experience shows that, in the short term, particularly in the first year or two after adopting the practice, adding cover crops does not help a farm's bottom line. However, other studies show that capacity to effectively manage the integration of cover crops improves over time along with soil quality, water availability and infiltration, microbial activity, and improved yields over the long term as a result of these water and soil outcomes. For this reason, cost-share in the first years of cover-cropping practice adoption can be critical.

Additionally, we are participants in a study designed to support the reintroduction of rye as a Kentucky cash crop, and our lead soil scientist has recently completed a study (not yet published) on the potential to use livestock grazing to terminate cover crops in our climate region, increasing the direct economic benefits of the crop and reducing the costs. Efficient operation of a grain hopper truck and relationship-building with buyers and specialty grain traders will allow us to develop feed, food and distillery markets for small grains, enabling their integration into a Conservation Rotation which improves on the typical corn-soy rotation. Recent CIG research by Practical Farmers of Iowa[5] showed reductions of GHG emissions in the three-year cycle to 16-38% below traditional corn-soy only rotations. We are students of cover cropping and reduced tillage systems, on organic and non-organic ground. We aim to continually improve this skill and knowledge, experimenting with new equipment and subtle shifts in management, receiving support from American Farmland Trust through our participation in their CIG cover crop work. The grant program will continue to weave together a community of practice and learning in our region as we use cost-share, technical assistance and field days to pass on collectively won experience.

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3   https://www.esenergy.com.au/continuous-charmaker-cpp

4   Qambrani, Naveed and Md. Mukhlesur Rahman, Seunggun Won, Soomin Shim, Changsix Ra, "Biochar properties and eco-friendly applications for climate change mitigation, waste management, and wastewater treatment: A review," Renewable and Sustainable Energy Reviews, Volume 79(255-273), 2017, https://doi.org/10.1016/j.rser.2017.05.057 .

5   https://sustainablefoodlab.org/wp-content/uploads/2021/11/Outcomes-of-Inclusion-of-Oats-in-Finishing-Beef-Rations_11.2.21-Final.pdf

3) *Prescribed grazing – NRCS 528 and Pasture improvement – NRCS 512 including management intensive grazing, improved hay feeding practices, and legume interseeding-* Participating graziers must choose Prescribed Grazing, NRCS – 528 as part of the practice suite which meets their required minimum GHG impact for cost share. Partial pasture renovation with legume interseeding may be selected as well. All practices must meet NRCS practice standards. The GHG value of .15 for prescribed grazing and 1.18 for legume interseeding is based on average COMET-farm values in project counties. The prescribed grazing practice GHG value applies annually, while legume interseeding is one-time.

Cattle are the backbone of Kentucky agriculture. In 2021 over 2 million cattle grazed here on the open pasture portion of approximately 9 million acres, with millions more beyond Kentucky's borders in other reaches of the Ohio River Valley. Changing grazing practices can transform eroded and overgrazed lands which lose carbon and nitrous oxide to the atmosphere to verdant multi-species pastures with dramatically reduced nitrous oxide emissions, sequestered carbon and even reduced enteric emissions from the livestock themselves. Like everything in agriculture, its easier said than done. It takes time, investment, practice.

Prescribed grazing shows vastly different rates of actual sequestration. HMI and Savory Institute work with the legacy of research and experimentation of Alan Savory. This body of work is known for enabling highly intensive management, sensitive to the growing plants and the behavior of grazers, similar to Adaptive Managed Paddock grazing. This is a type of practice enhancement which is central to our project. The data from Teague et al (2011) shows "across the fence" comparisons in southern tallgrass prairie in Texas, where AMP was applied to areas previously degraded through prolonged Continuous Grazing, enable us to calculate an average of 3 t C ha–1 y–1 (1.2 tn C ac–1 yr–1) more C sequestration in the top 90 cm (35.4 in) of soil over a decade in AMP grazing compared to commonly practiced heavy Continuous Grazing [table2][6].

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[6]). [2016 Soil and Water Conservation Society. Journal of Soil and Water Conservation 71(2):156-164 www.swcs.org] referencing Teague, W.R., S.L. Dowhower, S.A. Baker, N. Haile, P.B. DeLaune, and D.M. Conover. 2011. Grazing management impacts on vegetation, soil biota and soil chemical, physical and hydrological properties in tall grass prairie. Agriculture Ecosystems and Environment. 141:310-22.
https://www.sciencedirect.com/science/article/abs/pii/S0167880911000934

Table 2

Details of estimates to determine North American greenhouse gas (GHG) emissions due to current cropping and grazing management, current cropping with reduced ruminants compared to using conservation cropping and regenerative adaptive multipaddock (AMP) grazing with current levels of ruminants used for figure 1 and figure 2 (scenarios 3 through 5 assume stated percentage of land under conservation cropping and AMP grazing with the remainder applying usual practices.).

Parameter	Scenario (Gt C y^{-1})				
	1	2	3	4	5
Current cropping with AMP grazing					
Crop production (USEPA 2006; O'Mara, 2011)	0.083	0.083	0.083	0.083	0.083
Soil erosion* (Lal 2003)	0.14	0.14	0.109	0.077	0.014
Livestock production (Ripple et al. 2014; Vermeulen et al. 2012)	0.056	0.028	0.056	0.056	0.056
AMP grazing†	0	0	−0.198	−0.395	−0.790
Net livestock†	0.056	0.028	−0.142	−0.339	−0.734
Total	0.279	0.251	−0.050	−0.179	−0.637
Conservation cropping with AMP grazing					
Crop production‡ (Gattinger et al. 2012; Aguilera et al. 2013)	0.083	0.083	−0.058	−0.199	−0.480
Soil erosion* (Lal 2003)	0.14	0.14	0.056	0.042	0.014
Livestock production (Ripple et al. 2014; Vermeulen et al. 2012)	0.056	0.028	0.056	0.056	0.056
AMP grazing†	0	0	−0.198	−0.395	−0.790
Net livestock	0.056	0.028	−0.142	−0.339	−0.734
Total	0.279	0.251	−0.143	−0.496	−1.200

*Soil erosion was considered to be 50% less with both AMP grazing and conservation cropping.
†−3 t C ha^{-1} y^{-1} (Delgado et al. 2011; Teague et al. 2011) for 263 × 10^6 ha grazing lands (UN FAO 2011)
‡ Conservation cropping at −3 t C ha^{-1} y^{-1} (Gattinger et al. 2012; Aguilera et al. 2013) for 160 × 10^6 ha (UN FAO 2011)

Those kind of results, 5-8x the sequestration typically generated in our region through NRCS prescribed grazing, require both following the NRCS standards and upping grazier management game in the way that training and mentorship from HMI, and ongoing monitoring and advice from Savory Institute via EOV practitioners encourages and supports. The HMI award is structured as a train the trainers and lead farmer-influencers in these enhanced practices and then spread that knowledge through the entire cohort of graziers in the project.

Another mentor to our group, Dr. Greg Halich, has recently received a Conservation Innovation Grant to improve and promote a practice of bale grazing, and he has offered to advise our program staff in this enhancement of the prescribed grazing practice. We understand the need to build linkages between research and implementation. Using our technical assistance provider support and cost-share access for our farmer network, together with tried and true techniques to track outcomes like the NRCS Pasture-scoring process and the soil cover/plant functional groups/cattle body condition score/manure decomposition/water infiltration and other ecological markers highlighted by the Ecological Outcomes Verification process, we will improve grazing practice for soil health and carbon sequestration and we will pay farmers for the transformation by creating value-added markets.

4) Woody Perennials – NRCS 381, 391, 612, Planting trees and developing silvopasture techniques-
All participating farmers must choose at least one CSAF practice involving woody perennials. Participating farmers may choose from among practices 381, 391, or 612 to contribute to reaching their required minimum GHG impact for cost share and grant participation requirements. All practices must meet NRCS practice standards. The GHG values shown in the table for these practices are based on average COMET-farm values in project counties. The per acre GHG benefit of CSAF practices involving woody perennials, including those listed here, are the highest of any practices implemented in our region, according to COMET data. As we are certifying the Climate-

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Smart nature of our chosen commodities based on entity scale monitoring of GHG benefits, adding trees to a participating farm operation can impact the climate-smart designation of a row crop or livestock product. In addition, woody perennials and multi-story plantings in our region produce many valuable commodities including forest-grown medicinal herbs, nuts and fruits. As these are slow to mature and produce, much of the potential for our network to aggregate and sell climate smart commodities directly from these plots will likely be post-project. However, we may have the first production of climate-smart commodities from understory plantings in these tree acres by year 5.

Due to our position in the foothills of the Appalachian Mountains, among the many streams that feed our great Ohio River, farms here tend to have areas of steeper slope or marshy character which have remained forested. In part, this is why farms often keep cattle in some spaces while reserving the flats for cropping. For this reason, improving the management of buffers and wetlands, working to improve forest soil quality, and afforestation in marginal areas is potentially a more impactful strategy in this bioregion than in some other places, and one which can be encouraged with the possibility of developing capacity for harvesting non-timber forest products including forest medicinals, mushrooms and maple syrup as we and others in our network are already doing today. It is also a region (mid-humid, hot summers) that could benefit greatly from silvopasture practices like planting trees with light branching shade on slopes, reducing erosion and improving cattle summer grazing habits so that they gain more[7] and produce fewer muddy holes. As we connect interested farmers with technical assistance, cost-share, monitoring and markets we include services of a forester with experience in forest management and carbon accounting.

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

There are two draws to the program for potential participants: First, access to cost-share on practices which improve soil fertility and free-to-farmers technical assistance to improve ecological outcomes and design of whole farm systems which support family farm goals; Second, price premiums paid for product marketed through the channels being developed by the Laura's team in locally-processed beef, regionally-marketed specialty grains, and "climate-smart" branded products in the Laura's Mercantile web store and beyond. We also look to form a true old school farming "community," knitted together by time and shared experience.

Outreach for aligned farmers takes place through existing personal and business networks directly, word of mouth, attendance at regional farmer-focused events, via printed advertisement on site at processors *ie* the slaughterhouse and the grain elevator, by media promotion, and through farmer groups like the Cattleman's Association or newsletters from county agents, etc. Our networks include technical assistance providers and processor partners, allies at Eastern Kentucky University and University of Kentucky, Grow Appalachia, Kentucky Department of Agriculture, and the Center for Agriculture and Rural Development, the Local Food Summit, Community Farm Alliance, the Organic Association of Kentucky, Organic Farmers Association, Ohio Ecological Food and Farming Association, Sustainable Ag Working Group alums and Sustainable Agriculture Research and Education.

In year one, we will identify fifteen strongly aligned farmer-partners. We plan to add an additional 25 participants in year 2 bringing the number to 40, 35 in year three and 25 in year 4 so that 100 farmers are enrolled and monitored for 1-5 years. This would represent approximately 30,000 acres if the average participating farm size is 300 acres which in our region splits very

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7 http://www2.ca.uky.edu/agcomm/pubs/aen/aen99/aen99.pdf

roughly 1/3 crop, 1/3 pasture, 1/3 woodlot[8]. At a typical stocking rate we're talking about 3000 head[9] and 10,000 acres of crops by the end of five years.

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

Upon receipt of the grant, MFE will hire two new full time staff members who are critical to the farmer/technical support side of grant administration, functions not currently included in our business operations. First, a Program Manager who will work between the Project Lead and the Mt. Folly Enterprises CEO, connecting farm-side grant operations with the product and marketing side. This person (tentatively Russ Turpin) will help farmers navigate the program requirements, will help with grant reporting, and will effectively administer the tree planting element with assistance from hourly landscape personnel. Second, our Field Tech (tentatively Dylan Kennedy) will be responsible for initial meetings with farmers to choose CSAF practices over acreages which meet program requirements and to design cost share plan that uses available funds to accomplish those practice objectives. During implementation he will connect farmers with Professor Settimi's counsel on specific crop questions, with advice from our non-timber forest products consultant where applicable, with input from the market development side about potential demand, and with the wisdom of the Savory network and his own experience on grazing and value added production.

The process for farmers to engage with our grant program is as follows:

1) First contact made between the farmer and the grant team

2) An on-farm meeting is set up with the Field Tech and the farmer. The farmer gets to learn about the available technical assistance, the monitoring requirements for receiving a sign-on bonus, the cost-share process, and an introduction to the decision-making principles of holistic management. The Field Tech gets to learn about the farmer's current practices and identify places where they might be able to implement CSAF practices. Together, the farmer and Field Tech will determine a CSAF practice plan which will meet one of the required minimum COMET-based GHG reduction levels and other grant criteria.

3) The farmer can choose to sign on to the program, triggering a sign-on bonus check and a visit from a soil monitoring party-- either Ecological Outcomes Verification baseline or someone gathering data for the EKU soil team.

4) Depending on which CSAF practices were selected, the farmer will receive relevant technical support from relevant personnel or subawardees. This includes tree planting planning and implementation assistance from the Trees Team, training in prescribed grazing techniques offered by the Field Tech, joining a small group workshop on fencing to NRCS standards, 55 gallon metal biochar unit set-up, and cropping assistance from Professor Settimi.

5) The grant team will help the farmer to make an entity-scale farm plan to integrate new climate smart practices. The cost-share expenses serve the goals and steps outlined in the farm plan.

6) Upon approval of the farm plan and cost-share application, money is allocated; farmer payments are made upon receiving farmer purchase orders with detailed supplier and cost information, or receipts for relevant expenditures.

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8   American Farmland Trust presentation at Local Food Summit in Lexington, KY April, 2022
9   https://agecon.ca.uky.edu/sacred-cows-and-stocking-rates

7) Monitoring of soil and practices continues, market relationships are developed
8) Sales contracts for verified "climate-smart commodities" are developed under the guidance of the MFE CEO
9) Unallocated cost-share at the end of the fifth year is shared among farmers with the top results in terms of actual measured increases in soil carbon in tested plots.

All recruited farmers who sign on and receive the starting bonus should have a willingness to facilitate multi-year monitoring of soil carbon at multiple sampling sites and capacity to adopt at least our 'gateway' practices: NRCS Pasture Condition Scoring and prescribed grazing with help from one of our trained techs and/or introduction or improved winter cover for grain farmers; and have interest in working with a technical assistance provider and program staff on entity planning. Field Days will be put on to help create a community of practice and learning among all participants in the region. Graziers joining in year 1 will have an option to join program staff at the Holistic Management Intensive in Texas followed by an intensive mentorship program designed to help participants effectively implement what they learned. Participants interested in silvopasture can join a train-the-trainers event hosted by Rural Action and including Trees for Graziers lead, Austin Unruh.

The Program Manager directly assists farmers through the stages of their administrative relationship with MFE. This work includes creating the forms, templates and data management protocol to properly track actions and outcomes of both farmers and the project team. The Field Tech practices the art of applying generally accepted beneficial methods in specific conditions on unique farms. The farmer, the Field Tech and the selected subawardees who work on the farm plan implementation help a farmer consider options, triangulate and adapt practices to their land in a way that suits their land and values while also meeting NRCS practice standards.

D. Plan to provide financial assistance for producers/land owners to implement CSAF practices

1) Pay farmers to provide access and information to support measurement, monitoring, reporting and verification of practices. This MMRV may include valuable grant-funded access to Savory Institute's Ecological Outcomes Verification program, in addition to all farms being open to staff team monitoring and reporting practice implementation and measurement and verification of soil carbon change by Eastern Kentucky University team members. $1500 upon signing initial contract.

2) Provide, free-to-farmers technical assistance to support implementation of chosen CSAF practices

3) Offer up to $10,000/farmer cost-share. Cost-share will be allocated at a rate of $35/ mT C02e projected by the farm plan's CSAF Practice Comet-Value Table, up to $10,000. Cost-share support payments are paid based on receipts or purchase agreements with specific costs in advance of the cash outlay by the farmer. Additionally, Mt. Folly Enterprises intends to bulk purchase some required inputs, including trees for plantings, at a substantial discount and pass these savings on to the farmer, stretching the value of the cost-share dollars. Cost-share purchases can be divided over multiple purchases and multiple years. It is allocated in the budget the year the farmer joins.

4) Determine baseline soil carbon and pay cash bonus to top performers at the end of the grant period, paid out of any unallocated cost-share

E. Plan to enroll underserved and small producers

First, we intend that at least 75% of our 100 producers will qualify as small family farms according to the typology of USDA,*i.e.* having Gross Cash Farm Income of less than $350,000 per

year[10]. Within that category we target medium-sales farms with GCFI of $150,000-$350,000 though low-sales farms with at least 100 acres under active management may participate (smaller farms owned by socially disadvantaged growers may be invited to participate by advisors from underserved communities).

Beyond this essential commitment to smaller producers, we draw on several experienced African-American food system organizers who are joining our team. Tiffany Bellfield/el-Amin, outreach consultant for reaching underserved farmers, has significant career experience in food system equity work, through local food, community development, farm and community/system assessment, data analysis, and farmer engagement. She has progressively gained experience in this field since 2015, and currently works as a Food Systems Equity Organizer for Community Farm Alliance. Working on this project limited hours will complement her work at CFA and build on it in important ways. Particularly her work on the Kentucky African-American Farmer Needs Assessment translates to this project. Her work on that project supports the development and implementation of tailored technical assistance and resources for farmers of color, and builds trust and relationships between Kentucky farmers of color and food system organizations.

She intends to track demographic identifiers to ensure intentional engagement with a variety of growers and to use her network to establish relationships with minority, unrepresented, and socially disadvantaged growers. We expect to reach veterans, farm families living below the poverty line and people who have been farming for less than ten years. Assuming 75% of our farmers operate small family farms according to the USDA typology, $862,500 of $1.15 million directed to producers for direct technical and financial assistance reaches historically underserved and/or small producers.

Measurement/quantification, monitoring, reporting, and verification plan

A. Approach to greenhouse gas benefit quantification

1) Establish baselines, particularly with regard to soil organic matter and soil organic carbon for all farms. Farmers will either participate in the Ecological Outcomes Verification[11](tm) protocol, with baseline and short-term ecological outcomes monitoring subsidized by our grant funds, or to work with our Eastern Kentucky University Principal Investigator Dr. John Settimi for MMRV, with more intensive data collection on practices. EKU partners will have access to all data collected for EOV participants.

2) Use COMET-farm as starting point to quantify benefit of practices.

3) Literature review and compilation of diverse research and data sets to identify other assessments of the GHG value of a given practice, and for GHG value of practices which are not included in COMET-farm (like application of biochar through animal feed and deposition) or which we intend to implement to a higher standard using more intensive management driven by ecological feedback. For example, a technical paper[12] recently published by Soil For Climate indicates that adaptive multi-paddock grazing could remove closer to 4mT c02e/ac/year, while COMET values basic prescribed grazing at 1/25th that amount.

4) Track changes in soil organic matter, soil organic carbon and other measures of soil health according to each team, to a depth of at least 45cm (EOV or EKU team protocol)

5) Identify different carbon pools (mineral associated vs. particulates); track quantity of biochar

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10 https://www.nass.usda.gov/Publications/Highlights/2021/census-typology.pdf

11 https://savory.global/wp-content/uploads/2021/07/EOV-chapter-1-v3.pdf

12 https://www.soil4climate.org/news/technical-brief-estimates-for-soil-carbon-drawdown-per-acre-from-holistic-planned-grazing-and-globally-by-all-means

produced and applied; and compare C deeper in the soil profile to that in surface layers to work on questions of permanence[13].

6) Use DAYCENT and other values determined by the research community to estimate reductions in NH_4 and N_2O as emissions reductions in these categories are not reversible while increased short-term soil carbon stocks can be.

7) Farmers can maintain a climate-smart designation by continuing to implement CSAF practices with five year verification of soil carbon change compared to that predicted by COMET-farm.

In summary, we aim to continue the long process of adapting the complexity of "Entity Scale" quantification and improve capacity to apply emissions factors and sequestration estimates in real world situations using lessons from literature, on farm assessment of practice changes, and soil testing. We recognize the critical importance of questions of permanence and, considering the flow-based model of C persistence, look to see monitored fields show movement of microbially processed SOM down in the soil profile through healthy soil pore structure where its inaccessibility to additional populations of microbes make it tend to be more stable. At the same time we recognize that the *implementation of CSAF practices* is the primary goal of this funding request for proposals.

B. Approach to monitoring of practice implementation

Initial data on entity characteristics and current practices will be collected during the initial assessment by the EOV team and/or Program Staff. This data includes total land under management; selected CSAF practices to implement and projected GHG benefit; area of land parcel where each CSAF practice is proposed to be applied; Crop selection and rotation sequence; Periods of grazing during the year; Animal type, class, and size used for grazing. The farm plan linked to all cost-share applications will clearly identify proposed climate smart agriculture and forestry practices which will be implemented as a result of the cost-share investment. Farmers will be asked to submit practice data quarterly to the Farmer Support Administrator including the activity parameters identified as critical in "Entity-Scale Methods" including Planting and harvesting dates; Residue management, including amount harvested, burned, grazed, or left in the field; application rate and timing of amendments; tillage; Cover crop species, rate and timing. Alternately for grazing: Plant species composition; Stocking rates and methods. Documents indicating NRCS technical specs and how they were met for each relevant practice will be signed by farmers and relevant grant personnel. Photographic record taken by program staff, subawardees or farmers showing dates of implementation of NRCS CSAF practices will be required and maintained for each farm. Signed farmer statements attesting that they are not receiving payment for the same practices on the same land will be maintained for each farmer.

The MFE Field Tech, the EKU Agriculture Department PI and Graduate Student team, grant management staff, and EOV trained monitors may all observe or receive reports of practice data as well. The EKU PI, the Field Tech and the Project Lead should work closely with the Farmer Support Administrator in the initial phase of the grant to design reporting templates which capture most relevant information. All notes on practice data should be transmitted to the Program Manager who is a liaison between MMRV, planning and technical assistance for practice implementation, farmer support, and market development operations. Our goal is to reach 100 farms, 30,000 acres over the

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13 Dynarski Katherine A., Bossio Deborah A., Scow Kate M. "Dynamic Stability of Soil Carbon: Reassessing the "Permanence" of Soil Carbon Sequestration," (2020) Frontiers in Environmental Science VOL(8). https://www.frontiersin.org/article/10.3389/fenvs.2020.514701

course of 5 years.

C. Approach to reporting and tracking of greenhouse gas benefits

As described elsewhere, this small pool award is aimed at encouraging practice uptake on smaller farms with higher levels of complexity than is typically found in other bioregions. Even in straightforward cases of applying a single practice on a single parcel, timing, weather, prior management, soil type, and many other factors influence the GHG impact of that practice. COMET values will be cross-checked against actual soil carbon change in relevant parcels over a five year period for farmers for whom we can collect five-year data. Where actual soil carbon change can be demonstrated to be higher than COMET predictions we will average COMET projected values and measured soil organic carbon change values. Practices for which measured soil carbon change over five years is less than GHG benefits projected by COMET-farm for that timeframe will be pulled for further scrutiny. Practice implementation detail and results across similar farms will be compared. If divergence between projected and actual results are widespread for a given practice, that practice will no longer be counted in our GHG benefit calculations until changes in implementation lead to a match between projected and actual benefits across a five year period for the wide majority of farms. If a given farm has actual soil carbon change less than projected values across most implemented practices, that farm will receive special attention in terms of technical support for implementation and analysis of potential causes. Subsequent actions will depend on the identified causes.

Because we are committed to ensuring that benefits are not double-counted, we will certify that no carbon credits for off-sets are sold from our participating farms during the period of farmer participation with our implementation, MMRV or marketing support. Carbon in-sets representing reduction of scope 3 emissions within the Brown Foreman branded spirits supply chains and any others who seek this service as a part of our grant project will be based on COMET-farm practice values for the grant-funded period. We will verify implemented practices and acreages, and share baseline measurement and change data to corporate partners working on scope 3 emissions through our project. For MFE sales channels, the 'climate-smart commodity' designation will contractually signify that all of the GHG benefits are contained in the value-added commodities themselves, and those benefits can not be removed from the commodity by trading them as off-sets. If we buy your climate-smart produce, we own the GHG benefits affiliated with the producing parcels for the producing year. These annualized GHG benefits are held in trust and *NEVER RESOLD*.

While many grant-funded organizations are highly motivated to scale up MMRV for long-term aims related to marketing avoided and sequestered carbon at scale, our project is designed to be relatively small, and focused on marketing high quality regional products to regional buyers. The responsible farming practices which allow for a climate smart designation are embedded in that definition of quality. We can track and maintain proof of practice implementation and associated NRCS-determined GHG benefit values for our network of farmers, who maintain a climate-smart designation by continued implementation of CSAF practices. This practice-based standard is what we will require to market through our channels, and its reporting and tracking internally can be accomplished using basic database technology. Where wholesale buyers in grocery want more detailed accounting including five-year SOC change over time, we can supply that data using existing, if somewhat time consuming, soil testing practices. We expect that if Brown Foreman, Consolidated Grain and Barge or other major institutional buyers want to radically expand their scope 3 emissions work, or to market conventional commodities at barge scale to buyers who are in turn looking for scope 3 reductions, they will look for a partner with tech credentials and the capacity

to scale MMRV using other methods. Farmers producing for them down the road will follow their protocols as they shift according to available technology and market expectations.

A final statement about our approach to reporting and tracking of greenhouse gas benefits. While some parties who are primarily focused on MMRV hold the position that "if you aren't measuring it, you aren't doing it," we find that this is not exactly true. In fact, for example, making and burying biochar at a steady pace but small scale will actually impact the soil and the atmosphere. Undercounting that effect will ensure that those benefits are not traded against continued emissions. Sometimes actions have consequences that you aren't making special attention to measure. Some measures are not well-suited to influence the ongoing management decisions required of farmers. Soil organic carbon, for one, is too slow moving to inform daily practice. For this reason, we look to the decision-making and ecological observation practices promoted by holistic management. Holistic management helps farmers to observe their operations with their own senses and their own financial records and use intentional question sets to investigate their local reality and make the best decisions. This is the kind of attention to detail which allows some graziers to see organic matter and related soil carbon growing at 20x the rate predicted by the COMET-farm model. We are grateful that COMET-farm is cautious with its estimates, particularly for practices which are implemented every year, because we know that outcomes are highly variable based on management, and we don't want those outcomes to be over-counted. At the same time, we believe that by carefully observing and tracking other visible, tactile, olfactory, and other sensory features of the land, plants, animals and fungi that we can actually achieve higher than average sequestration outcomes. We believe that higher than average sequestration outcomes for a given standard practice can be a happy byproduct of taking care of living communities. This attention to detail in ongoing management-- caring diligently for young trees far beyond the date that a practice implementation is marked down as approved complete because the grower has an expectation of marketable nuts and fruits, or because she loves the creatures that will find food and habitat in the grove-- is part of the value that will be embedded in our project and in our products.

D. Approach to verification of greenhouse gas benefits

We will cross check our data analysis of baseline and practices and the expected GHG benefits according to COMET-farm against a combination of inter-period EOV progress checks using visual markers and in-field tests of ecosystem and soil health, annual SOM and SOC tests at multiple depths, and full soil analysis every fifth year. Proof of practice implementation will be kept as long as farmers are selling through our markets. We will supply a record of GHG benefits projected based on practice data and corresponding actual soil carbon measurements and methodology to participating producers for their own farms, and to points of contact from participating buyers downstream of the farm where farmers agree to this condition. Practices for which measured soil carbon change is less than GHG benefits projected by COMET-farm on more than one farm for more than one year will be pulled for further scrutiny and those benefits will not be counted based on practice until implementation changes lead to a match between projected and actual benefits. Where actual values are higher than projected, the GHG benefits counted will be an average between the projected value and the measured annual change (or five year change averaged over the intervening years).

We attest that producers and land owners will not be involved in multiple USDA programs that fund the same practice on the same land . Federal funds under this funding opportunity may not be used to pay for implementation of the same practice on the same land.

E. We agree to participate in the Partnerships Network and will travel and communicate as required and as invited into the community of practice.

Plan to develop and expand markets for climate-smart commodities generated

A. Partnerships designed to market resulting climate-smart commodities,

Since 2016, Mt. Folly Enterprises has connected earth and climate-conscious consumers to trusted products and we are prepared to scale up these efforts. Most farmers don't want to market value-added products; they'd rather farm. This is our strength and what we offer to our growing network through branded product development, marketing, and logistics/infrastructure support.

MFE is committed to creating a Climate-Smart Beef product line and making it available to current and future customers at retail and wholesale, including regional divisions of major chain grocers. In order to develop regionally finished beef as a climate-smart commodity, local processing and frozen storage capacity must expand. We have existing relationships with a processor, Riverside Meats, and with Langley cold storage facility. Both are experiencing demand which far outstrips capacity. Our existing business relationship helps us to access available capacity and both facilities have committed to growing with us. As we grow, we will support restoration of regional meat processing capacity. The Kentucky Department of Agriculture is committed to helping us meet processing needs as the proposed Climate-Smart beef operation expands. To ensure the longevity and rate of growth of the Climate-Smart beef brand, MFE is willing to invest in a regional processing facility once the current regional meat processing capacity has been met. Ben Pasley of MFE has been developing relationships with the USDA-AMS, FlowerHill Institute, Kentucky Farm Bureau, and Kentucky Agriculture Development Board to evaluate this as a critical infrastructure option as the inventory and sales growth overwhelm the existing meat processing infrastructure in the Ohio River Valley.

For the beef brand specifically, we plan to start distribution to regional Natural Health Food stores and Independent Grocers that are current retailers; Rainbow Blossom, Full Circle, Good Foods Co-op, Matt's, Rosie's, Jungle Jim's, and All Natural Health. Second, we will focus on new independent Grocers; Clifton Market, The Turnip Truck, Earth Fare, Needler's, Good Earth, Nature's, HSU & Co., and Raisin Rack. Once we are established in regional independents and are at an acceptable scale for regions of National Retailers, we will focus on our existing national retail partner, Kroger. In case of incompatibility or additional growth, we are also prepared to build relationship with Publix, Target, Fresh Thyme Market, Sprouts, or The Fresh Market at a regional/division level.

On the grains and oilseeds side, our team restored mechanical systems, formed a working financial partnership and reopened and operated a historic grain elevator in neighboring Lexington, KY for the 2022 harvest season. While we found that the facility needed more physical plant upgrades to make it meet its best market potential than was financially feasible, the experience led to a number of useful relationships with capable grain farmers in our region and with buyers. Our participation in the Rye in Kentucky project of the Brown Foreman Dendri Fund also led to useful connections, including with representatives from Scoular's distillery grain logistics group, from Brown Foreman's distillery buyer and sustainability personnel. Brown Foreman would like us to work with farmers in their Jack Daniels supply chain to reduce their scope 3 emissions. By building on relationships developed as a result of our season running a local grain elevator and connecting with Brown Foreman on identifying and increasing GHG benefits in their grain supply chain, we can

expand diversified market opportunities for climate smart grain. We have sold variety-specific high-value non-GMO grain to the CGB terminal on the Ohio River, and are in conversations with their buyers about a premium for Climate Smart grains including initially those verified through our project. We are also diversifying into sunflowers on the farm side, at a scale that would benefit from collaborating with other farmers and sharing haul bill to a plant operated by Purdue in Georgia. We have established a relationship with a small local barley malting floor that is looking to expand and identified one in Tennessee which has much higher capacity and demand for barley. We look to improve our capacity to aggregate and supply for diverse markets, bringing new opportunities to skilled participating farmers.

MFE has a fully functioning web store and marketing program built initially around industrial hemp products produced by Mt. Folly Farm. It has expanded to include products from other farmers, like the bourbon barrel honey which complements our distilled spirits. We have added herbal tinctures to our product line produced from wild-simulated forest medicinals managed by team-member Andrew Ozinskas. We aim to verify our hemp, herb and grain production as climate-smart and then essentially make the entire web store into a climate-smart marketplace, suited to the current tagline and brand ethos, "Products that work, rooted in sustainability."

In addition to our deep partnership with the PI and agriculture department graduate students from EKU, we also have a proposal to work with marketing professor, Dr. James Blair, whose current work is focused on marginal willingness to pay for value-added qualities and most effective framing to encourage related consumer spending. Determining how the national trends around regenerative farming are playing out specifically in our region is key to effective marketing. He has asked us to provide funding for consumer surveys to experiment with these elements. He also runs a marketing class which routinely selects local companies and produces digital and print marketing campaigns as the practicum for the class. MFE will be assigned teams through the grant funded period and may provide them with small budgets to run comparative tests on different advertising choices. We will bid out the consumer survey work according to our contractual procurement procedures, with Blair offering one proposal.

We observe a national trend that raises up regenerative farming and links it to health. To capitalize on this national trend, both through online sales and through regionally-based wholesale markets, we will contract services for branding and public relations. Partnering with Savory Institute for Ecological Outcome Verification will link our web marketing to Savory's Land-to-Market branding efforts and online sales infrastructure. This is one step in a larger branding and public relations strategy which will serve the farmers of our CSAF project network by developing and connecting us to a strong regional customer base who makes the connection between ecologically sound farming practices and consumer health. In our experience, with the Laura's Lean Beef brand which Laura Freeman ran from 1984 to 2008, and with our current CBD and farm store business, people don't buy products solely on considerations of their environmental impacts. The brands that customers pay a premium for usually have an element to do with customer health. Our participating farmers are pasture-finishing beef; raising grains with practices which conserve soil, protect water, and demonstrate GHG benefits; and perhaps making other value-added products off their diversified operations. Building a strong regional market for each of these products depends on the customers connecting environmental benefits with their health and well-being. That's what will push up premiums for farmers. These motivated customers will pay more for climate-smart food from our product lines. Our grant project includes a significant investment in brand identity and building a website for direct to consumer sales of climate-smart commodities produced by the project farmer network.

In addition, we came up with the idea of monthly 'health support cells' meetings to coach each other up towards more and better use of whole foods direct from farmers and from highly-vetted farmer collaborations. Our intention is to build a strong community of customers who are getting more of their food from responsible mid-sized farms in the region. This has major GHG benefits beyond the bounds of the farm, as well as supporting CSAF practices inside the farm gate. It has the capacity to shrink supply chains, increase resilience, and reduce emissions from transportation. The "health support cells" project element has a capstone experience each year in the form of an in-person gathering, to take advantage of the farm as a site, to show off the CSAF practices to the public around harvest season, and to build skill towards health and farmer connection in this motivated customer base. Healthy regional food economies depend on people cooking well at home, knowing and caring about the links between the land and their plates. And doing this takes support and community, in an economy and social structure that is pushing everyone towards highly processed foods produced at industrial scale and traveled hundreds or thousands of miles. All of this related marketing, public relations, and customer community-building and web content generation activity will expand our farmers' access to the customers who are driving the overall national trend linking regenerative farming practices and healthy food.

Another neighbor, the local soft drink maker, Ale-8-1 Bottling Company provides an example of the form that future marketing partnerships around verified climate-smart commodities could take. Their Director of Innovation, who recently produced new Blackberry and Orange Cream sodas, has expressed interest in linking farm products in their supply chain with their other sustainability work and branding, and with their small-batch soda runs.

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

Beef farmers whose practices and outcomes indicate maintenance of climate-smart production can sell into our online regional meat market and through wholesale partnerships which may be interested in receiving production data to inform scope 3 calculations. Both the marketplace and the wholesale accounts will make the climate-smart marketing claim and seek a premium for multiple quality indicators including this one. Grain will be segregated and secondary customers will receive certification that they are buying climate-smart grain if that is part of their branding/supply chain needs. We will not track beyond our immediate customers.

C. Estimated economic benefits for participating producers including market returns

Standard commodity farming of corn, soy, and beef is a hard way to make a living in our region, as its hard to find enough flat land to support the labor saving equipment and reach economies of scale on inputs or storage and hauling. Just as critically, we pay a substantial price penalty due to fewer brokers, processing, and storage facilities serving our region, both in terms of grain and beef, and related, the cost of transportation to get our product to the facilities. Most families around here seek another source of income or, if they want to farm for a living, they have to get creative.

Beef is fundamental in our local agricultural economy but we are 1000 miles from the big slaughter facilities and are penalized because of our distance and consequent transportation costs. For example, as of the writing of this grant, an average weight (569lb) steer is worth $939 in our region vs. $1082 in Kansas, roughly .25/lb more; For finished cattle weighing 1400lbs the difference between Tennessee/Missouri prices and Kansas/Iowa prices is approximately $500, which translates

to .36/lb[14]! We plan to pay our farmers .11/lb premium for climate-smart practices, or $150 over local stockyards price for local finish-weight cattle and also to pay a $75/head bonus to the cow-calf operation. So a farmer raising cattle from cradle to grave can receive $225/head bonus, roughly .16/lb premium over local prices, keeping the cattle close to home to improve quality of life, reduce environmental impact, and circulate the dollars gained from consumer value-added price premiums in our home communities in Central Appalachia and the Ohio River Valley.

On the grains and oilseeds side, premiums are offered in response to end user market demand that typically centers on consumer health or manufacturer requirements-- organic, non-GMO, variety attributes. For example, a tofu buyer on the river was paying $1.2/bu over standard commodity price for a specific variety non-GMO bean; but aggregating quantity of sufficient quality and delivering takes a capable middleman. On a 100 acres of 56 bushel soybeans, this premium would translate to $6720 for the farmer. Pricing premiums for 'climate-smart' is obviously a new endeavor. We are in conversations with Consolidated Grain and Barge to learn about their supply chain demand for climate smart grains and to identify the likely premium in these early stages of climate smart ag in the USA. Brown Foreman has expressed formal interest in collaborating with us to improve practice implementation and MMRV for their grain supply chain.

Besides direct price premiums, our participating farmers will add an acre of productive trees and multi-story shade-grown perennials with produce which can be aggregated and processed by MFE long-term to create a new revenue stream for each farm. We are also offering access to our growing national audience accessing the online store, for new or existing value-added products of our farmers. Apart from our work to aggregate and process for markets which command a premium, we are offering direct cash incentives to farmers of roughly $1.15 million and technical assistance free to farmers worth over $150,000. Since the end of tobacco quotas, farms around here generally can't afford to pay farmers unless they look to diversification and value-added practices. Most provide supplemental income to families making their living another way. Advanced technical support crafted to match particularities of a farm's land and people to develop a mix of revenue streams that can keep a farm in the black is truly priceless.

D. Post-project potential

Mt. Folly Enterprise climate smart sales channels, including the regional beef product and value-added products offered through the online "mercantile" store will be sustained by good business fundamentals and continue to provide needed value-added outlets for the farmer-network that grows up around the grant. The intention of the grant is to build a working network of cooperatively selling farmers with a community of practice for improving CSAF practice implementation. After the grant period ends, we will continue to certify the farmer network that is producing for Mt. Folly sales channels by ensuring the continuation of NRCS CSAF practices which can be applied annually, including prescribed grazing, cover-cropping and conservation rotations. Additionally, we will ensure that the tree plantings are protected and maintained, as we expect to begin aggregating native fruits and nuts from within these planted acres in years 6-15.

Our advisor network's influence will be preserved through the composition of the farmer-network and the practices built into the farm and processor businesses. Our practical experimentation with pyrolysis will both directly produce biochar and expand the knowledge base for kiln construction in the United States. Any shifts in burn pile practices will continue to generate long-term sequestration across the region as uptake continues to spread through observation of a superior

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14 https://beefbasis.com/expected-value-by-weight/

method that is possible to do with equipment that most farmers have. Though this kind of cultural shift will not be measured and counted in carbon monitoring plans, its real impact on soils, plant communities and the carbon cycle will nonetheless persist.

The changed farming practices, intensification of management to reduce input needs and improve soil, and increased complexity of rotations and revenue streams will be baked into our farmers' regular annual rhythms. We expect that the cost-share and initial support will lead to a tendency and extended capacity to farm in ways that improve soil health and simultaneously sequester carbon, for the long haul.

The brands will generate customer awareness of the climate-smart designation, generating future market growth for verified climate-smart commodities from other teams. Our investment in rebranding the online store will open it up to cooperative marketing rather than marketing primarily our home farm CBD. Linking our efforts to national shifts in consumer interest by investing in consumer research and PR will strengthen the financial position of Mt. Folly Enterprises and extend the reach and volume of this cooperative marketing effort, including by encouraging retail grocers to invest in climate-smart products offered through our wholesale sales force. A strong regional community willing to invest in the traditional foodways that were once part of rural life will increase the market share and the overall revenue of the innovative small and mid-sized farms in our network and beyond. Where people value pasture-raised beef, truly cage-free farm eggs, locally-processed grains, small-batch dairy products, value-added nut and native fruit products-- and recognize the climate-smart quality of both the farming practices and the regional supply chains that make these products possible-- then the diversified farms and rural economies of the Ohio River Valley will flourish.

Milestone Type	Total Project Amt	07/23 y1-Q1	10/23 y1-q2	01/24 y1-q3	04/24 y1-q4	07/24 y2-q1	10/24 y2-q2	01/25 y2-q3	04/25 y2-q4	07/25 y3-q1	10/25 y3-q2	01/26 y3-q3	04/26 y3-q4
Number of producers involved	100	4	7	15	15	25	30	40	40	60	65	75	75
Number of underserved producers involved	28	1	3	5	5	9	10	12	12	17	18	20	20
Number of farms with gross revenue under $350k	75	3	6	12	12	18	22	30	30	45	48	56	56
Number of acres involved	30000	1200	2100	4500	4500	7500	9000	12000	12000	18000	19500	22500	22500
Number of head involved at project completion	18000	720	1260	2700	2700	4500	5400	7200	7200	10800	11700	13500	13500
Number of one-acre tree plantings on working farms	90	0	5	8	15	16	25	28	35	36	45	48	55
Dollars provided to producers	1,150,000	46000	80500	172500	172500	287500	345000	460000	460000	690000	747500	862500	862500
GHG Benefits (Metric Tons of CO2e Reduced or Sequestered)	30500	0	1625	415	1625	474	2312	474	2312	811	3960	811	3960
GHG Benefits cumulative	30500	0	1625	2040	3665	4139	6451	6925	9237	10048	14819	18779	
Number of new marketing channels* established	4		beef wholesale			climate smart grain to distillery market					climate smart grain to barge loading elevator		
Number of marketing channels* expanded	3	herbal/CBD wholesale		mercantile online opens to producers	Mercantile on Main retail open to producers	All of these markets expand gradually and continually throughout the grant periods with punctuated moments of greater growth. Markets re... and their communities join as well. Logistical hurdles around listing, packing and shipping from multiple points of production are ironed out, ... outlined in detail below.							
Number of measurement tools utilized		anything can be a measurement tool when one is constantly observing the whole under management with ones senses, especially when the whole under management includes both land a...											
number of events where outreach work reached underserved farmers		Tiffany should average 6 events a quarter plus some time talking one to one through networks of known farmers and some time producing materials and connecting interested farmers to st...											
trainings hosted by primary and sub awardees w grant funding		EOV asheville	foodways	meat lab	HMI texas, RA-silvopasture		foodways	meat lab	earth day '25	farm field days	foodways	winter HMI mentor	earth day '26
branding voice, web design, brand visual, CSAF/partner farmer content, press		brand voice workshop	org structure-> web architecture	SEO optimization, content index, user experience	Brand visual, climate smart mark	CSAF/ partner farmer content	Hire public relations agent	major press on PR to grow brand and mercantile traffic		continued paid advertising, placement work, partnerships with interviews, etc to grow brands and farmer revenue opportuniti...			
Market research/consumer attitudes			engaged	begins surveys	feedback to CEO	shift focus/mode	first formal report	collaborate next research project desi...		surveys and focus groups			feedback to CEO, core marketing staf...
grant deliverable on additional tree cultivar species to Oakland		x											
staff receives feedback from non-timber forest products consultant on '1ac' work			x		x		x		x		x		x
EKU identifies grad student partners annually, sampling and study trips		spring/summer outreach, fall sign-on for student. Prof. Settimi summers dedicated to field work, winters for data analysis and writing in collaboration with student thesis projects											
Demonstrated engagement of major partners		Brown Foreman links us to direct producers	National Coop Grocers Org connects beef to regional coop mkt			Brown Foreman engages regional elevator to segrate CS '24		Division of national grocer comes online for beef		specialty drink with some Climate Smart element	Consolidated Grain and Barge pays premium and segregates Climate Smart		
Other measurements of work related to marketing of commodities		see below											
Mt. Folly Steers			4	6			53		32		40		40
Other Steers		2			40	80	67	200	268	400	460	610	680
Total Steers	13812	2	4	6	40	80	120	200	300	400	500	610	720
Halves of steer Units		4	8	12	80	160	240	400	600	800	1000	1220	1440
Sold To New retailer doors		6	5	5	55	39	51	122	109	118	111	137	118
Frozen Beef halves 75% Reorder			3	7	11	52	81	119	211	292	381	464	567
Fresh Beef halves To Current 100%					14	69	108	159	281	389	508	619	756
Total Doors of Retailers at half steer initial set		4	9	14	69	108	159	281	389	508	619	756	873
New retailer avg/week					4.6	3.2	4.2	10.1	9.1	9.9	9.3	11.4	9.8
Steer Kill/week		0	0	1	3	7	10	17	25	33	42	51	60
lbs avg steer carcas half. dress1200.65%,20%bone, 5%fat	296						296	296	296	296	296	296	296
Avg lbs per retailer							447	422	456	466	478	478	488
Avg lbs per retailer per week							37	35	38	39	40	40	41

07/26 y4-q1	10/26 y4-q2	01/27 y4-q3	04/27 y4-q4	07/27 y5-q1	10/27 y5-q2	01/28 y5-q3	04/28 y5-q4
90	95	100	100	100	100	100	100
25	26	28	28	28	28	28	28
64	70	75	75	75	75	75	75
27000	28500	30000	30000	30000	30000	30000	30000
16200	17100	18000	18000	18000	18000	18000	18000
56	65	68	75	76	84	86	90
1035000	1092500	1150000	1150000	1150000	1150000	1150000	1150000
727	3548	727	3548	273	1330	273	1330
19506	23054	23781	27329	27602	28932	29205	30535

spond to the branding, PR, and other promotional work we are doing, to the growth of the overall customer base as new partner farms
new products which draw on raw material from multiple producers are developed apart from the beef, which is a core focus and

nd land stewards and the web as an access point to customers. We are always measuring. The tools are not always discreet. Unsure what this means.
aff through introductions. Outreach must flucturate seasonally based on enrollment needs and conference/event schedules

| farm field days | foodways | | winter HMI mentor | earth day '27 | farm field days | foodways | | winter HMI mentor | earth day '28 |

regenerative/health thought leaders, storytelling about partner farmers, potential podcast and other organic content,
es

| second formal rep | final project design session with staff team | | | research | | final report on consumer attitudes and mkt approaches | |

| | x | | x | | x | | x |

	45		40		45		40
860	975	1180	1330	1520	1545	1620	1630
860	1020	1180	1370	1520	1590	1620	1670
1720	2040	2360	2740	3040	3180	3240	3340
192	176	188	239	121	49	23	83
655	799	931	1072	1251	1342	1379	1396
873	1065	1241	1429	1668	1789	1838	1861
1065	1241	1429	1668	1789	1838	1861	1944
16.0	14.7	15.7	19.9	10.1	4.1	1.9	6.9
72	85	98	114	127	133	135	139
296	296	296	296	296	296	296	296
478	487	489	486	503	512	515	509
40	41	41	41	42	43	43	42

practice name	practice codes	average local comet value/acre	projected #/100 total project farms, once	projected # multi-year farms, enrollment weighted avg 3.8	projected avg project acres/farm	total projected acre/years of practice	Total COMET GHG value/project period/project area (MT C02e)
Conservation Crop Rotation	328	0.22	50	3	150	22500	4950
Intensive to No-till, non-irrigated	329	0.47	15		150	2250	1057.5
Cover Crop, non-irrigated, 25-50% N reduction	340	0.48	70	3	150	31500	15120
Intensive to Reduced tillage, non-irrigated	345	0.24	15		150	2250	540
Silvopasture	381	5.19	10		20	200	1038
Riparian Forest Buffer, replacing crop or grassland	391	6.15	40		1	40	246
cropland to forage or interseeding legume in pasture	512	1.18	60		100	6000	7080
Prescribed Grazing	528	0.15	60	3	200	36000	5400
Nutrient Management manure/compost non-irrigated pastur	590	0.22	2	2	50	200	44
Nutrient Management manure/compost non-irrigated cropla	590	0.32	8	2	50	800	256
Tree/shrub establishment from crop or grassland	612	16.19	50		1	50	809.5
							30533.5

	yr 1	yr 2	yr3	yr4	yr5		
total farms/year	**15**	**25**	**35**	**25**			
6/10 have livestock	9	15	21	15			
7/10 have some crops	10.5	17.5	24.5	17.5			
3/10 have crops and cattle	4.5	7.5	10.5	7.5			
10/10 plant some trees	15	25	35	25			
total acres/year	**4500**	**7500**	**10500**	**7500**			
% total acres in given year	0.15	0.25	0.35	0.15			
for multi-year practices, weighting # enrolled years	0.75	1	1.05	0.3	0.775	3.875	conservatively 3yrs
Projected GHG/year based on % enrolled (no multiyear factor)	4580.025	7633.375	10686.725	7633.375			
year 1 impact spread across	3664.02	229.00125	229.00125	229.00125	229.00125	**4580.025**	
year 2 impact spread across		5343.3625	763.3375	763.3375	763.3375	**7633.375**	
year 3 impact spread across			8549.38	1068.6725	1068.6725	**10686.725**	
year 4 impact spread across				6488.36875	1145.00625	**7633.375**	
Projected total annual impact for all producers	**3664.02**	**5572.36375**	**9541.71875**	**8549.38**	**3206.0175**	**30533.5**	

	qtr1	qtr2	qtr3	qtr4			
Year 1							
18% prescribed grazing+ 16% conservation rot. evenly divided/3		415	415	415	1245	2419.02	
the rest split spring/fall qtr 2 and 4		1209.51		1209.51			
	0	**1625**	**415**	**1625**			
Year 2							
18% prescribed grazing+ 16% conservation rot. evenly divi	473.650919	473.650919	474	474	1895.301838	3677.061913	
the rest split spring/fall qtr 2 and 4		1838.53096		1838.530956			
	474	**2312**	**474**	**2312**			
Year 3							
18% prescribed grazing+ 16% conservation rot. evenly divi	811.046094	811	811	811	3244.046094	6297.672656	
the rest split spring/fall qtr 2 and 4		3148.83633		3148.836328			
	811	**3960**	**811**	**3960**			
Year 4							
18% prescribed grazing+ 16% conservation rot. evenly divi	726.6973	727	727	727	2907.6973	5641.6827	
the rest split spring/fall qtr 2 and 4		2820.84135		2820.84135			
	727	**3548**	**727**	**3548**			
Year 5							
18% prescribed grazing+ 16% conservation rot. evenly divi	272.511488	273	273	273	1091.511488	2114.506013	
the rest split spring/fall qtr 2 and 4		1057.25301		1057.253006			
	273	**1330**	**273**	**1330**			

practice name	practice codes	average local comet value/acre	projected #/100 total project farms, once	multi-year factor avg 2.5	projected avg project acres/farm	total projected acre/years of practice	Total COMET GHG value/project period/project area (MT C02e)
Conservation Crop Rotation	328	0.22	50	3	150	22500	4950
Intensive to No-till, non-irrigated	329	0.47	15		150	2250	1057.5
Cover Crop, non-irrigated, 25-50% N reduction	340	0.48	70	3	150	31500	15120
Intensive to Reduced tillage, non-irrigated	345	0.24	15		150	2250	540
Silvopasture	381	5.19	10		20	200	1038
Riparian Forest Buffer, replacing crop or grassland	391	6.15	40		1	40	246
cropland to forage or interseeding legume in pasture	512	1.18	60		100	6000	7080
Prescribed Grazing	528	0.15	60	3	200	36000	5400
Nutrient Management manure/compost non-irrigated pastu	590	0.22	2	2	50	200	44
Nutrient Management manure/compost non-irrigated cropla	590	0.32	8	2	50	800	256
Tree/shrub establishment from crop or grassland	612	16.19	50		1	50	809.5
							30533.5

**To ensure that we meet at least 300 mT co2e/project avg we will require each cost share proposal to project either >1 mT C02e per ac/project or >400 mT C02e per project to allow small intensive or large grazing-primary projects to meet standard

SAMPLE FARMS TO ESTIMATE GHG BENEFIT PER FARM

280 ac directly impacted in program		practice value	acres	total years	total acre-years	practiceXac-years	
Conservation Crop Rotation	328	0.22	80	3	240	52.8	
Intensive to No-till, non-irrigated	329	0.47	0		0	0	
Cover Crop, non-irrigated, 25-50% N reduction	340	0.48	80	3	240	115.2	
Intensive to Reduced tillage, non-irrigated	345	0.24	0		0	0	
Silvopasture	381	5.19	0		0	0	
Riparian Forest Buffer, replacing crop or grassland	391	6.15	0		0	0	
cropland to forage or interseeding legume in pasture	512	1.18	100	1	100	118	
Prescribed Grazing	528	0.15	200	3	600	90	
Tree/shrub establishment from crop or grassland	612	16.19	1	1	1	16.19	
						392.19	1.400678571 mT c02e/ac/project
							0.466892857 mT c02e/ac/year
250 ac directly impacted in program		practice value	acres	total years	total acre-years	practiceXac-years	
Conservation Crop Rotation	328	0.22	150	3	450	99	
Intensive to No-till, non-irrigated	329	0.47	0		0	0	
Cover Crop, non-irrigated, 25-50% N reduction	340	0.48	150	3	450	216	
Intensive to Reduced tillage, non-irrigated	345	0.24	0		0	0	
Silvopasture	381	5.19	0		0	0	
Riparian Forest Buffer, replacing crop or grassland	391	6.15	1	1	1	6.15	
cropland to forage or interseeding legume in pasture	512	1.18	100	1	100	118	
Prescribed Grazing	528	0.15	100	3	300	45	
Tree/shrub establishment from crop or grassland	612	16.19	0	0	0	0	
						484.15	1.9366 mT c02e/ac/project
							0.645533333 mT c02e/ac/year
750 ac directly impacted in program		**practice value**	**acres**	**total years**	**total acre-years**	**practiceXac-years**	

Practice	Code	practice value	acres	total years	total acre-years	practiceXac-years		
Conservation Crop Rotation	328	0.22	0		0	0		
Intensive to No-till, non-irrigated	329	0.47	0		0	0		
Cover Crop, non-irrigated, 25-50% N reduction	340	0.48	0		0	0		
Intensive to Reduced tillage, non-irrigated	345	0.24	0		0	0		
Silvopasture	381	5.19	0		0	0		
Riparian Forest Buffer, replacing crop or grassland	391	6.15	1	1	1	6.15		
cropland to forage or interseeding legume in pasture	512	1.18	200	1	200	236		
Prescribed Grazing	528	0.15	750	2	1500	225		
Tree/shrub establishment from crop or grassland	612	16.19	0	0	0	0		
						467.15	**0.622866667**	mT c02e/ac/project
							0.311433333	mT c02e/ac/year

100 ac directly impacted in program		practice value	acres	total years	total acre-years	practiceXac-years		
Conservation Crop Rotation	328	0.22	0		0	0		
Intensive to No-till, non-irrigated	329	0.47	0		0	0		
Cover Crop, non-irrigated, 25-50% N reduction	340	0.48	60	2	120	57.6		
Intensive to Reduced tillage, non-irrigated	345	0.24	0		0	0		
Silvopasture	381	5.19	20	1	20	103.8		
Riparian Forest Buffer, replacing crop or grassland	391	6.15	1	1	1	6.15		
cropland to forage or interseeding legume in pasture	512	1.18	40	1	40	47.2		
Prescribed Grazing	528	0.15	40	2	80	12		
Tree/shrub establishment from crop or grassland	612	16.19	0	0	0	0		
						226.75	**2.2675**	mT c02e/ac/project
							1.13375	mT c02e/ac/year

100 ac directly impacted in program		practice value	acres	total years	total acre-years	practiceXac-years		
Conservation Crop Rotation	328	0.22	0	0	0	0		
Intensive to No-till, non-irrigated	329	0.47	0		0	0		
Cover Crop, non-irrigated, 25-50% N reduction	340	0.48	0	0	0	0		
Intensive to Reduced tillage, non-irrigated	345	0.24	0		0	0		
Silvopasture	381	5.19	20	1	20	103.8		
Riparian Forest Buffer, replacing crop or grassland	391	6.15	0		0	0		
cropland to forage or interseeding legume in pasture	512	1.18	80	1	80	94.4		
Prescribed Grazing	528	0.15	100	1	100	15		
Tree/shrub establishment from crop or grassland	612	16.19			0	0		
						213.2	**2.132**	mT c02e/ac/project
							2.132	mT c02e/ac/year

400 ac directly impacted in program		practice value	acres	total years	total acre-years	practiceXac-years		
Conservation Crop Rotation	328	0.22	100	2	200	44		
Intensive to No-till, non-irrigated	329	0.47	0		0	0		
Cover Crop, non-irrigated, 25-50% N reduction	340	0.48	100	2	200	96		
Intensive to Reduced tillage, non-irrigated	345	0.24	0		0	0		
Silvopasture	381	5.19	0		0	0		
Riparian Forest Buffer, replacing crop or grassland	391	6.15	1	1	1	6.15		
cropland to forage or interseeding legume in pasture	512	1.18	200	1	200	236		
Prescribed Grazing	528	0.15	300	2	600	90		
Tree/shrub establishment from crop or grassland	612	16.19	0	0	0	0		
						472.15	**1.180375**	mT c02e/ac/project

practice name	codes	local	factor Y/N
Conservation Crop Rotation	328	0.22	y
Intensive to No-till, non-irrigated	329	0.47	
Cover Crop, non-irrigated, 25-50% N reduction	340	0.48	y
Intensive to Reduced tillage, non-irrigated	345	0.24	
Silvopasture	381	5.19	
Riparian Forest Buffer, replacing crop or grassland	391	6.15	
cropland to forage or interseeding legume in pasture	512	1.18	
Prescribed Grazing	528	0.15	y
Nutrient Management manure/compost non-irrigated pasture	590	0.22	y
Nutrient Management manure/compost non-irrigated cropland	590	0.32	y
Tree/shrub establishment from crop or grassland	612	16.19	

Climate-Smart Practices and Limitations

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

NRCS Practice Code	Practice Name
328	Conservation Crop Rotation
329	Residue and Tillage Management, No Till
340	Cover Crop
345	Residue and Tillage Management, Reduced Till
381	Silvopasture
391	Riparian Forest Buffer
512	Pasture and Hay Planting
528	Prescribed Grazing
590	Nutrient Management
612	Tree/Shrub Establishment

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

N/A

Partnerships for Climate-Smart Commodities

Data Dictionary for Recipients

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Version 1.0

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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."

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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

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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

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<u>Field Enrollment</u>

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

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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 CO_2 emission reductions for field	Annual
Total CH4 estimated	Estimate of total CH_4 emission reductions for field	Annual
Total N2O estimated	Estimate of total N_2O emission reductions for field	Annual

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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

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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

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<u>Project Summary</u>

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 (CO_2eq) 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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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.

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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

USDA Partnerships for Climate-Smart Commodities Data Dictionary for Recipients
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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

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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

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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

USDA Partnerships for Climate-Smart Commodities Data Dictionary for Recipients
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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

	Strip width (feet)	20-1,000
Filter Strip (CPS 393)	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

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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

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<u>Other CSAF Practices</u>
Traditional or cultural practices
Microbial products
Solar power generation
Grain bin construction
Pre-season drainage

![USDA] Partnerships for Climate-Smart Commodities Data Dictionary for Recipients
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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.