

STRUCTURE AND EYE APPEAL - IN BEEF CATTLE EVALUATION

R.A. LONG

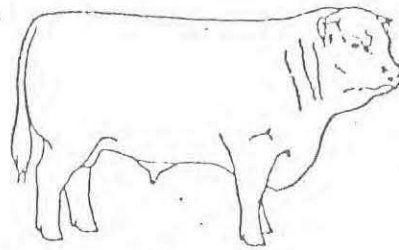
TEXAS TECH UNIVERSITY

INTRODUCTION

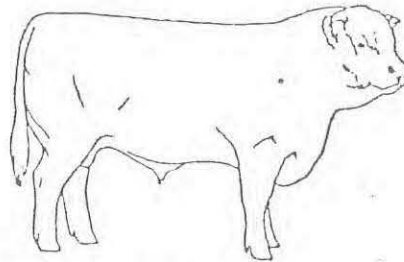
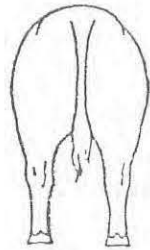
The accurate evaluation of slaughter cattle is important in several phases of the beef cattle industry. Both the feeder and packer buyer can make more intelligent decisions if they are able to accurately predict the quality and cutability of the carcasses resulting from the slaughter of specific individuals or groups of cattle. Likewise, purebred breeders should evaluate seedstock in this manner in view of the high heritability of carcass traits. Even in the show ring, both breeding and slaughter classes should be largely evaluated on the basis of accurate estimates of carcass characteristics. However, some breeders, feeders, packers and live animal judges currently use evaluation criteria of doubtful accuracy in their appraisals. Examples are the various estimates of skeletal size such as height and length of body often referred to as "elevation", "stretch" and "scale", the implication being that the greater the skeletal size, the more desirable the animal. Further measures of bone are such terms as "ruggedness" and "heavy bone", as determined by visual estimation of the circumference of the cannonbones and their overlying tissues. Here again the suggestion is that larger is more desirable. Muscling is also referred to by such terms as "length", "smoothness" and "pattern", all terms which imply desirability but which have no demonstrated contribution to superior composition of bovine meat animals.

STRUCTURE

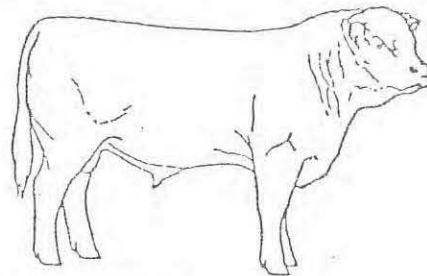
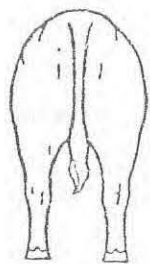
My subject today is concerned with structure. The word "structure" implies a fixed plan or organization. This is exactly the case with the



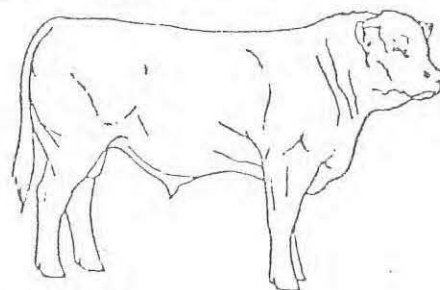
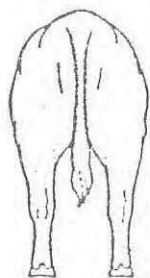
BODY TYPE 1



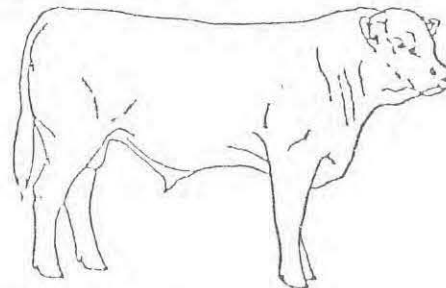
BODY TYPE 2



BODY TYPE 3



BODY TYPE 4



BODY TYPE 5

Figure I. Body types.

structure of steers or all beef cattle for that matter. All steers in the world are made according to the same plan or design. They are composed of a skeleton, the number of the bones of which is constant, as is the general shape of each bone. Also, the percentage of weight or linear size that each bone represents of the whole skeleton is constant. Butterfield (1964), Kaufman (1973), Ramsey (1976).

About ten years ago, a National field day was jointly sponsored by a different breed association and the University of Wisconsin in each of three consecutive years. Each breed selected different "types" of steers which were placed on feed and when ready for market were slaughtered, and a field day was built around the data collected. Some good things came out of these sessions but unfortunately, that which has received the most attention and is still with us are the profile drawings in Figure I, which is entitled "Body Types." Note that "body type #1" is shortbodied and lowset and shows heavy development in the dewlap, brisket and belly, and great proportional depth of body. Also, observe that "body type #5" is tall and long and is a trim fronted, tight middled kind. The implication here is that all small framed cattle are wasty and fat and all large framed cattle are trim and desirable. Nothing could be further from the truth.

I do not believe that such a thing as a body type exists. I believe, and will offer evidence to prove, that every frame size of beef animal can and does occur with every possible combination of fat and muscling. Some small framed cattle are highly desirable in composition - some are not. Some large framed cattle are desirable in composition - some are not. The same can be said for any frame size.

I want you to look at the data from three steers in table I. Their weight is very different but their skeletons are practically identical in size, which is, of course, their frame size. Now examine the dissection

TABLE I: MUSCLE:BONE RELATIONSHIPS AMONG SLAUGHTER STEERS
LIVE MEASUREMENTS

	Steer #	1	2	3
Live wt. (lbs.)		1450	1300	1005
Length of Body (in.)		60.23	60.23	59.84
Rump Length (in.)		20.07	20.07	20.47
Ht. Withers (in.)		51.96	51.57	52.36
Ht. Hips (in.)		53.54	53.14	53.93

TABLE II: MUSCLE:BONE RELATIONSHIPS AMONG SLAUGHTER STEERS
DISSECTION DATA

	Steer #	1	2	3
Lbs. of Bone		64	68	67
% Bone		13.1%	16%	23%
Lbs. of Muscle		320	262	168
% Muscle		66%	63%	59%
Lbs. of Fat		104	81	53
% Fat		21%	19%	18%
Muscle:Bone		5.01	3.88	2.52
Muscle:Bone IM Fat Included		5.16	3.94	2.61

TABLE III: MUSCLE:BONE RELATIONSHIPS AMONG SLAUGHTER STEERS
CARCASS MEASUREMENTS

	Steer # 1	2	3
Carcass Wt.	976	820	570
Dress %	67%	64%	57%
Maturity	A ⁷⁵	A ⁵⁰	A ⁷⁵
Marbling	Small ³⁰	Slight ⁸⁰	Slight ⁶⁰
Quality Grade	Ch ⁻	Gd ⁺	Gd ⁰
Fat thickness (in.)	.3	.3	.12
Rib Eye Area (Sq. in.)	18.1	14.3	9.9
% KIP	3.0%	2.5%	2.5%
Yield Grade	1.8	2.3	2.3

data in table II. Not only were their skeletons identical in linear measurements, but their skeletons weighed the same. However, here the similarity stops. Note the tremendous difference in muscle both in total weight and as a percentage of the carcass of the #1 steer. This gives a muscle:bone ratio of just twice as much for the heavily muscled steer as is the case with the thinly muscled one. Fat varies only a little in this case but keep in mind that it would be easy to put together a large group of steers with identical skeletons that vary widely in fat and muscle composition. Table III lists the conventional carcass measurements. This table makes two major points.

1. The Yield Grade formula ranked these three steers essentially the same, which is obviously in error. This is because the formula was constructed with conventional British breeds which did not offer the range in muscling we have here. It under evaluates the heavily muscled #1 steer, over evaluates the thinly muscled #3 steer and does a good job on #2.
2. The frame size or skeletal size of these steers had nothing to do with the desirability of their carcasses.

I would hope that your conclusion would be something like mine which simply stated is: Why anyone would use frame size in the evaluation of cattle for slaughter is beyond me. Yet, that is exactly what takes place in the majority of steer shows in this country - they put the tall ones up. Think what this means. The cattle are shown by weight and most of them have been fed and managed in such a way that they are not excessively fat. Therefore, placing the tall, big framed steers up in class and the small framed ones down means that selection was against muscle or meat which makes no sense at all in the beef production business. The placing of the tall ones of the same weight on top of the class further complicates the situation.

Large framed cattle mature later which fact decreases the chances of the large framed steer making the choice grade.

What is the Value of Frame Size?

Skeletal growth or bone formation on growing animals takes priority for nutrients over fat deposition and even maximum muscle growth. Therefore, regardless of plane of nutrition, if we compare animals at the same age, their frame size has probably increased according to genetic potential and is a good measure of what their mature frame size will be. When compared at the same age, the larger the frame the larger it will be at maturity and the longer it will take to reach that point. Also, we know that as an animal approaches maturity, he begins to deposit fat in the muscle, which is the marbling that puts him in the choice grade. This is the very basis for the new U. S. D. A. Feeder Grades which separate cattle into large, medium and small frame sizes. If cattle of the same age are sorted into uniform frame size groups, each frame size will reach the choice grade after a different length of time on feed. The larger the frame size, the longer the feeding period required to grade choice.

Of course, this same principle works on breeding cattle and if they are compared at the same age and are of the same sex, the larger framed animals will be larger at maturity and likewise require longer to reach maturity. Therefore, if your only goal is size at maturity, go for frame size. Remember, frame size tells you nothing about the composition of the carcass, growth rate or reproductive efficiency.

Most people currently measure frame size (or think they do) by measuring height at the withers and/or hips. Figure II illustrates how misleading this can be. Note that these are identical skeletons except for the angle of the leg joints, yet the one on the right measures considerably taller at the withers and hips. Fortunately, this is no problem since research work by Ramsey (1976),

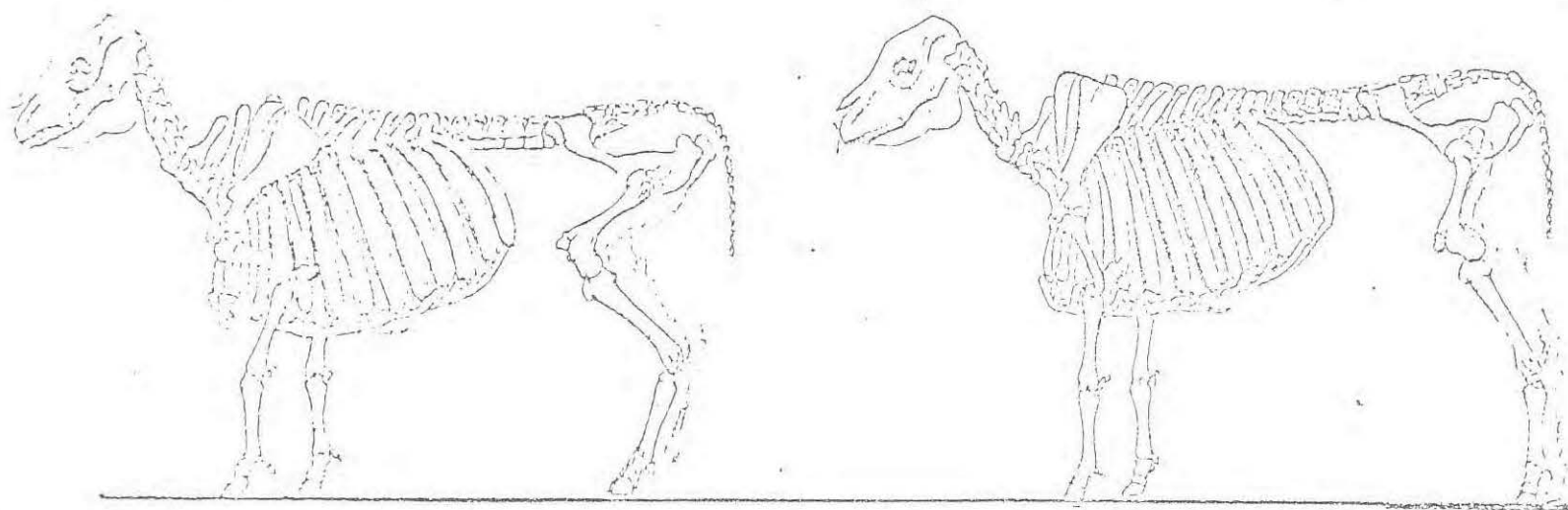


Figure II. Identical skeletons showing the effect on height at the withers and hips of changing the angle of movable joints of the long bones of the legs.

Butterfield (1964) and Kaufman (1973) have all observed that the bovine skeletons occur in constant proportion. Therefore, you can accurately compare frame size on cattle by actually measuring or visually estimating a single bone in the leg of each. If one bone is longer every other bone in the skeleton will be longer and proportionately so. Remember, this is only valid if the cattle are of the same age and sex. You must compare bulls with bulls, steers with steers (castrated at the same age) and heifers with heifers, because at puberty the level of sex hormone production changes greatly and results in closure or calcification of the epiphyseal groove and the length of the leg bones stops increasing.

When scoring cattle for size of frame, actual weight should not be considered. Weight is recorded by the scales and is a separate performance measure. Skeletal size is the point to be considered.

Let us look at some additional data on measurements of the skeleton. We measured 88 head of steers the day before they were slaughtered and then collected detailed carcass data including specific gravity of the whole carcass and complete dissection into boneless, closely trimmed retail cuts plus ground beef. These data are shown in Table 4. Note that all linear measurements are positively and significantly associated with carcass weight. This is no surprise and is just a function of size. Even big trucks are, on the average, longer and taller than little trucks. Essentially the same is true of dressing percentage but remember this tells us nothing. Some steers dress high because of muscle and some dress high because of fat, Kaufman (1976). These linear measurements are also positively associated with yield grade and ribeye area. This is also a function of size since the yield grade formula penalizes heavier cattle regardless of their composition and big cattle have big ribeyes on the average just as big trucks have bigger tires.

Now note particularly that the 3 best measures of value of a carcass are marbling score or quality grade, specific gravity as a measure of fatness and boneless, trimmed retail cuts % which is the best measure of the 3. In each of these areas there is no association, none at all, with linear measurements of live cattle. Your conclusion should be - don't use frame or skeletal size in evaluating slaughter cattle.

Whenever I use the statement, "Don't use frame size in the evaluation of slaughter cattle", I can predict the responses. They are, "Modern steers are more feed-efficient and more profitable for the cow-calf man and the feedlot operator". "University tests show conclusively that frame size is closely correlated with a steers ability to grow". I submit, gentlemen, that these statements are simply not true. The data that shows an advantage for large frame size in rate and efficiency of gain is the result of killing cattle at constant weights or at constant length of feeding period. When cattle of the same age

TABLE 4. SIMPLE CORRELATION COEFFICIENTS OF
LIVE MEASUREMENTS WITH CARCASS TRAITS

	Live Measurements ^a					
	Height at withers	Height at hips	Rump length	Body length	Fore- cannon length	Fore- cannon circum- ference
Carcass weight	.59***	.67***	.66***	.71***	.54***	.71***
Dressing percent		.25**	.51***	.41***	.27**	.23*
Maturity score			-.22*			
Marbling score						
Yield grade	.31**	.22*	.43***	.27**	.22*	
Fat thickness			.31**			
Kidney, pelvic and heart fat, %	.26**				.27**	
Ribeye area	.25*	.32***		.28**	.20*	.52***
Specific gravity						
Fat trim, %	.27**		.35***	.21*		
Bone, %	.40***	.40***			.43***	
Retail cuts ^b , %	-.22*					

^aN = 88.

^bBoneless, closely-trimmed retail cuts plus ground beef.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

TABLE 5.
 MEANS OF ADG AND FEED EFFICIENCY FROM SMALL,
 MEDIUM AND LARGE FRAMED FEEDER CATTLE

Group	Trait	
	ADG	Feed to gain
Small Framed	1.2 ^a	8.5 ^a
Medium Framed	1.2 ^a	9.2 ^a
Large Framed	1.2 ^a	8.7 ^a

a,b,c Means in the same column with different superscripts are different ($P < .05$).

^dADG and Feed to Gain are expressed in kg.

and condition but of different frame sizes are fed to the same stage of physiological maturity or the same quality grade their rate and efficiency of gain tends to be the same. The data in Table 6 compares the performance of small framed, medium framed and large framed steers fed 150, 180 and 220 days respectively. They all graded 70% choice. Had they all been killed at the same weight or after the same time on feed this would not have been true. That is the very reason for sorting feeder cattle by frame size, not by weight when they go on feed. Rate of growth in beef cattle is a heritable trait and is improved by selection for growth rate not how far the cattle "stick up" in the air. An example is the strain of Angus cattle bred by Martin Jorgenson. His cattle are not the tallest Angus cattle in the world but don't get in a growth race with them unless you want to get beat.

So much for size of frame or structure, now how about soundness of that structure. Some say, "The ideal steer needs to have large, symmetrical feet that are deep at the heel. His legs must be correctly placed on all four corners and he should move off with a free, easy, long stride since a steers inability to walk would hamper his performance in the feedlot". That's ridiculous. In the first place he has already "walked" in the feedlot when you see him. More importantly, the steer you see in the show ring probably had his feet trimmed 3 or 4 times during his life by an expert at corrective podiatry, a professional blocking job on his legs and joints and could well have his joints loosened by dexamethazone and the pain masked by "butazolidin". And you're emphasizing structure? Don't be naive. The steer won't reproduce anyway. If you must consider soundness take one with some slope to his shoulder and angle at his hock. Every cattleman, horseman, hogman & sheepman worth his salt knows that straight shoulders, steep pasterns and post-legs are predisposed to injury.

Finally, I hear references made about a steers rump. A typical statement would be, "This steer slopes off at his rump and is narrow at his pins.

Therefore, his sisters would have calving troubles and not be productive in the breeding herd. Gentlemen, listen carefully, boys and girls are not shaped the same way. Besides the sloping rump is a lean one and the square rump you like is a "fat rump" and should be discriminated against.

MUSCLING

Now we'll stop picking the bones and talk about the muscle - the meat we eat. We hear a great deal about the "kind" of muscle on cattle and the favorite terms are "the right kind of muscle" or "that good, long, smooth muscle". Fortunately, there is only one "kind" of muscle. It is composed of muscle fibers bundled together by connective tissue and attached by connective tissue and tendons to other muscles and to the skeleton. The "length" of the muscles is determined by the size of skeleton since each muscle is attached to the skeleton at the identical spot in all cattle. Therefore, cattle of equal frame size have the same length of muscle. "Smooth Muscle" is a term used to describe cattle that have a layer of subcutaneous fat or are thinly muscled, or both.

Just as the skeleton is in the same proportion, each muscle in its anatomic entirety represents a constant percentage of the total muscle mass. This is well established by both Berg (1927) and Kaufman (1976) and is the basis for estimating total muscle by examining a steer for degree of muscling over the forearm or through the stifle. Let's face it, a steer cannot produce an excellent carcass without being well muscled. This, of course, adds to his weight & when finish is constant the heavily muscled steer far outweighs the "smooth" muscled steer of the same frame size. Therefore, a large framed steer will be considerably heavier than the packer wants if his composition is correct.

You will recall that we have pointed out that both the skeleton and musculature occur in essentially the same proportion in all steers. This results in a near constant percentage of carcass weight in each of the wholesale cuts. For example, a heavily muscled Limousin steer has the same percentage of hindquarter

as the thinnest muscled Jersey steer. Cattle just don't possess "more weight in the high priced cuts". The difference is in the percentage of meat, fat and bone in each cut. The data which illustrates the constant proportionality of skeleton and muscle has often been misinterpreted to mean that all cattle are the same and if you measure them the longest or largest is the best. This is in complete error. You must know muscle:bone ratio and degree of fatness in order to know composition.

SUMMARY

Currently, steer shows lack credibility in the beef industry. This is true, I fear, because we have tried to performance test in the showring by criteria that do not measure performance.

The purpose of the steer show, as I see it, is to identify the kind of a steer that hangs the most desirable carcass from the standpoint of both palatability and cutability. Then it becomes the job of breeders, feeders and packers to develop genetic, nutritional and processing programs which produce such carcasses efficiently and profitably. I believe we have the "know how" to do this job.

The ideal steer must have a high muscle:bone ratio, a maximum of .3 inches of fat, choice marbling and be in the 1050 - 1250 weight range. How far he "sticks up" in the air should not be a factor.

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The Judge's Perspective

This is an extremely important segment of our program because these are the fellows who are in the firing line. Steer judges have the responsibility of setting steer type so to speak in our major steer shows. The judges appearing as the judging panel today has several things in common. They are outstanding judges, highly respected by the industry and they have judged and continue to judge the major steer shows in the U.S. So obviously they exert an important influence. They have all coached very successfully livestock judging teams and in their total capacity do have occasion to see and evaluate many steers and many championship steers.

Bill Jacobs, Animal Science Dept., California Polytechnic, San Luis Obispo, California

Well Bob I hope you understand and everyone here understands how difficult this assignment is. If I was a research scientist, I could come up here and show some charts. I think I could get by a little better and try to defend some of the mistakes made in the past in the steer arena. And definitely there has been some mistakes made. I'm going to talk a little bit about the philosophy of the steer shows from the point of view of a steer judge.

If we are to face reality, this type of symposium would not be needed if steer shows would measure up to the expectations of all involved in the livestock industry. Many involved in this industry see steer shows as nothing more than an exhibition of extremes that have no relationship to what is being fed in feedlots across this country. It is my feeling that judges, producers and exhibitors all hope in the future some creditability can be obtained in the steer arena.

We have all witnessed a great deal of emphasis placed on two traits in the past -- carcass merit and frame size. We have all heard of many champions that did not grade choice and many champions that would need to be fed in excess of 200 days to grade Choice because of their extreme frame size. Most judges have found it very difficult to predict carcass merit, yet these same judges have been very successful in evaluating body type. The end result is the large frame steer is being questioned in regard to his usefulness in an industry that is going in the direction of fewer days on feed.

As I look back over the past ten years and consider the "supposed" progress made in the selection of purebred cattle, I feel this progress has been beneficial. The change made during this period and the most expensive trait to produce has been frame. This trait relates to more performance and leaner beef. It takes an extreme change in purebred livestock to make a small change in commercial production.

Somewhere along the line, however, we have forgotten that a steer cannot reproduce--he is terminal. His additional frame will contribute to his usefulness only up to a point. It is my thinking that whatever trait we select for will become a liability, not an asset, if we crowd nature too far. The 60" tall steer requires many days on feed, his heifer mates require additional days to reach puberty, and these days cost money.

Because of the "Big Steer" syndrome, exhibitors have been encouraged to manipulate weight. Weight manipulation has also been encouraged by judges who will only consider a champion that is within a very restricted weight range. Rather than asking a steer to fit into confined weight parameters, or ask a steer to lose 150 lbs three days prior to a show, would it not be better to assume all steers will kill an acceptable carcass if slaughtered at their proper end point. The proper end point is when frame, muscle and finish all come together at the same time. The packer wants muscle and adequate finish while the producer wants adequate frame for efficiency of gain. The key word here is "adequate." A word that in the past has not been accepted because it has been felt that a judge should give direction, look into the future and select the steer of tomorrow. I have no idea what the ideal steer will look like in 1990. I feel my responsibility as a judge is to put emphasis on what is needed today.

Some feel the only thing needed for an acceptable champion is for him to hang a carcass that will grade Choice. Like most judges I hope all steers I identify as a champion will grade Choice. Like most judges I understand my limitations in predicting this desired grade. Because Choice is not absolute and because Choice is not always synonymous with profit, it becomes only one of many characteristics to evaluate. Steer judges would be more accurate in predicting carcass grade if, like fat cattle buyers, they were given feed intake, kind of ration, and days on feed. It must be realized that steer judges are evaluating cattle that come from atypical backgrounds. If the judge is certain a steer will grade Choice, he is probably also certain that steer has an unacceptable cutability and has been inefficient to produce.

It has been a tradition in the show ring to give recognition to the far out, the immoderate. We have more genetic variation in beef cattle today than ever before. We have all the tools needed and all the parts available to design a variety of ideal steers. With the variation of these different parts to work with, would it not be logical to use parts that fit an industry in need of basic versatility? Over emphasis on any one part will make for an incomplete end product. Extremes can be manipulated; economically important traits are inherited.

I realize I have not drawn a concise picture of the ideal steer of today. I realize I could be easily misunderstood as being in favor of little cattle that don't grade Choice. To give an exact height, weight, and fat cover of the ideal steer is not realistic. All three things can easily be manipulated by the experienced exhibitor. The concept of relating these three variables to what is profitable to produce in slaughter cattle is more realistic. Let's remember a steer is terminal, forget this and steer shows themselves might be terminal. Any judge can identify a big, dried out steer. It is more difficult to select for useful parts that fit commercial production, but if we move in this direction the steer show of the future will have more creditability.

Bill Able, Animal Science Dept., Kansas State University

Some have said that we could breed the calf crop next year to produce the ideal steer the judges are looking for. I bet you could tell me the specifications of the ideal steer and I could get it for you in three days. If you don't believe that, go out and judge a steer show and see how many telephone calls your friends get to find out what type of steer you are looking for and they will produce what ever you are asking for. So for us to come up with some kind of a description of ideal steer we would really blow a lot of peoples minds, if we all started looking for the same things and I don't think we really want that.

We may have some people judging shows that disagree whole heartedly with me and maybe that is good. I think the reason we are here is that we have had to many steers that have been put up grand champion in shows and have a tenth of an inch backfat, weighed 1250, turned out 2 weeks and weighed 1650. If we look around the room several people are in attendance could be up here giving their discussion of the ideal steer. I feel its an honor for me to be chosen to speak to this group and give you what little information and maybe what I look for.

What is modern beef type? When we attempt to define such a broad area, we should attempt maybe to break down the phrase and understand its meaning. According to Websters New World Dictionary, the term modern means of, or characteristic of the present or recent times, up to date, not old fashion, or obsolete. The age old definition that is used in most text books, dealing with beef cattle or introductory ANSI, defines type as those characteristics which make an animal better suited for its particular purpose, which in this case means production of red meat. But when I start trying to tie all of these things together I start trying to put into my mind all the factors that would go into the production of economical beef. After a quick glance at some of the photos of champion steers since 1945, we can truly say that our forefathers also thought they had these

same goals in mind. However, we know that times and values change. The extremely short legged, short bodied, compact, overly fat beef animal has become obsolete. Spiraling feed costs, consumer preference for leaner beef and the need for higher performing animals has caused cattle men to look at their product with a very scornful eye. So with thoughts in mind, what I tried to do was to break down the old time honored adage that the feedlot industry produces choice cattle that are trim, that we don't see in the show ring.

We have a quite unique show in Kansas called the Beef Empire Show, which by the way is starting Thursday of this week, where cattle are brought in out of the feedlot and shown on foot. The first year Don Good judged the show they had a horse for him to ride through the cattle as they brought them to him. He evaluated the cattle and then they were slaughtered. They think in Kansas that Don Good is next to God. The first year he was there I think he hit them perfectly. Champion on foot was champion on the rail, Reserve Champion on foot was also Reserve on the rail. The second year he went back, the reserve was Grand and Grand was Reserve on the rail. He should have never went back. You and I both know what happened. The first year, the feedlots brought in cattle that had been on feed for probably 150 to 240 days. All Don had to do was select the trim cattle, put them up, they graded, and he did a super job. The next year he got away with the same thing. So what happened? The same thing that happens in the show ring. The feedlot people were seeing the type and shape of animal that it took to win, and that was a trim animal. So they went out in the feedyard and started bringing in cattle that were trim and hadn't been on feed long enough for them to develop enough internal fat or marbling for them to grade Choice. So they do the same thing in the feedlot as we do in the show. They bring you what you want to see. I think that is one thing we have to get across in this symposium, is that you as a judge dictate what people bring for you to look at. That is the most true thing I could say the rest of the day.

I know everybody gets a nickname as a judge. I guess mine is Butt and Bark. I don't mind that as long as that gets across. So far today I haven't heard any of the meats people or the production people really refute we need muscle and adequate fat cover in our steers, so I would have to say that I might be proud to be called the Butt and Bark man.

Now to get into these slides. What I've tried to do is to give a comparison between the Beef Empire Show and AK-SAR-BEN which I consider one of the major shows in the midwest.

If we compare the percentages of the different yield grades at the widely different shows, we see an interesting trend. In the early days of the Beef Empire Show, we had a majority of fat

cattle, mainly yield grade 3, some 4's and even some 5's. After the first show that started shifting back toward a trimmer, leaner steer. Basically this was nothing more than the educational process of showing the people what the judge wanted to see. So they shifted and as a result, a majority of the cattle today are yield grade 1's and 2's and some 3's. No yield grade 4's and 5's.

At the AK-SAR-BEN, basically, the same trend has been noticed. The cattle are somewhat larger, later maturing, definitely leaner and a higher percentage of yield grade 1's and 2's. If you compare the data in 1973, the feedlot steers were 30% yield grade 2's as compared to 28% at the AK-SAR-BEN. In 1977, the feedlot steers were 46% yield grade 2's as compared to 47% at the AK-SAR-BEN. Very comparable data between the two shows.

We have had a lot of discussion relative to the amount of fat necessary over the rib on some of our cattle. I personally think that between 0.3 - 0.4 inch of backfat in cattle is acceptable. We have been too super critical of 0.4 inch of fat on our show cattle. If we compare the Beef Empire Show and the AK-SAR-BEN, cattle that have less than 0.3 inch of fat on them have shown an almost steady increase. The cattle in the 0.3 to 0.45 inch category have remained fairly steady, and the fatter cattle (over 0.5" inch of fat) have decreased over time. But what has happened to quality grade? The first two years of the Beef Empire Show, which again is a feedlot show, 46% of the steers graded Prime, 51% Choice and 3% Good. You can go back and relate this to a high percentage of yield grade 4's and 5's at that particular time. We have got to hit a happy medium between the two.

However, during the last 10 years, the percentage of Prime graded cattle has become almost nonexistent. Very few cattle are being fed long enough to reach the Prime grade. Don Good did a super job of convincing the feeders to do away with the backfat and get a much higher or more desirable yield grade score.

At the AK-SAR-BEN show the last 10 years, the percentage of Choice graded steers have decreased from 69% to 23%, while the percentage of Standards have increased from 0% to 28%. The cattle have gotten larger, later maturing and so lean they simply will not grade with a minimum of fat cover.

At both shows, cattle with 0.3 to 0.45 inch of backfat have a 10-20% higher Choice percentage than cattle under 0.3 inch.

There has been a tremendous decrease at our major shows in English and Charolais crosses. Simmentals, Limousin, Chianinas and other exotic breeds have all increased. Basically what we are talking about is genetics vs. environment. Full feeding

should be a pretty good idea. Let those old calves run to a self-feeder and select a show to go to rather than select one steer and hope that he can make all eight shows. This is the biggest fault we have. Instead, we put the steer on limited feed until he gets his belly sucked up or if he doesn't get it that way, you can put the running boots on him and get him in good shape that way. Surely we can be more practical than that.

I do not believe that our major shows can provide as much information to the judge as should be provided at a local show. The local show should be the place that you could get all of the information (weight gain, days on feed, etc.). I don't think you can do it at a state show or any national show. The environments are simply different at every place and the data becomes less meaningful. However, at the county level, environment should be fairly equal, and some information (average daily gain, days on feed, etc.) could be beneficial. Sire, dam and breeder of the calf could also be given. This would be extremely important to local beef production. The people who are producing the end product need recognition too. Then you have a program being shown that commercial producers can relate to, and can only be beneficial to their programs and help them do a better job.

So as far as my ideas of the ideal steer are concerned, first, we can not set weight limits. If you set limits, exhibitors will try and meet those limits one way or the other. But, my ideal steer would probably weigh between 1200 and 1300 lbs. Under today's conditions, have 0.3 to 0.4 inch of fat at the 12th rib and grade low choice as long as the industry requires that. When times change, I think we can change with them and keep modern that way.

Gary Minish, Virginia Tech, Animal Science Department

This is my opportunity from the standpoint of a steer judge to express some of my opinions.

First, there is one comment that has been made several times this morning, i.e., that steer shows don't have anything to do with the industry. I totally disagree with that statement, from the standpoint of three things. First, right or wrong, steer shows do have a significant impact on type changes. Secondly, steer shows significantly impact the popularity of breeds. There is tremendous interest from several breeds represented here and that is good. Breeds have come and gone because of steer shows. Third, steer shows have a very large impact on fitting and grooming procedures in purebred shows. Most of these changes that come along that we try to do away with as far as fitting cattle started with our steer shows. So steer shows do impact the industry from a type, breed popularity and grooming standpoint.

In addition, steer shows do affect the cow calf man, feedlot operations and the packers. The present growth pattern, frame size, trimness, all physical traits and even the performance information that we have tried to select for visually in steer shows are transmitted by the top bulls in our breeds and each segment of the industry is affected.

Well anyway, I'm going to make some suggestion's on how we can make some changes in the steer shows. These are my opinions.

Current beef cattle breeding can claim the use of new breeds for crossing, artificial insemination, performance and progeny testing, and computerization among its many recent innovations. Breeding systems are improving significantly, and more objective measures of progress and predictability are being attained.

Breeding cattle shows have provided a note of optimism because performance and type are not necessarily mutually exclusive. They were at one time, but today there are a significant number of sires in all breeds that transmit superior performance as well as superior type.

The steer show represents none of the above and currently has been likened to that of a "dog show."

To change this image we need to establish selection standards for show steers. My 1982-85 selection standards are as follows:

1. Live weight, lb: 1200
2. Average daily gain, lb: 3.0
3. Feed conversion F/G, lb: 5.0
4. Backfat, in: 0.3
5. Ribeye area, sq in: 13.5
6. Yield grade: 2.5
7. Quality grade: low choice
8. Structure: sound

The first question is: Can we produce and market in large uniform numbers the above show steer without any attendant problems? Yes.

The second question is: How can we do it?

1. Employ judges who can accurately evaluate assess the above parameters.
2. Register all show steers with the breed association representing the steer's sire breed.
3. Show by age classification and provide birth date, actual weight, weight per day of age and backfat

information to the judge.

4. Make all national steer shows terminal.

The third question is: Why change? Because steer shows have a tremendous impact on beef type standards and more importantly this is our largest youth program in beef production. Let's make it realistic and objective.

The Show Manager's Perspective

Bob Volk, AK-SAR-BEN

It was a pleasure earlier this year to be in Oklahoma helping to set up this Symposium. We at AK-SAR-BEN have hosted Beef Seminars in 1970, 1972 and 1977 and found them to be beneficial to our Show. I know they were also beneficial to the United States. Bob Totusek, I would suggest you adjust the mailing budget for you will be receiving requests of these proceedings from every state in America.

Under the topic I am reporting on, "Show Manager's Perspective," I would first like to give you a little background of the AK-SAR-BEN Livestock Exposition and Rodeo. Our show is open to 4-H members only from Nebraska and the states touching plus Minnesota or a total of eight states with 2,500 exhibitors showing 5,300 head of livestock. All is made possible by the proceeds of thoroughbred horse racing. We can thank our forefathers who set up thoroughbred racing in 1935 on a non-profit basis for making it all possible. We are the only state in America whose proceeds from racing are used for agricultural, charitable and educational activities and one example is the AK-SAR-BEN Livestock Show, the world's largest 4-H show. There are many others which combine 4-H and FFA but AK-SAR-BEN is the only one that is exclusively 4-H and we are now in our 55th year.

Why are we here? Because of the youth of America and this symposium should reflect on your kids, and changes, if any are made, should be made only if they are good for the kids. If they are good for them it will be good for the show. That is the motive of our Executive Committee. These shows should be family affairs and emphasize the youth. I believe the best times of my life and the time my family was the closest knit was when Bob and Jeanette and sons Jay and Clark were showing steers and heifers in the 4-H shows of America.

We at AK-SAR-BEN pay our own premium money whereas other shows develop premium money from breed associations. I believe it is wrong to show by breed. We have not had breeds since 1978. I was convinced at the 1976 show where in one Angus steer class the first three purples, as placed by Harlan Ritchie, were the best three but all three steers had horns or scurs. Yet all three had blood typed to say they were Angus. That is ridic-

ulous. We have no more problems with breeds and it is a pleasure to look at our classes because they are all by weight. Last year one of the weight classes varied only 10# and some varied only 5# with an average of 40 head per class. We have a minimum weight limit of 900 pounds. No upper weight limit is enforced as we want the kid to come to our show and not to shrink the steer into a weight limit.

We require all market steers to gain 2# per day and market heifers 1.8# per day. They must have a weigh-in prior to April 1 for our late September show.

My Director of Agricultural Activities, Sherman Berg, and General Superintendent, Doyle Wolverton, have been to shows where they measure cattle and talked to judges who judged them. We are going to measure the feeder calves in September 1982 and show them by height. However, we plan to continue monitoring the height deal, remembering our cattle are sold by the pound.

(Rules for Grooming Slide) RULES FOR GROOMING

1. Clipping, trimming or blocking (all species) by anyone other than exhibitors will not be permitted at this show.
2. Grooming other than clipping, trimming or blocking may be done only by exhibitors and immediate members of an exhibitor's family.
3. Upon violation of above rules, exhibitor automatically is disqualified from show and forfeits all premium monies.
4. In the beef show the use of artificial tail fins or the addition of any hair or hairlike substance to the animal's body excluding false tails, will be permitted.
5. No change of the major color pattern of the animal by painting or dyeing of the animal will be allowed.
6. Any grooming material that allows color to come off from any animal will not be allowed at the show. Violators will be dropped one ribbon group in the live show and excluded from carcass competition when found. Animals will be shipped to cooperating packer if initial placing was blue or purple.

Now, let's take a look at some AK-SAR-BEN champions.

(Grand Champion Steer slides)

1978 - Troy Thomas, Harrold, South Dakota - 1,265#, 2.90 ADG,
Maine-Anjou-Shorthorn-Angus carcass: weight 864#,
loin eye area 15.7 sp. in., fat inches .2, kidney,
heart and pelvic 1.5 yield grade 1.56, cutability 53.07
and quality grade Choice-.

- 1979 - Sara Stille, Storm Lake, Iowa - 1,255# Simmental-Angus carcass: weight 837#, loin eye area 16.9 sq. in., fat inches .2, kidney, heart and pelvic 2.0 yield grade 1.17, cutability 53.96 and quality graded Good.
- 1980 - Steve Yackley, Onida, South Dakota - 1,240#, ADG 2.88, Chainina-Angus sired by Motivator carcass: weight 818#, loin eye area 15.7 sq. in., fat inches .25, kidney, heart and pelvic 2.0, yield grade 1.734, cutability 53.10 and quality grade Choice-.
- 1981 - Stacey Gropper, Grinnell, Iowa - 1,265# Chianina-Angus, ADG 2.38, carcass: weight 831#, loin eye area 14.4 sq. in., fat inches .3, kidney, heart and pelvic 2.0, yield grade 2.19, cutability 52.02 and quality grade Good-.
(Champion Heifer Slide)
- 1980 - Steve Yackley, Onida, South Dakota - 1,145#, ADG 2.29, Angus Cross carcass: weight 738#, loin eye area 12.0 sq.in., fat inches .3, kidney, heart and pelvic 2.0, yield grade 2.61, cutability 51.07 and quality grade Good+.

I would suggest if you want to add a class to your show, add a market heifer class. We have traditionally had about 40% of the market beef that have gone to slaughter have been heifers. That should make the ladies happy as it did my former secretary. About 10% of 1000 head entered are heifers and are divided into three classes by weight.

At the 1970 AK-SAR-BEN Beef Seminar we established guidelines for our shows when we moved from a 70 purple ribbon carcass competition to a terminal show where all market beef are slaughtered. In addition, as a result of the 1981 show, in which the quality grade continued to decline, I asked the University of Nebraska, that's "Go Big Red" territory, Animal Science Department to take a look at the last ten years of carcass competition. This is what it looked like:

(Ten Year AK-SAR-BEN Beef Summary slide)

NO.	CARCASS		YIELD				%	CHOICE
	HEAD	WT.	LEA	FAT	KPH	GRADE		
1981	681	765.8	14.76	.28	2.05	1.789	23.9	
1980	757	770.02	14.30	.29	1.8	1.8	29.8	
1979	674	756.7	14.35	.32	2.1	1.9	28.8	
1978	655	756.7	14.4	.32	2.1	1.9	45.0	
1977	916	745.3	14.1	.34	2.2	2.2	27.0	
1976	1021	754.64	13.96	.38	2.7	2.4	51.3	
1975	919	707.80	13.57	.37	2.8	2.3	37.9	
1974	874	694	13.01	.40	3.0	2.6	38.3	
1973	981	672.99	12.87	.42	2.9	2.9	49.1	
1972	977	669	12.47	.51	3.1	2.8	69	

In order of importance you can see we have lost in percentage of choice grade cattle down from 69% to 23%, carcass weight

is up 100#, loin eye area is up 2 square inches, the fat cover is cut almost in half .51 to .28, kidney heart pelvic fat is down and yield grade is down from 2.8 to 1.7. The cattle have gotten so lean they don't grade. The percentage of Choice in 1976 was up because we let the red and white withdraw from the sale.

(Dark Cutter - All Cattle slide)
 (Dark Cutter - Packing Plant slide)
 (Carcass Yield by Grade slide)
 (Carcass Grade by Yield slide)

STATE PERCENTAGES																	1981 All Cattle	
TE	UT	BLK	UT	ST-	ST	ST+	GD-	GD	GD+	CH-	CH	CH+	PR-	PR	PR+	D.CUT		
IA	0	3	0	15	0	20	45	0	55	53	5	4	0	0	0	34	22	
	0.0	1.32	0.0	6.50	0.0	12.26	28.51	0.0	24.12	23.25	2.19	1.75	0.0	0.0	0.0	15.79		
NE	0	5	0	19	7	53	88	0	20	42	6	2	0	0	0	45	34	
	0.0	1.45	0.0	5.51	0.58	16.23	25.51	0.0	28.41	20.00	1.74	0.58	0.0	0.0	0.0	13.04		
MX	0	1	0	4	2	16	22	0	22	15	2	1	0	0	0	8	6	
	0.0	1.13	0.0	4.71	2.35	18.82	25.88	0.0	25.88	17.65	2.35	1.18	0.0	0.0	0.0	9.41		
	0	0	0	1	1	4	7	0	4	4	0	0	0	0	0	3	5	
	0.0	0.0	0.0	4.35	4.35	17.39	30.43	0.0	26.09	17.39	0.0	0.0	0.0	0.0	0.0	13.04		

PLANT PERCENTAGES																	1981 All Cattle	
NT	UT	BLK	UT	ST-	ST	ST+	GD-	GD	GD+	CH-	CH	CH+	PR-	PR	PR+	D.CUT		
1	0	5	0	16	4	43	120	0	130	105	13	7	0	0	0	30	44	
	0.0	1.08	0.0	3.46	0.86	13.41	25.92	0.0	28.08	22.68	2.81	1.51	0.0	0.0	0.0	6.48		
2	0	4	0	23	1	41	62	0	51	34	0	0	0	0	0	62	21	
	0.0	1.83	0.0	10.55	0.46	18.81	28.44	0.0	23.39	16.51	0.0	0.0	0.0	0.0	0.0	28.44		

CARCASS WEIGHT YIELD BEEF

Weight Yield All Cattle (681)	-----	63.32
Weight Yield 71 Purple Cattle	-----	64.67
Weight Yield Blue Cattle	-----	63.56
Weight Yield Red Cattle	-----	62.72
Weight Yield of 14 Champions	-----	65.12

CARCASS YIELD BY GRADE

	% Choice	% Good	% Standard	% Bullock
64% or Less	23.7	55.7	19.4	.2
65 - 66%	23.8	59	15.6	.2
67% or More	40.5	43.2	13.5	.3

CARCASS GRADE BY YIELD

	64% or Less	65 - 66%	67% or More
Choice	71.6	18.7	9.67
Good	74.8	20.6	4.6
Standard	79.1	16.5	4.3
Bullock	66.7	22.2	11.1

Now the good thing that comes from all this data is that it is not all negative. Look at this slide that shows over-fat cattle do not exist in our show or in any show in America today.

(1981 Yield Grade slide)

1981 AK-SAR-BEN YIELD GRADE

YIELD GRADE 1 and 2	655
YIELD GRADE 3	24
YIELD GRADE 4	2
YIELD GRADE 5	0
TOTAL HEAD	681

50-60% of beef sold in America is not graded by the U.S.D.A. and, take the Safeway chain, say 1700 stores, that sell beef that does not have a quality grade. I ask, is our show ring wrong? I think our cattle are somewhat ahead of the time but we still sell them by U.S.D.A. grades. The only way you can sell is on the rail.

(1981 Beef Price slide)

1981 AK-SAR-BEN BEEF PRICE
STEERS

QUALITY GRADE	CARCASS WEIGHT	YIELD GRADE				
		1	2	3	4	5
USDA CHOICE & PRIME	899 down	111.00	109.50	108.00	96.00	93.00
USDA GOOD STANDARD	899 down	All weights regardless of yield grade			103.50	
		HEIFERS				
USDA CHOICE & PRIME	over 500	105.50	104.00	102.50	93.50	90.50
USDA GOOD STANDARD	over 500	All weights regardless of yield grade			96.00	

1. Base price of Choice yield grade 3's is \$1.00 per 100# dressed over the quote of direct cattle trade Omaha USDA quoted Friday noon.
2. Spread for Choice to Good grade and 3 to 4 yield grade will be determined from Monday yellow sheet close. 5's are #3.00 off 4 price.
3. 900#-1000# carcass steers are minus \$1.00; 1000# - 1000# carcass steers minus \$2.00 of 5-9 price.

4. Bullocks \$1.00 below base price for goods.
5. Dark cutters will be discounted #2.00 off his price group.
6. Bruises will be discounted .50 per side bruised per hundredweight of carcass.

Some other good things we do include an AK-SAR-BEN Catch-A-Calf class started in 1978 by purchasing cattle we knew were at least 1/2 English bred. These calves were purchased by AK-SAR-BEN and given to kids who were successful in catching a rodeo calf during the Rodeo performance. These cattle over the last 4 years have averaged over 50% Choice because we know the background and we suggest to the kids that they take them to no more than one other show before ours. The program also emphasizes average daily gain. These cattle come from the Wagonhammer and Adamson ranches and, as I mentioned, are at least 1/2 English bred meaning, in this case, Angus.

AK-SAR-BEN also has a class called Performance Market Steer. These steers have a certified birth date and known sire and dam and are fast-gaining, big cattle. They have weight per day of age ranging from 2.3 to 2.9. Carcass weight ranged from 1,115# to 1,580# last year. These are cattle that grow tremendously fast. In this class last year there were 29 head of which 10 graded Choice, 13 graded Good+, 4 Good and 2 Standard. They are big, beefy cattle that are also important to the cattle business. The carcass awards in this class are based on weight per day of age and merit given equal emphasis to each.

I think I have taken more than my allotment of time but want to say the guidelines still are the same as 1970 and should be choice for quality and yield grade 2 or better.

The greatest thing we have in common in beef steer show business is the phrase, "Grand Champion." It is better than being in the Top Ten or No. 1 in football. Oh, the Boy Scouts and Girl Scouts would love to say Grand Champion. Yes, I hesitate to say this but even the church would like to use the words, Grand Champion. Because these words, Grand Champion, make kids want to win and succeed and to be a Champion. Let's hope we in this room are Champions today and tomorrow in making things better for beef shows.

I trust I have given you enough information to invite questions from the Reaction Panel.

Ken Hartman, National Western

I would like to thank you for asking me to be here today. This is a great honor for me to be on the Show Manager's Panel.

As somebody said earlier and I think everyone on this panel and every show manager out there is deeply concerned with steer shows. Steer shows are still a very important part of the livestock show business. They cannot only be educational to the

youth directly involved with the project, but also beneficial to the producer, the feeder and the packer. The show presents building blocks that arise for the young men and women as they learn to win and lose. They learn to make decisions, hopefully select genetic superior steers, keep records, learn financial responsibility and most of the time make new friends. Many individuals continue on in agriculture because they became enthused by getting involved with a 4-H or FFA project. Certainly we have to be enthused and love the business in order to stay in agriculture today. Needless to say the monetary means have really not been there in the most recent years but we won't get into that. These are only a few of the good points that we really feel steer shows offer to you and we want to try and keep this available. This has been stressed earlier.

Let me touch on a few of the problems that steer shows can cause at least from the management side, looking at it from trying to maintain an image. Its my feeling, and this has been touched on a number of times, that our number one problem that we face today is integrity or credibility. Without integrity in this business, the steer shows will fail. I challenge you that the youth involved, at least at this young age, are not at fault. Integrity has to begin with the parents, the 4-H leaders, the FFA advisors and the environment that they are surrounded with. Integrity not only has to be in the youth but also in the breeders, the producers of these feeder calves which these kids are taking and bringing back to the shows. Because of this lack of integrity as you are probably well aware of it seems like more and more rules have been implemented and created to control the honesty of the show.

I hate rules. I wish we didn't have to have any rules in the world but rules are made to try to improve the situation and not try to hurt it. Now I know and everybody says when you make a rule, before you get the rule typed and printed someone has already figured out how to beat it, or how to get around it. But rules are made to try and improve the show and hopefully we don't have to put any more rules in than are necessary. There has been a number of discussions here this morning about frame size, scale & weight. Let me tell you folks, we at Denver are not afraid to try something. We are going to show our steers by height this year. Everybody says they are going to stop by and take a look at us. One of the big problems we've seen over the last few years has been repeated here many times today and that is the fact that they are shrinking these steers from 14-15-1600 pounds back to 1250 pounds because the judge said that he wants a 1250 pound steer for his champion steer and they will bring them to you. We hope that by showing and classing these steers by height that it will eliminate the encouragement for the exhibitors to shrink the steers back to a particular weight. The hope is with the animals all being of the same height that the thickest, meatest animal in that particular class would win. It should also make it easier for the judge to select for carcass ability and not select just for the tallest. As Bob Long said

earlier, it doesn't take any real smart individual to walk out and select the tallest steer in the class. We have noticed a trend that we thought was happening. The judges were picking the tallest steer in the class down to the smallest steer. We did take measurements, I've got them with me. I can quote you a few figures off of that but this certainly was the case. In most all classes, that the top placing steers were your tallest steers going down to your shortest steer being your last placing in the class. It was very easy for you to say I could sure follow that judge. I know exactly what he is doing. Well we are going to take that away and make the judge get down and really look for carcass ability and factors that are more meaningful to the industry.

The other thing that we hope measurements will do is to furnish fresher cattle to the judge. When we say fresh at least we hope that they have not been depleted of 300 pounds of moisture. We are one, like many other shows, that are having a hard time selling the product. This year we have two packers in our area. There have been others at times. But Chuck and myself, before this show, were making arrangements to kill all of our steers and the packers said, "Don't even come talk to us. We don't want to hear about your problem. We have had your cattle before and we don't want them." Thank goodness we have some good friends and our friend Monfort come through that day. We had to ship our cattle from Denver to Grand Island to kill. The only ones that we didn't were the steers we sold in the premium sale. Those that were sold in the premium sale were taken home by the buyer and put in their locker. However, the buyer would call up and say, "Where in the world did this beef come from? I can't eat it." Therefore, we started this year, instead of letting the buyer take the poor quality meat home, we got box beef. We supplied them with really choice steaks. At least we got our buyers back. And let me tell you when we start going out and promoting this premium sale. We are asking people to come support the youth. Then they get a poor product, we lose the premium sale and we have lost a big part of the steer show. So we have to do something about getting a better quality product to the packer and the consumer. The one other thing that I might tell you since Bob Volk has already plugged AK-SAR-BEN so much, the National Western in the fall of 1983 will be going with a Fall Junior Classic Show. This will be for steers, barrows, lambs, breeding heifers and of course the Juniors will be involved with horses in this also. One of the reasons that we are doing this is to try to promote what the beef industry, the hog and the sheep industry should be and that is getting the animals to market at the right time. We have probably been encouraging some of the youth to hold these steers from the time that they are really ready, over to January and of course, we also need more facilities and this is again a better utilization of our facility. But one of the main considerations that our committee made in adopting this proposal is that we are going to more desirably fit the time that all of these classes of livestock ought to be marketed. So in 1983 we will be going to a

Junior Fall Classic and marketing these steers hopefully at a much better time.

In summary I would like to say that the show recognizes the steer show and the impact that they should have on the industry. We also recognize the problems that can rise from such an event and our doing utmost to make them a meaningful event for all segments of the industry. Thank you!

NATIONAL WESTERN STOCK SHOW

JUNIOR SHOW STEERS

1982

BREED HEREFORD

CLASS HEAVY WEIGHT (1180 - 1439)

ENTRY NUMBER	PLACING	WEIGHT	HIP HEIGHT
53	1st	1216	52 $\frac{1}{2}$
57	2nd	1329	53 $\frac{1}{2}$
44	3rd	1439	53 $\frac{3}{4}$
56	4th	1250	50 $\frac{1}{2}$
63	5th	1180	51
64	6th	1184	51

CLASS LIGHT WEIGHT (978 - 1173)

42	1st	1146	52 $\frac{1}{2}$
58	2nd	1124	51 $\frac{3}{4}$
55	3rd	1173	51
43	4th	1168	51
62	5th	1128	51
59	6th	1172	50
46	7th	978	48

NATIONAL WESTERN STOCK SHOW

JUNIOR SHOW STEERS

1982

BREED POLLED HEREFORDCLASS HEAVY WEIGHT (1119 - 1252)

ENTRY NUMBER	PLACING	WEIGHT	HIP HEIGHT
7	1st	1199	51 $\frac{1}{2}$
68	2nd	1251	52 $\frac{3}{4}$
8	3rd	1121	50
10	4th	1165	49 $\frac{1}{2}$
9	5th	1119	48 $\frac{3}{4}$
13	6th	1252	50 $\frac{1}{2}$
36	7th	1127	51
22	8th	1129	48 $\frac{3}{4}$
32	9th	1172	51
28	10th	1158	48 $\frac{1}{2}$
3	11th	1189	48 $\frac{3}{4}$

CLASS LIGHT WEIGHT (958 - 1117)

69	1st	1084	48 $\frac{1}{2}$
18	2nd	1029	49
17	3rd	1021	48 $\frac{3}{4}$
33	4th	1001	49 $\frac{1}{2}$
19	5th	1036	48
67	6th	958	47 $\frac{1}{2}$
31	7th	981	49
21	8th	1062	50
6	9th	999	49 $\frac{1}{2}$
15	10th	1117	48 $\frac{3}{4}$
30	11th	970	49

NATIONAL WESTERN STOCK SHOW

JUNIOR SHOW STEERS

1982

BREED SHORTHORN

CLASS HEAVY WEIGHT (1238 - 1342)

ENTRY NUMBER	PALCING	WEIGHT	HIP HEIGHT
76	1st	1247	52 3/4
79	2nd	1253	54
77	3rd	1315	55 1/2
73	4th	1245	52 1/2
71	5th	1238	51
81	6th	1243	54
80	7th	1342	53 1/2

CLASS LIGHT WEIGHT (997 - 1228)

89	1st	1216	53 1/2
86	2nd	1160	51 1/2
88	3rd	1228	55 1/2
87	4th	1130	51 3/4
90	5th	997	52 3/4
78	6th	1215	52
82	7th	1220	53

NATIONAL WESTERN STOCK SHOW

JUNIOR SHOW STEERS

1982

BREED LIMOUSIN

CLASS HEAVY WEIGHT (1222 - 1327)

ENTRY NUMBER	PLACING	WEIGHT	HIP HEIGHT
241	1st	1223	54 $\frac{1}{2}$
151	2nd	1327	56 $\frac{3}{4}$
162	3rd	1323	55
142	4th	1254	54 $\frac{1}{2}$
271	5th	1232	55 $\frac{1}{2}$
155	6th	1312	55
145	7th	1276	53 $\frac{3}{4}$
143	8th	1299	54
136	9th	1222	54
364	10th	1224	53
144	11th	1293	53 $\frac{1}{2}$

CLASS LIGHT WEIGHT (1066 - 1203)

140	1st	1154	54
141	2nd	1203	53 $\frac{1}{2}$
137	3rd	1198	54 $\frac{1}{2}$
135	4th	1203	54 $\frac{1}{2}$
204	5th	1125	53 $\frac{3}{4}$
158	6th	1126	54
153	7th	1188	54 $\frac{3}{4}$
139	8th	1186	54
146	9th	1180	52 $\frac{1}{2}$
161	10th	1066	51 $\frac{1}{2}$
138	11th	1174	53 $\frac{1}{2}$

NATIONAL WESTERN STOCK SHOW

JUNIOR SHOW STEERS

1982

BREED SIMMENTALCLASS HEAVY WEIGHT (1285 - 1526)

ENTRY NUMBER	PLACING	WEIGHT	HIP HEIGHT
114	1st	1366	57 $\frac{1}{2}$
106	2nd	1321	57 $\frac{1}{2}$
94	3rd	1317	57
96	4th	1298	54
107	5th	1365	56 $\frac{1}{2}$
130	6th	1309	54
117	7th	1315	59
92	8th	1361	57 $\frac{3}{4}$
121	9th	1289	56 $\frac{3}{4}$
104	10th	1319	None
120	11th	1323	57 $\frac{3}{4}$
102	12th	1484	54 $\frac{1}{2}$
288	13th	1285	56 $\frac{1}{2}$
115	14th	1526	57
129	15th	1343	None
97	16th	1328	54 $\frac{1}{2}$
110	17th	1291	53 $\frac{1}{2}$

CLASS LIGHT WEIGHT (1040 - 1265)

118	1st	1250	54 $\frac{1}{2}$
108	2nd	1126	53 $\frac{1}{2}$
111	3rd	1201	54 $\frac{1}{2}$
95	4th	1221	56
359	5th	1219	54 $\frac{1}{2}$
126	6th	1040	54
101	7th	1256	54 $\frac{1}{2}$
109	8th	1245	51 $\frac{1}{2}$
99	9th	1168	52 $\frac{1}{2}$
122	10th	1260	53 $\frac{1}{2}$
116	11th	1227	50 $\frac{1}{2}$
100	12th	1148	53 $\frac{1}{2}$
93	13th	1174	48 $\frac{3}{4}$

NATIONAL WESTERN STOCK SHOW

JUNIOR SHOW STEERS

1982

BREED OTHER BREEDS & CROSSESCLASS HEAVY WEIGHT (1318 - 1508)

ENTRY NUMBER	PLACING	WEIGHT	HIP HEIGHT
287	1st	1330	57 $\frac{1}{2}$
353	2nd	1375	56 $\frac{1}{2}$
225	3rd	1414	57 $\frac{3}{4}$
282	4th	1413	56 $\frac{1}{2}$
243	5th	1405	58
366	6th	1326	57 $\frac{1}{2}$
170	7th	1318	56 $\frac{1}{2}$
345	8th	1320	54 $\frac{3}{4}$
269	9th	1393	54 $\frac{1}{2}$
351	10th	1320	56
173	11th	1508	56 $\frac{3}{4}$
291	12th	1435	56
347	13th	1332	54
344	14th	1377	55 $\frac{3}{4}$
290	15th	1489	56 $\frac{1}{2}$
363	16th	1340	56 $\frac{1}{2}$
192	17th	1347	54 $\frac{1}{2}$
342	18th	1340	55

CLASS HEAVY WEIGHT (1283 - 1317)

305	1st	1315	56 $\frac{1}{2}$
184	2nd	1292	55 $\frac{1}{2}$
270	3rd	1310	54 $\frac{3}{4}$
356	4th	1299	57
319	5th	1283	55 $\frac{1}{2}$
244	6th	1286	55
249	7th	1291	55
167	8th	1306	57 $\frac{1}{2}$
181	9th	1284	55
180	10th	1301	58
199	11th	1293	55 $\frac{1}{2}$
223	12th	1298	54 $\frac{3}{4}$

BREED OTHER BREEDS & CROSSES

CLASS HEAVY WEIGHT (1318-1508) Continued

ENTRY NUMBER	PLACING	WEIGHT	HIP HEIGHT
285	13th	1316	54 $\frac{1}{2}$
203	14th	1304	56 $\frac{1}{2}$
354	15th	1317	55 $\frac{1}{2}$
326	16th	1300	56
283	17th	1283	55 $\frac{1}{2}$
193	18th	1287	52 $\frac{1}{2}$

CLASS MEDIUM WEIGHT (1242 - 1279)

301	1st	1279	56 $\frac{1}{2}$
323	2nd	1271	55 $\frac{1}{2}$
335	3rd	1242	55 $\frac{1}{2}$
343	4th	1263	55 $\frac{1}{2}$
242	5th	1278	56
297	6th	1266	55 $\frac{1}{2}$
254	7th	1275	56
341	8th	1249	54 $\frac{1}{2}$
171	9th	1267	56 $\frac{1}{2}$
299	10th	1255	54 $\frac{1}{2}$
334	11th	1276	56 $\frac{1}{2}$
261	12th	1248	55 $\frac{1}{2}$
309	13th	1264	52 $\frac{3}{4}$
202	14th	1266	56
274	15th	1245	54 $\frac{1}{2}$
185	16th	1274	56 $\frac{1}{2}$
329	17th	1242	None
333	18th	1264	55 $\frac{1}{2}$
205	19th	1268	57 $\frac{3}{4}$

CLASS MEDIUM WEIGHT (1222 - 1241)

339	1st	1228	56 $\frac{1}{2}$
265	2nd	1238	53 $\frac{3}{4}$
182	3rd	1232	55 $\frac{1}{2}$
316	4th	1235	56
228	5th	1235	56 $\frac{3}{4}$
340	6th	1237	56

BREED OTHER BREEDS & CROSSES

CLASS MEDIUM WEIGHT (1222-1241) Continued

ENTRY NUMBER	PLACING	WEIGHT	HIP HEIGHT
310	7th	1222	54 3/4
183	8th	1233	55
281	9th	1241	53 3/4
338	10th	1236	55
295	11th	1224	54 3/4
259	12th	1239	53 3/4
210	13th	1233	52 1/2
255	14th	1239	57 1/2
166	15th	1237	56 1/2
350	16th	1225	53 1/2
317	17th	1222	52 1/2
307	18th	1228	53 1/2

CLASS LIGHT WEIGHT (1184-1218)

209	1st	1201	55 1/2
227	2nd	1214	55 1/2
256	3rd	1204	55 1/2
221	4th	1187	54 1/2
331	5th	1218	54 1/2
246	6th	1193	55 1/2
306	7th	1210	55 1/2
264	8th	1209	54 1/2
215	9th	1188	55 1/2
328	10th	1197	54 1/2
177	11th	1206	52 1/2
318	12th	1204	53 1/2
201	13th	1217	53
266	14th	1184	52 1/2
272	15th	1201	53 1/2
280	16th	1192	52 1/2
179	17th	1212	52
289	18th	1196	56 1/2

CLASS LIGHT WEIGHT (1096-1180)

337	1st	1109	54 1/2
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BREED OTHER BREEDS & CROSSES

CLASS LIGHT WEIGHT (1096-1180) Continued

<u>ENTRY NUMBER</u>	<u>PLACING</u>	<u>WEIGHT</u>	<u>HIP HEIGHT</u>
168	2nd	1158	52 $\frac{1}{2}$
278	3rd	1121	54 $\frac{1}{2}$
194	4th	1160	53 $\frac{1}{2}$
279	5th	1137	52 $\frac{3}{4}$
206	6th	1150	54 $\frac{3}{4}$
222	7th	1176	53 $\frac{1}{2}$
176	8th	1180	54 $\frac{1}{2}$
352	9th	1167	54
330	10th	1131	54 $\frac{3}{4}$
348	11th	1152	53 $\frac{3}{4}$
237	12th	1174	53 $\frac{3}{4}$
349	13th	1134	54
214	14th	1152	52 $\frac{3}{4}$
298	15th	1145	56
273	16th	1096	52 $\frac{1}{2}$
362	17th	1180	54 $\frac{3}{4}$
236	18th	1139	51 $\frac{1}{2}$
260	19th	1179	54 $\frac{3}{4}$