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, levamisole, 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 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 26. 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

| Nomination Deadline | May 10 |
| Ram Delivery | Monday, June 1 |
| Acclimation Period (3 weeks) | June 1 – June 23 |
| Start Test | June 22 & 22 |
| 14-day Interim Date | July 7 |
| 28-day Interim Date | July 21 |
| 42-day Interim Date | August 4 |
| 56-day Interim Date | August 18 |
| Off-test (70 days) | September 1 |
| Sale & Field Day | September 26 |

### 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).
3. **Number:** Program capacity is a total of 100 rams. Minimum of 3 and maximum of 10 rams per consignor. Sire groups of two or more strongly recommended.
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.

**VII. Sale Requirements and Policies**

1. **Number:** A sale following the test will be held at the Southwest AREC with a target number of 40 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.
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).
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.
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 by the test and sale committee. 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 $8.00 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. Dave Notter, Professor Emeritus, Dept. of Animal & Poultry Sciences, Virginia Tech
Dr. Mark McCann, Extension Animal Scientist, Dept. of Animal & Poultry Sciences, Virginia Tech
Dr. Anne Zajac, DVM, Biomed. Sciences and Pathobiology, VA-MD Regional College of Veterinary Medicine, Virginia Tech

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

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<th>2013</th>
<th>2012</th>
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<tr>
<td><strong>Total Rams Evaluated</strong></td>
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<tr>
<td><strong>Test Costs</strong></td>
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<td>Feed</td>
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<td>Misc.</td>
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<td><strong>Sale Costs</strong></td>
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<td>Post-test feed</td>
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<td><strong>Total Sale Expenses</strong></td>
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<td><strong>Average Total Test &amp; Sale Expenses</strong></td>
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**SALE RESULTS**

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<tr>
<td>Number Sold</td>
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<td>30</td>
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<tr>
<td>Average Price</td>
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