

BY THE NUMBERS

by Esther McCabe, director of performance programs

Growth of Structured Sire Evaluation

The value of phenotypes in the weekly National Cattle Evaluation cannot be overstated.

Certain phenotypes are easier to collect than others. For example, there are approximately 2.2 million ultrasound records submitted to the American Angus Association database, whereas there are only about 130,000 carcass records.

Starting in fall 2008, ultrasound traits were included as indicator traits for carcass merit. Ultrasound data correlates to carcass data at 0.70 to 0.80. The ability to use ultrasound data to predict carcass traits is a very powerful and useful technology, but since it is not a perfect correlation of 1, carcass records are still needed for more accurate predictions.

One of the most important programs the Association manages for the membership is the Structured Sire Evaluation, which is focused on carcass data collection.

First Association sire evaluation

While this Structured Sire Evaluation is not the first managed by the Association, it does have a different purpose than predecessors.

The first was specifically designed to develop growth-trait expected progeny differences (EPDs). A part of the National Sire Evaluation program, a new carcass evaluation program was adopted in 1972 that

resulted in the first Angus Sire Evaluation Report and formed the foundation of the Angus performance records database.

Reestablishment of program

Reestablished in the fall of 2015, the Association-sponsored Structured Sire Evaluation aims to collect carcass data on widely used bulls in the Angus population that have little to no actual carcass data collected on their progeny.

Widely used bulls are those included in the Top 300 Registration Sires the previous fiscal year, and in most cases are proven for growth traits and may even have hundreds of progeny ultrasound records reported. Targeted commercial participants then choose which bulls they would like to use in their operation, breed the females and are provided compensation once carcass data records are submitted.

Since inception, the program has enrolled multiple commercial herds that combined, have bred more than 10,000 females. These are typically herds ranging from 250 to 1,000 females and have experience using artificial insemination (AI).

This allows each sire used to have progeny in contemporary groups of at least 15 to 20 to gather sufficient

data. The data from this program enters the weekly evaluation in the same way as every other data point — subject to contemporary group guidelines — and supports the evaluation in the same capacity. Ultimately, it increases the accuracies on widely used sires, which improves prediction accuracies of genomic evaluations, adds phenotypic data to the robust Angus database and provides an opportunity to validate selection tools.

Sires used in this program consist of both test and reference sires.

Test sires are those described previously and are represented in Table 2. Since fall 2015 there have been more than 150 test sires included in the program.

Reference sires are highly proven sires for carcass traits, meaning they are well described with harvest data in the evaluation. Reference sires are critical to include in the project design, as they allow for the new data to be tied to the current database, making the data much more valuable.

Listed in Table 1 is the cohort of sires and their carcass EPD accuracy changes as progeny records entered the evaluation. These sires are those in the most recent harvest data from summer of 2021. This Association-sponsored program does not replace

the need for members to submit carcass data, but instead works alongside member data.

Growth of the program

The program has recently grown to include sires nominated by Angus members. The first breeder nomination period was open in January of 2022. This allows Angus members to nominate unproven sires to be used in the program.

Nominated sires selected by test herds to be used will have the opportunity to obtain carcass data on progeny compared to proven, high-accuracy Angus sires, improving accuracies on carcass traits.

For more information on the Structured Sire Evaluation, contact the Performance Programs department. [AJ](#)

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Editor's note: For more information, visit www.angus.org/performance or contact the member services department at 816-383-5100.

Table 2: Test sires utilized in the Structured Sire Evaluation Project from 2015 through 2021

Name	Reg. No.
3F Epic 4631	17950219
44 Arsenal 4W07	17857587
44 Envision	17448751
A A R Ten Gauge 1501	17049149
A A R Ten X 7008 S A	15719841
B P F Special Focus 504	15140670
Baldrige Alternative E125	18837398
Baldrige Breakthrough A091	17822045
Baldrige Compass	18229488
Baldrige Download Z013	17314910
Baldrige Jennings Z064	17314954
Baldrige Willie Y34	17074451

Table 1: Accuracy changes with inclusion of carcass records

Sire Evaluation Report	Name	Reg. No.	Carcass Progeny	CWT Acc	Marb Acc	RE Acc	Fat Acc
Fall 2021	44 Arsenal 4W07	17857587	25	0.65	0.62	0.59	0.6
Spring 2022			45	0.7	0.68	0.64	0.65
Fall 2021	Bruns Blaster	17991528	0	0.51	0.45	0.46	0.45
Spring 2022			13	0.62	0.57	0.55	0.57
Fall 2021	Bush's Easy Decision 98	17649083	2	0.53	0.47	0.47	0.47
Spring 2022			11	0.6	0.56	0.54	0.55
Fall 2021	Connealy Big Money	17888826	0	0.5	0.45	0.46	0.45
Spring 2022			8	0.57	0.52	0.51	0.52
Fall 2021	Connealy Consensus 7229	16447771	36	0.81	0.79	0.77	0.8
Spring 2022			56	0.82	0.81	0.78	0.81
Fall 2021	Connealy Cool 39L	17586776	9	0.59	0.55	0.52	0.53
Spring 2022			27	0.67	0.64	0.6	0.62
Fall 2021	EXAR Monumental 6056B	18379347	11	0.62	0.57	0.55	0.58
Spring 2022			21	0.66	0.62	0.59	0.62
Fall 2021	G A R Prophet	16295688	294	0.88	0.87	0.84	0.87
Spring 2022			302	0.88	0.87	0.85	0.87
Fall 2021	HA Prime Cut 4493	17943466	10	0.59	0.54	0.53	0.54
Spring 2022			20	0.64	0.6	0.57	0.6
Fall 2021	Jindra Acclaim	17972810	31	0.68	0.65	0.61	0.65
Spring 2022			45	0.71	0.69	0.65	0.69
Fall 2021	LD Capitalist 316	17666102	27	0.69	0.65	0.62	0.66
Spring 2022			38	0.71	0.68	0.65	0.69
Fall 2021	LD Emblazon 999	16665803	31	0.69	0.66	0.62	0.66
Spring 2022			74	0.76	0.74	0.7	0.73
Fall 2021	MGR Treasure	18156972	5	0.59	0.54	0.53	0.54
Spring 2022			20	0.66	0.62	0.59	0.62
Fall 2021	Musgrave Big Sky	17614813	18	0.64	0.6	0.58	0.6
Spring 2022			29	0.68	0.65	0.61	0.65
Fall 2021	PA Full Power 1208	16981588	63	0.76	0.74	0.7	0.74
Spring 2022			68	0.77	0.75	0.71	0.75
Fall 2021	Prairie Pride Next Step 2036	17367599	2	0.54	0.48	0.48	0.49
Spring 2022			13	0.61	0.57	0.55	0.57
Fall 2021	Raven Powerball 53	17632447	21	0.65	0.61	0.58	0.61
Spring 2022			30	0.68	0.65	0.61	0.64
Fall 2021	S S Objective T510 OT26	13776378	209	0.89	0.88	0.85	0.88
Spring 2022			218	0.89	0.88	0.86	0.88
Fall 2021	SF Speedway A187	17470682	10	0.6	0.55	0.53	0.55
Spring 2022			22	0.66	0.62	0.59	0.61
Fall 2021	V A R Generation 2100	17171587	10	0.66	0.63	0.6	0.63
Spring 2022			18	0.69	0.66	0.63	0.66
Fall 2021	V A R Legend 5019	18066037	4	0.57	0.52	0.52	0.53
Spring 2022			17	0.64	0.6	0.58	0.61
Fall 2021	Werner Flat Top 4136	18094501	22	0.66	0.62	0.59	0.62
Spring 2022			54	0.73	0.71	0.67	0.7

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baldrige Xpand x743	16762739	Ellingson Roughrider 4202	17933463	S A V Priority 7283	15688351
Bar R Jet Black 5063	18389838	EXAR Denver 2002B	17160560	S A V Prosperity 9131	16396523
Basin Advance 3134	17597915	EXAR EZX 3772B	17479034	S A V Quarterback 7933	18913003
Basin Advance 5016	18185320	EXAR Monumental 6056B	18379347	S A V Recharge 3436	17633838
Basin Payweight 107S	15332022	EXAR Resistol 3710B	17434366	S A V Renown 3439	17633839
Basin Yuma 4286	17905508	EXAR Stetson 3704B	17434364	S A V Resource 1441	17016597
Boyd Signature 1014	16916267	EXAR Stud 4658B	17908266	S A V Ten Speed 3022	17633563
Bruin Uproar 0070	16858775	EZAR Gold Rush 6001	18510183	S A V Territory 7225	18913034
Bruns Blaster	17991528	FF Rito Righteous 6R41	18577290	S A V Thunderbird 9061	16396499
BSF Hot Lotto 1401	17919726	G A R Prophet	16295688	S Whitlock 179	17007891
Bushs Easy Decision 98	17649083	G A R Quantum	18636059	SF Speedway A187	17470682
C C A Emblazon 702	15980098	HA Cowboy Up 5405	18286467	Shipwheel Montana 2600	17524723
Connealy Arsenal 2174	17314528	HA Prime Cut 4493	17943466	Sitz Dividend 649 C	18086964
Connealy Big Money	17888826	Hoover Elation M123	17603620	Sitz Dollar Up 489Z	17175957
Connealy Blackhawk 6198	18538178	Jindra Acclaim	17972810	Sitz Investment 660Z	17179119
Connealy Capitalist 028	16752262	Jindra Blackout	18996457	Sitz Lightning 659Z	17176063
Connealy Commonwealth	18230653	JVC Cavalry V3326	17784803	SITZ Logo 12964	17746620
Connealy Concord	18148348	K Bar D Joe Canada 18Y	17011364	Sitz Profile 1160	18385986
Connealy Confidence Plus	17585576	K C F Bennet Exponential	19507801	Sitz Rainmaker 11127	15734469
Connealy Conquest	17888696	K C F Bennett Homestead	16771888	Sitz Reinvested 636a	17467126
Connealy Consensus 7229	16447771	K C F Bennett Southside	16430862	Sitz Sensation 693A	17470735
Connealy Contractor	16448662	Koupal Advance 28	17314326	Sitz Top Game 561X	16559105
Connealy Cool 39L	17586776	Koupals B&B Extra 0011	16710494	Sitz Wisdom 481T	15636992
Connealy Countdown	17585522	Koupals B&B Identity	16710463	Spring Cove Crossbow	17924903
Connealy Courage 25L	17302304	Koupals B&B Titan 3013	17608631	Stevenson Rockmount RX933	16647203
Connealy Earnan 076E	16969555	LD Capitalist 316	17666102	Still in the Rough 201	17246314
Connealy Emerald	19257149	LD Emblazon 999	16665803	SydGen Black Pearl 2006	17236055
Connealy Glory 4127	17888624	McCONNELL ALTITUDE 3114	17877778	SydGen FATE 2800	17521423
Connealy Gold Rush 026E	16969554	Mead Magnitude	18543414	TC Total	14844711
Connealy Greeley	17302235	MGR Treasure	18156972	Tehama Bonanza E410	18624785
Connealy Guinness	17031279	Mill Bar Hickok 7242	17351674	Tehama Tahoe B767	17817177
Connealy Impression	15543702	Mogck Bullseye	17102085	Tex Playbook 5437	18414912
Connealy Intrinsic	17888848	Mohnen South Dakota 402	17250190	V A R Confirmed CKR 1269	17001883
Connealy Long Range	18870277	Musgrave 316 Exclusive	18130471	V A R Empire 3037	17455111
Connealy Mainstay	18839231	Musgrave Big Sky	17614813	V A R Generation 2100	17171587
Connealy Maternal Made	18869400	O C C Unmistakable 946U	16294218	V A R Heritage 5038	18066052
Connealy Power Surge 3115	17585502	PA Full Power 1208	16981588	V A R Index 3282	17513381
Connealy Shrek 4242	16204949	Pine View Rock Solid P234	17880784	V A R Legend 5019	18066037
Connealy Spur	17304082	Poss Element 215	17383988	V A R Ranger 3008	17455083
Connealy Uptown 098E	16896296	Prairie Pride Next Step 2036	17367599	Vermilion Sirlain	16957718
Connealy Western Cut	17304232	Quaker Hill Rampage	16925771	Vin-Mar O'Reilly Factor	16400429
CTS Remedy 1T01	17331233	Raven Powerball 53	17632447	Vintage Legacy 4409	17906918
Dameron C-5 American Classic	17471320	Rito 12E7 of 5F56 Rito 5M2	17131890	Vision Unanimous 1418	16992096
DB Iconic G95	19611994	Rito 9Q20 of Rita 5F56 GHM	16408445	Werner Flat Top 4136	18094501
Deer Valley Growth Fund	18827828	S A V Angus Valley 1867	17016630	WR Journey-1X74	16924332
Deer Valley Old Hickory	17873660	S A V Hesston 2217	17318946	Yon Full Force c398	18150495
Deer Valley Wall Street	18827829	S A V Iron Mountain 8066	16115617		
Diablo Deluxe 1104	18741751	S A V Momentum 9274	16396574		
EF Commando 1366	17082311	S A V Platinum 0010	16687592		