



**Department of Animal & Poultry
Sciences**

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March 1, 2021

To: Sheep Producers

From: Scott P. Greiner, Extension Sheep Specialist, Virginia Tech
Lee Wright, Southwest AREC Superintendent, Virginia Tech

Dear Sheep Producer:

Enclosed please find the details of this year's Virginia Tech Southwest AREC Ram Test. Over the last few years, we have appreciated the strong participation and interest in this program. This unique forage-based ram performance test, designed specifically to quantify growth and parasite resistance in rams, has created much discussion and interest across the industry. After not being able to conduct the program in 2020 due to the pandemic, we are excited to be back in 2021!

The entire program details as well as consignment forms (due May 1) are attached. Rams will be taken up at the station on Tuesday, June 1. We will utilize a three week acclimation period, during which time we will adapt the rams to our forage and management system, as well as assess parasite status. The goal will be to reduce parasites to very low levels, and ensure rams do not harbor drug-resistant parasites. After this acclimation period, the rams will start the test period and be evaluated for 70 days (ending late August). Rams will have continuous access to high quality fescue-based pasture, and supplemented on a daily basis with concentrate. We believe this combination offers the best opportunity to both properly grow and develop the rams as potential breeders, as well as measure performance potential. At the start of the test, the rams will also be administered a controlled dose of parasites. Frequent measurements of weight gain, fecal egg count, and FAMACHA scores will allow us to differentiate ability of the rams to cope with parasites, while simultaneously provide us with the information to prevent parasitism from having serious detrimental impact on the rams' performance.

Please read through the Rules & Regulations carefully. We would like to call to your attention a few highlights:

- Ram Age- Rams born January 15-March 15 are eligible. Registered rams- see rules for details.
- Number- We have a maximum capacity of ~100 rams, with a maximum of **8** per consignor. Note that individual consignors will be allowed to sell a maximum of half their rams through the sale.
- Pre-Test Management- Rams should be acclimated to feed, however rams fed for high rates of gain prior to delivery will likely not perform as well on test. Additionally, rams that have not had prior exposure to internal parasites may not be able to fully express their potential for parasite resistance.
- Sale- A sale will be held in conjunction with the program (see details in Rules and Regulations). Target number for our sale offering will be 50 rams again this year. Only half of an individual breeders' rams will be sold through the sale (maximum). This policy provides an opportunity to manage sale numbers, and encourage the educational and demonstration components of the program, with the hope that a portion of each breeder consignment will be taken home and retained in the flock or marketed through additional venues. We will work closely with consignors to identify sale rams based on test performance and marketing wishes of the breeder. You may take all your rams home if so desired (not sell any).
- The annual Sale and Field Day will be Friday, September 24.

We encourage you to consider consigning rams. This opportunity is open to any breeder from the U.S. We very much look forward to the opportunity to work with you. Should you have any questions, or would like more information, feel free to contact one of us: Lee Wright at (276) 944-2200, e-mail lrite@vt.edu , or Scott Greiner at (540) 231-9159, e-mail sgreiner@vt.edu .

Rules and Regulations

Virginia Tech Southwest AREC Ram Test 2021

Location: Virginia Tech Southwest Agricultural Research and Extension Center
12326 VPI Farm Road, Glade Spring, Virginia

Program Lee Wright
Coordinators: Southwest AREC
12326 VPI Farm Road
Glade Spring, VA 24340
Phone: (276) 944-2200 (main office)
email: lrite@vt.edu

Dr. Scott Greiner
Extension Animal Scientist, Sheep
Virginia Tech
366 Litton Reaves Hall (0306)
Blacksburg, VA 24061
Phone: (540) 231-9159
email: sgreiner@vt.edu

Program Website: www.apsc.vt.edu/extensionandoutreach/Sheep-Extension/sheep-programs/swarec-ram-test.html

I. Program Purpose

1. To provide a standardized post-weaning performance evaluation of growth and parasite resistance that will furnish records which will be useful to the consignor's breeding program.
2. To serve as an educational tool for the sheep industry.

II. Administration and Management

Program coordinators are responsible for consignments, performance record keeping, correspondence, and general coordination/oversight of the program. Care, feeding, and management of the rams on a daily basis are conducted by staff at the Southwest AREC. All finances of the program will be handled through the Southwest AREC. Faculty from the VA-MD Regional College of Veterinary Medicine will serve as consulting veterinarians for the program.

III. Program Overview

Pre-test Period: At delivery, rams will be weighed, vaccinated for clostridial diseases and soremouth, have feet trimmed and soaked, and have scrotal measurements taken (and other procedures as recommended by the consulting veterinarian). Additionally, at delivery rams will be dewormed with three anthelmintics (ivermectin, levasole, and albendazole or fenbendazole), and fecal samples collected to determine presence of nematode parasites (FEC). A three-week adjustment period will be used to acclimate rams to pastures (separate pastures than those to be used for the test period) and supplemental concentrate diet. A subsequent FEC will be taken 12 days following delivery. Any rams not showing acceptable reduction in parasite load as determined by the consulting parasitologist will not be allowed to participate in the test (due to parasite resistance to dewormers).

Test Period: Following the three week adjustment period, rams will be allocated to test groups and forage paddocks based on age and weight. The structured performance test will be initiated 21 days following delivery. At the start of the test period all rams will receive an oral dose of 3rd stage *H. contortus* larvae appropriate for their body weight (5,000 infective larvae as standard- with groups of heavier/lighter rams receiving more/less based on body weight). This level of infection does not produce clinical signs of disease as determined in previous studies. Weights, FEC, and FAMACHA scores will be taken at the beginning of the test period, at 14 day intervals during the test (14, 28, 42, and 56 days), and at the conclusion of the test (70 days). Average weights on two consecutive days will be used for on and off test weights. During the test, rams will have continuous access to fescue paddocks, and receive supplemental concentrate feed at a rate of 2-3% body weight daily (daily feed adjusted each weigh period to account for weight gain). The following performance measures will be determined to collectively assess growth and parasite resistance:

- Test Average Daily Gain (ADG) = total weight gain/number of days on test
- Weight Per Day of Age (WDA) = weight/age in days
- ADG Ratio = individual ADG/test group average ADG
- WDA Ratio = individual WDA/test group average WDA
- FEC – reported at 14 day intervals
- FAMACHA scores – reported at 14 day intervals

FEC and FAMACHA taken every 14 days will be closely monitored during the test, and utilized to determine rams requiring deworming treatment. The number and timing of such treatments shall be added to the performance record of each ram.

At the conclusion of the test, ultrasonic evaluation for carcass merit/body composition will be conducted. Complete breeding soundness exams will also be conducted on each ram. Following the test period, all rams will be dewormed with multiple anthelmintics.

Post-Test: A sale for a portion of the participating rams, along with an education field day, is planned for September. Consignors will be allowed to market a maximum of one half of their rams evaluated through the sponsored sale. See following sections for further details..

IV. Eligibility of Consignors

1. Open to breeders from all states in the U.S. with preference given to breeders in Virginia.

V. Dates

	<u>2021 Dates</u>
Nomination Deadline	May 1
Ram Delivery	Tuesday, June 1
Acclimation Period (3 weeks)	June 1 – June 22
Start Test	June 22
14-day Interim Date	July 6
28-day Interim Date	July 20
42-day Interim Date	August 3
56-day Interim Date	August 17
Off-test (70 days)	August 31
Sale & Field Day	Friday, September 24

VI. Entry and Delivery Requirements

1. Breed: Program open to registered rams of any breed. Registered rams must be recorded with and have registration papers issued from a national breed association (rams need not be purebred if percentage rams are recognized and recorded by respective breed association).
2. Age: Rams born January 15 through March 15, 2021.
3. Number: Program capacity is a total of 100 rams. Minimum of 3 and maximum of 8 rams per consignor. Sire groups of two or more required. Should more than maximum test capacity be consigned, the program coordinators reserve the right to reduce consignments in an equitable manner. Previous consignors and flocks enrolled in NSIP will be given first priority.
4. Health, Soundness, and Management:
 - a) Rams must be accompanied at delivery by a Certificate of Veterinary Inspection (health paper) stating that the flock of origin is free of contagious disease.
 - b) Rams must carry appropriate Federal Scrapie Program identification tag at delivery.
 - c) Rams will be inspected by the attending veterinarian at delivery. Any unsound, unthrifty, or unhealthy rams will not be accepted for the test.
 - d) Rams must be vaccinated for *clostridium perfringens* types C & D two to three weeks before delivery to the test.
 - e) Rams must be weaned minimum of 21 days prior to delivery.
 - f) Rams must be started on feed and bunk-broke prior to delivery (rams should be acclimated to feed, however rams fed for high rates of gain prior to delivery will likely not perform as well on test; and rams that have not had prior exposure to internal parasites may not be able to fully express their potential for parasite resistance).
 - g) Feet must be trimmed on all rams just prior to delivery.
 - h) Rams cannot be vaccinated for epididymitis.
 - i) Rams should weigh a minimum of 40 pounds at delivery.
 - j) Wool breeds of rams should be sheared prior to delivery.

VII. Sale Requirements and Policies

1. Number: A sale following the test will be held at the Southwest AREC with a target number of 50 rams sold. Each consignor shall be limited to selling a maximum of one half of their rams completing the test. It shall be the responsibility of the consignor (in collaboration with the test management) to identify which rams from their consignment group will sell. To be considered eligible for the sale, rams must meet minimum requirements listed below. Consignors which have their flocks enrolled in NSIP will be given preference for sale eligibility.
2. Minimum Test Performance: Rams must have a minimum ADG ratio of 67, or a minimum WDA ratio of 100 to be eligible for the sale (ratios calculated within breed/age test group). Rams which are dewormed during the course of the test, will not be eligible for the sale.
3. Type and Structural Soundness: Rams will be inspected at the end of the feeding period for structural soundness (including feet/legs and mouth) and type by a committee. Only those rams of acceptable type and quality will be sold. The decisions of the committee shall be final.
4. Breeding Soundness and Health: Rams must achieve an acceptable breeding soundness examination rating as determined by the attending veterinarian prior to the sale. Guidelines published by the Society for Theriogenology will be applied. This will include physical examination, body condition score, genitalia examination, scrotal examination and palpation (including scrotal circumference), and semen examination (motility and morphology). All rams must be healthy and eligible for interstate shipment as approved by

the consulting veterinarian (this may include necessary diagnostic tests for issuance of interstate health papers).

5. Sale Order: Sale order determination will be based on objective measures of performance on test, including growth and parasite resistance. FEC measures collected during the test shall be used to categorize rams into parasite resistance categories. Within FEC category, rams shall sell based on growth index which combines test ADG and WDA. The program committee shall evaluate this methodology based on the test results, and in consultation with consignors make adjustments as deemed appropriate. Should more than 40 rams be eligible for the sale using the minimum criteria, this procedure described for Sale Order shall be applied to determine which rams will sell.
6. Catalog Information: All pertinent information on the rams will be published in the sale catalog. This will include pedigree, birth date, birth type, test ADG/ratio, WDA/ratio, off-test weight, scrotal circumference, adjusted ultrasound data/ratios (fat thickness and loin muscle area), codon 171 genotype, and FEC measure. EBVs will also be published on rams participating in NSIP. Consignors are responsible for providing appropriate information for inclusion in the sale catalog in a timely fashion.
7. Registration Certificates: The test coordinator must have the endorsed registration certificates on rams by sale day or they are subject to losing sale eligibility.
8. Floor Price: A floor price on all ram lambs will be established in consultation with consignors prior to the sale (based on market conditions). Rams failing to command a bid at the floor price will be subject to sale expenses.
9. Sale Guarantee: All consignors agree to abide by the breeding guarantee published on sale rams.

VIII. Costs

1. Consignment Fee: \$10 per head due at the time of nomination. If a breeder fails to deliver a consigned ram, the consignment fee will be forfeited. Rams turned down prior to or at delivery will receive a refund. Consignment fees paid will be credited towards test expenses at the conclusion of the test.
2. Feed Costs: Feed costs for the entire period will be pro-rated on a per head basis, according to average feed consumption per head per day.
3. Yardage: Rams will be charged an \$12 per head yardage fee. Proceeds will be utilized for the maintenance and upkeep of the facilities at the station.
4. Veterinary and Medical Costs: Charged on an average per head basis for all vaccinations, treatments, and tests provided (includes delivery vaccinations, deworming, breeding soundness exams, treatments, fecal egg counts, etc.). Veterinary and medical costs for rams with chronic health problems will be the responsibility of the consignor.
5. Other Costs: Other costs associated with conducting the test charged on a per head basis (ear tags, bedding, genotyping, etc.).
6. Sale Expenses: Advertising, catalogs, mailing, auctioneer, and other sale expenses charged on a per head basis for rams selling. Registration papers will be transferred to the new owner at the consignors' expense. Rams failing to bring the floor price will be charged sale expense. Rams "bought back" will also be charged sale expenses.
7. Settlement: Feed, yardage, veterinary, sale, and other costs shall be deducted from the sale proceeds for consignors with one or more rams in the sale (consignors are responsible for any expenses not offset by sale proceeds). In the event a consignor does not have one or more rams qualify for the sale, complete test expenses must be paid at the time rams are removed. Consignors are responsible for payment of all applicable feed, yardage, veterinary, and other costs on all rams including those not qualifying for the sale, rams removed from the test, and rams which die while at the test station. Sale proceeds will be withheld on rams for which registration papers have not been provided.

IX. General Rules

1. Reports: Consignors will receive reports following each weigh date. These reports will also be made available to the public and any interested parties. It is the responsibility of the consignor to furnish appropriate information for inclusion in these reports.
2. Removal of Rams: No ram may be withdrawn from the test without proper authorization from the test management. All rams must remain for the entire length of the test unless removal is authorized for health or other reasons.
3. Notification of Consignors: The program management will notify consignors immediately in the case of severe sickness or malperformance of any ram. A diagnostic statement from the veterinarian will accompany such notification when warranted. The consignor agrees to have appropriate health treatments and diagnostic tests conducted on rams as authorized by the ram test management. All individual treatments to rams must be given by or under the supervision of the test supervisor or veterinarian.
4. Other Procedures: Consignors agree to allow their rams to be used in research/education/demonstration projects related to genetic improvement, performance evaluation and/or management. Such projects will have prior approval from the consignors, and will not jeopardize or disrupt the normal performance evaluation process of the test.

X. Liability

The owner assumes full risk and liability for animals during the feeding period. Virginia Tech, Virginia Cooperative Extension, the ram test committee assume no responsibility whatsoever for loss of animal, personal injury, or property damage.

XI. Program Committee

The following committee will provide oversight and technical input to the design and conduct of the program:

Dr. Scott Greiner, Extension Animal Scientist, Dept. of Animal & Poultry Sciences, Virginia Tech

Lee Wright, Superintendent and Senior Research Associate, Southwest AREC, Virginia Tech

Dr. Scott Bowdridge, Division of Animal and Nutritional Sciences, West Virginia University

Dr. Andrew Weaver, Department of Animal Science, North Carolina State University

Dr. Kevin Pelzer, DVM, VA-MD College of Veterinary Medicine, Virginia Tech

**Virginia Tech Southwest AREC Ram Test
Historical Test and Sale Expense Summary**

	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Total Rams Evaluated	111	121	108	111
Participating Breeders	28	28	26	28
<u>Test Costs</u>				
Feed	\$37.32	\$34.96	\$39.00	\$39.51
Yardage	\$12.00	\$12.00	\$12.00	\$12.00
Codon 171/Spider Genotyping	\$11.00	\$12.00	\$12.00	\$11.00
Vet/Medical/FEC	\$53.47	\$56.59	\$51.88	\$43.75
Misc.	<u>\$6.70</u>	<u>\$6.03</u>	<u>\$6.85</u>	<u>\$7.45</u>
Total Test Costs Avg. (\$/hd)	\$120.49	\$121.58	\$121.73	\$113.71
<u>Sale Costs</u>				
Post-test feed	\$10.58	\$8.95	\$10.20	\$6.31
Sale costs	\$44.33	\$58.28	\$43.53	\$50.75
VA Check-off	<u>\$0.50</u>	<u>\$0.50</u>	<u>\$0.50</u>	<u>\$0.50</u>
Total Sale Expenses Avg. (\$/hd)	\$55.41	\$67.73	\$54.23	\$57.56
Grand Total	\$175.90	\$189.31	\$175.96	\$171.27
Test & Sale Expenses Avg. (\$/hd)				
<u>SALE RESULTS</u>				
Number Sold	46	36	38	33
Average Price	\$1055	\$1665	\$1244	\$1015
Breeders Selling (NSIP)	26 (9)	23 (7)	23 (10)	25 (12)

	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>
Total Rams Evaluated	109	104	126	85
Participating Breeders	21	15	25	13
<u>Test Costs</u>				
Feed	\$42.32	\$36.70	\$32.29	\$43.70
Yardage	\$10.00	\$10.00	\$10.00	\$8.00
Codon 171/Spider Genotyping	\$11.00	\$11.00	\$11.00	\$11.00
Vet/Medical/FEC	\$43.15	\$28.25	\$27.50	\$21.50
Misc.	<u>\$6.85</u>	<u>\$5.00</u>	<u>\$7.00</u>	<u>\$7.50</u>
Total Test Costs Avg. (\$/hd)	\$113.32	\$91.20	\$87.79	\$91.70
<u>Sale Costs</u>				
Post-test feed	\$5.30	\$6.30	\$7.75	\$5.63
Sale costs	\$12.22	\$15.00	\$10.00	\$12.00
VA Check-off	<u>\$0.50</u>	<u>\$0.50</u>	<u>\$0.50</u>	<u>\$0.50</u>
Total Sale Expenses Avg. (\$/hd)	\$18.02	\$21.80	\$18.25	\$18.13
Grand Total	\$131.34	\$113.00	\$106.04	\$109.83
Test & Sale Expenses Avg. (\$/hd)				
<u>SALE RESULTS</u>				
Number Sold	36	20	22	30
Average Price	\$1222	\$1048	\$486	\$883
Breeders Selling (NSIP)	18 (8)	11 (NA)	17 (NA)	12 (NA)

Participating breeders: VA, AR, FL, GA, IN, KY, MD, MO, NC, OH, PA, SC, TN, TX, WI, WV
Rams sold: VA, FL, GA, IN, KY, MD, MN, MO, NC, OH, PA, TN, TX, WI, WV

**Virginia Tech Southwest AREC Ram Test
Historical Performance Data Summary**

	2012	2013	2014	2015	2016	2017	2018	2019
No.	85	117	88	108	103	108	114	111
Breeds	Katahdin	Katahdin, hair	Katahdin, Dorper, hair	Katahdin, DorperX, Hair, Polypay	Katahdin, Dorper, Suffolk	Katahdin, Dorper, Texel	Katahdin, Dorper, Texel	Katahdin, Cheviot, Texel
Final Wt.	96	84	94	93	95	114	107	111
ADG	0.25	0.15	0.37	0.28	0.28	0.48	0.42	0.45
WDA	0.47	0.42	0.48	0.47	0.49	0.57	0.54	0.57
Adj. Mean FEC	510	538	494	639	908	796	384	404
Rams Dewormed	4 (5%)	21 (18%)	11 (13%)	27 (25%)	25 (24%)	27 (25%)	10 (9%)	5 (5%)

2021 SOUTHWEST AREC RAM TEST NOMINATION FORM

Farm Name _____

Owner _____

Address _____

City/Zip _____

Phone _____

Email _____

Please indicate number of rams for each breed and age:

	Number of Rams	Birth Dates (range)
Katahdin		
Dorper		
Other breeds (specify)		

Return by **May 1** along with a check
payable to **VT Foundation** for **\$10** per ram to:

Lee Wright
Southwest AREC
12326 VPI Farm Road
Glade Spring, VA 24340
Phone: (276) 944-2200
email: lrite@vt.edu

*note: upon receipt of consignments, more detailed information will be sent regarding details of delivery and request for more information on individual rams