Genetic Carcass Evaluation for Simmental in USA

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Date: 11/02/1995

In Reply to Peter Speers

In response to your October 24 note on carcass evaluation, 1 have answered your questions below-

(a) What data do you use for this analysis?

I use about 9 500 actual progeny test records for carcass traits that represent about 600 purebred Simmental sires. Most of these records have been collected during the 1970s and earlier 1980s. However I have seen an increasing interest in carcass data collection by breeders, particularly since we resurrected our carcass evaluation in 1992. The total number of bulls evaluated include bulls with progeny data and bulls brought in as sires and maternal grandsires in the relationship matrix is aboul 750 In the accompanying article, the informafion that we record is listed in Table 1

(b) What traits do you report?

The Carcass Evaluation ranks bulls for three carcass traits: Carcass Weight, Percent Retail Cuts, and Marbling Score. Percent Retail Culs is the percent of closely trimmed, boneless retail cuts from the round, loin, rib and chuck. It :s expressed as +/- percent * 100.

(c) Do you analyse marbling?

Yes, we provide an EPD for marbling score. Marbling score is reported on a 10 point scale where 10 = abundant. 9 = rnoderately abundant, ... 1 = devoid. The EPD is expressed as +/- marbling score.

I will send the Fall 1995 Simmental/Simbrah Sire Summary. The Carcase EPDs are listed for each bull in the Simmental section. If the three boxes are blank, that sire does not have carcase EPDs. Presently we do not have any carcass data from Simbrah, so Simbrah does not have Carcass EPDs.

Guidelines for Collecting Carcass Data for Simmental Sire Evaluation

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Since 1992, the American Simmental Association has been involved in the evaluation of purebred Simmental sires for carcass traits. Expected progeny differences (EPD) are based on information gathered by cattlemen across the country in a host of different environments and management schemes. Just like with birth weight or yearling weight, the genetics needs to separated from the environment in order to rank bulls for carcass merit

Producers need to follow a structured approach when collecting carcass data for sire evaluation. All carcass information will be gathered using progeny testing, so the progeny test needs to be planned prior to the breeding season. The planning should be done with respect to four areas: 1) The Reference Sire(s), 2) The Management Group, 3) When to Slaughter?, 4) Data Collection.

(1) The Reference Sire(s)

For the Simmental Carcass Evaluation, producers need to use at least one reference sire. Ideally, a producer should use two references sires to make sure the progeny of the reference sires are represented in each management group, The reference sire provides the genetic tie between the bulls evaluated for carcass traits in the past and new bulls being tested.

For Simmental breeders, a reference sire is any bull with carcass EPDs or the son or maternal grandson of a bull with carcass EPDs. To find out which Simmental bulls have carcass EPDs, producers should consult the Fall 1995 Simmental/Simbrah Sire Summary. The ideal circumstances would have enough cows bred to produce 25 steer progeny per test sire and a combination of 20 steer progeny between the reference sires. If you do not have enough steer calves - their heifer mates can be used to make up the shortfall.

(2) The Management Group

The most important part of the Simmental Carcass Evaluation is the management group A carcass management group is defined as all calves with the following characteristics:

1) same weaning management group (Sex, Percent Simmental, management, weight date).

2) same yearling management group (weaning group, management, weight date)

3) same slaughter date

Calves need to be separated by their post-weaning management to distinguish between groups of calves that have been handled differently after weaning. All pertinent informaticn from birth to carcass should be recorded using the Herd Handler forms. If calves are split into different pens in the feedyard, they need to be treated as separate groups. All calves should to be recorded with the ASA at weaning whether they are used for herd replacements or for carcass test. Once the calves are split up for the post-weaning phase, they can be recorded into their separate yearling management groups.

(3) When to Slaughter?

Cattle need to be slaughtered at a constant compositional endpoint. This means that cattle should be sent to the packing plant when: 1) the group averages 0.3" inches of backfat; 2) prior to sixteen months of age; or 3) maximum of 1,300 pounds ave weight, whichever comes first. This translates to a minimum of 180 days on feed in the feed yard for calves. Depending upon the variation in weight when placed on feed and number of calves, two or more slaughter dates may be necessary. If this is the case, each slaughter group must include progeny of test and reference sires.

Producers should work with the National Cattlemen's Association Carcass Data Collection Service to collect carcass data on their calves. Once the calves have been placed on feed, the producer should contact the NCA and fill out a "Cattlemen's Carcass Data Service Enrollment Form" and return it to the following address

Cattlemen's Carcass Data Service National Cattlemen's Association PO Box 3469 Englewood, CO 80155

Phone: 303 / 694-0305

The feedlot manager should be notified that carcass data will be collected on the calves. A few days before the cattle leave the feedyard for the packing plant, NCA needs to be contacted to coordinate the collection of the carcass data at the plant. Communication is very important between the feedlot manager, NCA, and the packing plant. Many of the larger feedyards are including carcass data collection as a part of their custom feeding services Do not assume that things will get done! It is very important that the producer remains an active participant in the collecton of carcass data on his calves.

(4) Data Collection

Using the Herd Handler forms, the data listed in Table 1 needs to be recorded by the producer The items not in bold letters may not be needed if producers have followed other guidelines. For calves recorded at weaning, preprinted carcass data forms can be provided with calves listed by tattoo. If producers have any questions, they cari contact Bruce E. Cunningham, Ph.D with the ASA at 406/587-4531 Ext. 317 or send electronic mail to cunningham@mcn.net.

Many thanks to Kent Anderson PhD, North American Limousin Foundation (Fall 1995 National Limousin Genetics Evaluation Manual) and John Crouch, American Angus Association (Guidelines for Structured Sire Evaluation. BIF guidelines) for providing information from which this summary was produced.

Table 1. Information needed for carcass evaluation (if bold letters, required by ASA)

Unique individual animal identification (Tattoo)

Sire Identification (ASA Registration #)

Dam Identification (Tag, Tattoo, or ASA Registration

Dam Breed(s), Use codes on Herd Handler instructions

Dam Birth Date

Calf Birth Date

Calf Sex

Weaning Management Information

Weaning Weigh Date

Weaning Weight

Date placed on feed

Feeding group information (all calves in the same feeding group or pen)

Slaughter Date

Length of Chill (time until grading)

Hot Carcass Weight

Ribeye Area (nearest tenth square of an inch)

Fat Thickness (nearest hundredth of an inch)

Percent Kidney, Pelvic and Heart Fat (% KPH)

USDA Marbling Score (nearest tenth of a marbling score, Slight 50., Slight 60, etc.)

Carcass Maturity

Trimmed Carcass Weight (only if carcass is hot fat trimmed).