

# Dissecting a Performance Registration Certificate

Sale season soon will be upon us in a large portion of the country. Breeding decisions you make in spring 2005 most likely will produce beef that will be consumed two to three years from now, and those decisions can affect the maternal

makeup of your program for many years to come.

The decision of which bull(s) to purchase may not seem as simple as it was in the past. Seedstock producers collect data and present information — performance data,

expected progeny differences (EPDs), \$Value indexes and measurements — to help customers make those decisions.

There is a world of information out there for a potential buyer to evaluate. The American Angus

Association, through its Angus Herd Improvement Records (AHIR) program, currently provides EPDs on 19 traits, which appear on Angus pedigrees grouped in suites of production, maternal, carcass and ultrasound traits. \$Values are tools offered to help commercial cattlemen simplify bull selection. Combine EPDs and \$Values with performance measurements, ratios, and possibly the production history of some ancestors, and a buyer may have 40-50 different pieces of information to consider.

While it may seem a bit overwhelming, it's a good thing!

Having the opportunity to analyze and to select from these various pieces of information allows producers to improve their programs with the Angus seedstock they select. The key is to understand the data — what it means and how to use it. The following discussion dissects an Angus performance registration certificate (see Fig. 1) and considers the information that is available on it.

## What does it mean?

A performance registration certificate contains the most up-to-date performance data available on a registered animal and its close relatives. At a glance, the certificate seems rather complicated; however, closer examination provides valuable information. Let's dissect the certificate and see what all the numbers mean.

**1** The top portion of the certificate deals with pertinent information such as name, registration number, sex, tattoo, breeder and first owner. The breeder is the Association member who owned the dam at the time the animal was conceived; the first owner is the person who was the dam's owner of record when the calf was born.

**2** Next appear EPDs relating to production traits for the individual animal (Ind), its sire and its dam. EPDs are numeric expressions of the differences in genetic merit of animals.

• Calving ease direct (CED) — expressed as a percentage of unassisted births;

Fig. 1: An example of a performance registration certificate

**PERFORMANCE REGISTRATION CERTIFICATE**  
**American Angus Association**  
 Blood-typed  
 DNA-marker-typed

REGISTRY NUMBER  
#10226429  
 MONTH/DAY/YEAR  
3/05/1982  
 MEMBER CODE  
A-258572  
 MEMBER CODE  
A-258572

**1** *Certifier's Note*  
**SCOTCH CAP**  
 BREEDER: Hoff, Douglas H Bison SD  
 FIRST OWNER: Hoff, Douglas H Bison SD

**3** **4**

**2**

IND	Production EPD					Maternal EPD					Carcass EPD					Ultrasound EPD					
	CED	BW	YW	YS	YH	SC	CM	MM	MM	MM	LW	MM	IB	NEP	CE	MM	EP	RF	MM	CE	CE
1	+6	+5.1	+35	+69	+8	-.17	+5	+9	+66	+1.0	+18	+44	+47	+.031	+.02	110	+.74	+.94	-.0094	+.40	11.1
2	90	.97	.97	.97	.94	-.02	92	.97	.90	.90	.81	.83	.80	.79	.79	472	.78	.79	.79	.79	109
3	-6	12.0	124	145	1.8	1.08	+5	15	162	11.1	10	.09	-.13	1.047	.62	55	-.03	-.08	-.002	-.37	9
4	.91	.98	.98	.97	.94	-.04	.93	.97	.89	.89	.89	.73	.67	.65	.66	132	-.44	-.44	-.44	-.44	12
5	110	+1.7	+7.7	+5.7	+.7	-.20	2	+11	+77	+1.1	+41	+10.1	+7.3	14.001	1	+16	1.18	1.24	.007	1.42	11
6	.50	.46	.45	.44	.05	-.11	-.47	-.77	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05

**6**

CALV	EASE	WEAN	WEANING			YEAR WT	YEAR HI	YEAR SC	CALV	EASE	WEAN	WEAN	WEAN	WEAN	WEAN	WEAN	WEAN	WEAN	WEAN	WEAN	WEAN	
			WT	WT	WT																	
1	1	1	163	163	71	126																
2	149	149	1570	55	1061	30	331	230	1148	4410	7105	22873	70	70	70	70	70	70	70	70	70	
3	576	1.2	1357.7	102	1461.4	101	9508	101	2148	100	1003	99	4810	1.2	5725	99	170	106	178	101	181	105
4	702	1030	1201	71	744	28	241	57	911	5011	2048	31932	G	G	G	G	G	G	G	G	G	
5	1882	1.3	15155	100	17342	101	9605	102	2150	104	326	99	5011	1.2	7275	100	12	102	12	94	12	105
6	1	2	2	154	3	73	113	7	1	7	6	48	1	1	1	1	1	1	1	1	1	
7	1	1.0	7	112	7	110	8	113	7	1.0	1.2	101										

**8**

**9**

**10**

**11**

**12**

**13**

- Birth (BW), weaning (WW) and yearling weight (YW) — expressed in pounds;
- Yearling height (YH) — expressed in inches; and
- Scrotal circumference (SC) — expressed in centimeters.

Each EPD is accompanied by an accuracy value that indicates the degree of reliability for the individual's EPD. Accuracies range from 0 to 1.0 — the higher the accuracy, the more reliable the EPD. Accuracy values take into account the number of records included in the calculation of the EPD and the distribution of those records across contemporary groups.

As a general rule, accuracy values of .05 indicate the EPD is a pedigree estimate, calculated totally from information on the sire and dam or relatives. Larger accuracy values typically indicate the EPD is calculated from the individual record of the animal, plus pedigree information and any available progeny data.

In some instances an "I" will appear before the EPD, indicating that it is an interim EPD. Interim EPDs are calculations of genetic merit on cattle that have not been processed through the National Cattle Evaluation (NCE) or where there is insufficient information to generate an NCE EPD. Accuracy values also accompany interim EPDs.

③ The maternal suite of traits appears next. EPDs relating to production traits for the animal, its sire and its dam are shown.

- Calving ease maternal (CEM) — expressed as a percentage of unassisted births in calves out of first-calf daughters;
- Maternal milk (Milk) — expressed in pounds of weaning weight;
- Mature weight (MW) — expressed in pounds; and
- Mature height (MH) — expressed in inches.

### Carcass information

④ The carcass EPD section of the data block lists available EPDs for carcass traits for the individual, the sire and the dam. These carcass EPDs are generated from harvest data derived from sire-identified carcass records submitted through the AHIR program.

- Carcass weight (CW) — expressed in pounds;
- Marbling (Marb) — expressed in a percent of a USDA marbling score;
- Ribeye area (RE) — expressed in square inches;
- Fat thickness (Fat) — expressed in inches; and
- Percent retail product (%RP) — a predictor of salable retail product differences.
- Grp/Pg — number of contemporary groups and the number of progeny used in the analysis.

⑤ Ultrasound EPDs result from ultrasound scans processed through the National CUP Laboratory & Technology Center by ultrasound technicians who have been certified by the Ultrasound Guidelines Council.

Only scans from purebred yearling bulls and heifers are used. Ultrasound EPDs may differ in some instances from carcass EPDs. Attempts to compare

should be made only within each data set and not between data sets.

- Percent intramuscular fat in the ribeye muscle (%IMF) — expressed as a percent of a marbling score [4% IMF would relate to Small marbling (low-Choice)] in market animals;
- Ribeye area between the 12th and 13th ribs (RE) — expressed in square inches;

- External fat as a weighted average of the rib and rump fat measurements (Fat) — measured in inches;
- Percent retail product (%RP) — expressed in percentage (see earlier description).
- Grp/Pg — the number of contemporary groups and number of progeny.

*(Continued on page 30)*

## Dissecting a Registration Certificate *(from page 29)*

### Family history

**6** Below the EPD information is a table that contains performance data on the individual and on various relatives.

**A** The first line is the individual information on the animal. For example, this bull was calved unassisted (calving-

ease score of 1). He had a birth weight ratio of 121 (21% heavier than the average of the 163 calves in his group). His weaning weight ratio was 112 (compared to the same group of 163 calves). His yearling ratio was 126; however, only 71 of the 163 calves in his weaning group were kept in his

management group to yearling age.

**B** The production, maternal and ultrasound sections of Line B reflect the performance of the individual's progeny. In the calving-ease columns, only records from first-calf heifers are used. The maternal section deals with daughters of the bull and their respective records.

**C** The sections of Line C reflect records of the sire's progeny.

**D** Line D provides records of the dam's progeny.

**7** This is the date of the most current NCE from which the EPDs were calculated.

**8** The animal's three-generation pedigree is shown. Embryo transfer (ET) animals will show a plus sign (+) before the registration number. A pound sign (#) before the registration number indicates the animal is a Pathfinder. Listings of Pathfinders and the related requirements can be found each year in the April issue of the *Angus Journal*.

### \$Values

**9** \$Values provide multi-trait comparisons — a combination and a weighting of multiple traits formed into one value that can be used to rank animals. They allow producers to consider the expected difference in progeny in areas of weaning performance, feedlot performance, grid performance, and a combination of postweaning performance merit and the carcass value.

- Weaning Value (\$W), Feedlot Value (\$F), Grid Value (\$G) and Beef Value (\$B) — all expressed in dollars per head.

### Pertinent details

**10** This area lists the name of the recorded owner and service-sire information reported on transferred females.

**11** This section provides space to transfer the animal to a buyer.

**12** This block lists genetic defects or genetic code factors that, when applicable, will follow the registration number of any animal in the pedigree.

**13** At the bottom of the registration certificate appear the registration number of the animal, the date the registration certificate was issued and the file number of the office transaction.

### Get the paper

In this era of many black breeds of beef cattle, one of the best ways to reinforce the value of your Angus genetics is through a properly transferred registration certificate. Plus, having registered Angus bulls in your ownership with the American Angus Association allows you to participate in programs offered through the Commercial Programs Department. For more information visit [www.angus.org/comm/](http://www.angus.org/comm/) or call Jim Shirley, director of commercial programs, at (816) 383-5100.



**AMERICAN ANGUS ASSOCIATION**  
THE BUSINESS BREED

## APPLICATION FOR REGULAR MEMBERSHIP

American Angus Association, 3201 Frederick Avenue, Saint Joseph, Missouri 64506  
(816) 383-5100 • Fax: (816) 288-9703 • [www.angus.org](http://www.angus.org)

I (we) hereby make application to the Board of Directors of the AMERICAN ANGUS ASSOCIATION for Regular Membership and, in consideration of acceptance, agree to conform to and abide by the By-Laws, Rules and Regulations of the Association and Amendments or Modifications thereto which may, from time to time, be adopted. By signing this application for membership, applicant irrevocably waives any claim against and grants an absolute release to the American Angus Association, any member, employee or agent of the Association, for any act or omission in connection with the Association, including but not limited to, any enforcement of the rules and regulations presently in effect or hereafter adopted by the Association. It is requested that the Membership be entered as follows:

<b>Membership Name</b> _____	<b>Location of Herd</b> _____		
PLEASE PRINT (Limit Name to 74 Spaces)	(City)	(County)	(State)
<b>Mail Address</b> _____	_____	_____	_____
(P.O. Box, or Street)	(City)	(County)	(State) (Zip)
<b>E-Mail</b> _____	<b>Date of Birth (if under 21 years of age)</b> _____		
<b>Phone # Home</b> ( ) _____	<b>Signed</b> _____		
<b>Phone # Business</b> ( ) _____	<b>Date</b> _____		
<b>Fax #</b> ( ) _____			

<input type="checkbox"/> Fee of \$80.00 is enclosed and includes a one year subscription to <i>Angus Journal</i> <input type="checkbox"/> Certificates enclosed for correction <input type="checkbox"/> Enclosed is my membership fee of \$30.00. I understand this membership does not include subscription to the <i>Angus Journal</i> . Initial here _____
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**Corporations** — In case of a corporation, the corporate name shall be entered on the application, which is to be signed by a duly authorized officer, and below, on this side, at least two officers of the corporation shall sign their names.

**Partnerships** — In case of a firm or partnership, the name of the firm or partnership shall be entered on the application, which is to be signed by one of the partners, and below, on this side, all partners shall sign their names.

<b>President</b> _____	_____
<b>Vice Pres.</b> _____	_____
<b>Secretary</b> _____	_____
<b>Treasurer</b> _____	_____

### PLEASE READ THE FOLLOWING BEFORE FILLING IN APPLICATION; THEN DETACH

Regular membership may be applied for in the name of a person, a farm or ranch name; a partnership; or a corporation. Membership fees are payable at the time the application is submitted.

Your regular membership is good for one year. Thereafter, annual dues are required for all regular memberships.

Application should show the name in which the membership is to be entered. If animal registrations are to be applied for in an individual's name the membership should be in the name of the individual; if by a partnership the membership should be in the exact name of the partnership; if by a corporation the membership should be in the exact corporate name. All partners in a partnership, and at least two officers of a corporation must sign their names on the application.

The length of the membership name and location must not exceed 40 spaces, for example:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40  
J o n n e s & S m i t h L i t t l e C o R o c k R i v e r I A

WHEN SUBMITTING THE APPLICATION PLEASE ENCLOSE THE REGISTRATION CERTIFICATES OF THE ANGUS CATTLE YOU NOW OWN. ASSOCIATION RECORDS ARE KEPT IN MEMBER AND NON-MEMBER SECTION OF THE FILLS, AND THE CERTIFICATES WILL ENABLE US TO REMOVE THEIR RECORD FROM THE NON-MEMBER GROUP AND PLACE THEM UNDER YOUR NAME IN THE MEMBERSHIP SECTION. YOUR REGISTRATION CERTIFICATES WILL BE RE-ISSUED SHOWING YOUR EXACT MEMBERSHIP NAME AND MEMBER CODE NUMBER. THIS WILL GREATLY FACILITATE REGISTRATION OF NEW CALVES WHEN YOU SUBMIT APPLICATIONS OR TRANSFER ANIMALS YOU NOW OWN.