

# Performance of Southeastern Cattle When Placed on Feed

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## Introduction

Before I get into the “meat” of this paper, I would be remiss if I did not give all the credit due to Mr. Darrell Busby, area livestock specialist from Iowa State University Extension. He is a former co-worker, friend, confidant, and tireless researcher in the beef cattle industry. When Darrell took over his current position in the early 1980’s, his predecessor had begun a small-scale steer futurity in which several local producers fed their cattle together and had them slaughtered locally at a commercial beef processing plant near Oakland, Iowa in the southwestern part of that state. Originally, they had 35 consignors and 106 head of steers; the average producer consigned three head. The objective of the futurity at first was perhaps more of a test to see who had the best cattle (in terms of quality grade); get together and have a beer and a steak, and brag about the outcome. But Darrell fine-tuned this program and by pulling these producers together in a “think-tank” setting. They determined that what they really wanted to know was, What is the most profitable steer in the pen? From this original mission, and the formation of the Tri-County Steer Carcass Futurity (TCSCF) Darrell has explored not only what steer(s) is most profitable, but additionally he has explored the value of health, disposition, genetic influence, and region of origin and how cattle perform both in the feedlot and on the rail. Again, Darrell is owed all the credit for the material in this paper and presentation; unfortunately he could not be here to present it. I hope that I can do an adequate job of communicating these data to you here today.

## Feeding Cattle

The TCSCF is a group of feedlots in southwest Iowa that is governed by a ten-member board. The board provides directions as

well as oversight of the cattle. These member feedyards annually bid to participate, and when accepted, may feed cattle from anywhere in the United States, but have primarily fed cattle from the Midwest, the Southeast, or areas east and south of Iowa.

The premise of this particular study was to examine the effect (if any) of region of origin of the cattle on feedlot performance and carcass merit. Do Midwestern cattle outperform and out-grade Southeastern cattle? The general school of thought would be that it’s a no-brainer. Of course, Midwestern cattle outperform southeastern cattle! Why? Past history, perceptions, genetic mix of the cattle, and experience would have one believe that cattle from the Southeast, hauled 800 to 1,200 miles to a High Plains or upper Midwest feedlot will be thin, cheap, get sick, die, have long ears and won’t grade. But, if bought cheaply enough, have a little luck on the health, and “green” enough, money will be made. From my own experience as “night man”, unloading trucks at a salebarn in the Oklahoma Panhandle about 30 years ago, I formed my own opinions. That experience taught me a lot about the type of cattle (or so I thought) that came out of the Southeastern states. Unloading cattle at night as a wet-behind-the-ears college student with poor lighting and a few addle-brained bull haulers taught me a few things that carry over well into my mindset even yet today. Evaluating the general feedlot population of feedyards in the area near Guymon, OK compared with those found in western Iowa many years later as well as those I was raised around revealed huge differences in genetic types. No longer is this the case. We continue to see a huge improvement in the quality of cattle that originate out of the Southeastern states and are

placed in both Cornbelt and High Plains feedyards. I am as likely to see high-quality, Angus-influenced cattle in the Texas Panhandle today as I do in western Iowa.

The analyses presented in this paper include a study of 27,538 head of steers and heifers that were placed on feed at ten southwestern Iowa feedlots, and harvested from 2002 through 2007. Southeastern/eastern states represented were: Florida, Georgia, North Carolina, South Carolina, Virginia, Alabama, Mississippi, Kentucky, Tennessee and West Virginia. Midwestern states of origin were: Iowa, Missouri, Indiana, Illinois, and Minnesota. Before feedlot arrival, producers were encouraged to subject all cattle to a 28-day (minimum) preconditioning period. All cattle were fed a common feedlot diet and similar implant and health programs were administered to all cattle.

In summary, you will note that the Southeastern cattle were heavier upon arrival at the feedlot, but were also about 70 days older; and due to lower average daily gain, finished about 8 lbs lighter at harvest (see Table 1). The Midwestern cattle did have a little better feedlot performance in terms of average daily gain. Perhaps what is most surprising, to that old “conventional school of thought” is that the Southeast calves had less sick pulls and cheaper treatment costs than the Midwestern calves; they were healthier! Is it a function of age, better preconditioning practices at home, or just dumb luck? Digest these results for a moment and I’ll discuss these in the summary of the results.

So then, what would be the carcass results on these same cattle? They performed well in the feedlot; how did they do when they were hung up? Even though many of these means are statistically different, the magnitude of differences are small (see Table 2). At a common dressing percentage, Midwestern cattle would have slightly heavier carcass weights, and bigger ribeyes, (which is likely a result of the heavier carcass). Both groups had calculated yield grades that were in the mid-2’s, and the percentage of cattle that were YG 4 or 5 (extremely fat, overfed cattle) is well below industry average of about 10%. But, the

Southeastern calves had slightly more backfat, slightly smaller ribeyes, and had fewer cattle in the YG 1 & 2 category. All of these cattle were sold on a grid which would have paid premiums on YG 1 & 2 carcasses.

What about quality grade? In Table 3, please note there were no differences in percent USDA Prime and Choice, or in % Select or Standard by region of origin. There was a slight, but statistically positive result, in the Southeastern cattle qualifying for premium Choice (such as Certified Angus Beef) programs. In the value-based grid used to market the cattle, those qualifying for the CAB® program would have earned additional premiums.

Boil it all down: what counts? PROFIT! Which cattle were most profitable? If we revisit that all-important question that we wanted to answer, you find the results below, in Table 4.

The Southeastern cattle made more money, by \$ 11.32 per head. It is worth noting here, how the cattle were priced. Beginning cattle value is based upon USDA Agriculture Marketing Services market reporters. They assess the cattle and their market value prior to delivery to the feedlot. They assess the cattle in their home state and determine their market value prior to being loaded on the truck and delivered to the feedlot. The trucking bill is calculated on an individual basis by dividing the total trucking bill by the total load weight and multiply the cost per pound by the individual animal weight. The value of deads and other expenses are included in the analysis.

### **Summary and Discussion**

Southeast calves compared to Midwest calves:

1. Were heavier upon feedlot arrival by 11 lbs.
2. Were older upon feedlot arrival by 71 days.
3. Had similar percentage of cattle grading USDA Choice and Prime.
4. Had cheaper health treatments.
5. Had lower death loss.
6. Had greater CAB® acceptance rates.
7. Made more money.

Table 1. Effect of Region of Origin on ADG, Final Weight, Sick Pulls, and Death Loss

Item	Southeast	Midwest
No. Head	18,228 <sup>a</sup>	9,310 <sup>b</sup>
Arrival Wt., lbs	640 <sup>a</sup>	628 <sup>b</sup>
Delivery Age, days	324.3 <sup>a</sup>	252.9 <sup>b</sup>
Final Wt., lbs	1173 <sup>a</sup>	1181 <sup>b</sup>
Overall ADG, lbs/d	3.17 <sup>a</sup>	3.21 <sup>b</sup>
Morbidity Rate, %	15.22% <sup>c</sup>	20.76% <sup>d</sup>
Treatment cost, \$/hd	\$ 5.01 <sup>c</sup>	\$ 7.38 <sup>d</sup>
Mortality Rate, %	1.43% <sup>c</sup>	1.76% <sup>d</sup>

<sup>ab</sup>Means with unlike superscripts differ ( $P < .001$ )

<sup>cd</sup>Means with unlike superscripts differ ( $P < .05$ )

Table 2. Effect of Region of Origin on Carcass Traits and Yield Grades

Item	Southeast	Midwest
No. Head	18,228	9,310
Hot Carcass Wt., lbs	723 <sup>a</sup>	727 <sup>b</sup>
Fat Cover, inches	0.44 <sup>a</sup>	0.43 <sup>b</sup>
Ribeye Area, Sq. inches	12.2 <sup>a</sup>	12.4 <sup>b</sup>
Calculated Yield Grade	2.84 <sup>a</sup>	2.78 <sup>b</sup>
%YG 1 & 2	58.57 <sup>a</sup>	63.53 <sup>b</sup>
%YG 3	39.39 <sup>a</sup>	34.95 <sup>b</sup>
%YG 4 & 5	2.04 <sup>a</sup>	1.52 <sup>d</sup>

<sup>ab</sup>Means with unlike superscripts differ ( $P < .001$ )

<sup>cd</sup>Means with unlike superscripts differ ( $P < .05$ )

Table 3. Effect of Region of Origin on Quality Grade

Item	Southeast	Midwest
No. Head	18,228	9,310
Prime	1.14%	1.01%
Choice	67.94%	69.28%
Select	28.33%	27.22%
Standard	2.59%	2.48%
Premium Choice	21.57% <sup>a</sup>	19.02% <sup>b</sup>

<sup>ab</sup>Means with unlike superscripts differ ( $P < .001$ )

In a perfect world, what the country needs is a seamless, efficient, but profitable, beef industry. We need to be able to communicate across sector lines (gee, where have you heard that before?) and share information in order to provide a high-quality product to the most important link in the chain: **the consumer**. The beef industry needs cattle that will gain quickly and convert efficiently, without compromising lean yield and quality, and end up with a product that is safe, wholesome, and in demand by today's consumer.

One significant reason these Southeastern cattle have done so remarkably well is that they originated on ranches and farms where the cow-calf producer have a vested interest in the success of their calves in the feedlot and on the rail (retained ownership). If a producer is simply raising calves, taking the price that the market will give them, shipping them off, cashing the check and forgetting about them, they probably need to re-evaluate their stake in the industry. These consignors that

have shipped their calves to Iowa to feed are financially responsible for the genetics, health, and management of those calves. They are often the early adopters of genetic evaluation tools (use of EPD's when selecting sires); utilize the expertise of others in helping them improve their operations and thus, their cattle. Ultimately, these producers simply got tired of someone else benefitting economically from their best efforts in managing their cattle.

While we keep hearing about "price discovery"; should we not be concerned about "value discovery"? What is the true value of my calves? I think it is a question we all need to ask ourselves, and if your calves continue to top the market at the local sale barn, there is probably a reason why!

Table 4. Effect of Region of Origin on Profitability

Item	Southeast	Midwest
No. Head	18,228	9,310
Profit, \$/hd	\$ 48.63 <sup>a</sup>	\$ 37.31 <sup>b</sup>

<sup>ab</sup>Means with unlike superscripts differ ( $P < .001$ )