

For: Around the County  
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### Bull Buying Season: Using the Numbers for Genetic Advancement

Bull buying season is in full swing and with that comes lots of sale catalogs filled with lots of numbers. Those numbers are important as they help fulfill your objective of buying a bull to improve the genetics of your calf crop. Selection based on raw values places selection pressure not only on the genetic potential of an animal but also on environmental influences such as herd, year, season, and management, therefore bull selection should be based on EPDs and economic indices as these tools are far more accurate in predicting the average difference in offspring between bulls than visual appraisal or actual weights. Many producers mistakenly place more emphasis on these raw measurements than EPDs. Raw measurements include the confounded effects of genetics and environment, and consequently, the genetic ability of the animal is unknown.

Expected Progeny Differences (EPDs) allow for the comparison of animals within a breed for their genetic potential as parents for a given trait. EPDs have existed in the beef industry for decades and their use has produced intended genetic change in many traits. EPDs incorporate multiple sources of information, including full pedigree, an animal's own record, and progeny information. As additional sources of information become available, the accuracy of the EPD value increases. However, some producers are still reluctant to rely on EPDs when making selection decisions.

That said, it is completely unrealistic to expect all commercial bull buyers to completely understand all available EPD and economic selection indices. Commercial cattle producers have a cattle enterprise to run leaving little time to dedicate to understanding the intimate details surrounding genetic prediction. There are resources (e.g., [www.ebeef.org](http://www.ebeef.org)) designed to help. Ideally, seedstock suppliers should also aid in the understanding and use of these tools.

Matt Spangler, University of Nebraska Beef Cattle Geneticist outlined a few key points in bull selection.

Have a breeding objective in mind. This should include how you plan to sell calves, if you plan on retaining replacement females, and any labor or other environmental constraints (e.g., limited forage). This helps identify the traits that are economically relevant to you.

Choose a breed (or breeds) that fit your current crossbreeding system and match your objectives. Compare breeds based on current research (i.e., US Meat Animal Research Center) and not a historical view as breeds have changed overtime.

Identify a seedstock supplier (or suppliers) that you trust and that have bulls for sale that match your breed needs and your breeding objective.

Identify bulls, based on EPD or (preferably) economic index values that match your objectives. If calving ease EPD exist, do not use birth weight EPD. Calving ease EPD are generated using birth weight information.

If you retain replacement females, pay attention to calving ease maternal EPD. These are really 'Total Maternal Calving Ease' EPD, and reflect how easily a bull's daughters will calve as two-year olds. Reproductive longevity is a key profit driver for self-replacing herds. If a Stayability EPD or Sustained Cow Fertility EPD exists, use it.

If you retain replacement females in limited feed environments, consider selecting bulls with more moderate mature weight and milk (maternal weaning weight) EPD.

Understand that even if you sell calves at weaning, someone is going to own them in the feedyard. If you want to build a market for your calves, do not completely ignore post-weaning gain and carcass merit.

Use an index that fits your objectives—this can greatly simplify bull selection decisions. Do not use a completely terminal index if you retain replacement heifers.

Buy quality, but do not overpay. Sometimes the bull that is not top on your list is actually the better economic decision.

Too often seedstock producers and bull buyers get caught up in the actual weights, ultrasound data, etc., when selecting sires. EPDs provide a measure by which animals within a breed can be compared to one another for their genetic potential as parents for specific traits. This bull sale season do not make the process more complex than it really needs to be and certainly do not get caught in the trap of believing that you can visually see the genetic potential of a bull—use the tools that science has provided and has continually improved and validated.