Stalking the elusive breeding program, part III

How far the pendulum?

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The physical laws governing a pendulum are such that it always swings from one extreme to another rather than stopping in the middle. In fact, at the midpoint the pendulum has achieved maximum speed as it moves through its arc to the next extreme. This physical law also often applies to human ideas and behavior as well.

This author grants that the 8-900-lb. Angus cow producing a 900-lb. steer with .5 inches or more of fat was too small and the wrong kind. That 900-lb. steer with .5 inches or more of fat by today's standards would be a Yield Grade 5.

I cut too many of those kinds of steers in retail outlets and carried too many boxes of waste fat out the back door as I put myself through graduate school as a butcher. A reaction to the short-legged, deep-bodied, overfinished, too small cattle of the 1950s and early 1960s set in. The change was accelerated with the advent of production testing, the increased use of scales and the yardstick as cattle measuring devices. At the same time I contend the pendulum has already gone far enough or too far to the other extreme with the present emphasis on height and mature body weight.

Are we ignoring the fact that the ultimate product of the beef cattle business, purebred as well as commercial, is the beef sold in the retail outlet? That product must provide a pleasant, enjoyable, tasteful, satisfying experience when consumed as well as providing nutritional needs and do it at a reasonable price. If you will grant that the market steer is our ultimate goal, then read on. If you won't grant this, you can ignore the rest of this article.

Simply, the American housewife unconsciously has, is and will continue to dictate the kind of cattle we should produce. If we ignore the vote she makes every time she makes a retail purchase, we will soon find ourselves with a product we can't sell or only at a discounted price.

The retailer's requirements are often not well expressed nor understood. First, the wholesale cuts (boxed beef) he buys must be of a size that permits him to make retail cuts of size that are saleable in his area; secondly, it must have an appealing color, texture and marbling and an adequate shelf life when placed in the retail counter; and third, it must be of a yield grade that minimizes waste fat trim and yet with sufficient cover to ship well and prevent lean discoloration.

Why are these factors important to the retailer? The size of the retail cut is determined by the amount of money the housewife will spend for the meat portion of the meal. If the total price gets too high, she starts looking for an alternate meat product. Carcasses that produce loin eyes of 10-13 inches can usually be cut into steaks of a desired thickness for broiling, (1-1 1/2 inches) and stay within the budget. Similarly, she wants roasts cut at least two inches thick and usually not over four inches to roast properly. Yet she wants a weight such that her family will consume it all at a single meal. Today's wife and mother does not welcome "leftovers."

If the retailer makes the cuts too thin they have a tendency to "curl" when cooking and are hard to get to the proper stage of "doneness" uniformly. If too thick it extends cooking time or results in the outer portion being "overdone" and the inner portion "underdone." Thus, the retailer has to make a cut of a thickness to cook properly and yet stay "within budget."

Today when meat is cut into retail cuts it is wrapped and sealed in a plastic film. In the wrap it should retain its appealing color and appearance for a minimum of 24 hours and preferably for 48 hours. Retailers tend to cut what will move in a 24-hour period. However, there are always the "slow" days or weekends when the volume sold is below normal and the cuts must be carried over. If you don't think the combination of color, texture, appearance and price per package aren't important, spend 30-60 minutes watching people "search through" the packages in a meat counter to find one that meets all of their requirements.

Finally, most retailers cut on a fixed "mark-up" or percentage. They take the total wholesale cost, mark it up a certain percentage and that should be the retail gross. Retail prices, including "specials," are based on this mark-up. If the carcass is wasty (Yield Grade 4 or 5) there is less net weight to be sold at the retail level. Conversely, if there is too little finish (less than .25 inches of fat at the 12th rib) the outside muscle tissue exposed to the air will darken and must be trimmed. This will also result in less net retail sales. Most retailers get two or three deliveries each week. This means the "box beef' will be stored in the meat market cooler 48-96 hours and must not discolor in this period and then spend another 24-48 hours in the retail display case. Add to this a 24-48 hour minimum in the packer cooler and another 24-48 hours in shipping and delivery time and you have a 3-10 day period that the fat covering becomes critical in protecting the carcass. Thus, a fat covering of .25 to .4 inches is desirable.

The packer is well aware of these retail requirements so he translates

these to a desirable carcass. In turn this is translated into a live animal that will meet the carcass requirements.

Let's look first at what the packer wants. He wants a 600-800-lb. carcass. This will give wholesale cuts for box beef that the retailer can cut into desirable retail cuts with proper size and thickness. As a result the packer has ordered boxes of a standard size into which the "boxed beef' cuts will fit. Don't blame the packer for wanting carcasses of a size that fit his "boxes." He is only trying to satisfy the demands of the retailer who in turn is trying to satisfy the demands of the housewife.

The retail purchasers have indicated that they want sufficient marbling for a carcass to grade Choice, so these are the cattle for which the packer looks. For Angus cattle, in the past at least, that has meant an external covering of .3 to .4 of an inch, usually. That amount of external finish will usually result in a Choice Angus carcass with a Yield Grade of 2 or 3 which in turn meets the retailer's demands for yield and "mark-up" percentage. At the same time it provides the consumer with the meat that provides a pleasant, enjoyable, tasteful, satisfying eating experience. Thus, the packer wants a 600-800-lb. Choice carcass with a yield grade of 2 to 3.

Now let us find a steer that will meet the packer requirements. It's a steer with a live weight of 1,000 to 1,250 lb. This is based upon a 60-65 percent dress for most Choice steers. Thus, steers in this weight range will yield a 600-800-lb. carcass if they have sufficient finish to grade Choice. If a Choice steer goes over 1,250 lb., the chances are he will get over the 800-lb. upper limit for "box beef." If the steer only grades Good, the dressing percent is apt to be in the 55-60 percent range. Thus, a 1,350-lb. steer grading Good might meet the carcass weight requirements and he might even meet the external fat shipping requirements.

However, he would not have the marbling necessary to meet the requirements of most retailers. When the steer gets over 1,350 lb. he gets too big to be handled as "box beef' regardless of grade. Thus, the market for large steers is limited. The retail cuts become so large that they exceed the purchaser's budget or if they stay

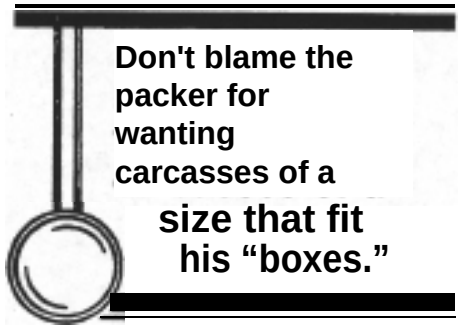
"within budget" they have to be cut too thin. So the live steer the packer looks for is between 1,000-1,250 lb. and carrying .3 to .4 inches of external finish at the 12th rib. In the past the packer has also known that if the steer had a black coat there was an excellent chance he also had sufficient marbling to grade Choice.

Now let's look at the kind of live parents it takes to produce this 1,000-1,250-lb. steer with .3 to .4 inches of fat.

Many articles have been written about cow size from many points of view. One idea I would like to introduce to the discussion, because I have not seen it discussed elsewhere, is that the mature weight of the cow will be the approximate weight of her steered offspring meeting the above requirements. If the steer is "pushed" through the feedlot, that is started on heavy grain feeding at weaning, he tends to get to the desired degree of finish at a weight a little lighter than his dam's mature weight. If he is "slowed down" and backgrounded on a high forage ration the first winter, he tends to get to the desired degree of finish slightly heavier than his dam's weight, Thus, a 1,000-1,300-lb. cow will tend to produce a steer of acceptable market size. This weight cow also will often produce a calf at weaning that equals 50 percent of her body weight, that is a 500-600-lb. calf. The 1,300-plus-lb. cows weaning calves equal to 50 percent of the cow weight are few and far between. Check AHIR records and see how many calves weaned at over 650 lb. The length of time between weaning and finishing the steer depends upon the feeding program, but most steers will reach the desired degree of finish (.3 to .4 inches) by 15-22 months of age.

There's another practical, economical consideration to keep in mind about large (over 1,300 lb.), slow maturing females. Many of these females will not exhibit estrus and/or conceive by 15 months of age so they can calve at 24 months of age unless they are given extra concentrate and/or protein. Most heifers that will mature into 1,000-1,300-lb. cows will conceive to calve at 24 months.

Now let's look at the sire. Bulls fed like steers will normally have .1 to .2 inches less finish than steers at the same weight. Check the test station records where bulls have been somoscoped and you will find very few bulls even at 1,400 lb. that have .4 inches of fat. If they do, they probably have frame scores of 4 or less. On the other hand, bulls on feeding programs similar to steers will usually weigh from 100-400 lb. more than steers at the same age or will get to the same weight in 2-4 months less time. Thus, we should be looking at bulls that weigh 1,000 to 1,300 lb. between 12-16 months of age with fat covering of .15 to .3 inches. A bull meeting these requirements will tend to sire steers that will satisfy the packer-tetailer requirements.



The ultimate or mature weight of the bull at 3-6 years of age will have little effect on desired steer weight at the desired age unless the bull has met the requirements above as a short yearling.

If the ton-plus mature bull is one of those slow maturing kind, he may actually have a negative effect on the age and weight at which his steered sons reach desirable market finish.

Up to now the author has ignored the question of height for a good reason. Much of the today's height has been achieved 'because of two reasons. First there has been an elongation of the bone from the stifle and elbow to the ground and secondly, by a change in the angulation of the bone structure, particularly of the hind leg.

In the packing plant the bone below the knee and hock goes into making bone meal, and there isn't much hamburger meat boned from the bones below the elbow and the stifle. Thus, elongation of leg has little effect on net carcass weight and what little there is may be negative. Most of today's show animals measure from 1-3 inches taller at the hip than the shoulder because of the change in the anguiation of the hind leg, resulting in a decided downward rear to front, slope of the topline. Although the change in the leg angulation has little effect on carcass weight, it can have a decided effect on breeding function. If the height has been achieved by straightening the hind leg, it may result in bulls that will develop leg problems when used in natural service.

To the author, two interesting questions are: what would be the conception rate of these 60-inch plus ton plus bulls if turned into a pasture to serve mature cows naturally and how many cows would be injured by such a bull?

Commercial breeders using natural service also have the additional problem of getting their 650-800-lb. heifers bred. This is one reason for the popularity of long yearling-short 2-year-old bulls. While there has been a marked tendency toward A.I. service in purebred herds, many commercial cattle breeders still depend on natural service. They are looking for bulls that are structurally sound, can walk and cover an extensive pasture area and will not injure cows while still maintaining a 90 percent-plus conception rate. If we ignore this natural breeding function, we will lose our market for bulls to sire commercial cattle.

Another very disturbing fact was published in this past year's *Angus Jownal.* Approximately 25 percent of the steers in the first certified Angus Junior Steer Show failed to grade Choice because of a lack of marbling.

If we are losing this traditional Angus characteristic of marbling with .1 to .2 inches less external fat than other breeds at normal marketing ages and weights, then the price we are paying for increased height and mature weight is too high in the opinion of this author.

Personally, I would like to see judges pay less attention to published height and weight records available at many shows, and stress more the characteristics such as structural soundness, body capacity to handle forage, muscle development with adequate finish and reproductive soundness. Remember, it has taken 25-30 years to get away from the short, compact, early-maturing cattle of the late 1940s to the early 1960s. The cattle we are breeding today will be influencing the cattle produced well into the next century. Are some of the extremely large Angus show cattle of today approaching the "elephant" category?

I leave you with the question: Has the pendulum swung far enough?

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