DATA DIVE

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A Look Into Scrotal Circumference

Taking scrotal measurements is a simple trait to measure — are your yearling bulls represented?

Scrotal circumference is a measurement that has been collected by Angus breeders for decades. Research shows a larger scrotal circumference allows for more daily production of sperm cells. It is also well established in literature that scrotal circumference of sires and age of puberty in heifers have a low negative, but favorable, genetic correlation.

Because of this relationship, you may have heard the anecdote that an increased scrotal circumference in sires resulted in daughters that reached puberty earlier and thus, resulted in an increased pregnancy rate in heifers. However, research shows these two traits (scrotal circumference and heifer pregnancy) have a near zero genetic correlation.

Collecting scrotal circumference

Scrotal circumference measurements should be taken during the yearling age window, 320-440 days of age. While some members do collect scrotal circumference at the same time as yearling weights and hip heights, scrotal measurements do not have to be recorded on the same day as other yearling measures. The scrotal circumference collected at the time of a breeding soundness exam (sometimes referred to as a BSE) can be submitted for the scrotal measurement. If you choose to use that measure, be sure bulls are in the appropriate age window for scrotal circumference at the time of the breeding soundness exam. Scrotal measurements taken after 440 days of age are not used in the genetic evaluation.

Scrotal measurements should be collected using a scrotal measure tape

and measured in centimeters. Both testes should be pulled down to the lower part of the scrotum and the measuring tape placed around the widest part of the scrotum. This measurement can be collected on the farm or by a veterinarian.

Submitting scrotal circumference

Scrotal circumference data can be submitted to Angus Herd Improvement Records (AHIR®). They can be submitted alongside other yearling measurements or standalone via the scrotal screen. For submitting scrotal records, the measure date and scrotal circumference are required. After records process, the following business day, the yearling AHIR report will be available in your AAA Login account and will include adjusted scrotal information.

The average AHIR adjusted scrotal circumference is 36.2 centimeters and can be found at *www.angus.org/Nce/AHIRAvg.*

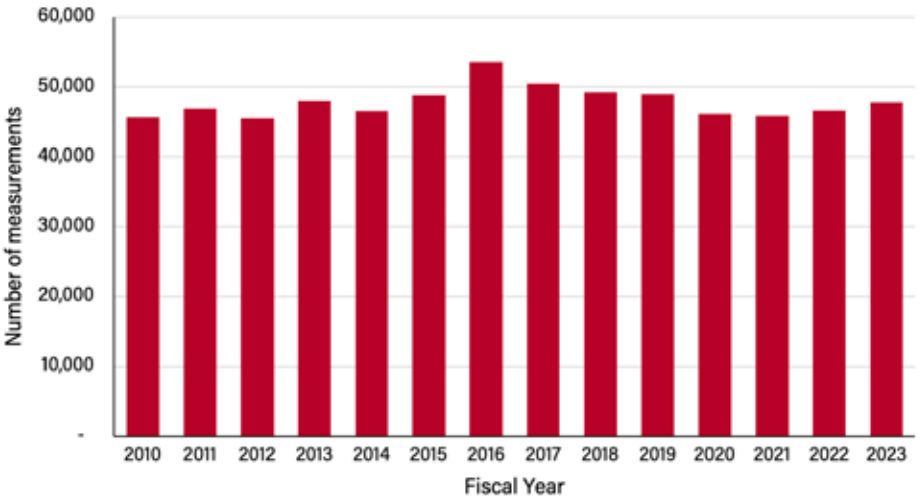
Fig. 1 shows the number of scrotal circumference measurements submitted to AHIR since 2010. There are approximately 48,000 scrotal circumference measurements submitted each year.

Scrotal EPD

Scrotal measurement is the phenotype used in the scrotal expected progeny difference (EPD). Currently, there are approximately 1.27 million phenotypes included in the scrotal EPD. The scrotal EPD, expressed in centimeters, is a predictor of the difference in transmitting ability for scrotal size compared to that of other sires. Scrotal circumference is a highly heritable trait ($h^2 = 0.48$) and can be selected for when making selection decisions.

The scrotal circumference EPD is one of the 13 traits currently included in the World Angus Evaluation. Today, records from members of the American Angus Association, Canadian Angus Association and Angus Australia are included in the evaluation.

Fig. 1: ***The number of scrotal circumference measurements submitted per fiscal year since 2010.***



Looking ahead

While scrotal circumference and heifer pregnancy do not show a genetic correlation, measuring and submitting scrotal measurements on yearling-age bulls has an incredible amount of value to your herd as well as your customers. Today, scrotal circumference is the genetic selection tool available for male fertility, and male fertility continues to be an area of ongoing research. While the size of the scrotum does not alone indicate a bull is fertile (a breeding soundness exam is needed to determine fertility status), a larger, healthy scrotum does provide more of the necessary tissues required for spermatogenesis and semen production.

Providing those measurements on yearling bulls continues to be a vital piece of information for indication of male fertility for genetic selection tools. AJ

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