



March 8, 2023

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 the 2023 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.

Please read through the Rules & Regulations carefully:

- Ram Age- Registered rams born January 15-March 15 are eligible. See rules for details.
- 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 Policy- A sale will be held in conjunction with the program (see details in Rules and Regulations). We will be selling the top ~50% of the rams tested, and base this on a Sale Index which combines growth and parasite resistance. We first implemented this index and policy in 2022. Please read Rules and Regulations carefully.
- Costs/Payments- We will collect Test Expense of \$200 per ram at delivery. This flat rate will cover feed, health, yardage, and typical costs associated with the test (does not include sale expenses for rams selling, and does not include codon 171 genotyping). See Rules and Regulations for details.
- The annual Sale and Field Day will be Friday, September 22.

The entire program details as well as consignment forms (due May 1) are attached. Rams will be taken up at the station on Tuesday, May 30. 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.

This program 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 .



VIRGINIA AGRICULTURAL EXPERIMENT STATION
SOUTHWEST VIRGINIA AGRICULTURAL
RESEARCH AND EXTENSION CENTER
VIRGINIA TECH.

Rules and Regulations

Virginia Tech Southwest AREC Ram Test 2023

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 Department of Animal & Poultry Sciences
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.



Virginia Cooperative Extension

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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 diet and management, and asses parasite status. 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.

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. 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 NSIP and Virginia breeders.

V. Dates

	2023 Dates
Nomination Deadline	May 1
Ram Delivery	Tuesday, May 30
Acclimation Period (3 weeks)	May 31 – June 20
Start Test	June 20
14-day Interim Date	July 4
28-day Interim Date	July 18
42-day Interim Date	August 1
56-day Interim Date	August 15
Off-test (70 days)	August 29
Sale & Field Day	Friday, September 22

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, 2023.
3. **Number:** Program capacity is a total of 100-120 rams. Minimum of 3 and maximum of 8 rams per consignor. Sire groups of two or more –encouraged. 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.
5. Rams failing to meet entry or health requirements at delivery will not be allowed to participate in the test, and will be sent home.

VII. Sale Requirements and Policies

1. Number: A sale following the test will be held at the Southwest AREC with a target of 50% of the rams tested sold (~50-60 rams). To be considered eligible for the sale, rams must meet minimum requirements listed below (items 2. through 4.). Should additional rams need to be eliminated from the sale group to achieve the target sale number, rams will be eliminated based on Sale Index. The Sale Index will combine growth (ADG, WDA) and parasite resistance (FEC).
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 will be based on Sale Index. The sale management reserves the right to make slight modifications to this order.
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, codon 171 genotype, and FEC measure. EBVs will also be published on rams participating in NSIP, and NSIP rams will be designated as such in the catalog. 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. Rams eliminated due to space requirements prior to delivery will receive a refund.
2. Test Expenses: A flat charge of \$200 per ram will be charged for test expenses listed below. **This \$200 is due at ram delivery.** Test costs shall include:
 - a) Feed Costs: Feed costs for the entire test period, including off test prior to the sale.
 - b) Yardage: Yardage fee included. Proceeds will be utilized for the maintenance and upkeep of the facilities at the station.
 - c) Veterinary and Medical Costs: Includes vaccinations, treatments, and tests provided as routine part of the test (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 financial responsibility of the consignor (above standard Test Expense cost).
 - d) Other Test Costs: Other costs associated with conducting the test including ear tags, bedding, and other miscellaneous costs.
 - e) Program coordinators reserve the right to charge for additional unforeseen expenses that may arise during the course of the test. Details of any such circumstances will be shared with consignors as they arise.
3. Codon 171 Genotyping: Costs for codon 171 genotyping performed as part of the test will be charged on a per head basis as an additional charge. Consignors are encouraged to genotype rams prior to delivery.
4. Sale Expenses: All sale costs including advertising, catalog (printing and postage), auctioneer and clerks, sale facility, online auction services, registration transfers, sale management fee (2%), etc. will be charged as a percentage of sale price on each ram. Rams failing to bring the floor price will be charged sale expense. Rams "bought back" will also be charged sale expenses.
5. Settlement: Any test expenses owed (codon 171 genotyping, etc.), sale expenses, and any 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 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. For rams removed early or not completing the test, Test Expenses will be prorated based on expenses incurred to time of removal or death. 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:

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

Dr. Scott Greiner, Extension Animal Scientist, Dept. of Animal & Poultry Sciences, 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>2022</u>	<u>2021</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>
Total Rams Evaluated	119	117	111	121	108	111	109
Participating Breeders	31	37	28	28	26	28	21
<u>Test Costs</u>							
Feed ^a	\$200.00 ^a	\$54.85	\$37.32	\$34.96	\$39.00	\$39.51	\$42.32
Yardage ^a		\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$10.00
Vet/Medical/FEC ^a		\$58.35	\$53.47	\$56.59	\$51.88	\$43.75	\$43.15
Misc. ^a		\$7.70	\$6.70	\$6.03	\$6.85	\$7.45	\$6.85
Codon 171 Genotyping	<u>\$13.00</u>	<u>\$13.00</u>	<u>\$11.00</u>	<u>\$12.00</u>	<u>\$12.00</u>	<u>\$11.00</u>	<u>\$11.00</u>
Total Test Costs Avg. (\$/hd)	\$213.00	\$145.90	\$120.49	\$121.58	\$121.73	\$113.71	\$113.32
<u>Sale Costs</u>							
Post-test feed ^a	---	\$13.19	\$10.58	\$8.95	\$10.20	\$6.31	\$5.30
Sale costs	\$74.10	\$63.28	\$44.33	\$58.28	\$43.53	\$50.75	\$12.22
VA Check-off	<u>\$0.50</u>	<u>\$0.50</u>	<u>\$0.50</u>	<u>\$0.50</u>	<u>\$0.50</u>	<u>\$0.50</u>	<u>\$0.50</u>
Total Sale Expenses Avg. (\$/hd)	\$74.60	\$76.97	\$55.41	\$67.73	\$54.23	\$57.56	\$18.02
Grand Total	\$287.60	\$222.87	\$175.90	\$189.31	\$175.96	\$171.27	\$131.34
Test & Sale Expenses Avg. (\$/hd)							
<u>SALE RESULTS</u>							
Number Sold	57	45	46	36	38	33	36
Average Price	\$1482	\$1507	\$1055	\$1665	\$1244	\$1015	\$1222
Breeders Selling (NSIP)	27 (12)	31 (10)	26 (9)	23 (7)	23 (10)	25 (12)	18 (8)

^abeginning in 2022, test costs charged at a flat rate per head

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

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

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

	2012	2013	2014	2015	2016	2017	2018	2019	2021	2022
No.	85	117	88	108	103	108	114	111	117	119
Breeds	Katahdin	Katahdin, hair	Katahdin, Dorper, hair	Katahdin, DorperX, Hair, Polypay	Katahdin, Dorper, Suffolk	Katahdin, Dorper, Texel	Katahdin, Dorper, Texel	Katahdin, Cheviot, Texel	Katahdin, Dorper, NC Cheviot x Suff, Texel	Katahdin, Texel
Final Wt.	96	84	94	93	95	114	107	111	111	111
ADG	0.25	0.15	0.37	0.28	0.28	0.48	0.42	0.45	0.37	0.36
WDA	0.47	0.42	0.48	0.47	0.49	0.57	0.54	0.57	0.55	0.56
Adj. Mean FEC	510	538	494	639	908	796	384	404	877	130
Rams Dewormed	4 (5%)	21 (18%)	11 (13%)	27 (25%)	25 (24%)	27 (25%)	10 (9%)	5 (5%)	20 (17%)	13 (11%)

2023 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