



# Research Update

► Summaries of current beef cattle research

## Studies consider bottom line

The following research highlights are presented by Harlan Ritchie, Steven Rust and Daniel Buskirk, beef cattle specialists at Michigan State University, East Lansing. The reviews summarize studies and trends reported at scientific meetings or in scientific and industry publications, which are cited at the end of each item.

### Significant variation in cow-calf returns

Cattle-Fax data compiled from 1986 to 2006 revealed there is considerable variation in cow-calf producer returns. The top one-third of producers generated an average return of \$89.19 per head on a cash cost basis. The lower one-third of producers showed a loss of \$29.56 per head. The middle one-third of producers were essentially in a breakeven business, generating a small per head profit.

It was noted that an important difference between profitable and unprofitable producers was lower cow costs on the part of profitable producers.

(Cattle-Fax Update)

### 2006 costs and returns for U.S. cow-calf producers

Cattle-Fax recently published its annual Cow-Calf and Stocker Survey, which was conducted in January 2007. Following is a brief summary.

- Average cow-calf profit was down slightly in 2006 from its peak in 2005. However, it was the eighth year in a row in which the majority of the respondents were profitable. Profit on calves sold at weaning was \$100 or more for 51% of producers, \$25 to \$100 for 35% of producers, and \$25 or less for 14% of producers.
- Annual average cash cost to manage a cow increased by \$15 per head, from \$351 in 2005 to \$366 in 2006.
- Feed costs accounted for approximately 62% of total cash costs, at \$226 per cow.
- Operating costs, which include labor, veterinary care/medicine, interest expense (excluding land) and other supplies, at \$136 per head, were \$1 per head lower than in 2005.
- An operation with an average cow cost of \$366 per head and a weaning percentage of 85% equates to a breakeven calf price of \$78 per hundredweight (cwt.).

- Average steer weaning weight was 563 pounds (lb.), which was 17 lb. lower than in 2005, largely due to dry conditions and short forage supplies throughout a large portion of the U.S.

(Cooke et al. 2007. *Southern Section ASAS. Abstract 76*)

### 2006 regional cow costs

Table 1 presents a tabulation of cow costs by region for 2006 as reported by Cattle-Fax. Compared to just two years ago (2004), cash costs have increased more than \$50 per head (\$366 vs. \$315). Increasing feed costs due to drought and limited forage supply were the primary contributors, accounting for more than 60% of the increase in cash costs per cow.

As shown in Table 1, the average total cost (cash plus non-cash expenses) to manage a cow in 2006 was \$453, ranging from \$425 in the Southeast to \$483 in the Midwest.

(Tod Kalous, Cattle-Fax Update)

**Table 1: Annual cow costs, by region**  
Costs, \$/cow

Region	Cash	Cash + non-cash
Northwest	400	475
Southwest	380	450
Midwest	360	483
Southern Plains	355	430
Southeast	330	425
All regions	366	453

Source: Todd Kalous, Cattle-Fax Update.

### Choice-Select price spread is widening

James Mintert, Kansas State University (K-State) economist, recently noted that it is important for cattle feeders to be able to anticipate changes in the Choice-Select price spread over time to optimize their feeding regimen. Changes in the price spread over time can be indicative of shifts in the supply of Choice vs. Select beef, shifts in demand for Choice vs. Select beef, or a combination of the two.

And, throughout longer periods of time, the spread reflects changes in the cost of producing Choice vs. Select beef. Increases in

the cost of producing Choice beef relative to Select beef are expected to yield an increase in the Choice-Select price spread, and that could be the case in 2007.

A review of the annual average Choice-Select spread in recent years reveals that the price spread has been trending upward since 2002, as shown in Table 2.

(Feedlot magazine)

**Table 2: Annual average Choice-Select boxed beef price spread**

Year	Price spread, \$/cwt.
2002	\$3.04
2003	\$6.54
2004	\$8.29
2005	\$9.30
2006	\$14.23

Source: USDA and James Mintert, Kansas State University.

### Dry-rolling grain reduced shedding of *E. coli* O157

K-State researchers conducted a study to determine whether grain type (sorghum or wheat) or method of grain processing (steam-flaking or dry-rolling) has an effect on fecal shedding of the bacterial pathogen, *E. coli* O157.

Forty heifers identified as being positive for *E. coli* O157 were randomly allotted to four treatments: 1) steam-flaked sorghum; 2) dry-rolled sorghum; 3) steam-flaked wheat; and 4) dry-rolled wheat. Four transition diets, each fed for four days, were used to adapt the heifers to final diets that contained 93% concentrate and 7% roughage.

The wheat diets contained 52.0% wheat, 31.2% steam-flaked corn, 7% alfalfa hay and 9.8% other ingredients. The sorghum diets contained 81.4% sorghum, 7.0% alfalfa hay and 11.8% other ingredients.

The average prevalence of *E. coli* O157 was significantly greater ( $P < 0.001$ ) in cattle fed steam-flaked grains than in those fed dry-rolled grains (65% vs. 30%). The average prevalence in cattle fed either sorghum or wheat did not differ. The authors concluded the results indicate that feeding dry-rolled grains compared with steam-flaked grains can reduce fecal shedding of *E. coli* O157. They stated that possibly dry-rolling allowed more starch to reach the hindgut where it was fermented, thereby making the hindgut inhospitable to the survival of *E. coli* O157.

(Fox et al. 2007. *J. Anim. Science. 85:1207*)

