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# Making Beef Production an Enterprise

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by Steve Radakovich, Earlham, Iowa



*Steve Radakovich, co-owner of Radakovich Cattle Co., Earlham, Iowa, presented the following talk at the recent Combelt Cow-Calf Conference in Ottumwa, Iowa. Radakovich is currently president of the Beef Improvement Federation and was recently named Iowa Beef Seed Stock Producer of the Year. He and his father center their beef operation around 300 head of purebred Hereford and Angus cows.*

*The performance-minded cattleman offered a few of his thoughts on selection and genetic direction to the many commercial producers attending the conference, but his points apply to responsibilities of purebred breeders as well.*

**E**nterprise as defined by Webster means "an undertaking which involves activity, courage, energy or a daring venture." It is not necessary to make beef production any more of an enterprise.

Beef operations, like any business, must keep current on two important aspects—direction and methodology, or where we are going and how we are going to get there.

Advancements in animal breeding and reproductive physiology have pushed seed stock breeders into the fast lane. Information advancements such as breeding values coupled with new techniques such as embryo transfer are causing exciting times. In fact, there has never been a period in history where we can make mistakes more accurately and propagate them faster than now. Having the tools to build a big car is one thing, not knowing if the public needs another big car is something else.

The time is long overdue for individual breeds to identify themselves and define their purpose in the industry, preferably a

purpose that does not stand a breed alone but defines what it can contribute to cross-breeding programs. It is also time for the individual breeder to write down his breeding program as it relates to the environment, market demand and management level of his clients. In other words, let's get DIRECTION. It is not logical to lose the assets of Breed A while trying to develop it after Breed B. We already have Breed B.

At the present time, the cow-calf man has 50+ breeds to choose from. He can move his cows in any given direction that he wants. He can make them tall, short, heavy milking, light milking, big, little or whatever. This genetic variation offers the cow-calf man the flexibility he needs to fit his various environments. Let's hope in the future, he can buy an Angus bull to fit the purpose of an Angus bull, or any other breed to fit their individual purposes.

Through the history of pendulum genetics, cattle breeders have been consistently guilty of maximizing single trait selection. We have bred cattle maximum small, maximum thick, maximum deep, maximum big and maximum tall. Corn breeders have

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**"Reproduction is not included in the sire summaries, it is not talked about in show rings or test stations . . . but through the systems approach we can use reproduction as a benchmark, a yellow light."**

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realized that several traits such as standability, dry down and ear retention are required in an optimum combination for highest net profit, not merely maximum small ears or maximum large ears. Corn producers also realize that maximum yield, or output, with no regard to input level seldom reflects highest net profit. Beef is also a dollars and cents business based on several important genetic traits. We as breeders must not fail to balance all important economic traits with regards to minimizing inputs per unit of output. My horse may run faster than yours, but that does not mean he will stop, turn or even be caught.

I think our seed stock industry is changing dramatically. It has been very exciting and enjoyable living in the simplistic era that we have just been through, where it was easy to identify those individuals that could provide a little extra growth in our programs. Single trait selection is much simpler and much more satisfying in the short term compared to systems selection. It would be a relatively simple task to select only for growth today and use all the breeding value information available. Presently, we do not have breeding values that identify cattle superior in the multiple trait concept. Consequently, an individual breeder's job is much more difficult in terms of iden-

tifying the animal with the greatest net profit potential. This requires a greater level of understanding, not only of performance records, but also of how genetics relate to a given environment. Obviously, the first question each of us must ask is what are the traits that relate to net profit? They are many and there will be some antagonisms.

#### **Are Maximums the Answer?**

Why do we as purebred breeders strive for maximums? The answer is very obvious—we receive recognition for them. Take, for example, the show ring. It takes maximums in the same traits to win a Hereford show as a Simmental show, and the same maximums in an Angus show as a Chianina show. Do these breeds all have the same purpose? Will these breeds all work in the same environment? Even so, most breeders are pushing their breeds in the same direction. The same applies to the breeders aiming for high gainers in central test stations. Show ring and central tests, same song, same tune. A tractor pulling contest is a show of maximizing horse power, yet we all know these competitive tractors are impractical for farm use. My question is: Who is minding the store?

There was an Italian lad that received a telescope for his 10th birthday—one that extends, the kind sailors used to use. The boy complained to his father that the telescope was useless, that he could see better without it, everything looked small. The father turned the telescope around. The father widened the son's outlook and how fortunate that he did. The son's name was Galileo. He later discovered the moons of Jupiter, the rings of Saturn and the mountains of our own moon, as the world's foremost astronomer of his day.

Maybe some of us in the beef industry need to turn our telescopes around. Perhaps

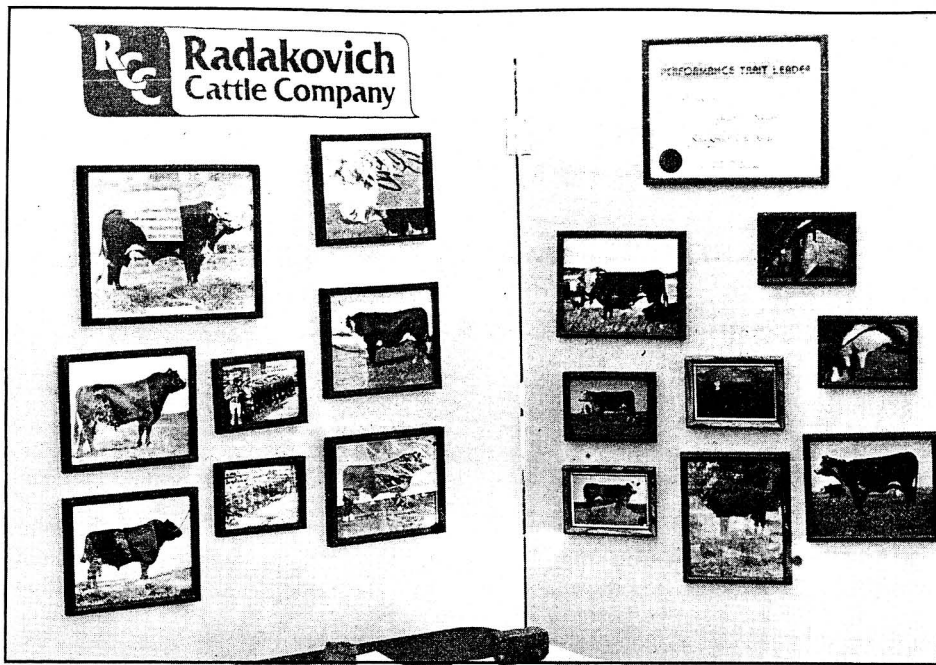
we need to look at the entire industry, or at least our own operations, with regard to total input, genetic trade-offs, market demands, available feed supplies and inventory. How can we produce beef from within the boundaries of our fence for the highest net profit? That should be the most important question.

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**"Selection can accomplish a lot, but we must cull the bad feet, bad udders and other problems. Too many cowboys take pride in being able to pull a calf, sew up a cow, trim feet . . ."**

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If we examine the history of agriculture in the United States and particularly the history of animal breeding, one truism has always prevailed: More is better. (More corn production per acre, more eggs per hen, more milk per cow, more weaning weight per calf.) Relatively low input costs have been an underlying factor for this to be true, but this has changed. A parallel can be drawn with the American automobile industry. When I was in high school, the main consideration relative to a car was how fast it would go. Today we are concerned with how far that automobile will go on a gallon of gas. Efficiency is the watchword throughout our society and the same concept applies in agriculture. Instead of being concerned totally with outputs, we are more concerned about minimizing inputs per unit of output. This applies not only to fertilizer or fuel, but to all cow-calf inputs such as land, labor and capital.



### A Systems Approach

We have been using a systems approach in our operation since we first started taking birth weights. Using birth weights as a moderation influence on unlimited increases in yearling weights, we have tried to balance these traits. This is a very simple approach to beef cattle systems. Many are concerned with "systems," believing you must turn your total breeding program over to a computer which employs some sophisticated and little-understood formula for beef cattle selection. This is not necessarily true. The systems approach can be a common sense business approach to any enterprise. It involves inputs and outputs. It involves weights and inventory.

Most commercial producers within our industry, especially cow-calf operators, are very quick to accept this approach. They may not understand the scientific theory behind it, but they do understand the primary concern: Maximizing net profits. They understand this is influenced by day of calving, calf size, and number of calves weaned. They are also very aware of input costs such as vet bills, feed bills, extra labor, improvements required for inside calving and others that may go into any cow-calf operation.

It is through a systems approach that we finally come to grips in an important way with genetic antagonism. Anyone that has extensive experience with beef cattle breeding knows there must be trade-offs between birth weights and growth, between excessive milk production and reproduction, and between excessive frame and thriftiness. Increases in growth or milk are antagonistic with maintenance cost. This is a serious trade-off because energy for maintenance represents 60 percent of the total energy required per unit of edible protein produced. While commercial producers have been most receptive to the systems approach, the full responsibility for breeding cattle with a high degree of efficiency as evaluated under

this concept still lies with the seed stock breeder.

As mentioned earlier, success with the systems approach involves an attempt to balance traits. Perhaps an analogy would be appropriate at this time: Corn production requires several essential inputs—fertilizer, plant population or seed density, rainfall and adequate soil type. These factors must be present in an appropriate balance to achieve successful crop production. The same is true in balancing beef cattle production traits. How much growth can be developed while birth weights and calving ease are still kept in line? Ultimately, the environment is going to have a tremendous impact in determining the most desirable endpoint with regard to mature size and carcass weight. The key

is to balance the genetic potential of a herd with its environment.

A major way in which the systems approach differs from traditional production testing is that a systems approach is based upon total pounds of production from a given input of resources, as opposed to just the pounds of production per cow unit. In other words, in the systems approach, we are concerned with the number of cows in addition to the size of the cows which are run within the boundaries of a fence. A greater number of small cows can be run on the same amount of feed as a smaller number of large cows. The question then is which is the most profitable situation? A successful systems program will provide the answer.

### At Radakovich Cattle Co.

Let me share briefly with you how we attempt to follow the systems concept in our own production situation. Our registered herds consist of Hereford and Angus cattle. The first rule we follow is an attempt to keep our environment very similar to the environ-

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ment of our customers. If our yearling heifers are not cycling, we are not going to go out and feed them a higher level of supplement, simply because our commercial customers cannot afford to do so and still show a profit. We believe cattle have to work for our customers in order for us to have any



longevity in the seed stock business.

As far as bull selection is concerned, it is our policy to use proven sires artificially. As I go through the sire evaluation reports, I look for bulls that meet acceptable levels in the three important production traits listed: A bull must not be over four pounds EPD on birth weight; he has to be +50 or more pounds on yearling weight; and he cannot be under 105 on maternal breeding value in the Hereford breed or under 100 maternal breeding value in the Angus breed. Very few bulls listed in the 1982 Angus Sire Evaluation Report met all of these criteria. Once we have identified these individuals, we do a thorough reproductive study and check out their soundness, longevity and disposition, traits that still require visual appraisal.

As you can see, we are not selecting for the extremes. Instead, we are looking for an animal that is balanced and economically sound in the production traits. Obviously, bulls that meet all of our selection criteria are the exceptions. This is one of the real challenges to the animal breeder today and tomorrow. He must look for exceptions that

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are beneficial to the industry and then propagate them in order to be classified as a true animal breeder.

One of the key factors which indicate how well we have done in balancing our cattle to our environment is reproductive rate, or day of calving. We compare cattle of various levels of production (in a variety of traits) with their position in our calving season. For example, if our largest cows are not cycling back soon enough after calving, and are consequently in the middle or latter third of our season, then perhaps we are getting more size and more production potential bred into our cattle than our environment can stand. Or, when we segregate our cattle according to maternal breeding value and find cattle in the last third of the calving season have the highest maternal breeding values, then perhaps our milk production level has exceeded our environmental capabilities. The same thing could also relate to sire line of females. This is an excellent method of evaluating the compatibility of the environment and the level of herd genetics.

#### Functional Efficiency

Another concern of ours as seed stock producers that relates to the systems ap-

proach is the concept of functional efficiency. We insist on cattle that require a low level management or labor input. For example, we certainly insist on cows that calve

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by themselves and require no attention to their udders at calving time. One good thing about the short post-calving interval in the beef cattle business: When the beginning of the breeding season rolls around, the fact that we had to wade through the mud, pull calves and milk cows is still fresh in our minds. We remember those cows which are problems during the calving season.

Functional efficiency is one of the greatest concerns to the owner-operator. He is the one who has to calve the cows and live with them on a day-to-day basis. We select for functional efficiency basically by selecting against those cattle that are inefficient. We keep 90 percent of our heifers. If they do not breed or calve easily, then they are culled. If we have a cow that insists on us working for her instead of vice-versa, she is culled. The only way to avoid having these problems creep into a cow herd is to cull against them.

I come from the Midwest where cattle are a low priority agricultural enterprise. Basically, they are viewed as utilizers of areas otherwise wasted. In other words, they are used to clean up fence rows, waterways and pas-

ture grounds that cannot be cultivated. In order to be profitable they must be required to have low-intensity management, low labor and low cash inputs. They must be able to do it on their own. The typical Iowa farmer is highly skilled in grain and hog production where there is a larger potential for net profit. Cattle, on the other hand, must function as ruminants to utilize waste feed or by-product feeds from these other operations. In order for cattle to work in this type of situation, they must be low maintenance and self-preserving. They must be able to reproduce with a minimal amount of difficulty at 2 years of age.

I encourage breed associations to do their best to emphasize the need for functionally efficient cattle. It is difficult to find a way to glamorize or promote reproduction, maternal traits or functional efficiency instead of

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simply identifying frame size. Unfortunately, size is glorified in the show ring and test stations.

There is no free lunch in cattle production. Any extra level of production has to come from additional inputs in the form of feed resources and management. We as seed stock producers have a moral obligation to select and identify cattle which can make the greatest genetic contribution to the profitability of our total industry. **AJ**