2015 Dakota Performance Ram Test Final Report

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The Dakota Ram Test consignors would like to THANK Dave Pearson, Ram Test Manager, for the excellent care and assistance provided to the program as well as Dave Ollila and Alison Crane for their assistance on work days.

The Dakota Performance Ram Testing program was established primarily to identify differences in wool traits for rams managed under the same environmental conditions and plane of nutrition. Secondly, it was established to measure post-weaning growth rate as indicated by weight gain. An added feature is the evaluation of animal carcass merit using real-time ultrasound technology.

The 2015 Dakota Performance Ram Test included 71 rams from 4 breeds. The ram test calendar listed below summarizes the dates on which specific activities were conducted during the test. I have also enclosed the results, ranked from high to low indexing ram, and separating out the rams eligible for Certificate of Merit. I have also enclosed the carcass data as a separate spreadsheet. Financially, it looks like our expenses exceeded our registration fee by about $8.27/head. Some of the values are estimates, as all of the final bills are not in. The % of blown legs was 14% (8% last year, 15% in 2013). The last couple of years we have increased supplemental Vit D to 360 IU/# diet, and this year we provided injectable Vitamin D every 28 d in an attempt to further alleviate these "rickets-like" symptoms. Obviously, Vitamin D is not the only problem. Overall, ADG was similar to the past couple of years (0.89, vs. 0.85 and 0.88), with only one ram with ADG below 0.55 #/d, the minimum required for certification. Please provide Dave and Chris with feedback if you would like further changes for next year's ration.

We look forward to seeing everyone next year, and please call if you have questions (701-567-4323).

SCHEDULE 2015 - 2016 DAKOTA FALL RAM TEST (Dates Subject to Change)

September 5 - September 20, 2015	Rams to be delivered to the HREC
September 22, 2015	Rams shorn
September 25, 2015	Rams weighed and started on test
October 23, 2015	28 day weighing
November 20, 2015	56 day weighing
December 18, 2015	84 day weighing
	trim hooves and re-vaccinate
January 15, 2016	112 day weighing
February 12, 2016	140 day weighing - End of growth test period Bleed B-ovis and DNA, staple length, wrinkle score, scrotal circumference
February 16, 2016	Rams shorn - core sampling, wool weights
March 10, 2016	Ultrasound
March 12, 2016	Field Day and Sale; rams picked up by owner 9 AM (MST)

TEST PROCEDURES

Fleece weight and staple length were calculated on a 365-day basis. Core samples were sent to Texas A&M University to determine fiber diameter, variability, and clean wool yield. Wool measurements for fiber were determined by the OFDA 2000. Average daily gain was calculated based on the total weight gain (including fleece) during the 140 day performance trial.

Fiber Diameter: Core fiber diameter was determined for each sample using the laserscan technology method. The diameter is estimated by measuring four hundred clean fibers to determine an average (mean). In addition, the variation within a sample is determined. For each individual ram and type of sample a histogram illustrates the variation. The horizontal axis indicates microns and the vertical axis shows the number of fibers from the total fibers measured which were a specific diameter. A narrow distribution pattern indicates relative fleece uniformity. The standard deviation (std. dev.) and coefficient of variation (C.V.) are given to provide numerical indications of the variation. A fleece sample with a small C.V. should be considered more uniform than one with a large C.V. (C.V. = std.dev./mean fiber dia.).

Staple Length: Staple length was determined by measuring length at the shoulder, side, and britch. Values were adjusted (less 1/8") for the stubble remaining after the initial shearing and an average calculated from these three sites.

Clean Wool: Clean wool was determined from the laboratory scoured clean yield estimates on side samples. Analytical procedures meet ASTM standards.

Face and Body Skin Fold Scores: Scores were determined by averaging subjective scores from a three person committee selected by the Ram Test committee. Scores were assigned from 1 to 4 for each trait. The lower the value the more open faced or freedom from skin folds.

Average Daily Gain: Average daily gain was calculated by dividing the total gain by the number of days in the test period (140 days).

Index: The index utilized the following formula established by the Texas and Wyoming Ram tests and the approved index for the American Rambouillet Sheep Association's register of merit program (ROM). (Revised July 8, 1993)

Index = 60(Average daily gain in pounds) + 4.0(365-day adjusted staple length in inches up to 5.5 inches) + 4(365-day adjusted clean wool in pounds) ± fiber diameter and variability points according to the following schedule:

Fiber Diameter (micron) of side:

3(22-actual microns) = + points up to 9
3(actual microns-22) = - points up to -6

Variability:

22.0 +/- actual Coefficient Variation x 1.25 up to a maximum of +/- 5 points

Index Ratios: To compare one ram with another an index ration was calculated by the following formula. The average index ratio for all rams is 100; an individual with an index ratio of 130 would be 30% higher than the average.

$$\text{Ram Index Ratio} = 100 \times \frac{\text{Actual Ram Index}}{\text{Average Ram Index Value}}$$

The top 30% of the registered Rambouillet rams as indicated by index are eligible for the Certified Ram Classification. In addition to the above requirement, a ram must meet acceptable standards from the standpoint of body type, amount of body skin folds, freedom from anatomical weaknesses and wool defects, including extremely hairy britch or excessive amount of belly type wool. All certified rams must have a minimum of 4.0 inches staple length, 9 pounds clean wool, a core wool grade of 23.77 or less, a maximum of 2.7 face cover score, and must have gained at least 0.55 pounds per day on test.

Carcass Merit: At the end of the test fat cover and ribeye area was measured at the 12-13th rib by real-time ultrasound. This information is not included in the index. However, these measures may help producers identify rams with superior carcass merit. Ribeye area is a good indicator of overall muscling; rams with larger ribeyes would be expected to more muscular compared to those with smaller ribeyes. More muscular individuals would be expected to exhibit high growth rate relative to those with less muscularity. Fat cover is an indicator of maturity patter (i.e. frame size). Those rams carrying less fat (finish) would likely be later maturing, or perhaps younger than those with greater amounts of fat cover.

American Grade	Spinning Count Grade	Micron Diameter
Fine	Finer than 80s	Under 17.70
Fine	80s	17.71 – 19.14
Fine	70s	19.15 – 20.59
Fine	64s	20.60 – 22.04
1/2	62s	22.05 – 23.49
1/2	60s	23.50 – 24.94
3/8	58s	24.95 – 26.39
3/8	56s	26.40 – 27.84
1/4	54s	27.85 – 29.29
1/4	50s	29.30 – 30.99
Low ¼	48s	31.00 – 32.69
Low ¼	46s	32.70 – 34.39