National Institute for Animal Agriculture

AR# 2531-II

AR Title: Antibiotics Symposium & Producer Engagement with Public Health Leaders

AR Purpose and Description:

Science demonstrates significant improvements have been made in how farmers, ranchers, and veterinarians utilize antimicrobials in beef production over the past several decades. Improvements have been achieved through implantation of judicious use guidelines^[1], regulatory updates^[2], vaccination programs^[3], improved animal husbandry, biosecurity, data-driven decision making, development of antibiotic alternatives^[4],^[5], genetic selection^[6], and educational programs^[7].

Yet, U.S. and global consumers still have significant concerns about livestock farming [beef production.]

Farmers and ranchers continue to face an ever-changing landscape of issues and areas they are asked to address. From environmental stewardship to worker health and safety, and animal health [antibiotic use] to human nutrition. There is never a shortage of topics to address via research, education, and promotion.

Antibiotic use in beef production continues to be a robust topic of conversation within the scientific community as well as the public [consumer influencers and consumers]. Even with significant changes in on- farm/ranch practices and new rules and regulations affecting antibiotic use, public opinion in the United States regarding livestock farming, antibiotic use, and its connection to antimicrobial resistance (AMR) is increasingly critical, with concerns largely focused on public health implications.

Leading "voices" that are influential amongst consumers and influential leaders who affect the beef industry's Freedom to Operate, are "vocal." Many online discussions and articles highlight that a significant portion of antibiotics sold in the U.S. is used in livestock production, not for treating sick animals, but for promoting growth and preventing disease in healthy animals. Through published articles and blog posts, critics of beef production report that the widespread use of antibiotics is linked to the rise in antibiotic-resistant bacteria, which poses a serious health threat. [8]

Organizations like the Natural Resources Defense Council (NRDC) and scientific journals have reported that the intensity of antibiotic use in U.S. livestock is nearly double that of Europe.^[9] Correlating that this high level of use contributes significantly to the development and spread of

antibiotic-resistant bacteria. They note that European policies have successfully reduced antibiotic use in livestock through stringent regulations, and advocate that this is a model many experts suggest the U.S. should follow.

Public concern is also reflected in the increasing demand for antibiotic-free meat and calls for stricter regulations on antibiotic use in farming.^[10] Reports from Nature and other academic sources emphasize the need for urgent action to mitigate the risk of antimicrobial resistance, which threatens both human and animal health.

Overall, the popular opinion is that while antibiotics are essential for treating infections, their overuse in livestock farming is dangerous and unsustainable. There is a strong push for different [better in their mind] management practices and policies to curb unnecessary antibiotic use to protect public health.

Additionally, AMR is recognized as one of the most significant threats to global public health, posing severe challenges across human, animal, and environmental health sectors. Topics of significant interest based on prevalent research areas:

Global Public Health Threat

AMR is increasingly viewed as a critical issue due to its widespread impact and the potential for severe outcomes.^[11] According to the World Health Organization (WHO), AMR is one of the top ten global public health threats facing humanity. The rise in drug-resistant infections undermines advances in modern medicine, leading to prolonged illness, higher mortality rates, and increased healthcare costs.^[12]

Impact on Human Health

AMR results in infections that are harder to treat and more likely to spread, leading to prolonged hospital stays, higher medical costs, and increased mortality. The Centers for Disease Control and Prevention (CDC) estimate that in the United States alone, at least 2.8 million people get an antibiotic-resistant infection annually, and more than 35,000 people die as a result. Globally, it's estimated that AMR could cause 10 million deaths per year by 2050 if no action is taken.^[13]

One Health Perspective

The One Health approach, which integrates human, animal, and environmental health, is essential for combating AMR. The interconnectedness of these sectors means that antimicrobial use and resistance in one area can directly affect the others. For instance, the use of antibiotics in livestock can lead to the development of resistant bacteria, which can then be transmitted to humans through the food chain or environmental pathways.^[14]

Economic Impact

The economic burden of AMR is substantial. It includes direct costs such as increased healthcare expenses and indirect costs like loss of productivity. A report by the World Bank projected that AMR could have significant economic consequences, potentially reducing global GDP by up to 3.8% annually by 2050, with the cost of healthcare rising sharply due to more expensive treatments and longer hospital stays.^[15]

Comparison with Other Public Health Issues

While other public health challenges, such as non-communicable diseases (NCDs), infectious diseases like HIV/AIDS and tuberculosis, and emerging pandemics (e.g., COVID-19), are also critical, AMR's unique characteristic is its potential to undermine the effectiveness of antibiotics that are essential for treating a wide range of infections. This cross-cutting impact makes AMR a distinct and pressing issue compared to other health concerns. The failure to address AMR effectively can exacerbate other health problems by reducing the efficacy of treatments for infections that complicate conditions such as surgery, cancer therapy, and chronic diseases.^[16]

AMR is a paramount public health issue with wide-ranging implications for human, animal, and environmental health. Its management requires a coordinated, multi-sectoral approach as advocated by the One Health framework. Given its potential to significantly impact healthcare outcomes and economic stability globally, AMR remains a high-priority topic in the grand scheme of public health. And, for the beef sector and other animal agriculture sectors of today's food system.

When scientific communities and influential organizations and consumers are "leading" conversations about antibiotic use, stewardship, and antimicrobial resistance, farmers, ranchers, veterinarians, and allied animal agriculture leaders need to be in the conversation.

The National Institute for Animal Agriculture (NIAA) believes continuous improvement on topics such as the responsible use of antibiotics will be shaped by engaging consistently and effectively through the communication of scientific collaboration, and a commitment on the part of the broad animal agriculture sector and its allies to combat antimicrobial resistance (AMR).

The 14th Annual NIAA Antibiotics Symposium and subsequent activities is a foundational convening that continues to support Beef Checkoff contractors, NIAA members, and all animal agriculture leaders in their work – engaging with influencers and consumers in meaningful ways. The knowledge and skills garnered and honed at Symposium allow beef producers to engage with influential leaders, including:

- Association of State & Territorial Health Officials . Consumer packaged goods companies
- Food & Agriculture Organization of the United Nations. General Assembly of State Veterinarians
- Meat and poultry processors

- National Association of Public Health Veterinarians
- Presidential Advisory Council to Combat Antimicrobial Resistance. Restaurants and retailers
- The Centers for Disease Control and Prevention
- University and college researchers
- U.S. Food & Drug Administration
- U.S. Department of Agriculture
- U.S. Department of State
- U.S. Environmental Protection Agency
- World Health Organization

Citations:

- [1] Beef Quality Assurance. *Antibiotic Stewardship for Beef Producers.* (2020). National Cattlemen's Beef Association, Accessed May 31, 2024. www.ncba.org/Media/NCBAorg/Docs/bqa-antibiotics-2020.pdf
- [2] U.S. Food and Drug Administration. *Veterinary Feed Directive*. January 3, 2024. Accessed May 31, 2024. https://www.fda.gov/animal-veterinary/development-approval-process/veterinary-feed-directive-vfd
- [3] Chirase, N. K., et al. *Effects of a vaccination program on the health and performance of beef calves*. Journal of Animal Science (2001).
- [4] Callaway, T. R., et al. *Probiotics, prebiotics and competitive exclusion for prophylaxis against bacterial disease*. Animal Health Research Reviews (2008).
- [5] Wallace, R. J., et al. *Phytochemicals in animal health: Flavonoids and related compounds*. Journal of Animal Science (2010).
- [6] Berry, D. P., & Kearney, J. F. *Genetics of feed efficiency in dairy and beef cattle*. Journal of Animal Science (2011).
- [7] Checkley, S. L., et al. *Antimicrobial stewardship programs: an essential measure to combat antimicrobial resistance in animals and humans*. Canadian Veterinary Journal (2018).
- [8] Wallinga, MD, David, Natural Resource Defense Council. December 1, 2022. U.S. Livestock Industries Persist in High-Intensity Antibiotic Use. Accessed May 31, 2024. https://www.nrdc.org/resources/us-livestock-industries-persist-high-intensity-antibiotic-use
- [9] Reardon, Sara, Nature. February 6, 2023. Antibiotic use in farming set to soar despite drugresistance fears. Accessed May 31, 2024. https://www.nature.com/articles/d41586-023-00284-x
- [10] Anne-Marie Roerink, Principal, 210 Analytics LLC, *The Power of Meat 2022*, Report sponsored by Sealed Air Food Care Division/Cryovac® and Published by FMI and the Foundation for Meat & Poultry Research & Education
- [11] Food and Agriculture Organization of the United Nations. *Antimicrobial Resistance*. Accessed May 31, 2024. https://www.fao.org/antimicrobial-resistance/en/
- [12] World Health Organization. November 21, 2023. *Antimicrobial resistance*. Accessed May 31, 2024. https://www.who.int/news-room/fact-sheets/detail/antimicrobial-resistance

- [13] Centers for Disease Control and Prevention. March 20, 2024. 2019 Antibiotic Resistance Threats Report. Accessed May 31, 2024. https://www.cdc.gov/antimicrobial-resistance/data-research/threats/?CDC AAref Val=https://www.cdc.gov/drugresistance/biggest-threats.html
- [14] Centers for Disease Contril and Prevention. February 29, 2024. *One Health.* Accessed May 31, 2024. https://www.cdc.gov/one-health/about/index.html
- [15] Jonas,Olga B.; Irwin, Alec; Berthe,Franck Cesar Jean; Le Gall,Francois G.; Marquez,Patricio V.. March 1, 2017. *Drug-resistant infections: a threat to our economic future* (Vol. 2): final report (English). HNP/Agriculture Global Antimicrobial Resistance Initiative Washington, D.C.: World Bank

Group. http://documents.worldbank.org/curated/en/323311493396993758/final-report

[16] United Nations Interagency Coordination Group on Antimicrobial Resistance. (2019). No Time to Wait: Securing the future from drug-resistant infections. Accessed May 31, 2024. www.who.int/publications/i/item/no-time-to-wait-securing-the-future-from-drug-resistant-infections

CBB Budget Category: Industry Information

Start Date: 10/1/2024 **End Date:** 9/30/2025

FY25 CBB/BPOC Funding Request					
Direct Costs Implementation Total					
\$52,580.00	\$42,420.00	\$95,000.00			

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

- Grow Consumer Trust in Beef Production
- Improve the Business and Political Climate of Beef
- Safeguard and Cultivate Investment in Beef Industry Research, Marketing and Innovation

TACTIC DESCRIPTION:

The 14th Annual NIAA Antibiotics Symposium continues the work and collaborations established in prior symposia, funded in part by the Beef Checkoff. The FY '25 Symposium focuses on continued knowledge and insights about responsible antibiotic use and the primary efforts aimed at combating antimicrobial resistance (AMR). All components of the Symposium impact the beef value chain:

- 1) **Science**: understanding causal links, resistance mechanisms, bacterial genomics, the microbiome, current/future research, and more.
- 2) **Alternatives**: preventative and intervention strategies, ensuring antibiotic stewardship, needs and challenges, innovation, and technology.
- Communication: How to effectively engage beef producers with reliable information, which can be shared when beef producers are engaging with influencers and consumers.
- 4) **Education**: How are all educators K-12, colleges, and universities, are preparing the next generation to utilize antibiotics responsibly while engaging in AMR conversations and solutions?

The Symposium is unique in its design as it follows the *One Health* approach. *One Health* recognizes the health of people is connected to the health of animals and the environment. Building upon previous Symposia and current societal drivers, the Symposium explores and connects the responsible use of antibiotics to sustainable beef production as defined by the U.S. Roundtable for Sustainable Beef - *environmentally sound*, *socially responsible*, *and economically viable beef*.

The Symposium creates a synergistic environment where stakeholders from Qualified State Beef Councils, national beef organizations, the Centers for Disease Control & Prevention (CDC), the U.S. Food & Drug Administration (FDA), United States Department of Agriculture (USDA), American Veterinary Medical Association (AVMA), National Institute for Antimicrobial Resistance Research and Education (NIAMRRE), state public health offices, and experts from all points along the animal agriculture supply chain (producers, packers, retailers, etc.), industry associations, and other animal agriculture leaders can come together to recognized the progress and diligent efforts of industry and veterinary medicine and the work that has broadened the *One Health* collaboration with human medicine and environmental activities. In addition, the Symposium fosters shared learning, networking, and collaboration as, together, food and agriculture system leaders continuously improve the responsible use of antibiotics in

animal agriculture while ensuring animal agriculture is doing its part to combat antimicrobial resistance (AMR).

Through keynote addresses, panel conversations and breakout sessions that allow for further exploration and application of knowledge, beef producers leave the Symposium and allied activities with skills, knowledge, and insights to more effectively engage with key opinion leaders as they preserve and enhance trust in beef production, safety, and products. Farmers and ranchers also leave with additional resources to add to the 2020 Beef Checkoff-funded toolkit of resources to ensure they are able to engage with influencers and consumers on a variety of platforms – social media, traditional media, in-person, etc.

Citations:

¹World Health Organization. "One Health" - One health (who.int). Accessed 13 June 2024.

Measurable Objectives:

Measurable Objective #1

Stakeholders from all segments will attend the 2024 Symposium: Animal agriculture leaders (including beef producers), processors, retailers, research scientists, academia, environmental NGOs, human health professionals, and government. Success is:

- At least 80 percent of attendees share that the Symposium improves their knowledge and understanding of responsible antibiotic use and measure to combat AMR.
- A successful Symposium will have 80 percent of attendees reporting increased knowledge and skills about communicating with influencers and consumers.

Measurable Objective #2

Engage at least two state beef councils in pre- and post-Symposium media interviews, such as commercial radio, podcasts, farm news, etc. that reach a minimum of 65,000 beef producers with key take-aways advanced by the Symposium agenda.

Measurable Objective #3

Creation of a comprehensive White Paper detailing insights shared during the 14th Annual NIAA Antibiotics Symposium with a specific webinar for Qualified State Beef Councils (QSBCs) following Symposium to discuss application of key insights from the White Paper to support the work of QSBCs.

Performance Efficiency Measures:

General Target Audience

- Beef Producers Reach Goal: 65,000
- Beef Producers Engagement Goal: 1,750

Key Opinion Leaders

- CDC, USDA, ASTHO, etc. Reach Goal: 600
- CDC, USDA, ASTHO, etc. Engagement Goal: 125
- Processors, Retailers, and Restaurants Reach Goal: 500
- Processors, Retailers, and Restaurants Engagement Goal: 50

LRP Initiatives Addressed by this Tactic:

Grow Consumer Trust in Beef Production

- Align and collaborate with traditional and nontraditional partners to tell the positive story of beef cattle production
- Educate medical, diet and health professionals about beef and 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 and their impacts on animal well-being

Improve the Business and Political Climate of Beef

- Demonstrate beef's positive sustainability message and key role in regenerative agriculture
- Drive continuous improvement in food safety

Safeguard and Cultivate Investment in Beef Industry Research Marketing and Innovation

- Encourage the cooperation and collaboration of existing industry advisory committees to identify and prioritize research efforts
- Increase industry funds for beef marketing, promotion and research
- Educate producers, lawmakers, and industry stakeholders on the benefits and the impact of the Beef Checkoff
- Cultivate preventative animal care and wellness technologies

Checkoff Program Committee(s): Safety & Product Innovation, Stakeholder Engagement

Tactic B | 2531-II Beef Producer Engagement with Public Health Leaders

TACTIC DESCRIPTION:

Previously, the Beef Checkoff has provided specific funding for beef producers to engage in antibiotic Symposia events and a subsequent meeting with the Centers for Disease Control and Prevention (CDC) and related public health groups. Building on the positive outcomes of previous producer engagement with the CDC, a group of state beef council producer leaders will attend and participate in the Antibiotic Symposium and after the Symposium host CDC leaders to specifically learn about beef and dairy production during a NIAA-facilitated farm/ranch tour.

Beef producers will be empowered to use face-to-face presentations to share information on both scientific developments learned at the Symposium and at the CDC meeting specifically within the beef industry to influence their peers' commitment toward continuous improvement, related to responsible antibiotic use. In addition, they will share the results of communication strategies and effectively communicate the safety and wholesomeness of beef.

This tactic includes support for working with Qualified State Beef Councils (QSBCs) to attend Symposium and host CDC and public health leaders during a far/ranch tour.

Measurable Objectives:

Measurable Objective #1:

5 QSBC farmer/rancher leaders and state staff participating in the 14th Annual NIAA Antibiotics Symposium.

Measurable Objective #2:

5 QSBC farmer/rancher leaders and state staff participating in a FY '25 CDC and public health officials farm/ranch tour focused on beef and dairy production.

Measurable Objective #3:

At least five (5) social media post assets showcasing the engagement between farmers and ranchers and CDC and public health officials prepared for Qualified State Beef Councils (QSBCs) to utilize in their consumer engagement. Social media assets will include pictures, graphics, and verbiage.

Performance Efficiency Measures:

General Target Audience

• Beef Producers Reach Goal: 2,000

Beef Producers Engagement Goal: 325

Key Opinion Leaders

CDC and ASTHO Reach Goal: 325

CDC and ASTHO Reach Goal: 100

LRP Initiatives Addressed by this Tactic:

Grow Consumer Trust in Beef Production

- Align and collaborate with traditional and nontraditional partners to tell the positive story
 of beef cattle production
- Educate medical, diet and health professionals about beef and beef production
- Intensify efforts in educating consumers as well as supply chain decision makers about the benefits of animal care programs like BQA and their impacts on animal well-being

Improve the Business and Political Climate of Beef

- Demonstrate beef's positive sustainability message and key role in regenerative agriculture
- Drive continuous improvement in food safety

Safeguard and Cultivate Investment in Beef Industry Research Marketing and Innovation

- Attract innovation and intellectual capital and cultivate the next generation of talent into the beef industry
- Encourage the cooperation and collaboration of existing industry advisory committees to identify and prioritize research efforts
- Increase industry funds for beef marketing, promotion and research
- Educate producers, lawmakers and industry stakeholders on the benefits and impact of the Beef Checkoff

Checkoff Program Committee(s): Safety & Product Innovation, Stakeholder Engagement

Supplemental Information for This AR

1. Please explain significant changes from the FY24 approved AR.

Informed by Symposia feedback, the FY '25 AR requests additional funds to support more robust participation by QSBC volunteer leaders and staff to bring a more robust "producer voice" to the conversation. Symposia participants are eager to learn from and engage with beef producers as research, communication, and educational topics are

more fully explored in a One Health manner addressing antibiotic stewardship and antimicrobial resistance.

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

3. Will all work with vendors/agencies be competitively bid? If no, please provide a brief description as to why.

N/A

4. Has this AR built upon past work or projects that have been previously funded by the BPOC? If yes, please provide a detailed list and background information on the project and contractor(s) involved.

Yes. In its 14th year, this Symposium and its related activities have fostered stronger insights and collaborations between beef producers and multiple organizations and groups affecting trust in beef production - allied industry and animal agriculture; state, federal, and global agencies; university researchers; curriculum developers; educators; and consumer influencers.

Additional Beef Checkoff contractors engaging with the work of this AR:

- American Farm Bureau Foundation for Agriculture
- Cattlemen's Beef Board
- Foundation for Meat & Poultry Research and Education
- National Cattlemen's Beef Association Beef Quality Assurance Program
- 5. If applicable, explain how this AR can be extended by state beef councils or other contractors.

The knowledge and resources shared and developed via this AR are available to all QSBCs and other contractors complimentary because of the Beef Checkoff's investment. NIAA continues to ensure all QSBCs are aware of complimentary registration for Symposium and all QSBCs and contractors are able to access White Papers and additional resources from Symposium. NIAA works with fellow contractors for all post-Symposium engagements with public health leaders and allied animal agriculture organizations.

Detailed Budget Summary

The tables in the following three sections report program budget information from the following funding sources:

- Cattlemen's Beef Board/Beef Promotion Operating Committee (CBB/BPOC) Funding
- Other Funding sources such as:
 - Federation of State Beef Councils (FSBC) Funds
 - o Individual Qualified State Beef Council (QSBC) Funds
 - o 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)
- Other

Section 1 – FY25 Funding Requested by Tactic

FY25 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.

FY25 CBB/BPOC Funding Requested by Tactic						
Committee Name	Tactic	Tactic Name	Direct Costs	Implementation	Total	
Safety & Product Innovation, Stakeholder Engagement	Tactic A	14th Annual NIAA Antibiotics Symposium	\$17,440.00	\$23,835.00	\$41,275.00	
Safety & Product Innovation, Stakeholder Engagement	Tactic B	Beef Producer Engagement with Public Health Leaders	\$35,140.00	\$18,585.00	\$53,725.00	
		Total	\$52,580.00	\$42,420.00	\$95,000.00	

FY25 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.

FY25 Other Funding Sources Requested by Tactic (Informational Only)					
Funding Source	Tactic	Tactic Name	Total		
Other: NIAA Members & Partners	Tactic A	14th Annual NIAA Antibiotics Symposium	\$125,000.00		
Other: NIAA Members & Partners Tactic B		Beef Producer Engagement with Public Health Leaders			
		Other Funding Total	\$150,000.00		

Use the space below if you wish to provide additional comments/information on the FY25 CBB/BPOC or Other Funding amounts that are being requested for this AR's tactic(s).

N/A

Section 2 – Summary of FY24 AR Budgets and Expenses

from last year. CBB will report information in the "FY24 CBB/BPOC Funding" table and the contractor will provide information for the "FY24 Other Funding Sources" table.

FY24 CBB/BPOC Funding

This table reports the amount of awarded and expended CBB/BPOC funding for this Authorization Request in FY24.

FY24 CBB/BPOC Funding					
Note: The Cattlemen's Beef Board completed the fields in this table.					
	AR# 2431-II				
	Direct Costs	Implementation	Total		
Funds Awarded	\$45,000.00	\$15,000.00	\$60,000.00		
Actual Expenses (October 1, 2023 - June 30, 2024)	\$42,293.00	\$17,707.00	\$60,000.00		

FY24 Other Funding Sources

The following table reports the amount of committed and expended "Other Funding Sources" for this AR in FY24. 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.

FY24 Other Funding Sources (Informational Only)					
		AR# 2431-II			
	Other Funding Source	Funds Committed	Funds Expended (October 1, 2023 – June 30, 2024)		
Α	Other: NIAA Members & Partners	\$75,000.00	\$75,000.00		

Use the space below if you wish to provide additional comments/information on the FY24 CBB/BPOC or Other Funding amounts that are being requested for this AR's tactic(s).

N/A

Section 3 – Historical Summary of AR Budgets and Expenses

Classification: This AR is a continuation of, or builds upon, program work from the last

two years or more. CBB will report information in the "CBB/BPOC Historical Summary" table and the contractor will provide information

for the "Other Funding Sources Historical Summary" table.

CBB/BPOC Funding – Historical Summary

The following table reports the amount of awarded and expended CBB/BPOC funding for this AR in FY21, FY22, and FY23.

CBB/BPOC Funding - Historical Summary Note: The Cattlemen's Beef Board completed the fields in this table.					
		FY23 AR# 2331-II	FY22 AR# 2231-II	FY21 AR# 2131-II	
AR Period ¹	Start Date:	Oct. 1, 2022	Oct. 1, 2021	Oct. 1, 2020	
AR Periou	End Date:	Sep. 30, 2023	Sep. 30, 2022	Sep. 30, 2021	
Funds Awarded		\$70,000.00	\$79,160.00	\$89,466.00	
Actual Expenses ²		\$70,000.00	\$79,160.00	\$89,466.00	

¹For multiyear ARs, the "End Date" reflects the date that the AR is scheduled to be completed. ²If the AR "End Date" has not occurred, actual expenses will be reflective of the following time period: AR Start Date - June 30, 2024.

Other Funding - Historical Summary

The following table reports the amount of "Other Funding Source" expenditures for this AR in FY21, FY22, and FY23. 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.

Oth	Other Funding Sources – Historical Summary (Informational Only)								
	FY23 AR# 2331-II		FY22 AR# 2231-II		FY21 AR# 2131-II				
	Other Funding Source	Total Expenditures	Other Funding Source	Total Expenditures	Other Funding Source	Total Expenditures			
Α	QSBC Funds	\$5,000.00	Other: NIAA Members & Partners	\$85,000.00	Other: N/A				
В	Government Funds	50,000.00							
С	Other: NIAA Members & Partners	53,170.00							

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

N/A