

Stalking the elusive breeding program, part II: Ferretting out multipliers, merchandisers, and breeders

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Editor's note: Dr. Chamberlain continues leading our search for a breeding program with a field trek designed to more precisely identify our sought-after species. A guest lecture states the problem and issues a challenge.

Let me set the stage for what follows. It was a college classroom; the class was "Breeds of Livestock"; the class included the majority of the university livestock judging team that had won the Chicago International the previous fall as well as sons and daughters of several prominent purebred breeders in the state; several of those young people had already expressed an interest in jobs in the purebred industry or to be purebred breeders; the guest lecturer was a well-respected geneticist coordinating beef breeding programs for the USDA; the subject of the lecture "The Role of the Purebred Breeder in Livestock Production"; the time was in the early 1960s. The geneticist and I had discussed some ideas I was trying to get across and I knew many of his ideas which was why I had invited him to lecture to the class, but I was not prepared for his opening sentence.

"The majority of purebred breeders are S.O.B.'s." The silence following that opening statement was intense, the hostility and antagonism from the class became oppressive. I could sense several of the class members were about to get up and walk out.

The geneticist allowed the impact to set in and then continued, "Now that I have your attention and before you say I'm the same and walk out, give me a chance to explain and to challenge your thinking. You hopefully, might get some ideas that will enable you to make real contributions to the livestock industry." Prophetically, that class later produced more people who became directly involved in making a living in the purebred industry than any other the author taught in 33 years. It included people who have become breed secretaries, breed fieldmen, purebred breeders and commercial breeders among other related occupations.

The geneticist began by saying that most purebred producers multiply animals with registration papers. This was necessary to have animals to sell to have an income and to show a profit whether real or through tax incentives.

Those animals produced might or might not make an improvement in livestock production. That would de-

pend on what one defined as improvement. That in turn brought up the merchandising ideas. His contention was that many purebred producers were more interested in merchandising livestock for the highest possible dollar than in improving livestock.

He questioned how many livestock producers had been in a packer cooler to look at carcasses or in a retail

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Excerpts from a letter by Dr. Chamberlain to John Crouch, American Angus Association's director of performance programs

Dear Johnny:

Enclosed are the three articles I talked to you about. I think they raise some issues we need to think about in the cattle industry in general and in the Angus breed in particular. They will provoke some controversy, I suppose... and may not be too popular with some.

I am in a position where I can say some of the things I have. I am old enough (65) so it is doubtful it will haunt me in the future. I am not big enough (9 cows now building to 20) that I have to worry about sales and reputation. And, I don't have to depend on the cattle for a living.

The articles... were not spur of the moment ideas. It took a year and several rewritings to get them in their present shape.

About the herd and our plans: as I told you, we are going to stress maternal values and carcass data. The three maternal bulls we picked were 1) Shoshone, 2) Nichols Landmark L56, and 3) Eileenmere Lad 549 (Skyhigh). The first two were obvious choices from a maternal and milk point of view, and they had good weaning and yearling weights... Skyhigh had good maternal and milk values... His plus 3.0 pounds on birth weights would let him be used on heifers.

In addition, he sired Pine Drive Big Sky and several other show cattle that had some style and also looked like they had some meat in them.

The pictures of Rito Excel 809 (The Captain) have impressed me since I first saw them.

In the future we will probably cross daughters of one of the four above bulls to one of the others. Another sire we are considering is 9J9 for milk and muscle.

The boys' steer showing record of having champions in the Angus, Hereford, and Shorthorn divisions as well as a reserve grand champion at Knoxville with the high (over 80 percent) of choice carcasses with an average Yield Grade of just over 3 speaks for itself. During that time, the boys showed over 75 steers. I think it demonstrates we could feed winning show steers that at the same time would be good market steers...

Sincerely,

"Chuck"
C.C. Chamberlain

butcher shop to see what was being purchased at the retail level. He argued that until producers could define their final product in detail they could not determine what kind of live animal it took to produce it. Until producers knew the kind of live animal needed to produce desirable "meat market meat" they could not intelligently set up the breeding programs necessary to establish the pool of genes required to obtain that goal with any degree of consistency. This, he admitted, was a difficult long range goal that in most cases would take a lifetime.

He continued that rather than establish long-term goals, the average purebred multiplier took the short-term approach of merchandising whatever fads, fancies, or foibles were in current fashion. Remember the time frame, the early 1950s, as he cited some of the fads, fancies and foibles then in fashion in the cattle industry: the emphasis on cow families, show ring winnings, the use of nurse cows and high concentrate rations to get excessive early growth and finish, pedigree popularity without consideration for productivity or soundness. There were others, but those of you who were in the cattle business in the 1950s & 60s especially get the idea. He further argued that it was easier to merchandise fads, fancies and foibles than to merchandise economical productivity, structural correctness, breeding soundness, or correct market type.

In the previous article the author started with merchandising meat at the retail level. There is definite limitation on the size of retail cuts which can be sold. From that point of departure he proceeded backward to the size of the packer carcass (600-800 lb.) to the live steer (1,000-1,250 lb. with .25 to .4 inches of fat) at 15-22 months of age, to the kind of cow and bull it took to produce that steer. He ended up with a 1,000-1,300 lb. cow at maturity because that weight of cow would tend to produce the steer needed. The bull needed to weigh 1,000-1,300 lb. between 12-16 months of age with .15 to .3 inches of fat. A bull with these credentials would tend to sire the correct kind of market steers.

Now I would like to go a step further and challenge you to sit down

and write a job description for the minimums you will accept in your Angus cows and bulls. Many of you have written job descriptions for your employees, or as employees have read your job description to know what is expected of you. So let's look at some of the minimum characteristics an Angus cow needs, at least in the opinion of this author.

Let's start with the heifer at birth and take her to maturity. She should be born unassisted yet be large enough so that she will get up quickly and nurse. From birth to weaning she should grow rapidly enough to have an adjusted weaning weight equal to 50 percent of her dam's weight. This should be accomplished on the dam's milk and good to excellent forage without additional concentrates. From weaning to puberty she should be able to develop on high quality forage with no or only limited concentrate. If the forage quality is low to average it will probably require some protein supplement and concentrate to compensate for the lack of forage quality.

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The heifer should give evidence estrus at approximately 13-15 months of age and settle by the time she is 18 months of age. This will allow her to calve at between 22-26 months of age. She should weigh at least 650 lb. at puberty and be in the 700-800 lb. range when bred. She should continue to grow and also develop her calf on high quality forage. At parturition she should weigh in the 900-1,050 lb. range. If you weigh her within 48 hours after calving her body weight will be 75-100 lb. less than this. She should calve without assistance or only limited assistance depending on the characteristics of the sire. Her mothering instincts should be quickly manifested as she shows interest in the calf, nuzzling and licking it and encouraging it to get on its feet. She should then accept the nursing in-

stinct of the calf without kicking, butting or walking away. When the calf is ready to nurse there should be an adequate milk flow which increases as the calf grows and is capable of handling increased quantities of milk. She should have adequate mammary development and four well-placed medium-sized teats that are big enough for the calf to find them but not too large to get in the new calf's mouth.

The heifer should shed the after-birth naturally, repair the reproductive tract, come back in heat and settle within 90 days. Milk production should increase for 90 to 120 days and then persist at least until the normal weaning age of 205 days. At that time the calf should have a weaning weight equal to 50 percent of the dam's weight. Personally, I would like to have a cow with 8-10 months' persistency of lactation and let the calf nurse her that long. We only give dairy cows producing 15-20,000 lb. of milk a 6-10 week dry period. Why does a beef cow need more? If she isn't producing milk, she's getting fat.

From this point on she should con-

tinue to produce a calf every 12 months, continuing to wean calves with an adjusted weight of 50 percent of her body weight. She should reach a mature weight of 1,000-1,300 lb. between 5-7 years of age. During her lifetime she should produce at least eight calves—and still be producing calves at 10 years of age and hopefully longer. Assuming a 50-50 sex split, at least two of the four heifers should be better than she is, and be "keepers" as herd replacements. At least one of the four bulls should be of "herd bull" caliber.

The herd bull's job description starts much the same way: unassisted birth; quickly getting to his feet and nursing; rapid growth to an adjusted weaning weight equal to 50 percent of his dam's weight on his dam's milk and good forage, that is 500-650 lb.; he should have a good milking dam with a good udder and teat size so he can pass these characteristics on to his daughters.

When placed on a moderate-forage, moderate-concentrate ration following weaning, he should have a minimum ADG of 3.0 lb. per day, weigh 1,000 to 1,400 lb. at 12-16 months of age with no more than .2 to .3 inches of backfat. With this weight and backfat he should sire steers that will weigh 1,000-1,250 lb. with .25 to .4 inches of backfat at 15-22 months of age depending on the kind of feeding program used on the steers.

The bull should have adequate testicle size (scrotal circumference) to produce viable semen by 12 months of age. By 15 months of age he should be capable of being turned in with 10-15 females and settling 90 percent of them in within 60 days by natural service. If collected for A.I. usage, he should be able to produce a minimum of 200 straws per week from no more than three ejaculations. By the time he is 2 years of age the number of cows served naturally should be in the 35-50 cow range with a 90 percent conception rate in 60 days. If collected for A.I. usage, the semen production should be at least double that given for the short yearling above. The bull, like the cow, should be able to continue his reproductive functions until he is at least 10 years old. At least 50 percent of his heifers must be equal or superior to their dams. Three to five percent of his sons should be capable of be-

ing used as "purebred" sires and another 10-20 percent be of commercial bull caliber.

Up until now I have said nothing about height or mature weight of the bull. Height can be achieved by elongation of the long bones of the legs and/or a change in the angulation of the leg. Neither of these will have any effect on the carcass characteristics of his steers. The elongated leg simply means more bone meal, but no more lean meat. While mature weight may mean larger cattle the question is do we get the size needed with the finish needed at the proper age to produce an acceptable market steer that is a 1,000-1,250 lb. steer with .25 to .4 inches of fat by 15-22 months of age?

What is the advantage of a 60-inch plus bull weighing over 2,000 lb. if he can't produce steers that meet the above qualifications, that is if his steers weigh 1,350-1,500 lb. before they get adequate finish to grade Choice?

Let's go back to the geneticist who talked about merchandising fads, fancies and foibles. Have we really changed? Substitute embryo transplants for cow families; no substitution needed for show ring winnings; mature size on concentrate feeding for nurse cows; and no need to comment on pedigree popularity.

It is easy to merchandise embryo transfer. Any livestock breeder has a little gambler blood. How many donor dams have really proven themselves, for example, by producing at least two calves with weaning and yearling ratios of 105 before they were considered for embryo transfer? This would establish their genetic superiority and maternal characteristics. Not all show ring winners are genetically superior.

Why is it easy to merchandise hip height, body length and mature weight? They are easily visible and can be easily measured and verified. It is easy to see a difference of one to three inches in height or length or a 300-lb. difference in weight even by the novice. It is much more difficult for example to merchandise structural skeletal soundness simply because it is more difficult to define. What is the correct angulation of the hind leg if the bull is to cover extensive pasture, serve cows naturally and stay breeding sound until he is 10 years old?

How much rib spring do you need to provide adequate room for heart and lungs and capacity for a digestive system capable of utilizing extensive forage, and in the female, room for a developing embryo? How do you describe or define such terms as femininity or masculinity? How can or do you merchandise these concepts, especially to a novice who has not developed an eye for such characteristics and is just getting started in the business?

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My class asked the geneticist what he thought the characteristics of a breeder were.

He offered some interesting suggestions. He must develop an eye for livestock that is capable of seeing not only the big differences but the small, subtle differences as well. They must make a long-term, usually a lifetime, commitment to animal breeding. In cattle, this means at least 20 years or four to five generations of cattle. This means not only learning about genetic principles but how to use them as "tools of the trade". They also must know what their ultimate product is and how to produce it economically by combining genetics with nutrition and health factors. Not only must the breeder be aware of the final product now but must stay abreast of any changes that occur that may affect the kind of animal produced for the retail market. Breeders must be able to translate the desirable retail product to a desirable live animal, and live animal to the kind of parents needed to produce it and in turn to concentrate the genes so that that kind of animal will reproduce offspring of like or better kind consistently.

They next asked why he called a majority of purebred breeders S.O.B.'s. His reply was direct: "Because they don't know what their final product is or should be; they have not set long-term goals; they don't know how to use the "tools of the trade" to improve the genetic pools, and they don't keep up with retail marketing trends in order to modify their goals.

"They multiply animals they can merchandise rather than produce animals that will improve the breed."

To the Angus breeders who were in the business from 1960-65, and there are many, I would ask the question: how many of you then set as your breeding goals a 60-inch plus bull weighing over a ton at maturity and a 1,500-plus lb. brood cow that has her first calf at 30-36 months of age? Yet to read today's ads you would believe this to be the goal. Frankly, the ads stating the bull was the tallest, longest or heaviest for his age at a major show leave me cold because as I view these cattle they do not look like they would sire the kind of steers I would like to be cutting at the retail level if I were still a butcher.

Rather, to me at least, they are rapidly approaching the "elephant" category, if they are not already there.

To today's breeders I would offer a challenge. Set your goals for the kind of cattle you would like to be carrying your farm name in year 2005-10 that is 20-25 years from now. Determine what characteristics you want or would like in your cattle and then try to build a genetic pool of those characteristics.

For example, how many of you are using bulls with MBV of 105 or even 103 that have over 100 daughters in production? How many are using bulls with a proven record of +30 lb. in weaning weight and +50 lb. in yearling weight with a .85 accuracy? How many of you are using bulls that have 25 or more steers of record that weighed 1,000-1,250 lb. at 15-22 months of age with .25 to .4 inches of backfat and graded at least Low Choice. I won't even ask the question if you are using a bull that combines two, let alone all three, of these.

The lecture I referred to at the beginning of this article caused more controversy and discussion among students and faculty than any lecture that I know of in my 33 years of college teaching. At the same time, that class produced a higher percentage of students who have made contributions to the livestock industry than any other I was ever involved in. The geneticist summed up his lecture as follows: a real breeder has to have knowledge first of the final products being produced; secondly, know the sciences of the genetic, nutritional and health principles to produce it economically (the "tools of the trade"); third, the breeder must be an artist because there is art to be combined with knowledge and science to produce the masterpiece (the art of breeding, the art of feeding, the art of health care); and finally, it never hurts to have a little luck when a mating is made, when a ration is chosen or when health care is performed.

When you make your present matings, are you simply multiplying registration papers you can easily merchandise two to four years from now, or are you concentrating the genetic pool that will consistently produce the desirable final market product economically? Are you a multiplier and merchandiser or are you earning the title of breeder? L.A.S.