



DAVIS COLLEGE OF AGRICULTURE, NATURAL RESOURCES AND DESIGN  
DIVISION OF ANIMAL AND NUTRITIONAL SCIENCES

March 15, 2021

Dear Buck Test Cooperators,

We are proud and honored to be a place where producers feel comfortable in sending their animals for performance testing and plan to continue to meet your needs well into the future. To that aim, this year we will be evaluating bucks for parasite resistance using what we call an artificial challenge of the parasitic worm *Haemonchus contortus*. This year we will have the capacity to test up to 150 bucks in our facility

To ensure accurate testing of bucks for parasite resistance it is imperative that bucks come to us with prior exposure to parasites. This can be accomplished through exposure to common pastures where parasites are known to exist. As parasitic environments vary, I urge you to get your young bucks out on pasture ASAP to make sure they arrive with prior parasite exposure. Details of the infection and how that will work can be found in the attached 2021 Test Guidelines.

**Delivery day will be May 22<sup>nd</sup> deliveries will ONLY be accepted that day! At arrival, please make sure that your bucks have a certificate of veterinary inspection and weight at least 40 lbs.** If animals arrive without CVI they will not be allowed off the trailer. Any bucks that weigh less than 40 lbs will not be allowed into the test and must return to their home farm. A weight allowance will be applied to bucks traveling from out-of-state (see attached guidelines).

***Buck test nomination forms will be due by May 3*** to ensure a place for your bucks on this year's test. There is a \$25 nomination fee per buck that is due with your nomination. These fees are used to purchase RFID tags and initial feed required to be in place before arrival of your bucks. Finally, a fee of \$125/buck will be due upon delivery which covers all costs of test including, feed, veterinary treatment, fecal egg counts, data analysis and awards. There will not be a post-test charge, our fees cover all animal needs and are critical for us to maintain our facility and provide your animals with the best possible care.

We look forward to receiving your nomination forms and seeing your bucks in May!

Best,

Scott A. Bowdridge, Ph.D.  
Test Program Coordinator  
Associate Professor

# **Guidelines for the 2021 West Virginia Small Ruminant Evaluation Program**

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**Location:** West Virginia University Animal Science Farm  
191 Animal Science Farm Rd  
Morgantown, WV 26506

**Purpose:** This program was established to provide producers an unbiased evaluation of economically important traits in young bucks using a common environment.

**Important Dates:**

|                      |                             |
|----------------------|-----------------------------|
| Nomination forms due | May 3, 2021                 |
| Delivery day         | May 22, 2021                |
| On-Test              | June 7, 2021                |
| 21-day report        | June 28, 2021               |
| 42-day report        | July 19, 2021               |
| Off-Test             | August 9, 2021              |
| Pick-up              | August 13 – August 16, 2021 |

- Bucks will be weighed weekly to collect necessary gain data.
- On-Test and Off-Test weights will be taken two consecutive times and averaged to help take into account differences in gut fill.
- Progress reports will be disseminated at three week intervals and can be accessed on the web at: <http://sheepandgoats.wvu.edu> or our Facebook page at: <https://www.facebook.com/wvrambucktest> .

**Liability:** Bucks in the evaluation program will receive appropriate management. Veterinary services will be used when deemed necessary by the station management and/or the program chairman. The sponsors assume no liability for loss of bucks, property damage, personal injury, or the accuracy of consignor information or of data collected.

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## Evaluating resistance to *Haemonchus contortus*

**Overview:** *Haemonchus contortus* or the barber-pole worm is the leading cause of death due to worm parasitism in small ruminants. This parasite is a blood-feeder and resides in the hosts' abomasum. Adult worms consume 0.05ml of blood per day. Multiplied by 1000 that is equivalent to 50mL of blood daily. That may be a little or a lot depending on the size of the host. In young kids, *Haemonchus* is lethal therefore controlling this parasite is required for economical small ruminant production. This problem is amplified by development of dewormer resistance and many producers have decided to utilize parasite-resistant breeds of sheep and goats.

While Kiko goats have shown some resistance to *H. contortus* infection, what has been learned from other breeds is that this trait like many quantitative traits is normally distributed – meaning that there is a range of parasite resistance. What we aim to do in this years' test is to identify bucks with superior resistance by infecting them with *H. contortus*.

### **Approach:**

- Upon arrival, all bucks will be dewormed using three drugs to clear any infection that they may arrive with, as directed by ACSRPC guidelines.
- Fecal samples will be collected on arrival and at the on-test day – which will allow us to calculate efficacy of dewormer regime.
- On the first test day all bucks will be given 5,000 *H. contortus* larvae orally.
  - These larvae have been used in my research lab and are very sensitive to all classes of dewormer.
  - Fecal and blood samples will be taken weekly, if at any time a bucks' PCV reaches 15% it will be dewormed immediately.
- At the end of the test, infected bucks will be dewormed with levamisole and will be available for pick up starting 1 week after deworming.
- Infection data will be used to calculate final test index replacing RFI that we have used in years past. If a buck needs deworming, then it is ineligible for the awards program.

## **Testing protocol**

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- 1.) Upon delivery, all buck will be weighed, dewormed, tagged, vaccinated, blood sample collection and fecal sample. A report will be generated of delivery weights, FEC and PCV
- 2.) Bucks will be acclimated to complete pellet for 2 weeks prior to beginning of test. During 2 week warm-up period, weights and fecal analysis will be conducted weekly.
- 3.) On the "On-Test" day, all bucks will be weighed twice (12 hours apart), infected with 5,000 *H. contortus* larvae and a blood sample will be taken for PCV determination. After data collection and processing, an On-test report will be generated and posted online
- 4.) All bucks will be weighed weekly and a fecal and blood sample will be taken for parasitological analysis. Progress reports will be posted at 21, 42 and 63 days. The 63 day report is the "Off-Test" report and all bucks will be weighed twice.
- 5.) Within one week of test completion, all bucks will be ultrasounded for loin eye measurements and fat depth.
- 6.) At the test completion, all bucks will be dewormed with levamisole and cannot be picked up prior to one week following test completion.
- 7.) **Please allow 72-96 hours after data collection days for reports to be posted – it takes us some time to process data.**

## **Health Requirements**

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- 1.) Bucks **must** carry appropriate Federal Scrapie Program identification tag at delivery.
- 2.) No Bucks may enter from any flock under federal or state quarantine
- 3.) **A Certificate of Veterinary Inspection (CVI) must accompany rams/bucks being delivered to the station. A valid CVI must be presented and cleared before animals are unloaded**
- 4.) All bucks must have had their feet trimmed within 10 days prior to delivery to the station
- 5.) Cooperators are **STRONGLY ENCOURAGED** to:
  - a. wean bucks at least 2 weeks prior to delivery and have them started on ad-libitum pelleted feed to minimize stress.
  - b. make sure that bucks have had pasture exposure to parasites
- 6.) Animals will be processed during the warm-up period as follows:
  - a. treated for control of internal and external parasites,
  - b. feet soaked in a foot bath of zinc sulfate at time of delivery
  - c. tagged with RFid tag
  - d. vaccinated for Enterotoxemia, Tetanus and Soremouth
  - e. treated for Coccidia
- 7.) On arrival at the test station, bucks will be evaluated for type, soundness (reproductive, mouth, feet/leg structure), and health (including any foot problems) by the station manager and veterinarian. To qualify rams/bucks must meet all of the above conditions.
- 8.) **Kiko bucks must weigh at least 40 lbs to be allowed into the test.**  
There will be a 0.5% of body weight allowance for bucks being shipped from outside WV, test admittance is at the discretion of the test program manager.

## **Eligibility**

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- 1.) A maximum of 150 bucks will be accepted to the test. Cooperators will be notified of the number of bucks accepted as soon as possible. Preference will be given to West Virginia cooperators however out-of-state cooperators are welcomed.
- 2.) To be eligible for the 2021 test, bucks must be born between January 1, 2021 and March 15, 2021
- 3.) Bucks must be raised by their natural mothers (bucks raised by nurse does or foster dams are not eligible) except that ET bucks may be consigned as long as there is a minimum of three full brothers consigned. ET bucks must be gestated and raised by does of the same breed as the breed of the buck.
- 4.) It is strongly encouraged that at least three bucks from the same contemporary group at weaning be consigned to the test (except as described previously for ETs).
- 5.) Consignors of accepted bucks agree to abide by all rules, regulations, terms, and conditions of the entire program, and any that might be adopted by the West Virginia Small Ruminant Test Committee for that test.
- 6.) **Kiko bucks must weigh at least 40 lbs to be allowed into the test.** There will be a 0.5% body weight allowance for bucks being shipped from outside WV, test admittance is at the discretion of the test program manager.

## Procedures for Entrance

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- 1.) Complete Nomination form and mail with check for \$25.00 per buck nominated, must postmarked by May 3, 2021. Make check payable to "West Virginia University". Entry fees for bucks not accepted due to insufficient facility space will be refunded. **However, entry fees will not be refunded for bucks that do not meet entry requirements**
- 2.) After notification of acceptance, complete Consignment Forms and deliver them with the bucks on Saturday, May 22, 2021.
- 3.) Bucks will be received between 8:30am and 5:00pm EST on May 22
- 4.) \$125 per buck at delivery (applied to feed, bedding, veterinary costs, yardage and other station costs associated with recording ultrasonographic data, rfid tags and fecal examinations).

## Other items

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- 1.) Rams/Bucks will be fed in groups, according to breed and age, within facility limitations.
- 2.) All rams/bucks must remain on feed for the entire period unless removed with written permission from the test manager.
- 3.) Breeds represented by fewer than two consigners will be handled in the most appropriate manner possible as determined by the Small Ruminant Evaluation committee.

# **Awards Program**

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This year we will be providing awards to the top five bucks in each category. Since our test has largely been populated by Kiko bucks awards will apply to that breed, unless there are more than three consignors of another goat breed.

- 1.) Average Daily Gain
- 2.) Muscling (as measured by adjusted REA)
- 3.) Fecal Egg Count (adjusted FEC)
- 4.) Overall Index

There will be an overall award for the highest indexing buck based on the index below:

$$\text{Buck Test Index} = 0.4*(\text{FEC Ratio})+0.3*(\text{ADG Ratio})+0.3*(\text{REA Ratio})$$

If for any reason a buck has to be dewormed or requires excessive health treatment, those bucks will be removed from contest consideration.

There will also be a top consignor award which will be the sum of index scores for their top three bucks. To be eligible for this award, you must submit a minimum of three bucks.

Awards will be announced using Facebook live and winners will be sent awards or will be available during buck load out.



# Contact Information

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**Test Program Coordinator**  
**and Associate Professor**

WVU Division of Animal &  
Nutritional Sciences

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**Research Technician and Test**  
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**2021 West Virginia Small Ruminant  
Evaluation Program  
Nomination Form**

***Must be postmarked by May 3, 2021***

**Please Print**

**Owner's Name** \_\_\_\_\_

**Farm Name** \_\_\_\_\_

**Address** \_\_\_\_\_

**Telephone** \_\_\_\_\_

**E-Mail** \_\_\_\_\_

**BREED** \_\_\_\_\_ **Number of Bucks you want to test** \_\_\_\_\_

I the owner, do hereby accept full and complete responsibility for my animals throughout the 2021 West Virginia Small Ruminant Evaluation Program. I have read and agree to abide by the rules, terms and conditions of the program, outlined in the Guidelines for the 2021 West Virginia Small Ruminant Evaluation Program.

\_\_\_\_\_  
**(Owners Signature)**

\_\_\_\_\_  
**(Date)**

Nomination Fee: \$25.00/Ram or buck (Due with this form)

Make check payable to: West Virginia University

Send nomination fee and form to: Dr. Scott Bowdrige  
West Virginia University  
1194 Evansdale Dr  
2213 Ag Science Bldg  
Morgantown, WV 26506-6108

