

**Course Outline**  
**ECOLOGY AND MANAGEMENT OF GRAZING**  
*(An Online Course in Grazing Animal Management)*  
**MODULE 4: RANCH OPERATIONS AND GRAZING MANAGEMENT**

**Presentation 1: Ranch Operations**

- A) Ranch Structure and Function
  - 1) Calendar of operations
  - 2) Stock flow calendar
  - 3) Feed flow calendar
- B) Forage Sources
  - 1) Annual Rangelands
  - 2) Mountain Meadows
  - 3) Great Basin
  - 4) Irrigated Pasture
- C) Ranching Operations
  - 1) Cow-Calf
    - a) Sierra Nevada foothills
    - b) Northeastern California
    - c) Eastern California
    - d) Central Coast
    - e) North Coast
  - 2) Stocker Operations
  - 3) Sheep
- D) Grazing Leases
- E) Niche Markets

**Presentation 2: Grazing Management Principles**

- A) Season of Grazing
- B) Frequency of Grazing
- C) Duration of Grazing
- D) Intensity of Grazing
  - 1) Stock Density
  - 2) Stocking Rate
  - 3) Carrying Capacity
    - a) annual variation
    - b) animal unit months
    - c) calculating available forage
      - (1) residual dry matter method
      - (2) allowable use method
    - d) animal demand for forage
    - e) adjusting for distance to water
    - f) adjusting for slope
  - 4) Production per head
  - 5) Production per acre
  - 6) Monitoring

**Presentation 3: Rangeland Grazing Systems**

- A) Grazing System Objectives
- B) Continuous Grazing
- C) Rotational Grazing
- D) Deferment
- E) Rest
- F) Short Duration Grazing
- G) Continuous vs. Rotational Grazing
- H) Seasonal Suitability Grazing
- I) Targeted Grazing
- J) Management

#### **Presentation 4: Pasture Grazing Systems**

- A) Goals
- B) Principles of Grazing
- C) Stock Density and Stocking Rate
- D) Pasture Growth
- E) Pasture Subdivision
  - 1) Rest periods (How long to rest)
  - 2) Grazing periods (How long to graze)
  - 3) How many pastures
- F) Fences

#### **Assignments**

- A) Annual Range Forage Production (M4, P1)
- B) Developing Livestock Leases for Annual Grasslands (M4, P1) California
- C) Grazing Management Terms (M4, P2)
- D) Guidelines for Residual Dry Matter (RDM) Management on Coastal and Foothill Annual Rangelands (M4, P2)
- E) Designing Your Grazing System (M4, P2)
- F) Animal Units (M4, P2)
- G) Determining Your Stocking Rate (M4, P2)
- H) Practical Exercise: Calculating Carrying Capacity
- I) A Summary of Livestock Grazing Systems Used on Rangelands in the Western United States and Canada (M4,P3)
- J) Rotational Grazing on Rangelands: Reconciliation of Perception and Experimental Evidence (M4, P3)
- K) Is Rotational Better? (M4, P3)
- L) Rotational Grazing (M4, P4)
- M) Paddock Design, Fencing and Water Systems for Controlled Grazing (M4, P4)

#### **Links to Additional Resources**

University of Nebraska Grazing Records Spreadsheet V2005  
 University of Nebraska User's Guide: Grazing Records Spreadsheet (Version 2005)