



Cattle Producer's Handbook

Genetics Section

1041

Selecting for Carcass Traits

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Within the beef industry, the development of a marketing system based on individual carcass merit rather than on pen average is important for the animal breeder, the feedlot operator, the livestock buyer, and the meat purveyor. A system will be important to the economic success of the total industry.

Most cattle are purchased on some type of grade and yield basis in the major packers in the West. Therefore, a complete understanding of all the factors that affect carcass quality and yield grade is essential to everybody participating in the beef industry.

Currently, several small groups of individuals are sponsoring special programs where premiums are returned to producers based on the quality of the product. The National Beef Quality Audit in 1991 defined targets for several traits for the beef industry, as shown in Table 1.

Generally, carcasses are rewarded for yield grades number 1 and 2 and discounted for those with a yield grade of 4 and 5. Also, carcasses with a quality grade of choice and prime are usually paid more than those grading select.

The spread between choice and select carcasses vary with the season and demand. This spread can be as great as \$12 per hundred during some times of the year and as no difference during other times of the year. Usually there is a \$4 to \$5 spread in favor of those carcasses that grade choice and prime.

Using EPD Values for Carcass Selection

At present carcass EPDs (Expected Progeny Differences) are not readily accessible for most sires. The accuracy for those that are available is not high. EPDs are available for carcass weight, marbling, ribeye area, and fat thickness. Although the data are limited, research trials show a definite advantage for the offspring grading choice from sires with high EPDs for marbling over sires with low EPDs for the same trait. In a study done at the Meat Animal Research Center using the Angus sire summary for 1989 and 1992, Angus bulls with high EPDs for marbling consistently sired a higher percent choice of their calves (Tables 2 and 3).

Table 1. 1991 National Beef Quality Audit carcass targets.

Live weight	1,000 to 1,350 lb
Carcass weight	650 to 850 lb (725 to 750 lb most preferred)
Quality grade:	
#1 Prime	7%
#2 Choice (upper 2/3)	24%
#3 Choice (lower 1/3)	40%
#4 Select	29%
#5 Standard	0%
Yield grade	1's and 2's
Fat thickness	.20 to .40 inches
Ribeye area	11.0 to 15.0 square inches

Source: 1991 National Beef Quality Audit.