



# Master Cattleman Quarterly

## Oklahoma State University

Welcome to the first issue of a newsletter targeted to graduates and current students of OSU's Master Cattleman program. We're planning to send a quarterly mailing this next year and look forward to your feedback as to what information you would like to get from the newsletter. If you'd prefer to receive this newsletter via e-mail, e-mail us as we'd love to save printing and postage costs.

### Upcoming events

#### Statewide Conference for Women in Agriculture and Small Business

Don't miss this year's Statewide Women in Agriculture & Small Business Conference as the workshop and keynote speaker lineup is excellent. It will be held on September 18 & 19, 2008 at the Moore Norman Technology Center, SW 134th Street and Pennsylvania Avenue in Oklahoma City. Concurrent sessions will focus on agriculture, small business and alternative enterprises. You choose which sessions you want to attend in any of the tracks. Keynote speakers are Jolene Brown, a real "Farmer Brown" from Iowa (she's a terrific speaker!) and Jenifer Reynolds, the current host of the statewide TV program, Discover Oklahoma. Friday's guest speaker is Mike Klemme, the Official Photographer of the Oklahoma Centennial. For more information and registration details, see <http://www.greatplainsrcd.org/wiasb2.php> It will be a great conference so bring a carload of people with you.

#### SW Stocker Conference, Sept. 30

Stocker health programs, market outlook, and Beef Quality Assurance topics will be emphasized as will management of wheat pasture cattle considering high grain

prices, high fertilizer costs and high value of gain. The conference will be held at the Great Plains Technology Center in Lawton. For more information, contact the Southwest Area OSU Extension Office, Duncan, 580-255-0546 or e-mail Bob LeValley at [bob.levalley@okstate.edu](mailto:bob.levalley@okstate.edu).

### Check out

#### BeefExtension.com

This website is being developed to serve as an easy to remember, single location for producers to find OSU beef cattle related activities and information. Led by Chris Richards, OSU Livestock and Forages team members are contributing materials. You'll find animal science as well as agricultural economics resources, sorted for cow/calf, stocker cattle and receiving and feedlot operators. Topics include genetics, reproduction, nutrition, health and disease, economics, marketing, facilities, quality assurance, and calculators. To find beef-related information, start at [BeefExtension.com](http://BeefExtension.com).

#### Cow Calf Corner

Master Cattleman graduates and current students can receive (at no cost) the weekly Cow Calf Corner Newsletter from the Oklahoma Cooperative Extension Service. The "email - only" newsletter is sent every Friday and contains management suggestions from OSU Cattle Reproduction Specialist, Dr. Glenn Selk and current beef cattle market news information from Dr. Derrell Peel, OSU Extension Livestock Marketing Specialist. Contact Glenn Selk at [glenn.selk@okstate.edu](mailto:glenn.selk@okstate.edu) to join the mailing list or update your email address.

Volume I

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- Damona Doye
- Francis Epplin
- David Lalman
- Derrell Peel
- Glenn Selk



# Wheat & Wheat-Stocker Production Planner

<http://agecon.okstate.edu/planner/>

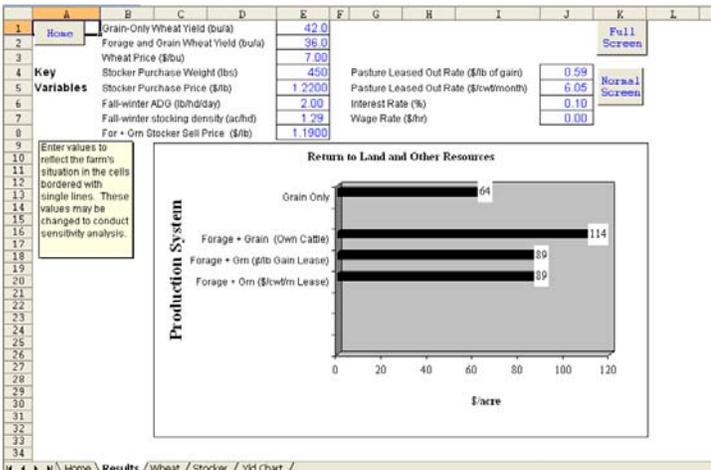
Francis Epplin, Department of Agricultural Economics, Oklahoma State University



The wheat and wheat-stocker production planner enables a user to describe farm-specific situations and to compare the economic consequences of grain-only and dual-purpose (fall-winter grazing with stockers plus grain) wheat.

The Grain-Only Wheat vs. Stocker plus Wheat Grain Planner consists of a Microsoft® Excel workbook composed of five worksheets. The excel tab labels for these worksheets are: Home; Results; Wheat; Stocker; and Yld Chart. Three of the worksheets (Results; Wheat; Stocker) enable a user to customize input requirements and prices to reflect a farm specific situation.

Example values for key variables:



Grain-only wheat yield of 42 bu/ac; dual-purpose wheat yield of 36 bu/ac; wheat price of \$7/bu; 30 lb/ac additional nitrogen for dual-purpose wheat; 0.5 bu/ac

additional seed for dual-purpose wheat; stocker beginning weight of 450 pounds; purchase price of \$1.22/lb; stocking rate of 1.29 ac/hd (350 lbs/ac); average daily gain of 2.0 lb; death loss of 2%; 119 days; selling price of \$1.19/lb. Note that the differential between the summer/fall purchase price of \$1.22/lb and the February/March sale price of \$1.19/lb is less than historical averages.

Results are displayed on the Results sheet. Given these parameter values the program estimates a return of \$64/ac for grain-only wheat and \$114/ac for dual-purpose wheat for stockers owned by the wheat producer. In this example, dual-purpose wheat adds \$50/ac to expected income above that of grain-only wheat. A wheat pasture rental rate of \$0.59/lb would split the \$50 between the wheat producer and the stocker owner.

Additional wheat production data may be entered in the wheat sheet

WHEAT PRODUCTION DATA		Full Screen	Normal Screen
INPUT QUANTITIES:	Grain-only Forage + Grain		
4 Seed (bu/ac)	1.00 1.50	Seed (\$/bu)	16.00
5 Nitrogen (lb/ac)	70 100	Nitrogen (\$/lb)	1.000
6 Phosphorus (lb/ac)	20 20	Phosphorus (\$/lb)	1.200
7 Other Nutrients (lb/ac)	0 0	Other Nutrients (\$/lb)	0.00
8 Herbicide (appl)	1 1	Herbicide (\$/appl)	20.00
9 Insecticide (appl)	1 1	Insecticide (\$/appl)	9.00
		Custom Harvest (\$/ac)	23.00
11 MACHINERY COST INPUT:		Custom Harvest (\$/bu)	0.23
12 Mach fuel, lube, repairs (\$/ac)	34.00 34.00	Custom Hauling (\$/bu)	0.23
13 Labor (hr/ac)	1.00 1.00	Miscellaneous (\$/ac)	6.00

Additional stocker production data may be entered in the stocker sheet.

STOCKER PRODUCTION: FALL-WINTER GRAZING DATA		Full Screen	Normal Screen
3 Days on Receiving Program		Vet & Med Exp (\$/hd)	14.00
4 Receiving Program ADG (lb/hd/day)		Marketing (\$/cwt)	2.20
5 Days on Fall-Winter Pasture	119	Freight (\$/cwt)	
6 Death Loss (%)	2.0	Mach & Equip (\$/hd)	
		Beef Checkoff (\$/hd)	
		Misc Expense (\$/hd)	18.00
		Misc Leasing Exp (\$/hd)	0.00
		LABOR:	
11 FEED:	Days Fed (lb/hd/day) Cost (\$/lb)	Receiving	Hrs/hd/day
12 Supplemental Hay	38 10.00 0.04	Feed/Check	
13 Supplemental Feed			Hrs/hd
14 Salt/Mineral	120 0.125 0.30	Misc.	

Users may change values to evaluate consequences of alternative prices, alternative costs, and alternative production parameter levels

## Mandatory COOL and Considerations for Cattle Producers

*Derrell S. Peel, OSU Livestock Marketing Specialist*

Updated: August 15, 2008

USDA's Agricultural Marketing Service (AMS) issued an interim final rule for mandatory Country of Origin Labeling (COOL) on July 29, 2008. AMS will accept comments from all interested parties until September 30, 2008. COOL became law in the 2002 Farm Bill but implementation has been delayed twice by Congress. The 2008 Farm Bill (Food, Conservation and Energy Act) made several changes to the COOL law, which have been incorporated into the interim final rule.

Highlights of Mandatory COOL under the interim final rule:

- Mandatory COOL will take effect September 30, 2008; products produced or packaged before this date are not covered.
- The act covers the following products sold at retail:
  - Beef, pork, lamb, chicken and goat (whole muscle and ground)
  - Fresh and frozen fruits and vegetables
  - Seafood (wild and farm-raised); previously implemented
  - Peanuts, macadamia nuts, pecans and ginseng
- Requirement: products must be labeled as to country of origin in an obvious (visible) manner that does not interfere with any other label requirements.
- Food service is excluded, including deli's and salad bars in retail stores.
- Processed foods are excluded.
- Processed food exclusion is based on two guidelines:
  - Products that are changed in character
  - Cooking, drying, curing, smoking, etc.
- Products that are combined with other products to make a new product
- Covered meat products include "All muscle cuts of beef, lamb, chicken, goat and pork; and ground beef, ground lamb, ground chicken, ground goat and ground pork.
- To be labeled "Product of USA", cattle must be born, raised and slaughtered in the U.S.
- Animals imported immediately before slaughter use the label: "Product of country X and the U.S." Animals imported prior to slaughter use the label: "Product of the U.S., country X and/or country Y."
- Products imported directly for retail sale use the label: "Product of country X."
- Ground meat products can use a label that states "may contain product of countries X,Y and Z".
- Retailers must provide country of origin information to final consumers and must retain records for 1 year.
- All suppliers of a covered commodity, whether direct or indirect, must provide origin information and maintain records for 1 year.
- Both retailers and suppliers are subject to fines of \$1,000 per violation for willful violation of the act.
- Retailers and suppliers are also subject to any other applicable statutes, e.g., food labeling as covered by FDA rules.
- USDA-AMS will conduct compliance reviews and will initiate investigations and enforcement actions.

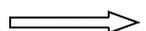
### Supplier Recordkeeping

The rule states that "any person engaged in the business of supplying a covered commodity, whether directly or indirectly, must make available information to the subsequent purchaser about the country(ies) of origin" and "must maintain records that establish and identify the immediate previous source and the immediate subsequent recipient of a covered commodity, in such a way that identifies the product unique to that transaction, for a period of 1 year from the date of the transaction".

Origin claims are to be substantiated with "records maintained in the normal course of business." Producer affidavits may be used to initiate an origin claim provided they are "made by someone having first-hand knowledge of the origin of the animal(s) and identifies the animal(s) unique to the transaction."

This initial documentation may be needed for several years until all cows and bulls currently in the herd are sold. Individual calf identification (ear tags) is not required (cannot be required by USDA) and may not be essential for cow-calf producers but may be helpful to link specific calves or sets of calves to the appropriate herd records.

For stocker producers and feedlots, AMS has indicated that animals from various source groups, but with the same origin, may be commingled and sold in different sales groups without tracking animals to specific source groups as long as the producer has records which verify an overall balance between animal purchases and sales.



**Mandatory COOL and Considerations for Cattle Producers (cont.)**

Depending on the nature of the operation and the manner that animals flow through the operation, producers may find that a more detailed tracking system, possibly including individual animal ID is the most efficient way to document sources and destinations of animals. Producers should request an affidavit for all animals purchased and may use that as the basis to issue affida-

vits for animals sold. Animals with different origin should be segregated with supporting records unless some sort of individual animal ID system is used to track animals. As noted above, NAIS compliant animals may use the animal ID to verify origin.

**Recent OSU Publications of Interest to Beef Producers**

AGEC-249 Stocker Cattle Production and Management Practices in Oklahoma

<http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-5323/AGEC-249web.pdf>

E-1006 Calving Time Management for Beef Cows and Heifers

<http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-5171/E-1006web.pdf>

CR-7193 Management of Insect Pests in Rangeland and Pasture, CR-7193

<http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-5173/CR-7193web.pdf>

AGEC-613 Cull Cow Grazing and Marketing Opportunities

<http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-5148/AGEC-613web.pdf>

ANSI-3034 Management of Cows with Limited Forage Availability

<http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-4968/ANSI-3034web.pdf>

AGEC-612 Minding Your Cattle P's and Q's: Basic Facts on Source, Age, and other Claim Verification through PVP and QSA Programs

<http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-4931/AGEC-612web.pdf>

CR-205 Oklahoma Farm and Ranch Custom Rates, 2007-2008

<http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-4923/CR-205%202007-2008web.pdf>

E-968 Bobwhites on Oklahoma Farms and Ranches: Management Options for Landowners

<http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-4921/E-968web.pdf>



2007 Master Cattleman Summit participants at OSU's Range Cow Research Center for live animal evaluation

## A Methodical Approach to Beef Cow Nutrition

David Lalman, OSU Animal Science Extension Beef Cattle Specialist

My phone has kept me busy this summer visiting with producers about options to minimize feed costs this coming winter. The process of evaluating feeding or supplementation programs is not complicated and can be accomplished in 4 steps:

1. Determine the nutrient requirements for the appropriate stage of production.
2. Anticipate the amount of nutrients cows will receive from winter range and/or hay.
3. Determine supplemental needs.
4. Evaluate supplement alternatives.

### Nutrient Requirements

Nutrient requirements for beef cows include those for water, energy, protein, minerals and vitamins. Cow age, size, breed, body condition, milk production potential, expected calf birth weight, hair coat length in relation to current temperature and various other environmental effects all influence a cow's requirements. Computer software programs, such as OSU Cowculator, <http://www.ansi.okstate.edu/exten/cowculator/>, and tabular data are available in various extension and industry publications to assist producers in determine animal requirements in different situations.

### Nutrient Contribution from Forage

General guidelines for estimating forage intake are included in Table 1, and are expressed as a percentage of cow body weight. In general, intake is lower with lower quality forages and increases considerably with the onset of lactation.

The next step is to estimate nutrient content of standing forage or hay. These values are also variable, depending on forage type, maturity and weathering. The most accurate method to determine supplemental needs for cows that will receive primarily a hay diets, is to have the hay analyzed for nutrient concentration. Table 1 includes average nutrient values for a few common forages found in the Southern Plains.



**Table 1. Average nutrient content of selected forages (dry matter basis)<sup>1</sup>.**

Hay Type	Crude Protein, %	NEm, Mcal/lb	Ca, %	P, %	Estimated Intake, % of body weight	
					Gest.	Lact.
Winter range	5.0	.41	.26	.15	1.8	2.0
Prairie hay	6.4	.45	.35	.14	1.8	2.2
Bermuda-	7.8	.42	.47	.20	1.8	2.0
Sorg/sudan	8.0	.52	.55	.30	2.0	2.3

<sup>1</sup>Nutrient Requirements of Beef Cattle, NRC, 1984 and 1996.

### Supplemental Needs

Once nutrient requirements have been established and a reasonable estimate of the nutrient contribution of the forage has been made, determining supplemental needs is simply a comparison of the two. For this discussion, we will assume cows will graze winter range (receive little or no hay supplementation). Average cow weight will be 1,100 lb. and average calving date is March 15. Consequently, these cows would be grazing low quality winter range throughout the last one third of gestation. By using the information in Table 1 supplemental needs for a cow grazing winter range were calculated (Table 2). Without supplementation, this group of cows would be considerably deficient in both protein and energy, and would be expected to lose considerable body condition before calving.

**Table 2. Nutrient supply compared to requirements for 1100 lb. beef cow grazing native range during last one third of pregnancy**

	Crude Protein, lb.	NEm, Mcal
Required	1.74	10.39
Supplied by forage	.99	8.12
Supplemental need	.75	2.27

## A Methodical Approach to Beef Cow Nutrition (cont.)

Table 3. Typical nutrient composition and cost per unit of nutrient for various feeds.

Feed	\$/Ton <sup>1</sup>	% CP	\$/lb Protein	Mcal NEm/lb	\$/Mcal
Corn grain	\$200.00	8	\$1.25	0.99	\$0.10
14% feed product	\$213.00	14	\$0.76	0.68	\$0.16
20% feed product	\$249.00	20	\$0.62	0.69	\$0.18
25% feed product	\$270.00	25	\$0.54	0.74	\$0.18
38% feed product	\$343.00	38	\$0.45	0.73	\$0.23
Good bermudagrass hay	\$75.00	11	\$0.34	0.49	\$0.08
Good prairie hay	\$75.00	6	\$0.63	0.52	\$0.07
Full bloom alfalfa hay	\$90.00	15	\$0.30	0.52	\$0.09
Mid-bloom alfalfa hay	\$125.00	19	\$0.33	0.56	\$0.11
Wheat middlings	\$200.00	16	\$0.63	0.74	\$0.14
Soybean hulls	\$205.00	11	\$0.93	0.76	\$0.13
Corn gluten feed	\$210.00	21	\$0.50	0.79	\$0.13

<sup>1</sup> Costs of all feed sources vary. This exercise is intended as an example only. Readers are encouraged to use the demonstrated calculations with their own available feed resources and associated costs.

### Evaluating Supplement Alternatives

Fortunately, ruminant animals can use a wide variety of feeds to meet their protein and energy needs. Evaluating and capitalizing on supplement “bargain” opportunities requires some knowledge of beef cow nutrition, a mechanism to track markets and the ability to contract or even store feeds in advance of the feeding period. In addition, cost of ingredients for the supplementation program is only part of the story. Some feeds are bulky and difficult to handle. In many cases, storage for truck-load lots must be available in order to reduce transportation costs. Available labor and feeding system must also be considered, and may limit the options for many producers.

Table 3 illustrates cost per ton and cost per unit of protein and energy for several feeds. Costs for these feeds were estimated based on average prices in Central Oklahoma. Certainly, costs for each producer will vary from the values in the table depending on current feed commodity market conditions, source, transportation costs and many other factors. Be sure to investigate your own costs for any alternative that you are considering.

In general, higher protein feeds are usually cheaper sources of protein and high-energy feeds that are low in protein are cheaper sources of energy (Table 3). This relationship still holds true in today’s higher feed cost

environment. The data in Table 3 also points out that good quality hay is extremely valuable in times when feed grain and oilseed meal prices are high. The least expensive energy sources in Table 3 are the grass hays. For several years, corn grain was less expensive per unit of energy than good quality grass hay. This is no longer the case...again, based on the prices and nutrient values used here.

Cost per unit of protein or energy cannot be used exclusively in evaluating these alternatives for this scenario, because our “model” cow herd requires supplemental protein and energy. If the cows were in excellent condition (Condition score of 6 or greater), 2 pounds of the 38% feed product could be fed to meet the protein requirement. The net effect would be to maximize forage intake and digestion, with the understanding that the cows would lose some weight and condition, due to a slight deficiency in energy intake. Obviously, this program minimizes cost, but may not be the best choice for cattle that have marginal body condition at the beginning of the feeding period, as one would expect lower pregnancy rates the following year.

Table 4 demonstrates various supplementation programs and costs that would meet the protein supplementation need. Notice that the lower protein supplement

**A Methodical Approach to Beef Cow Nutrition (cont.)**

sources, such as corn and soybean hulls, are not practical protein sources. In fact, energy must be overfed to satisfy the protein need. With this much “supplement” intake, one would expect the forage intake to be much lower than the projection shown in Table 1. Because of the low quality forage diet, these cows require considerable supplemental protein and energy. Consequently, feeds or blends of feeds that are moderate in protein (around 25% CP) and high in energy fit this scenario the best. Obviously, for cows receiving grass hay similar to the bermudagrass hay shown in table 3, low protein, high-energy feeds would be more economical.

In summary, reducing feed costs, while maintaining performance is a must for Oklahoma cow/calf producers. By using a systematic approach to evaluating beef cow nutritional requirements, forage nutrient contribution and various supplement sources, an optimal winter nutrition program can be designed. The lowest cost alternative will not always be the best program, due to the relative value of convenience, labor availability and feeding system. The most effective way to evaluate alternatives is to first determine the cost of the total supplementation program, then compare differences in cost with these other factors.

Table 4. Feeding rate and cost to provide adequate supplemental protein for 1,100 lb beef cows grazing winter range during late pregnancy.

Item	Amount Fed, lb/day	Protein, lb/day	NEm, Mcal/day	\$/day	\$/90 days
Supplemental need <sup>1</sup>		.75	2.27		
Corn grain	9.4	0.75	9.3	\$0.94	\$84.60
14% cube	5.4	0.76	3.7	\$0.58	\$51.76
20% cube	3.75	0.75	2.6	\$0.47	\$42.02
25% cube	3	0.75	2.2	\$0.41	\$36.45
38% cube	2	0.76	1.5	\$0.34	\$30.87
Full-bloom alfalfa hay	5	0.75	2.6	\$0.23	\$20.25
Mid-bloom alfalfa hay	4	0.76	2.2	\$0.25	\$22.50
Wheat middlings	4.7	0.75	3.5	\$0.47	\$42.30
Soybean hulls	6.8	0.75	5.2	\$0.70	\$62.73
Corn gluten feed	3.6	0.76	2.8	\$0.38	\$34.02



2007 Master Cattleman Summit participants at OSU’s Range Cow Research Center for live animal evaluation

## Save the Dates!

### Master Cattleman Summit

The popular Master Cattleman Summit will be held on the OSU campus Aug. 13-14, 2009. Past participants overwhelmingly recommended that we maintain the hands-on educational approach and we will heed their advice! After some training, participants will evaluate live cattle AND evaluate carcasses from those same animals in OSU's one-of-a-kind teaching facilities. We are planning many more hands-on live animal educational opportunities **like those pictured in this newsletter taken during the previous Summit.** You won't want to miss it!

### Farm Transitions Conferences

Are you anticipating retiring or transferring some farm assets and management? Upcoming conferences will help you understand the potential tax and legal issues, become familiar with business entity options plus estimate your financial needs, financial position, and identify productive ways of resolving conflicts. Workshops will be held in three locations in different formats: **Ardmore**, Nov. 7 - 8, plus Dec. 12 -13; **Pryor**, Nov. 10 & 24 plus Dec. 8 & 15 (evenings only); **Alva**, March 27 - 28, plus April 24 - 25. More information will be available soon through your local Extension Office.

Damona Doye  
515 Ag Hall  
damona.doye@okstate.edu  
405-744-9836

David Lalman  
201 Animal Science  
david.lalman@okstate.edu  
405-744-6060

Oklahoma State University  
Stillwater, OK 74078



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