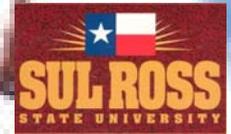


# Beef Production from Conception to Consumption: An Innovative Program for Hispanic and Other Underrepresented Students



S. A. Ericsson<sup>1</sup>, P. A. Will<sup>1</sup> and M. E. Will<sup>2</sup>  
<sup>1</sup>Departments of Animal Science and <sup>2</sup>Business Administration  
Sul Ross State University, Alpine, Texas



R. M. Lemons  
Odessa College, Odessa, Texas

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## Institutions and Agencies/Organizations

Sul Ross State University (SRSU), Odessa College (OC), Student Career Experience Program (SCEP) of the USDA Livestock and Seed Program, Texas AgriLife Extension Service and College Tech-Prep.

CSREES/USDA Priority or Mission Area: USDA/CSREES Priority Need Area 1, Educational Need Areas: A, C-F in the discipline of Animal Science.

## Objectives

The Beef Production from Conception to Consumption intends to create a program that will educate students in all aspects of producing high quality beef products. Staff will develop a distance delivery beef production curriculum, maintain and expand the existing articulation agreement between SRSU and OC. Student internship opportunities will be set up through the Student Career Experience Program (SCEP) of the USDA Livestock and Seed Program. Project staff will educate and recruit prospective students through the Texas AgriLife Extension Service and College Tech Prep and provide student financial support. Scientific equipment for instructional and hands-on use at OC will be acquired to appropriately educate students.



## Activities

Students will enroll in a curriculum that mirrors the biological timeline of producing a beef product, from the initial breeding of the animal until the consumer has a steak-on-a-plate. The final meat products will meet certain quality requirements prior to being offered to the public for sale. Each institution will maintain a herd of animals: SRSU (Herefords) and OC (Red Angus) both of which will be used to produce the beef products. The existing agricultural curricula at SRSU and OC will be revised to include ten distance delivery classes, new instructional materials, specialized experiential laboratories, and shared faculty and technological resources between SRSU and OC. Classes will be rescheduled to follow a real world beef production timeline and to maximize student experiential learning. The existing articulation agreement between OC and SRSU will be modified to facilitate seamless transfer of students from a two-year into a four-year program with the aim of increasing transfer and retention of Hispanic and underrepresented students. A partnership with the Student Career Experience Program (SCEP) of the USDA Livestock and Seed Program will be initiated to provide eight to ten students an opportunity to participate in the student trainee program. Students will gain valuable career experience while earning money for their education. Partnerships with the Texas AgriLife Extension Service and updated articulations with College Tech-Prep school districts will also be initiated to disseminate information about the program to identify and recruit qualified junior and senior students through its 4-H and Youth Development programs. Since many of the students in this region are economically disadvantaged, the program will fund tuition for potentially thirty-nine undergraduates to enroll in one BPCC course per fall and spring semester for three years and will provide financial assistance to one student graduating with a Bachelor of Science degree from SRSU (this student would be sponsored to pursue a Master of Science in Animal Science at SRSU with funds to be used to cover tuition, books, a stipend, computer, and travel to the American Society of Animal Science Annual Meeting and travel to one-week leadership training). Students at OC need updated equipment to be current with industry efficiency and safety standards. They presently observe animals for estrus, although a computerized estrus watch detection system utilizing radio frequency technology is a more accurate method of assessing estrus. In addition, OC needs a nitrogen tank for semen storage as well as modern artificial insemination equipment. The project staff will purchase and setup this new equipment which will be available for use thereafter to breed the student-selected cows from the OC Red Angus herd.

## Evaluation

The Institutional Research offices at SRSU and OC, in coordination with principal investigators and other faculty, will conduct follow-up surveys at 1-, 3-, and 5- year intervals to determine employment or advanced education status of program graduates. Quantitative, baseline, student enrollment, degrees granted and employment data will be collected to make comparisons in order to meet the HSI Education Grant Program



goals. Participating College Tech Prep schools in the region input student data into the existing CATEMA database, which collects Tech Prep and Career & Technology Education (CATE) information relating to students, courses and classes for school districts, high schools, teachers, counselors, college registrars, and college advisors. The web application is designed to provide a simple method to enter, update, display and report Tech-Prep and CATE-related information. Teacher recommendations for Tech Prep credit are available to college counselors and registrars. Thus, OC and SRSU will be able to identify prospective agricultural students. Principal investigators will coordinate, develop, and conduct an evaluation and follow-up system with the Texas AgriLife Extension to determine the BPCC effectiveness with 4-H and Youth Development students. In addition, school districts as well as SRSU and OC grant principals will utilize Integrated Post-secondary Education System (IPEDS) to further identify both high school and college students interested in pursuing careers in agriculture. Further, FAEIS Food and Agricultural Education Information System database will be used to benchmark, gather, compile, and distribute a broad range of higher education information to the food, agricultural and natural sciences. This data will be available to University faculty, higher education administrators, government officials, industry professionals, and the general public to answer questions about enrollment and graduation records, measures of student diversity, employment and placement diversity, including USDA agencies. Students will be surveyed twice each semester through voluntary questionnaires administered anonymously. The questionnaires will solicit responses on effectiveness, usefulness, and student desires in the BPCC Program courses. Before completing the revised courses, two SRSU Academic Forms, FE-1 and FE-2, will be completed. The department chair will complete form FE-1, "Chairperson Rating of Faculty Teaching Effectiveness," for each faculty member assigned to the course. The students will complete Form FE-2, "Student Appraisal of Faculty." Grant administrators will determine through the SRSU Office of Institutional Research and Effectiveness the number of students in revised courses as well as the number who have transferred from OC to SRSU. In addition, known employers will be contacted, electronically and/or personally, to determine if our BPCC Program is adequately training our graduates for positions in the industry.



## Expected Impact and Beneficiaries

The outcomes of this project will be the development of a novel experiential beef production program, creation of ten distance delivery courses, financial assistance for thirty-nine undergraduates and one graduate student, student internship opportunities, and purchase of scientific equipment for "hands-on" learning. Approximately 300 Hispanic and other underrepresented agricultural students will be prepared for employment in industry, government, and education during the period of the grant.

