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## Feedlot Nutritionist Boot Camp: An Intensive Short-Course for Commercial Agriculture Graduate Students

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### Abstract

In the digital age, face-to-face meetings combining didactic and experiential learning are valuable. Beef cattle nutrition graduate students ( $n = 33$ ) from 11 universities attended a 5-day feedlot nutrition and management short-course. Topics included nutrition, veterinary medicine, feedmill maintenance, and management of the financial and human aspects of the feedyard business. Practicing feedlot industry professionals provided the training. In addition, students completed an interactive, team-oriented assignment. Students gleaned a greater comprehension of the intersection between the scientific theory learned in the university and the very application of that theory.

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### Introduction

Although the use of digital, Web-based communication methods as primary tools for delivery of Extension programming has grown dramatically in the past decade (Kallioranta, Vlosky, & Leavengood, 2006; Rhoades, Thomas, & Davis 2009; Kinsey, 2010), an argument can still be made for the value of in-person delivery of Extension programming. Certain types of training simply do not lend themselves well to online training and benefit greatly from experiential, hands-on instruction (Franck, Vineyard, Olson, & Peterson, 2012). The complete experiential learning model stimulates a more comprehensive set of mental learning pathways, resulting in greater retention by all types of learners (Joplin, 1981).

Universities do a tremendous job of educating students in the basic and applied sciences necessary to best serve modern agriculture. Graduate coursework in conjunction with conducting research contribute to the knowledge base that will be required after the student moves on to his or her career. However, one area lacking in conventional graduate curricula is extensive exposure to industry practices beyond the university research-scale facilities.

Exposure to actual agribusinesses allows students to better comprehend practical challenges to

agribusinesses and therefore develop more effective solutions (Curtis & Mahon, 2010). The Feedlot Nutritionist Boot Camp was designed to provide current graduate students studying beef cattle nutrition with insights into modern production practices of the feedlot industry. Perspectives on timely industry issues and practices was provided by practicing feedlot nutritional and veterinary consultants as a means of connecting the basic sciences being taught at the university with application of those sciences in production practice. A second, although not secondary, benefit and goal of the event was to provide students and industry professionals a substantial interpersonal interface for development of relationships.

## Meeting Design

The Boot Camp used the three primary stages of Experiential Learning outlined by Joplin (1981): focus, action, and debrief. The initial presentations of the week set the stage for the topics and learning environment. The bulk of the week alternated between lecture, facilities visitations, and interactive team practical problem solving. And the final presentations of the week were designed to summarize the week's material and opportunities.

The first goal was to provide the training at a minimal cost to the students. Sponsorship was solicited so that the students only needed to supply their travel to and from the event; meals and lodging were provided at no cost to the students. Sponsors provided an instructor for a portion of the training within their area of production expertise. The organizers strove to allow sponsors to represent their own products but also provide truly valuable technical training.

The second goal was to maximize in the limited time provided. Classes began daily at 0700 hours, concluding at 1900 hours daily, and instruction began Monday at 0700 hours and concluded at noon on Friday. To prevent classroom fatigue, field trips were scheduled to a local feedlot and to a pharmaceutical technology company.

The third objective was that practicing industry professionals—nutritionists, veterinarians, and corporate executives—would provide much of the actual instruction. Successful industry professionals have a unique perspective as to how and what portions of the sciences being learned in the university are presently being applied in commercial agriculture. It is the actual practicing industry professionals who are, daily, combining controlled studies, observational data, applied epidemiology, and "soft science" to solve industry challenges in real time.

The fourth objective was that students would get to know other students from other university programs. Students were assigned to four-member teams; students on each team were from different universities but were at a similar stage of their graduate training. Student teams were assigned a project to solve a current industry problem. After the evening meal each day students were given assistance with their assigned team projects.

The fifth objective was that instructors and sponsors would have substantial time outside of the formal instructional time to interact socially with the students. Enrollment was limited to 33 students in order to ensure maximum opportunity for interaction between students and instructors in the classroom and during informal breaks and meals. Sponsors and instructors were invited to join students for the noon and evening meals, which provided a total of several hours each day for interaction.

A panel of industry professionals was tasked with selecting the winning team project. As an incentive for the students to commit substantial effort to the team project, a custom commemorative belt-buckle was awarded to each member of the winning team.

## Lessons Learned

Some teams fail to identify synergistic opportunities among team members, resulting in frustration, dissention, and lackluster productivity. Some students lacked leadership and team work. Conversely, when individuals focused their individual efforts to the team outcome, the teams were successful.

Some instructors proved more capable of providing unbiased practical instruction than others; some who represent products and companies were less able to distance themselves from their inherent bias. For future programs, greater emphasis will be placed on purposefully selecting speakers who possess both exceptional subject matter expertise and an instructional approach to information delivery and who provide corporate bias coincidentally rather than pervasively.

Upon completion of the Boot Camp, interest was expressed in the program and the student-participants by many in allied industries. The intensive nature and extended time frame of the program gave the organizers insight into students' competency within the context of this unique and competitive learning environment.

## Conclusions

Graduate students in nutrition from across the U.S. were eager to participate in this week-long, didactic and experiential training and to learn directly from industry professionals how to best prepare themselves for a career in commercial agriculture. Industry professionals have expressed appreciation of this approach to bridging the gap between academia and the beef industry we mutually serve.

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