



## **BEEF COW ENTERPRISE NET RETURNS**

This article discusses beef cow enterprise net returns for 2009 and for the five-year period from 2005 to 2009. In addition, this article describes the items contained in the cost categories used to discuss livestock profit thirds on the KFMA web site ([www.agmanager.info/kfma](http://www.agmanager.info/kfma)). The tables and figures discussed in this article are similar to those presented on the KFMA web site.

The first table and figure below present information for the 2009 beef cow, sell calves enterprise. There was a \$357 difference in net return to management per cow between the low one-third and high one-third profit groups for this enterprise in 2009. Of this difference, approximately 32 percent is accounted for by the difference in gross income per cow, 21 percent is accounted for by the difference in feed cost, 5 percent is accounted for by the difference in summer pasture cost, and 15 percent is accounted for by the difference in labor cost. The remaining difference in net return (27 percent) was due to differences in interest, veterinarian expense, livestock marketing and breeding, depreciation, machinery, and miscellaneous cost items called "other". Differences in gross income between the two profit groups were due to differences in weaning percentages (not shown in the table),

average weight of calves sold, and average sale price per cwt. Feed cost includes purchased and raised feed. Summer pasture costs are listed as a separate cost item. The cost of raised feed is computed using the opportunity cost of hay, silage, stalks, wheat pasture, temporary pasture, and straw produced by the farm and utilized by the beef cow enterprise. Purchased and raised feed (i.e., feed cost) is considerably more important in explaining the difference in net return than summer pasture. The large difference in feed cost per head is understated due to the fact that the high profit group actually sold their calves at a heavier weight. Obviously, it is important for beef cow producers to benchmark their feed costs using comparative information. Labor costs include hired labor, operator labor, and family labor. Interest cost includes cash interest paid as well as an opportunity charge on capital invested in the enterprise. Machinery costs include repairs, machine hire, and fuel. The "other" cost category includes fees, property and real estate taxes, general farm insurance, utilities, and the farm portion of auto expense.

The second table and figure below present information for the 2009 beef cow, sell feeders enterprise. There was a \$439 difference in net return to management per cow between the low one-third and high one-third profit groups for this enterprise. It is important to note that the difference in net returns is even wider for this enterprise compared to the beef cow, sell calves enterprise. This fact illustrates the problem some farms have in efficiency adding weight to their calves after weaning. The difference in gross income between the profit groups reflects

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differences in weaning percentages and calf death loss after weaning (neither of which is shown in the table), the average weight of calves sold, and the average sale price per cwt. Note that the high profit group sold heavier calves. The largest difference in per cow costs was feed at \$98. There was also a large difference in labor cost per cow (\$46). These two cost items (feed and labor) accounted for 22 and 10 percent of the net return per cow difference, respectively. The difference in summer pasture cost was minimal.

The third table and figure below present information for the beef cow enterprise using KFMA farms with continuous enterprise data from 2005 to 2009. The data presented represents 5-year averages for 61 farms. The average farm in the high profit group was approximately 50 percent larger than the average farm in the low profit group suggesting that economies of size were important in explaining net return per cow differences. The difference in gross income per cow (\$14) was much smaller using five-year averages than it was for 2009. It is interesting to note the wide difference in weight of calves sold and average

sale price per cwt between the two profit groups. The high profit third group received a higher price, but sold lighter calves. This result is illustrative of the difficulty beef cow producers have had over the last few years in efficiently adding value to weaned calves. Feed cost, which includes summer pasture cost, and labor cost accounted for 41 percent and 19 percent of the difference in net return per cow between the two profit groups, respectively. The only cost item that was not substantially lower for the high profit group was depreciation expense.

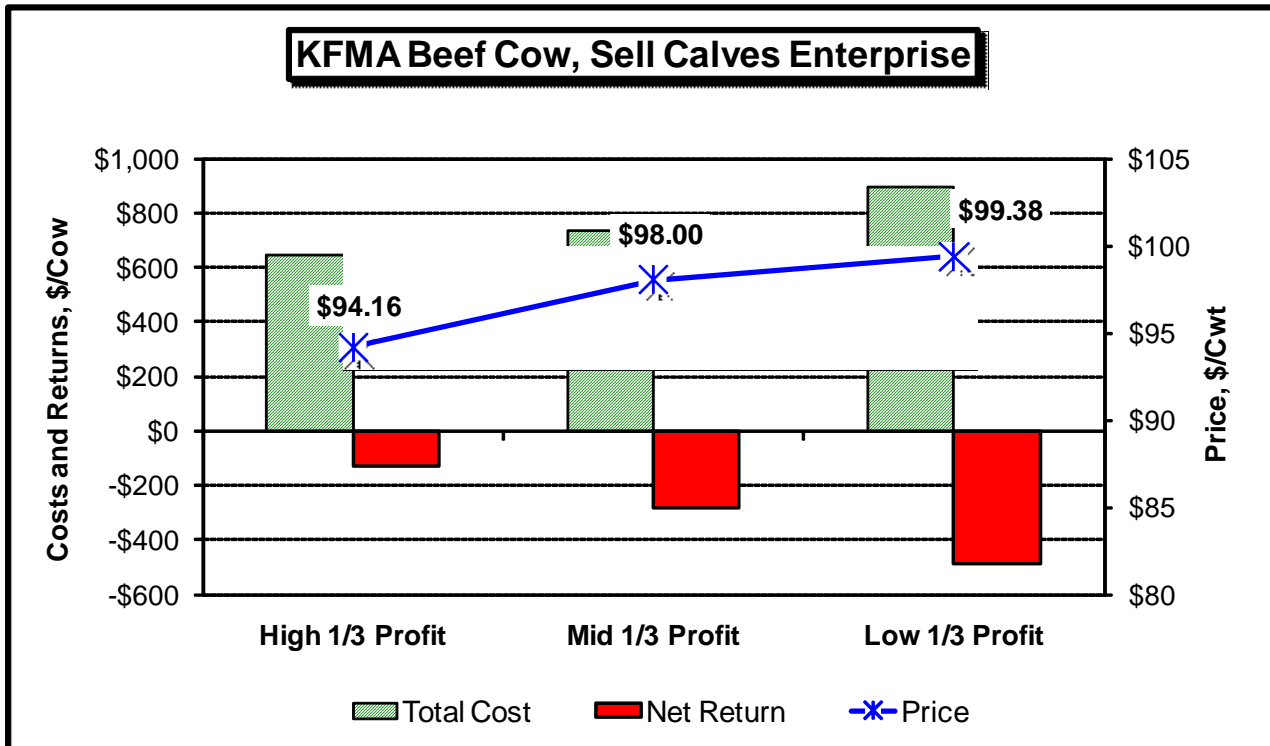
This article illustrated the wide differences in net return to management per cow for beef cow producers. More detailed information pertaining to net return differences can be obtained from a publication entitled “Differences Between High, Medium, and Low Profit Cow-Calf Producers” which is available on the Ag Manager web site.

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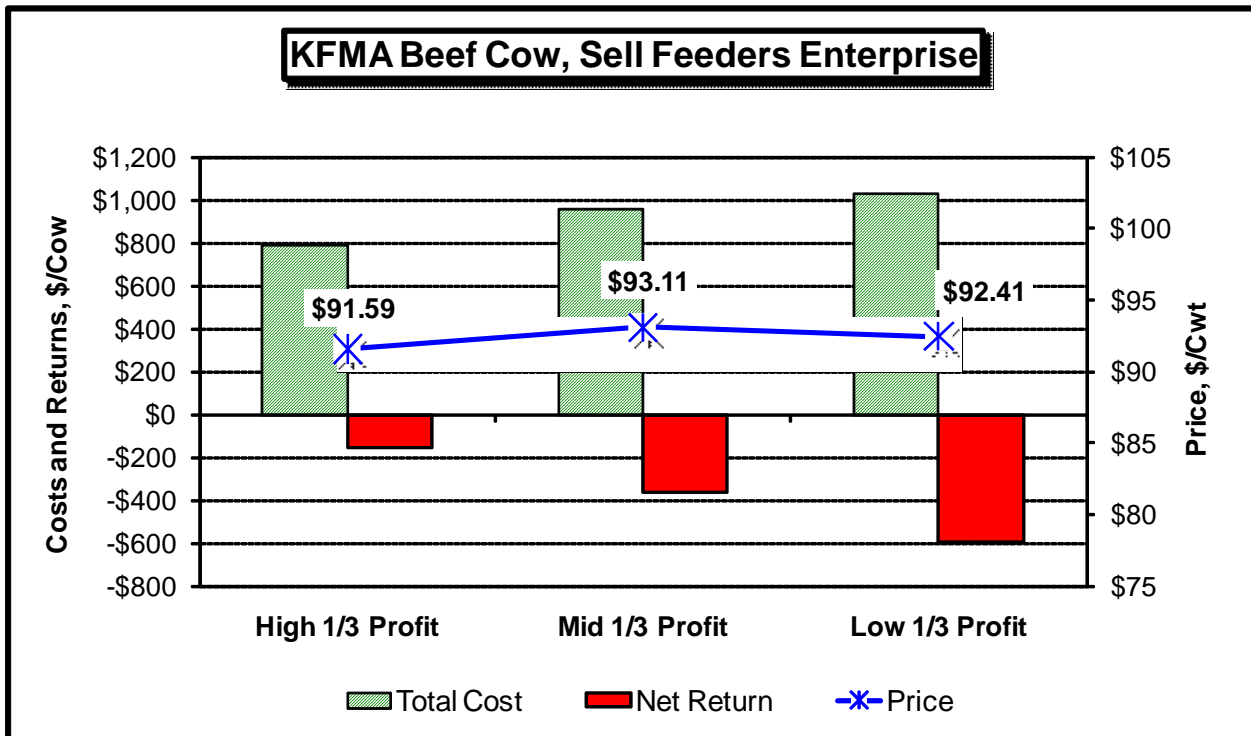
**Kansas Farm Management Association: State Averages**  
**2009 Beef Cow, Sell Calves Enterprise Sorted by Net Return to Management per Cow**

	Profit Category			Difference between High 1/3 and Low 1/3	
	High 1/3	Mid 1/3	Low 1/3	%	
Number of Farms	36	36	36		
Number of Cows in Herd	132	146	104	28	27%
Number of Calves Sold	115	114	93	22	24%
Average Weight of Calves Sold	595	545	550	45	8%
Sales Price / Cwt	\$94.16	\$98.00	\$99.38	(\$5.22)	-5%
<b>INCOME PER COW</b>					
Gross Income	<b>\$518.61</b>	<b>\$449.83</b>	<b>\$404.99</b>	<b>\$113.62</b>	<b>28%</b>
<b>COSTS PER COW</b>					
Feed	\$206.24	\$212.30	\$282.58	(\$76.34)	-27%
Pasture	\$127.56	\$140.10	\$144.91	(\$17.35)	-12%
Interest	\$96.55	\$118.68	\$131.90	(\$35.35)	-27%
Vet Medicine / Drugs	\$15.77	\$18.40	\$18.79	(\$3.02)	-16%
Livestock Marketing / Breeding	\$10.20	\$12.21	\$14.23	(\$4.03)	-28%
Depreciation	\$28.68	\$37.12	\$35.14	(\$6.46)	-18%
Machinery	\$52.73	\$66.19	\$78.52	(\$25.79)	-33%
Labor	\$84.43	\$97.56	\$137.18	(\$52.75)	-38%
Other	\$25.35	\$32.47	\$48.08	(\$22.73)	-47%
Total Cost	<b>\$647.51</b>	<b>\$735.03</b>	<b>\$891.33</b>	<b>(\$243.82)</b>	<b>-27%</b>
Net Return to Management / Cow	<b>(\$128.90)</b>	<b>(\$285.20)</b>	<b>(\$486.34)</b>	<b>\$357.44</b>	



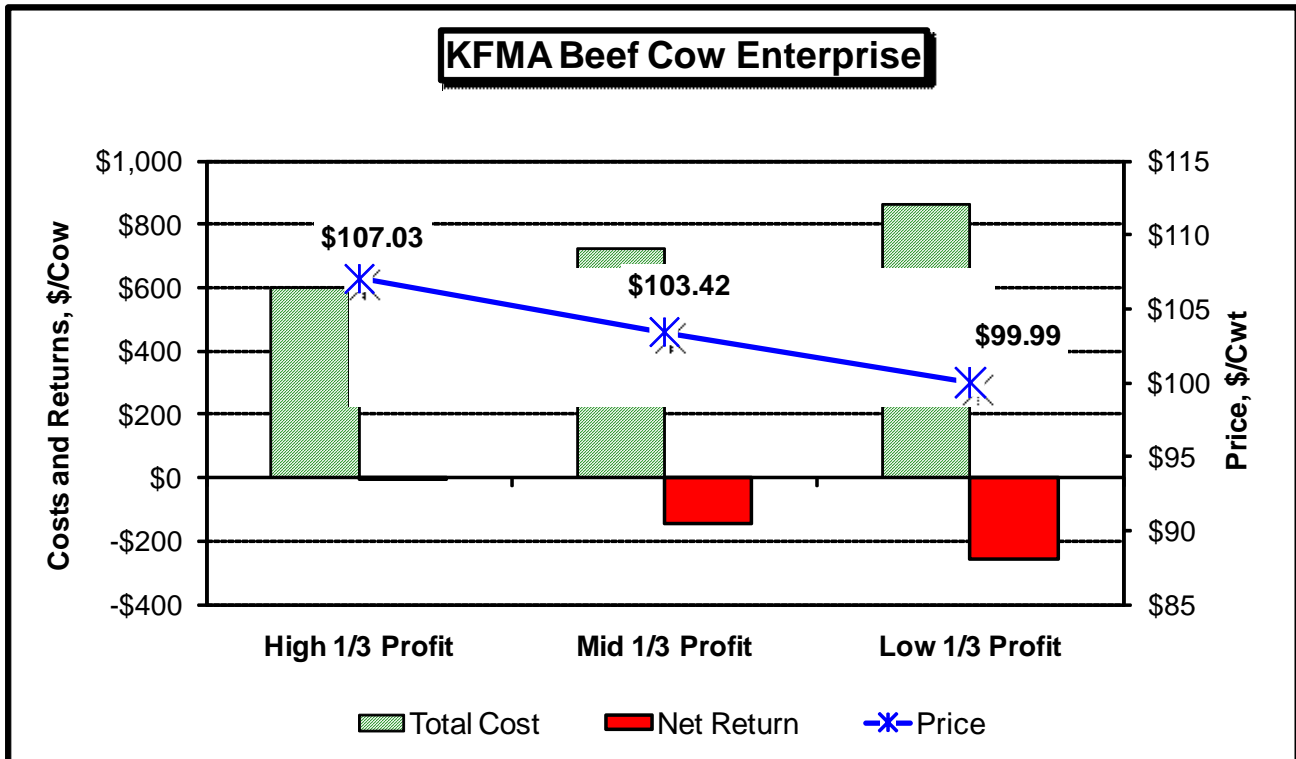
**Kansas Farm Management Association: State Averages**  
**2009 Beef Cow, Sell Feeders Enterprise Sorted by Net Return to Management per Cow**

	Profit Category			Difference between High 1/3 and Low 1/3	
	High 1/3	Mid 1/3	Low 1/3		%
Number of Farms	37	36	36		
Number of Cows in Herd	149	105	82	67	82%
Number of Calves Sold	107	83	66	41	62%
Average Weight of Calves Sold	726	737	677	49	7%
Sales Price / Cwt	\$91.59	\$93.11	\$92.41	(\$0.82)	-1%
<b>INCOME PER COW</b>					
Gross Income	<b>\$628.70</b>	<b>\$588.08</b>	<b>\$431.90</b>	<b>\$196.80</b>	<b>46%</b>
<b>COSTS PER COW</b>					
Feed	\$264.82	\$356.19	\$362.69	(\$97.87)	-27%
Pasture	\$133.84	\$133.81	\$140.10	(\$6.26)	-4%
Interest	\$134.76	\$151.72	\$162.75	(\$27.99)	-17%
Vet Medicine / Drugs	\$24.29	\$24.30	\$23.52	\$0.77	3%
Livestock Marketing / Breeding	\$21.51	\$22.71	\$17.94	\$3.57	20%
Depreciation	\$26.30	\$40.15	\$50.01	(\$23.71)	-47%
Machinery	\$58.64	\$64.35	\$85.63	(\$26.99)	-32%
Labor	\$91.18	\$122.74	\$137.13	(\$45.95)	-34%
Other	\$30.24	\$40.02	\$47.81	(\$17.57)	-37%
Total Cost	<b>\$785.58</b>	<b>\$955.99</b>	<b>\$1,027.58</b>	<b>(\$242.00)</b>	<b>-24%</b>
Net Return to Management / Cow	<b>(\$156.88)</b>	<b>(\$367.91)</b>	<b>(\$595.68)</b>	<b>\$438.80</b>	



**Kansas Farm Management Association: State Averages**  
**2005-2009 Beef Cow Enterprise Sorted by Net Return to Management per Cow**

	Profit Category			Difference between	
	High 1/3	Mid 1/3	Low 1/3	High 1/3 and Low 1/3	%
Number of Farms	20	21	20		
Number of Cows in Herd	165	128	111	54	49%
Number of Calves Sold	138	105	90	48	53%
Average Weight of Calves Sold	619	647	715	(96)	-13%
Sales Price / Cwt	\$107.03	\$103.42	\$99.99	\$7.04	7%
<b>INCOME PER COW</b>					
Gross Income	<b>\$590.15</b>	<b>\$578.11</b>	<b>\$603.90</b>	<b>(\$13.75)</b>	<b>-2%</b>
<b>COSTS PER COW</b>					
Feed	\$305.10	\$359.41	\$409.05	(\$103.95)	-25%
Interest	\$97.01	\$127.27	\$144.76	(\$47.74)	-33%
Vet Medicine / Drugs	\$15.09	\$14.63	\$25.41	(\$10.32)	-41%
Livestock Marketing / Breeding	\$9.16	\$9.83	\$21.75	(\$12.58)	-58%
Depreciation	\$34.39	\$25.41	\$33.06	\$1.33	4%
Machinery	\$44.20	\$61.38	\$72.41	(\$28.21)	-39%
Labor	\$66.16	\$86.39	\$114.11	(\$47.95)	-42%
Other	\$26.07	\$37.52	\$42.37	(\$16.30)	-38%
Total Cost	<b>\$597.19</b>	<b>\$721.85</b>	<b>\$862.93</b>	<b>(\$265.73)</b>	<b>-31%</b>
Net Return to Management / Cow	<b>(\$7.04)</b>	<b>(\$143.74)</b>	<b>(\$259.03)</b>	<b>\$251.98</b>	



## BACKGROUNDING COST OF GAIN

This article briefly discusses five-year average net return, total cost per cwt, feed cost per cwt, and feeding cost of gain for the backgrounding enterprise. Information in this article can be used to benchmark backgrounding enterprises.

The benchmarking enterprise has not been particularly profitable over the last ten years. Using KFMA data, the only years that had a positive return over variable cost during the last ten years were 2000, 2003, 2004, and 2005. With relatively higher feed grain prices during the last several years, it has been difficult to control costs. Figure 1 presents average feed cost and total cost per cwt for the backgrounding enterprise from 2000 to 2009. Costs per cwt were the highest in 2007. Though lower than that experienced in 2007, cost per cwt in 2008 and 2009 was still substantially above levels experienced from 2000 to 2006.

Due to unique circumstances pertaining to a particular year, it is often difficult to benchmark using just one year of data. With that in mind, Table 1 presents average gross income per head, total cost per head, and net return per head for the 16 KFMA farms with continuous backgrounding enterprise data from 2005 to 2009. The average weight produced per head was 324 pounds. The average difference between purchase price and sale price was \$18.80. The average ratio of purchase price to sale price was 1.193. Feed cost per head accounted for 52 percent of total cost per head. Feed cost includes purchased and raised feed. The cost of raised feed is computed using the

opportunity cost of feed grains, hay, and other feedstuffs produced by the farm and utilized by the backgrounding enterprise. The average net return to management was -\$66.72. Of the 16 farms, 1 farm had a positive net return to management and 9 farms had a positive return over variable costs.

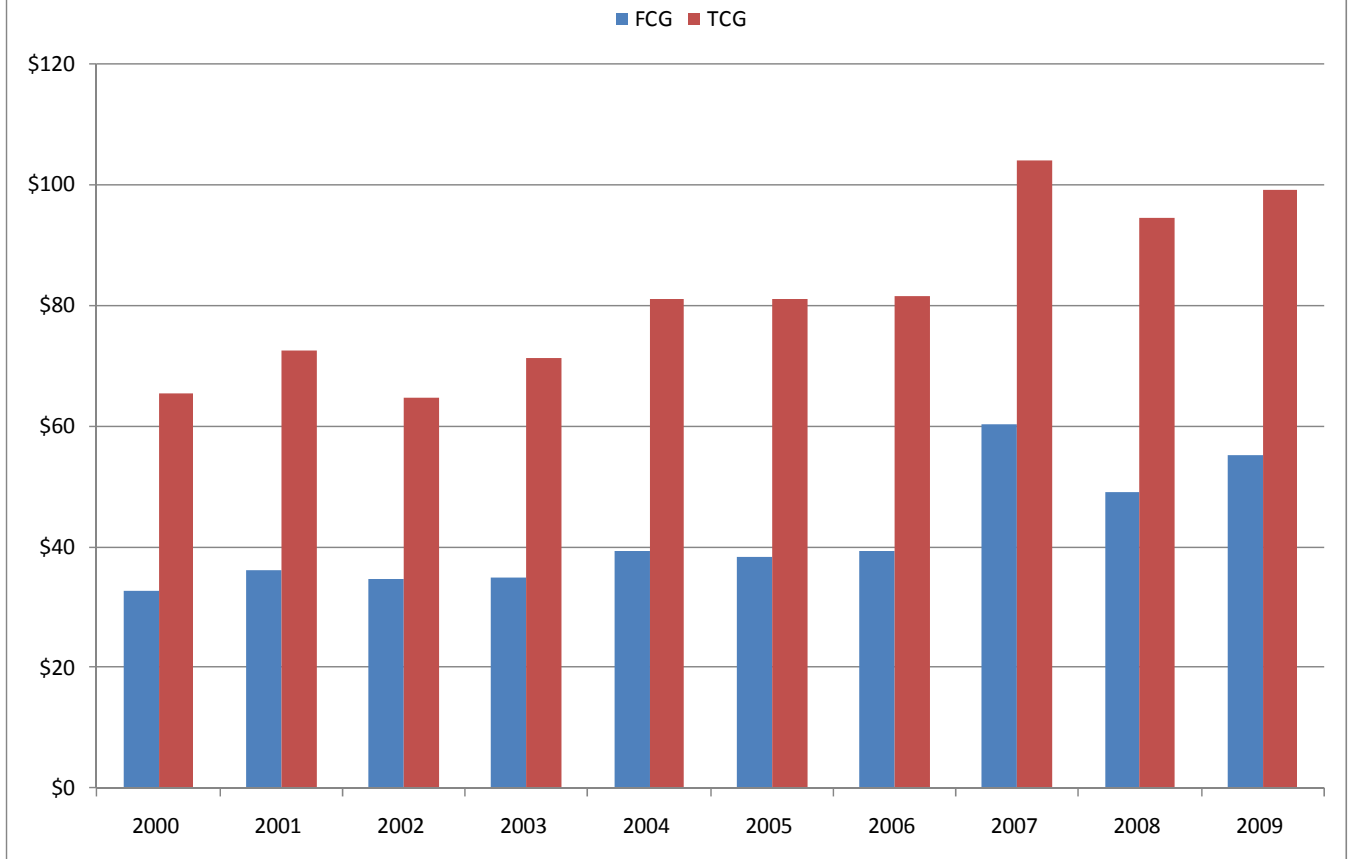
Feed cost per cwt is not the same thing as feeding cost of gain. The later is often used when discussing cost for finishing cattle. Table 2, using the averages for the 16 farms with continuous backgrounding enterprise data from 2005 to 2009, presents computations related to feed cost per cwt and feeding cost of gain. Feed cost per cwt is computed using information pertaining to feed cost and weight produced per head. The average feed cost per cwt for the 2005 to 2009 period was \$45.98. Feeding cost of gain is typically computed using all costs except interest on the feeder. Average feeding cost of gain for the 2005 to 2009 period was \$76.99. KFMA members that enterprise their backgrounding enterprise have both of these figures available in their annual analysis report.

This article discussed cost of gain for backgrounding enterprises. Further information on the backgrounding enterprise as well as the backgrounding and finishing enterprise can be found on the KFMA web site ([www.agmanager.info/kfma](http://www.agmanager.info/kfma)).

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**Figure 1. Feed Cost and Total Cost per Cwt  
KFMA Backgrounding Enterprise**



**Table 1. Backgrounding Net Return to Management per Head.**

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<u>Variable</u>	<u>Average</u>
Number of Head	502
Weight Produced per Head	324
Purchase Price per Cwt	\$116.31
Sale Price per Cwt	\$97.51
Gross Income per Cwt	\$68.07
Gross Income per Head	\$220.52
<u>Cost per Head</u>	
Feed	\$148.98
Interest	\$48.92
Vet Medicine & Drugs	\$14.20
Livestock Marketing & Breeding	\$13.53
Depreciation	\$8.31
Machinery	\$18.04
Labor	\$23.99
Other	\$11.26
Total Cost	\$287.23
Net Return to Management per Head	-\$66.72

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**Table 2. Feed Cost per Cwt and Feeding Cost of Gain.**

Variable	Average
Number of Head	502
<u>Feed Cost per Cwt</u>	
Feed Cost per Head	\$148.98
Weight Produced per Head	324
Feed Cost per Cwt	\$45.98
<u>Feeding Cost of Gain</u>	
Feed Cost per Head	\$148.98
Interest per Head (excluding interest on feeder)	\$11.14
Vet Medicine & Drugs per Head	\$14.20
Livestock Marketing & Breeding per Head	\$13.53
Depreciation per Head	\$8.31
Machinery per Head	\$18.04
Labor per Head	\$23.99
Other per Head	\$11.26
Total Cost per Head	\$249.46
Weight Produced per Head	324
Feeding Cost of Gain per Cwt	\$76.99

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## FEEDING WHEAT TO FINISHED CATTLE

This article briefly examines the historical relationship between corn, grain sorghum, and wheat prices in southwest Kansas from 1990 to the present. Wheat often becomes economical to feed when the difference between wheat price and corn price is \$0.10 per bushel or less.

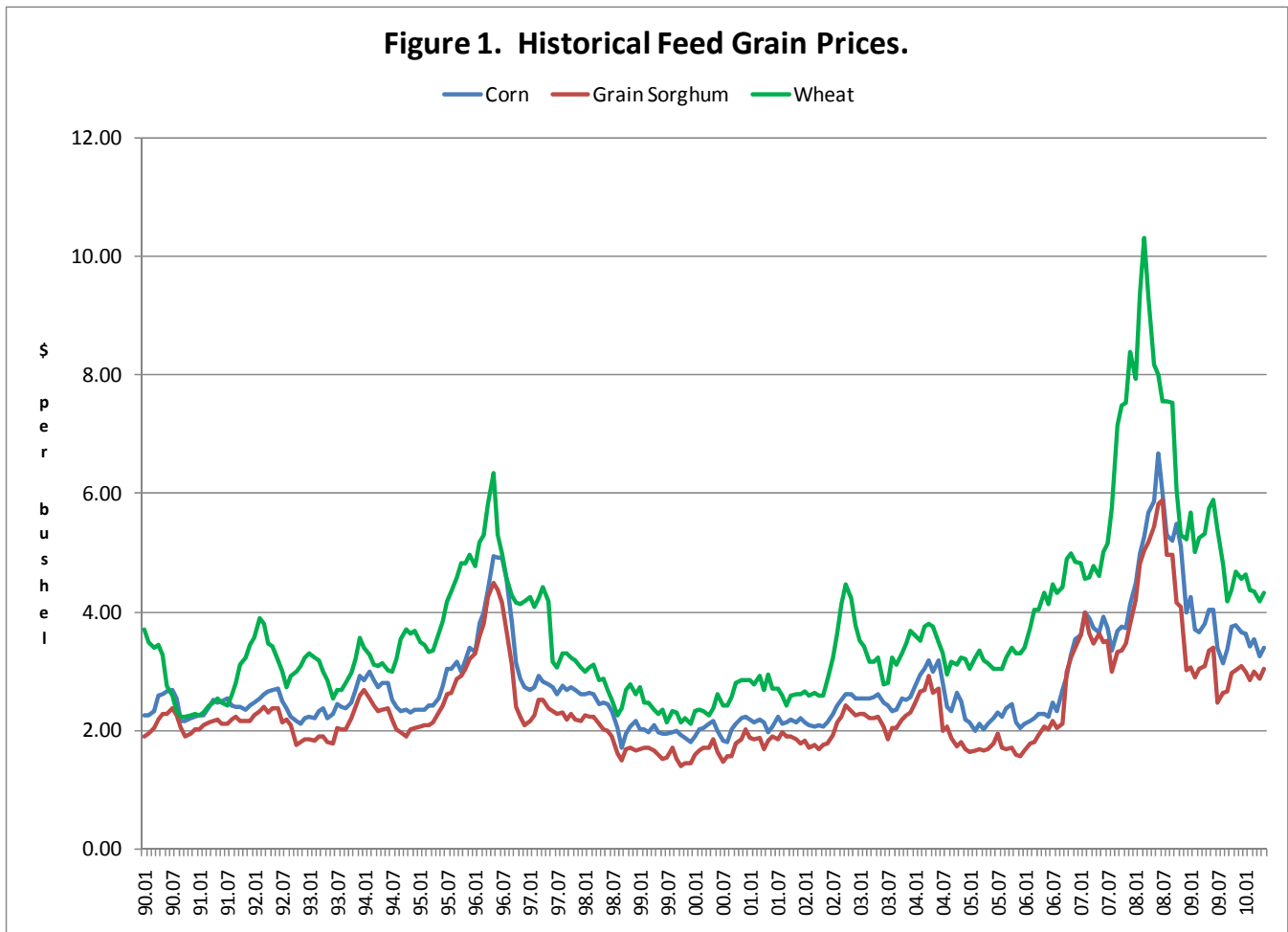
Figure 1 illustrates historical corn, grain sorghum, and wheat price in southwest Kansas since January of 1990. The average grain sorghum to corn price ratio was 0.86 while the average wheat to corn ratio was 1.34. Only 16 of the 245 months (6.5 percent of the months) since January of 1990 had a wheat price that was less than \$0.10 per bushel higher than the corn price. These 16 months are represented by two periods. The first period was from June

1990 to July 1991. The second period was from July 1996 to August 1996.

Will cattle finishers feed wheat later this year? Among other things, the answer to this question hinges on corn stocks and the demand for corn. It is certainly possible that we will see a period of time later this year for which wheat prices are less than \$0.10 per bushel higher than corn prices. If this is the case, the information in this article will be updated and published in a later issue of this newsletter.

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## RECOMMENDATIONS FOR FURTHER READING

The purpose of this section of the newsletter is to briefly discuss articles and web sites that may be of interest to readers. In general, the articles discussed will not report on original research. Rather, the articles will contain citations to web sites and articles that discuss topics of general interest.

A recent issue of the *Animal Science Monitor* (Issue 105), written by Matt Deutsch, discusses the importance of taking a vacation. As someone who has not taken very many vacations in his lifetime, I was definitely interested in what the author had to say. The author indicates that I am not alone in not taking

very many days off. In fact, a recent survey found that more than one-half of employees with vacation leave do not take all of their vacation days. The author suggests that relaxation is critical to remaining motivated and productive, and that people who are well rested are more capable of “thinking outside the box”. The author further contends that overworked employees are more likely to become burned out and dissatisfied with their job. Issues of the *Animal Science Monitor* can be accessed via the following web site:

[www.animalsciencemonitor.com](http://www.animalsciencemonitor.com).

A recent USDA report (Agricultural Economic

Report Number 846, 2008 Energy Balance for the Corn-Ethanol Industry) indicates that a dry grind ethanol plant that also produces DDGs produces 2.3 times more energy in the form of ethanol than it uses for corn, processing, and transportation. Further, the report indicates that as we move towards more bulky biomass feedstocks the energy balance is likely to increase dramatically. More information can be found in the report which is posted to my contributor site under “Recommendations for Further Reading”.

A recent USDA-ERS report written by William Coyle entitled “Next-Generation Biofuels: Near Term Challenges and Implications for Agriculture” discusses current biofuel capacity and the near-term sector challenges. The author indicates that the following biomass materials may be used to produce next-generation biofuels: woody biomass and wood waste; crop residues; dedicated energy crops such as switchgrass, cane, and forage sorghum; municipal solid waste; and algae. Current production capacity is approximately 88 million gallons per year, which is less than the average capacity of a single new corn ethanol plant. Production capacity is expected to exceed 350 million gallons by 2012. The 2007 Energy Independence and Security Act (EISA) established a goal of 16 billion gallons coming from cellulosic biofuels by 2022. Obviously, current capacity is far below this goal. In addition to discussing production capacity and mandates, the author discusses the following challenges facing next-generation biofuels: reducing high production and capital costs, securing financial support during precommercial development, establishing feedstock supply arrangements, and overcoming blending constraints. A comparison of corn and cellulosic ethanol production costs showed a cost per gallon for corn ethanol of \$1.65 and a cost per gallon of cellulosic ethanol of \$2.65. Finally, the author notes that the role for

agriculture could be substantial as the sector expands. More information can be found in the report which is posted to my contributor site under “Recommendations for Further Reading”.

In a recent article posted to the Brookings Institution web site ([www.brookings.edu](http://www.brookings.edu)), entitled “The U.S. Is Not Too Big To Fail”, William Galston indicates that the U.S. government is walking a fine line with its desire to provide short-term economic stimulus and at the same time not create a long-term fiscal imbalance. The higher spending and public debt go, the more the case can be made for fiscal restraint. The author provides several rules of thumb. First, the case for ending key safety-net programs such as unemployment insurance is weak. Second, it is not easy to determine whether additional economic stimulus is needed, even without the consideration of politics. The author contends that any additional stimulus has to be tied to future fiscal restraint. Third, credible commitment to a course of action related to future programs and budget procedures is critical. Without this commitment, buy-in from the public and the politicians will not be achieved.

There are several policy institutes besides the Brookings Institution noted above. The Cato Institute is a nonprofit public policy research foundation headquartered in Washington, D.C. The mission of the Institute is to increase the understanding of public policies based on principles of limited government, free markets, individual liberty, and peace. The Institute publishes books, monographs, briefing papers as well as a bimonthly newsletter and a quarterly magazine. The web site for the Cato Institute is as follows: [www.cato.org](http://www.cato.org).

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The Kansas Farm Management Association (KFMA) Newsletter is distributed monthly to provide farm management information to farm decision makers. Further farm management information can be found on the KFMA program website: [www.agmanager.info/kfma](http://www.agmanager.info/kfma); and, on the Extension Agricultural Economics website: [www.agmanager.info](http://www.agmanager.info). The Newsletter is edited by Michael Langemeier, Professor, Department of Agricultural Economics, Kansas State University.



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