

AUTHORIZATION REQUEST FOR FY 2019

CBB Budget Category: **Consumer Information**

Name of Contractor: **American Farm Bureau Foundation for Agriculture**

Name of Organization Subcontracting:

Start Date: **10/1/2018**

End Date: **9/30/2019**

AR OVERVIEW

AR Description:

This school year, 2017-2018, 55.9 million students attend public (50.7M) and private schools (5.2M) in the United States where they acquire content knowledge in math, language arts, etc. These students, are also acquiring attitudes about social norms: what's funny and what's not, what they should and should not do, and increasingly what they should and should not eat.

In five years, nearly 20 million of these students will leave high school and begin their adult life – making purchasing decisions, forming opinions on social issues, and casting their vote on issues including those important to the beef industry.

Reaching 20 million teenagers is a huge endeavor. However, we have an opportunity to impact this population through a critical gateway of key influencers – their STEM (science, technology, engineering and math)-based educators and the leaders/influencers of those educators.

The American Farm Bureau Foundation for Agriculture, a 501(c)(3) specializes in reaching these influencers and has identified opportunities to grow consumer trust in the beef industry through strategically engaging education leaders. AFBFA has been a contractor to the Checkoff since 2014 and has documented significant change in perception and intent to eat more beef after participation in AFBFA-led professional development events for influencers within the education scaffold. This authorization request intends to leverage data collected through national education programs and strategically engage influential leaders in education in order to positively impact consumer trust in the beef industry.

Data Source: National Center for Education Statistics

Total Cost of this AR:

| Source of Funding | Direct Costs | Implementation | Total |
|---|--------------|----------------|-----------|
| CBB/BPOC Funding Request: | \$608,887 | \$91,113 | \$700,000 |
| Federation of SBCs Funding Request: (Informational Only) | \$0 | \$0 | \$0 |
| Other Funding Source(s): (Informational Only) | \$0 | \$0 | \$0 |
| Total Cost | \$608,887 | \$91,113 | \$700,000 |

Long Range Plan Core Strategies Addressed by this AR (Check all that apply)

| Grow Beef Exports | Consumer Trust | Protect & Enhance | Beef's Value Proposition |
|--------------------------|-------------------------------------|--------------------------|-------------------------------------|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Digital properties and target audience(s) addressed by this AR:

On the Farm Home: <http://www.agfoundation.org/on-the-farm>

This site, owned by the American Farm Bureau Foundation for Agriculture, serves as a platform for facilitating national On the Farm beef educator events. Meet past participants <http://www.agfoundation.org/on-the-farm/meet-the-participants> to see the level of influencers engaged in these professional development events.

Learn About Beef: <http://www.agfoundation.org/on-the-farm/learn-about-beef>

This site, owned by the American Farm Bureau Foundation for Agriculture, features resources developed through beef checkoff funding and serves as a hub for beef education material.

PROGRAM INFORMATION FOR THIS AR**Tactic A**

Tactic Name: Immersive Experiences for Health and STEM Educators

Tactic Description:

The Situation: AFBFA has pioneered a national program to bring together influencers in STEM and health education for hands-on experience in the beef industry. Over the past three years, AFBFA has engaged more than 200 education leaders, including educators from the top 10 urban school districts in the nation. Many of these educators applied for this beef industry experience because they

- a) came from states that did not offer immersive experiences targeting STEM or Health education professionals
- b) did not have an initial interest in the beef industry and were reached through national education channels, or
- c) came from a high-level leadership position (University and/or District level leadership) and were drawn to the opportunity for national professional development

These national events have proven to move the needle with regard to beef perception and intent to consume, while offering increased exposure to state programming. Pre and post assessments administered to On the Farm participants indicate the following *changes in perception* after attending the event:

- **51%** increase in response that the “positives strongly outweigh the negatives of how cattle are raised”.
- **43%** decrease in those concerned with antibiotic use in beef production.
- **41%** increase in those that agree/strongly agree that the “beef industry openly shares information”.
- **27%** increase in those who plan to eat more beef than they currently do, after attending an event.

The On the Farm beef educator events have garnered respect, not only in the beef industry, but also in the education industry. The following reflections from On the Farm alumni speak to the value of these experiences:

I came in with a certain set of expectations and this changed the way I thought about parts of the beef industry. I learned much more than I ever knew.

This was by far the most amazing educational experience I have ever attended! I will be able to go back to my classroom and genuinely explain the love, care and dedication of the ranchers and members of our beef industry.

I have an appreciation for the beef industry and their commitment to producing healthy protein and protecting the environment.

Out of 25 years of professional development programs this was by far the best. Hands on, applicable, down to earth and fun.

I did not realize the ignorance level of the general public, and those in educational positions. It was eye opening and emphasizes the need for the Beef Council to continue to educate the public about the production and nutritional benefits of consuming beef.

The Need:

- Interest continues to grow in these events, especially in major urban school districts such as Los Angeles Unified School District (CA), Broward County

School District (FL), Portland Public Schools (OR) and New York City Department of Education (NY).

- Participating state beef councils will attest to the value added to their state programming by bringing in a national audience of influencers to engage with state leaders in the beef industry.
- State beef councils have requested this national event to be brought to their state in 2019.

Rationale:

- AFBFA has streamlined an efficient system for marketing, managing and facilitating On the Farm beef events for education influencers.
- AFBFA has facilitated initial conversations with two state beef councils interested in hosting On the Farm events next year.
- Through these national events, AFBFA brings together a team of leaders within the host state, including the state beef council, state Agriculture in the Classroom and state Farm Bureau.
- AFBFA has documented the need for continuing to offer these events, with more than 400 applications received last year for events.

Measurable Objectives *(List at least three outcome-based objectives for this tactic):*

- AFBFA will facilitate two On the Farm events targeting STEM and Health education leaders from non-agricultural, urban backgrounds.
- AFBFA will engage a minimum of 30 educators at each event with a goal of at least 50% of those educators coming from, or having influence over, urban school districts.
- AFBFA will research and document knowledge and perception change by participants, leveraging industry-standard evaluation processes. AFBFA use a pre-post assessment to achieve a minimum 15% change in positive perception indicators after participating in an event.
- AFBFA will pursue partnership with the host state beef council in the form of financial or in-kind contribution. AFBFA will achieve a working partnership with the host state beef council, actively engaging the state beef council leadership. At least 1 representative from the state beef council in the host state will be attend 90% of the major planning meetings.

Performance Efficiency Measures

Consumer Reach Goal: Reach 5,000 consumers with accurate beef messaging through major events.

Consumer Engagement Goal: Engage 1,000 consumers through AFBFA Learn About Beef website and events.

Voice/KOL Reach Goal: Reach 75,000 key opinion leaders in education through strategic advertising and outreach.

Voice/KOL Engagement Goal: Engage 360 key opinion leaders through event participation and advertising engagement.

LRP Strategic Initiatives Addressed by this Tactic *(Check all that apply)*

| Drive Export Growth | Grow Consumer Trust | Protect & Enhance Business Climate | Beef's Value Proposition |
|---|--|---|--|
| <input type="checkbox"/> Adopt traceability systems <input type="checkbox"/> Increase market access <input type="checkbox"/> Promote unique attributes of U.S. beef | <input type="checkbox"/> Ensure antibiotic stewardship <input type="checkbox"/> Certify & verify production practices <input type="checkbox"/> Ensure beef safety <input checked="" type="checkbox"/> Protect beef's image <input checked="" type="checkbox"/> Engage beef advocates | <input type="checkbox"/> Research & innovate new production tech. <input type="checkbox"/> Ensure beef's inclusion in dietary recommendations <input type="checkbox"/> Motivate producers & stakeholders to engage <input type="checkbox"/> Develop crises management plans <input type="checkbox"/> Attract, develop & enable the next generation <input type="checkbox"/> Defend beef's product identity | <input type="checkbox"/> Revolutionize beef marketing & merchandising <input type="checkbox"/> Measure & improve sustainability <input checked="" type="checkbox"/> Research & communicate beef's nutritional benefits <input checked="" type="checkbox"/> Connect & comm. with consumers <input type="checkbox"/> Improve product & production efficiency |

Committee(s) to Score this Tactic *(Check all that apply)*

| Consumer Trust | Export Growth | Innovations | Nutrition & Health | Safety | Investor Relations | Mkt. Research |
|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Tactic B

Tactic Name: National Beef-Science Curriculum Development

Tactic Description:

The Situation: On the Farm STEM and Health educator events have been successful in changing the perception of the beef industry among key influencers in education. Through these events we have identified a challenge/opportunity. These STEM-based education leaders are now willing to help shift the mindset of teachers and other

curriculum specialists in their states/district/schools, but they lack high-quality, vetted instructional materials to promote for use in the classroom.

The STEM education field is flooded with free instructional resources from universities, museums, zoos, trade associations and other groups. The general consensus among science education leaders, however, is that there is a critical shortage of quality resources, especially as they relate to the expectations of the Next Generation Science Standards (NGSS).

NGSS is a state-driven effort to increase the quality of science instruction. Nearly two-thirds of U.S. students live in states that have education standards influenced by the Framework for K-12 science education and/or the Next Generation Science Standards.

Nineteen states and the District of Columbia (representing over 36% of U.S. students) **have adopted** the Next Generation Science Standards (NGSS). The 19 states are Arkansas, California, Connecticut, Delaware, Hawaii, Illinois, Iowa, Kansas, Kentucky, Maryland, Michigan, Nevada, New Hampshire, New Jersey, New Mexico, Oregon, Rhode Island, Vermont and Washington.

Twenty states (representing 29% of U.S. students) have developed their own standards **based on** recommendations in the National Research Council (NRC) Framework for K-12 Science Education. The 20 states are Alabama, Colorado, Georgia, Idaho, Indiana, Louisiana, Massachusetts, Mississippi, Missouri, Montana, Nebraska, New York, Oklahoma, South Carolina, South Dakota, Tennessee, Utah, West Virginia, Wisconsin, and Wyoming.

Even in states where NGSS hasn't been adopted or used as the basis of their science standards, the National Science Teachers Association – with members from all 50 states – is in full support of NGSS and its adoption in the classroom. The NSTA site states, “It is essential that all students have access to a high-quality science education that provides them with the skills and knowledge they need to be well-informed citizens, to be prepared for college and careers, and to understand and appreciate the scientific enterprise. The National Science Teachers Association (NSTA) recommends the adoption and implementation of the Next Generation Science Standards (NGSS; NGSS Lead States 2013) as an effective, research-based approach to accomplish these goals and transform science education.”

The development of NGSS has converged the same time as the movement within states and districts to move away from textbooks and adopt open-source education resources available in online repositories. States and districts are now rushing to develop processes to vet available instructional resources and make them available to teachers. Science is an area where there is a critical shortage of materials.

Achieve - a leading education policy nonprofit led by governors, business leaders, and national education leaders – is striving to provide guidance on what constitutes high-quality science instructional materials through its NGSS Design Badge program. From

their website, “Many science instructional materials claim to be aligned to the NGSS with little to no evidence. Achieve hopes the NGSS Design Badge will provide an easy way for consumers to be assured that a unit--whether it was found online for free or purchased from a big publisher--is designed for the NGSS. By making this award a digital badge with embedded, detailed feedback, the evidence for why the badge was awarded follows the badge wherever it goes. It's critical that educators not only know that it is designed for the NGSS, but what evidence supports this claim. The NGSS Design Badge will give also publishers and developers a way to demonstrate to potential customers that their materials are high-quality and designed for the NGSS. By having their materials reviewed, developers can potentially earn a badge and advertise that their materials are some of the top rated in the field.”

In summary, STEM educators do not feel equipped to translate science phenomena and real-world applications into curriculum that can be easily deployed in classrooms. Educators are overwhelmed with the challenge of finding real-world connections as required by NGSS. The beef industry is positioned to provide an invaluable resource that will have immediate value as an instructional resource and will change perceptions about the beef industry by delivering accurate information in science classrooms.

The Need: High quality, freely available, instructional resources designed to support the rigor of new science standards in order to develop students prepared for college, career and life as an informed consumer.

- NGSS has presented a fundamental shift in mindset regarding how science should be experienced by learners and assessed by educators. There is a greater emphasis on integration across disciplines, design thinking, and problem solving through real-world application.
- Science educators are unprepared to develop curriculum that meets the expectations of new science standards.
- Further, many states and districts are working to move away from traditional textbooks and use an open education resource (OER) platform in which free resources, vetted by educators, are available for use by schools and teachers. A great challenge for many states and districts is that the free resources available now are not designed to meet the rigorous expectations of Next Generation Science Standards design.
- Past participants at On the Farm Health and STEM events have overwhelmingly expressed a need for specific resources to integrate beef industry information into the science classroom.

Rationale:

- There is a huge demand for these kinds of materials and very little supply (only two units of instruction had earned NGSS Design Badges at the time of this proposal, source: <https://nextgenscience.org/badgeunits>).
- We have the right team in place with the right process to ensure successful outcomes.
 - AFBFA is a leader with national-scale resources to support development and promote the resource through network of volunteers.

- Vivayic specializes in program management and curriculum design. Vivayic will design and coordinate the process.
- The program will be advised by the Nebraska Department of Education Science Specialist and leader of national NGSS initiatives to improve science education.
- We will engage a nationally recognized subject matter expert (SME) once the topic of each unit is determined (e.g., extension specialist or researcher in grazing systems or beef nutrition, for example)
- Three nationally-recognized organizations within science education will be under contract to conduct two-day professional training for curriculum developers.
 - Next Generation Science Storylines: This initiative is “dedicated to providing tools that support teachers in developing, adapting, and teaching with strongly aligned NGSS materials in classrooms around the country.” <http://www.nextgenstorylines.org/>
 - University of Colorado Boulder School of Education iHub: This project, led by Institute for Cognitive Science's Tamara Sumner and the School of Education's Bill Penuel, specializes in developing three-dimensional formative assessment in STEM education. <http://inquiryhub.dls.ucar.edu/>
 - Achieve: We will contract with the Achieve organization <https://www.achieve.org/> , a bipartisan group of governors and business leaders, to provide planning assistance, professional development to the writers on the EQulP Rubric for Lessons & Units, and to conduct a preliminary review of materials with feedback on how to improve materials for final NGSS Design Badge review.

This tactic is positioned as a 12-month development effort to design, develop, and complete the review to attempt to earn the NGSS Design Badge. Our FY20 authorization request will focus on promotion and use of the instructional materials developed in FY19.

Measurable Objectives *(List at least three outcome-based objectives for this tactic):*

1. AFBFA will work with leaders in science education to develop two units of integrated science curriculum using beef production as the application and context.
2. AFBFA will submit the units for review in attempt to earn a NGSS Design Badge on or before September 1st, 2019.
3. **Engage at least three organizations that are nationally-recognized for expertise in Next Generation Science Standards (NGSS) in the curriculum development process.**

For Reference Only: Due to the timing of the school calendar, AFBFA plans to present a continuation of this AR for FY 2020, which will accomplish the following objectives:

1. (FY20) Present to at least 25 science leaders, 25 science teacher educators and 1,000 science teachers.
 - a. Reach 1,050 KOLs
 - b. Engage 200 KOLs (teachers) in using the units in their classrooms
 - c. Reach 10,000 consumers (students) via science classroom instruction
 - d. Engage 500 consumers (students) that share their response to a social problem using social media
2. (FY20) Have the two initial units of curriculum approved for use in at least 10 states with an OER.
3. (FY20) Refine and routinize the process used to develop the initial integrated units and repeat the process to develop at least two additional units of instruction.

Performance Efficiency Measures

Consumer Reach Goal: This is a development year, and as a result, all contact will be directly with key opinion leaders for this tactic.

Consumer Engagement Goal: This is a development year, and as a result, all contact will be directly with key opinion leaders for this tactic.

Voice/KOL Goal: Reach 200 key opinion leaders through select invitation to participate in curriculum design team.

Voice/KOL Engagement Goal: Engage 8 key opinion leaders (2 days each) to design and develop materials. (Goal = 16)

LRP Strategic Initiatives Addressed by this Tactic (Check all that apply)

| Drive Export Growth | Grow Consumer Trust | Protect & Enhance Business Climate | Beef's Value Proposition |
|--|--|---|---|
| <input checked="" type="checkbox"/> Adopt traceability systems <input type="checkbox"/> Increase market access <input type="checkbox"/> Promote unique attributes of U.S. beef | <input type="checkbox"/> Ensure antibiotic stewardship <input type="checkbox"/> Certify & verify production practices <input type="checkbox"/> Ensure beef safety <input checked="" type="checkbox"/> Protect beef's image <input checked="" type="checkbox"/> Engage beef advocates | <input type="checkbox"/> Research & innovate new production tech. <input type="checkbox"/> Ensure beef's inclusion in dietary recommendations <input type="checkbox"/> Motivate producers & stakeholders to engage <input type="checkbox"/> Develop crises management plans <input type="checkbox"/> Attract, develop & enable the next generation <input type="checkbox"/> Defend beef's product identity | <input type="checkbox"/> Revolutionize beef marketing & merchandising <input type="checkbox"/> Measure & improve sustainability <input type="checkbox"/> Research & communicate beef's nutritional benefits <input checked="" type="checkbox"/> Connect & comm. with consumers <input type="checkbox"/> Improve product & production efficiency |

Committee(s) to Score this Tactic (Check all that apply)

| Consumer Trust | Export Growth | Innovations | Nutrition & Health | Safety | Investor Relations | Mkt. Research |
|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

SUPPLEMENTAL INFORMATION FOR THIS AR

1. Will all work detailed in this AR be completed by the end of the fiscal year?

Yes

If not, please provide an explanation.

N/A

2. Please explain changes from FY 2018 approved AR:

N/A

3. List any proposed subcontractor/agencies that will be used to complete the work in this AR.

Instructional Design and Project Management: Vivayic, Inc. (Lincoln, NE)
<http://www.vivayic.com>

4. Will all work with subcontractors be competitively bid?

No

If not, why not?

This program will leverage an ongoing relationship between AFBFA and Vivayic, Inc. Vivayic's agricultural education experts fulfill the responsibilities of The Foundation Education Director.

5. Please list any relationships between this AR and projects previously funded by the Operating Committee:

This AR extends the reach and impact established through AR 1708-CI, AR 1606-CI, and AR 1509-CI.

DETAILED BUDGET SUMMARY:**CBB/BPOC Funding Request:**

| Committee | Tactic | Tactic Name | Funding Source | Direct | Impl. | Total |
|------------------|--------|------------------------|----------------|------------|-----------|------------|
| Consumer Trust | A | Immersive Experiences | BPOC | \$ 237,344 | \$ 35,000 | \$ 272,344 |
| Consumer Trust | B | Curriculum Development | BPOC | \$ 371,543 | \$ 56,113 | \$ 427,656 |
| AR Totals | | | | \$ 608,887 | \$ 91,113 | \$ 700,000 |

Federation of SBCs Funding Request: (Informational Only)

| Committee | Tactic | Tactic Name | Funding Source | Direct | Impl. | Total |
|------------------|--------|------------------------|----------------|--------|-------|-------|
| Consumer Trust | A | Immersive Experiences | Federation | \$ - | \$ - | \$ - |
| Consumer Trust | B | Curriculum Development | Federation | | | \$ - |
| AR Totals | | | | \$ - | \$ - | \$ - |

Other Funding Source(s): (Informational Only)

| Committee | Tactic | Tactic Name | Funding Source | Direct | Impl. | Total |
|------------------|--------|------------------------|----------------|--------|-------|-------|
| Consumer Trust | A | Immersive Experiences | N/A | \$ - | \$ - | \$ - |
| Consumer Trust | B | Curriculum Development | N/A | \$ - | \$ - | \$ - |
| AR Totals | | | | \$ - | \$ - | \$ - |

Total Cost Summary for All Funding Sources: (Informational only)

| Committee | Tactic | Tactic Name | Funding Source | Direct | Impl. | Total |
|------------------|--------|------------------------|----------------|------------|-----------|------------|
| Consumer Trust | A | Immersive Experiences | All | \$ 237,344 | \$ 35,000 | \$ 272,344 |
| Consumer Trust | B | Curriculum Development | All | \$ 371,543 | \$ 56,113 | \$ 427,656 |
| AR Totals | | | | \$ 608,887 | \$ 91,113 | \$ 700,000 |

| Summary of Prior Year Budget: | FY 2018 Approved Budgets | | | | | | |
|-------------------------------|--------------------------|-------|-----------------|------------|-------------|-----------|------------|
| | CBB/BPOC | FSBCs | Other Source(s) | Total | Direct Cost | Impl. | Total |
| AR Total | \$ 435,131 | \$ - | \$ 59,678 | \$ 494,809 | \$ 455,260 | \$ 39,550 | \$ 494,809 |

| Summary of Prior Year Actual Expenses: | FY 2018 Actual Expenses (through May 30, 2018) | | | | | | |
|--|--|-------|-----------------|-----------|-------------|-----------|-----------|
| | CBB/BPOC | FSBCs | Other Source(s) | Total | Direct Cost | Impl. | Total |
| AR Total | \$ 61,674 | | | \$ 61,674 | \$ 44,087 | \$ 17,587 | \$ 61,674 |

| Historical Summary of Budgets and Expenses | Total Approved Budgets | | | Total Actual Expenses | | |
|--|------------------------|------------|------------|-----------------------|------------|------------|
| | FY 2017 | FY 2016 | FY 2015 | FY 2017 | FY 2016 | FY 2015 |
| AR Total | \$ 419,623 | \$ 440,700 | \$ 222,500 | \$ 331,041 | \$ 388,721 | \$ 208,193 |