

# The Florida Bull Test 2012–2013<sup>1</sup>

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## Test Procedures

The 2012–2013 Florida Bull Test consisted of a 112-day performance test and a breeding soundness evaluation of each bull that qualified for the auction. Upon arrival, bulls were sorted into contemporary groups based on consignor and breed (8–12 bulls per pen) and housed in the UF/IFAS North Florida Research and Education Center Feed Efficiency Facility where they received free-choice access to feed and water with a target rate of gain of 3.5 lb/day. The diet consisted of 42% pelleted soy hulls, 41% pelleted corn gluten feed, 12% loose peanut hulls, and 5% molasses liquid supplement containing vitamins, minerals, and ionophore (monensin) on a dry matter (DM) basis. The diet was formulated to contain 16.3% crude protein (CP) and 0.51 Mcal net energy of gain (NEg) per lb of diet DM.

After a three-week adaptation period, bulls were weighed on two consecutive days to obtain an objective average unshrunk starting weight, which became the on-test starting weight. Bulls were inspected daily for any arising health problems. An intermediate unshrunk weight was obtained 28 days after starting the test, followed by unshrunk weights on two consecutive days to obtain an accurate 56-day weight and complete the feed efficiency portion of the test. On day 56 of the test, bulls were moved from the feed efficiency facility to 3.25 acre pastures where they stayed for the remainder of the test. On the pasture, bulls remained in the same groups assigned in the feed efficiency facility pens. Bulls also continued receiving free-choice access to the same diet fed in the facility, with the addition of free-choice

bermudagrass hay. An additional intermediate unshrunk weight was assessed on day 84 of the test. At the conclusion of the 112-day feeding period, bulls were weighed again on two consecutive days to determine the final test weight. Animal performance, specifically average daily gain (ADG), was calculated using only the official starting and finishing test weights. Throughout the test, bulls were observed and screened for structural soundness and disposition. Bulls deemed structurally unsound or those having poor disposition did not qualify for the sale.

## Assessment of Feed Efficiency

After bulls arrived at the feed efficiency facility, they were fitted with electronic identification (EID) tags to monitor daily feed intake using the GrowSafe system, and ADG was calculated for the 56-day feed efficiency portion of the test. Residual feed intake (RFI) was the measure of feed efficiency used to rank the bulls in the test, and it was calculated as the difference between actual feed intake and expected feed intake. Daily feed intake was measured on each individual bull, and RFI was calculated as described previously by Maddock and Lamb (2009), available at <http://edis.ifas.ufl.edu/an217>.

## Test Rules and Regulations General Policies and Procedures

1. Bulls must have been born between August 15 and December 31, 2011.

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2. All consignors' herds must have been enrolled in their respective breed association performance records program. State beef cattle improvement association programs are acceptable for herds whose breed association does not have a performance records program.
3. Calves must have completed the weaning phase of the performance records program with their contemporary group, and this information must be presented at delivery. If data was not returned from the association, a copy of the weight data with the number of contemporaries must be provided.
4. All calves must be purebred or full blood and registered with their breed association. Composite bulls must have both sire and dam registered in an acknowledged beef breed association. In order to participate, each bull must have a registration certificate and pedigree when delivered to the test station.
5. A bull must weigh 2.5 lb/day of age when delivered to the test station. A shrink of 1% per hour of transit time is allowed.
6. Bulls must be weaned a minimum of three weeks prior to delivery.
7. Bulls must be structurally sound and show evidence of good growth potential.
8. Bulls' actual birth weight is required.
9. Consignments over 10 head will be accepted on a space-available basis.
10. Priority for space will be given to Florida residents. Bulls from other states will be accepted on a space-available basis.
11. Sire-group testing of bulls is more desirable than individual testing, because it provides more information to both breeders and prospective buyers. Therefore, they will receive preference if space becomes limited.
12. Preference will be given to breeders/consignors who are members of the Florida Cattlemen's Association.
13. Embryo transfer bulls must be designated as such, and the breed of the recipient cow designated.
14. Bulls must have legible permanent identification (tattoo or brand) corresponding to the registration paper at delivery.

15. Horned bulls will be grouped separately. It is recommended that they be dehorned and healed by delivery.

## Health Requirements

1. All bulls must be in good health and accompanied by a health certificate showing they are from a Brucellosis-free accredited or certified free herd with the herd number on the certificate, or they must have a negative test for Brucellosis not more than 30 days before delivery. Bulls originating from a state that is not TB-free must also be accompanied by a health certificate showing they are a certified TB-free herd or have a negative test for TB not more than 30 days before delivery.
2. Bulls must have been vaccinated twice (minimum 21 days between vaccinations) for 5-way leptospirosis, 7- or 8-way clostridium with *Haemophilus somnus*, and IBR/PI3/BVD/BRSV, with the last vaccination at least three weeks or more prior to delivery. Vaccination for *Pasteurella* is optional. Intranasal IBR/PI3 is recommended.
3. Consignors are responsible for the cost of treatment if their bull requires examination by a veterinarian.
4. Consignors should contact their local or state veterinarian for interstate permit and health requirements. An official certificate of veterinary inspection (health paper) is required for each bull.

## Test Results

The Florida Bull Test focuses on testing bulls on a diet that includes a grain-based supplement and *ad libitum* access to forage. Overall ranking for the test is based on ADG and the weight per day of age (WDA), generating an index ratio. The top performing bull and top performing Charolais bull was owned by Rogers Bar HR of Collins, MS, who indexed 136 with an ADG of 5.42 and WDA of 3.60 lb/day. The top SimAngus bull, Jenkins Bold Y178 owned by Jenkins Cattle Co. from Moultrie, GA, was ranked 2<sup>nd</sup> overall and indexed 123 with an ADG of 4.71 and WDA of 3.48 lb/day.

The top Angus bull, Hollywood 11 owned by Pintlala Cattle Co. from Hope Hull, AL, was ranked 5<sup>th</sup> overall and indexed 120 with an ADG of 4.57 and WDA of 3.39 lb/day. The top Simmental bull, BTC Making the Grade Y155 owned by Broken T Cattle Co. from Grand Ridge, FL, was ranked 11<sup>th</sup> overall and indexed 112 with an ADG of 4.13 and WDA of 3.35 lb/day. The only Brangus consignment, SS Brinks HL 797Y owned by Seldom Seen Ranch from Robertsedale, AL, was ranked 42<sup>nd</sup> overall and indexed 101 with an ADG of 3.72 and WDA of 2.98 lb/day.

The top Braford bull, RMR 0162 Next Step 2084 owned by Running M Ranch of Tallahassee, FL, was ranked 67<sup>th</sup> overall and indexed 92 with an ADG of 3.30 and WDA of 2.84 lb/day. The top Brahman bull, FF Mr Manso 201 owned by Ford Farms of Malone, FL, was ranked 71<sup>st</sup> overall and indexed 91 with an ADG of 3.66 and WDA of 2.41 lb/day. The top Hereford bull, JTN Revolution 0620 Y15 owned by J Taylor Neighbors of Americus, GA, was ranked 76<sup>th</sup> overall and indexed 89 with an ADG of 2.89 and WDA of 3.03 lb/day. Table 1 summarizes feed efficiency data; Table 2 summarizes individual feed intake and feed efficiency; and Table 3 summarizes individual animal performance.

## Sale Summary

The Florida Bull Test Sale was held on January 19, 2013. Of the 93 bulls tested, 77 qualified for the sale, but only 61 were on offer at the UF/IFAS North Florida Research and Education Center in Marianna, FL. The sale grossed \$197,400 with an average of \$3,273.87 per lot. Angus bulls averaged \$3,014 on 25 lots. A single Brahman bull was sold for \$3,600, and a single Brangus bull was sold for \$5,300. Charolais bulls averaged \$3,000 on two lots, SimAngus bulls averaged \$3,254 on 23 lots, and Simmental bulls averaged \$3,589 on nine lots. The high-selling bull was lot 40, Phillips Pen 1P3, selling for \$5,350. He was purchased by Mike Henry of Hope Hull, AL. The consignor was the John B Ranch of R&A Angus of Hope Hull, AL.

## References

Maddock, T. D., and G. C. Lamb. 2009. *The Economic Impact of Feed Efficiency in Beef Cattle*. AN217. Gainesville: University of Florida Institute of Food and Agricultural Sciences. <http://edis.ifas.ufl.edu/an217>.

Table 1. Summary of feed efficiency data for bulls in the 2012-2013 Florida Bull Test

Item	Daily Intake, lb of DM/day	RFI, lb of DM/day	Feed:Gain
<b>Average</b>	21.89	0.00	6.91
<b>Range</b>	14.44–31.49	-4.11–7.05	4.38–12.96

Table 2. 2012-2013 Florida Bull Test individual feed efficiency and feed intake data

Test ID	Breed	28-day Daily Feed Intake, lb/d	Feed:Gain	Gain:Feed	56-day RFI <sup>a</sup> , lb/d	56-day Feed Efficiency Rank
1032	Simmental	18.95	5.50	0.18	-4.11	1
1026	Angus	14.46	4.38	0.23	-3.80	2
1025	SimAngus	16.94	7.13	0.14	-3.47	3
996	Charolais	20.46	5.06	0.20	-3.32	4
1063	Angus	16.24	7.71	0.13	-3.13	5
1029	SimAngus	17.54	5.61	0.18	-2.90	6
1028	SimAngus	21.71	5.48	0.18	-2.88	7
1039	Simmental	19.13	5.10	0.20	-2.75	8
1062	SimAngus	22.19	6.54	0.15	-2.69	9
995	Charolais	23.55	5.33	0.19	-2.60	10
1012	Hereford	16.92	9.34	0.11	-2.49	11
1034	SimAngus	18.63	5.68	0.18	-2.30	12
985	Simmental	20.35	5.57	0.18	-2.18	13
1050	Angus	20.65	7.23	0.14	-2.18	14
1005	Simmental	21.21	6.15	0.16	-2.18	15
993	Charolais	26.50	5.18	0.19	-2.10	16
1006	SimAngus	22.53	5.19	0.19	-1.88	17
1000	Angus	14.49	5.75	0.17	-1.80	18
1058	SimAngus	20.13	7.14	0.14	-1.78	19
1004	Simmental	16.76	6.26	0.16	-1.77	20
1065	Angus	18.53	6.87	0.15	-1.76	21
1008	SimAngus	22.56	6.00	0.17	-1.71	22
1016	Angus	20.19	9.04	0.11	-1.62	23
1035	SimAngus	21.93	5.82	0.17	-1.58	24
1047	Angus	24.20	5.75	0.17	-1.50	25
1030	SimAngus	23.61	7.05	0.14	-1.36	26
984	SimAngus	21.82	6.43	0.16	-1.22	27
1024	Simmental	23.39	6.34	0.16	-1.19	28
987	Braford	14.96	5.82	0.17	-1.17	29
1048	Angus	23.62	7.67	0.13	-1.01	30
1061	Angus	23.78	7.50	0.13	-0.92	31
1020	SimAngus	23.84	7.85	0.13	-0.91	32
1071	SimAngus	21.00	5.65	0.18	-0.83	33
1007	Simmental	20.24	6.85	0.15	-0.69	34
1043	Angus	18.20	7.08	0.14	-0.66	35
1060	Angus	22.40	6.24	0.16	-0.65	36
1044	Angus	19.18	8.39	0.12	-0.65	37
1059	Angus	19.92	7.67	0.13	-0.58	38
1003	Angus	18.55	6.30	0.16	-0.53	39

Test ID	Breed	28-day Daily Feed Intake, lb/d	Feed:Gain	Gain:Feed	56-day RFI <sup>a</sup> , lb/d	56-day Feed Efficiency Rank
1002	Angus	18.18	5.56	0.18	-0.49	40
1042	Angus	22.75	7.47	0.13	-0.33	41
1022	Simmental	22.40	6.09	0.16	-0.31	42
986	Braford	19.17	5.90	0.17	-0.26	43
990	Angus	17.64	5.31	0.19	-0.24	44
1041	SimAngus	23.73	8.18	0.12	-0.19	45
1073	Angus	22.99	5.31	0.19	-0.02	46
1033	SimAngus	21.18	7.04	0.14	0.00	47
1010	Angus	20.30	8.24	0.12	0.00	48
1038	Simmental	16.72	7.55	0.13	0.02	49
1049	Angus	20.94	7.26	0.14	0.05	50
1076	Brahman	21.79	5.06	0.20	0.11	51
1001	Angus	20.24	7.43	0.13	0.13	52
1040	SimAngus	24.11	5.59	0.18	0.29	53
1036	SimAngus	21.01	7.84	0.13	0.34	54
1072	Angus	25.71	5.61	0.18	0.53	55
989	Angus	18.91	5.82	0.17	0.65	56
991	Angus	14.44	7.03	0.14	0.71	57
997	Charolais	21.77	7.13	0.14	0.81	58
1057	Brangus	19.72	5.94	0.17	0.82	59
1070	Angus	21.79	6.20	0.16	0.88	60
992	Charolais	25.68	5.70	0.18	0.94	61
1066	Angus	21.58	5.92	0.17	1.04	62
1075	Brahman	21.06	5.43	0.18	1.06	63
999	Charolais	23.79	6.56	0.15	1.09	64
994	Charolais	27.08	6.28	0.16	1.29	65
1017	Angus	27.82	7.00	0.14	1.42	66
1027	SimAngus	25.65	6.79	0.15	1.42	67
1014	Angus	24.92	10.34	0.10	1.55	68
998	Charolais	25.92	6.73	0.15	1.64	69
1054	SimAngus	26.13	7.14	0.14	1.65	70
1031	SimAngus	26.84	7.23	0.14	1.65	71
1055	SimAngus	27.84	6.69	0.15	1.71	72
1021	Simmental	22.93	6.57	0.15	1.73	73
1069	Angus	23.89	8.49	0.12	1.79	74
988	Braford	19.85	6.11	0.16	1.79	75
1013	Hereford	20.41	12.49	0.08	1.81	76
1053	SimAngus	23.33	7.32	0.14	1.93	77
1011	Angus	21.18	8.92	0.11	1.94	78
1023	Simmental	23.72	12.96	0.08	1.97	79
1018	SimAngus	18.35	8.29	0.12	2.07	80
1009	SimAngus	21.91	6.07	0.16	2.11	81
1052	Angus	24.80	8.49	0.12	2.18	82
1045	Angus	25.09	7.68	0.13	2.24	83
1068	Angus	23.41	10.37	0.10	2.41	84

Test ID	Breed	28-day Daily Feed Intake, lb/d	Feed:Gain	Gain:Feed	56-day RFI <sup>a</sup> , lb/d	56-day Feed Efficiency Rank
1074	SimAngus	26.42	6.42	0.16	2.69	85
1037	SimAngus	22.93	6.42	0.16	2.75	86
1046	Angus	27.89	6.67	0.15	2.78	87
1015	Angus	26.79	8.15	0.12	2.95	88
1019	SimAngus	22.33	8.51	0.12	3.04	89
1056	SimAngus	29.80	7.10	0.14	3.22	90
1051	Angus	31.49	8.71	0.11	4.46	91
1067	Angus	26.35	9.16	0.11	7.05	92

<sup>a</sup>RFI = residual feed intake

Table 3. 2012-2013 Florida Bull Test individual bull performance in order of final test index

Test ID	Breed	Start Weight, lb	28-day Weight, lb	56-day Weight, lb	84-day Weight, lb	Final Weight, lb	Final Test ADG <sup>a</sup> , lb/d	Final Test WDA <sup>b</sup> , lb/d	Final Test Index <sup>c</sup> , lb/d	Final Index Ratio	Frame Score
993	Charolais	991	1120	1278	1475	1598	5.42	3.60	9.01	136	8.0
1056	SimAngus	1012.5	1125	1248	1425	1540	4.71	3.48	8.19	123	7.1
994	Charolais	946	1090	1188	1345	1473	4.70	3.42	8.13	122	7.2
1028	SimAngus	928	1025	1150	1270	1393	4.15	3.87	8.02	121	6.9
1072	Angus	866	1005	1123	1270	1378	4.57	3.39	7.96	120	5.0
995	Charolais	950	1045	1198	1315	1448	4.44	3.35	7.79	117	6.8
999	Charolais	867	980	1070	1260	1378	4.56	3.23	7.78	117	7.3
1046	Angus	926	1045	1160	1295	1420	4.41	3.28	7.69	116	6.1
1008	SimAngus	942	1055	1153	1340	1443	4.47	3.18	7.65	115	5.3
1054	SimAngus	970	1070	1175	1345	1425	4.06	3.50	7.56	114	7.5
985	Simmental	853	950	1058	1245	1315	4.13	3.35	7.48	112	5.3
1047	Angus	957	1075	1193	1355	1425	4.18	3.26	7.44	112	6.2
984	SimAngus	925	1030	1115	1245	1358	3.86	3.54	7.41	111	6.3
1006	SimAngus	857	972	1100	1235	1323	4.16	3.19	7.34	110	6.4
1055	SimAngus	992	1110	1225	1365	1460	4.18	3.16	7.34	110	5.5
1030	SimAngus	1050	1125	1238	1350	1473	3.77	3.50	7.27	109	7.3
998	Charolais	927	1025	1143	1340	1378	4.02	3.23	7.26	109	8.0
1005	Simmental	937	1060	1130	1305	1408	4.20	3.03	7.23	109	6.0
1066	Angus	737	830	941	1135	1225	4.36	2.87	7.23	109	4.6
1062	SimAngus	1037.5	1145	1228	1395	1493	4.06	3.16	7.22	109	4.8
1040	SimAngus	826	942	1068	1225	1273	3.99	3.24	7.22	109	5.8
992	Charolais	850	992	1103	1205	1313	4.13	3.09	7.22	109	7.2
1070	Angus	779	864	976	1140	1273	4.41	2.78	7.19	108	5.1
1024	Simmental	971	1045	1178	1360	1428	4.08	3.07	7.15	107	5.4
996	Charolais	866	964	1093	1215	1318	4.03	3.08	7.11	107	7.1
1009	SimAngus	700	798	902	1050	1130	3.84	3.25	7.09	107	5.8
1027	SimAngus	936	1040	1148	1300	1355	3.74	3.34	7.08	106	6.1
1071	SimAngus	802	916	1010	1160	1255	4.04	2.97	7.01	105	5.3
1041	SimAngus	1057.5	1150	1220	1400	1443	3.44	3.54	6.98	105	6.2
997	Charolais	854	962	1025	1180	1295	3.94	3.02	6.96	105	7.4
1019	SimAngus	822	902	969	1130	1213	3.49	3.46	6.95	105	6.3
1074	SimAngus	852	972	1083	1220	1288	3.89	3.03	6.92	104	5.3
1039	Simmental	798	890	1008	1180	1248	4.01	2.87	6.88	103	5.9
1007	Simmental	867	960	1033	1145	1308	3.93	2.94	6.87	103	6.0
1053	SimAngus	859	934	1038	1195	1293	3.87	2.96	6.83	103	5.4
1067	Angus	784	876	945	1120	1235	4.03	2.78	6.81	102	4.5
1031	SimAngus	1004.5	1115	1213	1310	1388	3.42	3.38	6.80	102	7.1
1015	Angus	991	1100	1175	1355	1408	3.72	3.06	6.78	102	5.7
1022	Simmental	859	962	1065	1180	1238	3.38	3.37	6.75	102	6.8
1061	Angus	1062.5	1165	1240	1390	1468	3.62	3.10	6.71	101	6.2
1049	Angus	876	948	1038	1175	1268	3.50	3.21	6.70	101	4.7
1057	Brangus	693	770	879	1010	1110	3.72	2.98	6.70	101	6.6
1048	Angus	1072.5	1180	1245	1405	1470	3.55	3.13	6.68	100	5.7



Test ID	Breed	Start Weight, lb	28-day Weight, lb	56-day Weight, lb	84-day Weight, lb	Final Weight, lb	Final Test ADG <sup>a</sup> , lb/d	Final Test WDA <sup>b</sup> , lb/d	Final Test Index <sup>c</sup> , lb/d	Final Index Ratio	Frame Score
1069	Angus	960	1000	1118	1240	1350	3.48	3.19	6.67	100	6.2
1052	Angus	974	1060	1138	1295	1398	3.78	2.88	6.66	100	4.7
990	Angus	635	724	821	966	1085	4.02	2.61	6.63	100	4.9
1051	Angus	1135	1230	1338	1455	1523	3.46	3.16	6.62	100	5.8
1014	Angus	1102.5	1160	1238	1400	1478	3.35	3.26	6.61	99	7.6
1017	Angus	1037.5	1155	1260	1360	1428	3.48	3.12	6.61	99	5.6
1032	Simmental	917	1025	1110	1235	1320	3.60	3.00	6.60	99	5.8
1029	SimAngus	811	884	986	1115	1193	3.41	3.07	6.47	97	5.9
1073	Angus	775	888	1018	1070	1158	3.42	3.05	6.47	97	5.1
989	Angus	666	750	848	1005	1078	3.67	2.76	6.44	97	5.3
1035	SimAngus	894	994	1105	1185	1280	3.45	2.95	6.40	96	4.9
1011	Angus	858	936	991	1160	1220	3.23	3.13	6.36	96	5.2
1037	SimAngus	727	796	927	1070	1113	3.44	2.91	6.35	96	4.9
1060	Angus	894	996	1095	1205	1298	3.60	2.72	6.32	95	5.0
1065	Angus	869	930	1020	1180	1255	3.45	2.84	6.29	95	5.4
1025	SimAngus	927	996	1060	1230	1313	3.44	2.83	6.27	94	4.9
1001	Angus	855	942	1008	1150	1235	3.39	2.87	6.26	94	5.1
1050	Angus	997.5	1080	1158	1265	1358	3.21	3.00	6.21	93	5.0
1043	Angus	805	872	949	1110	1195	3.48	2.69	6.17	93	5.0
1023	Simmental	1095	1165	1198	1355	1438	3.06	3.10	6.16	93	5.9
1000	Angus	666	732	807	960	1065	3.56	2.60	6.16	93	5.0
1021	Simmental	799	884	995	1130	1148	3.11	3.04	6.15	92	5.7
988	Braford	655	728	837	934	1025	3.30	2.84	6.14	92	5.0
986	Braford	733	806	915	1010	1065	2.96	3.14	6.11	92	6.2
1016	Angus	1035	1090	1160	1335	1383	3.10	2.99	6.10	92	5.8
1010	Angus	907	974	1045	1160	1250	3.06	3.03	6.09	92	6.0
1018	SimAngus	712	766	836	968	1053	3.04	3.03	6.07	91	5.6
1075	Brahman	670	782	887	972	1080	3.66	2.41	6.07	91	5.8
1033	SimAngus	874	946	1043	1175	1243	3.29	2.74	6.03	91	4.4
1045	Angus	932	1020	1115	1225	1295	3.24	2.77	6.01	90	5.7
1026	Angus	658	746	843	974	1035	3.37	2.63	6.00	90	4.6
1034	SimAngus	817	896	1001	1100	1185	3.29	2.71	6.00	90	5.9
1012	Hereford	956	992	1058	1190	1280	2.89	3.03	5.92	89	5.3
1076	Brahman	702	832	943	1015	1088	3.44	2.44	5.89	89	5.6
1058	SimAngus	947	1015	1105	1205	1278	2.95	2.93	5.88	88	5.2
1020	SimAngus	1087.5	1145	1258	1410	1405	2.83	3.00	5.84	88	4.9
1002	Angus	687	782	870	990	1060	3.33	2.50	5.83	88	5.2
1059	Angus	897	968	1043	1195	1248	3.13	2.69	5.82	87	4.9
1036	SimAngus	895	944	1045	1185	1243	3.10	2.70	5.80	87	4.9
1003	Angus	760	854	925	1035	1115	3.17	2.62	5.79	87	5.2
987	Braford	650	706	794	894	974	2.89	2.87	5.77	87	5.5
1068	Angus	981	1025	1108	1225	1305	2.89	2.86	5.75	87	5.7
1004	Simmental	770	838	920	998	1103	2.97	2.69	5.66	85	5.6
1042	Angus	982	1080	1153	1290	1305	2.88	2.76	5.64	85	4.6



Test ID	Breed	Start Weight, lb	28-day Weight, lb	56-day Weight, lb	84-day Weight, lb	Final Weight, lb	Final Test ADG <sup>a</sup> , lb/d	Final Test WDA <sup>b</sup> , lb/d	Final Test Index <sup>c</sup> , lb/d	Final Index Ratio	Frame Score
1044	Angus	907	948	1035	1180	1238	2.95	2.65	5.60	84	4.6
1013	Hereford	936	984	1028	1115	1235	2.67	2.91	5.58	84	6.1
1038	Simmental	736	774	860	1005	1035	2.67	2.89	5.56	84	4.7
991	Angus	596	662	711	838	891	2.63	2.41	5.04	76	3.9
1063 <sup>d</sup>	Angus	907	994	1025	.	.	.	.	.	.	.
1064 <sup>d</sup>	Angus	815	896	.	.	.	.	.	.	.	.

<sup>a</sup>Final Test ADG = average daily gain during the 112-day test

<sup>b</sup>Final Test WDA = weight per day of age for each bull from birth until the last day of the test

<sup>c</sup>Final Test Index = the sum of Final Test ADG and Final Test WDA

<sup>d</sup>Bulls were removed from the test prior to completion.