UNIT - FORAGES

Lesson 6: Establishing and Managing Native Grasses

TEACHING PROCEDURES

A. Review

Review the previous lesson.

B. Motivation

Many warm season perennial grasses were native to Missouri, but they now have almost disappeared. However, a combination of cool season and warm season grasses can provide your best seasonal gains per animal.

C. Assignment

D. Supervised Study

E. Discussion

Ask students if they have seen or used native grasses. List the native grasses used in Missouri on the board.

What three native grasses have the most promise for production in Missouri?

1) Big Bluestem
2) Switchgrass
3) Indiangrass

2. Lead students in a discussion of the particular characteristics of native grasses. Contrast their characteristics with cool season grasses. List these characteristics on the board.

What are some specific characteristics of native grasses?

1) Warm season grasses
   a) Make most of their growth from June to September
   b) Will provide forage during hot, dry summer months
2) Very sensitive to overgrazing
3) Take time to become established
4) Sufficient forage for two cows during the summer from one acre of native grass

3. Have students discuss how native grasses can be utilized in a total forage program. Outline these applications on the board.

Discuss the use of native grasses as a forage.

1) Best for southern and southwest Missouri and adapted varieties are available
2) Greatest value is as a summer forage. (Native grasses begin to produce as cool season grasses decline and vice-versa in the fall.)
3) Animals gain well on native grass forage.
4) Native grasses are not superior for stockpiling,
   a) Low in protein, phosphorous and vitamins
   b) Require considerable supplementation

4. Ask students to outline practices they would observe when establishing a stand of native grasses. Include seeding rates, fertility, seedbed preparation and early stand management. List these practices on the board.

What are the practices for establishing stands of native grasses?

1) Seeding
   a) Use only one species. (Mixtures are difficult to manage.)
   b) Calculate seeding rate on basis of pure, live seed.
   c) Seed in April or May.
2) Fertility
   a) Apply phosphorous, potash, and lime at time of seeding. (Use superphosphate.)
   b) Don't apply nitrogen during establishment because it encourages excessive weed competition.
   c) Use 0-60-60 as a starter or follow soil test recommendations.
   d) Apply lime to raise pH to at least 5.5.
3) Seed bed preparation
   a) Prepare a firm, well-tilled seed bed.
   b) Fall residue may be used as a mulch. (Sow with a specially designed drill.)
   c) Seed may be broadcast or drilled on clean, tilled seed bed. (Roll or cultipack before and after broadcast seeding.)
4) Management during establishment
   a) Do not graze during year of seeding.
   b) Allow only limited grazing the second year if the stand is slow to take.
   c) Control weeds - this is critical to stand establishment.
      (1) Control with herbicides or mowing.
      (2) Mow no lower than six inches after June.
      (3) Control annual weeds the second growing season with a herbicide.

5. Ask students to describe grazing management practices that encourage maximum utilization of the forage while maintaining strong stands.

Discuss grazing management of native grass pastures.

1) Most growth is made June 1 to September 1.
2) Do not graze until they reach 8 to 10 inches in height.
3) Pastures are usually ready to graze by June 15 because growth is very rapid.
4) Overgrazing is detrimental to the stand.
   a) Switchgrass is very sensitive to overgrazing.
   b) Leave a ten-inch stubble at the end of the grazing season.
c) If overgrazed, don't graze the following year or the stand will die out.

5) Use the rest-rotation grazing system.
   a) One-half of the native grass pastures are closely grazed one year and rested the next, while the other half is then used.
      (1) Uses all the plants at one time of the year
      (2) Prevents spot grazing and die out
   b) Don't graze closer than two inches in this system.

6) Remove dead stubble from the pasture during winter months.
   a) This increases yields the following season.
   b) Winter grazing of stubble will require supplement.

H. Other Activities
1. Locate and observe native grass stands in your area.
2. Start native grass plots for observation at school.

G. Competency
Identify characteristics of and basic principles for growing native forage grasses in Missouri.

H. Answers to Evaluation
1. a
2. warm, June 1, September 1
3. a
4. 8 to 10, 10
5. One-half of the pasture is grazed (heavily) and then rested the following year while the other half is grazed.