

**Forage and Pasture Management**  
**SOCR 320**  
**Spring Semester 2013**

**Instructor:** Dr. Joe Brummer, Department of Soil and Crop Sciences  
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**Lecture Schedule:** 10:00 – 10:50 MWF    W-9 Plant Sciences

**Course Description:** Fundamentals of establishment, management, and utilization of cultivated forages including hay, silage, and pasture production.

**Text:** None. Handouts, lecture notes, etc. will be distributed in class or posted on RamCT for downloading. In addition, lectures will be recorded using Echo360 and posted on RamCT.

**Course Objectives:**

The overall objective of this course is to promote your understanding of the biological, climatic, and soil related factors affecting forages in cultivated production systems. You will then be able to better interpret the responses observed in managing forage-livestock systems and design management programs appropriate to each unique setting encountered. In addition to this general objective, you will:

- Learn some of the major forage plants and what adaptive features make them suitable for growth in particular environments.
- Become generally familiar with the composition of herbaceous plant tissue and how these fibrous plant components differ in composition from grains.
- Become familiar with the nutritional limitations of forages.
- Understand the concept of energy availability in forages and how factors such as composition, species, and environment affect forage quality.
- Learn about the most common livestock disorders associated with forage utilization.
- Become knowledgeable of the morphological and physiological features that determine growth patterns of forages and how they respond to environment, harvest, and animal utilization.
- Become familiar with the principles of cutting management in forage systems.
- Learn the importance and implications of fertilizer use in perennial forage production systems.
- Become knowledgeable of the most common forage preservation systems and the factors affecting the success of their use.
- Understand the basics of irrigation, insect, disease, and weed management in forage systems.
- Become familiar with the use of stocking rate and stocking density as management tools on pastures.
- Know the advantages and disadvantages of the most common grazing systems.

**Instructional Methodology:** The class will meet as a single group three hours a week for lectures and discussion. On February 4<sup>th</sup>, we will meet at the Greenhouse to dissect and learn plant parts. On February 6<sup>th</sup>, we will meet at the Greenhouse to explain and start the projects. On February 22<sup>nd</sup>, we will meet at the Livestock Pavilion for an exercise on evaluating hay quality.

**Methods of Evaluation:** The objectives stated above will be met by lectures, selected problem sets, an in-class presentation, regular examinations, and a final. Grading will be based on the following: 6 to 8 - homework assignments worth 170 total points, 1 - presentation at 50 points, 3 - one hour exams at 100 points each, and 1 - final exam at 100 points (**The final is not comprehensive**). Final grades will be determined based on the following tentative breakdown:

<u>Total Points Accumulated</u>	<u>Grade</u>
558 - 620	A
496 - 558	B
434 - 496	C
372 - 434	D
<372	F

**Course Policies:** University policies on academic dishonesty will be followed. These are stated in "Article III: Proscribed Conduct" of the Student Conduct Code which can be found at the following: <http://www.conflictresolution.colostate.edu/Data/Sites/1/documents/csu-student-conduct-code.pdf.pdf>. In accordance with the emphasis CSU is placing on academic integrity, you will be given the opportunity to sign the Honor Pledge on all exams: "I have not given, received, or used any unauthorized assistance."

**Homework Policy:** For full credit, homework assignments must be turned in at my office by 4:00 p.m. on the date due. You will receive 50% of points earned for late assignments up until I hand the graded assignment back in class (Generally 2 to 4 days). Late homework will not be accepted after that time. You are encouraged to work together on homework assignments.

**Exam Policy:** Make-up tests for missed exams will not be given after the time the exam is scheduled. Students with legitimate conflicts will be given the opportunity to take exams within a reasonable period prior to the regular exam time if arrangements are made ahead of time. You cannot use the calculator feature on your cell phone during exams. All you will need during exams is a simple 4-feature calculator, so please bring one on scheduled exam days.

**Attendance:** Attendance in class is highly encouraged. Large amounts of information are presented in lecture and **it is difficult for students to earn a high grade if they miss numerous classes.**

**Distractions:** Class discussion and questions relevant to the current topic **are welcome and encouraged.** Extended private conversations, however, are a distraction to others in the class and **are not acceptable.**

**Cell Phones:** I would prefer that all cell phones be turned off during class. If you must have your cell phone on, please set your ringer to silent mode. If I feel that your cell phone is distracting, I reserve the right to confiscate it until after class.