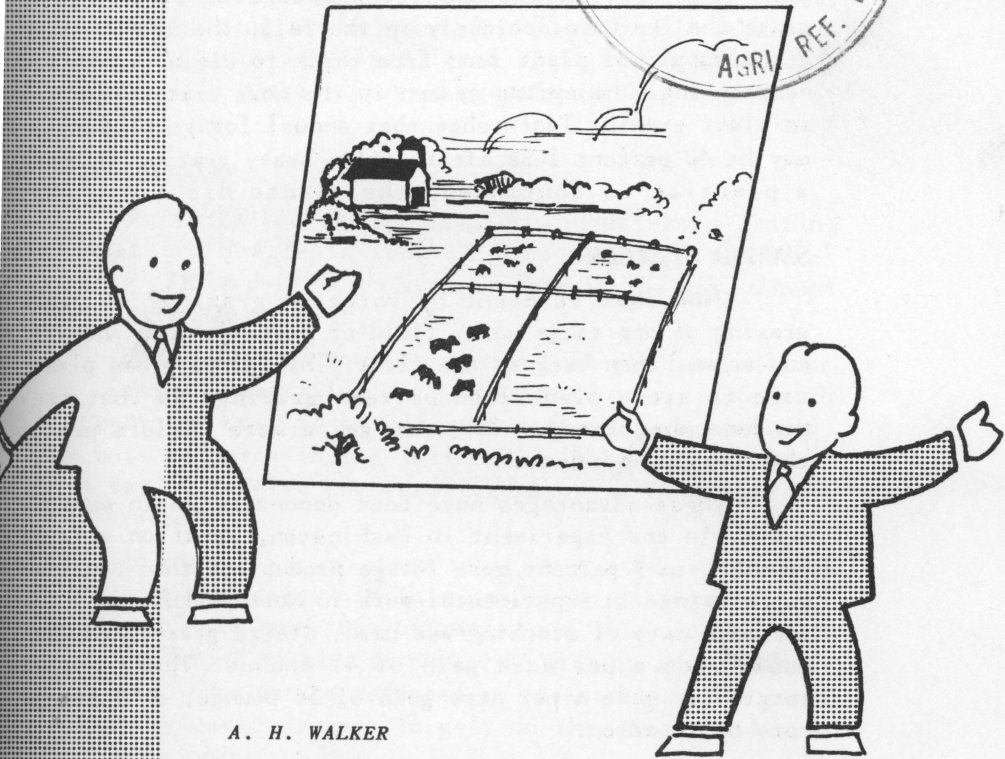
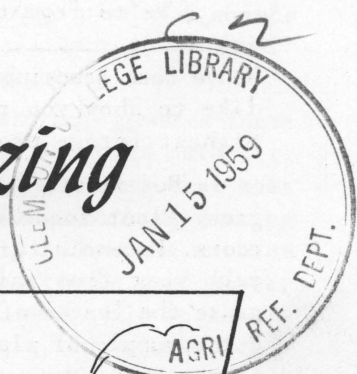


# Deferred and Rotation Grazing



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A team demonstration on deferred and rotation grazing will create more interest if you add county and local information. Use this publication and the suggested charts for guides. As prepared, this demonstration fits a district better than a county.

**FIRST SPEAKER:**

We're from the \_\_\_\_\_ 4-H Club. My name is \_\_\_\_\_, and this is my teammate \_\_\_\_\_ We've been studying deferred and rotation grazing, and we'd like to show you the advantages such practices offer to highest forage production on a ranch.

But first, let's take up a few points on how grasses grow. Plant food is made in the leaves and stored in the roots. Perennial grasses build all their early top growth each year from this stored food material. If livestock graze the leaves off closely in the fall, the grasses have a low supply of plant food from which to begin growth the next spring. The spring season is the most critical period in plant growth. Tests show that annual forage production may be 40 percent less after early, heavy grazing. If such a practice is continued, the plants die.

**SECOND SPEAKER:**

Now what is meant by rotation grazing? It means grazing of one range unit, field or pasture; then another; and so on; then back to the first. This gives grass plants time to store plant food between grazings so that they produce more forage. Too, you get a more uniform use of the forage produced.

These advantages have been demonstrated in experiments. In one experiment in Washington, rotation grazing resulted in 9 percent more forage production than continuous grazing. In experimental work in North Dakota in which the same rate of stocking was used, steers grazed continuously made a per acre gain of 47 pounds. Those grazed rotatively made a per acre gain of 54 pounds, or 7 pounds more by rotation.

Whether rotation grazing can be used on a particular ranch depends on many things, including kind of stock, kind of vegetation, fencing, waterings. \_\_\_\_\_ will tell you how deferred grazing differs from rotation grazing.

**FIRST SPEAKER:**

Deferred grazing generally means waiting to graze an area until after the most important forage plants have

made seed. This is an excellent practice for overgrazed range lands because it gives the forage plants a chance to reproduce themselves by seed as well as gain in vigor. Now, where does deferred grazing work best?

Tests conducted in Kansas indicate that grasses there become coarse and unpalatable as they approach maturity. Also, chemical analysis tests in East Texas show that most grass plants lose much of their food elements if grazing is delayed until fall. In heavy rainfall areas such as these or where leaching and loss of nutrients take place, deferred grazing would not work too well. But in short-grass regions and in West Texas where our grasses cure quite well in place, deferred grazing is well adapted.

#### **SECOND SPEAKER:**

We've talked about rotation and deferred grazing separately. Now let's look at them together, which becomes a deferred-rotation system. This is the more common practice on our grazing lands.

For a deferred-rotation system, the ranchman divides his range into several units to be grazed in rotation with at least one unit to be deferred each year. Preferably, the unit deferred in the fall will also be deferred the next spring to give the seedling plants a chance to get well started.

In planning a deferred-rotation system, a ranchman usually should defer his fair-condition pastures first. They will make more improvement in a shorter period of time. The length of time or number of grazing seasons which these pastures must be deferred to re-establish the grass vegetative cover depends largely on the range condition at the beginning.

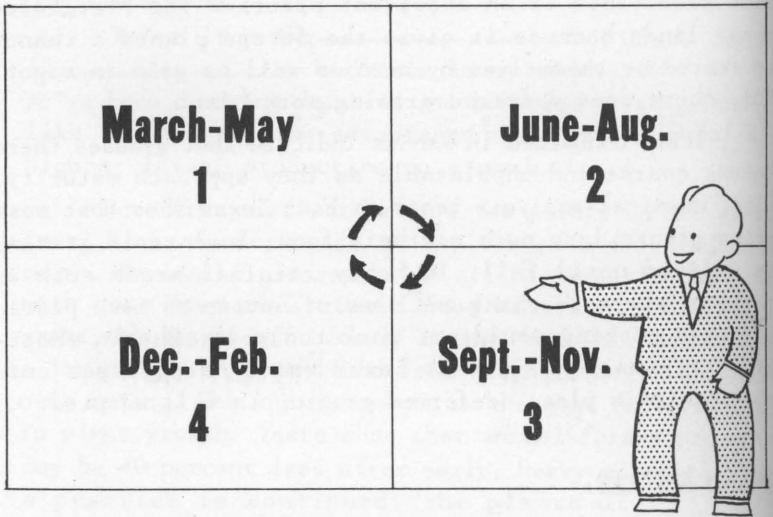
Let's look at a simple pasture setup to illustrate these ideas.

#### **FIRST SPEAKER:**

Suppose the pastures in this diagram\* were grazed in rotation as indicated by the arrows. Then Pasture No. 4 would be deferred during the entire growing season. In other

\*See Page 4

## A DEFERRED-ROTATION DIAGRAM FOR FOUR PASTURES



words, all forage plants in this pasture would have an opportunity to regain vigor and set seed.

A light grazing is advisable following deferment rather than no grazing at all because a light grazing will plant more seed, work humus into the soil and, of course, supply a lot of good forage for the livestock.

### *SECOND SPEAKER:*

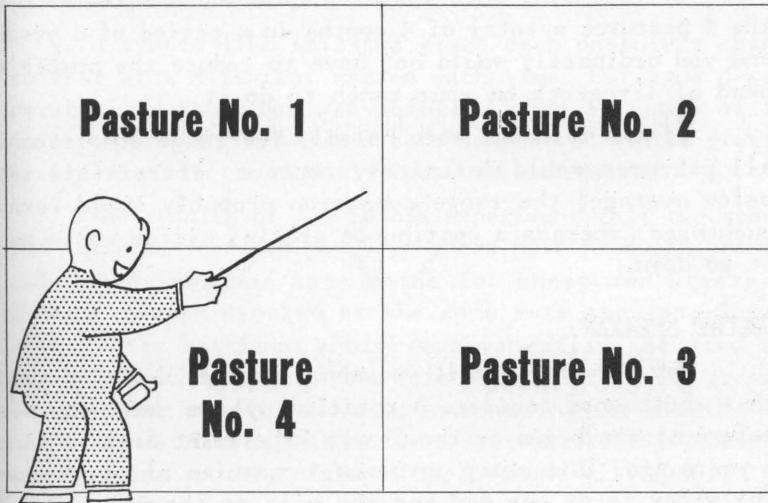
In our county the most important grasses are buffalo, curly mesquite, sideoats and several other gramas, together with a scattering of bluestems. The sod or turf-forming grasses, namely, curly mesquite and buffalo, are most likely to seed in May and June; and the bunch grasses, namely, gramas and bluestems, seed in September and October.

We should set up our deferred-rotation system to permit seeding of both types of grasses as often as possible. \_\_\_\_\_ will tell you how you might rotate your grazing under these conditions.

### *FIRST SPEAKER:*

This chart illustrates the plan. If you have four pastures of comparatively equal size with proper water and salt distribution, you could begin by deferring Pasture 1

## A DEFERRED-ROTATION PLAN FOR SOD AND GRAMA GRASSES



### DEFER GRAZING:

*1st year--Pasture No. 1, May and June  
Pasture No. 2, September and October*

*2nd year--Pasture No. 2, May and June  
Pasture No. 3, September and October*

*3rd year--Pasture No. 3, May and June  
Pasture No. 4, September and October*

*4th year--Pasture No. 4, May and June  
Pasture No. 1, September and October*

in May and June to give the sod grasses a chance to seed. Then defer Pasture 2 in September and October to give the grama grasses a chance to seed in the fall.

The following year, defer Pasture 2 in May and June to give the new grama seedlings a chance to become established and also to permit the sod grasses to seed. Then defer Pasture 3 that fall and also rest it the following spring. Continue in this way until all four pastures have been rested at each seeding time.

By following such a system, you would defer each of the 4 pastures a total of 4 months in a period of 4 years; and you ordinarily would not have to reduce the number of head of livestock on your ranch to do it.

If the rainfall were normal, the range condition of all pastures would definitely improve. If rainfall were below average, the range condition probably would remain unchanged; whereas a continuous grazing system would make it go down.

**SECOND SPEAKER:**

Now, I want to tell you about another deferred setup that shows good results. A rotation system that uses some deferment was begun at the Sonora Experiment Station about 6 years ago. This setup involves 4 pastures of equal size. The water is at one end and the salt at the opposite end of each pasture to help distribute the grazing. The plan calls for each of the pastures to be grazed 12 months then rested 4 months in rotation. The table shows a suggested grazing and deferment sequence for this setup.

**THE GRAZING AND DEFERMENT SEQUENCE  
USED AT THE SONORA STATION**

- 1956      *March, April, May and June:*  
          **Graze Pastures 1, 2, 3; Rest Pasture 4**
- 1956      *July, August, September and October:*  
          **Graze Pastures 2, 3, 4; Rest Pasture 1**
- 1956-57   *November, December, January and February:*  
          **Graze Pastures 1, 3, 4; Rest Pasture 2**
- 1957      *March, April, May and June:*  
          **Graze Pastures 4, 1, 2; Rest Pasture 3**
- 1957      *July, August, September and October:*  
          **Graze Pastures 1, 2, 3; Rest Pasture 4**

*and so on . . . .*

*(Second Speaker Cont.)*

A system like this one gives each pasture a chance to rest at a different season each time. During a 4-year period, all pastures are deferred once for each of the 4-month periods. This gives both summer and winter-growing plants a chance to regain vigor and make seed.

The results of the Sonora experiment tell the story. The deferred-rotation pastures there have produced practically the same per acre gains for sheep and steers as other pastures stocked at the same rate the year-round. Also, there has been a big improvement in the kind and number of good plants in the rotation pastures. The grasses improved one condition class, even during the drouth. Research shows that if you follow a system like this, maximum weight gains and vegetational improvement will result.

**FIRST SPEAKER:**

Where a pasture has been severely overgrazed, the soundest practice is deferment through the entire growing season, followed by non-grazing until June or later the next year. It would be good to graze such a pasture rather lightly from October to February. A system like this can often be worked out on a ranch that has 4 or more pastures.

\_\_\_\_\_ will tell you about some other experimental results.

**SECOND SPEAKER:**

In the northern Great Plains, experiments show that 7 acres were required to provide forage for one steer under yearlong grazing; whereas 4 or 5 acres were enough when deferred-rotation grazing was practiced.

Studies in Colorado show that after 9 years of a deferred-rotation system on a range, forage production increased over 50 percent and undesirable plants decreased 18 percent compared with continuous grazing at the same intensity on the same kind of range.

My teammate will sum up some advantages.

*FIRST SPEAKER:*

\_\_\_\_\_ brought out two advantages in telling you about the experiments: deferred-rotation grazing increases the carrying capacity and improves the range condition.

Deferred-rotation grazing gives you other advantages too. 1) The plants increase in vigor and produce healthier seed. 2) Grazing after deferment helps to plant the seed. 3) The seedlings have an opportunity to become established before they are grazed. 4) Soil erosion and water loss diminish. 5) You can improve a range without reducing the stocking rate if it is already properly stocked.

*SECOND SPEAKER:*

We believe that practicing deferred and rotation grazing, either alone or in combination, should be more widespread in our area. Using these practices will improve our range condition and make our livestock industry more stable.

Are there any questions or comments you'd like to make?

(Pause and answer questions)

It's been a pleasure to talk with you.

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