Quality Beef by the Numbers

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"Putting it all together" are the words that best describe the essence of the "Quality Beef by the Numbers Program".   In these challenging times connecting all the aspects of the beef industry from birth to the consumer becomes increasingly important. We find ourselves in an era of new technology. This new technology gives us tools that offer the potential to significantly increase profit. Access to and implementation of these technologies becomes important to the longer term survivability of producers. As a lifetime cattle producer, I've never been more excited about our industry. What's the exciting part? The easy answer is the production, marketing and analysis tools available to us today. Fixed-time AI, EPD's, grid marketing, performance records and the ability to apply an economic analysis of these practices in your herds, is what the "Quality Beef by the Numbers" program is all about.

Fixed time AI

Fixed time AI, can you believe it? I can now sit down and schedule the exact date and time that I will inseminate my herd next year, and in doing so, realistically expect to get 55 to 65% or more of my herd bred on a single day to the best bulls in the world. My records document that when I account for all of the steps involved in implementing the fixed-time AI protocols, the labor I incur amounts to a total of 10 minutes per cow and 11 minutes per heifer. Can anyone legitimately say that this takes too much time? Last year our AI-sired calves in the feed yard sold for $145.06 more per head than our natural service sired calves. Not a bad hourly wage!

I have met very few people who have tried fixed time AI and not made it a regular part of their operations. It is a very practical, cost-effective way to reach your genetic goals. Fixed time AI, also, is a great risk management tool. Knowing your genetic outcome at conception makes for more options at marketing time. QB strongly encourages producers to use fixed time AI on their entire cow herd to achieve the maximum benefits from today's available genetics.

EPD's and DNA

Expected Progeny Differences and DNA analysis on cattle gives us a tremendous tool to take the guess work out of animal breeding. Today we can make informed breeding decisions that can positively affect the genetic goals for our herds. Today, through AI, we can use semen on bulls that have thousands of progeny to validate the EPD's. Add to this a DNA profile to further validate the potential of their progeny creates for us, as stated above, a tremendous risk management tool. Due to the generational length of cattle, genetic change is slow. Make a mistake and you live with it for a long time. The knowledge and tools we have today give us the ability to make improvements more quickly than ever before with less potential for mistakes.   We now have knowledge of genetic defects in some cattle. These defects are certainly not new. We have just had the pleasure in the past of being blissful in our ignorance.   The knowledge we now have of the known defects and the ones yet to come is good for the industry. We now must face the fact we cannot throw good genetics away because of a defect. We must know the makeup of our herds so that we may use those genetics in a positive manner to achieve our goals without the negative expression of those defects. If we are going to remain profitable in the future we need to become animal breeders rather than someone who just turns out a bull. EPD's and DNA give us knowledge we must use now and into the future.

Economic Analysis

Do you know the number of the most profitable cow in your herd? Do you know the least profitable? These are questions I just started to ask myself a couple of years ago. After forty years of performance data it became evident high performance is certainly an indicator of profit. However, end product value has the ability to add more to my bottom line. Combine the two, performance and end product value, and consistent profitability becomes a reality.

The question then becomes, do you have the information you need?   Do you have the records you need? I have total performance records on my cow herd for the last forty years. I have been collecting carcass data for the last twenty-five years. I finally started looking at profitability back to each individual cow. The results were enlightening.   The variations in the value of cattle that look alike, are managed alike, and who came from the same pasture where the dams were managed alike, are phenomenal!   The table below chronicles what I titled the tale of three calves.

Calf Number	X294	X285	X382
Birth Date	8-27	8-24	9-6
Weaning weight	572	654	574
Finished weight	1555	1547	1100
Feed yard ADG	5.07	3.94	2.27
Carcass weight	997	990	705
Yield Grade	4.3	3.2	3.2

Sale value	$2,316.0	$1,992.49	$1,503.05
Difference over		$323.56	$813.00
Net Profit	$633.03	$206.57	-$249.97
Average Per head profit	$164.53		

These three calves were raised in the same management group. They were weaned on the same day. They left for the feed yard on the same truck. They were in the same pen at the feed yard. They were harvested the same day. As you can see, there were huge value and profitability differences.

The three mothers of these calves have the same production costs. It becomes clear that I need to identify the top cow and make more just like her. I also need to identify the bottom cow and her production equivalent peers and cull them. One thing for sure, is that I would never know this just by looking. To identify these individuals, I need to track information from conception to carcass. This is the premise behind QB. There are dollars to be made breeding and feeding high quality cattle. It doesn't cost any more to produce high value animals than it does to produce low value animals.

All this value is made possible by marketing your cattle on a quality grid.

Quality Grids

As the above calf chart shows there is only seven pounds difference in carcass weight between the first two calves. There is $323.56 value difference. The entire value difference between X294 and X285 is due to the fact X294 graded prime. It becomes evident that there is money to be made by increasing the quality grade of your cattle. Grid marketing systems let us know what genetics are creating the most valuable animals. Grids also, more importantly, let us capture the value we have created with our genetics. This is the main focus of the QB program: finding the cattle that create and have more value and making more of them. Conversely, one also needs to identify the low value animals and get rid of them.

 The Missouri Show-Me-Select Replacement Heifer Program sales point to a strong demand and willingness among buyers to pay for known genetics.

The table below illustrates this point. Tier one heifers in the Show-Me-Select program are heifers that meet all the minimum requirements for the program.

Tier Two heifers meet these same requirements, but, in addition, are sired by high-accuracy AI sires for traits that include: calving ease direct, calving ease maternal, weaning weight, carcass weight and marbling.   Look at the value difference buyers are willing to pay for known genetics!

Tier One	Natural service bred	$1,549 Baseline	Over baseline
Tier One	AI bred	$1,695	+$146
Tier Two	Natural service bred	$1,786	+$237
Tier Two	AI bred	$1,906	+$357

The take home message is good producers realize the lifetime production of high value animals is significantly more than average. Progressive producers are willing to search out and pay for animals with higher potential returns.

Conclusion

How do we use these technologies to improve our operations? Putting them all together is, as I stated above, the essence of QB. The time it takes to make improvements in our operation is significant. So making good informed decisions becomes crucial. Those decisions need to be made with good data. The common comment about cattle operations is that all progress comes through the bull. This is somewhat true if you don't purchase females that are better than what you have. I will agree with this statement to a degree. That degree is that you can slowly improve the average of your herd over time with bull selection. Faster improvement comes from using highly proven bulls AI and intense heifer selection based on good solid data from conception to carcass. Cattle obviously must produce on grass first and foremost. I truly believe that we can have fertile, forage adapted, fast efficient gaining and high carcass quality cattle all wrapped up in one animal. We can do this, but only with good, sound individual data.