CULTIVATING ADVOCACY SKILLS AND CONTENT KNOWLEDGE: AN EVALUATION OF A COURSE PROJECT

Dr. Carrie L. Pickworth*, Department of Animal Science, North Carolina State University
Dr. Wendy J. Warner, Department of Agricultural and Extension Education, North Carolina State University

NACTA 2016
Agriculture in the headlines...

2. The beef we use is all NC sourced and pasture raised. Pasture raised means no added hormones and no antibiotics are in our beef. Our cows are raised in pastures on grass. We work closely with Farmhand Foods of Durham to bring farmers into our beef source network. The farmers sign a code of ethics to make certain the beef you eat meets our quality standards. Pasture raised beef costs about three times what conventional corn-fed, hormone added beef costs, but we are committed to flavor and to your health. Pasture raised beef is higher in omega 3 and 6 fatty acids, lower in bad cholesterol and much higher in cancer fighting Lignolic acid with more minerals, more vitamins and less saturated fat. It's practically diet food.
Introduction

- Anti-agriculture messages and misinformation are commonplace in the media and among society.

- The role of agricultural universities...
  - Educate students using sound science.
  - Provide students production livestock experience.
  - Prepare students to serve as positive voices of agriculture.

- Therefore the Ambassadors of Beef assignment was created to provide students with the opportunity to learn and communicate about food animal production.
Option 1: Posters & Advocacy

Feedlot Finishing

- Improved feed conversion and meat quality
- High efficiency in feed utilization
- Reduces greenhouse gas emissions
- Cost-effective compared to conventional systems
- Enhances animal welfare

Ear Tags

- NC State University
- Temporary Ear Markings
- Identification and tracking of livestock
- Essential for record-keeping
- Compliance with animal health regulations

Forages

- Importance of forage in animal nutrition
- Impact of forage quality on animal performance
- Strategies for improving forage quality
- Role of forage in sustainable agriculture
Option 2: Seminar Presentation
Assessment: Year 1

- Pre-Assessment: Due Week 8
  - Submitted a 1 page personal statement on perceived preparation to advocate for the beef industry.
  - Generated a list of anticipated questions from the general public.
  - Identified topics perceived as potentially difficult to answer.

<table>
<thead>
<tr>
<th>Potential Questions</th>
<th>Frequency</th>
<th>Topics of Concern</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much antibiotics or hormones are in meat?</td>
<td>14</td>
<td>Effects of vaccinations, implants, antibiotics on meat</td>
<td>9</td>
</tr>
<tr>
<td>What do cattle eat/how much?</td>
<td>11</td>
<td>Topics related to animal welfare</td>
<td>4</td>
</tr>
<tr>
<td>What is the cow’s name?</td>
<td>8</td>
<td>Dealing with political questions</td>
<td>4</td>
</tr>
<tr>
<td>What is the difference between conventional and organic/grass-fed?</td>
<td>5</td>
<td>Nutritional requirements of different groups of cattle</td>
<td>3</td>
</tr>
<tr>
<td>Why are there so many breeds of beef cattle?</td>
<td>5</td>
<td>Relating to children</td>
<td>3</td>
</tr>
<tr>
<td>What is the difference between beef and dairy cattle?</td>
<td>5</td>
<td>Difference between conventional and organic/grass-fed beef</td>
<td>3</td>
</tr>
</tbody>
</table>
Assessment: Year 1

- Post-Assessment: Due Week 14
  - Submitted a 1 page personal statement on perceived to advocate for the beef industry.
  - Included a list of questions asked by the general public.

<table>
<thead>
<tr>
<th>Topics of questions asked</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of cow/calf</td>
<td>23</td>
</tr>
<tr>
<td>Name of cow/calf</td>
<td>9</td>
</tr>
<tr>
<td>Diet for cattle</td>
<td>8</td>
</tr>
<tr>
<td>Cuts of meat drawn on an animal</td>
<td>7</td>
</tr>
<tr>
<td>Age of cattle at slaughter</td>
<td>7</td>
</tr>
<tr>
<td>Gender of cattle</td>
<td>7</td>
</tr>
<tr>
<td>Ability to milk/ difference between beef and dairy cattle</td>
<td>7</td>
</tr>
</tbody>
</table>

Student reflections

- Lack of “meaningful questions”
- People are “unfamiliar with agriculture”
- Better able to relate to and answer adult questions as opposed to kids
- Need training on dealing with controversial topics or industry misconceptions
- “Better experience” and “more fun” than expected it to be
Assessment: Year 2

- Two Pre-Assessments: 1st Due Week 2, 2nd Due Week 12
  - Submitted a 1 page personal statement on perceived preparation to advocate for the beef industry.
  - Rated expected frequency of questions on 10-15 pre-identified topics.
  - Rated perceived confidence of ability to answer questions on the 10-15 topics.
    - Included answers to questions on Pre-Assessment 2.
  - Generated 5 additional topics/questions.
Assessment: Year 2

○ Student Reflection Pre-Assessment 1
  • “I would not feel comfortable trying to advocate for it [beef industry], with the little information that I know.”
  • “To be honest, I do not think I will be able to advocate for the beef industry at all. I honestly do not have an interest in food animal industries, and I have no previous beef cattle experiences.”
  • “Some areas I am not comfortable speaking about at this time include: aging cattle, estimating weight, reproductive aspects, and processing of cattle for meat.”
  • “I believe that I can be a great advocate for the beef industry today after I get more training...I know that I still have a lot to learn about the beef industry”

○ Student Reflection Pre-Assessment 2
  • “I feel like after taking this class I can properly advocate beef and give the beef industry a better representation.”
  • “Over-all I feel like I am better equipped to advocate for the industry than I was starting out, but one should never stop learning about something they care about.”
  • “I asked my friends if they had any questions about the beef industry, and I knew most of the answers. I was excited I could actually answer them.”
  • “I hope to use facts and my experiences to share with consumers how the beef industry contributes safe and wholesome beef, while being environmentally friendly, efficient, and top care for animals.”
Assessment: Year 2

- Post Assessment: Due Week 14
  - Submitted a 1 page personal statement on perceived to advocate for the beef industry.
  - Rated frequency of questions received on 10 pre-identified topics
  - Rated perceived confidence of ability to answer questions on the 10 topics.
  - Included an additional 5 topics/questions that were asked by the public.
Assessment: Year 2

- **Student reflection Post-Assessment**
  - “I saw a lot of ‘oh, I get it now’ looks on adult participants as I explained hormones in food using M&M’s”
  - “I felt more prepared than ever to be out there among the public answering questions of young children, wondering parents, and other experienced producers.”
  - “I advocated the beef industry well and was able to answer everyone’s questions… an it was an honor for me to be able to advocate for an industry that I only started to know about this semester.”
  - “It was much less intimidating than I imagined it to be. I was able to answer [questions] honestly and with confidence.”
  - “It really surprised me how many people were seeing animals ‘close-up’ for the first time in their lives.”
Assessment: Year 2

- The use of 3 assessments demonstrated progression of student learning throughout semester as topics were covered.

Student confidence (1 = not at all, 5 = extremely confident)

Within a topic are different (P < 0.0001)
Conclusions

- A service learning project which engages students in advocacy in a management course can...
  - Help increase student confidence in interacting with the public about agricultural topics.
  - Promote student learning of key course concepts.
  - Prepare future advocates for agriculture.
  - Reinforce the importance of disseminating scientifically accurate information.
  - Expose some perceptions about agriculture held by the general public.
  - Encourage the development of communication and presentation skills when interacting with audiences of all ages.
Application in Other Disciplines

◦ A similar project could be integrated in a variety of courses!
  ◦ What are some hot button issues or topics that are important for your students to learn/communicate about?
  ◦ What venues/audiences should your students be prepared for in the present and future?
  ◦ What are some communication/presentation skills your students should develop and refine?

◦ Some advice from our experience:
  ◦ Help students identify potential questions and practice their responses prior to their educational activity.
  ◦ Discuss some potential scenarios that could arise and different approaches for response.
  ◦ Props or resources available will direct questions and topics.
  ◦ Provide quality control of accuracy through supervision.
Thank You!

Dr. Carrie L. Pickworth
Department of Animal Science
clpickwo@ncsu.edu

Dr. Wendy J. Warner
Department of Ag & Extension Education
wjwarner@ncsu.edu