

# Tactic Quick Guides

# Preliminary FY23 Tactics



Safety & Product Innovation  
Committee

# **SAFETY & PRODUCT INNOVATION COMMITTEE**

## **TACTIC OVERVIEW**

<b>Pages</b>	<b>Tactic#</b>	<b>Tactic Name</b>	<b>Contractor</b>
3-6	2311-A	Safety Research and Scientific Affairs	NCBA
7-10	2311-C	Product Research and Technical Expertise	NCBA
11-18	2310-A	Post-harvest Beef Safety Research, Knowledge Dissemination and Stakeholder Engagement	FMPRE
19-23	2331-A	12 <sup>th</sup> Annual NIAA Antibiotic Symposium	NIAA
24-27	2331-B	Beef Producer Engagement with the Centers for Disease Control and Prevention (CDC)	NIAA
28-31	2331-C	Strategic Training Exercise - Antibiotic Use in Livestock	NIAA
32-35	2332-A	Animal Ag. Innovation Strategy Session- Beef Industry	NIAA
35-39	2332-B	NIAA Advanced Training for Animal Agriculture Leaders - Innovation Session	NIAA

**Name of Contractor:** National Cattlemen's Beef Association

**Name of Organization Subcontracting:**

**Start Date:** 10/1/2022

**End Date:** 9/30/2025

**CBB/BPOC Funding Request for this AR:** \$9,627,100

**CBB/BPOC Funding Request for this Tactic:** \$1,180,500

**Tactic#:** 2311-A

**Committee(s) to Score this Tactic**

Consumer Trust	Domestic Marketing	International Marketing	Nutrition & Health	Safety & Product Innovation	Stakeholder Engagement
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>

**Tactic Name:** Safety Research and Scientific Affairs

**Tactic Description:**

NCBA, on behalf of the Beef Checkoff, leads scientific research on pre-harvest beef and directly shares it with key decision makers to educate broadly and engage beef safety advocates. This work also builds the scientific foundation for pre-harvest beef safety communications, thought leader education and consumer messages. Historical and active program results demonstrate the industry's commitment to ensuring the safety of beef and addresses improvements that can be made pre-harvest to reduce food safety hazards to the rest of the industry and to consumers.

Results generated through this program are targeted at the scientific community including academia, scientific organization (American Meat Science Association, International Association for Food Protection), beef safety decision makers throughout the industry (feedlot operators, packers, processors, retail, foodservice, corporate food safety scientist) and regulatory sectors. Through collaborations with State Beef Councils, other NCBA Checkoff programs as well as other Checkoff contractors (e.g., USMEF, FMPRE, etc.), research and education outcomes are further leveraged for broader impact.

Over time, this program has evolved from a single pathogen focus (*E. coli*) to address several potentially harmful bacterial, chemical, or physical threats to beef safety. As the microbial environment evolves, other pathogens such as *Salmonella* challenge beef's safety. Today, consumers expect beef to be safe from pathogens and other safety threats, but also that the beef industry takes steps to evolve and improve the safety of the beef they purchase. Research in this program advances the industry's commitment and progress towards addressing these consumer/influencer concerns.

The current research roadmap developed and maintained with an industry expert advisory group, builds a foundation of research that addresses challenges and opportunities related

to pre-harvest beef safety focusing on pathogen mitigation strategies, pathogen harbors, and microbial physiology. Scientific reviews of emerging beef safety topics will also be commissioned. Research outcomes will be shared with advisory groups developing safety guidance, and scientific and regulatory communities in public forums/symposia (i.e., Beef Industry Safety Summit and other scientific forums), through written materials, visual tools or in-person meetings. Strategic planning sessions will be conducted as needed with third-party experts to refine beef safety research gaps. This tactic directly addresses the demand drivers of eating experience and how food is raised/grown that influence consumption and preference.

### **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. Conduct a minimum of three original scientific research projects focused on all three of the research roadmap pillars (mitigation strategies, harbors and physiology).
2. Engage 50 pre-harvest beef safety thought leaders.
3. Secure placement of at least 75 pre-harvest beef safety research results external to this tactic.

## 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
<p><input type="checkbox"/> 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 &amp; well-being of cattle and our markets from the effects of contagious diseases</p> <p><input type="checkbox"/> Identify &amp; address export customer needs &amp; values</p> <p><input type="checkbox"/> Collaborate with targeted partners to promote U.S. beef in foreign markets</p> <p><input type="checkbox"/> Invest in research, marketing &amp; education programs</p>	<p><input type="checkbox"/> Measure, document, improve &amp; communicate the net climate and environmental impact of beef production</p> <p><input type="checkbox"/> Educate medical, diet &amp; health professionals about beef &amp; beef production</p> <p><input type="checkbox"/> Align &amp; collaborate with traditional &amp; nontraditional partners to tell the positive story of beef production</p> <p><input type="checkbox"/> Engage positively in the sustainable nutrition conversation</p> <p><input type="checkbox"/> Intensify efforts in educating consumers as well as supply chain decision makers about the benefits of animal care programs like BQA &amp; their impact on animal well-being</p> <p><input type="checkbox"/> Expand BQA program to include verification</p> <p><input type="checkbox"/> Develop a direct-to-consumer beef safety campaign</p>	<p><input type="checkbox"/> Use innovative methods &amp; technologies to value carcasses based on eating satisfaction &amp; red meat yield</p> <p><input type="checkbox"/> Develop production/processing/marketing systems that result in more equitable margin distribution</p> <p><input type="checkbox"/> Explore business models and risk management tools that result in more sustainable producer profit opportunities</p>	<p><input type="checkbox"/> Promote the role of beef in a health &amp; sustainable diet</p> <p><input type="checkbox"/> Implement a marketing campaign that communicates beef's advantage compared to alternative proteins</p> <p><input type="checkbox"/> Develop targeted marketing programs focused on the highest opportunity market segments</p> <p><input type="checkbox"/> Cultivate collaborative promotion partnerships</p> <p><input type="checkbox"/> Promote innovative online marketing, packaging &amp; shipping solutions to enable the direct marketing of beef</p> <p><input type="checkbox"/> Engage consumers in a memorable beef eating experience</p> <p><input type="checkbox"/> Develop a more interactive &amp; exciting beef purchasing experience</p> <p><input type="checkbox"/> Promote underutilized beef cuts &amp; new variety meat products</p>	<p><input type="checkbox"/> Demonstrate beef's positive sustainability message &amp; key role in regenerative agriculture</p> <p><input type="checkbox"/> Defend beef's product identity</p> <p><input type="checkbox"/> Ensure beef's inclusion in dietary recommendations</p> <p><input checked="" type="checkbox"/> Drive continuous improvement in food safety</p> <p><input type="checkbox"/> Develop crisis management plans</p>	<p><input type="checkbox"/> Attract innovation &amp; intellectual capital &amp; cultivate the next generation of talent into the beef industry</p> <p><input type="checkbox"/> Encourage the cooperation &amp; collaboration of existing industry advisory committees to identify &amp; prioritize research efforts</p> <p><input type="checkbox"/> Increase industry funds for beef marketing, promotion, and research</p>

## **SAFETY & PRODUCT INNOVATION COMMITTEE**

### **Tactic Score Sheet Considerations, Scores, and Notes**

	<b>Tactic Considerations</b>	<b>Table Agreement Level</b>
1.	This tactic addresses the LRP initiatives.	
2.	This tactic addresses an industry need that will aid in stimulating, either directly or indirectly, the demand for beef.	
<b>Additional Notes:</b>		

**Name of Contractor:** National Cattlemen's Beef Association

**Name of Organization Subcontracting:**

**Start Date:** 10/1/2022

**End Date:** 9/30/2025

**CBB/BPOC Funding Request for this AR:** \$9,627,100

**CBB/BPOC Funding Request for this Tactic:** \$1,191,100

**Tactic#:** 2311-C

**Committee(s) to Score this Tactic**

Consumer Trust	Domestic Marketing	International Marketing	Nutrition & Health	Safety & Product Innovation	Stakeholder Engagement
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>

**Tactic Name:** Product Research and Technical Expertise

**Tactic Description:**

NCBA, on behalf of the Beef Checkoff, leads the primary product quality focused research initiative in the U.S. and shares findings with the scientific community and industry stakeholders with the purpose of educating broadly and engaging advocates. This program also builds the scientific foundation and generates unique research insights to reduce product inconsistencies, optimize product utilization, and improve beef eating satisfaction. This is essential for the beef industry as it is the only research funded on beef quality that is not proprietary or for competitive advantage.

Results generated through this program are targeted at the scientific community including academia, product quality decision makers, industry partners, and science associations (American Meat Science Association, American Association of Meat Processors, etc.). Through collaborations with State Beef Councils, other NCBA Checkoff programs, as well as other Checkoff contractors (e.g., USMEF, FMPRE, etc.) research and education outcomes are further leveraged for broader impact.

Over time, this program has evolved from a focus on beef tenderness challenges to address several factors of overall eating experience including aging, cooking, and beef flavor as well product storage and processing evolutions post-pandemic. As the beef industry evolves, the program addresses inconsistency from animal, product handling, and supply challenges. Today, consumers expect beef to provide a quality and repeatable eating experience. Research in this program advances the industry's commitment and progress towards addressing these consumer/influencer concerns.

The current research roadmap developed and maintained with an industry expert advisory group builds a foundation of research that addresses challenges and opportunities

focusing on beef palatability and product yield. Scientific reviews of emerging beef relevant topics will also be commissioned. Strategic planning sessions will be conducted as needed with third-party experts to refine product quality research gaps. Through scientific affairs activities, such as public conferences (i.e., the annual Reciprocal Meats Conference), written materials, visual tools and/or in-person meetings, this program will aim to drive product consistency. Taste is beef's top demand driver and the top reason consumers chose beef. To protect the most important product attribute - taste, this tactic directly addresses the demand drivers of eating experience, convenience/versatility and price.

### **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. Conduct a minimum of six original scientific research projects focused on the research roadmap pillars (applied research, basic research and technical services).
2. Engage 50 beef product quality thought leaders.
3. Secure placement of at least 75 beef product quality research results external to this tactic.

## 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
<p><input type="checkbox"/> 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 &amp; well-being of cattle and our markets from the effects of contagious diseases</p> <p><input type="checkbox"/> Identify &amp; address export customer needs &amp; values</p> <p><input type="checkbox"/> Collaborate with targeted partners to promote U.S. beef in foreign markets</p> <p><input type="checkbox"/> Invest in research, marketing &amp; education programs</p>	<p><input type="checkbox"/> Measure, document, improve &amp; communicate the net climate and environmental impact of beef production</p> <p><input type="checkbox"/> Educate medical, diet &amp; health professionals about beef &amp; beef production</p> <p><input type="checkbox"/> Align &amp; collaborate with traditional &amp; nontraditional partners to tell the positive story of beef production</p> <p><input type="checkbox"/> Engage positively in the sustainable nutrition conversation</p> <p><input type="checkbox"/> Intensify efforts in educating consumers as well as supply chain decision makers about the benefits of animal care programs like BQA &amp; their impact on animal well-being</p> <p><input type="checkbox"/> Expand BQA program to include verification</p> <p><input type="checkbox"/> Develop a direct-to-consumer beef safety campaign</p>	<p><b>■</b> Use innovative methods &amp; technologies to value carcasses based on eating satisfaction &amp; red meat yield</p> <p><input type="checkbox"/> Develop production/processing/marketing systems that result in more equitable margin distribution</p> <p><input type="checkbox"/> Explore business models and risk management tools that result in more sustainable producer profit opportunities</p>	<p><input type="checkbox"/> Promote the role of beef in a health &amp; sustainable diet</p> <p><b>■</b> Implement a marketing campaign that communicates beef's advantage compared to alternative proteins</p> <p><input type="checkbox"/> Develop targeted marketing programs focused on the highest opportunity market segments</p> <p><input type="checkbox"/> Cultivate collaborative promotion partnerships</p> <p><input type="checkbox"/> Promote innovative online marketing, packaging &amp; shipping solutions to enable the direct marketing of beef</p> <p><b>■</b> Engage consumers in a memorable beef eating experience</p> <p><input type="checkbox"/> Develop a more interactive &amp; exciting beef purchasing experience</p> <p><b>■</b> Promote underutilized beef cuts &amp; new variety meat products</p>	<p><input type="checkbox"/> Demonstrate beef's positive sustainability message &amp; key role in regenerative agriculture</p> <p><input type="checkbox"/> Defend beef's product identity</p> <p><input type="checkbox"/> Ensure beef's inclusion in dietary recommendations</p> <p><input type="checkbox"/> Drive continuous improvement in food safety</p> <p><input type="checkbox"/> Develop crisis management plans</p>	<p><input type="checkbox"/> Attract innovation &amp; intellectual capital &amp; cultivate the next generation of talent into the beef industry</p> <p><input type="checkbox"/> Encourage the cooperation &amp; collaboration of existing industry advisory committees to identify &amp; prioritize research efforts</p> <p><input type="checkbox"/> Increase industry funds for beef marketing, promotion, and research</p>

## **SAFETY & PRODUCT INNOVATION COMMITTEE**

### **Tactic Score Sheet Considerations, Scores, and Notes**

	<b>Tactic Considerations</b>	<b>Table Agreement Level</b>
1.	This tactic addresses the LRP initiatives.	
2.	This tactic addresses an industry need that will aid in stimulating, either directly or indirectly, the demand for beef.	
<b>Additional Notes:</b>		

**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

**CBB/BPOC Funding Request for this AR:** \$950,000

**CBB/BPOC Funding Request for this Tactic:** \$650,000

**Tactic#:** 2310-A

**Committee(s) to Score this Tactic**

Consumer Trust	Domestic Marketing	International Marketing	Nutrition & Health	Safety & Product Innovation	Stakeholder Engagement
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>

**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.<sup>1</sup> 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.<sup>2</sup> 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 every one O157:H7 positive there are 2-3 non-O157 positives.<sup>3</sup>

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.<sup>4</sup> 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.<sup>5</sup> 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.<sup>6,7</sup> 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.<sup>8</sup> 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.<sup>9</sup>

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.<sup>10</sup> The report notes STEC illnesses have decreased by 37 percent when comparing 2020 to 2017-2019 data.<sup>11</sup> 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 to cause 23.4 percent of STEC O157 illnesses, which is down from 25.5 percent in 2018.<sup>12</sup>

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.<sup>13</sup> 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.<sup>14</sup>

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.<sup>15</sup> 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.<sup>16</sup> 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](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](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](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](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 three 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 12 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.
  
4. Conduct a webinar series, at least two per year, to highlight post-harvest safety research funded by the Beef Checkoff. Target cumulative audience of 500 food safety practitioners and interested stakeholders.

## 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
<p><input type="checkbox"/> 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 &amp; well-being of cattle and our markets from the effects of contagious diseases</p> <p><input type="checkbox"/> Identify &amp; address export customer needs &amp; values</p> <p><input type="checkbox"/> Collaborate with targeted partners to promote U.S. beef in foreign markets</p> <p><input type="checkbox"/> Invest in research, marketing &amp; education programs</p>	<p><input type="checkbox"/> Measure, document, improve &amp; communicate the net climate and environmental impact of beef production</p> <p><input type="checkbox"/> Educate medical, diet &amp; health professionals about beef &amp; beef production</p> <p><input type="checkbox"/> Align &amp; collaborate with traditional &amp; nontraditional partners to tell the positive story of beef production</p> <p><input type="checkbox"/> Engage positively in the sustainable nutrition conversation</p> <p><input type="checkbox"/> Intensify efforts in educating consumers as well as supply chain decision makers about the benefits of animal care programs like BQA &amp; their impact on animal well-being</p> <p><input type="checkbox"/> Expand BQA program to include verification</p> <p><input type="checkbox"/> Develop a direct-to-consumer beef safety campaign</p>	<p><input type="checkbox"/> Use innovative methods &amp; technologies to value carcasses based on eating satisfaction &amp; red meat yield</p> <p><input type="checkbox"/> Develop production/processing/marketing systems that result in more equitable margin distribution</p> <p><input type="checkbox"/> Explore business models and risk management tools that result in more sustainable producer profit opportunities</p>	<p><input type="checkbox"/> Promote the role of beef in a health &amp; sustainable diet</p> <p><input type="checkbox"/> Implement a marketing campaign that communicates beef's advantage compared to alternative proteins</p> <p><input type="checkbox"/> Develop targeted marketing programs focused on the highest opportunity market segments</p> <p><input type="checkbox"/> Cultivate collaborative promotion partnerships</p> <p><input type="checkbox"/> Promote innovative online marketing, packaging &amp; shipping solutions to enable the direct marketing of beef</p> <p><input type="checkbox"/> Engage consumers in a memorable beef eating experience</p> <p><input type="checkbox"/> Develop a more interactive &amp; exciting beef purchasing experience</p> <p><input type="checkbox"/> Promote underutilized beef cuts &amp; new variety meat products</p>	<p><input type="checkbox"/> Demonstrate beef's positive sustainability message &amp; key role in regenerative agriculture</p> <p><input type="checkbox"/> Defend beef's product identity</p> <p><input type="checkbox"/> Ensure beef's inclusion in dietary recommendations</p> <p><input type="checkbox"/> Drive continuous improvement in food safety</p> <p><input type="checkbox"/> Develop crisis management plans</p>	<p><input type="checkbox"/> Attract innovation &amp; intellectual capital &amp; cultivate the next generation of talent into the beef industry</p> <p><input type="checkbox"/> Encourage the cooperation &amp; collaboration of existing industry advisory committees to identify &amp; prioritize research efforts</p> <p><input type="checkbox"/> Increase industry funds for beef marketing, promotion, and research</p>

## **SAFETY & PRODUCT INNOVATION COMMITTEE**

### **Tactic Score Sheet Considerations, Scores, and Notes**

	<b>Tactic Considerations</b>	<b>Table Agreement Level</b>
1.	This tactic addresses the LRP initiatives.	
2.	This tactic addresses an industry need that will aid in stimulating, either directly or indirectly, the demand for beef.	
<b>Additional Notes:</b>		

**Name of Contractor:** National Institute for Animal Agriculture

**Name of Organization Subcontracting:**

**Start Date:** 10/1/2022

**End Date:** 9/30/2023

**CBB/BPOC Funding Request for this AR:** \$125,000

**CBB/BPOC Funding Request for this Tactic:** \$60,000

**Tactic#:** 2331-A

**Committee(s) to Score this Tactic**

Consumer Trust	Domestic Marketing	International Marketing	Nutrition & Health	Safety & Product Innovation	Stakeholder Engagement
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**Tactic Name:** 12<sup>th</sup> Annual NIAA Antibiotic Symposium

**Tactic Description:**

The 12th Annual NIAA Antibiotic Symposium will continue the work and collaborations established in prior symposia, funded in part by the Beef Checkoff. The Symposium will focus 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.
3. **Communication:** How to effectively engage beef producers with reliable and information, which can be shared when beef producers are engaging with influencers and consumers.
4. **Education:** How are colleges and universities preparing the next generation of animal agriculture leaders to utilize antibiotics responsibly while engaging in AMR conversations and solutions?

Researchers who explore the consumer decision-making process continually find that shared values are what drive human decision-making (The Center for Food Integrity, 2009).<sup>1</sup> Upon establishment of shared values, messengers (beef producers) can then share scientific and economic facts that will also be used within the decision-making process. The 2022 Symposium will ensure beef producers and their fellow attendees are

prepared to engage with influencers and consumers through shared values while also having the knowledge and insights about the science behind responsible antibiotic use and measures to address antimicrobial resistance (AMR) by animal agriculture leaders. Each of these areas will be addressed in the content that will drive improvements in how animal agriculture communicates and engages, leading with common values and science.

The Symposium is unique in its design as it follows the ***One Health***<sup>2</sup> approach. ***One Health*** recognizes the health of people is connected to the health of animals and the environment. Building upon the 2020 Symposium and current societal drivers, the Symposium will more significantly explore and connect the responsible use of antibiotics to environmental stewardship.

The Symposium creates a synergistic environment where stakeholders from 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 beef (animal agriculture) supply chain (producers, packers, retailers, etc.), industry associations, and other animal agriculture leaders can come together to celebrate 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 will leave the 2022 Symposium and follow-up conversations 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.

**Citations:**

<sup>1</sup>The Center for Food Integrity - [Trust Model - The Center for Food Integrity](#)

<sup>2</sup> [One Health | CDC](#)

### **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. Stakeholders from all segments will attend the 2021 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 sharing 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.
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.

## 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
<p><input type="checkbox"/> 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 &amp; well-being of cattle and our markets from the effects of contagious diseases</p> <p><input type="checkbox"/> Identify &amp; address export customer needs &amp; values</p> <p><input type="checkbox"/> Collaborate with targeted partners to promote U.S. beef in foreign markets</p> <p><input type="checkbox"/> Invest in research, marketing &amp; education programs</p>	<ul style="list-style-type: none"> <li>■ Measure, document, improve &amp; communicate the net climate and environmental impact of beef production</li> <li>■ Educate medical, diet &amp; health professionals about beef &amp; beef production</li> <li>■ Align &amp; collaborate with traditional &amp; nontraditional partners to tell the positive story of beef production</li> <li>■ Engage positively in the sustainable nutrition conversation</li> <li>■ Intensify efforts in educating consumers as well as supply chain decision makers about the benefits of animal care programs like BQA &amp; their impact on animal well-being</li> <li>□ Expand BQA program to include verification</li> <li>□ Develop a direct-to-consumer beef safety campaign</li> </ul>	<ul style="list-style-type: none"> <li>□ Use innovative methods &amp; technologies to value carcasses based on eating satisfaction &amp; red meat yield</li> <li>□ Develop production/processing/marketing systems that result in more equitable margin distribution</li> <li>□ Explore business models and risk management tools that result in more sustainable producer profit opportunities</li> </ul>	<ul style="list-style-type: none"> <li>□ Promote the role of beef in a health &amp; sustainable diet</li> <li>□ Implement a marketing campaign that communicates beef's advantage compared to alternative proteins</li> <li>□ Develop targeted marketing programs focused on the highest opportunity market segments</li> <li>□ Cultivate collaborative promotion partnerships</li> <li>□ Promote innovative online marketing, packaging &amp; shipping solutions to enable the direct marketing of beef</li> <li>□ Engage consumers in a memorable beef eating experience</li> <li>□ Develop a more interactive &amp; exciting beef purchasing experience</li> <li>□ Promote underutilized beef cuts &amp; new variety meat products</li> </ul>	<ul style="list-style-type: none"> <li>□ Demonstrate beef's positive sustainability message &amp; key role in regenerative agriculture</li> <li>□ Defend beef's product identity</li> <li>□ Ensure beef's inclusion in dietary recommendations</li> <li>□ Drive continuous improvement in food safety</li> <li>□ Develop crisis management plans</li> </ul>	<ul style="list-style-type: none"> <li>■ Attract innovation &amp; intellectual capital &amp; cultivate the next generation of talent into the beef industry</li> <li>□ Encourage the cooperation &amp; collaboration of existing industry advisory committees to identify &amp; prioritize research efforts</li> <li>□ Increase industry funds for beef marketing, promotion, and research</li> </ul>

## **SAFETY & PRODUCT INNOVATION COMMITTEE**

### **Tactic Score Sheet Considerations, Scores, and Notes**

	<b>Tactic Considerations</b>	<b>Table Agreement Level</b>
1.	This tactic addresses the LRP initiatives.	
2.	This tactic addresses an industry need that will aid in stimulating, either directly or indirectly, the demand for beef.	
<b>Additional Notes:</b>		

**Name of Contractor:** National Institute for Animal Agriculture

**Name of Organization Subcontracting:**

**Start Date:** 10/1/2022

**End Date:** 9/30/2023

**CBB/BPOC Funding Request for this AR:** \$125,000

**CBB/BPOC Funding Request for this Tactic:** \$10,000

**Tactic#:** 2331-B

**Committee(s) to Score this Tactic**

Consumer Trust	Domestic Marketing	International Marketing	Nutrition & Health	Safety & Product Innovation	Stakeholder Engagement
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**Tactic Name:** Beef Producer Engagement with the Centers for Disease Control and Prevention (CDC)

**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 stakeholder groups. Building on the positive outcomes of previous producer engagement with the CDC, a group (approx. 15 to 20) of state beef council producer-leaders will attend and participate in the Antibiotic Symposium and after the Symposium at least 5 to 10 beef producers will attend meetings at the CDC in Atlanta, GA.

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 communicating the safety and wholesomeness of beef.

This tactic includes support for working with Qualified State Beef Councils (QSBCs) to identify targeted in-person and online tools and events that can be leveraged to engage beef producers in important antibiotics-related conversations, that can be conducted via online webinars, state and regional cattle association meeting presentations, unique social media events, sponsored producer influencer events, etc.

### **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. Between 5 to 10 beef producers will participate in a tour, presentations, demonstrations, and discussions with officials from the Centers for Disease Control, engaging in open dialogue, questions on next steps in communication and collaboration opportunities.
  - A minimum of five (5) beef producer participants will further engage with CDC leaders to serve as trusted resources on information related to farm/ranch practices. This will be measured via three-month, six-month and twelve-month surveys.
  - At least two (2) CDC professionals will visit/tour a beef farm/ranch.
2. Create a short video featuring beef producers, and professionals from CDC, FDA or USDA to share the responsible use of antibiotics across the beef value chain. Share the video with a minimum of two influencer-based organizations such as the Food Marketing Institute, Grocery Manufacturers Association, National Restaurant Association, American Academy of Pediatrics, etc.

## 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
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## **SAFETY & PRODUCT INNOVATION COMMITTEE**

### **Tactic Score Sheet Considerations, Scores, and Notes**

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**Name of Contractor:** National Institute for Animal Agriculture

**Name of Organization Subcontracting:**

**Start Date:** 10/1/2022

**End Date:** 9/30/2023

**CBB/BPOC Funding Request for this AR:** \$125,000

**CBB/BPOC Funding Request for this Tactic:** \$55,000

**Tactic#:** 2331-C

**Committee(s) to Score this Tactic**

Consumer Trust	Domestic Marketing	International Marketing	Nutrition & Health	Safety & Product Innovation	Stakeholder Engagement
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**Tactic Name:** Strategic Training Exercise – Antibiotic Use in Livestock

**Tactic Description:**

The dynamic nature of today's food system is one of increased rate of change, complexity, and consumer choice. While NIAA works with its members and partners to foster informed decision-making about the use of antibiotics in livestock [beef] production, the use of antibiotics in the "animal care toolbox" is no longer a certainty. Just as the beef industry created the Beef Quality Assurance program to address real and perceived beef safety issues, animal agriculture needs to prepare for the future - considering real and perceived issues of antimicrobial stewardship and resistance.

NIAA's mission is to *convene animal agriculture experts and allies in collaborative settings to explore, discuss, learn, and develop knowledge that fosters interdisciplinary cooperation for the improvement and continuous progress of animal agriculture.* This tactic fully exemplifies NIAA's mission in action. Through two, facilitated, in-person strategic training exercises, NIAA and its partner, will empower the beef industry with strategic intelligence and research that is timely, relevant, and actionable. Insights from the exercise will inform animal agriculture [beef industry] tactical work plan engagements with a variety of key audiences.

Three objectives for the exercises have been identified:

1. Understand the emerging regulatory and societal environment that affects animal agriculture's (beef's) social license<sup>1</sup> to utilize antimicrobials. This social license then affects beef demand, food safety, animal welfare, environmental stewardship and more.
2. Facilitate engagement from multi-disciplinary stakeholders

3. Explore education and communication strategies linking animal and human health.

Through this AR, NIAA and its partner will deliver a written summary of the observations, findings, and recommendations from the exercises, summary slides of the intelligence garnered, a summary of the post event survey results, exercise specific materials, a 60-minute virtual presentation of the results, and any necessary follow ups to finalize delivery of the objectives.

**Citations:**

<sup>1</sup> Social License - [Social License to Operate \(SLO\) Definition \(investopedia.com\)](https://www.investopedia.com/terms/s/social-license-to-operate-slo-1010000.html)

**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. A detailed research report with key insights for the beef industry on perceived and actual issues affecting antimicrobial stewardship and resistance.
2. A strategic direction report based on the NIAA-facilitated strategic training exercise detailing specific strategies and tactics the beef industry can take to mitigate/solve actual and perceived issues related to antimicrobial stewardship and resistance.

## LRP Initiatives Addressed by this Tactic

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## **SAFETY & PRODUCT INNOVATION COMMITTEE**

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**Name of Organization Subcontracting:**

**Start Date:** 10/1/2022

**End Date:** 9/30/2023

**CBB/BPOC Funding Request for this AR:** \$37,500

**CBB/BPOC Funding Request for this Tactic:** \$17,500

**Tactic#:** 2332-A

**Committee(s) to Score this Tactic**

Consumer Trust	Domestic Marketing	International Marketing	Nutrition & Health	Safety & Product Innovation	Stakeholder Engagement
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**Tactic Name:** Animal Ag. Innovation Strategy Session – Beef Industry

**Tactic Description:**

While Agri-FoodTech is a "hot" space for venture capital, all sectors are not receiving equitable investment and attention. The National Institute for Animal Agriculture's hypothesis is that because of the "closed" nature of the animal agriculture sector, entrepreneurs are not aware of the opportunities to bring technology and innovation to the sector. This "vacuum" of innovation and technology then leads to a lack of investments from venture capital, economic development agencies - private and public, and other organizations who affect the viability of innovative ideas and technologies.

In 2023, NIAA will convene two roundtable strategy-setting sessions to further explore where technology and innovation can affect positive change within animal agriculture. Beef Checkoff funding will specifically produce a report that highlights the opportunities entrepreneurs may address - increasing beef demand while affecting eating experience, sustainability, animal welfare, and more. Ideally, synergies between animal-derived proteins can be achieved to further extend the resources invested.

Strategy-setting sessions will be supported by quantitative research conducted by NIAA and garnered from additional organizations' insights that can foster greater exploration, discussion, and collaboration. Additionally, resources for entrepreneurs will be provided within the report.

### **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. One of two strategy-setting sessions will specifically focus on opportunities for greater technology and innovation within the beef sector of animal agriculture. The session will aggregate feedback and ideas from at least 50 animal agriculture leaders who represent interdisciplinary backgrounds - thought-leading farmers and ranchers, veterinarians, allied industry, processors, retailers, food service leaders, dietitians, NGOs, etc.
2. A beef industry-specific report highlighting tangible ideas for greater investment in innovations and technologies that affect beef quality, sustainability, animal welfare, etc. While the report will be shared broadly, specific focus will be placed on sharing the report with Beef Checkoff contractors, university "incubators," venture capital firms, and top-producing beef states - QSBCs and economic development professionals.

## 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
<p><input type="checkbox"/> 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 &amp; well-being of cattle and our markets from the effects of contagious diseases</p> <p><input type="checkbox"/> Identify &amp; address export customer needs &amp; values</p> <p><input type="checkbox"/> Collaborate with targeted partners to promote U.S. beef in foreign markets</p> <p><input type="checkbox"/> Invest in research, marketing &amp; education programs</p>	<p><input type="checkbox"/> Measure, document, improve &amp; communicate the net climate and environmental impact of beef production</p> <p><input type="checkbox"/> Educate medical, diet &amp; health professionals about beef &amp; beef production</p> <p><input type="checkbox"/> Align &amp; collaborate with traditional &amp; nontraditional partners to tell the positive story of beef production</p> <p><input type="checkbox"/> Engage positively in the sustainable nutrition conversation</p> <p><input type="checkbox"/> Intensify efforts in educating consumers as well as supply chain decision makers about the benefits of animal care programs like BQA &amp; their impact on animal well-being</p> <p><input type="checkbox"/> Expand BQA program to include verification</p> <p><input type="checkbox"/> Develop a direct-to-consumer beef safety campaign</p>	<p><input type="checkbox"/> Use innovative methods &amp; technologies to value carcasses based on eating satisfaction &amp; red meat yield</p> <p><input type="checkbox"/> Develop production/processing/marketing systems that result in more equitable margin distribution</p> <p><input type="checkbox"/> Explore business models and risk management tools that result in more sustainable producer profit opportunities</p>	<p><input type="checkbox"/> Promote the role of beef in a health &amp; sustainable diet</p> <p><input type="checkbox"/> Implement a marketing campaign that communicates beef's advantage compared to alternative proteins</p> <p><input type="checkbox"/> Develop targeted marketing programs focused on the highest opportunity market segments</p> <p><input type="checkbox"/> Cultivate collaborative promotion partnerships</p> <p><input type="checkbox"/> Promote innovative online marketing, packaging &amp; shipping solutions to enable the direct marketing of beef</p> <p><input type="checkbox"/> Engage consumers in a memorable beef eating experience</p> <p><input type="checkbox"/> Develop a more interactive &amp; exciting beef purchasing experience</p> <p><input type="checkbox"/> Promote underutilized beef cuts &amp; new variety meat products</p>	<p><input type="checkbox"/> Demonstrate beef's positive sustainability message &amp; key role in regenerative agriculture</p> <p><input type="checkbox"/> Defend beef's product identity</p> <p><input type="checkbox"/> Ensure beef's inclusion in dietary recommendations</p> <p><input type="checkbox"/> Drive continuous improvement in food safety</p> <p><input type="checkbox"/> Develop crisis management plans</p>	<ul style="list-style-type: none"> <li>■ Attract innovation &amp; intellectual capital &amp; cultivate the next generation of talent into the beef industry</li> <li>□ Encourage the cooperation &amp; collaboration of existing industry advisory committees to identify &amp; prioritize research efforts</li> <li>■ Increase industry funds for beef marketing, promotion, and research</li> <li>■ This LRP strategy does not list an initiative that address this AR. However, a focus of the LRP is to educate producers on how the industry is responding to opportunities and challenges to include the Beef Checkoff programs</li> </ul>

## **SAFETY & PRODUCT INNOVATION COMMITTEE**

### **Tactic Score Sheet Considerations, Scores, and Notes**

	<b>Tactic Considerations</b>	<b>Table Agreement Level</b>
1.	This tactic addresses the LRP initiatives.	
2.	This tactic addresses an industry need that will aid in stimulating, either directly or indirectly, the demand for beef.	
<b>Additional Notes:</b>		

**Name of Contractor:** National Institute for Animal Agriculture

**Name of Organization Subcontracting:**

**Start Date:** 10/1/2022

**End Date:** 9/30/2023

**CBB/BPOC Funding Request for this AR:** \$37,500

**CBB/BPOC Funding Request for this Tactic:** \$20,000

**Tactic#:** 2332-B

**Committee(s) to Score this Tactic**

Consumer Trust	Domestic Marketing	International Marketing	Nutrition & Health	Safety & Product Innovation	Stakeholder Engagement
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**Tactic Name:** NIAA Advanced Training for Animal Agriculture Leaders – Innovation Session

**Tactic Description:**

The Advanced Training for Animal Agriculture Leaders is a program developed by the National Institute for Animal Agriculture (NIAA) to empower animal agriculture leaders to positively affect the future of animal agriculture in the U.S. and around the world. Leaders selected for the program grow and develop through experiential learning and participating in an engaging, dynamic curriculum. The program provides participants – leaders from the entire value chain – the advanced skills necessary to lead animal agriculture into the future.

Leadership program participants participate in five (5) in-person sessions and multiple virtual sessions throughout their 16-month experience. The experience culminates with teams presenting a capstone project that offers a solution to a specific issue within animal agriculture. The need for greater investment, technology, and innovation is one such issue NIAA members and volunteer-leaders has identified. Lessons learned by beef sector leaders participating in the program can greatly affect their ability to lead work that increases beef demand while working within the Beef Industry Long Range Plan.

The Beef Checkoff's investment in the NIAA Advanced Training for Animal Agriculture Leaders program will ensure the session focused on innovation and the team addressing how to increase investment, technology, and innovation in animal agriculture [beef production] has the necessary resources for a quality experience.

### **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. Fifteen (15) to twenty (20) animal agriculture leaders will participate in a 2023 session focused on attracting investment, technology, and innovation to the animal agriculture [beef] sector of today's food system. The session will include at least one speaker/panel that specifically focuses on beef opportunities to leverage and threats to overcome.
2. The Beef Checkoff - especially via QSBCs, will receive the leadership cohort team's capstone project report highlighting their recommendations for attracting greater investment, technology, and innovation to animal agriculture [beef]. The cohort team also will present their findings at the April 2024 annual conference of NIAA. The report will be available after the conference.

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