

45<sup>th</sup>

# Annual Clemson Bull Sale

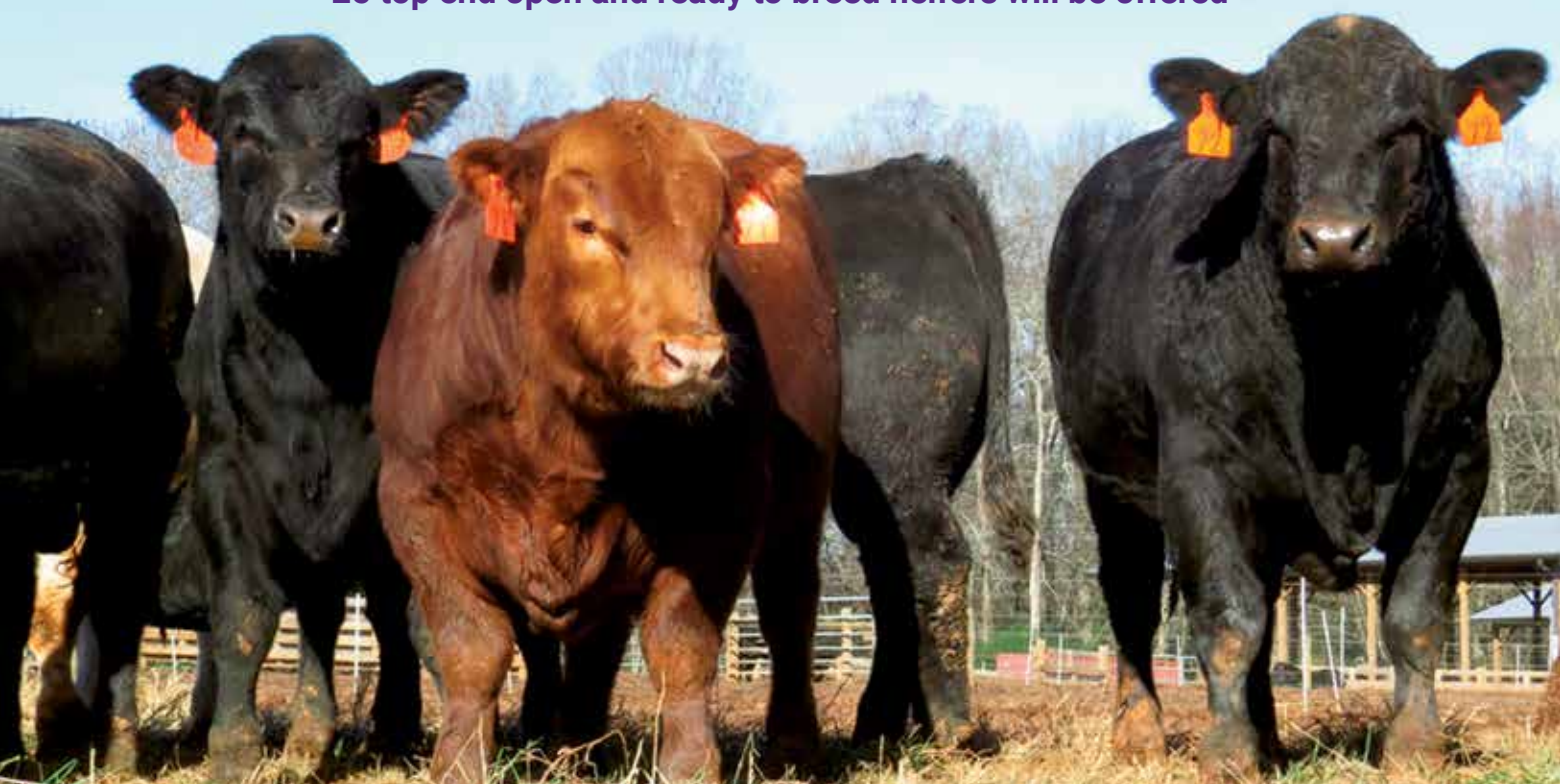
Presented by Clemson University and SC Cattlemen's Association

# 2021 CLEMSON

## EXTENSION BULL TEST PROGRAM

Angus • Braunvieh Composites • Gelbvieh • Hereford • Simmental • SimAngus

25 top end open and ready to breed heifers will be offered



— ONLINE AND CALL IN ONLY —

Saturday • **February 6, 2021** • Noon

Sale will be virtual only via DV Auction

Bulls can be viewed prior to the sale by contacting Dr. Steve Meadows, Clemson Bull Test Director  
Contact 864-633-9970 or email at [smdws@clemson.edu](mailto:smdws@clemson.edu)

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*Sale Bull videos can be viewed at DV Auction as well as the Clemson University Bull Test WEB site*

*<https://www.clemson.edu/extension/bulltest/clemson/index.html>*

**Announcements:** Announcements from the auction box will take precedence over the information printed in the sale book announcements.

**Sale Order:** See page 4.

**Auctioneer:** Dale Stith – Mayslick, Kentucky 918-760-1550

**Bull Test Site:**

Location of bull test where bulls can be viewed:  
Clemson University Bull Test Station, 1019 Bishop Branch Road,  
Central, SC 29630.

**Sale and Test Director:**

Dr. Steven E. Meadows  
Cell: 864-633-9970  
Email: [smdws@clemson.edu](mailto:smdws@clemson.edu)

**Sale Day Telephone:** 864-633-9970 or 864-940-2428

**Bidding Assistance and Sale Day Representatives:**

Mr. Brian Beer, Clemson University..... 803-320-9360  
Dr. Brian Bolt, Clemson University ..... 864-934-2104  
Dr. Mathew Burns, Clemson University ..... 864-940-2428  
Dr. Steve Meadows, Clemson University..... 864-633-9970  
Mr. Travis Mitchell, Clemson University,  
South Carolina Cattlemen's Association ..... 803-609-2828  
Mr. Lee Van Vlake, Clemson University..... 843-344-3322  
Mrs. Lyndsey Craig, Clemson University..... 908-268-8133

**Test Manager:**

Scott Justice  
Beef and Sheep Farm Manager  
Cell: 803-535-9545

**Livestock Mortality Insurance:**

A representative from American Live Stock Insurance Company will be available to assist you with mortality insurance for your purchases.

**ALL bulls must be picked up the day of the sale.**

**Clemson Extension Area Livestock Agents:**

Marion Barnes..... 843-909-1213  
Brittany Flowers ..... 850-209-5366  
Chris LeMaster ..... 864-490-9831  
Sam Quinney..... 864-752-5812  
Bryan Smith ..... 803-924-1883  
Chris Talley ..... 864-844-3909  
Hillary Pope ..... 912-978-1743  
Scott Sell (Edisto REC)..... 912-682-9590  
Amber Starnes..... 864-680-2864



Clemson Bull Test  
Steven E. Meadows, Ph.D., Director  
Clemson University  
103 Barre Hall • Clemson, SC 29634  
(864) 633-9970 • [smdws@clemson.edu](mailto:smdws@clemson.edu)

Welcome to the 45th Clemson University Extension Service, 2021 Performance Tested Bull Sale. We are truly humbled to have you consider the Clemson University Bull Test as your source of superior performance tested genetics. Out of an abundance of caution due to ongoing pandemic, **this year's sale will be virtual only.** While we realize this will be different for all of us, we are dedicated to making sure everyone can look, bid, and purchase bulls. **The sale will be conducted and carried live by DV Auctions.** You will also see listed on this page of the sale book, our sale representatives/contacts who will be happy to assist you with your bidding. These sale representatives will be available to take your bid over the phone on a one on one basis if you so desire. **The bulls are available for viewing at anytime by calling me on my cell phone at 864-633-9970 to make an appointment.** You may also view a video of each bull on the Clemson Bull Test Website, American Angus Association Website and DVAuctions. Pick up of the bulls will be available immediately after the sale and available Monday, Tuesday and Thursday following the sale. Pick up times will be from 10:00a.m. thru 4:00 p.m. on those days. **It is necessary you make an appointment for pickup with me before showing up.** That assures that we will have the bulls up. **Trucking will be available as well.** Bulls will be loaded out/ picked up at the Clemson Bull Test Station. Address for load out is 1019 Bishop Branch Road, Central, S.C. 29630.

This year's offering is packed with power genetics from top to bottom and that is no exaggeration. Whether you are looking for a herd bull to increase performance, lower birth weights, enhance maternal qualities or improve feed efficiency, this is your source and opportunity. As you study the sale book, you are going to see the majority of bulls are weighing in excess of 1200 lbs at 365 days and there are bulls weighing in excess of 1300, 1400 and one at 1566 lbs adjusted 365 day weight in working condition. These power-packed bulls combine outstanding performance on a structurally correct frame and are ready for today's cattle industry. This year's lineup is the absolute best set of bulls we have offered across the board. Please note the bulls have been evaluated and screened for disposition, structural correctness as well as foot/ hoof development. The sale bulls were turned out on pasture the first of December and will be ready to work for you when you get them home.

If you have any questions at all, please feel to call at 864-633-9970 or email at [smdws@clemson.edu](mailto:smdws@clemson.edu).

Sincerely,  
Steven E. Meadows Ph.D.  
Director, Clemson Extension Bull Test Program  
Cell 864-633-9970  
Email: [smdws@clemson.edu](mailto:smdws@clemson.edu)

**ANGUS MEDIA** EPDs contained in the hard copy of this sale book were current as of print date. Digital versions of this sale book can be viewed online at [www.angus.org](http://www.angus.org) and will have EPDs updated every Friday with the exception of EPD references in footnotes and photos. Any PDF downloads from the website will contain EPDs current as of the date downloaded. References: American Angus Association®, AHIR®, AngusSource®, CAB®, Pathfinder®.

**DVAuction**  
Broadcasting Real-Time Auctions  
[www.DVAuction.com](http://www.DVAuction.com)



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# GENERAL INFORMATION

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## Entry Requirements:

1. All consignors must be members of the South Carolina Cattlemen's Association.
2. Breeders' herds must be enrolled in their respective breed association's performance records program.
3. All bulls must be registered purebreds or registered hybrids (Balancer, Simangus, etc.).
4. Birth Dates: **Senior bulls** - September 1, 2018 to October 31, 2019  
**Junior bulls** - November 1, 2018 to December 31, 2019
5. Embryo transplant calves will be accepted.
6. Actual birth weights are required for all bulls.
7. Minimum Adj. 205-Day Weaning Weight: British breeds - 575 lbs and All Other Breeds - 625 lbs.
8. Minimum Adj. 205-Day Weaning Weight Ratio of 93. All bulls, except embryo transplants, must be raised by their genetic dams.
9. All bulls must have a negative blood tests for persistent BVD test within 30 days of delivery date and (out of state bulls) official state health papers (CVI) when delivered.
10. Pre-Delivery Health Requirements:
  - a. Vaccinations - IBR, PI<sup>3</sup>, BVD, BRSV, 5-way Leptospirosis, 7-way Blackleg (Clostridials) and Pasteurella haemolytica
  - b. Dewormed and treated for grub and lice control.

## Sale Requirements:

1. **Minimum performance requirements:**
  - a. Average Daily Gain Ratio - 85
  - b. Weight per Day of Age Ratio - 90
  - c. Adjusted 365-Day Yearling Weight Ratio - 90
2. **Minimum Adjusted 365-Day Yearling Scrotal Circumference - 30.0 cm.**
3. Sale eligible bulls must pass a Screening Committee's evaluation of frame size, structural soundness, disposition and muscling.
4. All bulls must pass a comprehensive Breeding Soundness Exam.
5. All bulls sell under their respective breed association guarantees.
6. Sale order based on **INDEX = (RFI Daily ratio - (RFI daily avg + RFI daily actual))/2**  
New index is structured to give merit to bulls that excel at performance and efficiency. It is an estimate and should be used as another tool in addition to other information provided when making selection decisions.  
Index, Sale Order, RFI, and videos are posted on:  
<http://www.clemson.edu/extension/livestock/beef/bulltests-cubt/>

## How Bulls Have Been Handled:

1. **August** - Bulls were delivered to the test station, tagged, dewormed with Eprinex pour-on, treated with Probios and temperature recorded. The 14-day pre-test warm-up period began.
2. **September** - Bulls were weighed on-test and vaccinated with (modified live IBR, PI<sup>3</sup>, BVD, BRSV, 5-way Leptospirosis), (Pasteurella haemolytica and Multocida) and (7-way Blackleg - Clostridials) vaccines.
3. **October** - Yearling scrotal circumference measurements were taken on the senior bulls.
4. **December** - All bulls were weighed off-test weight and yearling scrotal circumference measurements were taken on the junior bulls.
5. **January** - Bulls were given complete Breeding Soundness Exam.
6. **Week Prior to Sale** - All bulls were weighed and measured.

## Feed Program:

The bulls were fed a commodity by-product based test ration containing Rumensin during the 2-week pre-test warm-up period, the test and post-test periods. The GrowSafe 6000 system was used to measure individual intake data for each bull.

The new system utilizes more of an individual feeding system, meaning that one bull eats at a time, but any bull in the pen can eat out of any feeding bunk/node within that pen. The bulls are tagged with an RFID tag upon arrival to the test. Each feeding node is equipped with a separate bunk, which sits on a set of load bars and is wrapped with an EID tag reader. When a bull puts his head through the bars and begins to eat, the node records his EID tag number, weight of the bunk, date, and time for every second he is eating at the bunk. Each node is hardwired to a data acquisition panel located within 30' of the feeding space. The data acquisition panel then wirelessly transmits the data back to the office computer for recording and data analysis. The system has certainly served in its role to calculate feed intake, but also has offered valuable information for test managers during the duration of the test. Data transmitted back to the computer is analyzed and presented on the computer in several different screens, but one of the most useful screens is the "reduced intake" screen. When a bull has a reduced intake meaning, decreased from the pen average or decreased 25% or more from his previous day's intake, his number shows up on this screen. Reduced intake information is used on a daily basis to help identify bulls that may have health concerns.

Residual feed intake is simply: actual feed intake - expected feed intake = residual feed intake. What does this number mean? A positive residual feed intake means the bull ate more feed than expected to achieve his actual performance, whereas a negative residual feed intake means the bull ate less feed than expected to achieve his actual performance. For example, if we have two bulls (start weights are the same) both gaining 2.5 lbs. per day over a 75-day period. We would expect them to eat approximately 1,500 lbs. of feed per bull over the test period. However, bull A ate 1,717 lbs. of feed and bull B ate 1,232 lbs. of feed. Bull A residual feed intake would be: 1,717 - 1,500 = 217 lbs., and bull B residual feed intake would be: 1,232 - 1,500 = -268. Overall, bull A ate 485 lbs. more feed over a 75-day test period to gain the same amount of weight as bull B. Therefore, in this scenario, bull B could be considered "more efficient" than bull A. Residual feed intakes are presented on one page in the back of the sale book. Please ask if you have any questions about the data or system.

# GENERAL INFORMATION

## Contributors to the Clemson Bull Test Program:

The following companies and representatives contributed supplies to the Clemson Bull Testing Program. Their generous support of this program for the genetic improvement of South Carolina's beef cattle industry is appreciated:

Sagebrush Tags - Stu Marsh - 1-800-511-4744

Boehringer Ingelheim Animal Health - Randy Fordham (Danielsville, GA)

Godfrey's Feed - Weyman Hunt - 706-474-0536

## TERMS AND CONDITIONS OF SALE

1. Each animal will be sold to the highest bidder. The Auctioneer will settle any disputes as to bids.
2. Terms of the sale are cash or check payable to: Clemson University. Payment is due the day of the sale.
3. Each animal becomes the responsibility and risk of the new owner as soon as it is sold to the highest bidder in the auction ring.
4. Animals will be fed and cared for up to 4 hours after the sale (for no additional charge) unless other arrangements have been made.
5. A certificate of registration will be furnished by the consignor for each bull. As a courtesy, the test managers will coordinate the transfer of breed registration papers to the buyers.
6. Cattle available in this sale have been registered with their respective breed associations by consignor and are held out to meet the genetic and breed specifications of their respective breed associations.
7. All bulls have passed a breeding soundness exam administered by a qualified, 3rd party veterinarian. Any concerns regarding the fertility of the bull should be resolved between the purchaser and the consignor.
8. The above terms and conditions of the sale shall constitute a contract between the buyer and consignor of each lot and shall be equally binding upon both parties.
9. A "CONSIGNOR" may not "NO SALE" a bull during or after the sale.
10. Clemson University in its capacity as an educational institution and in carrying out its public responsibilities is vitally interested in promoting quality and healthy livestock. In doing so, the University acts solely as a host and facilitator of this sale event and is not responsible for any losses incurred by individuals, nor should Clemson University be considered as a party to the contract for the sale of the animal.
11. FLOOR PRICE – a minimum floor price of \$1,750 is set on each bull. This is the average value of bulls of this weight and condition if sold for beef at the stockyards. Bulls not selling during the auction will be taken home by the consignor or shipped directly to slaughter following the sale at consignor's cost.

**Relationship of USDA Quality Grade, Percent Intramuscular Fat (%IMF), Marbling Degree, and Marbling Score in Market Animals**

Quality Grade	%IMF	Marbling Degree	Marbling Score
Prime 0	> 12.1	Moderately Abundant 00-90	9.0 - 9.9
Prime -	9.8 - 12.1	Slightly Abundant 00-90	8.0 - 8.9
Choice +	7.7 - 9.7	Moderate 00-90	7.0 - 7.9
Choice 0	5.8 - 7.6	Modest 00-90	6.0 - 6.9
Choice -	4.0 - 5.7	Small 00-90	5.0 - 5.9
Select +	3.1 - 3.9	Slight 50-90	4.5 - 4.9
Select -	2.3 - 3.0	Slight 00-40	4.0 - 4.4
Standard	< 2.3	Traces 00-90	3.0 - 3.9

# PERFORMANCE RECORD

1. Tag No. = bull's test ear tag number.
2. Registered Name = bull's registered name.
3. Birth Date = actual birth date.
4. Reg. No. = breed association official registration number.
5. Tattoo No. = bull's permanent identification in ear.
6. CED = calving ease direct EPD
7. BWT EPD = birth weight EPD (lbs.) is a within breed predictor of a bull's ability to transmit birth weight to his progeny compared to other bulls.
8. WWT EPD = weaning weight EPD (lbs.) is a within breed predictor of a bull's ability to transmit preweaning growth to his progeny compared to other bulls.
9. YWT EPD = yearling weight EPD (lbs.) is a predictor of a bull's ability to transmit yearling growth to his progeny compared to other bulls.
10. RADG EPD = feed efficiency expressed in pounds per day, is a predictor of a sire's genetic ability for postweaning gain in future progeny compared to that of other sires, given a constant amount of feed consumed.
11. YHT EPD = yearling height EPD (inches) is a within breed predictor of a bull's ability to transmit yearling height to his progeny compared to other bulls.
12. YSC EPD = yearling scrotal circumference EPD (cm) is a within breed predictor of a bull's ability to transmit yearling scrotal size to his sons compared to other bulls.
13. Milk EPD = maternal milk EPD (lbs. of calf weaning weight) is a within breed predictor of a bull's ability to transmit milk and maternal ability to his daughters compared to daughters of all other bulls.
14. MARB EPD = marbling EPD - expressed as a fraction of the difference in USDA marbling score - is a within breed predictor of a bull's ability to transmit marbling to his progeny compared to progeny of other bulls evaluated at a given slaughter endpoint.
15. REA EPD = ribeye area EPD (sq.in.) is a within breed predictor of a bull's ability to transmit ribeye size to his progeny compared to progeny of other bulls evaluated at a given slaughter endpoint.
16. \$Wean = an index value expressed in dollars per head, is the expected average difference in future progeny performance for preweaning merit. \$W includes both revenue and cost adjustments associated with differences in birth weight, weaning direct growth, maternal milk, and mature cow size.
17. \$Beef = \$Beef index (\$ per head) is a within breed predictor of the expected average difference in a bull's progeny performance for postweaning and carcass value compared to progeny of other sires.

1	2	3	4	5
<b>BREED</b>		<b>Owner:</b>		
<b>2-generation pedigree</b>				
<b>EPDs</b>				
CED	BWT	WWT	YWT	RADG
6	7	8	9	10
YSC	MILK	MARB	REA	\$WEAN
12	13	14	15	16
<b>PERFORMANCE</b>				
TRAIT	BWT	AWWT	ON WT	OFF-HT
VALUE	18	19	21	22
RATIO		20		
<b>ADJ 365 YEARLING</b>				
TRAIT	UIMF	UREA	UFAT	URMP
VALUE	28	29	30	31
RATIO				

18. BWT = actual birth weight (lbs.).
19. AWWT = weaning weight (lbs.) adjusted to 205 days of age and for age-of-dam.
20. AWWT Ratio = ratio of bull's adj. 205-day weaning weight to the average for all bulls in the same weaning management group.
21. On-Wt = on-test weight (lbs.).
22. Off-Ht = off-test hip height (inches).
23. Off-Wt = off-test weight (lbs.).
24. Test ADG = test average daily gain (lbs./day) = [On-Test Weight - Off-Test Weight] / Days on Test.
25. ADG Ratio = ratio of bull's ADG to his breed-age group average.
26. Test WDA = weight per day of age (lbs./day) = (Off-Test Weight / Off-Test Age).
27. WDA Ratio = ratio of bull's WDA to his breed-age group average.
28. u%IMF = adjusted 365-days yearling 12th rib % intramuscular fat.
29. uREA = adjusted 365-days yearling 12th rib ribeye area (in<sup>2</sup>).
30. uFAT = adjusted 365-days yearling 12th rib fat thickness.
31. uRMP = adjusted 365-days yearling rump fat thickness.
32. AYHT = adjusted 365-days yearling hip height (inches).
33. AYSC = adjusted 365-days yearling scrotal circumference (cm).
34. AYWT = adjusted 365-days yearling weight (lbs.).
35. AYWT Ratio = ratio of bull's adjusted 365-days yearling weight to his breed-age group average.
36. RFI Daily = ADG + WDA.

# 2021 CLEMSON BULL TEST CONSIGNORS

**Shuffler Farm**  
Eugene Shuffler  
444 Union Grove Rd  
Union Grove, NC 28689  
704-876-9895  
resdvm@yadtel.net  
**Lots 38, 41, 64**

**Broadway Cattle Farm, LLC**  
Chuck Broadway  
4408 Medlin Road  
Monroe, NC 28112  
704-579-3514  
cattle@bcsgroup.biz  
**Lots 45, 46, 47, 48, 50, 51**

**Barrett Farms**  
Chet Barrett  
769 Tommy Irvin Rd  
Mt. Airy, GA 30563  
706-499-8008  
chetbarrett61@gmail.com  
**Lots 24, 25**

**Edisto Pines Farm**  
Todd Edwards  
700 Wagner Hwy  
Leesville, S.C. 29070  
803-379-1184  
te.edistopines@gmail.com  
**Lots 76, 77, 78, 79, 80**

**Black Crest Farms**  
Billy McLeod  
1320 Old Manning Rd  
Sumter, S.C. 29150  
803-481-2011  
williammcleod@ftc-i.net  
**Lots 15, 17, 18**

**Clinton Farms**  
Lee Clinton  
3005 Clinton Dairy Rd  
Clover, SC 29710  
704-913-6127  
leeclinton4798@aol.com  
**Lots 81, 82**

**Shady River Farms**  
Jerry Ellis/Glenda Walker  
1138 Liberty Rd SW  
Calhoun, Ga 30701  
706-629-2632  
shadyriverfarm@yahoo.com  
**Lot 6**

**Panther Creek**  
John Smith  
1434 Kitty Noecker Rd  
Pink Hill, NC 28572  
252-526-1929  
johnsmith3982@embarqmail.com  
**Lots 19, 20, 21**

**Innisfail Farms**  
Weyman Hunt  
PO Box 488  
Madison, Georgia 30650  
706-342-0264  
weyman@godfreysfeed.com  
**Lot 84**

**Woodlawn Farm LLC**  
Rick Wood  
5781 Hwy 115 W  
Clarksville, GA 30523  
706-499-2325  
rick@gpspoultry.com  
**Lots 68, 73**

**Cooks Cattle Service**  
John Cook  
PO Box 92  
Buckhead, GA 30605  
706-818-1348  
cooks cattleservices@yahoo.com  
**Lots 53, 55, 65**

**Brendy Hill Farm**  
Virgil Wall  
PO Box 497  
Ninety Six, SC 29666  
864-942-2380  
virgilwall@joahna.norbord.com  
**Lots 85, 86**

**AK/NDS**  
Jim Rathwell  
159 Overdue Hill  
Six Mile, SC 29682  
864-868-9851  
rathwell2@hotmail.com  
**Lots 26, 27, 71, 72**

**Yaupon Land & Cattle**  
Ryan Settle  
501 Hickory Hollow Rd.  
Inman, SC 29349  
864-706-8035  
yauponlandandcattle@gmail.com  
**Lots 59, 60**

**Eddie Bradley**  
2710 Dills Rd.  
Hiawasse, GA 30546  
706-994-2079  
eddiebradley@windstream.net  
**Lots 13, 14**

**Oak Hill Farms**  
Danny Winchester  
134 Fox Hunt Lane  
Six Mile, SC 29682  
864-637-8592  
winchesterd@bellsouth.net  
**Lot 63**

**Bridges Beef Cattle**  
John Bridges  
2032 Chatfield Rd.  
Shelby, NC 28150  
704-692-2978  
bridgesbeefcattle@gmail.com  
**Lots 28, 30, 31, 32, 74**

**Berry-Wells Farm**  
Jonathon Wells  
2093 Crawfordville Rd.  
Rayle, GA 30660  
770-880-6678  
jwells1586@gmail.com  
**Lots 35, 36, 37**

**Goforth Angus**  
Tim Goforth  
2852 Crissman Rd. #280  
East Bend, NC 27018  
336-403-1905  
tg0575@gmail.com  
**Lots 3, 4**

**Britt Family Farms**  
James Britt  
1111 W NC Hwy 403  
Mt. Olive, NC 28325  
919-738-6331  
jrb4070@hotmail.com  
**Lots 33, 34**

**Brasstown Beef**  
Rob Bodine  
1960 Brasstown Rd.  
Brasstown, NC 28902  
710-626-2244  
rbodine@ridgefieldfarm.net  
**Lots 56, 58**

## SALE ORDER

SALE ORDER/RANKING	TAG	GAIN INDEX	GAIN INDEX RATIO	RFI DAILY	TOTAL PERFORMANCE INDEX	SALE ORDER/RANKING	TAG	GAIN INDEX	GAIN INDEX RATIO	RFI DAILY	TOTAL PERFORMANCE INDEX
1	45	9.31	123.1	0.44	122.07	29	38	7.58	100.15	-0.46	100.21
2	21	9.25	122.21	0.13	121.5	30	33	7.49	99.01	-1.28	99.88
3	47	9.02	119.2	-0.68	119.31	31	59	7.41	97.9	-2.36	99.86
4	18	8.35	110.41	-8.77	118.62	32	35	7.54	99.7	-0.02	99.32
5	56	8.87	117.23	-0.68	117.36	33	68	7.48	98.84	-0.86	99.29
6	46	8.9	117.65	2.67	114.46	34	6	7.46	98.55	-0.71	98.86
7	51	8.66	114.52	-0.406*	114.4	35	4	7.39	97.72	-1.32	98.64
8	71	8.24	108.97	-4.71	113.16	36	58	7.47	98.73	1.41	96.93
9	78	8.75	115.69	2.65	112.53	37	25	6.91	91.39	-4.54	95.56
10	17	7.62	100.67	-10.82	110.99	38	3	7.35	97.09	1.23	95.49
11	50	8.29	109.57	-1.37	110.45	39	36	7.3	96.54	0.73	95.44
12	81	8.48	112.08	1.26	110.33	40	24	6.9	91.16	-3.95	94.75
13	79	9.11	120.43	9.66	110.28	41	84	6.67	88.2	-5.42	93.27
14	77	8.51	112.5	1.81	110.2	42	73	6.67	88.21	-5.2	93.06
15	20	8.25	109.01	-1.63	110.15	43	15	7.05	93.16	0.29	92.53
16	37	8.39	110.84	0.53	109.82	44	82	7.55	99.82	6.99	92.49
17	72	8.24	108.93	-1.15	109.6	45	64	7.41	97.92	5.2	92.38
18	80	7.91	104.56	-2.89	106.99	46	28	6.83	90.33	-2.07	92.06
19	41	7.96	105.26	-2.03	106.83	47	13	7.01	92.61	0.49	91.78
20	60	7.48	98.86	-7.23	105.64	48	63	6.74	89.07	-2.23	90.97
21	76	8.47	111.97	5.93	105.58	49	26	6.58	86.94	-0.62	87.26
22	19	7.96	105.14	0.15	104.55	50	27	6.49	85.8	-0.68	86.19
23	14	7.83	103.49	-0.49	103.54	51	55	6.28	82.98	-1.04	83.74
24	74	7.83	103.53	0.57	102.54	52	83	6.19	81.86	-1.37	82.96
25	34	7.63	100.91	-1.59	102.07	53	53	5.89	77.87	-4.41	82.02
26	48	7.86	103.9	1.61	101.87	54	85	5.74	75.81	-0.71	76.31
27	30	8.18	108.15	5.86	101.87	55	65	5.99	79.19	2.76	76.22
28	31	7.98	105.49	4.78	100.3	56	86	5.21	68.87	-2.89	71.58

\*RFI Value Missing/based on group average



17

BCF C765 BEEF BANK H440

10-06-2019

Bull \*19757966

Tattoo: H440

Angus/SR

Black Crest Farms Sumter, SC

\*KCF Bennett Beef Bank C765

18491423

\*KCF Miss Complete Y468

#Summitcrest Complete 1P55

\*Rita 7067 of Rita 5M46 Obj

\*BCF 1P55 Complete A001

17656201

HD SOK

EPDs

CED	BEPD	WEPD	YEPD	RADG	YH
+4 .32	+3.2 .52	+70 .45	+123 .39	+23 .28	+7 .48
SC	MILK	MARB	REA	\$W	\$B
+1.55 .44	+26 .28	+1.10 .35	+67 .35	+69	+168

PERFORMANCE

TRAIT	BW	205 WT	UIMF	UREA	UFAT	URMP	YR HT	ADJ SC	365 WT
VALUE	70	684	4.05	16.1	.33	.51	50.3	42.24	1273
RATIO		107							103

TEST PERFORMANCE

ON WT	OFF-HT	OFF-WT	TEST ADG / RATIO	TEST WDA / RATIO	TEST YW RATIO	RFI Daily
1062.5	52	1415	4.09 / 98.57	3.53 / 103.14	102	-10.82

20

PCF SGR 961

09-19-2019

Bull 19740585

Tattoo: 961

Angus/SR

Panther Creek Pink Hill, NC

\*\*Spring Grove Discovery 6251  
18578563

#\*VAR Discovery Z240

+Daltons Primrose 18

\*Chimney Top Upward Z28

PCF Rita 628 of Z28  
18827292

Springfield Rita 0152

ANGUSGS  
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EPDs

CED	BEPD	WEPD	YEPD	RADG	YH
+3 .28	+2.5 .50	+86 .42	+153 .33	+31 .26	+9 .41
SC	MILK	MARB	REA	\$W	\$B
+1.27 .34	+31 .25	+93 .30	+1.09 .30	+89	+189

PERFORMANCE

TRAIT	BW	205 WT	UIMF	UREA	UFAT	URMP	YR HT	ADJ SC	365 WT
VALUE	72	772	3.40	15.1	.19	.23	48.4	40.72	1260
RATIO		103							100

TEST PERFORMANCE

ON WT	OFF-HT	OFF-WT	TEST ADG / RATIO	TEST WDA / RATIO	TEST YW RATIO	RFI Daily
1025	51	1415	4.77 / 115.00	3.48 / 101.67	101	-1.63

18

BCF 298 LEUPOLD H441

10-07-2019

Bull \*19763603

Tattoo: H441

Angus/SR

Black Crest Farms Sumter, SC


#AAR Leupold 0578

\*GDAR Leupold 298  
17228402

\*GDAR Miss Blackcap 9232  
Lazy JB Top Shelf 9000

\*Wood Emblynette 3211  
17991357

\*SAV Emblynette 6277



EPDs

CED	BEPD	WEPD	YEPD	RADG	YH
+12 .33	-1.1 .49	+55 .42	+100 .37	+22 .28	+5 .43
SC	MILK	MARB	REA	\$W	\$B
+69 .39	+20 .33	+98 .36	+16 .36	+53	+137

PERFORMANCE

TRAIT	BW	205 WT	UIMF	UREA	UFAT	URMP	YR HT	ADJ SC	365 WT
VALUE	68	705	3.64	15.1	.31	.36	50.3	36.28	1236
RATIO		100							100

TEST PERFORMANCE

ON WT	OFF-HT	OFF-WT	TEST ADG / RATIO	TEST WDA / RATIO	TEST YW RATIO	RFI Daily
976	51.5	1445	4.83 / 116.42	3.52 / 103.04	99	-8.77

21

PCF DUALY 965

09-22-2019

Bull 19740586

Tattoo: 965

Angus/SR

Panther Creek Pink Hill, NC

\*DL Dually

18608253

\*DL Incentive 2103

\*Chimney Top Upward Z28

PCF Skymere 234 Bis

#PCF Skymere of Z28 419

18149021

ANGUSGS

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EPDs

CED	BEPD	WEPD	YEPD	RADG	YH
+4 .36	+3.1 .56	+96 .48	+170 .40	+31 .32	+1.4 .47
SC	MILK	MARB	REA	\$W	\$B
+1.01 .41	+18 .31	+38 .36	+59 .36	+78	+148

PERFORMANCE

TRAIT	BW	205 WT	UIMF	UREA	UFAT	URMP	YR HT	ADJ SC	365 WT
VALUE	72	731	3.13	13.1	.42	.39	N/A	39.83	1393
RATIO		114							100

TEST PERFORMANCE

ON WT	OFF-HT	OFF-WT	TEST ADG / RATIO	TEST WDA / RATIO	TEST YW RATIO	RFI Daily
1117.5	53.5	1650	5.39 / 129.78	3.86 / 112.92	111	0.13

19

PCF ENHANCE 956

09-10-2019

Bull \*19742719

Tattoo: 956

Angus/SR

Panther Creek Pink Hill, NC

SydGen Enhance

18170041

\*SydGen Exceed 3223

SydGen Rita 2618

\*Bruns Thunderbolt 963

PCF Skymere 706 of TB

19156926

PCF Skymere 212 RP

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EPDs											
CED	BEPD	WEPD	YEPD	RADG	YH						
+3	.37	+4.2	.54	+79	.47	+140	.39	+30	.33	+1.2	.46
SC	MILK	MARB	REA	\$W	\$B						
+94	.41	+38	.31	+1.25	.36	+38	.36	+90		+188	

PERFORMANCE									
TRAIT	BW	205 WT	UIMF	UREA	UFAT	URMP	YR HT	ADJ SC	365 WT
VALUE	73	811	6.89	13.5	.46	.52	51.2	38.94	1323
RATIO		110							100

TEST PERFORMANCE							
ON WT	OFF-HT	OFF-WT	TEST ADG / RATIO	TEST WDA / RATIO	TEST YW RATIO	RFI	Daily
1090	54	1485	4.48 / 107.88	3.48 / 101.75	106		0.15

24

MR RENOWN 903

09-05-2019

Bull 19780787

Tattoo: 903

Angus/SR

Barrett Farms Mt. Airy, GA

#\*\*SAV Renown 3439

17633839

+Rito 707 of Ideal 3407 7075


\*SAV Blackcap May 4136

#\*SAV Final Answer 0035

Gretsch Eisa Erica 3037

17809638

Gretsch Eisa Erica 9022



EPDs

CED	BEPD	WEPD	YEPD	RADG	YH
+6 .24	+7 .35	+56 .31	+103 .29	+23 .05	-2 .35
SC	MILK	MARB	REA	\$W	\$B
+44 .33	+20 .22	+17 .23	+45 .26	+51	+90

PERFORMANCE

TRAIT	BW	205 WT	UIMF	UREA	UFAT	URMP	YR HT	ADJ SC	365 WT
VALUE	60	623	1.91	14.8	.62	.56	47.0	34.75	1172
RATIO		99							102

TEST PERFORMANCE

ON WT	OFF-HT	OFF-WT	TEST ADG / RATIO	TEST WDA / RATIO	TEST YW RATIO	RFI Daily
1100	49	1440	3.64 / 87.62	3.26 / 95.39	94	-3.95













58

RF CAPITALIST G299

09-19-2019

Bull BC98326

Tattoo: G299

Angus/Braunvieh/SR

Brasstown Beef Brasstown, NC

C C C CAPITALIST 4248  
17907823?

CONNEALY CONFIDENCE 0100  
C C C EVERELDA ENTENSE 8248  
SYDGEN MANDATE 6079  
MISS RF 227B

MS RF 225D  
BC91375

EPDs

S	CED	BWT	WWT	YWT	MILK	MARB	RE
	+14	0.25	-1.5	0.39	+51	0.35	+91
	0.23	+25	0.25	+20	0.25	+74	0.74
D	CED	BWT	WWT	YWT	MILK	MARB	RE
	4	0.25	1.4	0.37	54	0.28	92
	0.11	42	0.15	0.9	0.03	0.06	0.06

PERFORMANCE

TRAIT	BWT	AWWT	ON WT	OFF HT	OFF WT	TEST ADG	TEST WDA
VALUE	85	680	1107.5	51.5	1515	4.00	3.47
RATIO		108				86.27	98.20

PERFORMANCE

TRAIT	UIMF	UREA	UFAT	URMP	AYHT	AYSC	AYWT	RFI DAILY
VALUE					51.00	38.0	1301	1.41
RATIO							106.0	

63

OHF WINCHESTERS ACCLAIM 171

11-03-2019

Bull 19591442

Tattoo: 171

Angus/JR

Oak Hill Farms Six Mile, SC

\*Jindra Acclaim

17972810

\*Jindra 3rd Dimension

\*Jindra Blackbird Lassie 1111

#\*SAV Final Answer 0035

\*Ohf Alexis Upward 253

+Ohf Alexis's Answer 147

18978100

HD50K

EPDs

CED	BEPD	WEPD	YEPD	RADG	YH
+6 .23	+1.4 .28	+73 .26	+135 .21	N/A N/A	N/A N/A
SC	MILK	MARB	REA	\$W	\$B
N/A N/A	+30 .18	N/A N/A	N/A N/A	+73	N/A

PERFORMANCE

TRAIT	BW	205 WT	UIMF	UREA	UFAT	URMP	YR HT	ADJ SC	365 WT
VALUE	68	751	2.69	14.8	.38	.48	47.7	36.17	1186
RATIO		104							100

TEST PERFORMANCE

ON WT	OFF-HT	OFF-WT	TEST ADG / RATIO	TEST WDA / RATIO	TEST YW RATIO	RFI Daily
893	48	1210	3.54 / 85.10	3.20 / 91.95	95	-2.23

59

YLC MAGNITUDE G906

11-14-2019

Bull \*\*19577341

Tattoo: G906

Angus/JR

Yaupon Land & Cattle Inman, SC

\*Mead Magnitude  
18543414

\*KCF Bennett Southside  
#\*Mead Primrose N198  
#\*Yon Future Focus T219  
Yon Witch B190  
17847249

+Yon Witch Z812

ANGUS

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EPDs

CED	BEPD	WEPD	YEPD	RADG	YH
+11 .33	+1.5 .48	+80 .42	+145 .37	+31 .30	+1.3 .43
SC	MILK	MARB	REA	\$W	\$B
+1.97 .39	+36 .28	+65 .34	+95 .34	+91	+172

PERFORMANCE

TRAIT	BW	205 WT	UIMF	UREA	UFAT	URMP	YR HT	ADJ SC	365 WT
VALUE	73	779	4.62	14.3	.29	.27	50.0	40.02	1211
RATIO		100							100

TEST PERFORMANCE

ON WT	OFF-HT	OFF-WT	TEST ADG / RATIO	TEST WDA / RATIO	TEST YW RATIO	RFI Daily
823	49	1205	4.13 / 99.30	3.28 / 94.18	95	-2.36

64

SFA EG80 ENHANCE OF AX47

11-13-2019

Bull 19742874

Tattoo: EG80

Angus/JR

Shuffler Farm Union Grove, NC

SydGen Enhance  
18170041

SydGen Rita 2618

#\*SAV Final Answer 0035

#SFA Rita AX47  
17332315

SFA Rita EU31

HD50K

EPDs

CED	BEPD	WEPD	YEPD	RADG	YH
+13 .26	-1.4 .37	+60 .33	+120 .30	+31 .05	+1.0 .37
SC	MILK	MARB	REA	\$W	\$B
+1.74 .30	+31 .19	+85 .05	+58 .05	+65	+172

PERFORMANCE

TRAIT	BW	205 WT	UIMF	UREA	UFAT	URMP	YR HT	ADJ SC	365 WT
VALUE	70	747	5.57	13.7	.43	.40	52.0	35.48	1272
RATIO		106							104

TEST PERFORMANCE

ON WT	OFF-HT	OFF-WT	TEST ADG / RATIO	TEST WDA / RATIO	TEST YW RATIO	RFI Daily
918	52	1350	3.95 / 94.93	3.46 / 99.45	100	5.2

60

YLC BLACK MAGIC G908

12-12-2019

Bull 19598896

Tattoo: G908

Angus/JR

Yaupon Land & Cattle Inman, SC

\*Byergo Black Magic 3348

17803074

\*Silveiras Conversion 8064

\*Byergo Elia Cupcake 5900

\*Williams Incentive 200

Callaways Elluna 0890

GBA Elluna 5420

18520207

ANGUS

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EPDs

CED	BEPD	WEPD	YEPD	RADG	YH
+1 .32	+3.7 .49	+91 .42	+160 .37	+32 .31	+1.4 .43
SC	MILK	MARB	REA	\$W	\$B
+1.43 .38	+28 .28	+55 .33	+88 .33	+86	+182

PERFORMANCE

TRAIT	BW	205 WT	UIMF	UREA	UFAT	URMP	YR HT	ADJ SC	365 WT
VALUE	80	842	4.55	12.9	.40	.53	49.0	37.68	1336
RATIO		100							100

TEST PERFORMANCE

ON WT	OFF-HT	OFF-WT	TEST ADG / RATIO	TEST WDA / RATIO	TEST YW RATIO	RFI Daily
794	48	1190	4.05 / 97.44	3.43 / 98.48	105	-7.23

65

4CLF COWBOY CUT G937

11-03-2019

Bull 3702506

Tattoo: G937

Simmental/JR

Cooks Cattle Service Buckhead, GA

CCR COWBOY CUT 5048Z  
2703910

CCR MS 4045 TIME 7322T  
HPF OPTIMIZER A512  
HAYFIELDS PRIME BANDIT

4CLF MISS OPTIMIZER E739  
3411206

EPDs

CED	BWT	WWT	YWT	MILK
13.3 0.43	2.8 0.47	94.4 0.45	144.5 0.44	17.4 0.22
MARB	RE	ST	API	TI
0.14 0.42	0.82 0.45	18.7 0.32	134.3	82.3

PERFORMANCE

TRAIT	BW	205 WT	UIMF	UREA	UFAT	URMP	YR HT	ADJ SC	365 WT
VALUE	71	744	3.66	13.44	0.44		50	38.6	1172
RATIO		107							

TEST PERFORMANCE

ON WT	OFF-HT	OFF-WT	TEST ADG / RATIO	TEST WDA / RATIO	TEST YW RATIO	RFI Daily
886	50	1165	2.97 / 100.00	3.02 / 100.00		2.76









# AMERICAN ANGUS ASSOCIATION SELECTION TOOLS

**Expected Progeny Difference (EPD)**, is the prediction of how future progeny of each animal are expected to perform relative to the progeny of other animals listed in the database. EPDs are expressed in units of measure for the trait, plus or minus.

**Accuracy (ACC)**, is the reliability that can be placed on the EPD. An accuracy of close to 1.0 indicates higher reliability. Accuracy is impacted whether the animal has a genotype and the number of progeny and ancestral records included in the analysis.

**Calving Ease Direct (CED)**, is expressed as a difference in percentage of unassisted births, with a higher value indicating greater calving ease in first-calf heifers. It predicts the average difference in ease with which a sire's calves will be born when he is bred to first-calf heifers.

**Birth Weight (BW)**, expressed in pounds, is a predictor of a sire's ability to transmit birth weight to his progeny compared to that of other sires.

**Weaning Weight (WW)**, expressed in pounds, is a predictor of a sire's ability to transmit weaning growth to his progeny compared to that of other sires.

**Residual Average Daily Gain (RADG)**, feed efficiency expressed in pounds per day, is a predictor of a sire's genetic ability for postweaning gain in future progeny compared to that of other sires, given a constant amount of feed consumed.

**Yearling Weight (YW)**, expressed in pounds, is a predictor of a sire's ability to transmit yearling growth to his progeny compared to that of other sires.

**Yearling Height (YH)**, is a predictor of a sire's ability to transmit yearling height, expressed in inches, compared to the that of other sires.

**Scrotal Circumference (SC)**, expressed in centimeters, is a predictor of the difference in transmitting ability for scrotal size compared to that of other sires.

## MATERNAL

**Maternal Milk (Milk)**, is a predictor of a sire's genetic merit for milk and mothering ability in his daughters compared to daughters of other sires. In other words, it is that part of a calf's weaning weight attributed to milk and mothering ability.

## CARCASS

**Marbling (Marb)**, is expressed as a fraction of the difference in USDA marbling score of a sire's progeny compared to progeny of other sires.

**Ribeye Area (RE)**, expressed in square inches, is a predictor of the difference in ribeye area of a sire's progeny compared to progeny of other sires.

## \$VALUE INDEXES

**\$Value Indexes**, reported in dollars per head, are multi-trait economic selection indexes where a higher values suggest more profit when comparing two individuals.

**Weaned Calf Value (\$W)**, expressed in dollars per head, provides the expected difference in future progeny preweaning performance from birth to weaning.

**Beef Value (\$B)**, expressed in dollars per carcass, represents the expected average differences in the progeny postweaning performance and carcass value compared to progeny of other sires. This index assumes commercial producers wean all male and female progeny, retain ownership of these animals through the feedlot and sell on a carcass merit grid.

# AMERICAN SIMMENTAL ASSOCIATION SELECTION TOOLS

**Expected Progeny Differences (EPDs)**: EPDs are the most accurate and effective tool available for comparing genetic levels. In using EPDs, the difference between two sires' EPDs represents the unit difference expected in the performance of their progeny. For example, if sires A and B have EPDs of +10 and -5, a 15-unit difference would be expected in their progeny (moving from -5 to +10 yields 15 units). Key to using EPDs is knowing what units they are expressed in. For example, if the above case referred to weaning weight EPDs, A would be expected to sire 15-pounds more weaning weight than B. If calving ease were the trait, A would be expected to sire 15-percent more unassisted births in first-calf heifers; in other words, if B sired 30 assists in a group of 100 heifers, we'd expect A to require 15 assists. A percentile-ranking chart is required to determine where a bull's EPDs rank him relative to other bulls in the breed. For percentile rankings or more detailed information about EPDs and \$ indexes visit [www.simmental.org](http://www.simmental.org). Listed below are the units ASA EPDs are expressed in:

**All-Purpose Index (API)**: Dollars per cow exposed under an all-purpose-sire scenario. (See below for more details.)

**Birth Weight (BW)**: Pounds of birth weight.

**Calving Ease (CE)**: Percent of unassisted births when used on heifers.

**Milk (MLK)**: Pounds of weaning weight due to milk.

**Marbling (MRB)**: Marbling score.

**Ribeye Area (REA)**: Square inches of ribeye. Warner-Bratzler

**Stayability (STAY)**: Percent of daughters remaining in the cowherd at 6 years of age.

**Terminal Index (TI)**: Dollars per cow exposed under a terminal-sire scenario. (See below for more details.)

**Weaning Weight (WW)**: Pounds of weaning weight.

**Yearling Weight (YW)**: Pounds of yearling weight.

**\$ Indexes**: Though EPDs allow for the comparison of genetic levels for many economically important traits, they only provide a piece of the economic puzzle. That's where \$ indexes come in. Through well-conceived, rigorous mathematical computation, \$ indexes blend EPDs and economics to estimate an animal's overall impact on your bottom line. The same technology that led to the dramatic progress in swine, poultry and dairy genetics over the last several decades was used to develop the following \$ indexes:

**All-Purpose Index (API)**: Evaluates sires for use on the entire cow herd (bred to both Angus first-calf heifers and mature cows) with the portion of their daughters required to maintain herd size retained and the remaining heifers and steers put on feed and sold grade and yield.

**Terminal Index (TI)**: Evaluates sire for use on mature Angus cows with all offspring put on feed and sold grade and yield.

**Using API and TI**: First, determine which index to use; if you're keeping replacements use API, if not, TI. Then, just as with EPDs, zero in on the unit difference between bulls. (As described above, index units are in dollars per cow exposed.) The difference can be used to determine how much a bull is worth compared to another. Or, put another way, how much you can pay for one bull compared to another. For example, when buying an all-purpose-type sire, you can quickly figure a bull scoring +100 for API is worth an extra \$6,000 over a +50 bull if both are exposed to 30 cows over 4 years (\$50 diff. x 30 hd. x 4 yr. = \$6,000). A percentile-ranking chart is required to determine where a bull's index value ranks him relative to other bulls in the breed. For percentile rankings or more detailed information about EPDs and \$ indexes visit [www.simmental.org](http://www.simmental.org).

# AMERICAN GELBVIEH ASSOCIATION SELECTION TOOLS

## EPD DEFINITIONS

Listed below are the definitions of American Gelbvieh Association EPDs and the units in which they are published. The EPDs with an asterisk (\*) next to the name are available to members only.

### Maternal traits

**Calving ease direct (CED):** Percent of unassisted births of a bull's calves when he is used on heifers. A higher number is favorable, meaning better calving ease. This EPD can be vital to a rancher looking to decrease the amount of calves pulled in his herd.

**Milk (Milk):** The genetic ability of a sire's daughters to produce milk expressed in pounds of weaning weight.

**Stayability (ST):** Predicts the genetic difference, in terms of percent probability, that a bull's daughters will stay productive within a herd to at least six years of age. The stayability EPD is one of the best measures currently available to compare a bull's ability to produce females with reproductive longevity.

### Growth traits

**Birth weight (BW):** Predicts the difference, in pounds, for birth weight of the calf.

**Weaning weight (WW):** Predicts the difference, in pounds, for weaning weight (adjusted to age of dam and a standard 205 days of age). This is an indicator of growth from birth to weaning.

**Yearling weight (YW):** Predicts the expected difference, in pounds, for yearling weight (adjusted to a standard 365 days of age). This is an indicator of growth from birth to yearling.

### Carcass traits

**Yield grade (YG):** Differences in yield grade score, which is a predictor of percent retail product. Smaller values suggest that progeny will have a better lean to fat ratio.

**Ribeye area (REA):** Differences in ribeye area in inches between the 12th and 13th rib. Greater ribeye areas are preferable.

**Marbling (MB):** Predicts the differences in the degree of marbling within the ribeye as expressed in marbling score units. Greater marbling numbers are preferable and are an indicator of higher carcass quality grades.

**\*Average daily gain (ADG):** Difference in average daily gain in pounds based on an animal's performance during a feed intake test period.

**\*Residual feed intake (RFI):** Defined as the difference between an animal's actual daily feed intake and its predicted daily intake based on growth rate and body size. Animals with a positive RFI value are deemed more inefficient because they consume more than expected while animals with a negative RFI value are considered more efficient because they consume less than expected.

### Indexes

Indexes are tools that allow producers to select for several EPDs at once, making selections more efficient than selecting on one trait at a time. Indexes weigh traits based on their importance to a producer's bottom line by using a trait's economic and genetic value. Indexes are a good way to put selection emphasis on traits that are economically relevant.

**FPI™ which stands for feeder profit index:** An economic selection index designed to aid producers in selecting sires whose progeny will perform in the feedlot and are sold on a grade and yield standpoint. Well ranking sires for FPI have higher marbling and carcass weight than their contemporaries. As a terminal index, little emphasis is put on maternal traits such as stayability and calving ease.

# AMERICAN HEREFORD ASSOCIATION SELECTION TOOLS

## Understanding Hereford EPDs

The American Hereford Association (AHA) currently produces expected progeny differences (EPDs) for 17 traits and calculates three profit indexes. AHA's genetic evaluation makes use of a Marker Effects Model that allows the calculation of EPDs by incorporating the pedigree, phenotypic and genomic profile of an animal. Animals that have a genomic profile will be denoted with a GE-EPD logo.

The current suite of Hereford EPDs and profit indexes includes:

### Calving Ease – Direct (CE)

CE EPD is based on calving ease scores and birth weights and is measured on a percentage. CE EPD indicates the influence of the sire on calving ease in females calving at 2 years of age. For example, if sire A has a CE EPD of 6 and sire B has a CE EPD of -2, then you would expect on average, if comparably mated, sire A's calves would have an 8 percent more likely chance of unassisted calving when compared to sire B's calves.

### Birth Weight (BW)

BW EPD is an indicator trait for calving ease and is measured in pounds. For example, if sire A has a BW EPD of 3.6 and sire B has a BW EPD of 0.6, then you would expect on average, if comparably mated, sire A's calves would come 3 lb. heavier at birth when compared to sire B's calves. Larger BW EPDs usually, but not always, indicate more calving difficulty. The figure in parentheses found after each EPD is an accuracy value or reliability of the EPD.

### Weaning Weight (WW)

WW EPD is an estimate of pre-weaning growth that is measured in pounds. For example, if sire A has a WW EPD of 60 and sire B has a WW EPD of 40, then you would expect on average if comparably mated, sire A's calves would weigh 20 lb. heavier at weaning when compared to sire B's calves.

### Yearling Weight (YW)

YW EPD is an estimate of post-weaning growth that is measured in pounds. For example, if sire A has a YW EPD of 100 and sire B has a YW EPD of 70, then you would expect on average if comparably mated, sire A's calves would weigh 30 lb. heavier at a year of age when compared to sire B's calves.

### Scrotal Circumference (SC)

Measured in centimeters and adjusted to 365 days of age, SC EPD is the best estimate of fertility. It is related to the bull's own semen quantity and quality, and is also associated with age at puberty of sons and daughters. Larger SC EPDs suggest younger age at puberty. Yearling sons of a sire with a 0.7 SC EPD should have yearling scrotal circumference measurements that average 0.7 centimeters (cm) larger than progeny by a bull with an EPD of 0.0 cm.

### Maternal Milk (MM)

The MM EPD of a sire's daughters is expressed in pounds of calf weaned. It predicts the difference in average weaning weights of sires' daughters' progeny due to milking ability. Daughters of the sire with a +14 MM EPD should produce progeny with 205-day weights averaging 24 lb. more (as a result of greater milk production) than daughters of a bull with a MM EPD of -10 lb. (14 minus -10.0 = 24 lb.). This difference in weaning weight is due to total milk production during the entire lactation.

### Ribeye Area (REA)

REA EPDs reflect differences in an adjusted 365-day ribeye area measurement based on carcass measurements of harvested cattle. Sires with relatively higher REA EPDs are expected to produce better-muscled and higher percentage

yielding slaughter progeny than will sires with lower REA EPDs. Ultrasound measurements are also incorporated into this trait and have been shown to be highly correlated with the performance of slaughter progeny. All data is expressed on a carcass scale.

### Marbling (MARB)

MARB EPDs reflect differences in an adjusted 365-day marbling score (intramuscular fat, [IMF]) based on carcass measurements of harvested cattle. Breeding cattle with higher MARB EPDs should produce slaughter progeny with a higher degree of IMF and therefore higher quality grades. Ultrasound measurements are also incorporated into this trait and have been shown to be highly correlated with the performance of slaughter progeny. All data is expressed on a carcass scale.

### Baldy Maternal Index (BMI\$)

The BMI\$ is a maternally focused index that is based on a production system that uses Hereford x Angus cross cows. Progeny of these cows are directed towards Certified Hereford Beef. This index has significant weight on Sustained Cow Fertility, which predicts fertility and longevity of females. There is a slightly positive weight on Weaning Weight, Mature Cow Weight and Milk which accounts for enough growth but ensures females do not increase inputs. There is some negative emphasis on Dry Matter Intake, but a positive weighting on Carcass Weight which is anticipated to provide profitability from finishing of non-replacement females and castrated males. Marbling and Rib-eye Area are also positively weighted to keep the harvested progeny successful for CHB. This index is geared to identify Hereford bulls that will be profitable when used in a rotational cross with mature commercial Angus cows.

### Brahman Influence Index (BI\$)

The BI\$ is a maternally focused index that is based on a production system that uses Brahman x Hereford cross cows. Progeny of these cows are directed towards a commodity beef market since Certified Hereford Beef® does not accept Brahman influenced cattle. This index has significant weight on Sustained Cow Fertility, which predicts fertility and longevity of females. There is a slightly positive weight on Weaning Weight, Mature Cow Weight and Milk which accounts for enough growth but ensures females do not increase inputs. There is some negative emphasis on Dry Matter Intake, but a positive weighting on Carcass Weight which is anticipated to provide profitability in finishing non-replacement females and castrated males. Marbling and Rib-eye Area are also positively weighted to keep harvested progeny successful for a variety of commodity based programs. This index targets producers that use Hereford bulls on Brahman influenced cows.

### Certified Hereford Beef Index (CHBS)

CHBS is a terminal sire index that is built on a production system where Hereford bulls are mated to mature commercial Angus cows and all progeny will be targeted for Certified Hereford Beef® after the finishing phase. This index has significant weight on Carcass Weight to ensure profit on the rail. As well there is a positive weighting for Average Daily Gain along with a negative weighting on Dry Matter Intake to ensure efficient pounds of growth in the finishing phase. Keep in mind, this production system takes advantage of complimentary breeding with the commercial Angus cow. Although Marbling is weighted positively in this index, a positive weighting for Rib-eye Area and a negative weighting for Back Fat are a greater priority in this index to allow for optimum end-product merit. This is the only index that has no emphasis on fertility. Remember that no replacement heifers are being retained.

## Pick Up Bulls at Bull Test Site



Location of bull test where bulls can be viewed and picked up:  
 Clemson University Bull Test Station  
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