

ANIMAL SCIENCE 3402 BEEF CATTLE PRODUCTION AND MANAGEMENT

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Spring 2015
Lecture: MWF 10-10:50, RAS 132
Laboratory: W 2-3:50 pm. RAS, 132

Lecture exam grades and notes will be accessible through Blackboard. Class correspondence will be through Blackboard or student's SRSU email account.

Course Description:

The course will be divided into the areas of history, breeding, feeding, and management of beef cattle. Range laboratory exercises will be an integral part of the course.

Course Objectives:

By the end of the course, you will be able to understand:

1. The beef cattle industry from the perspective of a supply chain system.
2. The cause and effect relationships that affect cattle productivity and profitability.
3. The challenges confronting the beef industry.
4. The biology, care, health, and management of cattle.
5. Cattle breeds and factors to consider when choosing a particular breed for a production system.

Program Learning Outcomes:

Student will demonstrate that he/she is able to:

1. Recognize and be able to utilize animal breeds from a variety of domestic species.
2. Comprehend the role of nutrition in the production of food animals.
3. Understand the processes involved in producing meat products from a variety of domestic food animals.
4. Select breeding animals using genetic information.

Texas Education Agency. Domain IV—Animal Science:

Competency 011 - The agricultural science and technology teacher understands basic animal classification, anatomy, physiology, and genetics.

The beginning teacher:

1. Identifies basic characteristics and uses of various breeds and types of animals of major economic importance in the United States.

2. Knows the basic anatomy of major organs and organ systems (e.g., respiratory, digestive, skeletal, muscular) in various animals (e.g., cattle, horses, swine, poultry).
3. Understands basic physiological processes (e.g., digestion, respiration, circulation) in various animals.
4. Knows the stages of growth and development in various animals.
5. Understands basic health issues and trends in the consumption of animal products in Texas and the United States.
6. Understands basic principles of genetics and their application to animal reproduction and selective breeding.

Competency 012 - The agricultural science and technology teacher understands animal production and management.

The beginning teacher:

1. Demonstrates general knowledge of animal management procedures (e.g., immunizing, taking vital signs, restraining, medicating, performing common surgical procedures).
2. Recognizes normal and abnormal behavior in various animals and its relationship to animal management.
3. Understands care and safe handling of animals throughout the life cycle and legal and ethical considerations in animal production and management.
4. Understands basic nutritional requirements of animals and applies knowledge of animal nutrition (e.g., sources of nutrients, classes of feed, feed additives) and feeding practices (e.g., formulating rations, issues of feed quality, feeding schedules).
5. Identifies common nutrient deficiencies, disease symptoms, parasites, and genetic disorders of animals and methods of control, treatment, and prevention.
6. Knows basic principles of animal reproduction and selective breeding and applies principles of genetics (e.g., EPDs, progeny data, trait selection) to selective breeding of animals.
7. Applies basic knowledge of natural and artificial animal breeding practices (e.g., controlling mating, artificial insemination) and current technologies used in animal reproduction (e.g., embryo transfer).
8. Evaluates breeding animals using various data (e.g., performance testing, production records, progeny testing, visual appraisal).
9. Understands basic principles and procedures for animal aquaculture.

Competency 013 - The agricultural science and technology teacher understands animal facilities, and procedures for selecting animals and processing animal products.

The beginning teacher:

1. Identifies different types, characteristics, and purposes of animal facilities (e.g., barns, feedlots).
2. Identifies appropriate environmental conditions (e.g., lighting, temperature, humidity) for housing various animals and methods of environmental control.
3. Understands environmental issues associated with animal facilities and basic procedures for managing animal waste and maintaining sanitation.
4. Knows guidelines for evaluating, purchasing, selling, and culling individual animals and how to use relevant information databases in making these decisions.
5. Identifies basic sanitation procedures for handling, processing, and packaging edible animal products.

Textbook: Not required.

Exams:

There will be two midterms and a final exam. Exams will cover lecture materials and readings. The final exam will only cover material presented after the second midterm.

Laboratory exercises:

There will be laboratory assignments and/or quizzes-exams that will total 100 points.

Grading:

Midterm 1	100 points
Midterm 2	100 points
Laboratory exercises	100 points
Final	<u>100 points</u>
Total	400 points

Grade assignment: A =100-90; B = 89-80; C= 79-70; D = 69-60 and F= < 60.

Exam:

Midterm 1 – Wednesday, February 25.

Midterm 2 – Friday, April 3.

Final – Monday, May 11, 8:00 am.

16 week calendar (subject to change)

<u>Week</u>	<u>Presentation Order of Topics:</u>
1-2	An Overview of the U.S. Beef Industry.
3-4	Retail Beef Products and Consumers.
5	Review and Midterm 1.
6	Management Decisions for Seedstock Breeders.
7	Commercial Cow-Calf Management Decisions.
8	Spring Break.
9	Yearling-Stocker Management Decisions.
10	Review and Midterm 2.
11	The Marketing System.
12-13	Cattle Breeds.
14	Herd Health.
15	Cattle Behavior, Facilities, and Equipment.
16	Review and Final Exam