



**NOW TESTING
FEED EFFICIENCY!**

MCA-MSU BULL EVALUATION

2023-24 Policies & Rules

Bull nominations due: **September 1, 2023**

Bull receiving: **October 6, 2023**

MIBulls.com



MICHIGAN STATE UNIVERSITY | Extension

EXCITING EVALUATION UPDATES AND EXPANDED CAPABILITIES FOR 2023-24!

The MDARD Farm Innovation program has funded our project to measure bull feed efficiency in our efforts to support producer profitability while addressing climate change. Selection for efficient feed use is being broadly embraced by beef cattle producers across the country. In a recent survey, inclusion of feed efficiency information in the Bull Evaluation Program (BEP) was rated as moderately- to very-useful by past BEP bull buyers. Obtaining this information is also viewed as a high priority by the Beef Improvement Federation and beef breed associations (AAA and ASA supported our proposal).

Feed cost accounts for more than 50% of the variation in profitability among beef cow-calf farms in the upper Midwest. While feed accounts for the primary cost in all beef production systems, there is a large variation in feed efficiency among individual beef cattle. The good news is, because feed efficiency is a moderately heritable trait, it can be improved through genetic selection.

Two integrated sets of equipment from C-Lock Inc. will assist in capturing individual feed efficiency of bulls starting with the 2023-24 evaluation. The SmartFeed system integrates a feed bin, load cells, and an RFID reader (Fig. 1). SmartFeed continuously records feed bin weight and the corresponding entry and exit of an animal's RFID from the feeder. The required number of daily feed intake observations may be significantly reduced by obtaining accurate body weight changes. The SmartScale system captures partial body weight (front of bull) and behavior each time a bull approaches the automatic water trough (Fig. 2). Both systems continuously transmit data to a cloud-based server.



Figure 1. The SmartFeed system integrates feed bin, load cells, and RFID reader to log cattle feed intake quantity each time an animal visits the feed bunk.



Figure 2. SmartScale is a wireless scale system that integrates load cells and RFID to log partial body weight and behavior each time an animal visits the waterer.

These systems will allow reporting of dry matter intake, feed efficiency, and relative feed intake to BEP buyers. We are excited for this important opportunity for the BEP to extend genetic progress.

Sincerely,

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The **MCA-MSU Bull Evaluation Program Committee** (hereafter, "Committee") is responsible for program supervision and direction.

EVALUATION OBJECTIVES

- To promote performance-evaluated beef cattle and serve as an educational tool to acquaint producers with the value of performance evaluation.
- To provide a common environment for evaluating young bulls for rate of gain, feed efficiency, soundness, and body composition.
- To aid beef producers in obtaining superior bulls that have been evaluated for growth, feed efficiency, breeding and structural soundness, and carcass merit.

ENTRANCE REQUIREMENTS

Consignor Eligibility

1. Seedstock breeder participants (hereafter, "Consignor(s)") must be paid members of the Michigan Cattlemen's Association and have their 2023-24 dues paid in advance (micattlemen.org/Membership)
2. Consignors must have a current Beef Quality Assurance (BQA) certification at the time of nomination. Training and certification are available at www.bqa.org.
3. At the discretion of the Committee, bulls will not be accepted into the evaluation if they originate from a county in a bovine TB Modified Accredited Zone (i.e., Michigan counties of Alcona, Alpena, Montmorency, and Oscoda) or a county where an active bovine TB positive cattle herd investigation is underway.

Bull Eligibility

1. Bulls must be born between **Sept. 1, 2022, and Mar. 31, 2023**. The Committee reserves the right to reject any bull with a discrepancy between stated age and apparent age according to dentition.
2. Bulls must be purebred or hybrid, registered in a national or international breed association, and originate from a calf crop enrolled in that association's performance program and each bull must have weaning data reported to and processed by the breed association. Bulls must also have a corresponding, legible, ear tattoo or brand.
3. Bulls must have a DNA sample submitted for analysis through their respective breed association prior to receiving date. Analysis must minimally verify sire parentage and generate genomically enhanced EPDs.
4. Bulls identified by their breed association as potential carriers of a lethal trait, for which there is a DNA test available, must be tested and verified free of the lethal allele before receiving. Lethal traits with available DNA tests at the time of this printing include Arthrogyrosis Multiplex (AM), Neuropathic Hydrocephalus (NH), and Contractural Arachnodactyly (CA) in Angus, Osteopetrosis (OS) and Alpha-Mannosidosis (MA) in Red Angus, Progressive Ataxia (PA) in Charolais, Tibial Hemimelia (TH) and Pulmonary Hypoplasia with Anasarca (PHA) in Maine Anjou and Shorthorn. Other breeds may be affected via ancestors, even those removed several generations. Consult your breed association for a list of known lethal alleles, animal status, and approved testing procedures. There is no Developmental Duplication (DD) requirement for the evaluation, as it is not lethal, however, DD status will be published in the sale catalog.

5. Bulls must be vaccinated and boosted (usually 2 to 3 weeks later) per label instructions for:
 - a) Infectious Bovine Rhinotracheitis (IBR)*
 - b) Bovine Viral Diarrhea Virus (BVDV types 1 & 2)*
 - c) Parainfluenza₃, (PI₃)*
 - d) Bovine Respiratory Syncytial Virus (BRSV)*
 - e) Mannheimia haemolytica (with "leukotoxoid" or "toxoid")
 - f) Histophilus somni
 - g) Leptospira-five strains
 - h) Clostridial organisms-7 way

*At least one dose as a modified-live vaccine. Boosters must be given 14 to 30 days before receiving. Products labeled as "OneShot" or "Once" also require a booster, as bulls will be commingled. A list of example vaccination protocols is available at MIbulls.com.

6. Bulls must be treated for internal and external parasites with a broad-spectrum anthelmintic following removal from pasture, but no less than 14 days before receiving.
7. Bulls must be weaned and, if horned, dehorned a minimum of 21 days before receiving.
8. Bulls must test negative for BVDV before receiving. The test must be a virus detection test and not an antibody test. The MSU VDL can complete a virus detection test on an ear notch or blood sample. BVDV tests offered in combination with genomic testing are virus detection tests and are acceptable, but please note that these tests often have prolonged turnaround times.
9. Bulls originating from outside Michigan must have a certificate of veterinary inspection, official RFID tag, and meet all other health requirements to enter Michigan. For questions, contact Michigan's State Veterinarian office (1-800-292-3939).
10. Bulls must have a USDA official radio frequency identification (RFID) tag on the **inside of their left ear** at receiving. Proper placement is imperative for communication with the feed efficiency equipment. See manufacturer's instructions for proper application.
11. Bulls must weigh a minimum of 2.40 lb./day of age at receiving.
12. Bulls must be visually free of ringworm and warts at receiving. Bulls that are morbid, have poor disposition, physical defect such as cryptorchidism, testicular hypoplasia, lameness, or unacceptable claw set will not be accepted at receiving. Close observation of each bull's feet and palpation of the scrotum is recommended during on-farm preparation.

NOMINATION ACCEPTANCE

A completed nomination form must be received electronically or postmarked by **Sept. 1, 2023**, along with the nomination fee for space reservation. Nomination fees will be credited toward the total evaluation cost.

If nominations exceed station capacity, a priority plan will be implemented, which reserves space for first-time Consignors. The nomination fee will be fully refunded if there is no available space or entrance requirements are not met at receiving. However, due to fixed costs, **nomination fees are nonrefundable for no-show bulls after the cut-off date** (see schedule). Please contact the MSU or MCA office with any nomination changes.

RECEIVING REQUIREMENTS

Bulls must have completed documents at receiving for acceptance.

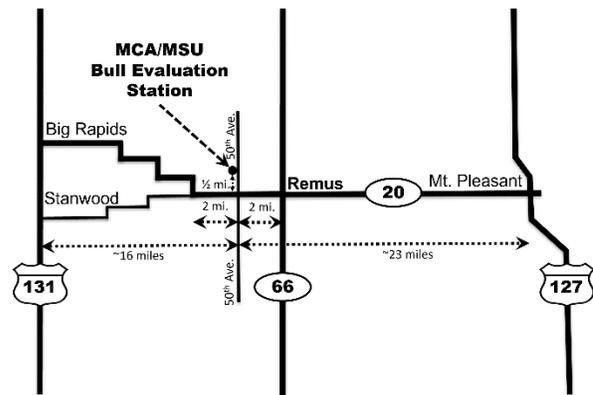
- Consignment receiving form
- Health verification form
- Registration webpage/papers copy
- Bovine TB testing agreement
- BVDV test report copy
- If applicable, genetic defect test results
- Receiving payment

CONSIGNOR PERFORMANCE DATA

Performance data (actual birth weight and breed association calculated adjusted weaning weight) must be reported at receiving or to the MSU office. Failure to submit data by Nov. 20, 2023, will result in a \$50/bull late fee and will result in sale ineligibility if not received by Dec. 15, 2023.

EVALUATION PROCEDURES

1. Bulls will be evaluated at the MCA-MSU Bull Evaluation Program Station, located at Wernette Cattle Company, 9441 50th Ave., Remus, MI, 49340.
2. Bulls will be ear-tagged with identification that will be their evaluation and sale lot number.
3. Bulls will be sorted into 4 pens of 28 bulls or fewer per pen based on receiving age, weight, and weaning contemporary group. Within testing contemporary groups (i.e., Senior and Junior) bulls will be fed the same ration.
4. Bulls will be retreated for internal and external parasites, including coccidia, and will receive a respiratory disease vaccination booster.
5. After a 21-day adjustment period, individual bull feed intake will be measured with the SmartFeed system ("feed test"). Feed deliveries will be recorded by pen before and after the feed test. Bulls will receive a total mixed ration, with a diet composition approved by the Committee and available to Consignors upon request.
6. Full body weights will be obtained at receiving, and on two consecutive days at each the beginning and end of the feed test (49 days) and at the end of the gain test (105 days). An additional two interim body weights will be taken during the evaluation. Partial body weights will be obtained by the SmartScale system as bulls visit the automatic waterers.
7. Individual bull hip height will be measured at the end of the gain test on two consecutive days and averaged to calculate frame size.
8. Bulls will have ultrasound measurements of ribeye area, rib fat, rump fat, and intramuscular fat obtained within acceptable age ranges. Ultrasound of older bulls, prior to receiving, is acceptable to maintain weaning contemporary groups. Note that some late March-born bulls



may be too young to conform to breed association guidelines for calculation of ultrasound carcass EPDs.

9. To be sale eligible, all bulls must receive and pass a complete breeding soundness exam (BSE) as defined by the Society for Theriogenology, except that bulls born Feb. 1 or later will be considered to have passed with a lowered minimum for normal sperm morphology (i.e., 50% vs. 70%). The Committee reserves the right to have rechecks conducted on BSE deferred bulls for conditions that are likely to resolve before the sale (e.g., warts, elevated white blood cells).
10. Veterinary service for individual bulls will be obtained when deemed necessary by the station manager. The Consignor will be responsible for all veterinary service fees and medication costs. If deemed necessary by the station manager to manage herd health, necropsy fees will be paid from the contingency fund.

BULL REMOVAL

Bulls must remain at the station from receiving until sale, unless released by the station manager, station veterinarian, or Committee. The station manager and Committee reserve the right to request removal of any bull because of health, structure, disposition, or failure to meet requirements. Consignors are responsible for all incurred costs while the bull is at the station. All costs must be paid in full before a bull is released from the station. Violation of these requirements will forfeit the Consignor’s future evaluation privileges.

SCHEDULE

Eligible birth dates	9/1/22–3/31/23	Warm-up period (21 d)	10/6–10/27
Nominations due	9/1/23	Start gain & feed tests (2 wts.)	10/26–10/27
Weaned on or before	9/15	Interim wt. (perf. data due)	11/20
Initial vaccinations (per label, ~2 to 3 weeks before booster)		End feed test (2 wts.; meeting)	12/14–12/15
Booster vaccinations	9/8–9/22	Interim wt. (3 rd payment due)	1/12
Final day for nomination refund	9/22	End gain test (2 wts.)	2/8–2/9
Bull receiving	10/6	Open House	3/2
		Sale	3/16

COSTS AND PAYMENT

Veterinary and medical costs, administered individually, will be charged to the respective bull. Feed costs during the feed test will be based on individual intake and waste. Feed cost before and after the feed test will be prorated according to individual bull weight gain within the pen. All other evaluation costs will be equally divided among bulls. Sale expenses will be calculated as a percentage of the sale (or floor) price for all bulls in the sale. Complete settlement will be made to Consignors by MCA after deducting all evaluation and sale expenses from the sale receipts for each bull. Past costs are available from the MSU office upon request. Payments toward evaluation costs must be made according to the following schedule.

Payment schedule*

Due at:	Nomination	Receiving	Jan. 12, 2024**
Payment	\$375	\$375	\$375

*Each past due payment will be assessed \$50/bull late fee.

Adjustment of the final payment may be required if market conditions dictate. Make checks payable to the **Michigan Cattlemen’s Association.

LIABILITY

Professional veterinary service will be obtained, when necessary, but neither the station managers, nor Wernette Cattle Co., nor Committee, nor its designated veterinarians, nor member breed associations, nor Michigan Cattlemen's Association, nor Michigan State University can be held liable in case of loss by fire, theft, injury, morbidity, or mortality of animals. Insurance is the owner's responsibility for their bull(s) while at the station.

RECORDS PROVIDED

Evaluation data will be made publicly available online following each weigh period or in the sale catalog. Information summarized during the evaluation will include:

1. Receiving, initial, interim, and final weights, weight per day of age (WDA), and average daily gain (ADG)
2. Dry matter intake, feed efficiency, and relative feed intake
3. Frame score, final WDA ratio, ADG ratio, and sale index
4. Breeding soundness examination results, including scrotal circumference and pelvic area
5. Ultrasound fat thickness, ribeye area, and intramuscular fat data submitted to breed association for inclusion in carcass EPDs.

SALE REQUIREMENTS

1. Breeders who do not wish to sell bulls must notify the station manager prior to the end of the gain test.
2. Bulls must gain 2.8 lb./day or more during the evaluation, pass the BSE, and pass observations of disposition and structural soundness, including foot conformation. Only bulls with a foot angle score of 3 through 7 and a claw set score of 3 through 6 will be eligible for sale. See mibulls.com for details.
3. All eligible bulls that are cataloged must sell through the sale. All non-sale bulls must be removed from the station no later than the day of the Open House.
4. Bulls successfully meeting all sale criteria will be freeze branded with the MCA-MSU Bull Evaluation Program brand. 
5. Sale order will be determined by a weighted sale index including percentile ranking of calving ease EPD, weaning weight EPD, yearling weight EPD, milk EPD (20th percentile threshold), marbling EPD, ribeye area EPD, and within test percentile ranking of average daily gain, weight per day of age, and dry matter intake.
6. The Committee will set the sale floor price at the mid-test meeting. Bulls not receiving the minimum floor price bid will not sell and will be charged sale expenses as a percentage of the floor price. Consignors are urged to support the program by setting subsequent sale prices on "no-sale" bulls at or above the floor price. In 2023, the floor price was \$2,750.
7. Registration transfer within 45 days following the sale payment is the sole responsibility of the Consignor. MCA will defer final settlement until bulls are transferred to their new owner.

MCA-MSU BULL EVALUATION PROGRAM COMMITTEE

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