Making Beef Out of Dairy

Dairy beef cross cattle have become an increasingly popular option for dairy farmers looking to capture additional market value on calves that aren’t needed for the dairy herd. Many dairy farms are selecting a percentage of their lower-potential or low-producing animals of the herd and breeding to beef sires. Breeding to beef sires with carcass trait merits has the potential to produce calves that will capture better prices in the sale barn or yield carcasses that can net more value compared to purebred dairy animals.

Data was collected on 17 dairy beef cross steers (n=10) and heifers (n=7). All of the steers and heifers were out of the same sire, a Simmental-Angus cross with the genetic capacity to pass on desirable carcass traits. Cattle sex, birth-weights (BW), weaning weights (WW), and average daily gains (ADG) from birth to weaning were recorded by the farm. One missing birthweight was recorded as an average birthweight of the group data was collected on. Calves were weaned at 60 days of age. Animals were grown out until approximately 1400 pounds.

Cattle were slaughtered at a local processing plant and carcass data was collected by Extension agents. Hot carcass weight (HCW) was recorded by processing plant workers. Live weights (LW) were estimated based off of hot carcass weight, assuming a 60% dressed weight. Back fat (BF), loin muscle area (LMA), percent kidney, pelvic, & heart fat (%KPH), and quality grade (QG) were measured for each carcass. Yield grade (YG) was calculated from these measurements using the standard formula. Back fat and loin muscle area were measured at the 12th rib. Intramuscular marbling was visually appraised and quality grade assigned based on USDA standards.

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Yield\ grade = 2.5 + (2.5 \times FT) + (0.2 \times \%KPH) + (0.0038 \times HCW) - (0.32 \times LMA)
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Heifer 52377 had a hot carcass weight of 822 pounds, 0.5 inches of back fat, a 15.6 square inch loin, a quality grade of prime, and a yield grade of 2.28.
Gross carcass value (CV) was calculated based on a market average on July 10. For choice or better steers and heifers, value was assigned at $110/hundredweight (cwt) and high yielding choice or better steers and heifers at $121/cwt based on calculated yield grade. Animals with yield grade of 1 or 2 were assigned the high yielding average value ($121/cwt), while animals with yield grade 3 or below were assigned the average yielding value ($110/cwt) based on the assumption buyers were paying more for the higher yielding animals on a live weight basis.

All animals graded choice or better. The average data were as follows: hot carcass weight was 866 pounds, back fat was 0.45 inches, loin muscle area was 13.4 square inches, and two percent kidney, pelvic, and heart fat. The average yield grade was 3.06. The average gross animal value was $1643.03.

- Feed cost to gain for the ration these animals were on was $0.48/lb.
- Yardage cost to gain was $0.84/lb.
- Other costs per head totaled $161.
- Breakeven price per sold cwt = $106.65

The Feedlot Enterprise Worksheet used to calculate breakeven prices and cost to gain prices is available on the Wisconsin Beef Information Center website at https://goo.gl/53rBeb or by scanning the QR code.

We would like to thank Ebert Enterprises for their generosity in supplying animal information and allowing us to collect data on their dairy-beef cross animals. We also want to thank Marchant’s Foods for recording hot carcass weights, ribbing the carcasses, and allowing access to their cooler so that we could collect carcass data on these animals.

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