INTRODUCTION

The Boy Scout motto, "Be Prepared" is sound advice and should also be the motto of cattlemen sending northeastern Nevada calves the long distances to wheat pasture. The stresses of shipping, acclimation and change in diet can be overwhelming and devastating to young calves. There are also potential problems associated with winter grazing wheat pasture and the calf needs to "be prepared" for these challenges.

This paper discusses selection and preparation of cattle for wheat pasture grazing and some of the potential problems associated with grazing wheat pasture. Companion papers discuss the Economics and Performance of Lightweight Northeastern Nevada Calves Grazing Texas Wheat Pasture: A Marketing Alternative Case Study; How Good is Wheat Pasture for Winter Grazing Light Weight Calves; How to Find and Secure Wheat Pasture for Grazing; and Agronomic, Cultural and Livestock Management Practices of Wheat Pasture Grazing.

Selecting Cattle for Wheat Pasture

Selection of lightweight calves for wheat pasture grazing should include only healthy and thrifty animals. Often calves are light because they are young, from a first or second calf heifer, aged cow, or they have been on poor feed. However, these light calves generally have good growth potential. Chronic, poor producing calves that have been stunted should be avoided. Producers often refer to this type of calves as "dinks," "hairballs," "realizers" or "chronics" and these calves are always losers.
Two Oklahoma trials show early-weaned calves (2-3 months of age) must weigh a minimum of 320 pounds and be at least 160 days of age before daily gains can be expected to reach two pounds per day. Even though the rumen is fully functional in these extremely small and young calves, the lower weight gains are probably due to a lack of rumen capacity. This lower capacity makes it impossible for the light calf to consume enough wheat pasture to meet their daily dry matter requirements. Placing 350-pound or heavier calves will increase performance because this weight of calf is capable of utilizing the available protein contained in wheat pasture better than heavier weight cattle. This is due primarily to the higher protein requirements for growth of the lighter and younger calves.

The type of wheat pasture grazed will dictate the most economical size of calf to initially stock pastures with. Typical stocking rates range from 150-200 pounds of animal per acre or 1-2 acres per stocker depending on weight of calf and fall or spring grazing. Graze-out acreage (wheat pasture grazed past March 1 and not harvested for grain) is best suited for calves weighing less than 400 pounds at placement time. Placement usually occurs by mid-November or early December. With a growth rate of two pounds per day for 150 days, (December 1 to May 1) the 400-pound stocker calf will weigh approximately 700 pounds at grazing termination on May 1. The 700 pound feeder is an ideal weight to enter the feedlot. Placing a larger calf on graze-out wheat will result in a heavier feeder calf entering the feedlot in May and these heavier feeders are often less efficient during the feedlot phase.

For grain harvest wheat pasture, a November placed calf should weigh approximately 500 pounds. This would result in a 700-pound feeder calf at grazing termination on March 1. A lighter placed calf would result in a feeder calf entering the feedlot in March that would require more days on feed during the more expensive feedlot phase.

Both steers and heifers are grazed successfully on wheat pasture. Steers generally out-perform their heifer mates. When grazing heifers, estrous heat cycles and bullers can reduce weight gains and cause other problems. Problems are compounded when steers and heifers are run in common, since steers riding cyclic heifers often do not perform as well as steers that are fed separately. Feeding MGA during the late grazing season when heifers have reached puberty will suppress cyclic and bulling activity. The MGA feeding information should be passed onto the next owner or manager of the cattle. Removing heifers from the MGA program would prematurely cause them to cycle simultaneously and reduce weight gains and weigh-up.

**Preparing Cattle for Wheat Pasture**

In order to achieve optimum performance on wheat pasture, calves must be healthy and in a positive weight gain situation prior to the onset of grazing. Pre-weaned and vaccinated calves gain faster and cheaper than calves weaned on the truck. Morbidity, mortality and the cost of gain are much more favorable when the calf is setup to succeed. A program that exceeds the VAC 45 program developed by Texas A & M University is recommended for all Nevada calves heading to the Great Plains wheat pasture. This program best prepares calves for the stresses of transportation and the transition from Nevada feed to lush wheat pasture.

The Nevada program, similar to the Texas VAC 45 program, requires all calves be weaned 45 days prior to shipment. Calves must be vaccinated according to label at weaning with an intranasal modified live IBR-PI3 vaccine and an injectable modified live IBR-PI3-BVD-BRSV vaccine. It is also recommended that calves be vaccinated according to the label for 7-way Clostridial, Haemophilus somnus and Pasteurella. To insure a healthy immune system it is recommended that a second series of these vaccines be given two weeks prior to shipment (Graph 1). Calves should be de-wormed with a Type II dewormer and de-loused either at the ranch or prior to wheat pasture grazing. This program may seem extreme, however, calves trucked 1,300 miles or more which are being introduced to new feed and environmental conditions must have an immune system capable of handling the new challenges that their young and undeveloped immune system will face. The theory behind the Nevada program is preventative medicine (Graph 1). The concept is to increase the resistance of the animal above the challenge level. In this case the challenge is the 1,300-mile truck ride and the change in environment.
Implementing a sound vaccination and weaning program on calves going to wheat pasture is essential. When animals shrink more than 7% of their body weight, tissue is lost. When tissue shrink occurs it compromises the immune system resulting in sick animals. Selecting a reputable trucking company is paramount to reducing shrink and insuring the health of the animal. Weighing conditions on and off wheat pasture play a very important role in profitability.

Graph 1. Raise the resistance with the VAC 45 program prior to the anticipated challenge of weaning and transportation and acclimation to wheat pasture.

**BLOAT**

Frothy bloat can be a major cause of death in stocker calves grazing wheat pasture. Wheat pasture is a low fiber; high moisture feed which is deficient in calcium. When calcium is deficient, the rumen does not contract and mix the rumen contents. A static rumen may block the esophageal opening and not allow the animal to release the rumen gases. Bloat seems to be compounded in high stocking rate situations because the forage is kept at an immature height and volume. This lowers the fiber content thereby reducing the amount of dry matter consumed by animals.

Feeding a calcium supplement, free choice, high fiber grass hay and using conservative stocking rates will aid in the reduction and prevention of bloat. Also, if stocking rates match available feed, and rumensin is always available, bloat will be reduced. Bloat occurs more frequently during warm weather.

It has also been shown that the addition of rumensin in the mineral or energy supplement will not only increase weight gains but also reduce the incidence of bloat. Studies have shown that feeding poloxoalene significantly reduced the incidence of bloat. Poloxoalene is an antifoaming agent that can be added to the feed or mineral supplement.

**Summary**

Matching the proper weight and class of calf to length of grazing season enhances profitability. Preparing calves for wheat pasture grazing by implementing a program like the VAC 45 is essential for financial success. Measures need to be taken to reduce the incidence of bloat when grazing wheat pasture. The only major mineral problem associated with wheat pasture is calcium.
References


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The authors wish to thank the following people for their contributions to this publication: Ted McCollum, Texas Agriculture Extension Service; Dale Blasi, Kansas State Extension Service; Greg Highfill, Oklahoma Extension Service; Gerald Horn, Oklahoma State University; and Clay Birdwell, Great Plains Cattle Feeders, Hereford, Texas.