

Corriente Bull Fertility Study

By Chris McIlmoil

As a cattle producer one must look at cost versus profit in all decisions. Drought, illness and a poor national economy have effected all agricultural production in America in recent years. Several indicators and tools have been developed to help cattle producers survive in this up and down market. One decision we all face is how many bulls to keep around being sure we have no open cows next year. In trying to make this decision one must know a little about his bulls and the reproductive ability. Conducting a breeding soundness exam every year prior to the breeding season is one important tool we can use to help us answer this question.

A breeding soundness exam is nothing new to many Corriente producers, especially those who started in the beef market. Each year prior to the breeding season the veterinarian comes out to your place and evaluate your bulls to be sure they would be capable of servicing all the cows. The exam includes a physical exam to be sure the bull is in good health with adequate weight to make it through the entire breeding season. Rectal palpation to assess the secondary sexual glands and electro-ejaculation with a semen quality and quantity evaluation is also performed. The testicles are palpated to look for abnormalities and the scrotal circumference (SC) is measured to be sure there is adequate testicle to produce enough sperm. Scrotal circumference has been linked to sperm number, sperm quality, age of puberty in the bull himself and age of puberty in offspring of the bull. A bull with an SC above the average will have heifer calves that reach puberty before average bull offspring. This equates to heifers that are ready to breed earlier in the year to be sure to get calves as a 2 year old. Many Corriente producers are familiar with the fertile nature of Corriente bulls and don't bother with evaluating bulls prior to breeding. Those who do evaluate their bulls are often frustrated with the results due to their bulls not passing with standards established for beef breeds. A standard for Corriente bulls is needed to help us keep fertile bulls without the frustration.

The following is a study I undertook as part of my senior year veterinary curriculum at Oregon State University. In performing this study, I wanted to establish a breed standard for our cattle. I wanted to look at the link between body weight and scrotal circumference as well as the link between horn base and scrotal circumference. I hypothesized that a bull with a larger scrotal circumference would have a higher testosterone level leading to a heavier horn base and better horn growth. What I present to you

here is the result of many producers that took part in an original data collection through the association and then countless others who helped after receiving a phone call from me. A special thanks to all those who helped through measurements and words of advice.

In total, 180 measurements were taken from 125 bulls. Most bulls were measured one time, but many were measured at various ages. Horn base was measured on some of these bulls along with body weight. According to the data I have collected there is a correlation of bigger horn bases to larger scrotal circumference. I am not trying to say if you use bulls with bigger SC all your offspring will have the biggest bases ever, just that there is a good chance you will see better bases on their offspring when comparing them to smaller SC bulls.

So how should you look at these results? As with everything else in life use it how you see best. It is my recommendation based on this small study that you use bulls who have been fertility tested and meet established guidelines. You will be confident in the choice of your bulls, and their ability to service all your cows. When you buy a new bull have him fertility tested. Compare your bulls to this chart. If the SC of your bull is larger than that listed for his age GREAT, keep using him and reap the benefits of a larger SC and use this chart to select from his offspring who has what it takes to stay a bull and who should be castrated. Keep track of your herd records, and use them to follow trends in SC as well as other important traits such as calving problems, horn bases, horn growth rates and over all length, body size, roping traits etc. A breeding soundness exam is only one tool available to help you select the proper herd sires.

Thanks for reading and good luck in the future. It is my wish that this study will help us as Corriente producers keep high quality cattle and good times in all our futures. And by the way the study is still ongoing. If you have breeding soundness exam performed of have copies of previous BSE you have had performed, please send them to me so I can get enough data collected to make sure it is statistically significant. Chris McIlmoil DVM 31527 SW Wildwood Ct, Wilsonville, OR, 97070. For questions or just want to talk cattle call me 503-476-5741.

Measurements per bull, no.	Bulls, no.
1	116
2	18
3	4
4	3
5	1

Table 1: Number of measurements per bull, with a total of 142 bulls measured and 181 measurements taken for this study.

Age in months	Quadratic predicted value	1 SD for age	Breed Standard cm	SFT Standardcm	Corriente bulls passing SFT standard	Number of bulls passing new breed standard	Mean SC for study
12	22.40	2.4	20	30	0	8/10	22.85
15	24.81	1.8	23	30	0	2/2	26.25
18	26.88	1.6	25	31	0	7/7	27.07
24	30.19	2.4	28	33	0	23/27	30.43
25-36	-	2.9	29*	34	9/40=23%	35/40=88%	31.70
>36	-	2.5	32*	34	34/58=59%	47/58=81%	34.36

Table 2: Age groups used to establish breed standard. The quadratic equation used for predicting SC $y = -0.0151x^2 + 1.1863x + 10.418$. SD-standard deviation, cm-centimeter, SFT-Society for Theriogenology.