



2008 Post Weaning Options for Calves

Without question, in 2008, for cow-calf producers to maintain profitability, adding weight to light calves, post weaning is an outstanding way to add value and put more dollars in your pocket. Here are some current trials that highlight supplements and other areas for consideration when backgrounding or developing cattle.

Byproduct Options for Back-grounding Calves

The Noble Foundation, Ardmore OK, presented data in which 488 steers were fed one of five different byproducts over a three year trial. These steers weighed an average of 680 lbs when the trial began and were fed either corn gluten feed (CGF), distiller's dried grains (DDG), soybean hulls (SBH), barley malt sprout pellets (BMP), and wheat middlings (WMD). The steers were fed 0.75% of body weight and offered very good quality hay, ad libitum (11.4% CP and 56% TDN). The cost and nutritive value of each of the byproducts is given in table 1.

Table 1

Item	Form	\$/lb	\$/Ton	DM%	CP%	TDN%	S%
SBH	7.9 mm pellet	0.414	170	87.2	13.1	78.8	0.15
WMD	9.5 mm pellet	0.46	190	87.3	17.9	77.3	0.25
DDG	granular	0.497	205	90.4	28.3	78.6	0.67
CGF	9.5 mm pellet	0.448	185	91.2	22.6	83.3	0.44
BMP	9.5 mm pellet	0.425	175	91.1	19.1	74.4	0.32

(Whitley et al., 2008)

Although this was a 3 yr trial, these prices are current as February 1, 2008. In Louisiana, many byproducts are difficult to obtain, however many areas of the state have the opportunity to obtain soybean hulls, distiller's dried grains and corn gluten feed. Note that the ddg product is the most expensive byproduct while sbh were the least expensive. Table 2 documents performance and cost of gains for the steers fed the three byproducts that are more readily available in Louisiana.

Table 2

Item	DDG	CGF	SBH
Initial BW, lb	670	665.5	665
Final BW, lb	871	828.08	821
ADG, lb/d	2.18	1.94	1.87
Supp, \$/lb	0.102	0.093	0.085
Supp, \$/hd/d	0.59	0.52	0.47
Hay, \$/lb	0.03	0.03	0.03
Hay, \$/hd/d	0.48	0.48	0.48
COG, \$/lb	.486	.518	.509

(Whitley et al., 2008)

Analyzing, table 2, although the ddg was the most expensive feed, when fed 84 days, this byproduct offered the least expensive cost of gain followed by SBH and then lastly CGF. The authors did note, however, that the length of the feeding period is important when pricing byproducts. In this trial, cattle fed DDG did not begin to outperform the other treatments until d 60 through day 84. When looking at 60 d or less of feeding, the three byproducts we are discussing compared very similar. Another interesting point is cattle fed the ddg actually had a decrease in hay consumption (15 lbs/hd/d for the ddg vs 18 lbs/hd/d for the CGF and SBH) but gained more total weight which would also impact costs of gain. Importantly, in table 2, the authors considered hay intake the same and this cost of gain (COG) only reflects the differences in byproduct consumption.

This trial certainly gives a beginning point with regards to options for backgrounding steers. It is of note that these cattle began the trial heavier than what we would see in our state and also the hay quality is considerably higher than most in Louisiana as well. In order to see the performance summarized here, more feed would need to be fed (1.00% of bodyweight). As this is being written, predictions for cost of gain in the feedlot are as high as \$1.00/lb. Backgrounding can be an excellent way to cheaply put on gain of calves.

Another important talk I saw was from the University of Arkansas, Beck et al., fed calves either 0.3, 0.6 or 1.2% body weight of expelled cottonseed pellets. This product is available in Lake Providence, LA and I know many who are using this product. In this trial, 48 steers weighing an average of 587 lbs were

offered the by product in small paddocks and offered ad libitum fescue hay. Again, this hay (14% CP and 65% TDN) was considerably higher quality when compared to the majority of our Louisiana hay. Steers fed 0.3%, 0.6% and 1.2% of the byproduct had average daily gains of 1.83, 2.07 and 2.31 lbs, respectively. Unfortunately, no hay intake values were reported. However, I would predict with lower quality hay and feeding this product to steers at 1% body weight, cost of gains would be around \$0.50/lb, similar to the data presented in trial 1.

Supplementation Frequency

Another interesting trial (Drewnoski from North Carolina State) fed growing steers a 50:50 combination of sbh and cgf either 3X/week (M,W,F) or every day. Both groups received the same amount of feed, there was differing frequencies of feeding. One group of cattle were fed hay only and used as a control. With regards to performance, there was no difference in growth between the groups fed either daily or 3X weekly. As you would expect the control receiving hay only gained 0.33/d while the other two groups gained roughly 1.5 lbs/hd/d. In this trial the steers weighed 600 lbs at trial onset and were fed 1.0% of body weight. Again, hay was offered ad libitum and averaged 8% crude protein. Although the cattle gained comparably, when accounting for labor and equipment the figures are of interest (Table 3).

Table 3

Estimated Operating and Labor Costs			
Item	H	7X	3X
Feed cost			
Hay, \$/hd	52.62	49.69	40.99
Supplement, \$/hd	-	32.74	32.74
Mineral, \$/hd	3.17	3.17	3.17
Equipment operation cost^a			
55 hp Tractor, \$/hd	1.86	1.86	1.86
1/2 Ton Truck, \$/hd	0.00	2.91	1.25
Labor cost			
Hay feeding, \$/hd	2.20	2.20	2.20
Travel to feed supplement, \$/hd	-	3.84	1.65
Supplement feeding, \$/hd	-	1.54	1.54
Total cost, \$/hd	59.84	97.96	85.39
Return over operating and labor, \$/hd^b	3.37	12.08	24.64
^a Costs are from NCSU ag-econ extension budgets.			
^b Using average market price for M1 -M2 steers in NC during Nov and Jan of 2004-2007.			

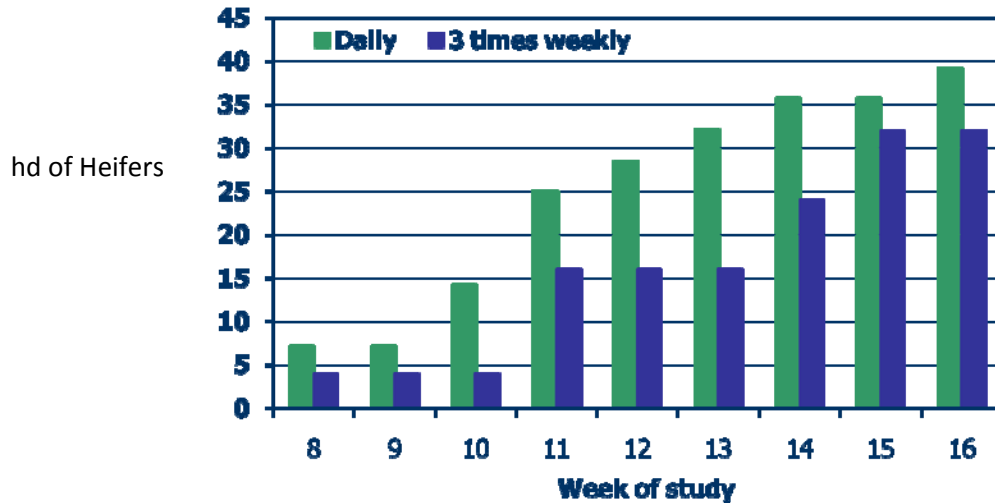
(Drewnoski et al., 2008)

Essentially, when accounting for labor and time, the 3X method actually returned more than feeding daily.

Cook et al (2008) from the University of Florida conducted a similar trial supplementing another byproduct (wheat middlings and sbh 22 % CP and 65% TDN) to developing Brahman crossbred heifers either daily or every other day. Again, similar to the prior trial, the authors either supplemented 3X/week or daily. In this situation, however reproductive performance was also measured. The

females were fed 40 lbs of supplement/wk. Although the heifers fed daily somewhat out-performed the heifers fed 3X/week. The reproductive performance was entirely surprising (Figure 1).

Figure 1. Pregnancy attainment of heifers fed either daily or 3X weekly



(Cooke et al., 2008)

Heifers (112 hd for the trial) were maintained on the supplement regimen and on bahiagrass pasture and exposed to a bull for 60 days. Figure 1 shows the differences (additive each wk) in pregnancy rates. Heifers receiving the supplement daily had considerably higher pregnancy rates when compared to heifers fed only 3X per week. Again, the same amount of feed is being fed, just simply differences with regards to the times fed per week. The authors attributed the higher pregnancy rates of heifers being fed daily as they were more apt to efficiently utilize the supplement when fed daily vs 3X a week. Therefore when considering data from the last two trials, I would only recommend alternative feeding growing steers and not developing heifers.

In summary, there are several options for producers when developing calves post weaning. The price of the supplement, duration and frequency of supplementation and sex of the animal all play a role in mapping out your nutrition program.