

The Mississippi Farm to Feedlot Project was initiated in 1993 with the following objectives:

- To evaluate production and carcass information of cattle produced in Mississippi;
- To provide educational information to Mississippi beef producers regarding retained ownership as a marketing alternative;
- To provide data to producers and to contribute to the development of EPDs for various carcass traits; and
- To evaluate recommendations for herd health programs.

The Farm to Feedlot project is sponsored by the Mississippi Cattlemen's Association, the Mississippi BCIA, and the Mississippi State University Extension Service. Leadership for the project is provided by the Animal and Dairy Sciences Department at MSU.

More than 3,300 steers and heifers have been consigned by 266 producers during the first 6 years of the project. Data for this summary were collected on animals shipped to the feedlot in October 1998.

Before being shipped to the feedlot, animals were preconditioned by producers. Preconditioning and vaccination recommendations were mailed to producers upon receipt of consignment. Animals were shipped in mid-October from four collection points in Mississippi. At the shipping points, animals were identified with electronic ID tags, weighed, and assigned a value per hundred-weight by an employee of the USDA Market Reporting Service. All other data were collected at the feedlot or at the packing plant.

Upon arrival at the feedlot, cattle were sorted into feeding groups based on sex, weight, frame size, and condition. Cattle were placed on starter diets and gradually stepped up to a finishing diet before being sold on a cash basis. All fees were deducted, and the producer received the balance.

Feedlot information reported included average daily gain, total cost of gain, slaughter value, and net profit. Carcass information collected included carcass weight, ribeye area, fat thickness, yield grade, and quality grade. Complete information on every animal was made available to each producer to evaluate their cattle and make necessary changes so their production programs might better fit the needs of the industry.

Project averages shown in Table 1 serve as a basis for comparing data from cattle owned by individual producers. Averages can be useful in developing budgets and calculating breakevens. The figures in the monetary categories are a function of the economic conditions in the industry. Cost of feeding depends on grain prices; as the price of grain rises, so does the cost of feeding. Final value and profit per head are also functions of economic conditions in the industry. Prices in this summary were similar to prices offered for other cattle at the same time.

Table 1. 1998 project averages

	Average
Initial weight, pounds	658.00
Initial value, dollars per pound	\$0.635
Feedlot weight, pounds	635.00
Shrink percent	3.50
Final weight, pounds	1,181.00
Total gain, pounds	523.00
Days on feed	172.00
Average daily gain	3.19
Carcass weight, pounds	764.00
Ribeye area, square inches	13.30
Average yield grade	2.64
Average quality grade	select-plus
Fat thickness, inches	0.45
Average dressing percent	63.85
Cost of feed per steer	\$262.39
Cost of feed per 100-pound gain	\$50.08
Final value per head	\$756.38
Profit per head	\$43.58

The Mississippi carcass data are similar to the national data (Table 2), with the exception of the percentage of animal's grading choice. Fifteen percent fewer Mississippi cattle graded "choice" than in the NCBA sample.

Trait	Average
Hot carcass weight, pounds	759.00
Carcass grade	choice
Fat thickness	0.46
Ribeye area, square inches	13.00
Yield grade	2.80
Percent choice	53.00

*From 259,717 animals graded nationally by the National Cattlemen's Beef Association Carcass Data Service.

The daily gain for the group was 3.19 pounds per day, with a range from 1.23 to 4.82 (Figure 1). Some 40 percent of the cattle fell within the 3.01 to 3.5 pounds per day range, with 23.75 percent of the group gaining more than 3.5 pounds per day. Gains were calculated based on sort weight at the feedlot and final pay-weight.

Upon completion of the feeding period, cattle were sold on a live basis and slaughtered at a buyer/packing facility. The Cattlemen's Carcass Data Service collected data on carcasses. Figure 2 describes distribution of carcass weights. Nine carcasses weighed more than 950 pounds and three carcasses weighed less than 550 pounds.

Ribeye area (Figure 3) ranged between 8.45 and 19.18 square inches, with an average of 13.27 square inches. Fifty-four percent of the cattle had between 12 and 13.99 square inches of ribeye area (REA) when measured at the twelfth rib.

The average fat thickness for the group was .45 inch and ranged from .04 to 1.6 inches. The distribution of external fat (Figure 4) measured at the twelfth rib centered between .40 and .49 inch of fat, with 57 percent between .30 and .59 inch of fat.

More than 38 percent of the carcasses graded choice or better, with 56.6 percent and 4.6 percent grading select and standard, respectively (Figure 5). The carcasses had exceptional yield grades, with 62.8 percent of the carcasses being yield grade 1 or 2 (Figure 6). Only 3.4 percent of the carcasses had yield grades of 4 and 5.

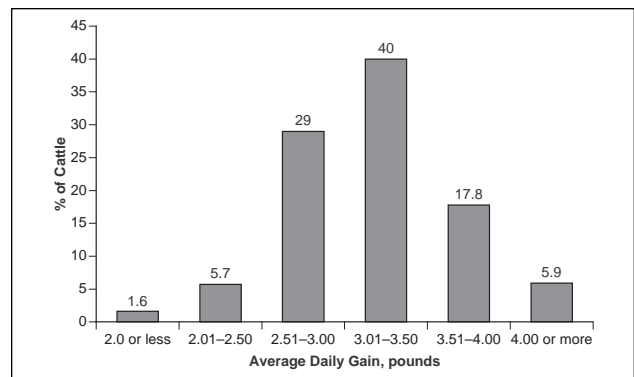


Figure 1. Distribution of average daily gains. Avg = 3.19 Range = 1.23 - 4.82

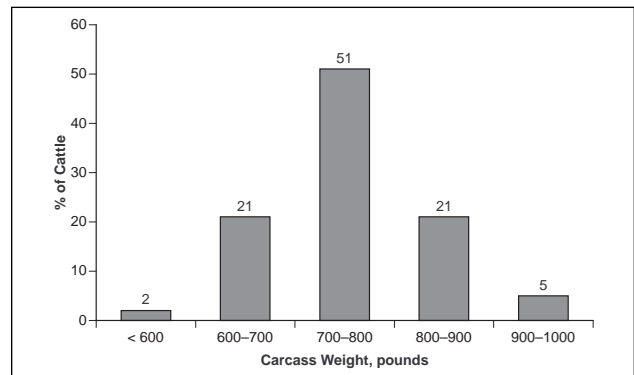


Figure 2. Distribution of carcass weight.

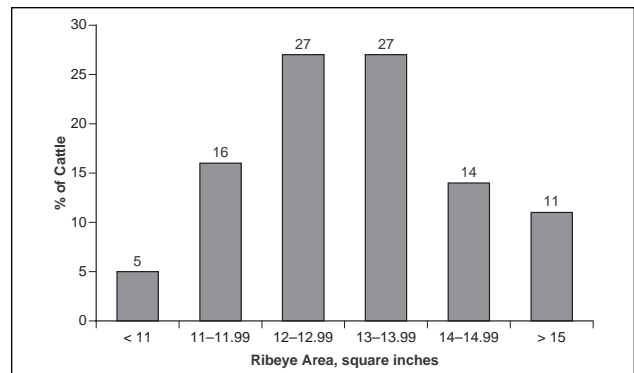


Figure 3. Distribution of ribeye area.

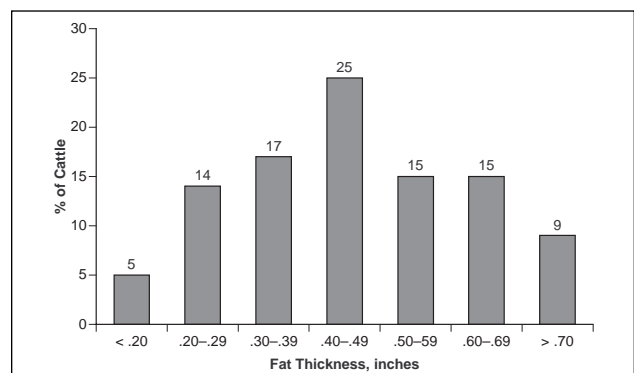


Figure 4. Distribution of fat thickness.

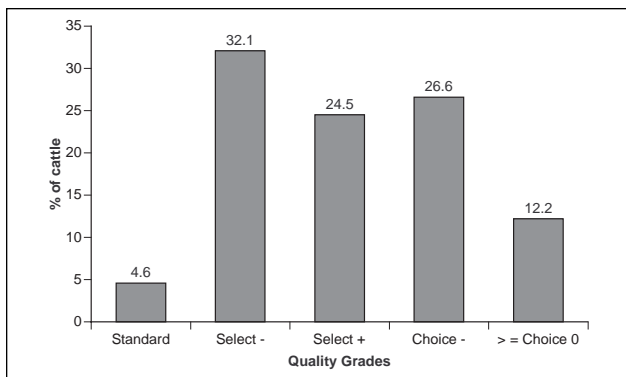


Figure 5. Distribution of quality grades.

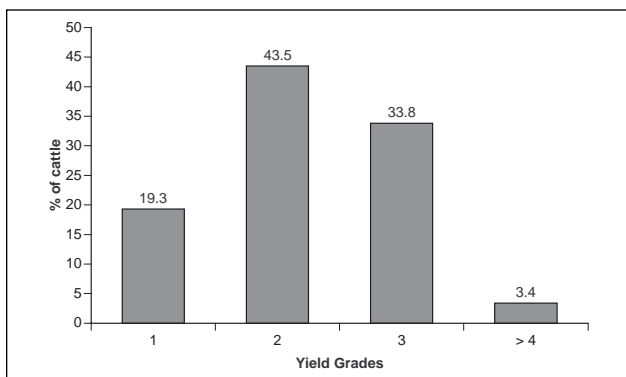


Figure 6. Distribution of yield grades.

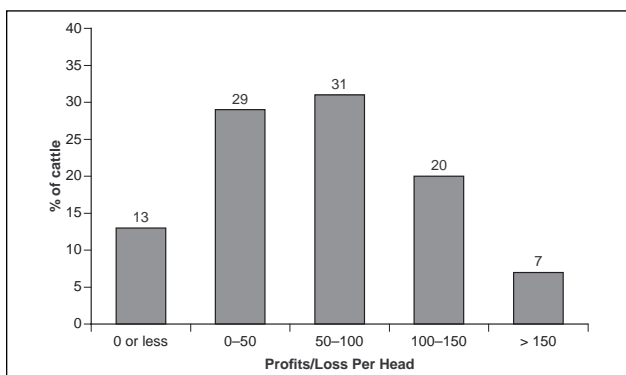


Figure 7. Distribution of profit/loss.

Expenses incurred for medical treatment impacted over-all profit. Average treatment cost was \$24.57 per head treated (Table 3). This treatment cost is similar to the average treatment cost in the previous 5 years. Cattle that require treatment incur greater expense, and they generally have lower average daily gain, final weight, and quality grade.

Year	No. Cattle	Percent Treated	Average Treated per Head
1993	384	35.9	19.29
1994	495	26.3	13.54
1995	518	13.1	22.92
1996	529	10.6	20.72
1997	575	11.8	18.25
1998	806	12.1	24.57

Profitability on individual animals ranged from a \$218.44 profit to a \$170.37 loss, with an average profit of \$43.58. Most producers not realizing a profit could attribute their losses to animals that died, were railed (sold for salvage), or showed poor performance. A wide range in feeding profit per head (Figure 7) was reported. Many factors affected profitability; however, major contributors were average daily gain, medicine cost, and sale price.

Although this is an educational program to meet project objectives, do not forget beef production is a business. Profit and loss must be considered in each phase of beef production to correct inefficiencies. Table 4 shows estimated standards cattle should meet to fit the cattle industry. Table 5 shows why some animals do not meet performance standards. Many animals are listed as not meeting more than one standard.

• Profit	• \$25/head
• ADG	• 2.75
• Quality grade	• Select -
• Yield grade	• 3.0 or less
• Carcass weight range	• 550 to 950

	<i>Head</i>	<i>Percent</i>
Profit	207	25.7
ADG	119	14.7
Quality grade	31	4.6
Yield grade	22	3.3
Carcass weight	12	1.8
Died	20	2.5
Railed	9	1.1
	420	52.1

Table 6 compares the top 20 percent to the bottom 20 percent, based on net return per head. Even though the two groups are similar in beginning weight and value, the more profitable group excelled in average daily gain and quality grade. These data indicate that, even though animals appear similar at the beginning, more data are needed to identify those animal that are going to be the most profitable.

	<i>Top 20</i>	<i>Bottom 20</i>
Pay weights	662.00	632.00
In value /100 (\$)	62.90	65.48
Out weight	1,295.00	1,048.00
ADG	3.78	2.63
Net/head (\$)	142.85	-20.81
Percent treated	6.80	22.40
Hospital days/head	2.18	3.00
Medical cost/head (\$)	19.46	25.83
Quality grade		
Percent choice	54.90	26.30
Percent select	44.40	62.30
Percent standard	0.10	11.40



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