

Forging links for beef chain's future

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"Partners In Progress" is an appropriate title for a meeting of people who derive their livelihood from the production and processing of beef at this particular time in the U.S.

We may well be at a time in history when the future scope and viability of the U.S. beef industry is determined by decisions made in the next few years. Thus, it is necessary for all participants to focus their attention on improving our present competitiveness and image in our present marketplace and to guide this industry successfully into the next century.

Beef production historically has not been product driven, but instead has been one of realizing salvage or by-product value. In some cases, this represents realizing a salvage value from animals maintained for other purposes such as milk production or as draft animals. In other, beef animals are used as a means of harvesting an otherwise unsaleable commodity, "roughage". Only recently, and chiefly here on the North American continent, have we combined forage utilization with grain feeding to produce fed beef on a large scale. This is a relatively new beef production system and history's judgment of its ultimate success or failure is still pending. How we respond to the challenges of developing and perfecting this system of production will determine our future as participants in the beef business.

Where are the efficiencies of beef production? In an environment of relatively cheap grain, beef production is not competitive with other means of producing protein.

Figure 1 shows the species comparisons in percent total efficiency of converting grain to live weight and retail product gain. Broilers have a percent total efficiency conversion of grain to live weight of 50 percent; pork, 28.6 percent; lambs, 20 percent; and beef animals only 12.5 percent. Percent total efficiency of conversion of grain to retail product is 25 percent, 13.4 percent, 6.5 percent and 5.5 percent, re-

spectively, for the same species. When the growth that initially occurs in lamb and beef on roughage is taken into consideration, live weight and retail product efficiency of conversion improves to 38.2 and 12.8 percent in lamb and 28.5 and 12.7 percent in beef.

This obviously places the ruminant animals at a definite disadvantage from a cost of production standpoint. When reproductive efficiency is taken into consideration beef suffers even more in comparison to the other species due to its low reproductive rate per female unit (Figure 2). What this information says is that the beef industry is not a very efficient converter of feedstuffs to protein.

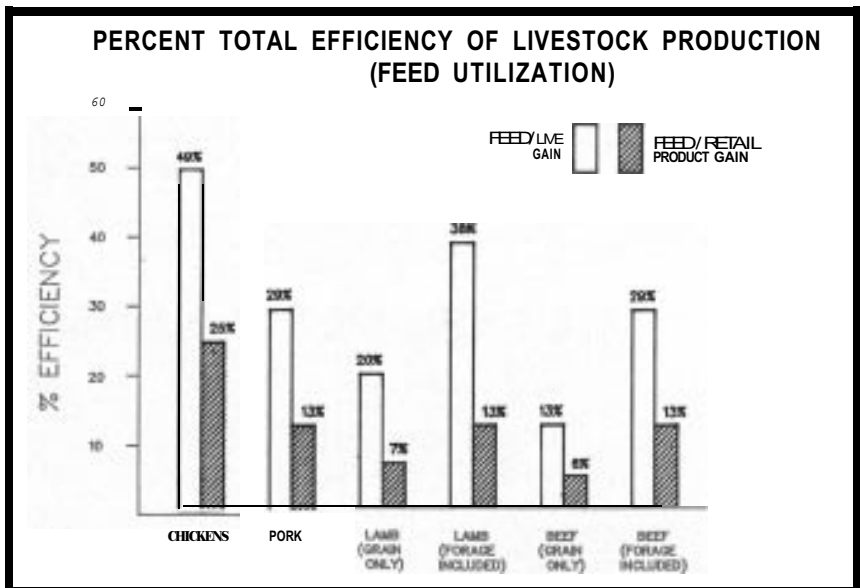
It will be very difficult for beef to remain in the commodity protein market where price determines purchases. We need to recognize this and realize that we must market a product that is not cost competitive. Thus, the industry should continue to strive to improve production efficiencies, and to position beef in the marketplace separately from other com-

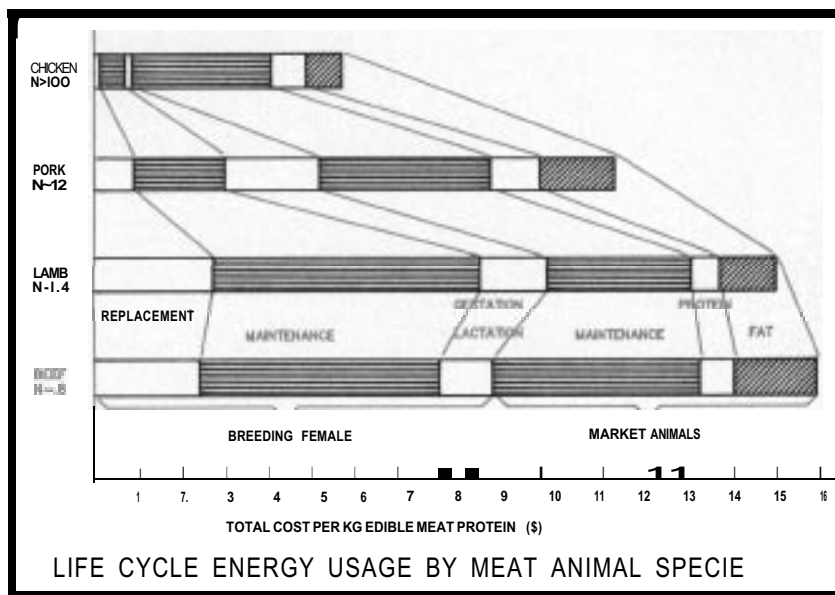
modity proteins. The Certified Angus Beef Program is an excellent example of market positioning of a beef product.

How can the rancher market position the product he sells? The most successful rancher-businessman of the future will in all probability do exactly that. He will identify what it is that the marketplace is demanding and will plan his breeding program accordingly. He will take his direction from the marketplace for his product "beef", and plan to produce beef that meets certain defined specifications. The consumer will dictate these specifications to the retailer, retailer to the packer, packer to the feedlot, feedlot to the cow-calf man, and cow-calf man to the seedstock producer. A partnership in information flow must evolve thru this entire chain in order for the entire industry to achieve this desired market positioning.

What will be the target types of products that cow-calf producers should target their production toward? Trends seem to indicate that there will be three types of beef that will provide marketing outlets for significant quantities of beef. Those market segments are: 1) high quality beef (Certified Angus Beef is an example, 2) retail store beef and, 3) lean beef. Of these three, retail store beef will probably continue to command the greatest market share.

During the past three years, we have witnessed a major shift in the marketing of beef at retail. Retailers have moved in mass to selling retail product that is trimmed to one quarter inch of external fat or less. This has been a big positive for beef sales and consequently is not a trend





that will be easily revised. This same time frame has seen Excel take the next logical step beyond selling boxed beef, that being the centralized cutting and packaging of retail cuts and merchandising these as a branded product with Excels name on the package. Prior to this, packers have purchased cattle that were USA Choice, Yield Grade 3s or better and these were all fabricated and boxed in the same product line.

It was at the retail level where this

beef was then trimmed and sized for the retail package. This practice has created a very inefficient market since the value of trimmer cattle was not recognized, and thus price signals on the morevaluable cattle were not passed back to the producer. Instead, their identity was lost in the product mix of a Yield Grade 3 or better boxed beef product. In the developing system of centralized cutting, the packer will be the individual who trims and sizes cuts for the retail package.

In this system, the identity of carcasses providing maximum profitability will become evident and the marketplace will begin to reflect true value differences of live cattle. Thus, the producer/feeder of the most desirable cattle will be identified, and he will be financially rewarded either by

receiving price premiums or by not receiving price discounts.

Probable carcass and corresponding live animal specifications for the three target beef markets previously mentioned are shown here in Tables 1, 2, and 3.

Table 1 shows a set of carcass and live animal specifications that should provide for full development for product palatability. The major revenue enhancer in this type product will be the middle meats (ribs and loin) which will primarily be used by the restaurant business. This market will be limited primarily by the quantity of middle meats that can be successfully marketed in that trade.

Table 2 is a listing of carcass and live specifications of the type that is the best revenue enhancer for retail store beef. This type should result in product that optimizes palatability, retail product yield, and size of retail cuts. It is this type product that makes up the major proportion of the fed beef market and is the most flexible in the different ways that the carcass and its cuts can be merchandised.

Table 3 identifies a carcass and live animal type that can be merchandised as a leaner type product with acceptable, but generally lower palatability ratings.

Producers need to identify which of these type animals they can and want to produce taking into account what resources are available to them and which type allows them to match resources with maximum profitability. To do this, they must first identify what type cowherd they can maintain under their respective environment and management systems.

Environment and management may dictate that to maximize herd profitability, they may need to target one of these specific markets. Such things as cow size and the respective maintenance requirements for those cows matched with available feed resources may dictate what type animal they can produce. The successful cattle producer in the future will know and use the science of genetics to a

Table 1.

Carcass and Live Animal Specification for Quality Beef

Trait	Carcass	Live
Weight	650-850 pounds	1,065-1,325 pounds
Fat Thickness	Maximum-0.8"	Frame scores-Med plus to Lg. Typical-USA
Loin Eye Area	12.0-16.0 sq. in.	Muscling #1 Typical to 1 plus-USA
Maturity	Maximum B	Max. at slaughter 36 Mo.
Quality	Minimum-Modest Marbling	Ancestry such that marbling development enhanced
Lean Color	Normal for A maturity.	

Table 2.

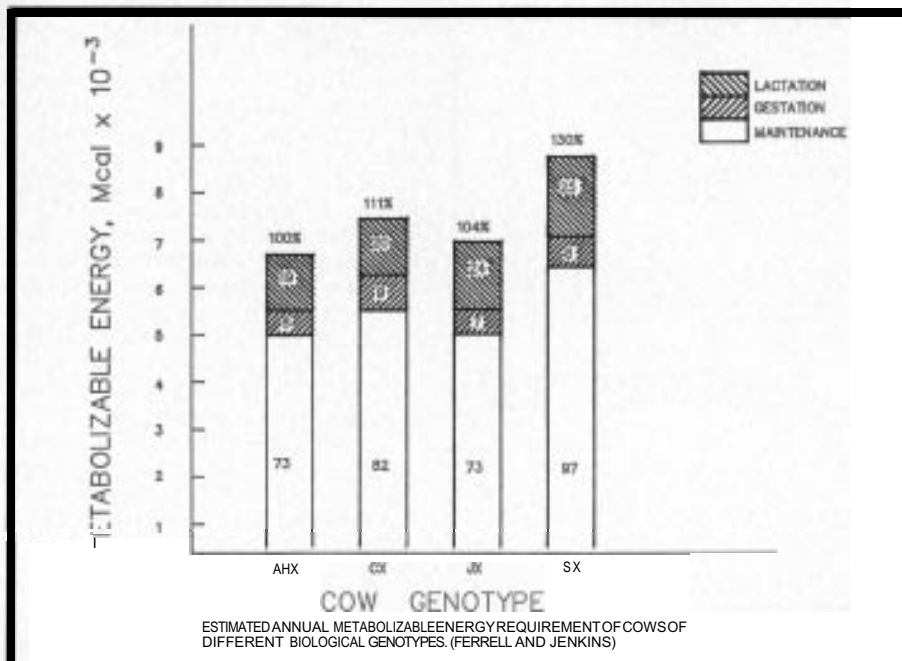
Carcass and Live Animal Specification for Retail Store Beef

Trait	Carcass	Live
Weight	650-750 pounds	1,075-1,175 pounds
Fat Thickness	0.2"-0.5"	Frame Size-Med. Typical to Lg. Minus-USA
Loin Eye Size	12.0-16.0"sq.in	Muscling #1 Typical to Lg. Minus-USA
Maturity	Maximum A+	Max. Age at slaughter-24 mo.
Quality	Choice minus	Ancestry such that marbling enhanced.
Lean Color	Normal for A maturity.	

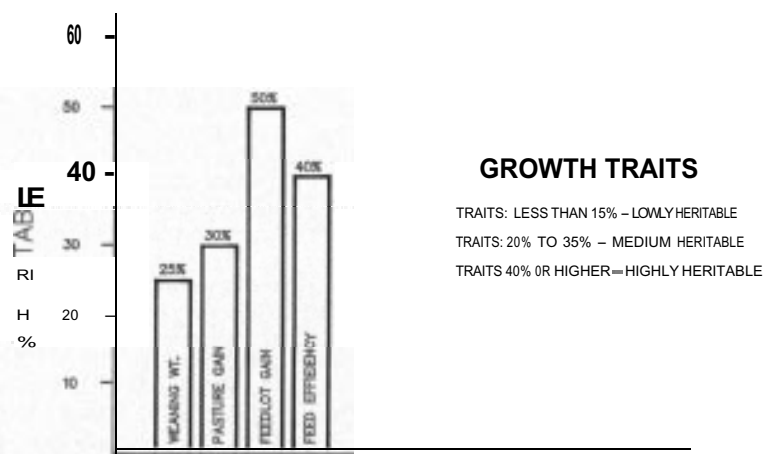
Table 3.

Carcass and Live Animal Specification for Lean Beef

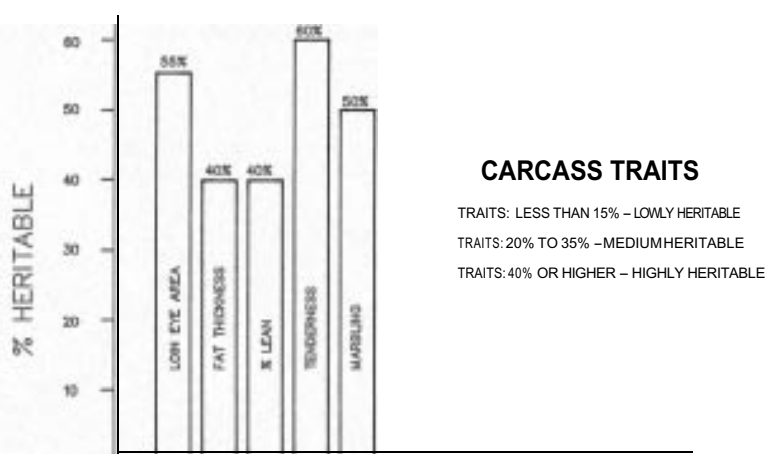
Trait	Carcass	Live
Weight	700-800 pounds	1,150-1,250 pounds
Fat Thickness	Maximum 0.3'	Frame Size-Med. plus-Lg. Typical-USA
Loin Eye Size	12.0 to 16.0 sq. in.	Muscling #1 Typical to 1 plus.
Maturity	Maximum A plus	Max Age at slaughter-24 mo.
Quality	Minimum-Select minus.	Ancestry such that development of higher depress of marbling not probable.
Lean Color	Normal for A maturity.	



BEEF CATTLE HERITABILITIES (GROWTH)



BEEF CATTLE HERITABILITIES (CARCASS)



much greater extent than has been true in the past. Animal performance on quantifiable genetic traits will become the standard of selection. Records of performance on cows coupled with the use of breed sire summaries will allow for the production of more uniform and predictable progeny. As competition within the industry increases as well as competition from non-beef protein sources, the survivors will be those operators who improve cost of production efficiencies and can market a uniform and predictable product.

Fortunately, opportunities exist to improve both cost of production and product desirability. The heritability for many of the economically important traits in the beef industry are relatively high, meaning that improvement in these can definitely be made. This is especially true of the traits relating carcass desirability and value. As we enter the age of genetic engineering, progress in these areas will be rapid and dramatic. In the not-to-distant future, a rancher may be able to specify that he wants semen from a sire that will provide him with 80 percent male calves, 20 percent replacement female of a certain birth-weight, a predictable average daily gain, and that these progeny will produce carcasses of known quality and retail product levels. He may contract these calves at the time of breeding to a particular feedlot or packer thus ensuring his market and potentially profit margin at this time.

I realize many of these ideas and concepts have somewhat of a Star Wars sound to them. I would point out however, that change is inevitable, and the rate of change is accelerating and will continue to accelerate with increased knowledge. I read recently that if you measured the total knowledge currently possessed by mankind and then identified the year where one-half of that knowledge was acquired prior to that year and one-half since that year, the year is 1963.

This simply means that knowledge has been increasing at a logarithmic rate and that new knowledge allows us to expand knowledge at an ever-accelerating pace. Individually each of us cannot hope to keep up with this expanding knowledge. Thus, it is imperative that we join forces as an industry and form partnership in the exchange of information and knowledge so that we can successfully make **Progress** and **Profit** into the next century.

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