



*High Altitude Bull Test*  
**U n i v e r s i t y o f W y o m i n g**

**Consignor's Handbook**  
**2023-2024**

## **Welcome to the 2023-2024 University of Wyoming High Altitude Bull Test!**

The University of Wyoming is excited to host the second annual University of Wyoming High Altitude Bull Test. Last year, in an effort to develop additional hands-on learning opportunities for students and strengthen the relationship between cattle producers and the University of Wyoming, we launched the University of Wyoming High Altitude Bull Test. The mission of the bull test is to provide a unique learning experience for our students, valuable data and a venue for producers to market their bulls, and a source of PAP-tested bulls for cow-calf producers across the region.

Our inaugural year was a great success, largely due to the support of the consignors and buyers of the 2023 test, as well as the hard work of the students involved in the program. We had 41 bulls in the test from 9 producers and 18 bulls available in the private treaty sale at the field day. Bulls performed well throughout the test, with an overall average daily gain of 3.81 lbs/day across all bulls. The High Altitude Bull Test also provided a unique learning opportunity for students. Students gained valuable experience in bull development, bull selection, breeding soundness exams, pulmonary arterial pressure testing, bull fertility, feed efficiency, carcass ultrasound, developing marketing materials, clipping and picturing bulls, and data management. With the success of the bull test enterprise course last year, we have expanded the class to be offered in both the fall and spring semesters. This will increase the learning opportunities for students related to bull development and marketing and is unique opportunity to provide students with real world experience that will better prepare them for careers in the livestock industry.

Building off the first year, we are excited to offer a test with additional opportunities for data, expanded age categories, and the inclusion of a live sale at the conclusion of the test. In the packet you will find details of the test, bull requirements to enter the test, projected costs, and important dates.

We look forward to working with you and thank you for your continued support of the University of Wyoming High Altitude Bull Test. Should you have any questions or concerns please feel free to contact us!

Thank you,

*The University of Wyoming Bull Test Team*

### **Contact for Bull Test Information & Entry Form Questions**

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# University of Wyoming High Altitude Bull Test Team

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## New to the 2023-2024 Test & Sale

- Two Age Divisions
  - Yearling bulls
  - 2-year old bulls
- Feed Efficiency Testing
  - Increased length of test to accommodate a 70-day feed efficiency test that meets Beef Improvement Federation guidelines for feed efficiency and growth testing.
- Registered and Non-registered bull divisions
- 45-day Screening Period
  - Assess risk for pulmonary hypertension and performance
- Live Sale with online and phone bidding available

## Test Overview

The University of Wyoming High Altitude Bull Test offers a unique opportunity to performance test bulls at 7200 ft and evaluate their risk for pulmonary hypertension (brisket disease) via pulmonary arterial pressure (PAP) testing! We are excited to expand our test this year with additional opportunities for data generation, marketing materials, and a live sale.

New to the test is a 45-day “screening period” which is designed to assess a bull’s risk for pulmonary hypertension (brisket disease) and propensity for adequate growth for a successful completion of the test and sale. All consigned bulls will be managed on pasture, fed grass hay and provided with a supplement to achieve moderate gain (2-2.5 lb/d). At the conclusion of a 45 day period, an initial PAP test will be completed. Bulls that do not have a PAP of 50 or lower will be removed from the test. Average daily gain and overall health will also be assessed. Any concerns on performance will be communicated with the consignor.

At the completion of the screening period, bulls will be transitioned to the LREC feedlot, where they will be acclimated to the Vytelle SENSE™ system (formerly GrowSafe). This system does require an EID tag (provided by the University of Wyoming High Altitude Bull Test) and will provide daily, individual feed intake records. A total mixed ration will be delivered in these

feeders with ad libitum access 24/7. At the completion of the 70 day feed efficiency test period, bulls will be fed the same ration in concrete bunks. A second PAP test will be performed at the beginning of February and serve as their final PAP score. With these new approaches we will be able to offer a more robust phenotypic dataset for the 2024 sale, including:

- 2 PAP measurements
- Growth metrics over an extended period
- Individual feed intake
- Feed efficiency metrics (RFI, G:F/FCR, etc.)
- Carcass ultrasound
- Breeding Soundness Exam

### Projected Test Costs (per head)

<b>*Entry Fee</b>	<b>\$85</b>
<b>*Feed Deposit</b>	<b>\$180</b>
Remainder of Feed	\$340
Health	Billed as needed
PAP Tests (2 tests)	\$70
BSE	\$24
Ultrasound	\$20
Yardage Screening Period	\$10
Yardage Feed Test Period	\$18
Sale Commission (UW Bull Test, Auctioneer, DVAuction)	10% of final sale
Genomic Testing Upon Request	Variable
<b><i>Approximate Total (w/o Health and Commissions)</i></b>	<b>~\$747</b>

**\*Entry Fee + Feed Deposit Due at Time of Arrival**

### Test Timeline

- Bull Consignment/ Registration
  - Opens September 15<sup>th</sup>
  - Closes October 20<sup>th</sup>
- Receiving Period
  - October 25 - November 1st
  - All bulls must be onsite by November 1st with appropriate papers on file
- Screening Period
  - November 1 - December 10th
  - Initial PAP ~December 15<sup>th</sup>
- Performance Testing
  - Feed efficiency testing: December 16 - February 14<sup>th</sup>
  - Clipping/torching, picturing, development of marketing materials (February -March)
- Field Day & Sale
  - March 9th in Laramie, Wyoming at LREC
  - Educational Field Day, Bull Viewing, and Live Sale (Online and phone bidding included)

## Bull Requirements

- Both registered and non-registered bulls eligible
  - Non-registered bulls will be sold in their own section at the sale
- Must fall into one of two age categories:
  - Yearling Bulls: born between January 1, 2023, and March 31, 2023
  - 2 Year-old Bulls: born between March 1, 2022 and September 1, 2022
- At time of delivery to the University of Wyoming, brand inspection, health papers, and proof of negative BVD-PI test, and trichomoniasis test (for 2-year old bulls) are required
- Bulls that “pass” the initial screening (~December 15<sup>th</sup>) will enter the feed efficiency test and consign to the live sale (March 9<sup>th</sup>)
  - Bulls that do not “pass” the initial screening will need to be picked up by December 22<sup>nd</sup>
- Maximum of 10 bulls per consignor unless space permits more
- Bulls must be picked up by March 19<sup>th</sup>, 2024

**Space Limitations.** We will only be accepting 100 bulls for the initial screening period and only 80 bulls for the remainder of the test. Therefore, we have implemented a 10 head per consignor limit. If the consignment deadline is passed and there is room, the consignor limit may be waived to fulfill the 100-bull quota.

## Vaccination and Health Requirements

- Proof of negative BVD-PI must be provided prior to arrival at the test facility.
- All cattle must be accompanied by a Certificate of Veterinary Inspection (CVI) that complies with guidelines provided by the Wyoming Livestock Board and USDA/APHIS.
- No visible signs of illness, lameness, lice, pinkeye, or other ailment at receiving.
- Viral vaccine for IBR, BVD 1 and 2, BRSV, PI3.
  - The most recent vaccination must be at least 3 weeks (21 days) prior to arrival
- Clostridial vaccine
  - The most recent vaccination must be at least 3 weeks (21 days) prior to arrival
- Anthelmintic of choice

\*\*\*Due to repeated needle puncture (pulmonary artery catheterization), bulls may be at risk of contracting BLV (Bovine Leukosis). Serological testing at the end of the test can be provided upon request. \*\*\*

## Ration & Feed Delivery

Upon arrival to Laramie, bulls will be managed on pasture, fed grass hay, and supplemented with a protein cake to target 2.5 pounds of gain per day. When transitioned into the feedlot for the feed efficiency period, a total mixed ration consisting of 65% roughage and 35% concentrate (corn, soybean meal, and dried distiller grain) will be fed in the Vytelle SENSE™ bunks or concrete bunk. This diet will be fed to target 2.5 pounds of gain per day.

\*\*\*Due to the harsh winter conditions in Laramie, bulls are at a higher risk of decreased gain. To avoid this decrease in performance, we recommend that consigned bulls are on a positive plane of growth prior to their arrival.\*\*\*

## Health Monitoring & Treatment Protocol

Treatment will be administered at our staff's discretion following our health management guidelines. An ionophore will be included in the ration to optimize digestion and performance. The bulls will be given a pour-on insecticide (Clean-Up II) at the start of the feed efficiency period and used as needed after that. Cost associated with treatment will be billed out individually. For more information regarding our health management and testing guidelines, please reach out to Ben Hollinger.

## Marketing Materials

The "Bull Enterprise and Marketing" class will create custom sale flyers and a sale catalog to highlight bulls in the test and sale. The marketing materials created will incorporate data collected during the test, which includes:

- Performance data
  - ADG, Feed:Gain, Residual feed intake (RFI), and DMI
- Carcass ultrasound data
  - Rib eye area (REA), Backfat, intramuscular fat (IMF)
- PAP Score
  - Measurements taken at day 45 and completion of the feeding period
- Bull Fertility
  - Breeding soundness exam – performed by Alpine Animal Hospital
- EPD Data
  - Registered animals will be marketed with EPD and/or gEPD depending on availability or interest in genomic data
  - Upon request, UW High Altitude Bull Test will gladly collect a sample for genomic testing and send in for analysis – billing will be direct to consignor
  - UW High Altitude Bull Test will also offer genetic testing via a commercial lab for specific health screening and/or commercial herd genetic evaluations upon request (for further information please contact Hannah Hollinger; hcunnin6@uwyo.edu)
- Photos and videos
  - Bulls will be clipped, torched, pictured, and videoed

*\*\*\*All data will meet the guidelines for reporting to breed associations and will be provided for the consignor and buyer \*\*\**

Digital copies will be provided to the consignor to distribute in advance of the sale. The High Altitude Bull Test Field Day and Sale will be promoted and shared through our media outlets and the University of Wyoming Beef Extension social media pages.

The Field Day and Sale will occur on March 9<sup>th</sup> at the Hansen Arena at the Laramie Research and Extension Center in Laramie, Wyoming. The morning will consist of an educational session covering topics related to pulmonary hypertension, bull selection, beef quality and sensory demonstration, as well as an overview of the 2023-2024 bull test performance presented by the undergraduate students participating in the course. Bull viewing will be available prior to the

educational session and during the lunch period before the start of the live sale. The sale will be a live sale with online and phone bidding options available.

## Entry Forms

Entry forms can be submitted either electronically ([bit.ly/UW-Bull-Test-Entry-Form-2023](https://bit.ly/UW-Bull-Test-Entry-Form-2023)) or by mail (see end of packet for hardcopy of entry form). Entries must be postmarked or electronically submitted by **October 20th, 2023**. Electronic submission via Qualtrics are encouraged. If you would prefer to submit your entry by mail, contact Shelby Rosasco to reserve your spaces.

## Supplemental PAP information

On day 45 of the test and in February, a pulmonary arterial pressure (PAP) measurement will be recorded on each bull by a certified technician. This measurement is acquired by introducing a catheter into the jugular vein, through the right atrium and ventricle of the heart, and into the pulmonary artery. Once the pressure is read, the catheter is removed. Cattle are thoroughly prepped and scrubbed prior to venipuncture to minimize the possibility of infection. This procedure is considered minimal risk, with the most common side effect being jugular hematoma. Below are the risk categories for development of pulmonary hypertension associated with PAP score ranges as outlined by Dr. Tim Holt. We will adhere to these guidelines at the University of Wyoming High Altitude Bull Test.

<b>PAP Risk Factor: Very High Elevation Test Chart</b>				
<b>PAP test conducted at elevation (&gt;7000 ft)</b>				
PAP Score	Use at Low Elevation (<4000 ft)	Use at Moderate Elevation (4000-5000 ft)	Use at High Elevation (5500-7500 ft)	Use at Extreme Elevation (>7500 ft)
34-45	Low Risk	Low Risk	Low Risk	Low Risk
46-49	Moderate Risk	Moderate Risk	Moderate Risk	Moderate Risk
≥ 50	Moderate Risk	Moderate Risk	High Risk	High Risk

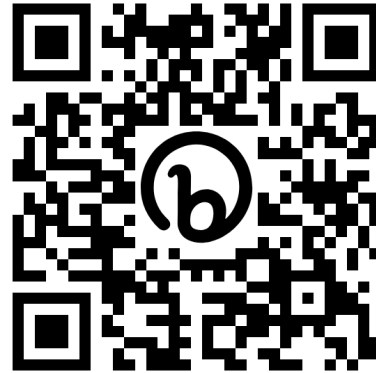
*When selecting an animal based on a PAP measurement, other factors besides those listed above should be considered such as genetics or pedigree, PAP EPD, Systolic/Diastolic pressures, breed, and previous illness. Special consideration should be given to the amount of time the animal was exposed to elevation (>5500 ft.) prior to testing. The predictability and repeatability of the PAP measurement improves with longer exposure to higher elevation (minimum of 4 weeks is required). This chart is based on animals greater than 10 months of age. Testing older animals (>12 months) results in a higher predictive and repeatability measurement.*

*(Dr. Tim Holt, DVM)*

Using the guidelines set by Dr. Tim Holt, a bull is at substantial risk for right ventricular failure secondary to pulmonary hypertension (Brisket disease) with any PAP measurement equal to or greater than 50 mmHg at 7200 ft (Laramie, WY) for use at an elevation of 5500 ft and above. All bulls with a PAP measurement of 50mmHg and above will be subject to further evaluation. Removal from the test and relocation to an elevation of below 5500 ft may be necessary. The University of Wyoming High Altitude Bull Test will not be held liable for mortalities due to Brisket disease. **Consignors will be called to discuss options should a bull fail the PAP test.**

Below is a link and QR code for the bull test performance data. This sheet will be updated throughout the duration of the bull test so that you can track data of your bulls in real time.

<https://bit.ly/3L1mzle>



Additional information regarding the University of Wyoming High Altitude Bull Test will be posted on the University of Wyoming Animal Science website.



## Entry Form for Mail Submission

*(If you plan to submit online, please use the link on page 7)*

**Thank you for your interest in the University of Wyoming High Altitude Bull Test**

1. All questions on this form are REQUIRED. If some of the questions do not pertain to you, please answer N/A.
2. Please be as specific as possible with all of your data entry.
3. If there is an issue with your entry form, or for any questions, please contact Shelby Rosasco at [srosasco@uwyo.edu](mailto:srosasco@uwyo.edu) ASAP.

Ranch Name	
Contact Name(s)	
Phone Number(s)	
Email Address	
Mailing Address	

Breed of entered bulls <i>(Please circle all that apply)</i>						
Angus	Charolais	Hereford	Red Angus	Simmental	Commercial	Other*
*If Other, please describe:						

Please enter your breeder number(s) including the association prefix (i.e. Angus – AAA12345678)

Please enter vaccination information for each time period			
	Branding	Pre-conditioning	Weaning
Clostridial Vaccine			
Viral Vaccine			
De-wormer			
Other			
Other			

Please enter complete information for each bull consigned									
Animal ID	Registration #	Sire Name	Birth Date	BW	Weaning Date	WW	Adj. WW	YW (if applicable)	Breed

Thank you for completing the entry form for the 2023-2024 University of Wyoming Bull Test. If there was an issue with any of your entries, or something you would like to change, please reach out to Dr. Shelby Rosasco at [srosasco@uwyo.edu](mailto:srosasco@uwyo.edu).

**IMPORTANT INFORMATION**

1. Bull receiving is open between 10/25/2025-11/01/2023. No late entries will be accepted.
2. All bulls must arrive with health papers, brand papers, negative BVD-PI test, as well as negative Trichomoniasis test for aged bulls.
3. Entry fees are due upon bull arrival. Bulls WILL NOT be unloaded until payment is received.