

Raising Replacement Heifers on Winter Pastures on the Texas Gulf Coast

by L.R. Sprott, Ph.D., and David Bade, Ph.D, Texas A&M University

Introduction

Raising replacement heifers on winter pastures can be successful provided that plants are well established and receive adequate rainfall. Weight gains of 1.0 to 2.0 lbs per head per day are common. The problem is that lack of rainfall can prevent adequate forage growth which is essential for achieving animal weight gain. Lack of rainfall is a problem with any pasture, but is a particular problem for winter pastures since they require additional labor and money compared to what is needed for native pasture.

Keys to Success

Below are things that must happen in order to have successful replacement heifer development on winter pastures.

1. Adequate rainfall (see above) near the time of planting is essential for seed germination and continued plant growth.

2. Take a soil sample in late summer to determine what forage species are best adapted to your soil type. Soil samples will also determine your fertilizer needs.

3. Choose species that are adapted to both your soil type and climate. For the Gulf Coast region, either Gulf or Marshall ryegrasses are acceptable choices. They can be planted alone or in a mixture of oats or clovers. The mixture is preferred to help ensure that at least one of the species will survive. Extremely cold weather and/or disease will reduce the chances that oats survive. In many cases, both species in the mix will survive. This is particularly advantageous when the mix includes clovers because they help fix nitrogen in the soil which promotes growth of the other species in the mix and can reduce the need for nitrogen fertilizer. For the Gulf Coast region, TAMU 397 is an acceptable oat variety. Others may work, but recent tests show that this variety of oats survives very well.

4. Winter forages that have recently germinated will die without adequate sunlight. To avoid this problem, it is best to plant on a prepared seedbed. This requires moderate to heavy discing depending on amount of summer grass coverage. If discing results in excess clodding, drag the pasture to smooth it out before planting. Over-seeding on warm season grasses without discing is not recommended in this particular situation because pasture establishment is slow which delays the opportunity to begin grazing. Planting on prepared seedbed also results in higher forage production which helps ensure proper growth in the heifers. Without proper growth, their reproductive development is impaired.

5. Planting should occur between September 20 and October 15. Planting later than these dates will delay the opportunity to begin grazing. Fertilizer should be applied at the time of planting. Amount and type of fertilizer depends on soil type and specie of forage. Depending on the variety of forage planted and the type of seedbed, it may be best to roll or lightly drag the seedbed after planting to ensure that the seeds make good contact with the soil.

6. Fertilize a second time by mid to late February. Use of clovers will reduce the need for nitrogen fertilizer, but clovers need phosphorus fertilizer for good establishment and continued growth.

7. Stocking rate will range from 1.0 to 1.5 acres per animal depending on the amount of standing forage. **Do not graze** the pasture until the new plants are at least 5 to 6 inches tall. Usually, this is around December 1. **Never graze** plants down to a height less than 3 inches. This prevents excess stress on the plants which results in limited regrowth and poorer animal performance.

8. Feed a loose (not block form) mineral mix at all times. The mix should contain calcium and phosphorus in a 2:1 ratio. Phosphorus content in the mix should be from 7 to

10%. Magnesium content should be from 4 to 6%, and salt content in the mix should be from 10 to 20%.

9. Feed hay free choice, particularly in the early grazing period. This stretches the grazing period by reducing plant stress in the early stages of growth and helps slow gut movement which improves utilization within the gut. The result is better animal performance. As the pasture matures in late winter and early spring, hay feeding is optional.

10. Continually monitor the amount of forage available. If plant height falls below three inches, provide additional hay regardless of the time of year. If plant height continues to fall, extra feed supplements will be needed in addition to hay.

11. Weigh the heifers every 40 to 50 days. Based on their

weight at the start of grazing (around December 1) and their breed, try to achieve the following average daily gains (see attached table). These values are calculated based on a 160 day grazing period. By then most of the winter pasture will decline and be replaced by warm season grasses. Heifers that do not reach these weight gains on pasture will need extra supplemental feeds. Otherwise, they will not reach sexual maturity and will consequently fail to breed by 14 to 16 months of age.

12. A sound health management program is essential whether on winter or summer pasture. See your veterinarian for a vaccination program to control blackleg diseases, reproductive diseases and for recommendations on internal parasite control.

Table 1. Daily Weight Gains Needed.

	English and early maturing European breeds	Brahman and Brahman crossbreeds and late maturing European breeds
Weight at start of grazing (lbs)		
450	1.5	2.0
500	1.2	1.7
550	1.0	1.5
600	0.6	1.0
650	0.25	0.8

Produced by the TAMU Department of Animal Science, The Texas A&M University System
Additional information on animal science topics can be found on the Web at <http://animalscience.tamu.edu>.

Educational programs of Texas Cooperative Extension are open to all people without regard to race, color, sex, disability, religion, age or national origin. Issued in furtherance of Cooperative Extension Work in Agriculture and Home Economics, Acts of Congress of May 8, 1914, as amended, and June 30, 1914, in cooperation with the United States Department of Agriculture. Chester P. Fehlis, Director, Texas Cooperative Extension, The Texas A&M University System.