

United States Department of Agriculture

FY 2022 Annual Evaluation Plan



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I. Introduction

The United States Department of Agriculture (USDA or agency) provides leadership on food, agriculture, natural resources, rural development, nutrition, and related issues based on public policy, the best available science, and effective management.

USDA has a vision to provide economic opportunity through innovation, helping rural America to thrive; to promote agriculture production that better nourishes Americans while also helping feed others throughout the world; and to preserve our Nation's natural resources through conservation, restored forests, improved watersheds, and healthy private working lands.

In support of the Foundations for Evidence-Based Policymaking Act of 2018 (Public Law 115-435) (Evidence Act) to promote the use of evidence to inform and guide decision making, USDA has established three governing bodies to implement and coordinate activities associated with the building and use of evidence. Governed by the Chief Data Officer (CDO), the Data Advisory Board oversees the implementation of requirements associated with the Open Data Governing Act; the Statistics Committee chaired by the Chief Statistical Officer (CSO) oversees requirements associated with the Confidential Information Protection and Statistical Efficiency Act, and the Performance, Evidence, Evaluation Committee (PEEC), chaired by the Chief Evaluation Officer (CEO) oversees the development a multi-year learning agenda, an Annual Evaluation Plan, and completion of an evidence capacity assessment. The PEEC is comprised of representatives from each of USDA's eight mission areas and their agencies as well as Departmental Administration – the operational arm of USDA: Office of Customer Experience (OCX), CDO and the CSO. The CSO, CDO and EO meet routinely to ensure coordination and collaboration of efforts.

USDA's EO also serves as the Performance Improvement Officer (PIO), Chief Risk Officer (CRO) and Budget Director which allows for greater integration and alignment of strategic planning, performance, budget, and enterprise risk management (ERM) activities.

Statistics Committee

1. Designation Guidance
2. Statistical Policy
3. Access to Data Assets
4. Assess Data Assets



Data Advisory Board

1. USDA Data Governance
2. Open Data Plan
3. Data Inventory
4. Data Council

Performance, Evidence, Evaluation Committee

1. Capacity Assessment
2. Learning Agenda
3. Annual Evaluation Plan
4. Evaluation Policy

Goals of USDA's Evaluations

USDA has three primary goals for its planned evaluations:

1. **Learn.** Gain knowledge about USDA programs and services to identify lessons learned, and to improve program design and delivery.
2. **Measure.** Establish quantifiable indicators that capture program outcomes and outputs.
3. **Understand.** Apply and analyze findings to assist in answering the “why” questions of programs, discovering reasons certain activities worked or didn’t work.

II. Purpose

USDA’s Annual Evaluation Plan describes the significant evaluation activities USDA plans to conduct during FY 2022. Evaluation defined by the Evidence Act is an assessment using systematic data collection and analysis of one or more programs, policies, and organizations intended to assess their effectiveness and efficiency. The following Annual Evaluation Plan is intended to illustrate the methodology and evidence USDA will use to address mandated evaluations, strategic priorities, key research, innovations, learning agenda priority questions, and other key assessments.

The purpose of the Annual Evaluation Plan is to promote a common understanding regarding the inspiration and use of evidence and evaluation activities, increase transparency, and improve accountability, as well as presenting USDA’s significant evaluation efforts and interrelationship to key questions.

For the purposes of this plan, the USDA’s criteria for significant evaluations is as follows:

- Evaluations required by statute or congressional mandate.
- Provides insight or potentially answers a priority question on the Learning Agenda.
- Addresses a key area of concern or strategic priority.
- Advances research and innovation priorities.
- Fills a gap critical to the program, agency operations, and/or customers.
- Critical to USDA’s Mission.

III. Stakeholder Engagement

In developing USDA’s Annual Evaluation Plan, USDA utilized the PEEC, chaired by the EO, as a core team of internal stakeholders to lead efforts and gain feedback and insight surrounding not only the development of the Annual Evaluation Plan. The PEEC also participated in the development of the Learning Agenda.

The PEEC is comprised of individuals from different mission areas, and backgrounds throughout USDA, as well as our key evaluation partners, the CDO and CSO. The impact of these different perspectives and expertise encouraged buy-in across the USDA, augmented technical expertise, and promoted a greater diversity of perspectives. Partnerships with the CDO and CSO allowed for greater insight and advisement on data access, data quality and statistical methods. Feedback from the PEEC was critical in defining and identifying significant evaluations and providing and developing the content for the Annual Evaluation Plan.

In addition to internal stakeholders discussed above, the USDA has a plethora of external stakeholders with vested interests in the results of the USDA’s significant evaluations including:

- Congress, OMB, and other agencies
- Regional and local governments
- Farmers, ranchers, producers/grower groups
- Associations, boards, cooperatives, and unions
- Universities and other academic institutions
- Research and science organizations
- Non-governmental organizations
- Food and agricultural industry and commodity groups
- Environmental groups
- Consumers, advocacy groups, and communities

Generally, findings from USDA evaluations will be used by stakeholders in three ways:

1. **Examine Influence of Program and Return on Investment:** Stakeholders seek answers on USDA's program impact. Example questions: Are programs achieving their targeted outcomes? What is the return on investment for programs and initiatives? What does the data indicate to provide guidance in funding decisions?
2. **Examine the Effectiveness of Program Changes:** USDA and mission area leadership seek answers on program strengths and weaknesses. Example questions: Did program modifications achieve their intended results? Did a program change result in additional costs or savings? Did program productivity measures or outcomes change?
3. **Support program planning and implementation:** Stakeholders may use evaluation findings to plan future activities, including grant applications, strategic planning, and funding justifications/requests. Example questions include: What have we learned about a program(s) that could be used to replicate planning for other similar programs?

Continuation of Stakeholder Engagement

Throughout FY 2022, USDA will continue to gather and rely upon stakeholder feedback, internally and externally, in evaluation efforts and development of evaluation work plans. USDA's PEEC will work towards developing and enhancing strategies that improve upon the identification of the criteria needing feedback, targeted audience and stakeholders, specific questions needed to be answered in order to achieve goals, timing; and methodologies in collecting feedback. The PEEC will partner with the OCX to gain greater feedback on the needs and desires of those the USDA serves. OCX's four focus areas include customer measurement and improvement, strategy & design services, employee experience & building culture, and AskUSDA Contact Center. OCX activities and efforts will be conducted through collaboration and partnerships with mission areas on ideation and the execution of changes to deliver services in a more customer-focused way. This partnership with OCX in evaluation efforts will ensure the voices of key stakeholders, both internal and external, are involved throughout the entire process from development to dissemination.

IV. FY 2022 Annual Evaluation Plan

On May 15, 1862, President Abraham Lincoln signed legislation to establish the USDA, and, two and a half years later in his final message to Congress, Lincoln called USDA “The People’s Department.”

At that time, about half of all Americans lived on farms, compared with about 2 percent today. But through work on food, agriculture, economic development, science, natural resource conservation and a host of issues, USDA still fulfills Lincoln's vision - touching the lives of every American, every day.

USDA’s evaluation efforts are integral to ensuring programs meet the needs of those the USDA serves. Evaluations efforts demonstrate the continued commitment to accountability, learning, transparency, and evidence-based data driven-decision making that are aligned with the USDA FY2018 – 2022 Strategic Plan.

USDA’s Strategic Approach

The USDA FY2018-2022 Strategic Plan will guide the work of the USDA in the coming years to ensure its efforts best serve the American public. The USDA identified seven strategic goals for fiscal years 2018-2022.

Strategic Goals for FY2018-2022

1. Ensure USDA programs are delivered efficiently, effectively, and with integrity and a focus on customer service.
2. Maximize the ability of American agricultural producers to prosper by feeding and clothing the world.
3. Promote American agricultural products and exports.
4. Facilitate rural prosperity and economic development.
5. Strengthen the stewardship of private lands through technology and research.
6. Foster productive and sustainable use of our National Forest System Lands.
7. Provide all Americans access to a safe, nutritious, and secure food supply.

The following summary of evaluations includes planned and ongoing significant evaluations for FY 2022, provides a rationale for why the evaluation was considered “significant” and identifies the lead office for each planned evaluation.

List of Evaluations by Strategic Goal

Evaluations conducted in alignment with **Strategic Goal 1:**

Ensure USDA programs are delivered efficiently, effectively, and with integrity and a focus on customer service.

Evaluation 1.1	Food, Nutrition, and Consumer Services
Evaluation Title	Rapid Cycle Evaluations of Operational Improvements in Supplemental Nutrition Assistance Program (SNAP) Employment & Training (E&T) Programs
Evaluation 1.2	Food, Nutrition, and Consumer Services
Evaluation Title	Access, Participation, Eligibility, and Certification (APEC) IV Study
Evaluation 1.3	Research, Education, and Economics
Evaluation Title	Research Priority Setting Process Inventory of Efforts

Evaluations conducted in alignment with **Strategic Goal 2:**

Maximize the ability of American agricultural producers to prosper by feeding and clothing the world.

Evaluation 2.1	Farm Production and Conservation Service
Evaluation Title	Farm Loan Program Borrower Graduation
Evaluation 2.2	Marketing and Regulatory Programs
Evaluation Title	Data Science Skills Improvements

Evaluations conducted in alignment with **Strategic Goal 3:**

Promote American agricultural products and exports.

The USDA does not have plans to conduct any evaluations deemed significant pertaining to Goal 3 for FY 2022. However, the Foreign Agricultural Services is currently conducting a number of evidence-building activities to provide insight that will be utilized in strategic planning, conducting future evaluations, inform program implementation, and collect evidence for future Learning Agendas.

Evaluations conducted in alignment with **Strategic Goal 4:**

Facilitate rural prosperity and economic development.

Evaluation 4.1	Rural Development
Evaluation Title	Economic and Social Impacts of E-connectivity in Rural Areas through USDA Broadband Programs
Evaluation 4.2	Rural Development
Evaluation Title	Assessing USDA Water Programs Impacts on Rural Water Systems ability to improve Water Quality, Economic Development, Community Health and Other Outcomes in Rural Communities
Evaluation 4.3	Rural Development
Evaluation Title	Bridging Health and Education Gaps in access and Service through USDA Community Facilities investment in Rural Communities

Evaluations conducted in alignment with **Strategic Goal 5:**

Strengthen the stewardship of private lands through technology and research.

Evaluation 5.1	Farm Production and Conservation Service
Evaluation Title	Software Platform Efficiency

Evaluation 5.2	Farm Production and Conservation Service
Evaluation Title	Conservation Practice Effect
Evaluation 5.3	Research, Education, and Economics
Evaluation Title	Cross-Departmental Assessment Supporting Technology Adoption Study

Evaluations conducted in alignment with **Strategic Goal 6:**
 Ensure Productive and Sustainable Use of Our National Forest System Lands

The USDA does not have plans to conduct any evaluations deemed significant pertaining to Goal 6 for FY 2022. However, the U.S. Forest Service is currently conducting a number of evidence-building activities to provide insight that will be utilized in strategic planning, conducting future evaluations, inform program implementation, and collect evidence for future Learning Agendas.

Evaluations conducted in alignment with **Strategic Goal 7:**
 Provide all Americans access to a safe, nutritious, and secure food supply.

Evaluation 7.1	Food Safety and Inspection Service
Evaluation Title	FSIS Employee Retention Evaluation
Evaluation 7.2	Food, Nutrition, and Consumer Services
Evaluation Title	Review of evidence on WIC participation among Women and Birth Outcomes
Evaluation 7.3	Food, Nutrition, and Consumer Services
Evaluation Title	Review of Evidence on Summer Feeding Programs and Models and Food Security, Diet, and Health of Children and Adolescents

V. Evaluation Work Plans

Evaluation Work Plans provided within this section provides additional details regarding the significant evaluations and evidence building activities planned in FY 2022.

- **Question to be answered:** Identifies the main research question(s) being addressed by the evaluation. If directly related to a Learning Agenda question, details which and how it contributes to the priority question.
- **Lead Office:** The mission area and program office responsible for leading the evaluation, include any related programs.
- **Point(s) of Contact:** Identifies the individuals responsible for development of the evaluation work plan.
- **Rationale:** Purpose of inclusion and reason(s) deemed significant in accordance to the USDA's criteria:
 - Evaluations required by statute or congressional mandate.
 - Provides insight or potentially answers a priority question on the Learning Agenda.
 - Addresses a key area of concern or strategic priority.
 - Advances research and innovation priorities.
 - Fills a gap critical to the program, agency operations, and/or customers.
 - Critical to the USDA's Mission.
- **Purpose of the Evaluation:** Describes how the findings will be used.
- **Audience:** For whom the evaluation is completed.
- **Methods:** Describes the approach/methodology to be used to conduct the evaluation. Includes evaluation design and analytic considerations (e.g., is it a randomized control trial, outcome evaluation, process evaluation, etc.)
- **Information needed to conduct the evaluation:** Describes the data to be collected including data sources and how the data might be used to answer the questions, such as:
 - What administrative data, such as program data or outcomes, is already being conducted?
 - Is there a need for new data that can be collected by administering surveys, assessments, conducting interviews or focus groups?
- **Anticipated Challenges:** Identifies potential challenges to conducting the evaluation as well as any identified mitigation strategies.
- **Dissemination:** Describes how evaluation findings will be shared including the timing and the method/strategies used to share results of the evaluation.

Strategic Goal 1: Ensure USDA programs are delivered efficiently, effectively, and with integrity and a focus on customer service.

Evaluation 1.1	Rapid Cycle Evaluations of Operational Improvements in SNAP Employment & Training (E&T) Programs
Research Question(s)	What are the impacts of small-scale changes in State SNAP E&T Programs on participation, wages, skills acquisition, job placement and job retention?
Lead Office	Food, Nutrition, and Consumer Services (FNCS)
Point(s) of Contact	Melissa Abelev
Rationale	Addresses a key area of concern or strategic priority; Advances research and innovation priorities; Fills a gap critical to the program, agency operations, and/or customers.
Purpose	<p>This study will provide SNAP E&T providers with quick information on program adjustments that are helpful or are not working so they can quickly adjust program models in real-time with the goal of helping more families get on the path to economic independence.</p> <ul style="list-style-type: none"> This study provides funding for testing small scale improvements in State SNAP E&T programs. Examples might include improving notices to participants or developing videos to promote E&T providers. States would receive funding to improve the operations of their SNAP E&T programs and an independent evaluator would assess the effectiveness of the innovation over a short-term period, usually a few months. If warranted, a tested intervention may be adjusted based on ongoing or continual evaluation feedback to improve its effectiveness. The evaluator would also provide technical assistance to the States when developing or implementing the operational improvement.
Audience	<ul style="list-style-type: none"> Agency, States, SNAP E&T providers; SNAP E&T participants; employers.
Methods	<ul style="list-style-type: none"> Mixed methods from a series of small evaluations to commensurate with program changes implemented and selected for evaluation testing.
Information Needed	<ul style="list-style-type: none"> FNCS will collect information from States regarding SNAP E&T programs and their intended impacts and then collect data to measure impacts against hypothesized outcomes.
Anticipated Challenges	<ul style="list-style-type: none"> FNCS will need to prioritize which interventions to test; obtain buy-in from State and local providers; gather data; and analyze outcomes quickly. FNCS has a contract with a research firm. The firm will first collect the data; FNCS will help with identifying and recruiting the implementers.
Dissemination	<ul style="list-style-type: none"> FNCS will report findings via reports posted to the FNCS webpage and highlight the information through the SNAP Office of Employment and Training program partners.

Evaluation 1.2	Access, Participation, Eligibility, and Certification (APEC) IV Study
Research Question(s)	What are the Improper Payment Rates for the National School Lunch and Breakfast Programs?
Lead Office	Food, Nutrition, and Consumer Services (FNCS)
Point(s) of Contact	Melissa Abelev
Rationale	Evaluations required by statute or congressional mandate; Addresses a key area of concern or strategic priority.
Purpose	<p>This study series is critical in helping the USDA monitor improper payments and focus on integrity in two of its largest programs (National School Lunch Program and School Breakfast Program). The evaluation provides evidence on whether program adjustments are reducing error rates over time.</p> <ul style="list-style-type: none"> This periodic study examines improper payment rates in the school meals programs. Previous cycles identified the major sources of program errors at the national level and provided an evaluation of strategies to reduce errors. APEC IV will provide new, nationally representative estimates of error rates for School Year 2022–2023 and will build on prior versions by exploring means to update the estimates with more frequent and limited indicator data. The intended result is to provide quicker feedback on the effectiveness of policy and operational changes in reducing error and better data for targeted action, accelerating the cycle of program improvement.
Audience	<ul style="list-style-type: none"> Agency, Congress, the United States Office of Management and Budget (OMB), States, school food authorities and school nutrition professionals.
Methods	<ul style="list-style-type: none"> Onsite observations and data collection from a nationally-representative sample of school food authorities.
Information Needed	<ul style="list-style-type: none"> FNCS will gather information from school food authorities and families participating in the National School Lunch and Breakfast Programs to determine error rates as defined in the Improper Payments Elimination and Recovery Act (IPERA).
Anticipated Challenges	<ul style="list-style-type: none"> Gathering data within a highly condensed timeframe is imperative for accuracy.
Dissemination	<ul style="list-style-type: none"> FNCS will publish a report of findings on its website and report findings to OMB in regular improper payment annual reporting.

Evaluation 1.3	Research Priority Setting Process Inventory of Efforts
Research Question(s)	<p>How does the USDA garner stakeholder input across its research and science agencies? (current state)</p> <ul style="list-style-type: none"> • What are the best practices for gaining stakeholder input and collaborating across the science and research community at USDA? (future state) • How does USDA use this input when establishing its research and science priorities? (current state)
Lead Office	Research, Education, and Economics (REE)
Point(s) of Contact	Holly Wiggins, Office of the Chief Scientist (OCS)-REE
Rationale	Provides insight or potentially answers a priority question on the Learning Agenda; Addresses a key area of concern or strategic priority; Advances research and innovation priorities.
Purpose	<ul style="list-style-type: none"> • This assessment will provide insight into priority questions for USDA’s Learning Agenda questions 1a) What are the most effective methods for determining and prioritizing research and data needs collaboratively across USDA, including a rigorous process of obtaining stakeholder input? 1b) How do we measure success via Return on Investment (ROI)? • Completion of this assessment will yield an inventory of USDA-wide processes for subsequent analyses to identify best practices for ensuring proper representation of stakeholder input and promoting cross-departmental collaboration, pooling of resources, and sharing of data and tools. This effort is critical to advancing USDA’s mission in a coordinated fashion and will advance research and innovation priorities. • Findings will provide a baseline inventory of current priority-setting practices across the USDA and identify other best practices across other Federal science agencies.
Audience	<ul style="list-style-type: none"> • Internal (USDA Science Leadership & Community)
Methods	<ul style="list-style-type: none"> • Data Collection & Analysis: Define key terms (science, research, data) to scope the Learning Agenda question and level set an understanding across stakeholders. Define types of stakeholders for agencies falling within scope and each agency’s ideal state relative to stakeholder engagement, research prioritization, and measurement of ROI. Identify desired short-, mid-, and long-term outputs of the learning agenda process. • Surveys & Interviews: Begin gathering information about each agency’s stakeholder engagement, research prioritization, and ROI measurement processes. Survey agency leadership to understand how information is used to improve strategic as well as tactical, data-informed, and evidence-based decision-making in a timely manner. • Survey, Interview, Data Collection: Gather similar information from other external federal science agencies and begin benchmarking against them.
Information Needed	<ul style="list-style-type: none"> • List of major programs and POCs. • Evaluation team will need to develop a standard set of questions to facilitate interagency visioning exercises, process comparisons and mapping.

Evaluation 1.3	Research Priority Setting Process Inventory of Efforts
	<p>Note: Current plans are for all information collection to take place within the government and therefore will not require any information collection approvals.</p>
Anticipated Challenges	<ul style="list-style-type: none"> • Department-wide Coordination: The activities outlined to answer this question require significant coordination across USDA. Each mission area will have vested interests in their own priorities and needs. Stakeholders outside of the USDA will have their own set of priorities, which may or may not overlap with USDA priorities. This challenge could be solved with substantial leadership from the top of USDA to prioritize this significant evaluation.
Dissemination	<ul style="list-style-type: none"> • The information gathered through this inventory will provide the basis of a logic model and process map to identify critical points of the priority setting process. These products will be developed in the FY22-FY23 timeframe. • These data will inform subsequent investigations that will ultimately inform USDA leadership of best practices for coordinated stakeholder input gathering and priority setting.
Additional considerations	<ul style="list-style-type: none"> • Agile Framework & Process: It is critical that this process be continuous. Needs change as the environment changes. The needs of right now will most certainly not be the needs of next year, or even tomorrow. A process that continually collects and prioritizes new needs and identifies needs that are no longer necessary must be considered.

Strategic Goal 2: Maximize the ability of American agricultural producers to prosper by feeding and clothing the world.

Evaluation 2.1 Farm Loan Program Borrower Graduation	
Research Question(s)	How can Farm Loan Programs (FLP) measure and improve the effectiveness of its supervised credit activities and borrower graduation to commercial credit?
Lead Office	Farm Production and Conservation Service (FPAC)
Point(s) of Contact	Dana Richey
Rationale	Addresses a key area of concern or strategic priority.
Purpose	<ul style="list-style-type: none"> Help the agency to understand and develop specific supervised credit actions that result in the greatest probability of success for borrowers to sustain and grow their operations and to potentially graduate to commercial credit.
Audience	<ul style="list-style-type: none"> Farm Service Agency (FSA) Farm Loan Program leadership
Methods	<ul style="list-style-type: none"> Review internal USDA data, such as current and historical FLP loan activity; participation in acreage reporting, and Farm Programs, Natural Resources Conservation Services (NRCS) and Rural Development (RD) programs; macroeconomic data from Economic and Policy Analysis Division (EPAD), Economic Research Service (ERS), and National Agricultural Statistics Service (NASS). Survey current, former, non-graduated and graduated customers
Information Needed	<ul style="list-style-type: none"> Data from FLP and other USDA sources (e.g., EPAD, ERS, NASS, OCE). University and commercial lender studies. Borrower survey. Data governance, validation, and assessments to identify areas and levels of impact.
Anticipated Challenges	<ul style="list-style-type: none"> Data availability, including borrower responses. FLP has large data sets but it is spread across multiple systems, some of which are not integrated. Fragmented and static data can make it difficult to synthesize data and detect patterns and trends. FLP's Business Process Reengineering (BPR) and Information Technology (IT) Modernization plans for FY2021-FY2025 are intended to retire, integrate, and update systems, which will help to enable the kind of analysis needed to determine the efficacy of supervised credit activities. External factors impacting agricultural industries and the U.S. and global economies that can influence the success or failure of a farm operation regardless of the supervised credit tools utilized. Need employees and contractors with the appropriate skills sets.
Dissemination	<ul style="list-style-type: none"> Upcoming decisions that may inform the evaluation include a new administration, new strategic plan, and a new farm bill. The output will be data to make informed decisions about improving the loan programs for long term self-sustainability of customers. Results will be disseminated to internal stakeholders through regular reporting. Results will be disseminated to external stakeholders through public announcement and other public affairs notifications.

Additional considerations

- FLP is mandated to provide “supervised credit” to borrowers and is not to provide credit to loan applicants who have the ability to obtain credit from commercial lenders.
- An initial assessment and ongoing analysis of the effectiveness of FLP’s supervised credit activities will help the agency to understand and develop specific supervised credit actions that result in the greatest probability of success for borrowers to sustain and grow their operations and to potentially graduate to commercial credit. An additional benefit is to assist agency employees to prioritize their activities during periods of high workload that most benefit customers.
- This evaluation will lead to the ability to conduct the 2nd evaluation under goal 2.1 for the mission area.

Evaluation 2.2 Data Science Skills Improvement	
Research Question(s)	<p>How can APHIS maintain traditional science skills (scientific method, scientific thinking, critical thinking) and improve skills and knowledge in data and information sciences and analytics? Also:</p> <ol style="list-style-type: none"> 1. What data, information science, and analytic skills, knowledge and tools does APHIS have? 2. What data, information science and analytic skills, knowledge and tools does the Agency need? 3. What is the appropriate mix of hiring, training, partnerships, interns, contracts, and cooperative agreements to gain the skills, knowledge, and tools that we need as an agency? 4. How can the culture of APHIS be changed to be more agile to recognize and act on the need for improvements to skills and knowledge more quickly?
Lead Office	Marketing and Regulatory Programs (MRP)
Point(s) of Contact	Scott Moore, Animal and Plant Health Inspection Service (APHIS)
Rationale	Addresses a key area of concern or strategic priority; provides insight or potentially answers a priority question on the Learning Agenda, and fills a gap critical to the program, agency operations, and/or customers.
Purpose	<p>This assessment will provide insight into priority questions for USDA’s Learning Agenda question, “How can USDA maintain traditional science skills and improve needed skills and knowledge in data and information sciences and analytics to ensure our future ability to prevent and mitigate the spread of agricultural pests and diseases?”</p> <ul style="list-style-type: none"> • Findings will be used to 1) determine the gap in data, information science and analytic skills, knowledge and tools needed, 2) determine what the appropriate mix of solutions should be and 3) determine how to identify and address these gaps more quickly in the future.
Audience	<ul style="list-style-type: none"> • The principal audience for these activities includes USDA leadership, the analytic community, and the Human Resources (HR) leaders and professionals who support leaders and the analytic community.
Methods	<ul style="list-style-type: none"> • A variety of methods could be used including but not limited to: <ul style="list-style-type: none"> – Interviews. – Questionnaires. – Existing data. – Discussions with agency leaders especially those who have responsibilities for analytic communities. – Planning to address these issues. • It would be important that any effort to assess capability be credible sourced so that the USDA is not relying solely on self-reports of capability.
Information Needed	<ul style="list-style-type: none"> • The USDA will survey the various program units and human resources management to assess needs for specific data and analytic skills. • This effort will focus on APHIS data though there is a current effort to collect similar data for all of USDA. Those working on this project will make sure that the current data collection be used is appropriate.

Anticipated Challenges	<ul style="list-style-type: none"> • The information collection needed for this evaluation overlap a current USDA-wide effort to gather data. Every attempt will be made to make sure that the needed information is collected regardless of the source. • Data collection needs to be sufficient. The schedule includes additional time to determine whether additional data collection is needed. • There have been efforts to assess employee capabilities before although it is doubtful that those data are available and up to date.
Dissemination	<ul style="list-style-type: none"> • Decisions that could be informed by this evaluation include: <ul style="list-style-type: none"> – What training the data and analytics community needs? – What skills and knowledge that the USDA needs to hire (for both entry levels and experienced levels)? – What partnerships could help the USDA gain these skills and knowledge including what contracts and cooperative agreements are needed? – How we can respond more quickly to changes needed in the workforce? • Results will be shared with the data analytics community and their leaders and with others in APHIS through briefings and the availability of reports.
Additional considerations	<ul style="list-style-type: none"> • This will be a priority project for Policy and Program Development, HR and staffs involved in data and analytics. As of this writing, funding and experienced staff would be readily available to support the evaluation and dissemination of results. • Efforts build on an existing effort under way at the USDA. This effort may include some evidence building that is more specific and targeted than the USDA-wide effort. • At this writing, it is expected that those participating will be willing and active participants.

Strategic Goal 4: Facilitate rural prosperity and economic development.

The evaluations planned for FY 2022 in support of Strategic Goal 4 Objective 4.1 “Expand rural business opportunity and rural quality of life with access to capital; improved infrastructure, broadband access and connectivity; and support for workforce availability” focus on the economic and social impacts of rural infrastructure investments through USDA broadband, community facilities, and water programs. USDA Rural Development has prioritized strategic investment in rural infrastructure.

Both urban and rural areas need infrastructure investment. American Society of Civil Engineers (ASCE, 2017) estimated \$4.6 trillion in investment needed by 2025 to bring infrastructure to “good condition” (\$2.1 trillion investment gap). Infrastructure investments can potentially influence rural economic performance in three ways, expanding the use of existing resources (labor, capital, etc.), attracting additional resources to rural places, and making rural economies more productive. In addition, infrastructure investments have the potential to improve the quality of life of those served by infrastructure through improved access to resources needed.

Understanding the outcomes achieved by rural infrastructure investments is critical to achieving USDA Strategic Goal 4. The insight gained from these evaluations will be used to inform program implementation, policymakers, and public-private- philanthropic collaborations.

Evaluation 4.1	Economic and Social Impacts of E-connectivity in Rural Areas through USDA Broadband Programs
Research Question (s)	<p>What are the impacts of the Broadband Programs (Telecommunications Infrastructure Loans and Loan Guarantees Program, Farm Bill Broadband Loans and Grants, Community Connect Grants, Distance Learning and Telemedicine Grants and Loans, Broadband Initiatives Reprogram, and ReConnect Program) on broadband availability, use, and on economic (job saving and creation, property values, household income, poverty) and social (population growth, school quality, community health, healthcare access and availability, telemedicine, public safety) outcomes.</p> <ul style="list-style-type: none"> • How do the impacts vary across the rural-urban continuum and by initial broadband availability and use?
Lead Office	Rural Development (RD)
Point(s) of Contact	James Barham, Anil Rupasingha, and Kasey Martin
Rationale	Addresses a key area of concern or strategic priority and answers the priority question on the Learning Agenda.
Purpose	<p>This assessment will provide insight into priority questions for USDA’s Learning Agenda question, “What are the short-term and long-term economic and social impacts of RD programs, including indirect/spillover effects?”</p> <ul style="list-style-type: none"> • RD programs are designed to reach certain goals and beneficiaries. The RD broadband programs are designed to promote access to broadband in rural areas. E-connectivity is fundamental for economic development, innovation, advancements in technology, workforce readiness, and an improved quality of life. Reliable and affordable high-speed internet connectivity will transform rural America as a key catalyst for prosperity. The evaluation of each of these programs listed above on specific outcomes are to understand whether they work, as well as the level and nature of impacts on intended beneficiaries. • The findings of each evaluation will be used to assess the effectiveness and efficiency of USDA broadband programs. Impact evaluation helps

	<p>policy makers decide whether programs are generating intended effects; promotes accountability in the allocation of resources across RD programs; and fills gaps in understanding what works, what does not, and how measured changes in well-being are attributable to a particular program.</p>
<p>Audience</p>	<ul style="list-style-type: none"> • Program managers and field staff in Rural Utilities Services (RUS), RD state directors. • USDA senior leadership and policy makers in Congress. • Researchers, extension agents, and development practitioners concerned with rural community and economic development in general and with broadband development. • Taxpayers and the interested general public.
<p>Methods</p>	<ul style="list-style-type: none"> • Quantitative methods are the most appropriate and will include both ex ante and ex post approaches. The evaluation of new programs like ReConnect will be ex ante where we will attempt to predict the outcomes of intended changes since not enough time would have been elapsed by the year 2022 after the inception of the program. There may be opportunities to use qualitative methods in ex ante analysis of new programs to gauge potential impacts that the program may generate, the mechanisms of such impacts, and the extent of benefits to recipients from in-depth and group-based interviews. • The evaluation of other programs will utilize ex post approaches such as rigorous quasi-experimental methods, namely matching, matching with regression, difference in difference analysis, synthetic matching, and regression discontinuity. For example, one evaluation project will be to study the impact of Telecommunications Infrastructure Loans and Loan Guarantees Program on job creation program areas. Basic problem for estimation of these impacts is that the outcome of businesses if the area had not received a grant/loan is unknown (counterfactual). Therefore, the analysis requires comparing job created in program areas after the program to jobs created in non-program areas. Potentially, the project will utilize matching techniques to create a control group of businesses (counterfactual) from businesses located outside areas that are very similar to those located within service areas. And then utilize the difference in difference analysis to study the impact of the program on job creation due to the program.
<p>Information Needed</p>	<ul style="list-style-type: none"> • Administrative data available from the RUS will be used in combination with other external data available from the Bureau of the Census, Bureau of Economic Analysis, Bureau of Labor Statistics, and Federal Communication Commission. Some of the broadband administrative data are currently being used in several on-going evaluation projects. • We will also use proprietary data sets on business register such as National Establishment Time Series (NETS). Since RD does not have license to NETS, evaluation projects, that study the impact on businesses outcomes has to be conducted in collaboration with ERS who has the license to NETS. ERS and RD have several signed Memorandum of Understanding (MOU) for data-sharing.

Evaluation 4.1	Economic and Social Impacts of E-connectivity in Rural Areas through USDA Broadband Programs
	<ul style="list-style-type: none"> • To conduct the impact analysis, we will combine various datasets using program service area information such as service area boundaries available from program shapefiles, census blocks, census tracts, other sub-county fipscodes, and county fipscodes. • All the external data needed for analyses are secondary in nature and there is no need for new information collection.
Anticipated Challenges	<ul style="list-style-type: none"> • Accessing Administrative Data is a significant challenge to any analysis or evaluation work. Significant investment in IT modernization, data warehouse reconfiguration, data catalog, data dictionary, mechanisms for access to data are needed. • Breaking down silos – need buy-in from program areas to approach evidence building at the mission level. • Access to establishment level business data is a challenge. There is no publicly available data, and this requires writing research proposals to Census Bureau to use their confidential data or purchasing proprietary business data sets such as National Establishment Time-Series.
Dissemination	<ul style="list-style-type: none"> • The findings will be shared throughout RD mission area and wider USDA community through the dissemination of reports and presentations. The findings will be delivered in a manner that is most appropriate for the audience. • In addition to sharing the findings internally the evaluation studies will be used to generate peer-reviewed publications and conference presentations.

Evaluation 4.2	Assessing USDA Water Programs Impacts on Rural Water Systems ability to Improve Water Quality, Economic Development, Community Health and Other Outcomes in Rural Communities
Research Question (s)	<p>The primary objective of this evaluation project is to study the impacts of Rural Utilities Service (RUS) water and sewer loans and grants program (WEP) on changes in economic, demographic, and social outcomes in program recipient communities across the rural-urban spectrum.</p> <ul style="list-style-type: none"> • Some of these outcomes include water quality, property values (residential, agricultural, and commercial property values), business dynamics, income and earnings, poverty, population growth, and community health. • A secondary objective, which will be pursued if suitable data sets are available, is to investigate the efficiency with which water and sewer utilities that receive RUS grants and loans provide these services.
Lead Office	Rural Development (RD)
Point(s) of Contact	James Barham, Anil Rupasingha, and Kasey Martin
Rationale	Addresses a key area of concern or strategic priority and answers the priority question on the Learning Agenda
Purpose	<p>This assessment will provide insight into priority questions for USDA’s Learning Agenda question, “What are the short-term and long-term economic and social impacts of RD programs, including indirect/spillover effects?”</p> <ul style="list-style-type: none"> • Safe drinking water and sanitary waste disposal systems are vital not only to public health, but also to the economic vitality of rural America. Small and rural water and wastewater utilities across the U.S. face unique challenges. Many rural communities need to upgrade and repair their water and wastewater systems. • They often lack the necessary funding to meet the industry’s growing demands, exacerbated by lower population density, higher poverty levels, and labor and resource shortages. • The WEP provides rural communities technical assistance and financing necessary to develop drinking water and waste disposal systems. The WEP is the only Federal program exclusively focused on rural water and waste infrastructure needs of rural communities with populations of 10,000 or less. The evaluation of this program is to understand the level and nature of impacts on intended beneficiaries. • The findings will be used to assess the effectiveness and efficiency of the program. Impact evaluation helps policy makers decide whether the program is generating intended effects; promotes accountability in the allocation of resources across RD programs; and fills gaps in understanding whether the program actually works, and how measured changes in well-being are attributable to the program.
Audience	<ul style="list-style-type: none"> • Program managers and field staff in RUS, RD state directors. • USDA senior leadership and policy makers in Congress. • Researchers, extension agents, and development practitioners concerned with rural community and economic development in general and with broadband development. • Taxpayers and the interested general public.

Evaluation 4.2

Assessing USDA Water Programs Impacts on Rural Water Systems ability to Improve Water Quality, Economic Development, Community Health and Other Outcomes in Rural Communities

Methods

- Quantitative methods are the most appropriate. Since the administrative data on the program do not have service area shapefiles, analysts will not be able to demarcate exact service areas. Therefore, the analysis will be conducted at the county and sub-county level (cities and towns). We will also look into the possibility of studying the impact on water quality at the facility-level if there are ways to link water quality data at the facility-level.
- Basic problem for estimation of impacts is that the outcome studied in a recipient locality if the locality had not received a grant/loan is unknown (counterfactual). Therefore, the analysis requires comparing program outcomes in service areas after the program to outcomes in non-service areas.
- The quasi-experimental research design can be used to create a comparison control group of counties or towns/cities as counterfactual.
- One potential problem is that the WEP program is so widespread and has been around for a long time and therefore there might not be enough comparable counties or localities in a control group to choose from. If this is a problem, we will have to look into other quantitative approaches such as instrumental variable analysis.
- Then again there is the problem of finding good instruments for the program. If this is a problem, analysts may consider using the instrumental variables (IV) approach of Lewbel (2012), which relies on heteroscedasticity in the errors of a system of structural equations to identify the structural parameters of the system. Another alternative is to use regression discontinuity method using eligible population as a cut off variable.

Information Needed

- WEP administrative data available from the RUS will be used in combination with other external data available from the Bureau of the Census, Bureau of Economic Analysis, Bureau of Labor Statistics, and Environmental Protection Agency.
- The WEP administrative data are currently being used in an incidence analysis of the program that investigates how RUS water and sewer grants and loans are distributed geographically and how do eligible communities that have received such grants and loans differ from those that have not.
- We will also use proprietary data sets on business register such as National Establishment Time Series (NETS) and property values such as CoreLogic data. Since RD does not have license to NETS or CoreLogic data, evaluation projects that study the impact on businesses dynamics and property values are to be conducted in collaboration with ERS who has the license for both NETS and CoreLogic.
- ERS and RD have several signed MOU for data-sharing. To conduct the impact analysis, we will combine various datasets using program counties, cities, and towns information using sub-county and county fipcodes.

Evaluation 4.2	Assessing USDA Water Programs Impacts on Rural Water Systems ability to Improve Water Quality, Economic Development, Community Health and Other Outcomes in Rural Communities
	<ul style="list-style-type: none"> • All the external data needed for analyses are secondary in nature and there is no need for new information collection.
Anticipated Challenges	<ul style="list-style-type: none"> • Accessing administrative data is a significant challenge to any analysis or evaluation work. Significant investment in IT modernization, data warehouse reconfiguration, data catalog, data dictionary, mechanisms for access to data are needed. • Breaking down silos – need buy-in from program areas to approach evidence building at the mission level. • Access to establishment level business data is a challenge. There is no publicly available data, and this requires writing research proposals to Census Bureau to use their confidential data or purchasing proprietary business data sets such as National Establishment Time-Series.
Dissemination	<ul style="list-style-type: none"> • The findings will be shared throughout RD mission area and wider USDA community through the dissemination of reports and presentations. The findings will be delivered in a manner that is most appropriate for the audience. • In addition to sharing the findings internally the evaluation studies will be used to generate peer-reviewed publications and conference presentations.

Evaluation 4.3	Bridging Health and Education Gaps in access and Service through USDA Community Facilities investment in Rural Communities
Research Question(s)	What are the impacts of the Community Facilities Program investments in the areas of rural health? What are the impacts of the Community Facilities Program investments in the areas of education (school quality)?
Lead Office	Rural Development (RD)
Point(s) of Contact	James Barham, Anil Rupasingha, and Kasey Martin
Rationale	Provides insight and answers the priority question on the Learning Agenda.
Purpose	<p>This assessment will provide insight into priority questions for USDA’s Learning Agenda question, “What are the short-term and long-term economic and social impacts of RD programs, including indirect/spillover effects?”</p> <ul style="list-style-type: none"> • Essential community infrastructure is key in ensuring that rural areas enjoy the same basic quality of life and services enjoyed by those in urban areas. Community facilities program (CF) provides loans, grant and loan guarantees for essential community facilities in rural areas. The purpose of this evaluation is to focus on the two largest areas of investment in the CF investment portfolio – health care and education. • The evaluation will focus on the impact of CF on health care and education outcomes in recipient facilities and communities. (i.e. healthcare delivery, COVID-19 related health outcomes, hospital closings, and school quality). • The evaluation of this program is to understand the level and nature of impacts on intended beneficiaries. The findings will be used to assess the effectiveness and efficiency of the program. Descriptive analysis will help the agency better understand how the program is operating, who is receiving benefits, or how operations transpire at the local level. Impact evaluation will help policy makers decide whether the program is generating intended effects; promotes accountability in the allocation of resources across RD programs; and fills gaps in understanding whether the program works, and how measured changes in well-being are attributable to the program.
Audience	<ul style="list-style-type: none"> • Program managers and field staff in CF, RD state directors. • USDA senior leadership and policy makers in Congress. • Researchers, extension agents, and development practitioners concerned with rural community and economic development, and issues related to rural health, and rural education. • Taxpayers and the interested general public.
Methods	<ul style="list-style-type: none"> • Descriptive data analysis tools are employed in an investigation of the incidence of CF, identifying areas and populations benefiting from the programs and comparing those to eligible areas and populations not benefiting from the programs. • In depth evaluations utilize rigorous quasi-experimental methods, namely matching, matching with regression, difference in difference analysis, synthetic matching, and regression discontinuity. For example, one aspect of evaluation is to focus on the impact of CF on COVID related outcome in rural communities. This analysis requires comparing these outcomes in program areas after the program to outcomes in non-program areas. The project may utilize matching techniques to create a control group of localities (counterfactual) from non-

Evaluation 4.3 Bridging Health and Education Gaps in access and Service through USDA Community Facilities investment in Rural Communities

	<p>program localities areas and then utilize Difference in Difference statistical analysis to study the impact of the program on COVID outcomes.</p>
Information Needed	<ul style="list-style-type: none"> • Administrative data available from the CF on their investment portfolio in the area of health and education will be used in combination with other external data available from the Bureau of the Census, Bureau of Economic Analysis, Bureau of Labor Statistics, HRSA Federal Office of Rural Health, Rural Health Information Hub, CDC, Johns Hopkins, Department of Education, Opportunity Index, National Rural Education Association, Annie E. Casey Foundation. • Example of funding uses for CF. • Health portfolio includes: Healthcare facilities such as hospitals, medical clinics, dental clinics, nursing homes, assisted living facilities, or facilities that provide for the prevention, treatment, and recovery of substance misuse disorders. • Educational portfolio includes: Educational services such as schools, colleges and universities, community colleges, charter schools, vocational and technical schools, libraries, and dormitories.
Anticipated Challenges	<ul style="list-style-type: none"> • Accessing Administrative Data is a significant challenge to any analysis or evaluation work. Significant investment in IT modernization, data warehouse reconfiguration, data catalog, data dictionary, mechanisms for access to data are needed. • Breaking down silos – need buy-in from program areas to approach evidence building at the mission level. • Access to establishment level business data is a challenge. There is no publicly available data, and this requires writing research proposals to Census Bureau to use their confidential data or purchasing proprietary business data sets such as National Establishment Time-Series.
Dissemination	<ul style="list-style-type: none"> • The findings will be shared throughout RD mission area and wider USDA community through the dissemination of reports and presentations. The findings will be delivered in a manner that is most appropriate for the audience. • In addition to sharing the findings internally the evaluation studies will be used to generate peer-reviewed publications and conference presentations.

Strategic Goal 5: Strengthen the stewardship of private lands through technology and research.

Evaluation 5.1	Software Platform Efficiency
Research Question(s)	What is the influence on efficiency (quality and timeliness) of service delivery to external customers utilizing newly developed software platforms?
Lead Office	Farm Production and Conservation Service (FPAC)
Point(s) of Contact	Ken Hill
Rationale	Addresses a key area of concern or strategic priority
Purpose	<ul style="list-style-type: none"> Help agencies use data and trend analysis to target resources towards software platforms that increase the quality of the products and services while decreasing delivery time to customers.
Audience	<ul style="list-style-type: none"> Investment Review Boards, agency leadership, and IT
Methods	<ul style="list-style-type: none"> Comparing “cycle time” and “optimally productive office” data throughout the implementation of new software systems. Controls will need to be implemented to isolate the effects of the software on delivery time and product quality before, during, and after implementation to improve the decision-making value. Types of controls needed are yet to be determined.
Information Needed	<ul style="list-style-type: none"> Potential data sources would be “cycle time study”, “optimally productive office”, quality assurance reviews, internal audits, and current progress reporting systems. Specific data point generation is yet to be determined. Data governance and validation will need to be done throughout the process and analysis will be done to compare quality and delivery time. Outcomes could be reported through ongoing dashboards using regularly scheduled data snapshots leading to an annual report.
Anticipated Challenges	<ul style="list-style-type: none"> Challenges could include isolating the effects of individual systems, which could be addressed through study design and coordinating with agencies on releases of software changes. Additionally, if data potentially shows that current systems or ongoing implementation of new systems does not provide for improved timeliness or quality, agencies would be reluctant to change direction, but by utilizing the information provided by answering this question, we could make better decision in the future to improve opportunities for success on decisions related to software and IT changes. Using this information to make better decisions in the future would be the long-term solution to these concerns.
Dissemination	<ul style="list-style-type: none"> The output will be data to make informed decisions about improving software systems to help provide quality products in a timely fashion while reducing burden on staff. Results will be disseminated to internal stakeholders through regular reporting and the IRB reports. Results will be disseminated to external stakeholders through public announcement and other public affairs notifications as appropriate.

Evaluation 5.1

Software Platform Efficiency

Additional considerations

- Upcoming decisions that may inform the evaluation include a new administration, new strategic plan, and a new farm bill.
- Continual review of new technology available will be needed.
- Current system may not be efficient but will take time to convert and an ROI will be needed to make informed decisions.
- Agencies have committed resources to systems that may not improve efficiency, so conversion may take time.

Evaluation 5.2	Conservation Practice Effect
Research Question(s)	What suites of conservation practices are most effective for addressing soil health, water resources, and critical wildlife habitat?
Lead Office	Farm Production and Conservation Service (FPAC)
Point(s) of Contact	Louis Aspey (NRCS)
Rationale	Addresses a key area of concern or strategic priority
Purpose	<ul style="list-style-type: none"> Help agencies prioritize conservation practices that have the highest impact on critical resource concerns of private lands that effect agricultural business sustainability and the users of those resources once they leave private agriculture ground.
Audience	<ul style="list-style-type: none"> Internal and external conservation planners and agricultural producers
Methods	<ul style="list-style-type: none"> Comparing past and current impact/outcome data from the agencies, private industry, land grant universities, and research agencies in USDA and other Departments.
Information Needed	<ul style="list-style-type: none"> Potential data sources would be CEAP data, NRCS outcomes data, land grant university studies, USDA research agency data and other Department research information, and other private sources. Data governance and validation will need to be done throughout the process and analysis will be completed to compare outcome data, economic data, and identify areas of multiple beneficial impacts to help improve the targeting of resources to improve effective delivery of services for maximum benefit of priority resource concerns. Current staff and contractors are working on the internal data. Additional coordination with research agencies and others will be required to answer this question.
Anticipated Challenges	<ul style="list-style-type: none"> Challenges could include regional and localized differences in impact based on conditions such as soil type, wildlife species, water supply, and water chemistry. Design of study could be done to account for these differences. Additionally, coordination of information between partners/entities could be difficult based on the goal of the study. Design would have to account for goals and adjust to make comparisons on equal merit. This would fit under the coordinated efforts of the Secretary's Innovative Ag Agenda.
Dissemination	<ul style="list-style-type: none"> Upcoming decisions that may inform the evaluation include a new administration, new strategic plan, and a new farm bill. The output will be data to make informed decisions about practice design and requirements, training of staff and contractors, and outreach/marketing tools to agricultural producers. Results will be disseminated to internal stakeholders through updated training and technical standards. Results will be disseminated to external stakeholders through public announcement and other public affairs notifications as appropriate.

Additional considerations

- There are many sources of data and evaluation that will need to be coordinated from universities, private research, other research agencies, and private industry and customers.
- This question will be a foundation to starting question 5.3 that relates to geographic impact and prioritization.

Evaluation 5.3	Cross-Departmental Assessment Supporting Technology Adoption Study (Assessment Phase)
Research Question (s)	1a) What are the barriers to technology and research adoption? 1b) How do we measure technology and research adoption and define its success?
Lead Office	Research, Education, and Economics (REE)
Point(s) of Contact	Holly Wiggins, Office of the Chief Scientist (OCS)-REE
Rationale	Addresses a key area of concern or strategic priority.
Purpose	<p>Ultimately this larger, multi-year project supports the activities outlined in Objective 5.1 of the USDA Strategic Plan to enable USDA to provide “accessible and relevant conservation tools and technologies [which] deliver value to [their] customers through improved engagement and implementation of customized, site-specific conservation plans.”</p> <ul style="list-style-type: none"> • This assessment will be the first phase (Assessment Phase) of a larger, cross-departmental study designed to answer the questions, 1a) What are the barriers to technology and research adoption? 1b) How do we measure technology and research adoption and define its success? Completion of this assessment will yield a comprehensive understanding of current conservation data collection in the areas of water quality, greenhouse gases and carbon sequestration, renewable energy, and food loss and waste. • Phase 1: Assessment. A cross-departmental evaluation team would leverage the current work being done as part of the Secretary’s Agriculture Innovation Agenda (AIA). The AIA team and the cross-departmental evaluation team are seeking answers to the question, “What are the barriers to research (technology, practices, etc.) adoption by stakeholders?” Starting with the field of conservation practices, the team seeks to understand what lessons can be learned and extrapolated and applied to other adoption use-cases. Through this assessment, AIA team and the cross-departmental evaluation team would increase the USDA’s understanding of the adoption of conservation practices and improve the timeliness and access to conservation information by developing a powerful new tool to measure and track progress.
Audience	<ul style="list-style-type: none"> • Decision makers who can leverage this information to improve the administration of conservation programs. • Decision makers who need to consider research priorities, resource allocation, and Return on Investment (ROI). (For example, better understanding regional adoption of conservation practices will improve USDA’s ability to target under-treated acres, stretching conservation dollars further.) • External stakeholders and Decision makers in need of conservation adoption data to inform program administration. • Private industry companies, non-governmental organizations, and states who administer conservation programs and currently lack a consistent way to track progress and document results. • All USDA program decision makers invested in research, technology, and user adoption to ensure success and impact. (Lessons learned from this evaluation will have transferable benefits to other USDA programs.)

<p>Methods</p>	<ul style="list-style-type: none"> • <u>Surveys</u>: Mining data from relevant surveys such as the USDA Census of Agriculture (NASS), the Agricultural Resource Management Survey (ARMS) (ERS & NASS), the Conservation Effects Assessment Project (CEAP) (NRCS & NASS), and other ad-hoc survey needs previously discussed. • <u>Reports</u>: Harvesting trends and findings from recent reports such as the Conservation Trends Report. These reports provide key data for understanding baseline adoption of conservation practices by which the cross-departmental evaluation team can utilize and work with partners to understand the socioeconomic and behavioral factors that affect adoption of practices ultimately reducing the barriers to adoption innovations. • <u>Logic Model</u>: The development of a logic model for these questions will help to identify the shared relationships among the resources, activities, outputs, outcomes, and impact for this effort. It will depict the relationship between the current activities and its intended effects. • <u>Agile Framework & Process</u>: Finally, it is critical that this process be continuous. Needs change as the environment changes. The needs of right now will most certainly not be the needs of next year, or even tomorrow. A process that continually collects and prioritizes new needs and identifies needs that are no longer necessary must be considered.
<p>Information Needed</p>	<ul style="list-style-type: none"> • The AIA team is actively conducting a comprehensive assessment of current conservation data collection in the areas of water quality, greenhouse gases and carbon sequestration, renewable energy, and food loss and waste. Many of the agricultural practices included have additional on- and off-farm benefits. For example, the USDA currently collects a wealth of data on commodity production, but information on how our food is produced and the conservation practices being employed is harder to obtain.
<p>Anticipated Challenges</p>	<ul style="list-style-type: none"> • <u>Time Constraints</u>: Understanding behavior and barriers to adoption can be a challenging socioeconomic long-term question that may expand beyond this five-year Learning Agenda. It may be pertinent to manage expectations in short-, mid-, and long-term expectations requiring this LA question to be continued across multiple LA cycles. • <u>USDA-wide Coordination</u>: The activities outlined to answer this question require significant coordination across USDA. Each mission area will have vested interests in their own priorities and needs. Stakeholders outside of the USDA will have their own set of priorities, which may or may not overlap with agency priorities. This challenge could be solved with substantial leadership from the top of USDA to prioritize this LA initiative. • <u>External Approvals</u>: Data collection will require resources and Office of Management and Budget (OMB) approval for surveys. • <u>Staffing Resources</u>: Continual evaluation and adjustment will require significant staff time and leadership to determine when to adapt strategies and when to continue through the challenges that arise. This challenge could be solved with enough staff time devoted to completing this LA initiative and/or contractor support as listed above.

Evaluation 5.3

Cross-Departmental Assessment Supporting Technology Adoption Study
(Assessment Phase)

Dissemination

- The cross-departmental evaluation team would consolidate their knowledge and findings into a set of USDA best practice recommendations. These recommendations would be divided into those where USDA wide uniformity is necessary for success and those where mission area (agency) customization could be tolerated without risk to success. Adoption of the proposed recommendations would be dependent upon USDA leadership feedback and sponsorship.

Additional considerations

- Answering these questions requires investments in comprehensive, socioeconomic research and data to understand how information and best practices are being transferred to stakeholders and the extent to which stakeholders are adopting these practices. Ideally, this proposed question will be a USDA-wide effort, led by the REE mission area/OCS. The REE/OCS Lead will establish a cross-USDA evaluation working group made up of the co-leads and contributing mission areas (agencies).

Strategic Goal 7: Provide all Americans access to a safe, nutritious, and secure food supply.

Evaluation 7.1	FSIS Employee Retention Evaluation
Research Question(s)	To what extent does FSIS know why employees leave (non-retirement-related)?
Lead Office	Food Safety and Inspection Service (FSIS)
Point(s) of Contact	Susan Cottrell
Rationale	Provides insight or potentially answers a priority question on the Learning Agenda. ¹ , Addresses a key area of concern or strategic priority, Fills a gap critical to the program, agency operations, and/or customers, Critical to USDA’s mission.
Purpose	<ul style="list-style-type: none"> This evaluation will help inform retention strategies and potentially identify specific or system issues. It will help determine why employees leave "early". If they leave early because of a perceived mismatch between the employee’s skills and position, the agency can determine if there is a way to address these mismatches.
Audience	<ul style="list-style-type: none"> All FSIS Offices.
Methods	<ul style="list-style-type: none"> FSIS will conduct exit surveys with employees separating from the agency for reasons other than retirement. Analysis of exit surveys will be conducted to identify trends for reasons why employees leave FSIS.
Information Needed	<ul style="list-style-type: none"> In addition to survey data, FSIS may also use employment data to inform the analysis. The agency may also use data analysts and statistical analysis software to analyze the data.
Anticipated Challenges	<ul style="list-style-type: none"> Capturing feedback from all employees who leave the USDA (some may leave without prior notice); Developing a comprehensive exit survey designed to identify departure reasons specific to the USDA’s workforce; Quality and timeliness of responses; and Limited ability to make changes based on survey results.
Dissemination	<ul style="list-style-type: none"> Results will be shared with agency offices and FSIS leadership using the agency’s enterprise governance process.
Additional considerations	<ul style="list-style-type: none"> Dissatisfied separating employees may be more motivated to respond to the survey, which would bias the results. Lower number of separations by non-field personnel results in more time needed to collect data to inform actionable outcomes. Additional separation data may be collected through informal interviews.

¹Retaining employees is essential to FSIS achieving its mission to protect the public’s health by ensuring the safety of meat, poultry, and processed egg products. In particular, field personnel play an integral role in verifying and enforcing compliance of food safety regulations.

Evaluation 7.2	Review of evidence on WIC participation among Women and Birth Outcomes
Research Question (s)	Is WIC participation associated with birth outcomes, including birth weight; preterm delivery; maternal mortality and morbidity?
Lead Office	Food, Nutrition, and Consumer Services (FNCS)
Point(s) of Contact	Melissa Abelev
Rationale	Provides insight or potentially answers a priority question on the Learning Agenda, Addresses a key area of concern or strategic priority.
Purpose	<p>The Women, Infants, and Children (WIC) program provides nutritious, supplemental food to nutritionally at-risk pregnant and post-partum women in order to improve their health and birth outcomes. This study will examine the literature to determine how well program outcomes align with goals.</p> <ul style="list-style-type: none"> Studies have shown that WIC participation during pregnancy is associated with a reduced risk of adverse pregnancy outcomes, including preterm delivery. Studies that are more recent employ updated statistical methods to avoid limitations of earlier studies. This review will update the evidence on the association of WIC participation during pregnancy and maternal and infant outcomes, including maternal mortality and morbidity, preterm delivery, infant mortality, low birth weight, and small-for-gestational age. Recommendations for future research on WIC participation and pregnancy risk and outcomes will be included in the review. This review will also inform FNS communication regarding the WIC Program. Understanding why people join and leave the program will be helpful to policy decisions. This is not an evaluation but evidence building to conduct future program evaluations.
Audience	<ul style="list-style-type: none"> Agency, Congress; WIC Agencies and public health stakeholders
Methods	<ul style="list-style-type: none"> Literature review
Information Needed	<ul style="list-style-type: none"> FNCS will conduct a literature review of studies examining the association between WIC and/or nutrition and birth outcomes. Studies will be drawn from a variety of peer reviewed, scientific literature.
Anticipated Challenges	<ul style="list-style-type: none"> This study will depend on finding sufficient literature examining this topic.
Dissemination	<ul style="list-style-type: none"> FNCS will publish the findings in a report on the website. https://www.fns.usda.gov/research-analysis
Additional considerations	<ul style="list-style-type: none"> None

Evaluation 7.3	Review of Evidence on Summer Feeding Programs and Models and Food Security, Diet, and Health of Children and Adolescents
Research Question (s)	What is the association of food security and summer feeding program participation?
Lead Office	Food, Nutrition, and Consumer Services (FNCS)
Point(s) of Contact	Melissa Abelev
Rationale	Addresses a key area of concern or strategic priority
Purpose	<p>The Summer Food Service Program (SFSP) helps fill a gap in access to meals during the summer when children lose access to the National School Lunch and Breakfast Programs at school. Prior evidence suggests that adolescents are particularly at risk. This study will help provide data on adolescents' use of the SFSP and its relationship to food security.</p> <ul style="list-style-type: none"> • Studies have demonstrated that receipt of food or food benefits during the summer when school is not in session is associated with improved food security of children. This review will summarize all evidence on the association of summer feeding programs and models of delivery on food security, diet, and health-related outcomes of children and adolescents. Recommendations for future research on summer feeding models will be included in the review. This review will also inform FNS communication regarding summer feeding programs and models.
Audience	<ul style="list-style-type: none"> • Agency; Congress; Schools; Summer Food providers
Methods	<ul style="list-style-type: none"> • Literature Review
Information Needed	<ul style="list-style-type: none"> • FNCS will gather and review relevant literature from the peer-reviewed, scientific literature.
Anticipated Challenges	<ul style="list-style-type: none"> • This study will depend on finding sufficient literature examining this topic.
Dissemination	<ul style="list-style-type: none"> • FNCS will distribute the report on its website https://www.fns.usda.gov/research-analysis
Additional considerations	<ul style="list-style-type: none"> • None