

To EPD Or Not To EPD. That Is The Question.
(The Answer: To Be, Or Not To Be)

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When Oklahoma State University has a cattle conference it is always impressive. There are about 43 speakers at this conference. There are more speakers here than I usually have in the audience of most of the groups that I talk to.

When you analyze this meeting it becomes apparent that it is not unlike an old fashion camp meeting with a number of performance preachers such as Reverend Wallace and myself preaching the performance gospel to you. It is always interesting to hear from a few reformed sinners at such a revival. That group has been well represented here by the members of the packing industry who spoke to you earlier. I am really impressed by the fact that one of the Bishops of the Movement is here. I am referring to Bishop Benyshek who has been so effective in his work to give we laymen accurate EPD data on which we can build sound breeding programs. But frankly I have to admit that it blows my mind that this conference even brought you the Pope to speak in the person of Dr. Bill Pope this morning.

Not only did OSU put together a lot of good talent for this conference, but Dr. Bob Kropp challenged each speaker to do his best when he got here. The challenge that Reverend Roy and I received contained an interesting observation of where the industry is now in its acceptance of EPD's. Since my talk will attempt to answer some of the questions that this letter raises, I would first like to quote two paragraphs from this challenge. I am quoting now from this letter from Dr. Kropp:

"I seriously believe that this portion of the program holds the future direction of the industry in the palm of its hand. If we can get a sound message across on how to utilize EPDs for herd and breed improvement, then we will have helped the industry. If we fail, then the promoters will do enough barn talking to beat down association efforts to document more performance. There is really a lot of confusion, frustration and misconception in the industry regarding performance and EPDs. Breeders do not believe the data. They think some bulls are over, as well as under evaluated and really believe a lot of money is being spent on worthless information.

"The message is simple--how we get it across is very hard. The utilization of EPDs to build a solid, functional set of cattle with industry merit doesn't seem hard until one tries to convince breeders to do it. They do not feel they can sell the kind of cattle they have strong EPDs. They feel we are going backward rather than forward. The utmost thought in everyone's mind is, "Can I sell them?", not whether or not they are the "right kind". If we can convince breeders that the

"right kind" is the "right kind", then there will be a market for the "right kind". Most breeders perceive the "right kind" as what brought the most money last week!"

To be told that you hold the future of the industry in the palm of your hand is really a pretty heavy load to carry even with Roy's help. Today I wear two hats--one as your friend and one as your competitor. As your friend I am glad to share with you what our experience has been in using EPDs as the only way to choose our sires for the last eight years. However, if you are trying to produce good bulls I am also your competitor. The use of EPDs has dramatically increased the performance on our ranch of our commercial as well as our registered cattle. The cattle we are selling from our registered herd now are bringing three times what they did 10 years ago. As your competitor I hope you never use EPDs.

I would like to begin this EPD discussion quoting an editorial written on the front page of the April 25, 1988 edition of the Western Livestock Journal by the editor, Fred Wortham Jr.

"The day when a producer simply set out down the road to find that "good doing" bull is gone...apparently forever. No longer can you depend on commercial men to eyeball that "bugger" and decide he would fit the cow herd and the environment...and, by the way, he's no longer content to simply hunt for a bargain bull...in fact in many cases he shuns that bargain-buy chance."

"These things were brought forcefully to the forefront a week ago when more than 2,000 bulls found new owners through a series of auctions in the state of Montana."

"Today's bull buyer--the commercial man in particular--is as hard to please as some of our ultimate customers, Mrs. American Housewife and her peers. He knows what he wants, and more importantly he knows what he doesn't want. If you are going to sell him a bull, you not only had best have all the growth traits listed for your production, you had better have the data (expected progeny differences) on his dam, and granddam, and for that matter on his sire and grandsire. The further back into the pedigree you can go with data, the better chance you'll have to sell him the bull and with that chance comes a better chance for a higher price than you might otherwise expect."

"One very successful firm in Oklahoma recently made the point that commercial producers want EPDs--the full compliment, please--while there are still seedstock people who don't know what EPDs are and worse, can't read them or interpret them.. Those who don't know EPD's now had better take a crash course, a point brought home time and time again in Montana a week ago. "

"Bulls offered which did not carry very desirable maternal traits in their EPDs or those which had little or no EPD information sold at prices as much as \$1,500 to \$2,000 less than those that carried a "full report card."

"The days when weight per day of age, when average daily gain and weaning and yearling weights were enough, no longer exist. Most of the people we talk to during this trip in the seedstock sector acknowledge this for the most part, though some of them still accept the fact with some qualification or reservation."

"Pedigrees are still important to the bull buyers, but breed families with the desirable maternal traits, including ease of calving and lower birth weights, are in highest demand right now."

"In most instances the difference between \$1,000 bulls and \$3,000 bulls in the Montana sales were more desirable maternal trait EPDs."

"The roles of the seedstock producer, our interviews in Montana revealed, is due to change somewhat, and the changes seem to be drawing closer at a more rapid pace than previously thought."

"Specification beef for the super market counter is not the only specification of the future. Specification genetics, specification bulls, to fit specific herds with the seedstock producer and the commercial producer working in partnership with feedlot operators and even packers as members of the "firm" is not such far-fetched pipedream as the industry attempts to move toward the product in high demand."

"Indicators which point to this kind of an industry adjustment were in evidence in conversations carried out at Treasure Test Center in Great Falls, at Midland Test Center and at the Leachman Cattle Co. sale, the latter two in the Billings area."

"The cattle industry of the late 1980's and early 1990's will be exciting times...the excitement is here already and evolution is all around us."

I have heard it said EPDs are just a fad that will not be around very long. I firmly believe EPDs are by far the best genetic selection tool that has ever been available to beef cattle producers. This "fad" will be with us until it is replaced by something better. I would like to share with you how we have used them and what they have done for us at our ranch.

Beginning in the fall of 1980 we have used only EPDs to select our sires. Most of the bulls we use as sires we have never seen. However, they are bulls that are listed in the sire summary so they are progeny proven bulls. Most of our females are settled by A.I. We have not used a clean-up bull on our replacement heifers since 1964 or on our registered cows since 1979. Our registered cows are bred in a 70 day season, commercial cows 60 days, registered heifers 50 days and commercial heifers have a 30-day breeding season. Open females are sold.

At the beginning of our fall breeding season in 1987 we had 980 females, including replacement heifers, to breed. Only 80 head of those had clean-up bulls turned with them. We should have only about 10 to 15 naturally sired calves in the fall of 1988. This will be the highest percentage of A.I. calves we have had, but for several years 85 to 90 percent of our total calf crop has been A.I. calves.

We use three EPD scores to select our A.I. sires. Those EPDs are birth weight, pure milk, and yearling weight. Sires used on first-calf heifers have around 0 lbs. EPDs for birth and as high on EPD as we can find on milk and yearling weight. On cows we have used bulls with as high as +8 lbs. EPDs for birth weight. EPDs this high have given us high birth weights and dead calves at birth from mature cows when those cows have a lot of growth in their own pedigree. This 8 lbs. birth weight EPD gave us very little birth weight problem on cows whose pedigrees were not stacked for growth. I would say as we continue to stack pedigrees for growth in our cow herd we will use EPD's of 6 lbs. or less for a maximum for mature cows. May I caution you that these are Angus figures. EPDs across breed are not comparable but genetic principals apply to all breeds.

We are not sure how much milk our environment will support but we want more milk in our cow herd than we have now. Until the pure milk figures came out about three years ago we were not able to measure milk production very accurately. The present system does a good job of measuring milk production.

Thus the bulls that have acceptable birth weights and milk and also high yearling weights are the sires that we use. The system is not very complicated. What has it done for us?

We have owned some of our steers through to slaughter since 1970. We have also been buying feeder cattle and putting them into the feedlot since 1972. The feeder cattle have been purchased by the same order buyer at the same locations. There has been about 2000 steers purchased each year and about 60 to 100 home raised steers fed. Over the last 10 years the purchased cattle have not changed their performance very much. During the same time our home raised steers changed their feedlot performance considerably. All steers purchased and raised have been fed at the same commercial feedlot during this time.

Steers	Pounds of feedlot gain per day	Days on Feed	New weight @ slaughter
<u>Purchased</u>			
(1978-80 avg.)	2.87 lbs.	142	1099 lbs.
(1986,87 avg.)	3.09 lbs.	133	1145 lbs.
	<u>+ .22 lbs.day</u>	<u>- 9 days</u>	<u>+46 lbs.</u>
<u>Home Raised</u>			
(1978-80 avg.)	2.81 lbs.	154	980 lbs.
(1986,87 avg.)	3.63 lbs.	108	1172 lbs.
	<u>+ .82 lbs/day</u>	<u>- 46 days</u>	<u>+192 lbs.</u>

Another interesting demonstration of EPD effect on our cattle production is a before and after comparison on our weaning weights. The average weaning weights of our steer calves from 1964 to 1973 was 523 pounds. From 1974 to 1979 we creep fed our steers and also weaned them

at earlier dates so our weights were not comparable. Then in 1980 we returned to a comparable management of our steer calves. Those calves weighed 526 pounds. No change from the 1964-73 steer weights.

In the fall of 1980 the first field data sire evaluation report was published. This was the first time that all the widely used A.I. bulls of the breed were evaluated with EPD scores. That 1980 report listed 23 Angus bulls that we had used by A.I. over a 12 year period. When we averaged their EPDs their composite values were as follows:

Avg. birth weight = +.1 lbs.
 Avg. weaning weight = +3 lbs.
 Avg. yearling weight = +9 lbs.
 Avg. maternal breeding value = 99.5

If these EPD scores were correct we would obviously get very little change in our weights. As I have already told you from 1964 to 1980 our weights were stuck on about 525 pounds. Our cattle in 1980 were a little taller but not heavier. You might correctly say we did a poor job of selecting bulls. But other purebred herds at that time were not doing much better. One of the leading Angus herds in the 1970's had a sale that 5 bulls brought from \$21,000 to \$53,000. Guess what their herd bulls averaged on their EPDs?

Avg. birth weight EPD = +.17 lbs.
 Avg. milk EPD = -1.6 lbs.
 Avg. yearling weight EPD = +4.8 lbs.

In 1981 we started using only progeny proven A.I. sires with acceptable EPD values. Our steer weights from 1980 through 1987 are as follows:

	Weight off cow	Date Weaned
1980	526 lbs.	Aug. 6
1981	661 lbs.	July 22
1982	723 lbs.	July 22
1983	706 lbs.	July 18
1984	736 lbs.	July 16
1985	705 lbs.	July 15
1986	786 lbs.	July 18
1987	774 lbs.	July 13

Using proven bulls with acceptable EPD's for birth, milk, and yearling has added over 250 lbs. to the weights of our steers. For the last two years we have been using only daughters of A.I. sires for our commercial replacement heifers. In another 5 years most of our commercial cow herd will be daughters of some of the top bulls in the breed. We will continue to see improvement in the performance of our herd.

Dr. Kropp said in his letter that breeders do not believe the EPD data. Roy Wallace's analysis of 257 progeny-proven sires with 50 or more daughters with weaning ratios on their calves indicates that pedigree projected data alone will be within 7 pounds, on the milk EPD,

75 percent of the time after those sires have progeny data to actually prove their milk EPD's. Both sire and dam had to have a milk EPD for the 257 bulls to be included in the analysis.

We have never ever had such an accurate predictor of production before. Can the "eye of the master" equal or even come close to that? No! Do we have any other system of gene selection that can even come close to the EPD system? No! why don't breeders use EPDs? As your competitor I vigorously support your EPD opposition!

Some breeders get very upset when they see EPDs change very much. One of the few tools that an animal breeder has is genetic change. The more genetic variation there is in a population the faster the genetic improvement can be made if you will identify the change that is going toward your goals. Without genetic variation genetic improvement can not be made. If we as seedstock breeders can not offer genetic improvement then all we have to sell are cow fresheners.

Though 75 percent of the time the change in Roy's milk EPD study was less than 7 pounds, there were 14 of the 257 sires or 5 percent that their milk EPD change fell in the less than 3 standard error range or up to a change of ± 21 pounds. Change of that magnitude is genetic opportunity not genetic disaster because part of those sires may give you rapid genetic improvement. Identify them and go with them. Without them we have genetic stagnation or change at a snail's pace.

Dr. Kropp indicated breeders think they cannot sell cattle that have strong EPDs. We had a sale at our ranch this last April. Our catalog talked about and had EPDs in it from cover to cover. We sold 91 bulls for a \$3,050 average, the top bull bringing \$7,000. There were 51 bulls that brought \$3,000 or more. Only five of the 91 bulls were purchased by registered breeders. Just as the editorial in the Western Livestock Journal said happened in Montana, the demand for light birth weight EPDs was high. The 23 bulls with EPDs of less than +2.0 pounds birth weight averaged \$3,525.

On the other side of the coin 10 bulls sired by the bull with the most frame and also the heaviest EPD for birth weight averaged \$800 less than the light birth weight bulls. Times are changing rapidly. You can sell cattle with EPDs. Will you be able to sell cattle for much longer without EPDs?

Two years ago at the Beef Improvement Federation annual meeting in Lexington, Kentucky the group went to the race track for an evening's entertainment. After the races on the bus on the way back to our hotel an interesting observation was made by my seat mate. He said some of the people who have told him that a sire evaluation report was too complicated to understand had figured out the much more complex and detailed racing form in five minutes. It made them more successful at the race track. Expected progeny differences will make you more successful with breeding cattle.

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