



TEXAS COUNTY AG NEWSLETTER

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Effect of Nutritional Status on Carcass Traits (by Dr. Britt Hicks, OSU Area Extension Livestock Specialist)

Recent research indicates that variations in nutritional status prior to entering the feedlot may have as much or more effect on performance and carcass characteristics as the nutritional management of the cattle while in the feedlot. This research suggests that marbling development begins early in a calves' life and doesn't occur just in the feedlot. The type of diet (grain vs forage) may affect marbling. High grain (starch) diets appear to result in greater marbling deposition. Two recent University of Illinois studies have looked at the impact of early weaning, creep feeding (grain vs fiber based) and dietary starch levels fed during a feedlot growing period on carcass quality and marbling deposition.

Effects of Weaning Age, Creep Feeding, and Type of Creep on Steer Performance & Carcass Traits:

Recently published Illinois research evaluated the effects of weaning age, creep feeding, and type of creep on the performance and carcass characteristics of feedlot steers. In this study, 168 spring born Angus x Simmental steers were assigned to four different treatments: early weaned and program-fed a high concentrate diet, normal weaned and fed a grain-based creep, early weaned and fed a fiber-based creep, and normal weaned with no creep (control). The calves were weaned at either 63 or 189 days of age. The early weaned steers were program-fed a high-concentrate diet (71% whole shield corn) to gain the same as steers on the two creep-fed treatments from the time of early weaning until normal weaning. The major ingredients in the grain-based creep were corn (26%), soybean hulls (30%) and wheat midds (20%), whereas, the major ingredients in the fiber-based creep were soybean hulls (50%) and wheat midds (32%). Following weaning all calves were fed a high concentrate finishing diet (77% whole shelled corn). Ultrasound was used to determine backfat and predict harvest dates. A target backfat of 0.43 inches was used to sort the steers into two groups. Steers were then harvested at 323 or 349 days on trial (days from early weaning to harvest).

During the finishing phase of this study, no differences in performance between early weaned and normal weaned creep fed steers were observed. For the overall duration of the study, control steers gained less per day (2.82 vs 3.08 lb/day) and required 12 more days to reach harvest than the other three treatments. The early weaned steers had greater marbling scores, a greater percentage of steers grading Average Choice or greater (72.5 vs 39.3%), and a greater percentage of steers grading Low Prime or greater (12.5 vs 2.5%) than creep fed steers. There were no differences in marbling or carcass quality between the two creep fed groups. This result is in contrast with pervious Illinois research that showed that creep feed energy source could affect carcass quality even when gains were similar while calves were on creep feed. In this earlier study, nursing crossbred steers were creep fed either cracked corn or ground soybean hulls for 113 days prior to weaning and then fed common diets during a 77 day growing period and 167 day finishing period. During the combined growing/finishing period, source of creep feed did not affect performance. However, calves that were creep fed corn produced carcasses with higher marbling scores resulting in higher quality grades. Perhaps, no differences in carcass quality were observed between steers creep-fed either grain-based or fiber-based feeds in the most recent study because the grain-based creep feed did not contain enough starch to initiate marbling (contained 26% corn).

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In summary, these researchers concluded that program-feeding early-weaned steers high-concentrate diets improved carcass quality and marbling deposition compared with creep fed steers. Presumably, this occurred because the early weaned steers were fed high starch diets early in life. No differences in carcass quality were observed between creep treatments possibly because the grain based creep contained insufficient starch. The control steers produced carcasses of less value than the other treatments (primarily due to 38 lb lighter carcasses).

Effect of Level of Starch in Growing Period on Performance and Carcass Traits of Feedlot Steers:

Additional Illinois research recently determined the effect of level of starch during a growing period on feedlot performance and carcass traits. In this study, 200 Simmental x Angus steers were early weaned at 65 days of age and after a 57 day adaptation period, randomly assigned to one of four diets during a 105 day growing period. These diets were 1) High Starch (71% corn and 0% soy hulls), 2) Intermediate Starch (47% corn and 23% soy hulls), 3), Low Starch (23% corn and 47% soy hulls), 4) No Starch (0% corn and 71% soy hulls). These diets were equal in protein content with hay, soybean meal and mineral making up the remainder of the diet. After the growing period, all steers were fed a common finishing diet (83% corn, 10% hay and 4% soybean meal) for 172 days. After 105 days on feed, marbling, back fat thickness, and ribeye area were measured using ultrasound. The steers were slaughtered at 399 days of age and carcass data was collected.

During the growing period, average daily gain and efficiency (gain/feed ratio) decreased linearly as the amount of fiber fed increased. Ultrasonic measurements of marbling, back fat thickness, and ribeye area also linearly decreased as dietary fiber levels increased. During the finishing period, average daily gain and dry matter intake increased linearly as the amount of fiber fed previously increased (compensatory response). Over the overall growing/finishing period, no differences in performance were observed. In addition, no differences in carcass characteristics at harvest were reported. These researchers concluded that feeding higher levels of starch during the growing period increased marbling (measured by ultrasound) but differing rates of gain during the finishing period may have reduced these marbling differences at harvest.

Colorado State Forestry Service Trees

It is that time of year. The Colorado State Forest Service will make available their seedling windbreak trees and shrubs. There is a wide selection of hardy trees and shrubs to choose from. Bare-root trees and potted-trees are offered. The Colorado State Forest Service Program enables farmers, ranchers, and rural landowners to obtain trees at nominal cost. The program's purpose is to encourage landowners to plant new forests, establish effective windbreaks to reduce soil erosion, protect homes, cropland, livestock and highways; and enhance wildlife habitat. The trees and shrubs are grown for their conservation benefits only.

To participate, landowners must have at least two acres of land and must agree to not use the plant for ornamental or landscape purposes. The plants cannot be resold as living plants.

Plants available this year will be:

- Bare Root trees and shrubs-chokecherry, lilac, native plum, sumac, nanking cherry, green ash, Siberian elm, hybrid cottonwood, hackberry, honeylocust, lombardy poplar and bur oak, sand cherry, & golden currant, at a cost of \$36.00 for 50 trees.
- Regular Potted trees (top growth 6" to 12")-Colorado blue spruce, pinion pine, ponderosa pine, Austrian pine, & Rocky Mountain juniper, at a cost of \$48.00 for 30 trees.
- Small Potted trees (4" to 6") Eastern redcedar, Scotch pine, Austrian pine, Colorado blue spruce, ponderosa pine, Rocky Mountain juniper & pinon pine, at a cost of \$28.20 for 30 trees.

Payment must accompany the order. Orders will be on a first-come first-serve basis. Some of the tree species sell out quickly.

Order deadline is February 29, 2008. If you have any further questions, please call the Texas County OSU Extension Service at (580)338-7300 or stop by at 301 N Main St, Guymon, OK.

No-Till Oklahoma Conference

Clarion Hotel
737 S. Meridian
Oklahoma City, OK 73108
(405) 942-8511

The cost for attending the conference is \$75 per person, if reservations are made before January 21. After January 21, the cost will be \$100 per person. Reservation information can be found online at <http://oces.okstate.edu/notill>

Conference cost does not include hotel accommodations. If you prefer to stay at the Clarion, mention the No-Till Oklahoma Conference -- rates will be \$69 per night if reserved by January 27. Guests of the hotel may participate in a complimentary reception at 5:00 p.m. every evening. For reservations, contact the Clarion at 405-942-8511.

Agenda:

February 11th

10:30 - 11:30	No-till Philosophy
11:30 - 1:00	Lunch
1:00 - 2:30	Key Considerations for Crop Rotation
2:30 - 3:00	Break
3:00 - 4:30	Disease, Weed, & Insect Management

February 12th

8:00 - 9:30	Equipment - Essential for No-Till
9:30 - 10:00	Break
10:00 - 11:30	No-Till Wheat, Cotton & Grazing Systems
11:30 - 1:00	Lunch
1:00 - 2:30	Overcoming Obstacles
2:30 - 3:00	Break
3:00 - 4:30	Closing Session

No-Till Oklahoma Conference Registration

To register, complete the form below and return with \$75 payment to Ag Conference Services, (Make checks payable to: OSU-Ag Conference Services.) Registration deadline: **January 21, 2008** (for \$75 rate)
(Please print or type.)

Name: _____

Address: _____

City, State, ZIP: _____

County: _____

Phone: (_____) _____ E-mail: _____

Credit card # _____ Exp. Date _____ Signature _____

If paying by **check**, please mail to Ag Conferences, 430 Student Union, Stillwater, OK 74078.
If paying by **Visa** or **MasterCard**, fax this form to 405-744-8491, or mail to the above address.
For program information, contact Janelle Malone at 405-744-3669.

Reducing Nitrogen Costs

By: Jeff Edwards and Randy Taylor

Looking to cut nitrogen costs this year? Keep in mind that the ultimate goal is to provide “just enough” nitrogen for the crop. Short-change the crop and you will lose yield. Over-apply nitrogen and you incur unnecessary costs. The best way to determine the optimal nitrogen rate is to use a three-pronged offensive consisting of:

1. A recent soil test that includes surface (0-6") and sub-surface (6-24") nitrate nitrogen levels. Whatever soil N is present can be subtracted from the approximate fall nitrogen requirements listed on the previous page.
2. A nitrogen-rich strip (a.k.a. N-Rich Strip, RAMP Strip, or Greenseeker Strip). An N-rich strip is simply an area where N is not limiting, and having an N-rich strip is essential to accurately gauge if the pre-plant application was “enough” or if it is “running out”. Gauging the difference (or lack thereof) in color between the N-rich strip and the rest of the field will let the producer know if supplemental N is needed and how early it is needed.

Hand-held Greenseeker sensor readings taken in February from the N Rich Strip and the farmer practice will let the producer know how much additional topdress N is needed. For more information contact your local extension and ask for publication #PT

2005-3 *Get Your Nitrogen-Rich Strips Out Early* or visit www.nue.okstate.edu for a downloadable copy.

The latest method to take advantage of Sensor Based In-Season Nitrogen management is the Ramped Calibration Strip (RCS). OSU's Biosystems and Agricultural Engineering and Plant and Soil Sciences Departments have built two applicators that will change nitrogen rates every 10 feet to create the pattern shown to the upper right. The advantage of the RCS is the visual aspect of nitrogen needs. Producers should be able to walk the strip and see the response to nitrogen. The multiple rates along the RCS should also improve the predictive capabilities of sensors.

3. The third and final component is commitment on the part of the farmer. Similar to providing mineral supplementation to beef cattle, the easy approach to N fertility is to “put plenty out there”. This is, however, not the most economical nor environmentally-friendly approach. Just like a good herd manager, a well-trained agronomist will use the tools available to them to determine what the crop needs and how to supply that need. Whether we are talking about cattle or wheat, this takes commitment, dedication, and perseverance.

It's not too late!

By Jeff Edwards, OSU Extension Small Grains Specialist

November is quickly approaching and wheat sowing in Oklahoma is about 10% behind the 5-year average. Emergence is about 20% behind. Recent rains in the central section of the state will bring us closer to normal over the next week or two.

Wheat sown in early November can have good yield potential. Of course, a few minor adjustments in your management strategy will be in order.

Late-sown wheat will typically not tiller as well as

early-sown wheat, so seeding rates should be increased by 20 to 30%. Seeding rates should be adjusted upward even further if planting extends into the latter half of November.

Late-sown fields should also be first on the list when top-dress season rolls around. Having ample nitrogen fertility in place before the end of the tillering phase will encourage the plant to retain more tillers and assist the plant in “catching up”.

Controlling weeds this fall rather than next spring will also assist the crop in competing for nutrients and light. Weed interference studies in almost every agricultural crop grown in the US have →

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shown that controlling weeds early is more profitable than controlling weeds late. So, fall control of weeds is a good idea for almost any wheat crop whether early or late-sown.

Some producers are also faced with the choice of keeping a marginal stand of wheat or attempting to replant. This is a difficult call, and the first step is to actually count plants and assess your stand. Count the number of plants in 1 foot of row at several locations in the field. Use Table 1 to determine the number of plants you have per square yard.

We need about 500 - 600 heads per square yard at harvest to optimize yield. So, for wheat that is emerged right now, I like to see 180 - 200 plants per square yard. Assuming 2 to 2.5 tillers per plant this will put us at the desired number of heads at

harvest.

Table 1. Plants per square yard as a function of plants per foot of row and row spacing			
Plants / ft of row	6-inch	7.5-inch	9-inch
	-----Plants per sq yd-----		
10	180	144	120
12	216	173	144
14	252	202	168
16	288	230	192
18	324	259	216
20	360	288	240

Oklahoma Unwanted Pesticide Disposal Program

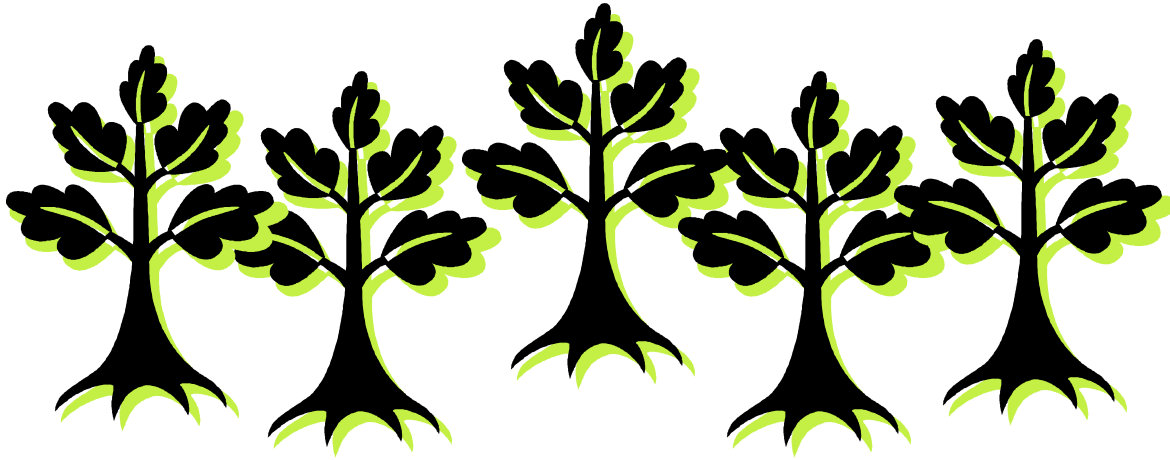
<http://pested.okstate.edu/unwanted.htm>

When & Where?

November 13, 2007 from 8 am -1 pm.....Estes, Inc in Clinton, OK, Hwy 183 South (3 miles south of I-40 & ¼ west)
November 15, 2007 from 8 am-1 pm.....Hooker Equity COOP in Hooker, OK, 200 E Hwy 54

- What is the Oklahoma Unwanted Pesticide Disposal program? Unwanted pesticides are pesticides that are unusable as originally intended for various reasons. Unwanted pesticides are leftover pesticides, pesticides that are no longer registered in the state of Oklahoma, pesticides that no longer have labels and pesticides that are no longer identifiable.
- Who is eligible to participate and what does it cost? Oklahoma commercial and non-commercial applicators and pesticide dealers may participate as well as Oklahoma farmers and ranchers. There is no cost for the first 2,500 lbs of pesticides brought in by a participant. Participants will however be charged \$1/lb for anything over 2,500 lbs except in the case of mercury based pesticides. Mercury based pesticides will cost participants \$2.22/lb for disposal. Clean Harbors will accept payment in the form of check or credit card only at the disposal site. No cash will be accepted!
- What are the steps to participate in the collection program? Applicators, farmers, and ranchers are not required to pre-register. Dealers are asked to pre-register with Clean Harbors through OSU Pesticide Safety Education Program. After completing pre-registration requirements, if required, bring unwanted pesticides safely to one of the collection sites. Visit the above website for more info.
- Why are dealers asked to pre-register? Dealers are asked to pre-register due to the potential of large quantities coming from multiple dealers and/or multiple locations. This allows Clean Harbors to plan the appropriate resources to handle the quantity of pesticides that comes into the collections.

Don't forget to come in and order your windbreak trees!



Steve Kraich, Ag/4-H Educator
Texas County OSU Extension Service

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