

It has been a popular pastime during the last year or so for experts in all walks of life to make predictions for the '80s. Automobile manufacturers have crystal-balled the next decade predicting the size and fuel efficiency of the automobiles we drive. The large food conglomerates have suggested what we Americans will eat with special emphasis on convenience foods. Government officials have spelled out the future regarding how we will exist in a fuel-short economy and their plans to curb inflation while lighting the pathway about how the "good life" in America will change.

Cattle industry experts have fallen in the lineup, telling cattle producers of all kinds what the ideal beef animal will be for the '80s. They have called for more efficiency in the beef production chain. Most have called for a high incidence of crossbreeding and the use of highly efficient crossbreeding systems. With high feed and other input costs, most have again insisted that more of our beef will be produced with less grain and more forage. Breeders have become convinced that larger, later maturing cattle are indeed more desirable for the commercial industry because these kinds are somehow thought to be more efficient.

#### **Where Should Emphasis Be?**

Where do all these predictions and thoughts leave the serious seed stock breeder as we plunge into the decade of the '80s? Where should the emphasis be placed as these breeders set goals and make selections that will surely affect the cattle produced in the commercial industry not only in the '80s but, because of relatively long generation intervals, the '90s as well?

The preponderance of purebred breeders are convinced now that performance testing is a most valuable tool. Though this is true, there are thousands of breeders who

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have never really used performance selection in their own herds even though they may have weighed calves and even yearlings.

The key to the future has to be the widespread use of superior sires in registered herds. This is not a new concept at all; we have known that some 90% of the genetic improvement made in a herd has to come through sires.

#### **Traditional Guidelines Still Sound**

In the past breeders have been told that they must: (1) Performance test their entire herd, (2) cull cows that either fail to reproduce regularly or are at the low end of the production level, (3) select the top end of their female calf crop each year for replacements, and (4) use the very best performance and/or progeny tested bulls (either raised or purchased) they can afford.

This is still very sound advice. The difference is that the era of sire evaluation has arrived. With the advent of the 1980 AHIR Field Data Report which lists progeny data on 564 Angus sires, there is much, much more hard information available than ever before.

I am utterly amazed at the progress made in the Angus breed in the last decade. Open A.I. has been the main reason. Sire evaluation has contributed to this progress, though only a relatively few sires really have been evaluated under the Angus national sire evaluation scheme. On top of this the accuracy in estimated breeding value has been relatively low on many bulls because of the small sample size in terms of effective progeny number and a general lack in depth of performance information on close relatives.

#### **More Information in the Future**

The availability of performance pedigrees in the breed and the promise of accurate evaluation on a large number of young sires on a continuing basis using field data methods offers great hope for the future of the serious registered Angus breeder.

The technology that allows accurate sire evaluation is truly amazing. When I was first exposed to a statistical approach to animal breeding as an undergraduate in the early '50s, I frankly was turned off. I could not for

# **Sire Evaluation Every Breeder's Business**

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*In the future the registered breeder, in order to be successful, will have to use available tools and use them well. And in the eyes of the author the most important of those tools will be performance testing and the use of performance records.*

the life of me see how this kind of thinking could be harnessed for use by the breeder. Then as a graduate student almost 15 years later and after I had worked with beef cattle performance programs for some 10 years, I began to see light at the end of the tunnel; but we still had only individual performance records upon which to make sire selection decisions.

In the meantime, computers were being used by breed associations and state beef cattle improvement groups but breed association performance programs were really only in their infancy. Artificial insemination was known to be a valuable genetic tool but most breed associations clung tenaciously to rules which limited its use to owners of sires.

#### Computer Technology Applied

In the early to mid 1970s we all of a sudden learned that more relaxed rules on A.I.

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use really would not wreck the purebred business. And at the same time, through Beef Improvement Federation efforts, we learned how to harness performance records and progeny records with computer technology for sire evaluation. Dr. Richard Willham at Iowa State University and others figured out how to put this computer technology to work to make the animal breeding theories of Dr. Sewell Wright and Dr. Jay Lush useful in deriving estimated breeding values.

We still do not all understand how the complex calculations are made but, like the biblical story of creation, we are learning to accept on faith that they are as close to the truth as we can get in dealing with genetic material.

We will no doubt see a continuation of structured sire evaluation programs in the coming decade. These programs, though, require A.I. breeding of young test sires along with reference sires in designated commercial test herds and they definitely are expensive and the number of young sires that can be tested is limited. Carcass data gained from them is useful but is of far less importance than calving ease, growth and maternal ability. Therefore we will forego the carcass data, will use structured programs much less and will rely more heavily on field data sire evaluation.

#### Personal Predictions

What then will Angus breeders do in the next decade? In my view, they will use superior progeny-proven sires by A.I. in their herds to a much larger extent. This does not mean that very few sires will be used. If

you study the 1980 Field Data Report you will come to the conclusion that there are very few, if any, truly superior bulls in all traits. It has been said that very few complete bulls are made. They, rather, seem to be made in pieces. Therefore different breeders will view sires differently. There will be a very disappointing market though for bulls which rank low on maternal traits and growth traits.

And, I think, breeders will become involved in sire evaluation themselves by keeping detailed performance records through AHIR and in testing young sire prospects they themselves bred.

Whose business then, is sire evaluation? Virtually every breeder has a stake in evaluation and must realize how important his involvement actually is.

#### Testing Becomes a Necessity

We're past the time when performance testing is a nicety—it's a necessity! This means that every registered Angus breeder must have his herd enrolled on AHIR. He must weigh calves at birth, at weaning and at yearling stages and promptly send the data to the Angus association for computation. The only performance game in town for Angus breeders is AHIR. Only through AHIR can Angus breeders get performance recorded along with pedigree information. Only when virtually all breeders are in the program can performance pedigrees be complete and accurate and can complete sire evaluation data be compiled.

We've passed the time when use of A.I. is helpful. It is now a necessity. Without A.I. how can a breeder use superior, progeny-proven sires—or promising young sires for that matter? How else can he get his top young herd sire prospects sampled across several herds, something that is essential for proper evaluation?

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Performance pedigrees are a reality. They too are a necessity now and will be the only pedigree with value in the future. Therefore breeders that are behind in getting performance testing going in their herds must get started now! The hour is late, but not as late as a year or two from now will be.

#### Promotion Needs Substantiation

Recently I was sent a promotional flyer with pictures, pedigree and printed material which a breeder had concocted on his newly purchased herd sire. The flyer and the breeder's personal letter portrayed this bull as a strong maternal sire. He went into great detail about the milk produced by dam and

half sisters. Udders were perfect with well-proportioned, small teats. There was, however, a gaping hole in all of this information. There was not one shred of comparative performance data that would substantiate the argument that this bull is indeed high in maternal estimated breeding value. My guess is the whole effort will fail to sell semen to the alert, serious breeder.

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One of the saddest things I can imagine (and it happens) is for a breeder to produce an outstanding young herd sire prospect with superior individual performance but a blank on depth of performance in the pedigree and thus very flimsy information upon which to generate estimated breeding values. A bull of this documentation is and will in the future be relegated to a commercial price. Breeders cannot afford to let this happen.

#### We're Not There Yet

Have we arrived in our sire evaluation programs? Definitely not. The data and the accuracy of these data will be much more complete in the future. Completeness will be proportional to participation by purebred breeders.

So, what is the breeder to do? Big or small, the herd must be on AHIR. In big herds or small, superior progeny-evaluated sires must be used A.I. They must have high estimated breeding values for maternal traits and high EPDs for growth traits. Breeders must do their own selection, though, so they will place emphasis in different ways. Sons must be performance tested and the top ones sampled across several herds just as early as possible. These same top young bulls must be used by the breeder naturally and/or A.I. These young sires must have high estimated breeding value for traits of interest which must include maternal as well as growth.

There is most certainly a bottom line. In the future the commercial man will demand bulls for natural service that are sired by superior bulls with published evaluation. In fact they are already doing it.

Sometimes I feel the sharp commercial men are better students of performance and sire evaluation than the rank and file registered breeder. The registered breeder who succeeds in the commercial marketplace will have to use the tools available and use them well. He will definitely be involved in the sire evaluation process in the years ahead. 