Course Title: Livestock and Meat Evaluation. (3) I, II.

Course Description:
Evaluation of slaughter livestock and their carcasses as related to economically efficient production of red meat. Evaluation of breeding livestock on visual appraisal and performance records. A study of growth and the effects of nutrition, environment and hormones on growth patterns. Breeds of livestock and performance programs will be studied. One hour lec. and four hours lab a week. Pr.: ASI 102 and 105. ASI-315-1-0104.

Student Performance Objectives:

Behavioral Objectives for Livestock and Meat Evaluation

1. To recall the growth curve and the development of body tissues from birth to maturity.
2. To compare the growth patterns of beef, sheep, and swine as observed by feeding three groups of feeder animals to market weight during the semester.
3. To accurately estimate carcass composition and quality characteristics of live animals.
4. To calculate prices for market animals and their carcasses based on visual evaluations and current market conditions.
5. To identify various methods of evaluating carcass composition of live animals and carcasses.
6. To define and explain the subjective and objective methods used to evaluate carcass quality and composition.
7. To solve problems involving: yield and quality grades; percent edible portion; pricing of live animals and carcasses; rate of gain; and profit or loss of fed livestock using production data.
8. To recognize the effect of nutrition, environment, and hormones on the growth patterns of livestock.
9. To understand the factors of body size, nutrition and environment which alter the efficiency of growth.
10. To compare and distinguish the performance traits among various breeds of beef cattle, sheep and swine.
11. To differentiate the various performance programs of swine, beef, and sheep.
12. To recognize the roll of performance records in the selection of breeding stock.
13. To identify structural soundness and patterns of acceptability in swine, beef, and sheep.

Instructor: Michael Dikeman, David Nichols, and John Unruh
I. Lecture topics
   A. Meat animal growth and development
   B. Animal efficiency
   C. Animal size and efficiency
   D. Hormonal, nutritional and environmental effects upon animal growth
   E. Methods of evaluating live animals and carcass quality and yield
   F. Live animal and carcass pricing techniques
   G. Beef cattle breeds and performance testing programs
   H. Sheep breeds and performance testing programs
   I. Swine breeds and performance testing programs

II. Laboratory exercises
   A. Evaluation of feeder animals (swine, sheep, beef cattle) to be fed during the semester. Worksheets are used to determine growth rate, feed conversion, cost of producing edible protein for each specie.
   B. Live animal evaluation of 4 groups (3-4 hd/grp) of cattle, sheep, swine for fat thickness, loin eye area, carcass quality grade, yield grade or percent muscle.
   C. Live animal evaluation will be followed during the same week with the carcass evaluation of these animals for fat thickness, loin eye area, carcass quality grade, yield grade or percent muscle to relate carcass and live animal parameters.
   D. Keep-Cull groups will be evaluated for breeding purposes using visual appraisal and performance records--5-6 groups of each species (beef cattle, sheep, swine).

Evaluation Procedures:
Fifty percent of the course grade is derived from the laboratory exercises. Fifty percent of the course grade is derived from two, 1 hour exams, a comprehensive final exam, and weekly quizzes (equivalent to a 1 hour exam).

Text and Reference Material:

Sequencing:

Supplemental Information: