



BIC: 21-44700
Department of Animal Sciences
Colorado State University
1171 Campus Delivery
Fort Collins CO 80523-1171



**One Bar Eleven Ranch
Colorado State University
John E. Rouse – Beef Improvement Center**

27th Annual BIC –Bull Sale

Monday – April 8th, 12:30 p.m.

Selling Approximately 45 Yearling Bulls



One Bar Eleven Ranch

Colorado State University

John E. Rouse – Beef Improvement Center

Dear Cattlemen:

Enclosed are the final results for the 2012 yearling bulls on test at the One Bar Eleven, Colorado State University John E. Rouse Beef Improvement Center. These bull calves were weaned October 1 and then went on test November 7 at an average weight of 603 lbs. The average daily gain over the 120 day test was 3.20 lbs per day. These bulls were selected at weaning and represent what we consider the top third of our bull calves.

Many of these bulls will make calving ease sires with over half having negative birth weight EPDs and 75% having positive calving ease EPD. As a whole the bull calves in this test had an average birth weight of 76 pounds with an average calving ease EPD of +3.4! For those producers at high elevation, approximately half of the bulls have a PAP of 43 or lower.

The focus of our breeding program is on producing animals that are adapted to range environments with cows that have long, productive lifespans. Yet we realize our cattle must perform in the feedlot and ultimately result in a product that satisfies the consumer. To monitor our progress in this area, the steers from our herd are retained and fed at the Eastern Colorado Research Center with carcass data collected at harvest. The last group of steers we harvested graded over 90% Choice with an average USDA yield grade of 2.78!

We have also spent considerable effort producing bulls whose female replacement offspring will stay in your herd, producing calves every year. Every bull in this year's sale except one has a positive stayability EPD.

As we move forward with a focus on producer profitability, we are leveraging the feed intake unit near campus to measure feed intake on steers from the ranch as well. This effort will focus on improving feed utilization characteristics of the herd, with the goal to improve both cow and feedlot efficiency.

We continue to produce within-herd EPD calculated at CSU's Center for Genetic Evaluation of Livestock. These EPD are based on animal performance data from the more than 50 years this herd has been in existence. Please join us for the sale. For more information or questions contact any of the following:

Beef Improvement Center
Mike Moon 307-329-8030
Lindsey Noreen 307-710-2938

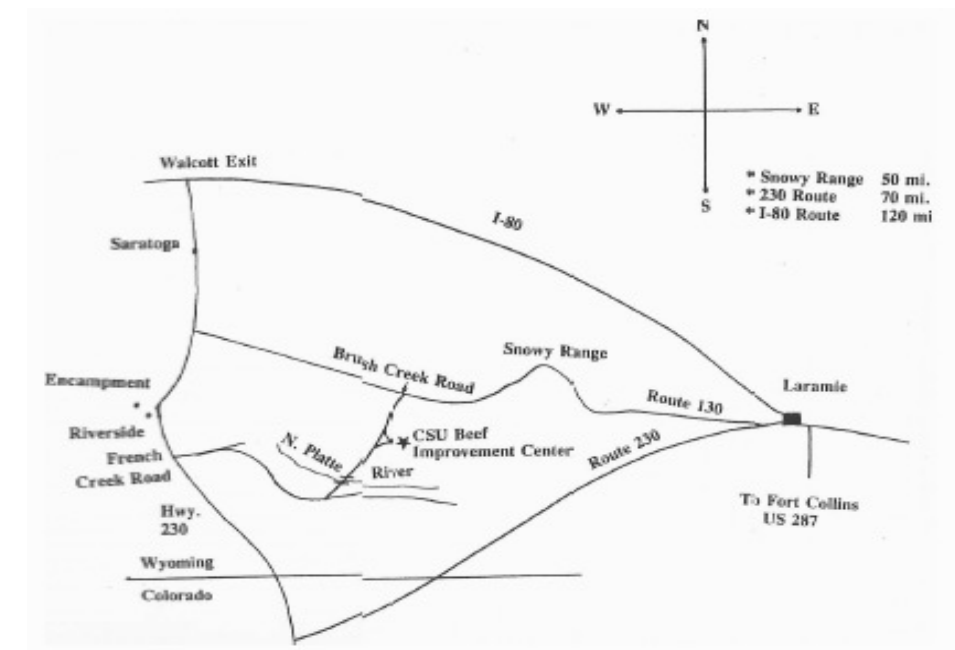
Colorado State University
Mark Enns 970-491-2722

SEALED BIDS: Sealed bids for all bulls will be handled by Mike Moon, CSU – BIC (307) 329-8030 or Mark Enns, CSU, (970) 491-2722.

SALE DAY LUNCH: Lunch will be served at the center at 11:30 a.m. by the Snowy Range Cattlewomen.

INSPECTION OF CATTLE: Available any time before sale date. On sale date, bulls will be available for inspection at 9am.

Map to the Ranch



TERMS OF SALE

All lots will be sold to the highest bidder. The Auctioneer will settle any disputes. Animals sold in this sale will be fed and cared for free of charge for 7 days following the sale, but at owner's risk, and will be turned over to purchaser or loaded for shipment as directed. After 7 days, a \$2 per bull per day late charge will be assessed to the buyer. A certificate of transfer and bill of sale will be furnished for each animal sold. The terms of the sale are cash, and all settlements must be made at the close of the auction. We will not be held liable for the loss of any animal or its progeny following the transfer of ownership.

All bulls selling have passed a fertility exam that included live semen evaluation and scrotal measurements. They have also been tested **BVD free**. We feel you are purchasing very good animals from an outstanding herd. Please keep us informed on how they perform for you!

One Bar Eleven Ranch

Colorado State University

John E. Rouse – Beef Improvement Center

Glossary of Terms and Abbreviations

120 Day Test ADG: (Average Daily Gain) Measurement of daily body weight change of an animal on the 120 day performance test.

Birth Weight, Weaning Weight, and Yearling Weight EPD: Expressed in pounds, it is a predictor of differences in sires' progeny due to differences in breeding value for the trait of interest.

Calving Ease EPD (CE): Expressed as a probability of an unassisted birth, it is a predictor of a sire's ability to produce calves born unassisted. Higher values represent easier calving. **CE Total Maternal** represents the ability of a sire's daughters to calve easily.

EPD: (Expected Progeny Difference) The difference in performance to be expected from future progeny of a parent, compared with that expected from future progeny of all other parents evaluated in the analysis when bred to equal mates. EPD is an estimate based on progeny testing and herd performance and pedigree information. EPD's are generally reported in the units of measure of the trait, e.g. pounds, cm, cm², percent, mmHg, etc.

Frame Score: A score based on evaluation of actual height. Scores are based on equations listed in BIF guidelines.

Milk EPD: Expressed in pounds of calf weaned, it is the difference in performance expected from daughters of the bull in question due to differences in genetics for milk production.

PAP: (Pulmonary Arterial Pressure) Obtained by a procedure called "right heart catheterization", this test is the best indicator to date for identifying animals predisposed to Brisket Disease. The test is not 100 percent accurate and should be used with that knowledge. Generally, cattle with PAP values greater than 50 are considered high risk and cattlemen should be cautious of using them at high elevations.

Stayability EPD (STAY): The probability that a sire's daughters will remain in the herd to age six assuming they produced their first calf at 2 years of age. This trait represents longevity of a sire's daughters. (Higher values result in a greater probability that a sire's daughters will remain in the herd to 6 years of age.)

BREEDING AND MANAGEMENT PHILOSOPHY

The John E. Rouse—Colorado State University Beef Improvement Center herd has a history of over 50 years of selection for improved performance of economically important traits. The Center has established a reputation for predictable, superior performing animals as evidenced by test results involving bull and steer carcass performance tests. Our focus for the breeding program is to continue to develop and improve this highly productive herd of Angus cattle with emphasis on fertility, maternal ability, low pulmonary arterial pressure (and correspondingly a reduced risk of Brisket Disease), strong early growth and excellent carcass quality. Our end goal is to produce genetics that are adapted to the high altitude environment with long-lived, low-cost, fertile females and steers that work in the feedlot and on the rail. The research with this herd at the Center focuses on these traits and on methods to improve beef producers' profitability. The John E. Rouse – Colorado State University Beef Improvement Center herd of Angus cattle is an outstanding source of genetics that is contributing significantly to the beef industry's future.

Beef Improvement Center Research Update

The One Bar Eleven Ranch and the Beef Improvement Center cow herd are integral components to the teaching and research efforts of the Breeding and Genetics program in the Department of Animal Sciences at Colorado State University. This facility is a self-sustaining beef operation for educating students by serving as a destination for field trips, providing real-world data and examples for course use, and offering student internships. In the past we have had students as interns from six universities and 3 countries. Additionally much of our foundational research on genetic improvement of cow adaptability and fertility occurs with this herd. Historically, research in this herd has resulted in the stayability EPD, a selection tool now adopted by multiple breed associations that identifies bulls whose female progeny have a high probability of remaining in the herd by weaning a calf every year. Ongoing projects include improving methods to select animals for reduced susceptibility to high altitude disease. Included in this project is the evaluation of early-life pulmonary arterial pressure measures (PAP) as a means to reduce the incidence of disease and assist in making selection decisions at an earlier age as opposed to waiting until animals are a year of age. One outcome of this project has been the development of PAP EPD for selection—a project that was completed in conjunction with several producers in Colorado and Wyoming.

The process of calculating EPD is evolving. In recent years, great genetic progress has been made by developing strategies and technology to calculate multi-trait and multi-breed EPD comparable across breeds. The next expansion of EPD technology is the addition of DNA-based data. We now have the ability obtain thousands of genotypes for a beef animal (i.e., BovineSNP50 = 50,000 genotypes and BovineSNPHD = 800,000 genotypes). When Milt Thomas joined our research team as the John E. Rouse Endowed Chair, we embarked on this type of research. We just completed genotyping 1,750 animals from this herd. We will use these data to help discover the important chromosomal regions and genes influencing growth, fertility, and tolerance to high altitude (i.e., PAP) and help calculate genome-assisted EPD (gEPD). The use of genomic data will result in more accurate EPD and increased rates of genetic improvement. Regarding tolerance to high altitude, our animal science research team is collaborating with veterinary scientists as well as researchers from the University of Colorado Anschutz School of Medicine. Together we are studying genes with DNA and RNA sequencing technology using heart and lung tissues from high and low PAP steers from this herd to study the underlying genetic regulation of PAP. This information will help us understand how many genes regulate Brisket Disease and identify causative mutations; thus, the genomic information will help us develop new tools to breed cattle that are more tolerant of high altitude.

For those not at elevation, we are also initiating a project to determine appropriate cow size and milk production levels for the cow-calf producers in this regions arid environment. Our hope is that this will result in selection of animals with reduced costs of production but acceptable levels of performance leading to improved profitability.

Within-Herd Expected Progeny Differences

Calf ID	Sire	Birth Date	Age of		Off Test Wt			Test ADG	Frame Score	PAP	SC (cm)	Birth Weight	Weaning Wt	Milk	Yearling Wt	Calving Ease		Stayability
			Dam	Birth Wt.	Weaning Wt.	(March 7)	Direct									Maternal	Calving Ease Tot.	
2002	9528	2/12	2	50	558	979	3.18	4.2	51	37.2	-5.8	4	6	28	13.0	3.1	3.8	
2012	9528	2/18	2	49	540	1033	3.44	5.0	39	36.5	-5.5	-3	8	23	14.4	4.2	6.1	
2019	9567	2/20	2	72	520	1015	3.51	5.3	40	34	-0.9	22	5	61	2.3	-1.5	3.3	
2021	9528	2/20	2	51	572	988	2.84	4.5	38	32.5	-4.0	4	9	37	10.1	0.1	5.0	
2022	9528	2/20	2	58	558	1110	3.95	5.8	41	38	-2.9	9	9	49	8.0	1.3	2.4	
2023	9528	2/20	2	74	536	972	2.81	4.5	40	35.5	-2.0	4	5	33	8.4	1.6	7.3	
2030	7637	2/21	2	59	562	1003	2.63	5.3	44	37.5	-2.4	8	9	56	10.1	3.0	5.4	
2031	9528	2/21	2	63	502	990	3.04	4.6	48	36	-3.1	-1	6	22	10.8	2.9	5.5	
2033	9528	2/21	2	59	580	1033	2.97	5.3	46	37	-4.6	2	6	30	12.7	3.6	5.0	
2039	7637	2/23	2	52	524	1006	3.43	4.1	51	37	-2.7	2	5	68	10.2	1.4	5.6	
2051	9528	2/25	2	67	500	989	3.32	4.9	44	38.5	-3.3	6	9	41	9.9	2.7	4.3	
2052	9528	2/25	2	76	514	1022	3.29	5.4	42	35.5	-1.0	10	6	54	4.0	0.2	5.2	
2057	9567	2/29	2	60	520	1046	3.60	5.2	53	37.5	-1.3	14	5	47	7.7	-0.1	3.8	
2071	Summit	3/15	5	66	516	987	3.11	4.1	42	33.5	-3.0	-1	0	20	5.5	1.2	1.7	
2085	Added Value	3/17	7	78	578	877	2.14	5.4	43	35	-1.3	4	6	21	1.9	-0.2	4.7	
2086	Added Value	3/17	7	86	498	878	3.33	5.1	40	31	-0.1	1	1	11	0.9	0.8	7.7	
2091	Final Product	3/17	7	85	490	974	3.26	4.9	44	35.5	0.3	1	3	18	0.4	2.0	6.5	
2093	Yield Grade	3/17	3	64	524	1050	3.42	5.1	44	41	-2.7	-3	3	29	6.3	1.5	2.7	
2097	Summit	3/17	4	80	532	1098	3.78	5.9	57	32	0.8	10	1	22	1.4	1.6	2.7	
2098	Stimulus	3/18	8	78	526	1017	3.45	4.9	42	38.5	-0.8	1	5	31	2.9	2.6	3.5	
2099	Final Product	3/18	10	77	550	928	2.85	5.1	39	32.5	2.0	11	7	23	-1.0	1.1	10.5	
2105	Stimulus	3/18	8	65	524	938	3.11	4.1	40	36.5	-2.3	-3	2	13	5.8	2.0	4.5	
2111	Summit	3/19	4	80	590	1108	3.47	5.7	46	34	-0.3	11	5	23	2.5	-0.3	2.7	
2112	Added Value	3/19	7	77	488	926	2.96	5.2	49	34.5	-1.4	-2	2	5	3.8	1.3	5.6	
2115	Added Value	3/19	12	70	526	1009	3.63	5.4	42	37.5	1.6	13	4	27	0.8	1.4	2.4	
2123	EPIC	3/19	6	72	582	1152	3.95	5.4	44	39	-0.7	5	1	6	2.0	-0.1	5.0	
2124	Cyclone	3/20	3	73	552	1046	3.30	5.4	48	32.7	-0.7	6	4	17	3.1	-0.4	3.6	
2127	Rito 954	3/20	3	76	508	925	2.82	4.2	39	32	0.1	6	3	19	2.0	0.9	1.0	
2133	Added Value	3/20	8	79	532	996	3.42	5.2	40	38	-0.1	7	4	25	1.1	-0.7	4.0	
2149	Final Product	3/21	10	85		963	3.80	4.7	52	34.5	1.3	6	7	26	0.5	3.6	10.4	
2154	Added Value	3/21	6	80	540	1043	3.54	4.7	41	36.3	0.2	6	4	6	1.8	2.4	5.3	
2158	Rito 954	3/21	4	74	482	1036	3.68	4.2	44	33	-0.5	4	5	27	2.7	0.7	1.4	
2174	.	3/22	6	75	602	1061	3.13	5.4	48	35	0.6	3	1	9	-1.0	0.1	5.1	
2175	.	3/22	6	77	592	1043	3.54	5.4	46	37	0.3	5	5	14	2.5	1.8	7.7	
2184	Summit	3/22	4	77	496	889	2.73	3.7	45	32	-0.3	4	0	13	2.7	0.1	2.2	
2190	9567	3/23	6	89	526	918	2.82	5.7	46	34.2	1.5	22	6	57	-0.7	1.7	5.5	
2207	GameOn	3/24	4	85	508	974	3.34	5.0	45	34.5	1.3	12	10	35	0.0	-2.1	3.7	
2221	9567	3/26	10	79	542	992	2.99	5.8	45	33	-0.9	18	9	61	2.6	1.5	3.7	
2223	Stimulus	3/26	7	79	556	1017	3.15	5.5	35	32	0.2	5	4	25	1.5	0.9	4.7	
2226	Stimulus	3/26	4	83	492	982	3.43	5.0	42	36	-0.9	2	5	13	1.9	-0.1	3.3	
2258	8749	4/1	11	80	480	991	3.60	5.3	39	37.2	1.7	19	2	32	-4.8	1.3	10.2	
2271	Added Value	4/4	13	80	488	981	3.50	5.1	37	33	2.3	14	4	37	-3.1	-2.4	5.5	
2274	EPIC	4/5	3	72	488	937	2.99	4.9	39	36	-2.2	-3	3	1	4.7	2.4	0.0	
2288	7637	4/7	5	82	498	947	3.13	5.2	54	37.5	-0.3	9	9	60	4.5	2.2	5.7	
2303	9713	4/8	5	77	510	1007	3.52	4.9	42	32.5	2.8	10	6	26	-1.1	-0.6	3.7	
2315	8749	4/9	13	84	476	791	2.49	4.5	38	31.8	2.6	22	0	33	-6.4	-2.6	6.0	
2339	9713	4/12	11	87	466	896	3.00	4.5	43	36	2.9	13	8	47	-3.6	-0.8	6.3	
2360	7637	4/14	5	71	428	885	3.12	5.3	45	34	-1.2	3	6	47	5.1	-0.3	7.5	
2364	7637	4/16	8	78	498	810	2.34	3.8	55	36	-0.8	11	8	64	4.6	0.5	6.9	
2371	7637	4/18	7	76	464	896	3.18	5.3	43	31	-1.0	-1	8	48	4.3	1.6	10.4	
Overall Bull Test Averages			5	76	525	984	3.20	5.0	46.3	35.2	-0.8	7	5	32	3.4	0.8	4.7	