



January, 2006

## Supplemental Feeding on Wheat Pasture Cattle to Stretch Limited Forage

Due to limited rainfall, and therefore, limited wheat forage availability, many producers are considering options such as supplemental feeding programs for cattle grazing wheat to “stretch” the available forage, or in effect, stabilize the stocking rate. When cattle have adequate wheat forage available, it is generally not very efficient to provide supplemental feed, due to the very high quality of the forage. The exception to this would be the “Oklahoma Green Gold” supplementation program which utilizes a small amount of a high energy feed and an ionophore as a true supplement to the wheat forage. It is not a program to consider when wheat pasture forage is limited, as it will not reduce forage intake. Obviously, a more common situation this year is a lack of forage and the need to stretch it as far as possible.

Cattle grazing limited wheat forage will likely get adequate crude protein due to the high protein content of wheat pasture. It is typically in excess of 20% crude protein through the end of April. For this reason, we would naturally look to a high energy feed such as a grain or one of the commodity feeds such as soybean hulls or wheat midds to increase energy intake to achieve the average daily gain we expect in a wheat pasture stocker program. Grain feeding can adversely effect the utilization of forages that contain a high percentage of fiber such as native range or bermudagrass. This is not such a serious problem with wheat forage because it is high in soluble carbohydrates and has a rapid fermentation rate in the rumen. Since grain feeding does not cause a large negative associative effect on the digestion of wheat forage, we can consider the use of grain-type supplements to stretch the available wheat forage.



If feeding cattle on wheat in order to stabilize stocking rates, or “stretch” limited forage, here are a few general recommendations:

**Intake:** Target daily intake at about .75% of body weight. For example, a 500 pound calf would receive about 3.75 pounds per day, (500 X .75% = 3.75).

**Type of feed** – *High starch versus high fiber by-product feeds*

- Work at the Marshall Wheat Pasture Research Unit has compared the use of corn (a high starch grain) to a blend of soybean hulls and wheat midds (high fiber by-product feeds). Each supplemental feed contained Rumensin and was hand fed daily at about .75% body weight. Stocking rates were increased on some treatments.

- Weight gains were increased by an average of .33 lbs. per head per day.

- There was no difference in the gain of the high starch versus high fiber treatments.

- Grains and the by-product feeds such as wheat midds, corn gluten feed, soybean hulls, etc. are relatively low priced at this time.

Silage will work very well. Intake will vary according to the amount of wheat forage available.

**Supplement conversion:** In the Marshall work, the average conversion was about 5.0 lbs of supplement per pound of added gain per acre. When adequate forage is available, supplementing is not as efficient. Figure about 8 pounds of supplemental feed per pound of added gain per animal if forage is adequate.

**Cattle preference:** Cattle seem to consume the high-fiber supplements more readily than the corn based supplement. The cattle consumed the high fiber supplement (soybean hulls/wheat midds) in a matter of 10 – 30 minutes. It took a couple of feeding periods (morning and mid-afternoon) to consume the corn supplement. This may be important from a bunk management perspective on days of weather problems such as rain or snow.

## **Mineral Supplementation on Wheat Pasture**

Greg Highfill

The amounts of calcium, phosphorus, and magnesium required by growing stocker calves gaining 2.0 lb/day plus the average mineral composition of wheat forage is shown in Table 1. Phosphorus has the most variable mineral composition during the wheat pasture growing season and overall, tends to be lower in areas closer to the Oklahoma/Texas panhandle. In general, the phosphorus content of wheat pasture exceeds the stocker requirement, although the high requirement for light-weight calves could be borderline in some of the far western counties. Magnesium is believed by many producers to be deficient in wheat forage for stocker calves. Hypomagnesemic Tetany is a serious problem with lactating cows that are grazing wheat pasture. Years ago, some producers related these low magnesium levels to the cause of sudden death syndrome in wheat pasture calves because of the loss of lactating beef cows; this is not the case. While magnesium is needed, along with added calcium, for lactating cows grazing wheat forage, it is seldom deficient for stockers. Moreover, contrary to popular belief, magnesium plays no known role in reducing bloat on wheat pasture.

<b>Table 1. Mineral content of wheat forage vs requirements.</b>			
	Ca	P	MG
Wheat Forage (% of Dry-Matter)	.35	.25 - .40	.15
Requirements for growing steer/heifer calves gaining 2.0 lb/day			
300 lb calf	.80	.36	.10
500 lb calf	.53	.26	.10
700 lb calf	.41	.21	.10

The obvious mineral deficiency for wheat pasture stockers is calcium, especially for light-weight calves. Approximately 99 percent of the stocker's calcium content is found in the bones and teeth. Calcium is also present throughout the body, being required for blood clotting, muscle contraction, myocardial function, rumen functionality, enzyme activation and many other activities. Wheat pasture producers should supply grazing calves with a high calcium mineral to correct the significant calcium deficiency. In addition, supplemental calcium will correct the calcium to phosphorus ratio, which can approach 1:1 in wheat forage (2:1 – Ca:P is recommended). Also, supplements most commonly used on wheat pasture (grains, wheat midds) are very low in calcium and high in phosphorus so the need for additional calcium is also present when supplements are fed.

**Recommendations.** Stockers on wheat pasture should receive a high calcium, low phosphorus mineral. Because phosphorus is the high price ingredient of mineral mixes, wheat pasture mineral should be reasonably priced in comparison to native range minerals. Typical native pasture minerals are high in phosphorus content and would not be appropriate for wheat pasture mineral needs. A half-and-half blend of limestone and salt is a common “home-made” blend for wheat pasture mineral. High calcium commercial mineral products that often include trace minerals, flavor enhancement and ionophores have been shown to be very cost effective. Research at the OSU Wheat Pasture Research Station near Marshall has shown the value and importance and proper mineral supplementation and the advantages of including and ionophore in the mixture.

<b>Steer gain on wheat pasture with differing mineral treatments.</b>			
	No Mineral	Mineral 12% CA, 6% P	Mineral Plus Iono- phore
Average	1.12	1.39	1.63

Intake is the primary challenge in mineral supplementation. Stockers do not “crave” a deficient mineral. In general, mineral consumption is regulated by salt intake. Intake of minerals should be monitored by producers to get a general feel for possible mineral intake shortfalls.

Moreover, appropriate levels of calcium should be added to any supplemental feed supplied to wheat pasture stockers.

### **Wheat Pasture Mineral Guidelines for Stockers**

<b>Wheat Pasture Mineral</b>	<b>Mineral Content Suggested</b>
High Calcium	10 –12 % or more
Low Phosphorus	4 – 6 %
Magnesium	Optional
Trace Minerals	As needed

### **Landscape Maintenance Schedule**

Remember to water plants during prolonged dry periods. Pay special attention to evergreen trees and shrubs, plants growing in protected areas and plants growing in raised planters.

Fertilize trees, including fruit and nut trees and shrubs in February.

Spray peaches and nectarines with a fungicide to control peach leaf curl before bud swell (February).

Finish pruning deciduous trees and shrubs, but remember to wait and prune spring flowering plants after flowering in spring.

Continue to control winter weeds in dormant bermudagrass with a product containing glyphosate. **DO NOT** use glyphosate on bermuda that is thin and weak or still green.

Treat young pines for tip borers if you did not spray for them in November.

### **Alfalfa Weed-it –Tips**



January and February is the time to apply herbicides like Sinbar and Velpar L for control of cool season weeds in established stands. If the first cutting of hay last year had more than 3% weeds, then you need to spray those fields in January or February. Once alfalfa stands thin to less than 30 stems/sq. ft., then weeds are able to grow in areas not occupied by alfalfa. When weeds are able to have growing room, they start competing with alfalfa, and each year the percentage of weeds in the hay will increase.

## **1/2 Cent County Sales Tax**

The 1/2 cent county sales tax will be coming before the voters of Kingfisher County on February 14, 2006. Where does the money go? The community services that participate in this are:

Resurfacing Roads ~ 29%

Rural Fire Department ~ 13%

Extension & 4-H ~ 09%

Free Fair ~ 10%

Chisholm Trail Museum 05%

Libraries (Hennessey & Kingfisher) ~ 03%

County Sheriff ~ 15%

General County Government ~16%

The 1/2 cent sales tax for the past 15 years has made a tremendous impact on our county. Equipment has been purchased for our Rural Fire Departments and computers for our Libraries. Roads have been resurfaced and improvements have been made on the fairgrounds. Salaries for the Extension & 4-H offices and structural stabilization for the Seay Mansion have been possible because of the 1/2 cent sales. The Kingfisher County Sheriff has utilized the 1/2 cent sales tax by purchasing patrol cars and maintaining CLEET & OLET certified staff. County Government paid their liability insurance with the sales tax income.

### **Quicken Farm Accounting Program**

Are you still keeping your receipts and expenses in a shoe box? A Quicken Farm Accounting Program will be held February 13 from 7 to 9 pm in the Extension Meeting Room. This program will use the Quicken program and an additional farm accounting CD to teach users how to keep track of income and expenses. Quicken is easy for people unfamiliar with accounting terms to use, making it a good place to start when changing from a hand-kept cash accounting system to computerized records. Cost of this program is \$25 and you will receive the farm accounting portion and an instruction booklet to help you convert your current record keeping system to Quicken. Please pre register by February 24 so we know how many to prepare for.

## **Conservation Tillage 101 Workshops**

### **Hoover Building, Enid, OK**

Goal of Conservation Tillage 101 Sessions – To give producers in the area enough background information about conservation tillage to help make educated choices for managing their cropping operation. This is especially directed to attendees who are interested in conservation tillage and have no experience with it as well as those producers currently in conservation tillage wanting to gain more information to help them be more efficient producers.

#### **February 1<sup>st</sup>**

9 AM – Registration, Coffee and Donuts

9:30 AM – Randy Taylor – Equipment for Conservation Tillage, Harvesting and Residue Mgmt. (with a break at or around 10:45 AM)

12 PM – Lunch

12:45 PM – James and Richard Wuerflein and Ed Regier -- Producer Comments on No-till in Their Operation

#### **February 8<sup>th</sup>**

9 AM – Registration, Coffee and Donuts

9:30 AM – Case Medlin -- Critical Weeds

10:15 AM – Tom Royer – Critical Pests

11:00 AM – Break

11:15 AM – Bob Hunger – Critical Diseases

12 PM – Lunch

12:45 PM – Case Medlin – Learning Chemical uses, rotations and timing to control pests

1:30 PM – Bill Steinert -- Producer Comments on No-till in Their Operation

#### **February 15<sup>th</sup>**

9 AM – Registration, Coffee and Donuts

9:30 AM – Roger Gribble – Soil Effects and Fertility and Cultural Practices and Crop Diversity (with a break at or around 10:45 AM)

12 PM – Lunch

Please call 580-237-1228 for reservations for any of these meetings.

### **Oklahoma Cattleman's Association District Meeting**

An OCA district meeting will be held at the Exhibit Building, Kingfisher County Fairgrounds on February 27 beginning at 6:30 pm. The program will consist of OCA update, Legislative update and officer elections. Please call the Extension Office at 375-3822 or the Oklahoma Cattleman's Association at 405-235-4391 for reservations.