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Scrotal Circumference EBV

What It Does:

The Post-weaning Scrotal Circumference (PSC) EBV predicts differences in testicular size at post weaning and is strongly related to the semen capacity of rams. Genetic differences in scrotal size are expected to improve reproductive efficiency and shorten the time to sexual maturity in their female relatives. Selection for a positive PSC EBV, especially in conjunction with reproductive EBVs (NLB/NLW), may be advantageous in terms of both breeding capacity of rams and reproductive performance of their daughters.

How to Measure:

In Katahdins, the most useful PSC measurement is taken at late post-weaning (approximately 6 to 9 months of age) and is recorded in centimeters. Although not required, a body weight recorded at the same time or within 7 days of the post-weaning scrotal measurement is preferred. Like weights, scrotal circumference measurements are automatically adjusted for age prior to calculation of EBVs. Scrotal circumference should be measured at the greatest circumference of the scrotum. A scrotal tape is most often used for measuring due to its repeatability and ease of use. Before measuring, always palpate the scrotum for abnormalities such as inflammation or hernia. Lambs with such abnormalities should ***not*** be included in the data set as the measurements will not be an accurate reflection of scrotal circumference, and some (e.g. hernia) could be genetic flaws. Currently, NSIP generates PSC EBVs for early-maturing maternal breeds based on the ***first*** PSC recorded, normally at the late post-weaning measurement. Early post-weaning measurements taken before puberty are less accurate. As with other traits (e.g., FEC), not all producers collect scrotal circumference on their ram lambs largely because most if not all have been marketed before testicular development is adequate to reliably take measurements.

How It is Applied:

The PSC EBV is reported in centimeters above (+) or below (-) average. A ram with a PSC EBV of 1.3 cm is expected to have a scrotal circumference 1/2" larger than the breed average and he will pass half of these genetics (0.65 cm) on to his offspring. Although research suggests that a below average scrotal circumference may have a negative correlation with semen counts, maximizing scrotal circumference may not significantly increase the number of ewes a ram can inseminate and is not encouraged. Rams with an average scrotal circumference are adequate for most systems.

Things to Consider:

Post-weaning measurements of scrotal circumference allow producers to select for early scrotal development in ram lambs prior to their first breeding. Besides genetics, the quality and quantity of feed can affect scrotal development in young ram lambs. Certain growth performance supplements, implants, hormones, and diets high in dried distiller's grains (DDGs) can negatively affect testicular development. It is important to note that a ram's libido, body condition and structural soundness, as well as seasonal conditions, can affect a ram's breeding capacity. A breeding soundness exam, which includes a scrotal circumference measurement, is recommended on rams prior to breeding.