

PERFORMANCE REPORT

BEEF LOGIC *by Bob Long*

Using USDA Feeder Grades

USDA feeder grades are based on frame size and muscling. If accurately assigned, the grades do a good job of sorting cattle into uniform outcome groups, provided the cattle in question are of the same age, sex and previous treatment. Each of these variables has an important effect on the length of feeding period required to reach the USDA Choice quality grade, as well as affecting feed conversion during the time on feed.



Bob Long

Feeder cattle are usually grouped by age as either calves (8-10 months of age) or yearlings (14-16 months of age). Table 1 shows that within each frame size calves require a longer feeding period to reach the same degree of marbling than do yearlings. Of course, at the end of the feeding period the yearlings are considerably older.

Keep in mind that these are "average" figures and that differences in condition due to previous treatment will change the time required to reach slaughter condition.

Also note that muscle score is not mentioned here since differences in muscling do not affect length of feeding period. Regardless of muscling, all cattle of the same age, sex and frame size reach the Choice grade together.

Age also influences feed conversion. Among genetically similar cattle the younger the cattle the more efficient the gains.

Rate of gain while on feed is also influenced by age. When fed as yearlings cattle that are genetically similar will gain somewhat faster than if fed as calves.

Gender is also a variable that affects performance in the feed yard. Other things being equal, steers gain faster and more efficiently than heifers but require a longer feeding period to reach slaughter condition.

A common misconception among cattle producers is the belief that larger framed cattle must be fed to heavier weights. This is not always true due to large differences in muscling. Table 2 shows the average slaughter weights of the various feeder grades. Note that large framed light muscled (Large 3), medium framed medium muscled (Medium 2) and small framed heavily muscled (Small 1) cattle should all be processed at essentially the same weight. These are average figures and extremes of either frame size or muscling (or both) can change these weights.

Another misinterpretation is the belief that the larger the frame size, the faster the cattle will gain. Among cattle representing the entire cattle population this is true only if the gains are compared after the same number of days on feed.

For example, comparing the average daily gain of calves representing the three frame size groups after 150 days on feed, the large framed cattle will have outgained the others and the medium framed cattle will have gained faster than the small framed group. However, the small framed cattle are ready to process and the other two groups must continue on feed (see Table 1). If each of the three groups is fed the appropriate time all three groups will have an average daily gain for the entire feeding period that is approximately the same. Fortunately, there are cat-

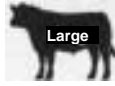


Table 1. Required Average Number of Days On Feed for steers Reach USDA Choice Quality Grade.			
AGE	FRAME SIZE		
			
Calves (8-10 mos.)	210	180	150
Yearlings (14-16 mos.)	140	120	100

Table 2. Average Slaughter Weight for USDA Choice Steers of Each Feeder Grade			
Slaughter Weight (lbs.)			
Large1			1400
Large2	Medium 1		1250
Large3	Medium 2	Small 1	1100
	Medium 3	Small 2	950
		Small 3	800

tle from performance selection programs that gain faster than others, regardless of frame size.

The USDA feeder grades do a good job if accurately assigned. The frame size dictates how long the cattle must be fed. The thickness score (muscling) predicts the USDA Yield Grade. The genetic potential determines the rate and efficiency of gain.

Finally, large framed, heavily muscled cattle are too heavy for current market demands when they reach USDA Choice. Also, small framed, light muscled cattle are not heavy enough. The packer will not pay top price for either kind.

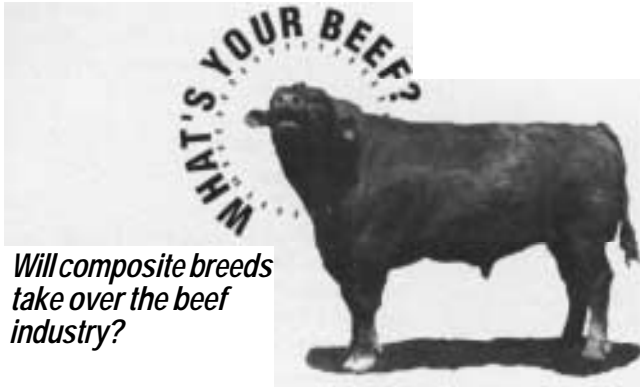
Iowa State Hosts Ultrasound Training Seminar

Iowa State University will host a training seminar in ultrasound image collection and interpretation in beef-cattle. The training seminar will be held Jan. 9-13, 1995, on the ISU campus in Ames. This training will help prepare participants for the certification process sanctioned by the Reef Improvement Federation, scheduled for May 1995.

Total cost for the training seminar is \$400; with \$100 due at time of registration and the remaining \$300 due at the beginning of the seminar.

The number of participants is limited to 20, taken on a first-come, first-served basis. Deadline for registration is Jan. 1, 1995. Registration materials are available by contacting Doyle E. Wilson, ISU Extension livestock specialist at (515) 294-2240; Gene Rouse, professor of animal science at (515) 294-5641; Catherine C. Crawley image analyst at (515) 294-5275; or by faxing your request to ISU Extension Animal Science at (515) 294-3795.

Performance Report



Will composite breeds take over the beef industry?

Bob Long: *In my opinion no, for the following reasons:*

1. To be successful, all matings must be at random. This means that no selection of replacements is permitted. If there is selection for growth rate, composition, frame size or personal preference for kind or color, the relationship within the composite increases and heterosis is lost.
2. Herds must be large enough to prevent inbreeding.
3. A composite can never exhibit maximum heterosis because of the loss between the F1 and F2 generations.
4. Independent cattle producers will not accept such an arrange-

merit. It eliminates personal preference and pride in a breeding program.

5. No improvement in production efficiency is possible without development of new composites, which depends on availability of superior purebred lines.

Certain individuals have attempted to sell composites by stating that the swine and poultry industry are successfully using composites. This is not true. Both groups have developed strains or lines superior in certain traits which are crossed and the crosses sold to commercial producers.

For example, a swine breeder crosses two lines superior in maternal traits and sells the F1 females to commercial producers to be used as brood sows.

Similarly, two lines superior in growth and carcass are crossed and the F1 males sold to be used on those sows. This provides superior performance, maximum heterosis, and allows the seedstock producer to retain his/her purebred lines intact.

This is as it should be.

WE WELCOME YOUR INPUT!

"What's Your Beef?" column serves as a forum for Angus breeders and industry experts to express their opinions on current issues and topics of breed improvement and performance programs.

If you'd like to respond to the topic above, or would like to address another please contact the Angus Journal editorial office at 1-800-827-5478 or fax (816) 233-6575.

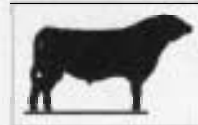
PERFORMANCE POSTCARD



Doug Dohoney of Dohoney farms, Salem, Ind., consigned the top-indexing bull of all breeds at the 1994 Indiana Beef Evaluation Performance Bull Test. Dohoney was honored at the Bull Test Sale held Oct. 20 at the Springville Feeder Auction near Bedford. His Angus bull had a test index of 119.6 and an average daily gain on test of 4.78 pounds. The bull was a May '93 son of Harmony's Mac Kevin E529.



Nancy Madigan, left, Sidney Ill., consigned IBEP's top-indexing get-of-sire group. She was presented the award by IBEP President Jim Day at the sale held Oct 20 at the Springville Feeder Auction near Bedford. Her Angus get was sired by MadiganBoldRuler 9116.



**TO: American Angus Association
St. Joseph, Missouri**