AUTHORIZATION REQUEST FOR FY 2023

CBB Budget Category: Research

Name of Contractor: Foundation for Meat and Poultry Research and Education

Name of Organization Subcontracting:

Start Date: 10/1/2022

End Date: 9/30/2025

AR OVERVIEW

AR Purpose and Description

The strategies and tactics described in this Authorization Request (AR) support the Checkoff program category for Research. Detailed descriptions for post-harvest beef safety research and education and outreach are included in the following section. Around the world, consumers of U.S. beef demand high quality, safe and nutritious products. Beef safety and nutrition research play key roles in the dialogue with domestic and foreign consumers of U.S. beef as their access to protein choices expands and the demand for product information continuously increases. Effective communications must be based in science. Disseminating science-based information and data to diverse audiences is a fundamental role that will be filled through the programs outlined in this AR. Collaborative efforts will be utilized to ensure broad distribution and effective engagement with all stakeholders.

FY23 CBB/BPOC Funding Request		
Direct Costs	**Implementation**	**Total**
$300,000	$150,000	$450,000

Beef Industry Long Range Plan (LRP) Core Strategies Addressed by this AR

(Check all that apply)

Drive Growth in Beef Exports	Grow Consumer Trust in Beef Production	Develop & Implement Better Business Models & Value Distribution Across All Segments	Promote & Capitalize on the Multiple Advantage of Beef	Improve the Business & Political Climate of Beef	Safeguard & Cultivate Investment in Beef, Industry Research, Marketing & Innovation
☐	■	☐	■	■	■

PROGRAM INFORMATION FOR THIS AR

Tactic A

Tactic Name: Post-Harvest Beef Safety Research, Knowledge Dissemination and Stakeholder Engagement

Tactic Description

Food safety is critical to ensuring consumer confidence in the beef products they choose to buy and feed their families. While current levels of pathogen contamination on beef remain relatively low, there continue to be areas for improvement in its safety profile. Sampling results from the Food Safety and Inspection Service (FSIS) show the prevalence of Shiga toxin-producing *Escherichia coli* (STEC) O157:H7 at 0.15 percent for raw ground beef components and 0.19 percent for ground beef in calendar year (CY) 2021.[1] In June 2020, FSIS announced plans to expand routine verification testing to include the six non-O157 STECs (O26, O45, O103, O111, O121, or O145) in addition to *E. coli* O157:H7, to ground beef, bench trim, and raw ground beef components other than raw beef manufacturing trimmings.[2] The agency also intends to test for these non-O157 STECs in retail ground beef and imported raw beef products. This expansion could have a significant impact on the number of beef samples testing positive for STEC as FSIS estimates that for everyone O157:H7 positive there are 2-3 non-O157 positives.[3]

There are additional pathogens of concern on beef products. The prevalence of *Salmonella* spp. on raw ground beef components is 6.2 percent and 2.1 percent in raw ground beef in CY 2021.[4] FSIS' "Nationwide Microbiological Baseline Data Collection Program: Beef-Veal Carcass Survey," conducted from August 2014 – December 2015 showed 27 percent of beef carcasses tested positive for *Salmonella* post hide removal.[5] Because of the public health concerns around *Salmonella*, FSIS issued a "Roadmap to Reducing *Salmonella*" as well as held a public meeting on the state of science in 2020.[6,7] Together, these activities outline programs that FSIS and industry can undertake to reduce *Salmonella* on meat products, including performance standards and research among other efforts. FSIS has also indicated they are considering replicating activities undertaken to reduce *Salmonella* in poultry for beef if they are successful.[8] Contamination of ready-to-eat meat and poultry, which is not broken out by species, by *Listeria monocytogenes* has remained relatively steady at a little more than one-half of one percent over the last few years.[9]

Research shows that post-harvest, multiple hurdle beef safety interventions and other process controls are effective in reducing the prevalence of pathogenic bacteria. However, the threat posed by pathogens is not static, rather it is constantly emerging and antimicrobial interventions and other process controls must be constantly upgraded to address these emerging threats. Without these continuous improvements, incidence levels would have most likely increased. Many of the interventions and process controls

now used in the beef industry are the result of Checkoff-funded research and continued investment is necessary for further improvement.

According to the Centers for Disease Control and Prevention 2020 FoodNet report, foodborne infections declined likely due to COVID-19.
However, Salmonella and *Campylobacter* are the most common infections.[10] The report notes STEC illnesses have decreased by 37 percent when comparing 2020 to 2017-2019 data.[11] The incidence of illnesses attributed to Listeria has remained relatively unchanged for the past several years at 0.2 cases per 100,000 population.

The Interagency Food Safety Analytics Collaboration (IFSAC) released foodborne illness attribution estimates for 2019 in late 2021. IFSAC used outbreak data to update previous analyses to estimate which foods are responsible for illness related to *Salmonella*, *Escherichia coli* O157, *Listeria monocytogenes*, and *Campylobacter.* IFSAC considers these priority pathogens because of the frequency (estimated 1.9 million illnesses each year combined) and severity of illness they cause, and because targeted interventions can significantly reduce these illnesses. The report noted that *Salmonella* illnesses came from a wide variety of foods, with more than 75 percent coming from seven food categories. For the first time, beef is not among the top seven foods. However, it is listed as the eighth most likely cause of *Salmonella* illness and is attributed to 6.2 percent of illnesses, an increase from the 2018 report which attributed 5.7 percent of *Salmonella* illnesses to beef. Nearly 80 percent of *E. coli* O157 illnesses were linked to vegetable row crops, *e.g.*, leafy greens, and beef. Specifically, beef is estimated cause 23.4 percent of STEC O157 illnesses, which is down from 25.5 percent in 2018. [12]

Pathogens in beef remain a critical public health concern and ground beef remains a significant vulnerability. Over the last few years, there have been several high profile pathogen outbreaks attributed to ground beef. Healthy People 2030 have set public health goals to reduce illnesses attributed to STEC, *Salmonella* and *Listeria* as well as to reduce outbreaks attributed to STEC, *Campylobacter, Listeria, and Salmonella* infections linked to beef.[13] It is clear regulatory and public health agencies are committed to reducing foodborne illnesses attributed to beef. While most consumers trust America's meat industry to create products that are safe to eat, research shows that food safety is an ongoing concern, with concerns about raw meat contamination higher than that of raw produce.[14]

Like pathogens, science and detection technologies have also continued to evolve. Public health officials and regulatory agencies are using whole genome sequencing (WGS) technology for genetic typing of bacteria, including pathogens relevant to food safety. WGS allows for significant improvement in foodborne disease outbreak detection and source traceback compared to earlier technologies. FSIS announced upcoming changes to the laboratory sampling datasets to include the FSIS Number – the whole genome sequencing (WGS) identifier assigned for pathogens – and allele codes with date stamps. The FSIS Number update will apply to sampling results for *Listeria monocytogenes*, *Salmonella*, *Campylobacter*, and Shiga toxin-producing *Escherichia*

coli, or STEC. In July, FSIS intends to publicly post this information for sampling results for October 2013 through March 2022. Subsequent dataset postings will include this information moving forward.[15] To improve public health, it is important to gain a better understanding of the virulence factors of pathogens found on beef. Learning why and how pathogens cause illness will enable the beef industry to more appropriately target interventions to minimize their presence and make improvements in public health.

The economic burden of illness is another factor in the costs associated with pathogen contamination. According to the U.S. Department of Agriculture's Economic Research Service, illnesses attributed to *Salmonella* cost $3.6 billion, STEC (non-O157 and O157) cost nearly $300 million, and *Listeria* costs $2.8 billion in the 2013.[16] These costs resulted from medical costs, lost productivity, and death. There are no acceptable levels for pathogenic organisms in beef products as evidenced by the level of foodborne illnesses in the United States. Because *Salmonella* is a significant source of illnesses, hospitalizations, deaths and related costs, research efforts focused on mitigating this threat in the beef supply will continue to be a key priority.

Another beef industry cost associated with pathogen contamination is the reduced value of products testing positive. When a raw material or finished product tests positive for a pathogen, it cannot enter commerce unless it is thermally processed. If the product has already entered commerce, the product is subject to a recall. In both cases, a substantial reduction in value for the pathogen positive product and significant recall costs are incurred by the packer or processor.

The total costs of safety interventions and processes, medical and missed opportunity claims, recalls and reduced value of contaminated products cannot always be passed on to consumers. Most often these costs are borne by the industry and eventually passed on to beef producers through reduced live cattle values. Accordingly, there is a direct economic incentive for beef producers to invest in beef safety research to further reduce pathogenic contamination levels in raw materials and finished products to increase the value of their cattle and their return on investment.

For the foregoing reasons, foundational, applied research is the focus in this program. Integrated communication and educational initiatives will ensure that the data collected are shared with targeted audiences for application across the processing sectors. Outreach with stakeholder groups will inform and impact collaborative research and communication programs addressing the safety of U.S. beef products.

The beef industry must consistently produce products that are safe and wholesome to maintain and bolster consumer trust and grow demand. International and domestic consumers must have confidence that the U.S. beef items they and their families consume are produced using the best processes available, which are supported by science-based research. The threats in the microbial environment are constantly evolving and posing new risks to the safety of the beef supply. These changes can lead to new regulatory initiatives and require adaptations or scientific support for compliance. Yet, not all research is applicable to all facilities as they vary in size,

capacity and types of beef products produced. It is imperative that the beef processing industry have access to the most up-to-date science-based research to mitigate both current and emerging threats. A one size fits all approach does not work when ensuring safe beef. As a result, while there may be a large body of scientific evidence in the literature, post-harvest beef safety research investments must continue to address these differences and emerging challenges. This tactic provides practical, science-based research that can be used by in-plant personnel and others to ensure the safety of the U.S. beef supply.

A standing advisory committee of industry and academic experts and practitioners will establish research priorities and evaluate proposals. As needed, a select group of beef industry members may be identified to develop and evaluate specific research projects in consultation with the standing advisory committee. Based upon their recommendations, contracts are awarded based on merit and priority need. Funding partners are identified, as appropriate. The Foundation, as a contractor to the Beef Checkoff, has a demonstrated history of bringing together funding partners. After the award, the research contracts will be closely monitored to ensure timely and complete research work products are available for distribution to the industry.

Research findings will be disseminated to stakeholders and safety professionals through many means. Investigators will present their research at regional, national and international technical conferences as well as publish work in peer-reviewed materials. Research findings will also be shared with regulatory agencies to ensure they have all the evidence when making decisions impacting beef safety. AR activities and related outcomes will be shared during sponsorship events and exhibits. The dissemination of research findings to the food safety community will aid the safety of, and consumer confidence in, beef products.

Citations:

1. Sampling Results for FSIS Regulated Products. https://www.fsis.usda.gov/sites/default/files/media_file/2022-04/Sampling_Project_Results_Data_20210401_20220331.pdf. Accessed June 16, 2022.

2. FSIS Notice and request for comments: Expansion of FSIS Shiga Toxin-Producing *Escherichia coli* (STEC) Testing to Additional Raw Beef Products. 85 *Fed. Reg.* 34397-34402 (June 4, 2020).

3. Personal Correspondence. KatieRose McCullough, Ph.D., MPH and Paul Kiecker, Administrator, FSIS.

4. Sampling Results for FSIS Regulated Products. https://www.fsis.usda.gov/sites/default/files/media_file/2022-04/Sampling_Project_Results_Data_20210401_20220331.pdf. Accessed June 16, 2022.

5. Nationwide Microbiological Baseline Data Collection Program: Beef-Veal Carcass Survey. https://www.fsis.usda.gov/node/1968. Accessed June 22, 2021.

6. FSIS Roadmap to Reducing Salmonella: Driving change through Science Based policy. https://www.fsis.usda.gov/wps/wcm/connect/388d5b27-b821-42ba-a717-526f3bc68b4a/FSISRoadmaptoReducingSalmonella.pdf?MOD=AJPERES. Accessed June 22, 2021.

7. https://www.federalregister.gov/documents/2020/08/14/2020-17827/salmonella-state-of-the-science. Accessed June 22, 2021.

8. Reducing *Salmonella* in Poultry. https://www.fsis.usda.gov/inspection/inspection-programs/inspection-poultry-products/reducing-salmonella-poultry

9. Sampling Results for FSIS Regulated Products. https://www.fsis.usda.gov/sites/default/files/media_file/2022-04/Sampling_Project_Results_Data_20210401_20220331.pdf. Accessed June 16, 2022.

10. Centers for Disease Control and Prevention (CDC). Decreased Incidence of Infections Caused by Pathogens Transmitted Commonly Through Food During the COVID-19 Pandemic — Foodborne Diseases Active Surveillance Network, 10 U.S. Sites, 2017–2020. MMWR Morb Mortal Wkly Rep. 2021 September 23.

11. Ray LC, Collins JP, Griffin PM, et al. Decreased Incidence of Infections Caused by Pathogens Transmitted Commonly Through Food During the COVID-19 Pandemic — Foodborne Diseases Active Surveillance Network, 10 U.S. Sites, 2017–2020. MMWR Morb Mortal Wkly Rep 2021;70:1332–1336. DOI: http://dx.doi.org/10.15585/mmwr.mm7038a4

12. Interagency Food Safety Analytics Collaboration. Foodborne illness source attribution estimates for *2019* for *Salmonella*, *Escherichia coli* O157, *Listeria monocytogenes*, and *Campylobacter* using multi-year outbreak surveillance data, United States. Atlanta, Georgia and Washington, District of Columbia: U.S. Department of Health and Human Services, CDC, FDA, USDA/FSIS. *October 2021.*

13. https://health.gov/healthypeople/objectives-and-data/browse-objectives/foodborne-illness. Accessed June 22, 2021.

14. Technomic. NAMI Protein PACT Q1 2022 Report. April 25, 2022.

15. *FSIS Constituent Update.* https://www.fsis.usda.gov/news-events/news-press-releases/constituent-update-may-20-2022. Accessed June 17, 2022.

16. Hoffmann, Sandra, Bryan Maculloch, and Michael Batz. *Economic Burden of Major Foodborne Illnesses Acquired in the United States,* EIB-140, U.S. Department of Agriculture, Economic Research Service, May 2015. https://www.ers.usda.gov/webdocs/publications/43984/52807_eib140.pdf?v=42136. Accessed June 22, 2021.

Measurable Objectives

For tactics requesting $100,000 or less of CBB/BPOC funding, two measurable objectives are required. For tactics requesting over $100,000 of CBB/BPOC funding, at least three to five measurable objectives are required.

1. Manage the execution of a minimum of two research projects addressing current knowledge gaps. Topics may include but are not limited to: identifying and validating antimicrobial interventions to reduce pathogen contamination of raw ground beef components intended for use in ground products; investigating efficient and sustainable application of antimicrobials to reduce pathogens on beef products; investigating innovative *Salmonella* indicators for problematic lots of product; evaluating the effectiveness of implementing a *Salmonella* quantification based trim program on ground products; developing best practices for the dry and semi-dry fermented products as well as dry cured items as an updated version of the Interim Good Manufacturing Practices for Fermented Dry and Semi-Dry Sausage Products.

2. Assess research impact over time by cataloging citations for research funded by the Beef Checkoff and administered by the Foundation. Identify 10 references citing Beef Checkoff funded research used as a foundation for other research projects, to develop regulatory guidelines, standard operating procedures or best practices by the end date of this AR.

3. Facilitate the dissemination of research data and knowledge sharing through at least cumulatively four meetings, webinars, documents or other events targeted to safety professionals.

    - Reaching at least 1,000 stakeholders through combined activities
    - Newsletter distribution will achieve at least 28 percent open rate.

Performance Efficiency Measures

PEM is not required for Research ARs.

LRP Initiatives Addressed by this Tactic

Drive Growth in Beef Exports	Grow Consumer Trust in Beef Production	Develop & Implement Better Business Models & Value Distribution Across All Segments	Promote & Capitalize on the Multiple Advantage of Beef	Improve the Business & Political Climate of Beef	Safeguard & Cultivate Investment in Beef, Industry Research, Marketing & Innovation
☐ Drive the adoption of traceability for all U.S. cattle to help promote U.S. beef through (verified) value-added programs, while protecting the health & well-being of cattle and our markets from the effects of contagious diseases ☐ Identify & address export customer needs & values ☐ Collaborate with targeted partners to promote U.S. beef in foreign markets ☐ Invest in research, marketing & education programs	☐ Measure, document, improve & communicate the net climate and environmental impact of beef production ☐ Educate medical, diet & health professionals about beef & beef production ☐ Align & collaborate with traditional & nontraditional partners to tell the positive story of beef production ☐ Engage positively in the sustainable nutrition conversation ☐ Intensify efforts in educating consumers as well as supply chain decision makers about the benefits of animal care programs like BQA & their impact on animal well-being ☐ Expand BQA program to include verification ☐ Develop a direct-to-consumer beef safety campaign	☐ Use innovative methods & technologies to value carcasses based on eating satisfaction & red meat yield ☐ Develop production/ processing/ marketing systems that result in more equitable margin distribution ☐ Explore business models and risk management tools that result in more sustainable producer profit opportunities	☐ Promote the role of beef in a health & sustainable diet ☐ Implement a marketing campaign that communicates beef's advantage compared to alternative proteins ☐ Develop targeted marketing programs focused on the highest opportunity market segments ☐ Cultivate collaborative promotion partnerships ☐ Promote innovative online marketing, packaging & shipping solutions to enable the direct marketing of beef ☐ Engage consumers in a memorable beef eating experience ☐ Develop a more interactive & exciting beef purchasing experience ☐ Promote underutilized beef cuts & new variety meat products	☐ Demonstrate beef's positive sustainability message & key role in regenerative agriculture ☐ Defend beef's product identity ☐ Ensure beef's inclusion in dietary recommendations ■ Drive continuous improvement in food safety ☐ Develop crisis management plans	☐ Attract innovation & intellectual capital & cultivate the next generation of talent into the beef industry ■ Encourage the cooperation & collaboration of existing industry advisory committees to identify & prioritize research efforts ☐ Increase industry funds for beef marketing, promotion, and research

Committee(s) to Score this Tactic

Consumer Trust	Domestic Marketing	International Marketing	Nutrition & Health	Safety & Product Innovation	Stakeholder Engagement
☐	☐	☐	☐	■	☐

SUPPLEMENTAL INFORMATION FOR THIS AR

1. **Please explain changes from the FY 2022 approved AR:**

   Potential research topics have been updated in Tactic A.

2. **List any proposed vendors/agencies that will be used to complete the work in this AR.**

   None

3. **Will all work with vendors/agencies be competitively bid?**

   No. Work will be awarded through an RFP process and evaluation of research proposals by a standing committee comprised of industry and academic food safety and nutrition practitioners.

4. **Please list any relationships between this AR and projects previously funded by the Beef Promotion Operating Committee (BPOC).**

   The Foundation for Meat and Poultry Research and Education and the North American Meat Association previously administered post-harvest beef safety research through ARs # 1405, 1504, 1603, 1705, 1811, 1910 and 2010. FMPRE also administered processed beef nutrition research under ARs # 1910, 2010 and 2110. FMPRE currently administers post- harvest beef safety research through AR # 2210.

5. **If applicable, explain how this AR can be extended by State Beef Councils or other contractors.**

   Outcomes and results will be shared with State Beef Councils and contractors for further dissemination and use. Efforts on topics of common interest among contractors will be shared to maximize Checkoff reach. Initial discussions have taken place with existing contractors to identify areas for collaboration.

POTENTIAL PARTNERSHIP LIST

Partners/collaborators does NOT include subcontractors.

1. **North American Meat Institute –** Collaborations could include in-kind staff support, research co-funding, dissemination of research, outreach and education opportunities.

2. **Foundation for Meat and Poultry Research and Education** – Collaboration could include research co-funding with non-Checkoff funds, dissemination of research, outreach and education opportunities.

3. **National Pork Board -** Collaborations could include co-funding research, dissemination of research, outreach and education opportunities.

4. **U.S. Poultry and Egg Association -** Collaborations could include co-funding research, dissemination of research, outreach and education opportunities.

5. **American Meat Science Association** – Collaborations could include dissemination of research, outreach and education opportunities.

6. **American Association of Meat Processors -** Collaborations could include dissemination of research, outreach and education opportunities.

7. **Eastern Meat Packers Association** - Collaborations could include dissemination of research, outreach and education opportunities.

8. **Southwest Meat Association** - Collaborations could include dissemination of research, outreach and education opportunities.

9. **Food Marketing Institute –** Collaborations could include dissemination of research, outreach and education opportunities.

10. **National Grocers Association –** Collaborations could include dissemination of research, outreach and education opportunities.

11. **International Association for Food Protection** - Collaborations could include dissemination of research, outreach and education opportunities.

12. **Institute of Food Technologists** - Collaborations could include dissemination of research, outreach and education opportunities.

13. **Academy of Nutrition and Dietetics** - Collaborations could include dissemination of research, outreach and education opportunities.

14. **American Society for Nutrition** - Collaborations could include dissemination of research, outreach and education opportunities.

15. **International Food Information Council** - Collaborations could include dissemination of research, outreach and education opportunities.

16. **Niche Meat Processors Assistance Network** - Collaborations could include dissemination of research, outreach and education opportunities.

DETAILED BUDGET SUMMARY

In the following three sections, use the tables to report program budget information from the following funding sources:

- Cattlemen's Beef Board/Beef Promotion Operating Committee (CBB/BPOC)
- "Other Funding" sources such as:
    - Federation of State Beef Councils (FSBC)
    - Individual Qualified State Beef Council (QSBC) Funds
    - Government Funds (e.g., Market Access Program, Foreign Market Development)
    - Grain/Oilseed Funds (e.g., National Corn Growers Association, American Soybean Association)
    - Corporate Funds (e.g., tech and pharma companies)
    - Etc.

Section 1 – FY23 Funding Requested by Tactic

CBB/BPOC Funding Requested by Tactic

The following table outlines the amount of CBB/BPOC funding that is being requested for each tactic within this AR, and the committee(s) that has been selected to score each tactic.

CBB/BPOC Funding Requested by Tactic					
Committee Name	**Tactic**	**Tactic Name**	**Direct Costs**	**Implementation**	**Total**
Safety & Product Innovation	A	Post-Harvest Beef Safety Research, Knowledge, Dissemination, and Stakeholder Engagement	$300,000	$150,000	$450,000
		TOTAL	**$300,000**	**$150,000**	**$450,000**

Other Funding Sources Requested by Tactic
The following table reports the amount of proposed and/or anticipated "Other Funding" sources that would be applied to this AR's tactics. The funding information in this table is for informational purposes only and demonstrates external collaboration as delineated in the 2021-2025 Beef Industry Long Range Plan.

Other Funding Sources Requested by Tactic *(Informational Only)*			
Funding Source	**Tactic**	**Tactic Name**	**Total**
N/A	A	Post-Harvest Beef Safety Research, Knowledge, Dissemination, and Stakeholder Engagement	$
N/A	B	Science-Based Research on the Nutritional and Health Benefits of Processed Beef, Knowledge, Dissemination, and Stakeholder Engagement	$
		TOTAL	**$**

Use the space to below if you wish to provide additional comments/information on the FY23 CBB/BPOC or Other Funding amount that are being requested for this AR's tactics.

N/A

Section 2 – Summary of FY22 AR Budgets and Expenses

AR Classification
This section reports budget information on ARs that are continuing program work from last year. The below description outlines the classification category the describes this AR.

Classification:	This AR is a continuation of, or builds up, program work from last year. CBB will report information in the "FY22 CBB/BPOC Funding" table and we will provide information for the "FY22 Other Funding Sources" table.

FY22 CBB/BPOC Funding
The following table reports the amount of awarded and expended CBB/BPOC funding for this AR in FY22.

FY22 CBB/BPOC Funding *Note: The Cattlemen's Beef Board completed the fields in this table.*			
	AR# 2210-R		
	Direct Cost	**Implementation**	**Total**
Funds Awarded	$350,000	$150,000	$500,000
Actual Expenses *(October 1, 2021 – June 30, 2022)*	$1,453	$79,493	$80,946

FY22 Other Funding Sources
The following table reports the amount of committed and expended "Other Funding" sources for this AR in FY22. The funding information in this table is for informational purposes only and demonstrates external collaboration as delineated in the 2021-2025 Beef Industry Long Range Plan.

FY22 Other Funding Sources *(Informational Only)*			
	AR# 2210-R		
	Funding Source	**Funds Committed**	**Funds Expended** *(October 1, 2021 – June 30, 2022)*
A	NA	$	$

Use the space to below if you wish to provide additional comments/information on the FY22 CBB/BPOC or Other Funding budget and expense summaries.

N/A

Section 3 – Historical Summary of AR Budgets and Expenses

AR Classification

This section reports budget information on ARs that are continuing program work from last two years (or longer). The below description outlines the classification category the describes this AR.

Classification:	This AR is a continuation of, or builds upon, program work from the last two years (or longer). CBB will report information in the "CBB/BPOC Historical" table, and we will provide information for the "Other Funding Sources Historical" table.

CBB/BPOC Funding – Historical Summary

The following table reports the amount of awarded and expended CBB/BPOC funding for this AR in FY19, FY20, and FY21.

FY22 CBB/BPOC Funding
Note: The Cattlemen's Beef Board completed the fields in this table.

		FY21 AR# 2110-R	FY20 AR# 2010-R	FY19 AR# 1910-R
AR Period[1]	*Start Date:*	*October 1, 2020*	*October 1, 2019*	*October 1, 2018*
	End Date:	*September 30, 2023*	*September 30, 2023*	*September 30, 2022*
Funds Awarded		$646,144	$798,057	$800,000
Actual Expenses[2]		$162,745	$657,438	$753,454

[1]For multiyear ARs, the "End Date" reflects the date that the AR is schedule to be completed.
[2]If the AR "End Date" has not year occurred, actual expenses will be reflective of the following time period: AR Start Date - June 30, 2022.

Other Funding – Historical Summary
The following table reports the amount of "Other Funding" source expenditures for this AR in FY19, FY20, and FY21. The funding information in this table is for informational purposes only and demonstrates external collaboration as delineated in the 2021-2025 Beef Industry Long Range Plan.

	Other Funding Sources *(Informational Only)*					
	FY21 AR# 2110-R		**FY20 AR# 2010-R**		**FY19 AR# 1910-R**	
	Funding Source	**Total Expenditures**	**Funding Source**	**Total Expenditures**	**Funding Source**	**Total Expenditures**
A	N/A	$	N/A	$	N/A	$

Use the space to below if you wish to provide additional comments/information on the historical CBB/BPOC or Other Funding budget and expense summaries.

N/A