

Improving teaching by building confidence in meat evaluation skills

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Introduction/Need

“School based agricultural education (SBAE) teachers fulfill a variety of roles and responsibilities when engaging students in the three-component model” (Bowling et al., 2020). Within the three-circle model, Career Development Events (CDEs) are academically-based competitions where students enrolled in agricultural education courses are given the opportunity to apply knowledge gained through their coursework and/or other program components (Bowling et al., 2020). The primary responsibility of SBAE teachers is classroom or laboratory content instruction, and CDEs allows students to learn content in a non-formal setting either individually or on a team (Bowling et al., 2020). In 2023, the leading placement Supervised Agricultural Experience (SAE) in Missouri was Food Products/Processing Systems with a total of 3,217 students (Missouri Department, n.d.b). Students have the opportunity to implement knowledge learned from CDEs or coursework into their SAEs to allow for a real-world application of knowledge. With the perceived benefits students gain from participating in CDEs indicated by research, it is no surprise research has also indicated a “high degree of teacher stress and need for teacher professional development in CDE preparation” (Ball et al., 2016a). Ball et al. (2016b) indicate coaches became more knowledgeable in CDE content areas through reading the manuals, but also through the initiative of participating in area CDE workshops, professional development opportunities and collaborating with other advisors and coaches. Through participating in workshops and reading in content areas, the coaches are better able to answer students’ questions on the spot without referencing additional resources for answers (Ball et al., 2016b).

How it Works

We developed this professional development opportunity to help SBAE teachers gain knowledge and skills to confidently prepare students for the Missouri Meats Evaluation CDE. Experts in the field provided knowledge and skills to evaluate carcasses, judge retail classes and identify retail cuts. Our workshop team included an Assistant Extension Professor who also serves as the University of Missouri Meat Specialist, a master’s student in agricultural education who works in a meat processing facility, and two Agricultural Education faculty members. We invited SBAE teachers to participate in this professional development workshop via email and social media. Upon arrival, instructors were provided with a booklet containing PowerPoint presentations, notes pages, and other supplemental materials.

We organized topics by species, including beef, pork and lamb carcass evaluation, retail class evaluation, retail identification, beef grading and questions. For each species, participating SBAE teachers first participated in a foundational lecture with PowerPoint. Next, they moved into the processing facility to apply the information to a variety of classes. We aimed to simulate classes their students would see in a contest to make their own experiences and learning applicable to their students’ CDE experiences. It was important for workshop participants to have

a realistic, hands-on experience in the meats processing facility because it is difficult to portray fine details such as texture or cutting angles in pictures.

Results to Date

Participants included 9 SBAE teachers (6 female, 3 male) from across Missouri. Teaching experience ranged from 0-30 years. Results of the post-workshop evaluation indicated:

- 100% of participants were likely or very likely to recommend this workshop to others.
- All participants scored 48/50 points or higher on at least one class, indicating a high level of understanding.
- Participants were most successful at placing retail judging classes, with the lowest score being 43/50 points.
- Participants struggled the most with beef grading. When prompted to grade steaks after learning how to do so, participants said they were not willing to attempt the math to accomplish the task of grading.

It is important to acknowledge the evaluation only measured satisfaction level and knowledge level of the SBAE teachers participating in the workshop. Our evaluation did not assess to what extent SBAE teachers will be able to teach the workshop information to their students.

Future Plans/Advice to Others

Future plans include conducting meat evaluation workshops for instructors every 3-5 years to provide a consistent, hands-on training resource within throughout the state. These workshops may be particularly beneficial for early career SBAE teachers or veteran instructors who have had limited experience with the Meats Evaluation CDE. We also plan to track team results to evaluate the performance of workshop participants' meats evaluation teams. This information will help us understand how successfully SBAE teachers who participated in the workshop were able to teach the materials to their students. Those aspiring to plan and host similar events should understand the importance of maintaining communication with meat processing facilities well in advance of the event. Processing schedules vary greatly and ensuring there are enough carcasses to cut all product needed for various classes and retail identification is a crucial step.

Additionally, we recommend hosting the workshop over two days instead of one due to the large amount of in-depth information the contest involves.

Cost/Resources Needed

Each participant paid a registration fee of \$75. The fee covered lunch for the participant, printed classroom materials, a take-home packet, and the campus event fee. It is crucial to establish and maintain a good working relationship with a local processing facility in order to host a successful event.

References

- Ball, A., Bowling, A., & Bird, W. (2016a). A Case Study of Learning, Motivation, and Performance Strategies for Teaching and Coaching CDE Teams. *Journal of Agricultural Education*, 57(3), 115–128. <https://doi.org/10.5032/jae.2016.03115>
- Ball, A., Bowling, A., & Sharpless, J. D. (2016b). An Observational Analysis of Coaching Behaviors for Career Development Event Teams: A Mixed Methods Study. *Journal of Agricultural Education*, 57(3), 101–114. <https://doi.org/10.5032/jae.2016.03101>
- Bowling, A. M., Ball, A. L., & Bird, W. A. (2020). Exploring Motivational Strategies, Outcomes, and Theories within the Career Development Event Preparation Process. *Journal of Agricultural Education*, 61(1), 221–234. <https://doi.org/10.5032/jae.2020.01221>
- Missouri Department of Elementary and Secondary Education. Ag Ed Strategic Plan 2024-2029 Revised 6-26-23. Missouri Department of Elementary and Secondary Education. (n.d.a). <https://dese.Missouri.gov/media/pdf/ag-ed-strategic-plan-2024-2029-revised-6-26-23>
- Missouri Department of Elementary and Secondary Education. Curriculum. Missouri Department of Elementary and Secondary Education. (n.d.b). <https://dese.Missouri.gov/Agricultural%20Education%20Curriculum>.