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John Woolfolk
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The strength and power of the American Hereford Association, AHA, sire summary continues to grow each year. The sire summary provides breeders with a tremendous amount of information on a large population of Hereford sires. The AHA measures 11 traits and calculates 4 Profit (\$) Indexes. The number of sires in this printed version of the sire summary is limited to proven sires, young sires, carcass sires and reference sires (criteria for listing can be found later in the booklet). A comprehensive sort for Hereford sires can be done on the web at www.hereford.org.

Vice President

Dave Breiner
Alma, KS

Pan American Evaluation

Cliff Copeland

Nara Visa, NM

Over the course of the past few years, the AHA has been working with Uruguay, Argentina and Canada to develop a Pan American Cattle Evaluation (PACE). The research was completed in Spring 2009 and the first Hereford Pan American Genetic evaluation was released in the Fall 2009. This is the first genetic evaluation of its kind and Hereford breeders from each country should feel a sense of pride for completing this work. This evaluation should support genetic progress in each country and should boost marketing opportunities.

Keith Fawcett

Ree Heights, SD

Paul "Butch" Funk

Copperas Cove, TX

Cow Longevity and Heifer Calving Rate Research

Jerry Huth

Oakfield, WI

Over the past year, research continued on two different traits that will affect the selection of Hereford sires for fertility and longevity. This research was done by Dr. Dan Moser (Kansas State University) and Dr. Mike MacNeil (Ft. Keogh Livestock & Range Research Laboratory). These traits have been made possible by the dedication of Hereford Breeders to Whole Herd Reporting. Breeders can find a research release for Heifer Calving Rate (HCR) on the web at www.hereford.org.

Jimmie Johnson

Clinton, OK

Steve Lambert

Oroville, CA

Genomics

Marty Lueck

Mountain Grove, MO

The AHA continues to work with academia to help validate and discover Genetic Markers that may enhance EPD's. With this in mind, the AHA board of directors would like to encourage all breeders to begin to collect and store DNA on as many animals as possible. This would include sires, calf crops and feed yard animals that would have individual carcass data collected. The preferred method of collection is blood serum, then tissue, then hair. Remember, semen is a good source of DNA.

Dale Micheli

Fort Bridger, WY

James Milligan

Kings, IL

Dale Venhuizen

Manhattan, MT

Preface

This Spring 2011 American Hereford Association Sire Summary is based on the Pan American Hereford Genetic Evaluation (PACE) conducted at the Agricultural Business Research Institute (ABRI) of the University of New England in Armidale, New South Wales, Australia using Hereford performance data from the U.S., Canada, Argentina and Uruguay.

The Spring 2011 Sire Summary presents results from the semi-annual Pan American Hereford genetic analysis. Performance information from these countries is combined in this one of a kind analysis. All Hereford breeders in these North & South American countries benefit from this type of analysis.

Researchers at ABRI have utilized a multiple trait analysis for EPDs of all traits in this analysis. For example, an animal's weaning weight is used in the prediction equations for scrotal circumference. From this analysis, all animals, including heifers with a weaning weight EPD will also have a scrotal EPD. Heifers cannot express scrotal circumference nor can bulls express milk production, but both sexes contain the genetics for all traits.

The Spring 2011 Sire Summary has incorporated a feature of sorting bulls into four categories to aid you in finding a bull that meets your breeding needs. The categories include Proven Sires, Young Sires, NRSEP Reference Sires and a special Carcass section (see explanation in the section "Criteria for Listing"). Other features included in the format are the calving ease EPDs as well as each of the

carcass trait EPDs and the percentile rank for each EPD published for a bull based on the Active Sire Distribution tables.

EPDs from one year's Sire Summary cannot be directly compared with those in other year's. An EPD is relevant only when compared with another EPD from the same analysis. Note that EPDs are still not comparable across breeds. Polled and Horned cattle in the countries represented in the PACE are now considered to belong to the same breed. Any EPD from AHA can be directly compared to EPDs from the Canadian Hereford Association, but EPDs of Hereford cattle in North America cannot be directly compared to Angus, Simmental, Gelbvieh or any other breed of cattle.

An EPD is always the best estimate of an animal's genetic worth given the data available for analysis. A great deal of recent research has shown that EPDs are unquestionably a better selection tool than anything previously available. Even for young animals, an EPD is up to nine times more accurate for across-herd selection than a performance ratio. Cutting costs and improving profitability requires knowledge to minimize the risks of genetic selection, and the Sire Summary is an important source of that knowledge. Hereford breeders and their commercial customers are becoming more and more aware of the economic advantages of using EPDs.

Use of EPDs is not a total answer to a selection and breeding program. Breeders should use EPDs as a genetic risk management tool. There

are many traits that are important in the beef cattle industry. Unfortunately, EPDs are available on only a portion of those traits. All breeders should examine the facts, use good judgment and common sense and consider many traits and factors before making selection decisions.

What is an EPD?

An Expected Progeny Difference (EPD) is a measure of the genetic merit of an animal using relevant performance and pedigree information in a process called Best Linear Unbiased Prediction. EPDs are expressed in the units of measure. For example, birth weight is expressed in lb. and ribeye area in square inches.

EPDs come from performance data that producers submit on their cattle. From this data, researchers look at the differences between animals raised in the same environment (contemporary groups) and ascertain the portion of that difference that is due to genetics (heritability). How the different traits relate to each other and interact together (correlations) is also accounted for in the analysis. They can then directly compare genetic differences among animals using the pedigree information contained in the registries of all PACE member countries. The result is a value that can be directly compared between animals and across environments, an EPD.

How Do I Use EPDs and this Sire Summary?

EPDs are expressed as a relative value, not an absolute. A birth weight EPD of +5 lb. does not mean the calves will be 5 lb. heavier than the average Hereford calf. EPDs are a means of comparing animals.

Let's look at two bulls as an example:

	BW	WW	YW	Milk
Sire A	3.0	30	55	20
Sire B	8.0	42	75	15
Difference	5.0	12	20	5

We see that the birth weight EPD of sire B is 5 lb. more than that of sire A, the weaning weight EPD is 12 lb. greater, the yearling weight is 20 lb. greater and the milk EPD is 5 lb. less.

So what does this mean?

If we were to breed both sires to the same group of cows, we would expect the calves from sire B to be 5 lb. heavier at birth than calves from sire A due to their genetics for birth weight. They would also be 12 lb. heavier at weaning due to the genetics from sire B and 20 lb. heavier at yearling. The daughters of sire A, if used in the same environment as those daughters of sire B, would be expected to add 5 more lb. of weaning weight to their calves than the daughters of sire B due to their milk production and maternal characteristics.

It is important to remember that these values are not relative to a breed average birth weight; rather they are relative to the production system the bulls would be used in. If for example, sire B was throwing calves with a 90 pound average birth weight in your cow herd, you would expect calves from sire A to weigh on average, 85 lb., when used across the same group of cows.

The AHA sire summary contains information on the EPDs, pedigree and ownership of various sires in use in the American Hereford population today. It is important to remember that there is no "perfect" set of unchangeable EPDs. EPDs

are a valuable tool to help producers find outliers and curve benders. These are animals that combine growth, calving ease and desirable carcass characteristics. The more traits in a selection program, the more difficult it will be to find the bull that meets all of your needs.

Breeders are encouraged to balance their trait selection among traits, without selecting for extremes in just one trait of interest. Because of the relationship between genes, selection for a single trait will inadvertently affect another. For example, selection strictly on the basis of weaning weight will tend to result in increased birth weights, as many of the genes affecting weaning weight, also affect birth weight.

Breeders can use the sire summary to identify potentially overlooked bloodlines on the basis of EPDs, identify particular genetics within a bloodline of interest and identify potential sires from which they may wish to purchase sons or daughters.

Remember that EPDs are a tool in the toolbox of profitable beef production and that visual appraisal, reputation, customer service and other factors such as price are also vital parts of making profitable selection decisions.

Statistics

The statistics printed in this Sire Summary are derived from the databases of PACE member countries. All averages, trends and distributions are calculated from the entire four-association analysis, rather than just one association's performance records. All statistical averages in this Sire Summary are Pan American Hereford averages, not just AHA averages.

Criteria for Listing

The actual value of a bull's EPD has no bearing on publication status. There are diverse types of sires printed in this summary. Because cattle breeders have different goals, have different types of females and raise them in vastly

different environments, a variety of sires are needed to meet every breeder's requirements.

A total of 2,228 sires are listed in this Spring 2011 Sire Summary. There are 880 Proven sires, 769 Young sires and 194 Reference sires from the National Reference Sire Evaluation Program. The balance of the sires can be found in the Carcass section, which is a list of the 889 highest accuracy bulls for carcass traits. In order to be listed in this edition of the sire summary, a bull must have met the following criteria for at least one of the four categories.

PROVEN SIRE

- Have a weaning weight accuracy value of .60 or higher
- Have a minimum of three progeny born in the last three years
- Have had at least one of those progeny born in the last two years (2009 & 2010).

YOUNG SIRE

- Have a weaning weight accuracy value of .30 or higher
- Be born on or after January 1, 2007
- Have had at least ten progeny.

NRSEP REFERENCE SIRE

- Have progeny used in the genetic analysis from the National Reference Sire Evaluation Program.

CARCASS SIRE

- Have at least one carcass trait accuracy > .45
- Have at least ten progeny with ultrasound/carcass data.

Each of the four PACE member country Associations establishes their own criteria for listing bulls in their respective Sire Summary.

Please feel free to call the AHA office if you have any questions.

Heritability Estimates & Trait Correlations

Heritability may be defined as the portion of the differences among sire progeny groups that is due to genetic variation. For a trait that is 40 percent heritable, 40 percent of the variation in the contemporary group is due to genetics and 60 percent is due to environment. The higher the heritability the easier it is to make a genetic change in one specific trait. Since heritability is already considered in their calculation, EPDs reflect actual genetic differences.

Heritability estimates given below are those calculated by ABRI for Pan American Herefords and used in this International Cattle Evaluation analysis.

EPD correlations indicate how closely traits are genetically related by reflecting the effect that selection for one trait can have on other traits. Correlations may range from -1.0 to +1.0. The closer the correlation is to -1.0 or +1.0 the higher the relationship.

Some genes may influence more than one trait. For example, the correlation between weaning weight and yearling weight is high. This means that increases in weaning weight will be accompanied by a significant increase in yearling weight. A positive correlation means that as one trait increases the other does as well. A negative correlation means that when one trait increases, the other decreases. Correlations of 0 mean that the traits have no relationship to each other. Correlations used in the Hereford PACE evaluation are shown below.

Heritabilities & Correlations used in the Hereford PACE										
(Heritabilities are on the Diagonal / Genetic Correlations are above the Diagonal)										
	BW	WW	YW	SC	MM	FAT	REA	IMF	CE	MCE
BW	.43	.53	.54	.03	.00	-.15	.18	-.07	-.40	.00
WW		.20	.80	.19	.00	.28	.59	.02	.00	.00
YW			.36	.24	.00	.23	.55	-.09	.00	.00
SC				.37	.00	.05	.05	.05	.00	.00
MM					.10	.00	.00	.00	.00	.00
FAT						.30	.18	.39	.00	.00
REA							.26	.00	.00	.00
IMF								.26	.00	.00
CE									.10	-.50
MCE										.10

Example Listing and Trait Definition

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	CE	BW	WW	YW	MM	MG	MCE	SC	FAT	REA	MARB	BMI\$	CEZ\$	BIIS	CHB\$
ANY BULL 123	+4.4 (.32)	+2.2 (.88)	+30 (.57)	+59 (.70)	+14 (.52)	+29	-0.2 (.32)	+0.7 (.40)	0.00 (.10)	+0.14 (.09)	-0.04 (.09)	+18	+19	+17	+16
01/15/87 X12345678 POLLED AI	-4.3 : +13.1	+1.4 : +3.0	+19 : +42	+46 : +72	+5 : +23		-8.9 : +8.5	-0.1 : +1.5	-0.03 : +0.03	-0.32 : +0.60	-0.31 : +0.23				
S: SUPERSIRE 503	21 / 191	72 / 306	70 / 287	33 / 116	32 Dgt.	85%	6 / 42	6 / 35	1 / 3	1 / 3	1 / 3				
B: SUPER HEREFORD RANCH, ANYTOWN, MO	10%	25%	90%	75%	70%				50%	60%	70%	25%	10%	20%	70%
O: SUPER HEREFORD RANCH, ANYTOWN, MO															

Sire-Information

Sires are listed in alphabetical order according to their registered name within each section. Also included in this column are the bull's registration number, date of birth, sire (S), breeder (B) and current owners (O) and Horned/Polled designation. AI box indicates the sire has been issued an AI permit for semen sales.

1. Calving Ease – Direct (CE)

CE EPDs are based on calving ease scores and birth weights. More positive EPDs are favorable and indicate easier calving. The EPD for direct calving ease indicates the influence of the sire on calving ease in purebred females calving at two years of age. An EPD in a black box indicates that the bull is a trait leader. For more information see the section titled "Percentile Breakdown of EPDs".

2. Birth Weight (BW)

Progeny of the sire above can be expected to weigh an average of 3.2 lb. more at birth than progeny sired by a bull with an EPD of -1.0 lb. (2.2 minus -1.0 = 3.2 lb.) Birth weight is an indicator of calving ease. 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. To learn more about how to use accuracy when evaluating EPDs please refer to the section "Accuracy and Confidence Range".

3. Weaning Weight (WW)

WW EPD reflects pre-weaning growth. Calves sired by the above bull should have a 20 lb. advantage in 205-day adjusted weaning weight compared to calves sired by a bull with an EPD of +10 lb. (30 minus 10.0 = 20 lb.).

4. Yearling Weight (YW)

YW EPD for this sire indicates his progeny should be 59 lb. above the average of progeny of a bull with an EPD of 0 lb. YW EPD reflects differences in the 365-day adjusted yearling weight for progeny. It is the best estimate of total growth.

5. Maternal Milk (MM)

The milking ability of a sire's daughters expressed in lb. of calf weaned. It predicts the difference in average weaning weight of sires' daughters' progeny due to milking ability. Daughters of the sire in the above example 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 over the entire lactation.

6. Maternal Milk & Growth (MG)

Maternal Milk & Growth reflects what the sire is expected to transmit to his daughters for a combination of growth genetics through weaning and genetics for milking ability. It is an estimate of daughters' progeny weaning weight. The bull in the above example should sire daughters with progeny weaning weights averaging 19 lb. heavier than progeny of a bull's daughters with a MG EPD of 10 lb. (29 minus 10.0 = 19 lb.). It is equal to one-half the sire's weaning weight EPD, plus all of his milk EPD. No accuracy is associated with this since it is simply a mathematical combination of two other EPDs. Sometimes referred to as "total maternal" or "combined maternal."

7. Maternal Calving Ease (MCE)

The MCE EPD indicates how easily a sire's daughters will calve at two years of age. When compared to the daughters of other sires.

8. 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 the above sire should have yearling scrotal circumference measurements that average 0.7 cm. larger than progeny by a bull with an EPD of 0.0 cm. In this genetic analysis, a multiple-trait model was used for scrotal circumference. Weaning weight was used as a predictor variable to increase the prediction accuracy of SC EPDs. Therefore, an animal with a weaning weight EPD should also have an SC EPD.

9. Rib Fat (FAT)

The FAT EPD reflects differences in adjusted 365-day, twelfth-rib fat thickness based on carcass measurements of harvested cattle. Sires with low, or negative, FAT EPDs are expected to produce leaner progeny than sires with higher EPDs. Ultrasound measures 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.

10. Ribeye Area (REA)

REA EPDs reflect differences in an adjusted 365-day ribeye area measures 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 measures 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.

11. Marbling (MARB)

MARB EPDs reflect differences in an adjusted 365-day marbling score (intramuscular fat) based on carcass measurements of harvested cattle. Breeding cattle with higher MARB EPDs should produce slaughter progeny with a higher degree of intramuscular fat and therefore higher quality grades. Ultrasound measures 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.

12. Baldy Maternal Index (BMI\$)

A maternally focused index that has a production system based on 1,000 Hereford x Angus females with a progeny harvest endpoint directed toward CHB. This index is more critical of CE than the BIIS and also has significant weight on fertility. There is positive weight on WW and a slightly negative weight on YW which promotes early growth and then a slow down on growth to keep mature size manageable. The emphasis of IMF is greater than the emphasis of REA. This is true because of the price difference of the choice-select spread and the fact that there is very little incentive to produce cattle better than a yield grade 3. The question comes up concerning the fact that the CHB program has been successful because of the acceptance of Select grade cattle. In answer to this, we are using a crossbreeding production system that could sell cattle on several grids and the CHB program is installing a choice product. This index is geared to service any commercial program that runs British cross cows.

13. Calving Easy Index (CEZ\$)

A general purpose index that focuses on identifying bulls that can be used on heifers and then ultimately the calves will be marketed through CHB. As you might expect, CE and MCE carries significant

weight in this index along with fertility. There is very little weight put on growth traits and less emphasis on carcass. Remember, this is a general index that is specifically designed to be used in a heifer program.

14. Brahman Influence Index (BIIS)

A maternally focused index that is based on a 1,000 head cow herd of Brahman x Hereford cross cows. The progeny for this index will be harvested in a commodity based system since CHB does not accept Brahman influenced cattle into the program. This index has less emphasis for CE than any of the other indexes. There is emphasis on both REA and IMF since the cattle will be harvested through a commodity market. The largest emphasis is in fertility which is measured solely by Scrotal Circumference at the present time. Obviously, the target for this index is the producers in the Southern regions of the US where the bulls are typically sold to commercial cattlemen that have Brahman influenced cow herds.

15. Certified Hereford Beef Index (CHB\$)

A terminal sire index that is built on a production system where Hereford bulls sire calves for the CHB market. There is some pressure put on CE and then positive weight on both WW and YW. Remember that all offspring in this index are harvested, so they need to be born alive and then grow fast at all stages of life. Of course, we have much more emphasis on fat in this index, as we want the cattle to stay lean. There is also a significant weight on both REA and IMF with more emphasis again on IMF. This index would be used by producers who have a target of producing bulls for a terminal breeding program. This index could be used heavily in the Midwest where bulls are used in rotational breeding programs to produce cattle in a retained ownership program or simply sold to backgrounders. This is the only index that has no emphasis on fertility. Remember that nothing is retained in the herd.

16. Confidence Range

The Confidence Range indicates the range in values for which the "true" EPD should probably lie 95 percent of the time. For most animals, one can be fairly confident that an EPD should be within this range in subsequent genetic analyses. For more information about understanding the use of Confidence Ranges, refer to page 6.

17. Herds

Number of herds in which progeny were raised with recorded measurements. This includes herd counts from PACE member countries. Number of herds gives a general indication of progeny distribution for each of the five traits.

18. Progeny

The number of progeny sired by the bull with recorded measurements for each specific trait. This includes the progeny counts from PACE member countries. Number of progeny should not be used in lieu of accuracy, but simply to further clarify accuracy values.

19. Daughters

The number of daughters sired by the bull which have produced progeny with weaning weight records. This includes daughter counts from PACE member countries. Number of daughters should not be used in lieu of accuracy, but simply to further clarify Maternal Milk and Maternal Milk & Growth accuracy values.

For an explanation of the **percentile distributions** listed for each trait see the section titled "Percentile Breakdown of EPDs". For an explanation of **trait leader** designations see bottom of page 6.

Genetic Trend

Breed direction is probably one of the hottest topics discussed any time a group of breeders gather. Evaluating average EPD genetic trends for the past several generations can be very useful when plotting future direction since these trends indicate where a breed has been, where it is headed and how fast it is moving.

The table that follows illustrates the genetic trends in the Pan American Hereford population using all animals in the entire genetic analysis. All traits changed very little until 1970. After 1970, weaning weight and yearling weight increased by about 1.4 lb. and 2.5 lb. per year respectively, while birth weight increased an average of .17 lb. per year. At the same time maternal milk changed an average of .3 lb. per year.

Please take note that the fixed base for each of the traits is indicated as bold text and is outlined in the table to the right. The traits with a Hereford base fixed at 1977 have had minor adjustments to maintain consistency of EPDs for modern animals after changes were implemented in the genetic analyses in 2001. In these adjustments, the breed average EPD for each trait for the 1998 birth year was adjusted to the same value as the Fall 2001 analysis. The adjustment factors were then applied to the EPDs of each animal in the analysis. This is why the breed average EPD of those traits may no longer cross the zero threshold in 1977.

Genetic Trend of EPDs by Birth Year

(All Animals)

Birth Year	CE EPD	BW EPD	WW EPD	YW EPD	MM EPD	M&G EPD	MCE EPD	SC EPD	FAT EPD	REA EPD	MARB EPD	BMI\$ INDX	CEZ\$ INDX	BII\$ INDX	CHB\$ INDX
77	0.8	-1.4	-2.4	-0.7	4.2	3.0	0.2	-0.1							
78	0.8	-1.2	-0.9	1.6	4.4	3.9	0.2	0.0							
79	0.8	-0.9	1.1	4.8	4.4	5.0	0.2	0.0							
80	0.8	-0.7	2.9	7.6	4.6	6.0	0.3	0.0							
81	0.8	-0.4	4.8	10.8	4.7	7.1	0.2	0.0							
82	0.7	-0.1	7.1	14.4	5.0	8.6	0.2	0.0							
83	0.7	0.2	9.1	17.6	5.3	9.8	0.1	0.0							
84	0.7	0.5	11.2	20.9	5.5	11.1	0.2	0.1							
85	0.6	0.8	13.3	24.1	5.6	12.2	0.0	0.1							
86	0.5	1.1	15.0	26.9	5.7	13.2	0.0	0.1							
87	0.4	1.4	16.8	29.8	5.8	14.2	0.0	0.1							
88	0.2	1.7	18.7	32.9	5.8	15.1	0.0	0.2							
89	0.1	2.0	20.6	35.8	5.9	16.2	0.0	0.2							
90	-0.1	2.4	22.5	39.0	6.2	17.4	0.0	0.2	-0.003	-0.08	-0.02	12.38	14.41	14.44	7.22
91	-0.2	2.6	24.2	41.6	6.4	18.5	0.0	0.2	-0.003	-0.07	-0.01	12.49	14.22	14.38	7.96
92	-0.4	2.8	25.5	43.7	6.9	19.6	-0.1	0.3	-0.003	-0.06	-0.01	12.57	14.04	14.32	8.58
93	-0.4	3.0	26.8	45.7	7.4	20.8	-0.1	0.3	-0.003	-0.05	-0.01	12.62	13.93	14.21	9.19
94	-0.5	3.2	28.0	47.5	7.9	22.0	-0.2	0.3	-0.003	-0.03	-0.02	12.68	13.80	14.13	9.78
95	-0.5	3.3	29.1	49.2	8.6	23.1	-0.2	0.3	-0.003	-0.02	-0.01	12.81	13.78	14.09	10.39
96	-0.4	3.4	30.4	51.1	9.2	24.4	-0.1	0.3	-0.002	0.00	-0.01	12.90	13.78	13.97	11.03
97	-0.4	3.4	31.3	52.5	9.7	25.4	-0.1	0.4	-0.003	0.01	-0.01	13.09	13.78	14.02	11.54
98	-0.3	3.5	32.3	54.1	10.1	26.3	-0.1	0.4	-0.002	0.03	-0.01	13.26	13.85	14.04	12.04
99	-0.3	3.6	33.1	55.3	10.5	27.1	0.0	0.4	-0.002	0.04	-0.01	13.42	13.86	14.08	12.46
00	-0.3	3.7	34.2	56.9	11.2	28.3	0.0	0.4	-0.002	0.05	-0.01	13.53	13.79	14.04	13.04
01	-0.2	3.7	35.0	58.2	11.5	29.0	0.0	0.5	-0.002	0.07	-0.01	13.64	13.84	13.98	13.53
02	-0.2	3.7	35.9	59.7	12.2	30.2	0.1	0.5	-0.001	0.08	0.00	13.77	13.83	13.94	14.11
03	-0.2	3.7	37.0	61.3	12.7	31.2	0.2	0.5	-0.001	0.10	0.00	14.00	13.91	13.96	14.70
04	-0.1	3.7	37.9	62.7	13.1	32.1	0.3	0.5	-0.001	0.12	0.00	14.22	13.96	14.01	15.27
05	-0.1	3.7	39.1	64.6	13.9	33.5	0.3	0.6	-0.001	0.14	0.01	14.32	13.92	13.94	15.86
06	0.0	3.7	40.2	66.3	14.7	34.9	0.5	0.6	0.000	0.16	0.01	14.54	14.00	13.95	16.52
07	0.1	3.7	41.4	68.1	15.4	36.1	0.6	0.6	0.000	0.18	0.02	14.84	14.10	14.05	17.21
08	0.1	3.7	42.3	69.6	15.8	37.0	0.6	0.6	0.001	0.20	0.03	15.09	14.17	14.14	17.82
09	0.3	3.6	43.4	71.2	16.5	38.2	0.7	0.7	0.002	0.22	0.04	15.38	14.30	14.23	18.48
10	0.4	3.6	45.0	73.6	18.1	40.6	0.9	0.7	0.003	0.24	0.05	15.83	14.47	14.38	19.51

Percentile Breakdown of EPDs

A percentile chart can be used to get a better idea of how an animal ranks in the current group of equivalent animals in the Hereford population in North & South America. The charts are divided into 5 percent increments for each trait. The top 5 percent are further divided into 1 percent increments.

Hereford cattle can be grouped into three very broad categories. The first would be active sires in the Pan American Hereford population. These are bulls that have sired at least ten total calves in the last three years. Your herd sire or potential herd sire can be compared to this population of bulls. Very few bulls rank at the top in every trait because of inherent genetic correlations. With careful evaluation you should be able to find bulls to match your specifications. For animals with EPDs that fall between the published ranges, use the lower value.

Percentile Rank in Active Sire List for BULL 448

Trait	EPD	%Rank
Calving Ease – Direct	+8.5	Upper 1%
Birth Weight	+1.3	15%
Weaning Weight	+52	25%
Yearling Weight	+81	35%
Maternal Milk	+19	45%
Milk & Growth	+45	35%
Maternal Calving Ease	+10.5	1%
Scrotal Circumference	+2.0	1%
Rib Fat	+0.006	60%
Ribeye Area	0.31	40%
Marbling	+0.12	25%
Baldy Maternal \$	+35	1%
Calving Easy \$	+29	1%
Brahman Influence \$	+31	1%
Certified Hereford Beef \$	+23	25%

Averages and Percentile Breakdown															
Active Sires*															
	CE	BW	WW	YW	MM	MG	MCE	SC	FAT	REA	MARB	BMI\$	CEZ\$	BII\$	CHB\$
Averages															
Avg	0.2	3.6	45	74	18	40	0.9	0.7	0.002	0.25	0.04	15.64	14.28	14.20	19.45
Low	-25.8	14.2	-93	-109	-21	-41	-10.7	-1.0	0.162	-1.63	-0.44	-2.21	-11.53	-1.75	-46.24
High	13.7	-6.2	84	144	48	81	9.9	2.8	-0.121	1.14	1.06	44.93	29.87	44.01	45.61
Percentile Breakdown															
Upper															
1%	7.3	-1.8	69	114	34	61	6.2	1.8	-0.059	0.79	0.42	29.15	22.64	27.13	32.74
2%	6.5	-1.0	66	109	32	59	5.6	1.6	-0.049	0.73	0.36	26.98	21.59	24.68	31.12
3%	5.9	-0.5	64	106	31	57	5.3	1.5	-0.044	0.68	0.32	25.21	20.98	23.50	30.02
4%	5.4	-0.1	63	104	30	56	4.9	1.4	-0.041	0.65	0.30	24.15	20.59	22.51	29.16
5%	5.1	0.1	62	102	29	55	4.7	1.4	-0.038	0.63	0.28	23.33	20.23	21.62	28.50
10%	4.0	1.0	58	96	26	52	3.8	1.2	-0.027	0.54	0.20	20.95	18.69	19.34	26.38
15%	3.3	1.5	56	91	25	50	3.2	1.0	-0.021	0.48	0.16	19.61	17.76	18.04	24.99
20%	2.7	1.9	54	88	24	48	2.7	0.9	-0.017	0.44	0.13	18.67	17.09	17.14	23.87
25%	2.2	2.3	52	85	22	47	2.3	0.9	-0.014	0.40	0.11	17.88	16.50	16.34	22.91
30%	1.8	2.6	50	83	21	46	2.0	0.8	-0.011	0.36	0.09	17.22	16.01	15.75	22.14
35%	1.4	2.9	49	81	20	44	1.7	0.8	-0.008	0.33	0.07	16.68	15.58	15.26	21.45
40%	1.1	3.2	48	79	20	43	1.3	0.7	-0.005	0.30	0.06	16.17	15.16	14.75	20.69
45%	0.7	3.4	47	77	19	42	1.1	0.7	-0.002	0.27	0.04	15.71	14.73	14.30	20.02
50%	0.3	3.7	46	75	18	41	0.8	0.6	0.000	0.25	0.03	15.27	14.31	13.86	19.38
55%	0.0	3.9	44	73	17	40	0.5	0.6	0.003	0.22	0.02	14.81	13.89	13.43	18.73
60%	-0.3	4.2	43	71	16	39	0.3	0.5	0.006	0.19	0.00	14.30	13.48	12.99	18.09
65%	-0.7	4.4	42	68	16	37	0.0	0.5	0.009	0.16	-0.01	13.86	13.05	12.52	17.42
70%	-1.2	4.7	40	66	15	36	-0.3	0.4	0.013	0.13	-0.03	13.37	12.60	12.04	16.72
75%	-1.6	5.0	39	64	13	34	-0.6	0.4	0.016	0.10	-0.04	12.87	12.10	11.53	15.90
80%	-2.1	5.4	37	61	12	32	-0.9	0.3	0.021	0.07	-0.06	12.28	11.49	10.99	15.00
85%	-2.8	5.8	35	57	10	30	-1.3	0.3	0.027	0.03	-0.08	11.60	10.82	10.30	13.90
90%	-3.7	6.3	32	53	8	28	-1.8	0.2	0.035	-0.02	-0.10	10.72	9.92	9.38	12.56
95%	-4.9	7.1	28	46	6	24	-2.7	0.2	0.048	-0.09	-0.14	9.32	8.55	8.06	10.65
100%	-25.8	14.2	-93	-109	-21	-41	-10.7	-1.0	0.162	-1.63	-0.44	-2.21	-11.53	-1.75	-46.24

*6,709 sires produced at least 10 calves since January 1, 2008

Averages and Percentile Breakdown															
Active Dams*															
	CE	BW	WW	YW	MM	MG	MCE	SC	FAT	REA	MARB	BMI\$	CEZ\$	BII\$	CHB\$
Averages															
Avg	0.0	3.7	41	67	15	36	0.5	0.6	0.001	0.16	0.02	14.54	14.00	13.92	16.65
Low	-19.4	13.2	-19	-28	-17	-12	-9.4	-1.1	0.175	-0.68	-0.51	0.39	-5.79	-1.24	-3.60
High	11.2	-6.8	75	129	46	73	9.5	2.3	-0.132	1.07	0.74	39.92	27.32	36.53	42.95
Percentile Breakdown															
Upper															
1%	5.6	-0.8	60	101	32	57	5.4	1.4	-0.046	0.61	0.32	24.76	20.91	23.51	27.85
2%	5.0	-0.2	58	97	30	54	4.7	1.3	-0.039	0.56	0.27	22.93	20.02	21.90	26.45
3%	4.5	0.2	57	94	28	53	4.3	1.2	-0.035	0.52	0.24	21.84	19.46	20.86	25.58
4%	4.2	0.5	56	92	28	52	3.9	1.1	-0.032	0.49	0.22	21.09	19.04	20.17	24.92
5%	3.9	0.7	55	91	27	51	3.7	1.1	-0.029	0.47	0.20	20.54	18.69	19.64	24.40
10%	3.0	1.4	52	85	24	48	2.9	1.0	-0.022	0.40	0.14	18.79	17.57	18.03	22.62
15%	2.4	1.9	50	82	22	45	2.4	0.9	-0.018	0.35	0.11	17.80	16.85	17.09	21.41
20%	1.9	2.2	48	79	21	44	2.0	0.8	-0.014	0.31	0.09	17.06	16.29	16.42	20.48
25%	1.5	2.5	46	76	20	42	1.7	0.7	-0.011	0.27	0.07	16.46	15.81	15.85	19.69
30%	1.2	2.8	45	74	19	41	1.4	0.7	-0.009	0.24	0.06	15.96	15.39	15.36	18.99
35%	0.9	3.0	44	72	18	39	1.1	0.6	-0.007	0.22	0.04	15.51	15.01	14.92	18.35
40%	0.6	3.3	43	70	17	38	0.9	0.6	-0.005	0.19	0.03	15.09	14.66	14.51	17.73
45%	0.3	3.5	42	68	16	37	0.7	0.5	-0.003	0.17	0.02	14.69	14.32	14.12	17.13
50%	0.0	3.7	41	67	16	36	0.5	0.5	-0.001	0.15	0.01	14.31	14.00	13.73	16.56
55%	-0.2	3.9	40	65	15	35	0.3	0.4	0.002	0.13	0.00	13.93	13.67	13.36	15.99
60%	-0.5	4.2	38	63	14	33	0.0	0.4	0.004	0.11	-0.01	13.54	13.34	12.98	15.44
65%	-0.8	4.4	37	61	13	32	-0.2	0.3	0.006	0.08	-0.02	13.14	12.99	12.60	14.84
70%	-1.1	4.6	36	59	12	31	-0.4	0.3	0.009	0.06	-0.03	12.74	12.62	12.19	14.20
75%	-1.5	4.9	35	57	11	29	-0.7	0.2	0.012	0.04	-0.05	12.29	12.22	11.75	13.51
80%	-1.9	5.2	33	55	10	27	-1.0	0.2	0.015	0.01	-0.06	11.79	11.76	11.25	12.76
85%	-2.4	5.5	32	52	8	25	-1.4	0.1	0.020	-0.02	-0.08	11.21	11.21	10.67	11.90
90%	-3.1	6.0	30	48	6	23	-1.9	0.1	0.026	-0.05	-0.09	10.48	10.48	9.93	10.78
95%	-4.1	6.7	26	43	3	20	-2.7	0.0	0.036	-0.11	-0.13	9.38	9.31	8.80	9.18
100%	-19.4	13.2	-19	-28	-17	-12	-9.4	-1.1	0.175	-0.68	-0.51	0.39	-5.79	-1.24	-3.60

*115,518 cows calving since January 1, 2009.

Averages and Percentile Breakdown															
2009 & 2010 Calves*															
	CE	BW	WW	YW	MM	MG	MCE	SC	FAT	REA	MARB	BMI\$	CEZ\$	BII\$	CHB\$
Averages															
Avg	0.3	3.6	44	72	17	39	0.8	0.7	0.003	0.22	0.04	15.54	14.36	14.29	18.85
Low	-14.1	14.2	-29	-27	-11	-6	-7.6	-0.8	0.141	-0.83	-0.42	1.93	-0.43	-3.43	-15.23
High	10.0	-6.3	81	134	42	72	9.5	2.3	-0.120	1.05	0.87	37.23	27.30	35.02	41.36
Percentile Breakdown															
Upper															
1%	5.8	-1.0	63	103	31	57	4.8	1.5	-0.040	0.63	0.34	25.55	20.89	23.69	29.79
2%	5.1	-0.3	61	100	29	55	4.3	1.3	-0.034	0.58	0.30	23.92	20.09	22.03	28.34
3%	4.7	0.0	59	97	28	54	4.0	1.3	-0.030	0.55	0.27	22.94	19.57	21.14	27.48
4%	4.4	0.3	58	96	27	53	3.7	1.2	-0.028	0.52	0.25	22.20	19.19	20.47	26.83
5%	4.1	0.6	57	94	27	52	3.5	1.2	-0.026	0.50	0.23	21.63	18.87	19.96	26.33
10%	3.3	1.3	54	89	24	49	2.9	1.0	-0.020	0.44	0.18	19.83	17.84	18.28	24.60
15%	2.7	1.8	53	86	23	48	2.5	0.9	-0.016	0.39	0.14	18.71	17.13	17.28	23.43
20%	2.2	2.2	51	83	22	46	2.2	0.9	-0.012	0.36	0.11	17.94	16.60	16.56	22.52
25%	1.9	2.5	50	81	21	45	1.9	0.8	-0.010	0.33	0.09	17.32	16.14	16.00	21.77
30%	1.5	2.7	48	79	20	44	1.6	0.8	-0.008	0.31	0.08	16.79	15.74	15.51	21.09
35%	1.2	3.0	47	77	19	43	1.4	0.7	-0.005	0.28	0.06	16.33	15.37	15.08	20.46
40%	0.9	3.2	46	76	19	42	1.2	0.6	-0.003	0.26	0.05	15.92	15.03	14.70	19.89
45%	0.6	3.4	45	74	18	41	1.0	0.6	-0.001	0.24	0.04	15.53	14.70	14.34	19.32
50%	0.4	3.6	44	72	17	40	0.8	0.6	0.001	0.22	0.03	15.17	14.37	14.00	18.77
55%	0.1	3.8	43	71	17	39	0.6	0.5	0.003	0.20	0.02	14.82	14.05	13.66	18.22
60%	-0.2	4.0	42	69	16	38	0.4	0.4	0.005	0.18	0.01	14.47	13.72	13.33	17.67
65%	-0.5	4.3	41	67	15	37	0.2	0.4	0.007	0.16	0.00	14.11	13.38	12.97	17.11
70%	-0.8	4.5	40	65	15	35	0.0	0.3	0.010	0.14	-0.01	13.74	13.01	12.61	16.51
75%	-1.2	4.8	39	63	14	34	-0.3	0.3	0.013	0.11	-0.03	13.34	12.62	12.22	15.86
80%	-1.6	5.0	37	61	13	32	-0.5	0.3	0.017	0.09	-0.04	12.91	12.17	11.80	15.15
85%	-2.1	5.4	36	58	11	31	-0.9	0.2	0.021	0.06	-0.05	12.41	11.62	11.29	14.29
90%	-2.7	5.8	33	55	10	28	-1.3	0.2	0.027	0.02	-0.07	11.76	10.92	10.64	13.21
95%	-3.7	6.6	30	50	7	24	-1.9	0.1	0.037	-0.03	-0.10	10.79	9.83	9.66	11.63
100%	-14.1	14.2	-29	-27	-11	-6	-7.6	-0.8	0.141	-0.83	-0.42	1.93	-0.43	-3.43	-15.23

*155,024 calves born in 2009 and 2010.

Accuracy and Confidence Range

Accuracy (ACC) is an expression of reliability of the EPD and may range from 0.00 to 1.00. As accuracy approaches 1.00, the EPD is more reliable and can be expected to change less in the future as more progeny performance records are accumulated. Accuracy is a description of the amount of information available in the calculation of an animal's EPD. A higher accuracy means that an EPD is less subject to change as more information becomes available. While the animal's genetic merit will never change (it has exactly the same DNA throughout its lifetime), our ability to predict its genetic merit may change. As we obtain more information on an animal, its' contemporaries, progeny and other relatives we are able to do a better job of predicting the animal's true merit. This is reflected by accuracy.

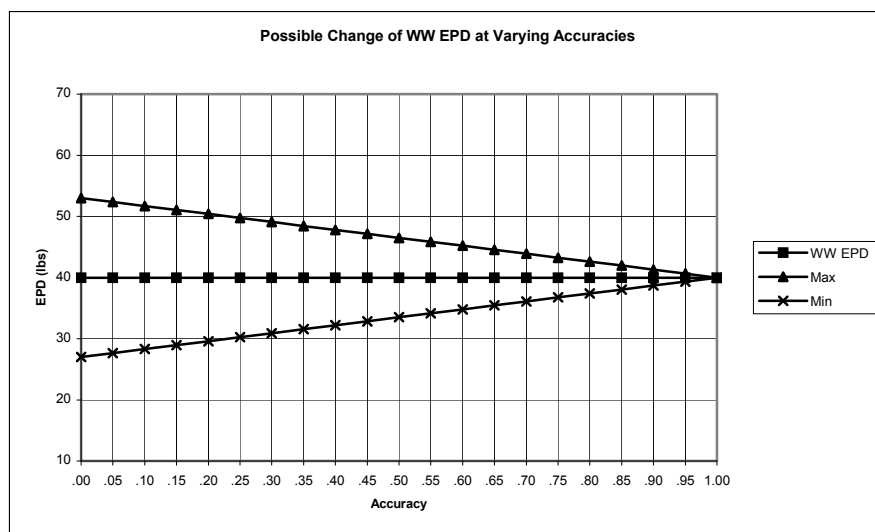
All accuracy may be categorized into low, medium and high reliability as follows: Low – .00 to .40; Medium – .40 to .70; High – .70 to 1.00. EPDs should be used to decide which bulls are selected while accuracy values suggest how extensively the bulls should be used. Bulls with favorable EPD values and corresponding high accuracy values can be used with confidence that they will contribute favorably to genetic improvement of the herd.

Changes in EPDs can be expected to fall within the possible change interval 68 percent of the time. In

actuality, Hereford EPDs typically change considerably less than this level. Listed below is a table showing the possible change at different levels of accuracy for each trait. The potential change or Confidence Range is the EPD plus or minus the possible change value. The Confidence Range is simply the interval in which one would expect an individual animal's true EPD to fall. For most cattle, the EPDs should not change more than the Confidence Range from one genetic analysis to the next. As the accuracy increases then possible change decreases and the Confidence Range narrows.

Confidence Ranges have been added to this Sire Summary to aid producers in understanding the potential for EPD changes.

Confidence Ranges, Accuracy and possible change values all relate to the reliability of a particular EPD. For example, if the accuracy of a bull's Weaning Weight EPD is .30, the expected possible change in



EPD is ± 9.1 lb. For a bull with a Weaning Weight EPD of +40 lb., the potential change or EPD Confidence Range is +30.9 to +49.1 lb. or rounded to whole pounds it is +31 to +49 lb. A Confidence Range is not an absolute limit of an EPD change, but is correct for most cattle. For example, another bull has the same EPD of +40 lb., but an accuracy of .90, the possible change in EPD decreases to ± 1.3 lb. His Confidence Range would be 40 ± 1.3 lb. or in other words +38.7 to +41.3 lb. or rounded +39 to +41 lbs.

Possible Change for Various Accuracy Values (Plus or Minus)

ACC Value	CE (%)	BW (lb)	WW (lb)	YW (lb)	MM (lb)	MCE (%)	SC (cm)	FAT (in)	REA (in ²)	MARB (deg)
.00	± 8.3	± 2.7	± 13.0	± 21.7	± 9.4	± 9.1	± 0.62	± 0.016	± 0.26	± 0.16
.05	8.1	2.6	12.4	20.6	8.9	9.0	0.59	0.015	0.25	0.15
.10	8.0	2.5	11.7	19.5	8.5	8.8	0.56	0.014	0.23	0.14
.15	7.8	2.3	11.1	18.5	8.0	8.5	0.53	0.014	0.22	0.13
.20	7.6	2.2	10.4	17.4	7.5	8.3	0.50	0.013	0.21	0.12
.25	7.3	2.1	9.8	16.3	7.1	8.1	0.47	0.012	0.19	0.12
.30	7.1	1.9	9.1	15.2	6.6	7.9	0.44	0.011	0.18	0.11
.35	6.9	1.8	8.5	14.1	6.1	7.6	0.41	0.010	0.17	0.10
.40	6.7	1.6	7.8	13.0	5.6	7.3	0.37	0.010	0.16	0.09
.45	6.4	1.5	7.2	11.9	5.2	7.1	0.34	0.009	0.14	0.09
.50	6.1	1.4	6.5	10.9	4.7	6.8	0.31	0.008	0.13	0.08
.55	5.8	1.2	5.9	9.8	4.2	6.5	0.28	0.007	0.12	0.07
.60	5.5	1.1	5.2	8.7	3.8	6.1	0.25	0.006	0.10	0.06
.65	5.2	1.0	4.6	7.6	3.3	5.8	0.22	0.006	0.09	0.05
.70	4.8	0.8	3.9	6.5	2.8	5.4	0.19	0.005	0.08	0.05
.75	4.5	0.7	3.3	5.4	2.4	4.9	0.16	0.004	0.06	0.04
.80	4.0	0.5	2.6	4.3	1.9	4.5	0.12	0.003	0.05	0.03
.85	3.5	0.4	2.0	3.3	1.4	3.9	0.09	0.002	0.04	0.02
.90	2.9	0.3	1.3	2.2	0.9	3.2	0.06	0.002	0.03	0.02
.95	2.1	0.1	0.7	1.1	0.5	2.3	0.03	0.001	0.01	0.01
1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.000	0.00	0.00

Trait Leader Designation

An EPD in a black box in the proven or reference sire sections of this sire summary indicates that the bull is considered a trait leader for that particular trait. The criteria for establishing trait leaders is based on the breed average EPD for the trait and the amount of variability in the EPDs observed for that trait across all animals in the Hereford breed. A bull must be at least one standard deviation above the breed average value for the trait to be considered a trait leader

Expected Progeny Difference (EPD) and Profit Index Averages and Standard Deviations (SD)

Trait	No. Records	No. EPD	Avg.	SD
Production:				
Calving Ease Direct, %	3,005,185	3,884,191	0.1	2.4
Birth Weight, lb.	3,099,578	5,531,618	1.6	2.8
Weaning Weight, lb.	3,885,027	5,531,618	19.4	18.0
Yearling Weight, lb.	1,733,618	5,528,655	33.6	28.6
Maternal:				
Maternal Milk, lbs.	3,885,027	5,561,695	7.9	6.6
Maternal Calving Ease, %	3,005,185	3,884,191	0.1	1.9
Fertility:				
Scrotal Circumference, cm	155,055	5,203,546	0.2	0.3
Ultrasound/Carcass:				
Fat Thickness, in.	202,324 / 3,832	5,394,005	.002	0.013
Ribeye Area, sq. in.	201,784 / 3,891	5,394,005	0.09	0.20
Marbling, degrees of score	142,564 / 3,908	5,394,005	0.01	0.07
Profit Indexes:				
Baldy Maternal, \$/head		2,859,380	13.20	3.47
Calving Easy, \$/head		2,859,380	14.80	2.88
Brahman Influence, \$/head		2,859,380	15.10	3.19
Certified Hereford Beef, \$/head		2,914,788	8.00	8.66

Internet Search Tools

The AHA has launched the most dynamic and powerful Internet search engine in the purebred livestock industry. The power of information that this new technology offers will most certainly aid you in identifying curve bending genetics that can move your herd in a positive direction.

There are three levels of search capabilities offered which can benefit everyone from commercial producers to serious seedstock breeders.

Guest Users:

These search facilities are available to everyone and provide search capabilities including: EPDs, pedigree information, sire summary designation, as well as breeder and owner information on any of the 3.5 million animals found in the searchable database. You can also access information on animals that are currently for sale or bulls that are available through semen sales. To access these powerful search tools log on to **www.Hereford.org** and click on the link regarding the release of the current EPDs.

Examples of search criteria:

- Name: CL1%DOMINO - retrieve all animals with CL1 at the start of the name and DOMINO somewhere else in the name.
- Regn No: - retrieve animals by registration number.
- Select If drop down boxes provide more selection criteria (eg. Animal has Semen Available, Bull Published in Sire Summary, etc).
- Sire Name: BT BULTER 452M – retrieves all progeny of this animal.
- Dam Name: VICTOREE PRINCESS F32 – retrieves all progeny of this animal.
- EPD Min & Max values enable the user to put in ranges for one or more EPD Traits.
- Sort By drop down box lets you specify how you want the results displayed.

Authorized Users (AHA Internet Accounts):

There are two levels of Internet Accounts available - Basic & Enhanced.

These levels of search capability are for Hereford Breeders that demand more comprehensive data search abilities and personal account tracking. Anyone can sign up for one of these accounts which can provide detailed searches within your own herd as well as across the entire Web searchable database. Here are a few facts about what the AHA Internet accounts have to offer

What / Who are Authorized Users?

Authorized users are individuals, ranches, farms, companies, etc. who have set up an AHA Internet

account with the American Hereford Association. These accounts do not provide you with Internet access and the association is not becoming an internet service provider (ISP). Access to the internet will be required to utilize these accounts.

Who qualifies to set up an AHA Internet account?

Anyone with an active customer account is eligible to set up an AHA Internet account. You are not required to be an actual member to set up an account. If you are not sure whether you have an active customer account with the AHA, please see the section below about signing up.

What are the benefits of having an AHA Internet account?

The primary benefit you will find in setting up an AHA Internet account today, is that you will have access to an online report of your herd's EPDs for active sires, active dams and 1999, 2000 or 2001 and 2002 calf crops from your herd. Additionally, the association will be providing new, convenient services through the use of the AHA Internet accounts in the future. A sample of these services include unprecedented access to the AHA animal and EPD database, download facilities for data files from your herd to use with on-farm herd management software, online registrations and additional online reports, which are "printed and mailed" to you today, preventing delays in getting the information you need.

Why should I set up an AHA Internet account?

You will want to set up an AHA Internet account today to make sure you are ready to take advantage of new online services as soon as they are available. Additionally, these online accounts will allow the association to more effectively communicate with you in a quicker, more effective manner.

What does it cost to set up an AHA Internet account?

For the Basic Account user level, nothing! It is absolutely free!! The only requirements are that you have an active customer account and that you provide the association with a valid email address that we may use to provide you important updates and other association information.

How do I sign up?

All you need to do to sign up is send us an email at accts@Hereford.org giving us your customer account number, name, postal address and email address. If you wish to subscribe to the Enhanced user level, please indicate so in your message. If you are unsure of your customer account number or are not sure if you have an active customer account, please provide

us with your phone number and zip code. We will process your request and reply to you with an email providing you with directions on how to get started using your new AHA Internet account. If you have any questions in the future regarding your AHA internet account please use the email address mentioned above.

Enhanced Account Users:

The ultimate in information gathering capability. The Enhanced Account user level is a subscription-based service which is activated upon payment of the Annual Member Service Fee. Enhanced Users have access to the following additional features:

Expanded Search criteria:

- Calving Years(s): makes looking for specific animals more sensitive (e.g. progeny searches)
- Breeder Location: makes looking for animals bred in specific states possible (use multiple states to create a region)

Expanded Details in Search Results:

- Progeny Views: Quick view of all progeny of an animal or view by herd with general or specific search criteria to help you zero in on certain herds.
- Pedigree Views: Interactive three generation pedigree of every animal encountered in the database.
- Lifetime Dam Production Summaries: For females owned by the breeder in portable document (pdf) format which allows archiving or emailing to prospective customers or other marketing purposes
- Performance Pedigrees: These long, popular reports that traditionally have been mailed out from the office are now available on the Internet. Showing a three generation pedigree, EPDs and complete performance summary of the subject animal and also it's sire and dam.

Additional Tools:

- Mating Predictor: Facilitates planned matings by allowing breeders to enter a sire or sires by Registration No. and then select females by Registration No. or from their herd inventory.
- Online Registry: This service, launched in Fall 2003 allows breeders to update inventories, register animals and submit weaning and yearling data electronically as opposed to the traditional method of filling out forms by hand.

If you have any questions regarding any of these Internet search tools please contact the AHA's customer service department at (816)842-3757.