

THE DATA DIVE

by Esther Tarpoff, director of performance programs

Structured Sire Evaluation

Data in Structured Sire Evaluation contributes to more accurate selection tools.

Reestablished in the fall of 2015, the American Angus Association-sponsored Structured Sire Evaluation aims to collect carcass data on widely used bulls in the Angus population with 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. As of fall 2021, members can nominate test sires to be included in the program.

Since 2015, the program has enrolled multiple commercial herds

that combined have bred more than 11,000 females. Targeted commercial participants choose which bulls to use in their operation, breed the females and then are provided compensation once carcass data records are returned. These herds

typically range from 250 to 1,000 females and have experience using artificial insemination (AI).

This allows each sire used to have 15-20 progeny in a contemporary group to gather sufficient

data. More than 170 sires have added progeny carcass records through this program.

The data from this program enters

the weekly evaluation in the same way as every other data point, subject to contemporary group guidelines and in support of 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.


The amount of change in accuracy for carcass expected progeny difference (EPDs) after carcass records are added is dependent on the level of accuracy prior to adding the records. Reference sires are sires that have high accuracy because of both phenotypes and genomics, while test sires are those with a lower accuracy.

Reference sires are sires that have high accuracy because of both phenotypes and genomics, while test sires are those with a lower accuracy.



For example, reference sires already at a high level of accuracy, even when 12 carcass records are added, may not have much change. When carcass records are added on test sires with a lower accuracy, there is more change in the accuracy of the EPDs.

As we look at the data from records collected this summer, there are fewer records than planned for many of the sires (Table 1). Spring 2022 accuracies were prior to the addition of the carcass data; fall 2022 accuracies are after adding the carcass data. The winter of 2021 when these calves were born was harsh, and like many others, calves were lost during the extreme weather, resulting in fewer records for these sires.

However, even with fewer records, test sires averaged 12 progeny and improved accuracies by 0.1 on average. Continuing to add phenotypes to the database for all traits will provide you and your customers with the most accurate selection tools. 

Esther D Tarpoff

etarpoff@angus.org

Editor's note: For more information, contact the Performance Programs Department.

Table 1: Sire accuracies

2022	Reg. No.	Name	Carcass Prog.	CW Acc	Marb Acc	RE Acc	Fat Acc
Spring 2022	16198796	EF Complement 8088	99	0.8	0.78	0.74	0.78
Fall 2022			103	0.8	0.78	0.75	0.78
Spring 2022	16295688	G A R Prophet	302	0.88	0.87	0.85	0.87
Fall 2022			304	0.88	0.87	0.85	0.87
Spring 2022	16430795	K C F Bennett Absolute	116	0.82	0.8	0.77	0.8
Fall 2022			125	0.82	0.81	0.77	0.81
Spring 2022	17328461	G A R Sure Fire	287	0.87	0.86	0.83	0.86
Fall 2022			299	0.87	0.86	0.84	0.86
Spring 2022	17817177	Tehama Tahoe B767	30	0.68	0.65	0.62	0.65
Fall 2022			68	0.76	0.73	0.7	0.73
Spring 2022	17877778	McConnell Altitude 3114	0	0.51	0.45	0.46	0.45
Fall 2022			2	0.53	0.47	0.47	0.47
Spring 2022	17888624	Connealy Glory 4127	1	0.54	0.49	0.49	0.49
Fall 2022			13	0.62	0.58	0.55	0.58
Spring 2022	17924903	Spring Cove Crossbow	0	0.52	0.46	0.47	0.47
Fall 2022			23	0.65	0.62	0.59	0.61
Spring 2022	17933463	Ellingson Roughrider 4202	0	0.52	0.46	0.47	0.47
Fall 2022			7	0.58	0.53	0.51	0.53
Spring 2022	18066052	V A R Heritage 5038	0	0.52	0.46	0.47	0.46
Fall 2022			7	0.57	0.52	0.51	0.51
Spring 2022	18150495	Yon Full Force C398	7	0.59	0.55	0.53	0.54
Fall 2022			14	0.62	0.59	0.56	0.58
Spring 2022	18229488	Baldrige Compass C041	17	0.64	0.6	0.57	0.6
Fall 2022			24	0.66	0.63	0.6	0.62
Spring 2022	18230653	Connealy Commonwealth	0	0.52	0.46	0.47	0.46
Fall 2022			14	0.61	0.57	0.64	0.55
Spring 2022	18385986	Sitz Profile 1160	41	0.69	0.65	0.6	0.6
Fall 2022			48	0.71	0.67	0.62	0.62
Spring 2022	18414912	TEX Playbook 5437	2	0.56	0.5	0.51	0.51
Fall 2022			11	0.62	0.57	0.55	0.58
Spring 2022	18538178	Connealy Blackhawk 6198	1	0.53	0.47	0.48	0.48
Fall 2022			13	0.61	0.57	0.55	0.57
Spring 2022	18543414	Mead Magnitude	4	0.56	0.51	0.5	0.51
Fall 2022			18	0.64	0.6	0.57	0.6
Spring 2022	18577290	FF Rito Righteous 6R41	4	0.56	0.51	0.51	0.51
Fall 2022			14	0.62	0.58	0.56	0.57
Spring 2022	18624785	Tehama Bonanza E410	13	0.61	0.57	0.54	0.56
Fall 2022			35	0.66	0.62	0.59	0.61
Spring 2022	18827828	Deer Valley Growth Fund	5	0.59	0.54	0.53	0.54
Fall 2022			20	0.66	0.62	0.59	0.63
Spring 2022	18839231	Connealy Mainstay	2	0.53	0.48	0.48	0.48
Fall 2022			7	0.58	0.53	0.52	0.53
Spring 2022	18870277	Connealy Long Range	0	0.49	0.43	0.44	0.44
Fall 2022			2	0.51	0.46	0.46	0.46
Spring 2022	19257149	Connealy Emerald	1	0.54	0.48	0.49	0.49
Fall 2022			9	0.6	0.55	0.53	0.55