

No Grand Design for the Perfect Steer



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Animals that win today's steer shows have little in common with the kind of cattle most in demand by profit-minded cow-calf producers, feeders or packers—and this should be changed.

These were the general conclusions drawn at the National Steer Symposium, June 1-2 at Oklahoma State University, Stillwater. The event which attracted some 600 persons brought together college researchers, meats experts, show judges, show managers, club calf and commercial cow-calf producers, purebred breeders, cattle feeders and packers to evaluate steer shows and recommend needed changes.

Not everyone agreed. Those who produce and show the kind of steers that win today felt they were doing a service to the industry by promoting the production of larger, more

productive cattle. And the men who judge many of the major steer shows indicated that they felt their decisions were not far wrong, based upon the very limited information they have to work with in the show ring.

The problem is not just what kind of animals are picked for class winners and champions, various speakers emphasized. How steers are handled and managed prior to the show makes it difficult to tell whether an animal will have a desirable carcass when slaughtered.

Carcass Quality

Carcass traits should be more than an afterthought in steer shows, emphasized Dr. Gary Smith, Texas A&M researcher from College Station. Many of today's show-steer management practices virtually assure dark cutters and low quality grades, he said.

The use of diuretics to shrink 200 lb. or more off a steer can dehydrate an animal so much, Smith said, that the pigment is concentrated enough to produce a dark cutter. And starving animals to meet weight requirements reduces marbling.

One of the strongest critics of present day steer shows, Smith said that "Steer shows are not

now, nor have been for 40 years, related to the commercial cattle industry."

The low quality of steer show carcasses was also emphasized by Ken Hartman, of the National Western Stock Show in Denver. He said that in recent years the show has purchased high quality sides and wholesale cuts to substitute for the show steer carcass when buyers want to have their animal processed for the home locker. Also, Hartman said, some packers do not want to slaughter and merchandise show steer carcasses because of their low quality.

How Big?

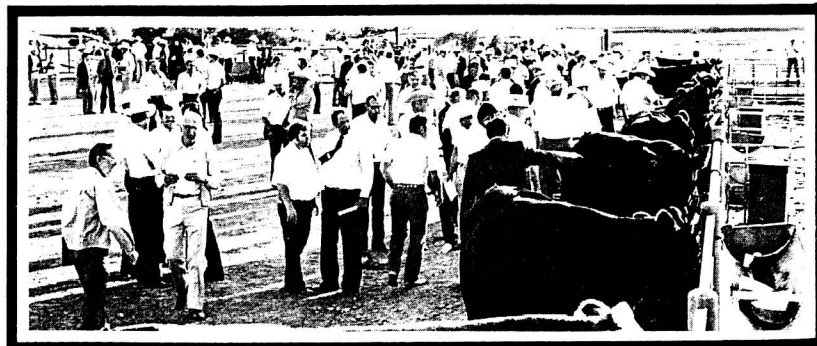
The extreme height and weight of today's show steers drew fire from several corners.

Size and frame have received a lot of attention at steer shows said Dr. Robert Long, Texas Tech University, Lubbock. But he said height has nothing to do with body composition or whether an animal will produce a desirable carcass. Within any frame size there is every kind of composition, Long emphasized.

"Saying that frame size gives you more place to hang muscle makes no more sense than saying that your money will grow faster if you put it in a big bank," Long said.

When steer classes are divided by weight and the class is placed based upon height, the judge is actually selecting against muscling, said Long. He also explained that a 10 degree change in the angle of the skeletal joints can change the height of an animal by 4 inches. That's why so many steer champions are straight shouldered and post legged, he implied.

Evaluating live steers at the Oklahoma State University beef cattle center are some 140 participants invited to the working session of the National Steer Symposium. The majority of this group reported that the best steer for the industry should weigh from 1,100 to 1,200 lb., grade USDA Choice minus and have .3 to .4 inch of fat cover.



Dr. Robert Totusek of hosting Oklahoma State University welcomed the crowd to this symposium on "The Ideal Show for the Beef Industry". Speakers and interested participants represented all phases of the cattle industry.

Long concluded that the ideal steer for the industry today is one that has a high muscle-to-bone ratio and is not large-framed by today's standards.

Packer to Cowman

Feedlot manager Bob Hillier, Guymond, Okla., said that height means nothing, "We want cattle to perform. A 1,400-lb. steer won't work in today's industry."

Cattle have to be the right size to hang on a rail for easy processing, and the wholesale cuts have to fit in a box, Hillier said. The major packer in his area will not buy very

Cody, Neb., disagreed that steer shows put up the wrong kind. "The theme (of this meeting) seems to be that we should back up on the weight and frame score of steers that are winning in steer shows," Adamson said. "This would be a very serious mistake." He emphasized that many commercial producers have not sufficiently increased the size of their cattle and they need the example that is represented by today's steer show winners.

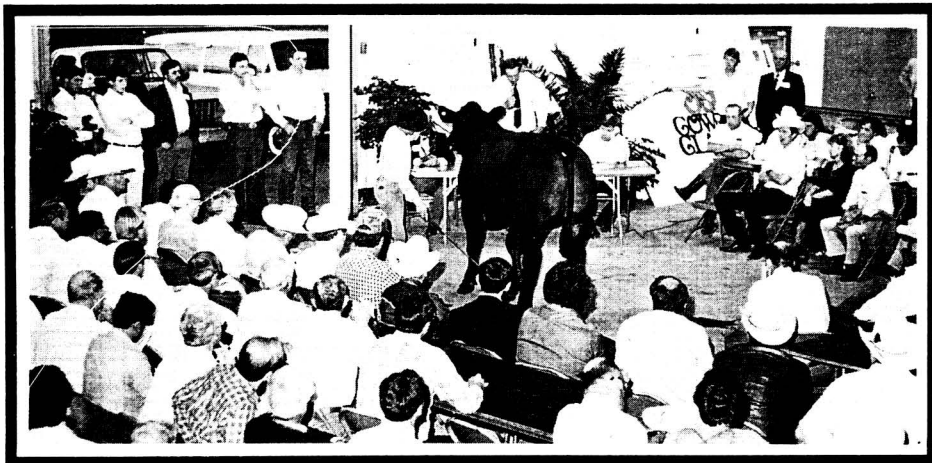
Judges' Opinions

Show improvements were called for by a panel of steer show judges, consisting of Dr's.

the judge has, the better he can do," Able emphasized. He said that many local shows could provide the judge with such complete information as rate of gain, feed efficiency, time on feed, sire, dam and even the breeder.

Gary Minish too, said judges need more information. "Why can't we have accurate data in steer shows like we do in breed shows?" he asked. Also, he said, if steers were shown by frame size rather than weight, the judge would have a better idea of which animals were heavy-musclcd and which ones did not weigh enough.

Minish disagreed with some who said that feet and legs are not very important, that a steer need only be able to walk onto the kill floor. Minish contends that show steers should represent the ideal of the industry, not just the packer. They need to have good feet and legs and walk properly. He said further that a steer should also weigh between 1,000 and 1,350 lb. in market condition, be between 52 and 54 inches tall, and have at least .3 inch of fat cover.



"The Composite Steer" was the title of this portion of the National Steer Symposium in Stillwater, Okla. Dr. Don Good, Kansas State University, moderated the panel.

large cattle, Hillier pointed out, because the entire cattle line must be stopped to allow a worker to get off his stand to split very long carcasses.

Dr. Rod Boling, with Monfort of Colorado, said a 1,350-lb. steer that produces an 850-lb. carcass is the largest that the industry can use, and sometimes this is too large.

On the other hand, commercial cowman and club calf producer Jerry Adamson,

Bill Jacobs, Cal Poly at San Luis Obispo, Calif.; Bill Able, Kansas State University, Manhattan; and Gary Minish, Virginia Polytechnic and State University, Blacksburg.

"Our accuracy would be better if we knew the length of time on feed," said Bill Jacobs. He also indicated that if show steers were fed properly that they would produce very acceptable carcasses when slaughtered.

Bill Able recommended that a method be developed for steers to be full-fed and brought only to a single show. This would help judges select the most productive and useful kind, he said. "The more information



Carcass traits should be more than an afterthought in steer shows, emphasized Dr. Gary Smith, Texas A&M researcher and one of the many who offered their comments to the group of 600 that attended the National Steer Symposium.



When steer classes are divided by weight and the class is placed based upon height, the judge is actually selecting against muscling, said Dr. Robert Long of Texas Tech University. The extreme height and weight of today's champions drew mixed comments at this Oklahoma conference.

Mixed Feelings

Despite the fact that some speakers contended steer shows have no positive effect on the industry, this was far from a general consensus.

Dr. Don Good, chairman of the animal science department of Kansas State University, summarizing the first days' events, said even though steer shows need to change, they should never be discarded.

"Steer shows have helped light the fire of enthusiasm in many young people who are now leaders in the cattle industry," Good said. Jerry Robbe, a cattle feeder from Pueblo, Colo., said that steer shows are a positive promotion tool for the cattle industry, because they attract the attention of many non-farm people. Shows are not a scientific laboratory, and should be addressed as such, he said.

Gary Minish pointed out that steer shows have had a positive impact on industry type changes and on breed popularity. Shows have provided service by passing on to the commercial industry ideas like growth pattern and the need for trimness and size.

The Group Consensus

The program was attended by more than 600 people according to Dr. Robert Totusek, head of the Oklahoma State University animal science department and chairman of the symposium committee. The first day of the program consisted of a working session with some 175 invited participants from all phases of the industry.

Each person at the working session was asked to fill out a questionnaire. About 145 of these forms were turned in after the program. The overwhelming majority believed that the 1,100 to 1,200-lb. steer was best for the industry. Most (122) thought .3 inch to .4 inch of fat cover was best, with a minority (20) feeling that .2 to .3 inch was enough.

On rib eye area, the majority (112) thought that 14 square inches was adequate, and about the same number (110) felt that a Choice minus USDA grade was best.

The group consensus was that some minimum rate of gain figures should be set for steer show winners, and 120 said the judge should be provided with data during the show. Of the 120 who wanted data provided, 99 wanted weight; 83, height; 104, average daily gain; 38, fat cover; and 56, age.

There was less agreement on how classes should be divided. Some 32 said by weight, 37 said by height, 21 said by breed and weight, and 6 said by breed and height. The last question was, "Should a grand champion steer fit the industry?" Some 78 strongly agreed and another 61 agreed. Only four said they disagreed or strongly disagreed.

Author's Comments

Drawing clear-cut conclusions from the two day program was difficult. The program did not produce the grand design for the perfect steer. In fact, many said that profitable cattle come in all frame sizes and probably all breeds (see story on profitable cattle). But from all the comments and discussions it was clear that program participants wanted more emphasis placed on making steer shows an educational tool for the youngsters involved. They repeatedly called for an end to manipulation of steers that go into the show ring. They said that more effort should be made to provide judges with useful information, and that the steer winners should look and perform more like a steer does in the commercial beef cattle industry.

... But Improved Efficiency is the Key to Progress



Dr. Dan Fox of Cornell University recommended that cattlemen determine what frame size of animal is most efficient for their area and management, then select for the fastest growing, most efficient cattle within that frame size.

There is little difference in the quality, efficiency or profitability of large or small cattle that are fed and marketed to the same end point, Dr. Dan Fox, Cornell University, told the 600 people who attended the recent National Steer Symposium on the Oklahoma State University Campus at Stillwater.

Consequently, Fox recommends that cattle producers determine what frame size of animal is most efficient for their area of the country and under their management conditions, and then select for the fastest growing and most efficient cattle within that frame size.

Cattlemen who select for growth rate alone do not necessarily select for efficiency, Fox told the group, they simply select for larger frame size or larger mature size.

Because size affects maintenance requirements, Fox explained that it is not possible to directly compare the performance of cattle with different frame sizes.

"If we consider that feeding cattle to 30% body fat, or low choice, is the most desirable end point," Fox said, "then we can assume that small body type cattle will reach this point at 800 lb., medium cattle at 1,100-lb. and large cattle at 1,320 lb."

The breeder or feeder whose cattle will eventually be marketed as 1,100-lb. choice steers would do best to match his cattle to his potential market, the speaker implied.

Because of maintenance requirements, Fox said, different size cattle must gain at different rates to be equally efficient. For example, he said that to be equal, small-framed cattle must gain 2.2 lb. per day, medium-framed cattle 2.6 lb. per day, and large-framed cattle 3 lb. per day over the feeding period.

To be of equal efficiency a small-framed cow must wean a 420 lb. calf, a medium-framed cow a 495 lb. calf and a large-framed cow must wean a 575 lb. calf, Fox said. Still, he said, most profits are governed by cow fertility. Simply stated, the most fertile cows are the most profitable.

Dr. Harlan Ritchie, Michigan State University, also called upon cattle producers to improve efficiency and cut costs as a way to return more profit to the cattle industry. "There are fewer reasons all the time for not cross-breeding," he said.

Body types do not have anything to do with the desirability of the end product of a steer, said Dr. Robert Long, Texas Tech University, Lubbock. Frame size, he said, tells us how long to feed cattle until marketed, while thickness of muscles, fat and high bone-to-muscle ratios determine carcass desirability. Long said that some cattle within every frame size just will not do, regardless of how they are fed or managed.

Long also urged cattlemen to do more performance testing to improve cattle efficiency and quality. "We don't have to have .5 inch of fat cover on steers in order to get them to grade Choice," Long stressed. "We have the genetics today to select cattle that are efficient, and that will also produce top quality beef."

"One size steer is not any better than another if the steers are marketed when ready," Dr. Gary Smith told the group. "There are three keys to good feedlot management," he said, "full feed, market when ready, and do not hold."

Full feeding is necessary Smith said, because of the priority for distribution of nutrients in an animal's body. These priorities are: 1st—nervous system, 2nd—skeletal, 3rd—muscle and 4th—fat. The priority by body location is: 1st—Head, 2nd—Neck and shoulder, 3rd—Hind Limbs, and 4th—Loin and rib. The priority for fat deposit is: 1st—Kidney knob, 2nd—Seam fat, 3rd—External fat and 4th—Marbling. Since the most important factors in carcass quality are the "4th" priorities, he said, it is necessary that animals be full-fed so that they will fatten and marble, especially in the high-priced cuts in the loin and rib.

Steers that are not full-fed do not have proper development for good beef; as Smith said, "You screw up the development." On the other hand, Smith pointed out, cattle should not be held past their most desirable end point even on full feed. This will reduce rate of gain and feed efficiency, and increase the percentage of fat in the carcass, he said. ♀