

ANSC 4314/5314
Forage Production and Management
Summer 2024

“An investment in knowledge cannot be stolen from a person and it always pays the best interest.”
- Benjamin Franklin

Instructor: Dr. Jamie Boyd
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Office Hours: By appointment

Lecture:

Web-based or T/H 9-10:45 am RAS 135

Required Texts: Southern Forages. D.M. Ball, C.S. Hoveland, and G.D. Lacefield. 2007 4th Edition or any earlier or later edition will work.

Other References: Other material will come from recent research and extension publications.

Course Description: Concepts and practical aspects of forage production, with emphasis on the southern United States. Forage management and forage species and review of grazing systems for different species of livestock.

Prerequisite: none

Purpose of the Course: This course is designed to provide a basic knowledge of ecological principles related to grassland ecology. Plant species adaption and interrelation with soil and climatic factors associated with establishment, production, utilization, and nutritional value of forages.

Student Learning Outcomes:

1. Be able to identify the major forage species used in the southeastern United States and know their major characteristics.
2. To understand relationships between ecology and physiology of forage plants and their adaption and management.
3. To relate animal performance to forage quality and management

Departmental Projected Learning Outcomes:

Student will demonstrate that he/she is able to:

1. Demonstrate the basic skills of interpreting research data gathered in an agricultural context,
2. Apply critical thinking skills to mitigate potential challenges in diverse animal sciences and related agricultural industries,
3. Develop problem solving skills, and
4. Demonstrate the ability to communicate through written, spoken, and graphical methods.

Assessment Measures: Upon completion of this course the student will demonstrate knowledge of forage identification, production and management, including plant morphology and physiology, grazing systems and management, and forage preservation by achieving at least a 60% score on examinations and other assignments.

Methods of Instruction: Material will be presented in the classroom lecture, discussion, and handouts.

Attendance Policy: It is your responsibility to attend lecture and laboratory periods. I do not provide copies of missed lecture material. It is also not feasible to “make-up” laboratory sessions. There will be no make-up exams or quizzes without **prior** approval.

Recommendations for Success: In order to succeed in this class, I recommend that you dedicate at a minimum two hours of study time per class hour each week. The material covered in this course cannot be learned adequately in only a couple days, it is cumulative and each day's material will build on the previous day.

Accommodations:

It is the SRSU policy to provide reasonable accommodations to students with disabilities. If you would like to seek any accommodations for this course, please contact the Counseling and Accessibility Services Office: Ferguson Hall 112 phone: (432) 837-8203 as soon as possible to ensure that such accommodations are implemented in a timely fashion

Academic Integrity: Academic dishonesty will not be tolerated. Consult the Honor Code for a statement of the college's policies. Any violation of academic integrity may (will probably) result in a grade of zero for an assignment or a grade of "F" for the course. Unless otherwise specified, group studying and discussion is permitted for papers, but all work submitted must be the student's own and individual work. This means that discussing options in a group is allowed, but you must write your OWN paper. Plagiarism will not be tolerated. No group work is permitted on quizzes or tests, which are closed note/book (unless otherwise specified). The take-home exam is open book and group discussion is permitted, but each student is responsible for producing an individual and independent final report.

Grading: The grade you earn is your responsibility! There will be no "extra-credit" opportunities.

Instructor should be notified as soon as possible if students will not be present for an exam. Unexcused absences will result in a zero grade being awarded and no makeup exams or quizzes will be given without prior approval.

Quizzes (4) will be given weekly. There will be two case studies and a comprehensive final exam.

Grading:

Grading will be based on four quizzes, term paper (graduate only), lab participation and assignments, two case studies and a comprehensive final exam.

Quizzes (n=4)	400 pts
Experimental Report (graduate students only)	100 pts
Case Study (n=2)	50 pts
<u>Final Exam</u>	<u>100 pts</u>
Total	550/650

Grading Scale:

- A = > 90%
- B = 80-89%
- C = 70-79%
- D = 60-69%
- F = < 60%

Quizzes: Quizzes will cover all material to date and will consist of multiple choice, true/false, fill in the blank, essay, and short answer questions. The final exam will be cumulative and will be optional.

Experimental Report (Graduate students only): Students will be required to develop a four-year plan for an assigned farm situation. Students will play the role of consultant or extension agent in this assignment and develop a detailed plan of action to help the designated producer develop and maintain a successful forage program. The report should be a minimum of 5pgs excluding the literature cited. It should be double spaced, using 12 point "Times New Roman" font. Each report will need a minimum of four references.

The final report must be turned in by midnight on the due date (July 1st) or a 10pt daily penalty will be applied!

Schedule of Class Sessions: This information should be treated as an outline. There may be some alterations to the sequence of topics. I will be posting new lecture material on M-H and quizzes will be posted on Friday as scheduled. The quizzes will be available until Saturday at midnight.

Course Outline:

Week 1: May 29-June 4

Ruminant Animal Production and Usage by Man (Ch 1 & 2 and handouts)
World Grasslands (Ch 3 and handouts)
General Characteristics of Grasses (Ch 4 and handouts)
Warm Season Perennials/Annuals (Ch 5)

Week 2: Adaption and Use of Forage Grasses June 5-June 11

Cool Season Perennials/Annuals (Ch 6)
General Characteristics of Legumes (Ch 4 and handouts)
Nitrogen Fixation (Ch 13 and handouts)
Warm/Cool Season Legumes (Ch. 7/8)

Week 3: June 12- June 18

Forage Establishment-Soil Fertility (Ch 9 and handouts)
Seed and Germination (Ch10 and handouts)
Establishment on Prepared Land (Ch 11 and handouts)
Establishment in Grass Sods (Ch 12 and handouts)

Week 4: June 19- June 25

Morphology, Physiology, and Ecology (Handouts, Ch 14/15)
Nutrient Requirements of Livestock (Ch 17 and handouts)
Forage Quality (Ch 16 and handouts)
Conserved Forages: Hay (Ch 18, 19, and handouts)
Conserved Forages: Silage and Baleage (Ch 20 and handouts)

Week 5: June 26- July 3

Grazing Management (Ch 25 and handouts)
Beef Cows and Calves and Stockering (Ch 26, 27, and handouts)
Horses (Ch 29 and handouts)
Goats, deer, Sheep, Llamas, and Ratites (Ch 30)
Wildlife (Ch 31)
Forage Livestock Disorders (Ch 22, 23, 24, and handouts)

Quiz Schedule: The quiz will open at 12:30 am on Thursday and close at midnight on Saturday, each quiz will cover the preceding week's material. The quiz will be offered in class on the dates listed below for in-person students if preferred by the student.

Quiz 1-June 6th

Quiz 2- June 13th

Quiz 3- June 20th

Quiz 4- June 27th

Final exam (cumulative) – July 3rd (online open July 1st and closes midnight July 3rd)

Graduate Assignment Due July 1st by midnight