



## What is the Value of EPD’s and Bull Performance Parameters?

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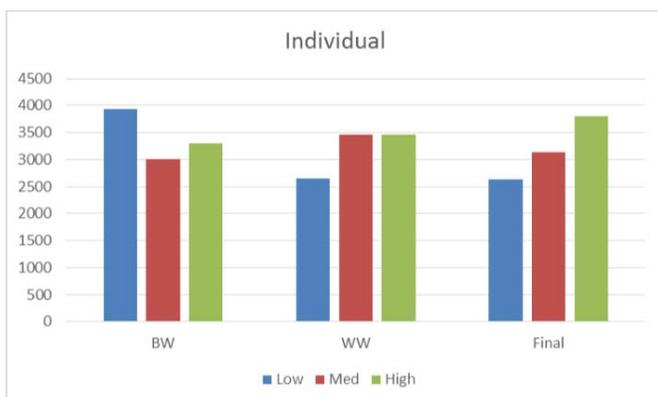
The Tucumcari Bull Test station has been collecting performance data on yearling bulls for over 40 years.

Since its inception, production trends, breed, and expected progeny differences (EPDs) have all changed as the industry has moved towards a more efficient system. These changes have been made, in part, based on selection preferences and performance evaluation within the seedstock (pure bred) sector.

In 1961, the predominant breed tested at the Tucumcari station was Hereford. The average end weight after 120 days on feed was 800 lbs. The bulls gained on average 2.25 lbs per day, and it took 10 lbs of feed to convert 1 pound of gain (FE). In 2017, the predominant breed tested was Angus. The bulls gained on average 3.58 lbs/d, with a feed conversion of 5.96 pounds of feed per pound of gain. Feed efficiency (FE) has become an important focal point for New Mexico seed stock producers. Efficient bulls can result more efficient females on grass and more efficient calves on feed.

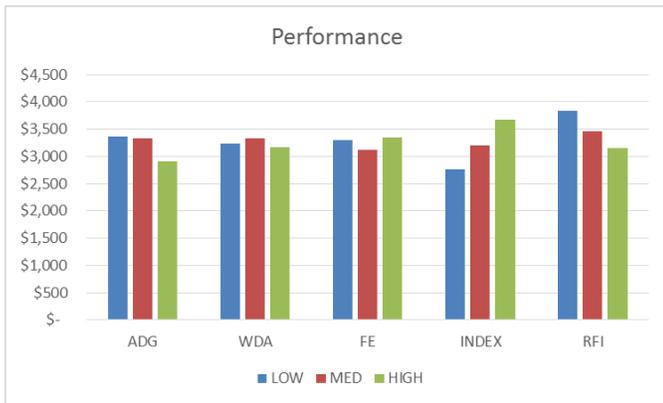
With the advancement of technology, a buyer has a full list of information at their disposal to make purchase decisions. From actual performance data, to EPDs, to genetic benchmarks, a producers can fine tune his or her selection process to focus on raising females, increasing weaning weights, or improving carcass traits.

For the 2017 Tucumcari Bull Test and Sale, performance and EPD parameters were correlated to price.



The purpose of this evaluation was to provide test participants information about what the buyers were basing their purchase decisions on. In Figure 1 actual calf data were compared against price.

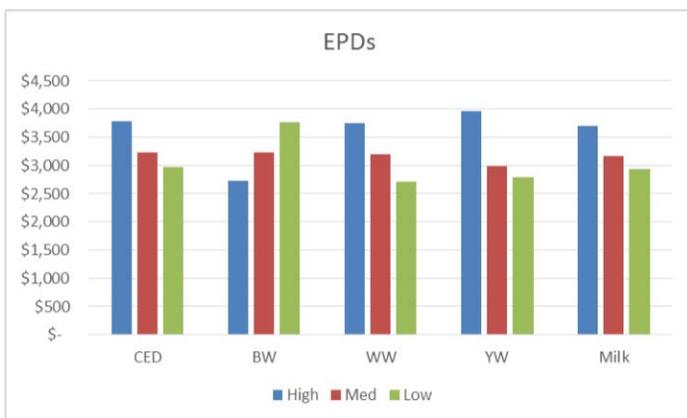
Both birth weight and final weight had the greatest impact on price, within these parameters. Low birthweight bulls, on average, were higher in price. Everyone needs a “heifer bull” and with only so many



of those type of bulls available, the price was driven by demand.

When the bulls performance during the test was evaluated (Figure 2.), there were only two factors that seem to drive price. Final index is a combination of gain (ADG), weight per day of age (WDA), and feed conversion (FE). This value indicates how an individual animal's overall performance ranked against all the other bulls he was evaluated with. Repeat customers of the bull test understand that the higher the bull's index, the better the bull. A new

measurement that is gaining interest is residual feed intake (RFI). This is a specific measurement that evaluates a bull's metabolic efficiency. The lower the values from this calculation indicates a more efficient bull. That is why the lower value was equated with higher priced bulls.



Finally, when EPD's were evaluated (Figure 3), the trends were clear within trait, but more difficult to interpret across traits. Both calving ease (CE) and birth weight (BW) were significant drivers of price. The higher the CE value the higher the price. Conversely the lower the BW value the higher the price. The yearling weight (YW) EPD was also greatly significant in a buyer's selection process. Of less concern were weaning weight (WW) and Milk. There were, however, no single EPD trait that drove price.

Come sale time, the buyer can impact genetic trends. It is a simple formula of supply and demand. The goal of the seedstock producer is to sell cattle that perform well, and encourage repeat business. For this to happen, they must listen to what their customers want. "Fat Sells" is a term you hear a lot from people that have been in the bull sale business for a long time. Producers are realizing that over conditioned bulls tend to not perform well in the first year at the ranch. Instead, the buyers say they are looking for bulls that are "fit" and "ready to work". Based on the results of this price evaluation, the term "fat sells" is still a key driver of price. The larger, heavier bulls consistently out sold bulls with more promise of efficiency. That said, as the industry is continually pressured to produce more with less, the animals tested at the Tucumcari Bull Test station will likely look very different 40 years from now.

**AG Day Degree Program – August 2<sup>nd</sup> – August 4<sup>th</sup> – NMSU Campus**  
**More detailed information to follow**

# AG DAY DEGREE SCHEDULE

Wednesday, August 2nd, 2017

8:00am to noon – Horsemanship with Curt Pate (OPEN TO PUBLIC with Fee)

1:00 pm – 5:30(?) – Stockmanship with Curt Pate (AG DEGREE DAYS BEGINS)

1:00 -- 2:30 On Campus

3:00 – 5:30 College Ranch

5:30 – Cook out TBA

Thursday, August 3<sup>rd</sup>, 2017

8:00 am *Choose One*

<b>ANIMAL SCIENCE</b>	<b>X</b>	<b>NATURAL RESOURCES</b>	<b>X</b>
Ruminant Nutrition and Anatomy		Principles of Range Management	
Bovine Reproduction and Anatomy		Principles of Wildlife Management	

9:00 am *Choose One*

<b>ANIMAL SCIENCE</b>	<b>X</b>	<b>NATURAL RESOURCES</b>	<b>X</b>
Animal Breeding		Forest Management	
Beef Cattle Diseases		Principles of Livestock Marketing	

**BREAK**

10:30 am *Choose One*

<b>ANIMAL SCIENCE</b>	<b>X</b>	<b>NATURAL RESOURCES</b>	<b>X</b>
Feeds and Feeding		Grazing Management	
Reproductive Management		Wildlife Population/Habitat Mgmt .	

**LUNCH**

1:00 pm *Choose One*

<b>ANIMAL SCIENCE</b>	<b>X</b>	<b>NATURAL RESOURCES</b>	<b>X</b>
Selection with EPDs and Genomics		Fire Ecology	
Vaccine Strategies for Beef Cattle		Marketing cattle in New Mexico	

2:00pm – 4:30pm *Choose One SPECIAL TOPICS* (breaks offered within each session)

BQA Certification		Navigating Policy and Regulations		TBA	
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## **DINNER ON OWN**

Friday, August 4th, 2017

Attendees will have the opportunity to participate in all four 1 hour demonstrations. The rotations will begin at 8:00am on the NMSU Campus Farm

Group will first meet at the Pavilion for Coffee and Donuts and will go from there.

- ✓ Animal Health Chute Side - Beef Barn
- ✓ Tack and Saddle Fitting – Equine Facility
- ✓ Brush spraying - Pavillion
- ✓ Plant Identification – Knox Hall

### Registration Fees

Wednesday August 2<sup>nd</sup> 8:00am 12pm

“Horsemanship for Stockmanship” With Curt Pate

Rider (limit 10; first come first serve)	\$50.00
Audit	\$10.00
Youth Auditors are free	
Ag Degree Days Aug 2 <sup>nd</sup> – 4 <sup>th</sup>	\$60.00
Student	\$30.00
Additional Meal Ticket (1 lunch & dinner)	\$25.00ea

**Cooperative Extension Service**  
The Linebery Policy Center for Natural Resource Management

**Circular 678**

## Poisonous Plants of New Mexico Rangelands



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Copies of Circular 678 – Poisonous Plants of New Mexico Rangeland can be obtained from our office; they are \$8.00 each. Call Kathy at (575)646-3326 or email me at [kbustos@nmsu.edu](mailto:kbustos@nmsu.edu) and let me know how many copies you would like, and they will be mailed to you. If you would like to use an index number in purchasing one or more, we can also do a JV.

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