

The Role of the Purebred Industry In the Beef Chain

L.S. Pope, Director
International Stockmen's School
Texas Agricultural Extension Service
College Station, Texas

Leader . . . Innovator . . . Progressive Cattlemen . . . Spokesman for the Beef Industry! One would hope that at least some of the above would apply to today's purebred breeder. Perhaps it's asking too much to expect him to meet all these demands in a changing world. In years past, it was generally accepted that the purebred breeder, and the association of which he was a part, were at the very forefront of industry change. Today, in the fierce crucible of rapid change and challenge, purebred breeders find themselves struggling to define their role, to find their niche.

This comes at a time when the industry is on the verge of dramatic genetic change, a veritable explosion of genetic impact. Armed with a battery of new tools, in addition to the old and proven ones, the purebred operator can now turn to embryo transfer, sire summaries, detailed carcass information, computerized matings, stacked pedigrees, EPD's and somewhere in the future, new horizons through gene splicing. Not only is the future exciting, but it is currently fueled by higher cattle prices and purebred sales beyond expectation.

Some producers have responded, have capitalized on the new information. In Henry Gardiner's herd at Ashland, Kansas, average weaning weights have increased by over 200 pounds since 1980, and similar stories can be found in herds of Martin Jorgensen of South Dakota, and John Stewart-Smith of Alberta. The opportunity to reap the rewards and benefits of these remarkable opportunities is NOW. Will the purebred industry take up the challenge?

Facing the Challenge

It's now secret that purebred breeders, and the associations they represent, face real problems with staff and budgets. Registrations have dropped in most associations while costs have shot up. Reductions in work force are common; in one major association the registrations have declined over 50% in the past decade, the staff and work force has been cut from 18 to 7 individuals.

Meanwhile, dozens of new breeds, synthetics and crossbreds have appeared on the scene; some estimate as many as 70 breeds or crosses now appear on the books. Keeping the major breeds "pure" is no small chore, despite present tools for blood typing and identification. Maintaining purity and high standards within a breed, once relatively simple with few and rather distinct breeds, has become a nightmare for some. All this leads to a simple question: Why do we need "pure" breeds for today's industry? Can our needs be met by carefully designed seedstock, with or without the purebred label?

It is commonly held that we must have homozygosity to effect the greatest genetic improvement in beef cattle, or to make the crosses that

lead to most profitable production. Yet the professional cattlemen today can carefully craft the mating program he needs, drawing on reservoirs of genetic material as never before and producing a uniform product.

Lessons From the Outside

Valuable lessons can be learned by studying other classes of livestock and poultry. With poultry, 6-7 layer crosses, each carefully designed for specific combining ability, and 6-7 broiler lines dominate the production scene. None are purebreds, each is a synthetic produce and merchandised by a large business operation. With swine, the trend is somewhat similar. The move for decades has been to employ crossbreeding, often in rotational patterns. Recently, outside agribusiness has attempted an inroad by producing a set of crossbreds, each designed for commercial production and capable of maximizing performance and carcass merit.

Witness, also, the developments in dairy cattle. Here, of course, the Holstein dominates the dairy scene. The product, milk, is fairly uniform, the trait highly heritable, and the environmental conditions much more uniform than with beef. The facts are clear; through massive use of A.I. to produce over 75% of all calves, DHIA records, astute mating via computer, plus improved feeding and management, the average yield of dairy cows has doubled since the 1950's. At present, registered breeders are exploring the possibility of tapping into the vast genetic pool of commercial cattle, identifying heritage and making three successive crosses before registering. Thus they would open the herd book, so to speak. By using extensive classification system, they attempt to avoid unsoundness and fix type. Embryo transfer from proven females has been accepted, with over 20,000 calves recorded last year. Computerized matings can predict with amazing accuracy the outcome in terms of offspring performance.

Are Purebred Breeders Ready for Change

The beef industry may not be ready for such dramatic change, but the examples cited do fit well into the specialization going on throughout U.S. agriculture. Based on this, one might envision a beef chain that would be serviced by specific lines or strains of superior cattle, few of them purebred, but with distinct differences in production and performances traits. They would be carefully woven into a planned crossing program to yield a superior product all the way to the retail counter. This source of basic genetic material to start the cross may be well outside of purebreds, as we know them today. The entire operation may be designed, financed and controlled by agribusiness firms from the outside, marketing their breeding stock under the company name.

And this may be just the beginning! Exciting new horizons await the progressive breeder. Through gene splicing, it may be possible to produce a unique genetic package. Recently, Harvard scientists produced a mouse with unique characteristics, and promptly applied for a patent. Obviously, this brings up questions of proprietary interests and poses

legal tangles. But the results of the technique are startling and the application may be here before the end of the century. How will purebred association respond? Even with embryo transfer we have encountered problems in obtaining accurate performance data.

These are developments that must be addressed at both the association and breeder level. The immediate challenge, of course, is to produce superior breeding stock, using all the tools of A.I., EPD's, sire summaries and computer-directed matings to provide the beef industry with cattle that can perform, and meet consumer demands. If we are to breed the fat off, rather than feed it off, still depending on the cow herd to produce under a wide range of environments and management, we face no small challenge in the years ahead.

How do we present the commercial buyer with the right kind of information? Where, for example, do cattle shows and other displays fit in. There are many critics. Meaningful data on the probable performance of young bulls, i.e., use of EPD's is largely ignored and only a few measurements or records are now employed in the final placings. Is it possible, in the future, that the computer will assist the live judge in the final placing? A small step in this direction was featured at the last International Stockman's School at Houston, with modest acceptance. Given the impressive and accurate data available to commercial buyers, is it unreasonable to expect that the final show ring placing can be based on 75% from the computer, using the best data at hand, and 25% from the judge, largely as a means of spotting unsoundness and to assure breed type? With beef females, the show ring should not be used to try to estimate future productivity. Possibly it should be restricted to cow/calf pairs alone.

Looking to the Future

Above all, purebred breeders must be able to spot trends, be aware of probable change in the beef industry, much more than in the past. This is all the more important as we concentrate on fewer sires through A.I. Looking back, we have seen dramatic changes in the beef industry, and only a few astute breeders spotted them in the early stages. Probably the real turning point was IBP and boxed beef, narrowing the specs of the end product. All the while, exotics were appearing on the scene, widening the genetic base. Grading standards were changed to better reflect true carcass merit and public concern about animal fat vs. a healthy diet. Large commercial feedlots, then, had the unenviable task of producing a remarkably consistent product - within a rather uniform set of specs as to carcass weight, lean content, quality grade, fat cover and maturity. The consumer has expressed strong preference on the right kind of beef, although varying from coast to coast.

To meet this changing picture, cattlemen redesigned their pure breeds, turned to crossbreeding, improved their management and business approach. It is heartening to see two major breeds now advertising and promoting a crossbred mating, and the resulting offspring, as the ideal. If the trend toward uniformity of end product continues, as it will,

how many breeds or crossbreeds do we need? From the large number available today, likely we will reduce to six to eight major ones. Each will be carefully structured and bred to fit a specific need to the industry.

The commercial cattleman will, of course, make the final decision, based on solid data and good judgment. Past preferences for breed and idealistic views will fall away. Through A.I., marked increase in performance will become commonplace. Genetic antagonisms that hamper progress will be spotted early, and avoided. Thus, for example, the conflict of rapid growth and mature size vs. female fertility and productivity will be addressed early in the game. And having developed the superior beef animal, the professional cattleman will want to share in the returns, either through retained ownership, joint partnerships, or a premium for a superior product.

Survival of the Purebred

Given this set of conditions for the 1990's, what kind of purebred industry will survive? Very likely, following the pattern will established in other sectors of U.S. agriculture, the future will belong to the larger, more sophisticated units, able to take full advantage of genetic superiority and to merchandise effectively. Small to moderate - size purebred herds, those unable to tie in with, or align themselves to, a specific breeding program will fall by the wayside. The larger units will make a handsome return to investors, keeping the capital flowing into the beef breeding sector.

Yet there's a note of nostalgia worthy of consideration in this change. The smaller breeder represents a broad pool of diverse genetic material, a best reservoir so to speak. Often, he is close to the commercial industry and understands its problem. Breeding stock are produced close to the regions and herds in which they must perform. And history would illustrate that because of their genetic diversity, they can supply the needs of the breed if conditions change. An example that easily comes to mind is recovery from the dwarfism and compact cattle of the 1950's. Further, they may be less influenced by wide swings in type and conformation, maintaining a steady course. Yet the future belongs to those who can best put to use all the tools of selection and merchandising.

In the purebred industry, there's always the tendency to respond to the immediate, to warp existing breeding programs to fit the times. Encouraged by show ring winnings or immediate demand, many solid and constructive purebred programs have been shifted out of position. The current trend toward increased height and frame size, which will be so well debated at this conference, is a case in point.

These trends will come and go, and emphasis on single traits will take its toll of both purebred breeders and the industry as well. Sound and constructive moves, triggered in response to industry needs and the demands of the consumer, will have to be made early and constructively for all sectors of the beef business to prosper.

Based on all this, what's the future for the purebred breeder? Will he survive and, if so, in what form? Will he be largely replaced by commercial seedstock producers, operating outside the associations and developing and merchandising specific lines? Given the short life span of many purebred herds, and brief opportunity to turn generations, a longer-range approach will be needed. We are likely to see the emergence of corporations and businesses that will capitalize on the demand for excellence, even worldwide. The impact of A.I. and embryo transfer is a signal in this direction.

Emphasis on the Tools Available

Purebred associations will spend less time on keeping breeds "pure" and place emphasis on records, EPD's and outstanding commercial cattle of the breed, or to other breeds introduced to perform a certain function. Crossbreds, fashioned to deliver the right genetic package, may become acceptable in breeding herds. By opening their books, under carefully controlled conditions, the sleight-of-hand introductions from other genetic stock might be controlled.

Strong emphasis will continue on overall "doing ability," even though the feeder and packer, with more limited vision as to what the industry needs, may protest.

As an example, the use of Brahman blood will continue in hot, humid climates, even though feeders and packers may discourage it. The questions will be how much, and in what combination. The almost universal move toward sire summaries and EPD's among breed associations bodes well for their survival and effectiveness. Despite the reduction in registrations and total purebred breeders, members as well as commercial cattlemen are going to ask more from the association. The word "service" will take on added meaning in a computer age. The prospect of combining all the tools for selection now at hand is exciting indeed.

To tackle this job effectively, purebred associations must not only be staffed with the brightest and best, but breeders must be sure that they elect directors up to the task, in step with the times. The change now under way, and those to come, will demand a whole new spectrum of thought in the boardroom. Land grant universities, through research and extension, will be called on as never before, and much of the increased cost must be borne by the breeders and cattlemen themselves, through checkoffs and direct grants. The proprietary nature of patented genetic stock will cause management and legal difficulties as yet known.

Facing the Challenge

Perhaps no other facet of the beef chain faces as great a challenge as the purebred sector. It will take full bore effort to keep up with the times, to say nothing of leading out with necessary changes. In a broad sense, the following might be worthy of consideration:

- * Do not ignore the past - there are too many time proven lessons to be learned from history to pass over lightly.

- * Spot emerging trends early, but be sure they are logical and well-founded. Identify the role your cattle will play and stay with it, building on the strengths of the breed.
- * Look for the beef industry to "stabilize somewhat around the present specifications after two decades of dramatic change. Thus, one can more clearly and consistently emphasize the important factors.
- * Be aware of trends and changes in other industries. What's happening in swine, dairy, poultry, and even crops can signal changes in our industry. Beef does not stand alone.
- * You must know the genetic capability of your seedstock, not only to better serve your customer, but to be able to effectively use the tools at hand, to plan ahead.
- * Emphasize the importance and "earning power" of the top sire - both purebred and commercial. As much as 80% of genetic progress traces to the sire and the genetic "reach" offers some amazing opportunities.
- * Develop a long-range and productive relationship with the new type of progressive and professional cowman coming on the scene; a dual approach and partnership is in the best interest of both parties.
- * Be cautious of the show ring - the wide swings in the pendulum can unravel a solid breeding program. While signaling change, they may not benefit the overall industry.
- * Don't expect acclaim by the industry for your efforts. Few breeders in history have received their just dues while still alive. The work of most "master breeders" is appreciated only after they have left the scene. In this computer age, the data bank and its use may be more important than the individual.

It's not easy to meet the challenge of the lead paragraph, but for a few gifted individuals it can happen. The purebred breeder and his association can lose their leadership role by default...not by competition. The beef industry will find the seedstock to prosper and make needed change. The big question: Who will do the job?