

COURSE OUTLINE

Breeding Livestock Production Management

Course Description

AG 109. Breeding Livestock Production Management. 3 hours credit. This course will enable the student to develop production techniques relating to breeding livestock. Reproduction, nutrition, selection, handling, housing, and husbandry practices are included.

Course Relevance

After completion of this course, the student will be able to select breeding livestock that will enhance profitability of an operation by incorporating successful management, nutrition, and health programs while utilizing industry approved methodology, facilities, and housing.

Required Materials

Gronau, D.M., (current revision). *Breeding livestock production management*.

Instructor lecture and lab notes.

Learning Outcomes

The intention is for the student to be able to

1. Select breeding livestock in a mother-offspring operation utilizing traits which affect production efficiency
2. Observe and facilitate parturition
3. Be able to design a feeding program which meets the nutritional requirements
4. Manage the reproduction and genetic relationships in efficient production
5. Provide proper facilities

Primary Learning PACT Skills that will be DEVELOPED and/or documented in this course

Through the student's involvement in this course, he/she will develop his/her ability in the following primary PACT skill areas:

1. Problem Solving
 - Through the production of expected progeny differences records, mating systems, and selection techniques, the student will select breeding livestock that will affect production efficiency.
2. Field-Related Technology
 - Through skills in birth assistance, animal health care, and proper nutrition, the student will facilitate parturition and manage reproduction and genetic relationships for efficient production
3. Critical Thinking

- Through a variety of practices the student will develop skills in animal identification, handling and facilities management.

Major Summative Assessment Task(s)

These learning outcomes and the primary Learning PACT skills will be demonstrated by

1. Analyzing case studies for factors that affect breeding livestock management including selecting breeding stock, parturition, designing a feeder program, housing, and managing reproductive and genetic relationships
2. Demonstrating success in insemination and embryo transplant

Course Content

- I. Themes – Key recurring concepts that run throughout this course:
 - A. Selection of approved management practices
- II. Issues – Key areas of conflict that must be understood in order to achieve the intended outcome:
 - A. Identifying factors that affect breeding livestock management and efficiency
- III. Concepts – Key concepts that must be understood to address the issues:
 - A. Understanding breeding animal physiology and production
- IV. Skills/Competencies – Actions that are essential to achieve the course outcomes:
 - A. Selecting breeding livestock
 - B. Matching mating systems to consumer demands
 - C. Using industry approved techniques in birth assistance and health care

Learning Units

- I. Selecting breeding animals
 - A. Trait selection
 - B. Production efficiency
- II. Designing mating systems to match goals of production
 - A. Match mating systems to accomplish production goals
 - B. Identify the time tables to match desired production
- III. Limiting dystocia problems at parturition
 - A. Discuss products used to assist in the birthing process
 - B. Select actions to take in providing assistance
- IV. Identifying a basic health plan
 - A. Discuss and select approved health care plan
 - B. Administer proper preventative vaccines
 - C. Identify and apply proper parasite control
- V. Determine proper nutrition, feedstuff, and feed additives to use
 - A. Use National Research Council recommendation in calculating rations
 - B. Determine proper stocking rates for native rangeland
 - C. Use a computer program to balance rations to specific breeding animal needs

- VI. Develop animal identification plan, handling area, and facilities needs
 - A. Identify tools used in animal identification
 - B. Demonstrate branding, ear notching, and tattoo applications
 - C. Compare housing, equipment, and waste handling systems

Learning Activities

Learning activities will be directed towards lecture/demonstrations and practical exercises. Classroom lecture is designed to enable the student to understand the principles in breeding livestock production management.

Grade Determination

The student will be graded on assessment tasks, class participation, and written examinations.