

# Value of Black Hereford Registration

## Increase Marketability

Whether one owns 10 or 500 Black Hereford cows, a registration certificate shows other producers that you are willing to take the time to document your herd's lineage, performance and production. A Black Hereford pedigree is an ancestral and performance record of an individual animal and is important information for prospective buyers.

## Enhance Genetic Value

The main goal and most valuable service of the American Black Hereford Association (ABHA) is to provide its membership a reputable recording of ancestry, or pedigrees, and an animal's performance for the different economically important production traits. Information contained as part of the ABHA registration certificate consists of an animal's identification, parentage (sire and dam, paternal grand sires and maternal grand dams) and performance. Registration papers and performance records provide added value on all Black Herefords and their progeny.

This ABHA registry paper is a permanent record of ancestry and performance records allowing breeders to accurately compare animals within the breed. Pedigrees are of value to all segments of the beef cattle industry. Breeding programs can be directed towards goals by selecting cattle that excel in those traits which will improve the herd and by selecting breeding animals based on their registry certificate and performance records will dramatically increase the cattle person's chance of success.

## Credibility

The breeder provides all registration and performance data used in producing pedigrees and performance records, bringing to surface the importance of breeder integrity. Improved pedigreed beef cattle for Black Hereford breeders are dependent on the integrity of each individual breeder.

## Credible Genetics

The American Black Hereford Association has examined the pedigrees of both Hereford and Angus animals in the breed in an effort to eliminate any known carriers of a genetic defect.

**PROPERLY IDENTIFIED AND REGISTERED BLACK HEREFORDS  
ARE WORTH MORE MONEY THAN NON IDENTIFIED ANIMALS.**

## Record Keeping for ABHA Breeders

### ABHA Contemporary Groups

#### **Birth Weight Contemporary Group** (within 24 hours of birth)

- Breeder member
- Sex at birth
- Year and season of birth (not more than 100 days)
- Birth type (single, twin, ET)
- Record Calving Ease scores if possible (optional)

#### **Weaning Weight Contemporary Group** (weights should be taken between 150 – 250 days of age)

- Breeder member
- Sex at weaning
- Year and season group (not more than 100 days)
- Breeder-defined management group & code
- Birth type (ET vs. natural)

**Yearling Contemporary Group** (weights should be taken between 320 – 420 days of age)

- Breeder member (original owner & herd)
- Sex at yearling
- Year and season (not more than 100 days)
- Breeder defined management group and code
- Record yearling scrotal when taking yearling weights (optional)

BIF Guidelines define a contemporary group as “a group of cattle of similar age that are the same breed and sex and have been raised in the same management group (same location, on the same feed and pasture, etc.)”. Proper contemporary groups allow genetic differences from one animal to another to be compared without the environmental influences and other factors that can affect performance.

***Contemporary groups are the foundation for accurate Expected Progeny Difference (EPD) analysis. When contemporary groups are properly identified, environmental differences have been accounted for and the differences observed between animals are genetic.***

A contemporary group must have at least two animals. Contemporary groups never get larger after calving. However, contemporary groups can get smaller.

**Report All the Data** – Once the proper contemporary group is defined, data should be collected and reported on **EVERY** individual in the group. Breeders may be tempted to weigh and report only the top performing animals in a group. Breeders may not want to report information on the poorer performing calves because they think it reflects badly on their herd. If either of these two things happens, any genetic evaluation for the group will be biased and less accurate.

Any Black Hereford animal not suitable for registration and transfer should be processed as Compute Only (free) or NR F1 Certified (\$12.50). NR F1 Certified animals will get a pedigree paper as well as performance records. Reporting data for Compute Only calves is free, and will maintain breeder contemporary groups.

***Complete and accurate contemporary groups provide the BEST animal records and comparisons!***

## Birth Information

**Birth Weights** – Calf birth weights should be taken with a spring or digital scale as soon after birth as practical or within 24 hours after birth.

Some cattlemen have used the Calf Scale Birthweight Tape (BT), Nasco, Fort Atkinson, WI. Although Birth Weight Tapes are a convenient alternative to using a scale, they have been shown to overestimate low birth weights and underestimate high birth weights as compared with a hand held hanging scale.

Black Hereford birth weights are adjusted for age of dam. These adjustments are additive:

| <u>Age in Days</u>   | <u>Years</u> | <u>Birth Wt. Adj. (lb)</u> |
|----------------------|--------------|----------------------------|
| Less than 1,004 days | 2 year old   | 5.50                       |
| 1,004 – 1,338 days   | 3 year old   | 2.75                       |
| 1,339 – 1703 days    | 4 year old   | 1.50                       |
| 1,704 – 3,561 days   | 5 to 9 years | 0.00                       |
| 3,562 – 3,926 days   | 10 years     | 1.00                       |
| 3,927 – 4,292 days   | 11 years     | 3.00                       |
| 4,293 - 4,657 days   | 12 years     | 3.00                       |

Black Hereford default birth weights are:

Bull calves – 85 lb.  
Heifer calves – 80 lb.

Black Hereford Adjusted birth weights are figured as follows:

$$\text{Adj. Birth Wt.} = \text{Birth Wt.} + \text{Age of Dam Adj.}$$

Black Hereford birth weight ratios are calculated as follows:

$$\text{Adj. Birth Wt. Ratio} = \frac{\text{Group Average Adj. Birth Wt.}}{\text{Individual Adj. Birth Wt.}} \times 100$$

Birth weight ratios over 100 indicate that that calves' birth weight is heavier than its contemporary group. This is reversed in other associations.

**Calving Ease Scores** – As Black Herefords begin to grow in numbers many breeders, as well as the ABHA, feel birth weight along with a calving ease score will provide the best information to comparative birth information. In the future, with more calving ease scores for Black Herefords, the ABHA will be able to produce EPDs for Calving Ease Direct and Calving Ease Maternal.

Suggested scores are:

- |  |   |
|--|---|
| 1 – No difficulty, no assistance       | 7 – Aborted                             |
| 2 – Minor difficulty, some assistance  | 8 – Open                                |
| 3 – Major difficulty/calf puller used  | 9 – Dam died, Calving difficulty        |
| 4 – Caesarian section or other surgery | 10 – ET donor dam, no calf reported     |
| 5 – Abnormal presentation              | 11 – Recipient dam, calf not reported   |
| 6 – DOA, Calf died at birth            | 12 – Multi-owned dam, data not reported |

*The combination of birth weight and calving ease are a  
cattleman's best selection tool.*

## Weaning Information

**Weaning Weights** – Weaning weights for Black Herefords should be standardized to 205 days of age and a mature dam equivalent. ***Weaning weights should be taken when the average age of a contemporary group of calves is about 205 days of age.*** Adjusted weaning weights should only be done for calves within an age range of 160 to 250 days of age. This would mean that a contemporary group would not be more than 90 days. Calves that fall outside of such a contemporary group should be put in a different contemporary group and noted with different management codes.

WEIGH ALL CALVES WITHIN A CONTEMPORARY GROUP ON THE **SAME DAY!** If individual animals of the same age and sex are treated differently – BE SURE to *mark them with different management codes.*

Individual breeders will have to decide how to make or divide their contemporary groups based on the animal's environment from birth to weaning weight collection.

**Proper contemporary groups produce the most accurate EPDs!**

Adjusted 205-day weaning weight is computed on the basis of average daily gain from birth to weaning, using the formula:

$$\text{Adj. 205-day Wean Wt.} = \frac{\text{Wean Wt.} - \text{Birth Wt.}}{\text{Weaning Age}} \times 205 + \text{Birth Wt.} + \text{Age of Dam Adj.}$$

If actual birth weight is not available, ABHA uses the default birth weights of 85 lb. for bulls and 80 lb. for heifers.

Ages of dam and management adjustments for weaning weight are as follows:

| <u>Age of Dam</u> | <u>Bull<br/>Creep</u> | <u>Bull<br/>No-creep</u> | <u>Heifer<br/>Creep</u> | <u>Heifer<br/>No Creep</u> | <u>Steer<br/>Creep</u> | <u>Steer<br/>No Creep</u> |
|-------------------|-----------------------|--------------------------|-------------------------|----------------------------|------------------------|---------------------------|
| 2                 | 62                    | 65                       | 52                      | 55                         | 62                     | 65                        |
| 3                 | 40                    | 42                       | 38                      | 40                         | 40                     | 42                        |
| 4                 | 29                    | 31                       | 25                      | 27                         | 29                     | 31                        |
| 5                 | 17                    | 18                       | 14                      | 15                         | 17                     | 18                        |
| 6 – 9             | 0                     | 0                        | 0                       | 0                          | 0                      | 0                         |
| 10                | 9                     | 10                       | 4                       | 5                          | 9                      | 10                        |
| 11 and above      | 19                    | 20                       | 17                      | 18                         | 13                     | 15                        |

Breeders should report weaning management codes for all calves. For example, creep vs: no creep. Black Hereford weaning management codes are:

- 1 – No Creep
- 2 – Creep Fed

Black Hereford weaning weight ratios are calculated as follows:

$$\text{Adj. 205-Day Weaning Wt. Ratio} = \frac{\text{Individual Adj. 205-day Weaning Weight}}{\text{Group Average Adj. 205-day Weaning Wt.}} \times 100$$

Ratios over 100 (100 = average) indicate that animal's adjusted 205-day weight was above average for that contemporary group. By the same token, ratios below 100 indicate that the animal was below the average for that contemporary group.

Ratios for animals between contemporary groups and herds are used to calculate the deviation, plus or minus, from the contemporary group and are used to calculate animal EPDs. This is the reason contemporary groups should be properly identified.

## Yearling Information

**Yearling weight** – at 365 days is an important trait because of its high heritability and strong genetic association with efficiency of gain and production of retail beef.

Yearling weights with ABHA should be adjusted to a standard age (365 days) and age of dam. Yearling weights can be taken on animals exposed to a low, medium or high energy diet, but should all be in one contemporary group. The variation in the adjusted yearling weights within contemporary groups is used to predict yearling weight EPDs.

The following formula should be used to calculate 365-day yearling weight:

$$\text{Adj. 365-day Yrlg. Wt} = \frac{\text{Final Wt.} - \text{Weaning Wt.}}{\text{No. of Days Between Wts.}} \times 160 + 205\text{-day Adj. Weaning Wt.}$$

Black Hereford yearling weight ratios are calculated as follows:

$$\text{Adj. 365-Day Yearling Wt. Ratio} = \frac{\text{Individual Adj. 365-day Yearling Weight}}{\text{Group Average Adj. 365-day Yearling Wt.}} \times 100$$

Other important information to be taken along with yearling weight is **yearling bull scrotal circumference**. Scrotal circumference measurements should be taken when yearling weights are recorded.

#### Minimum Scrotal Circumference for Black Hereford Bulls

| <u>Age (months)</u> | <u>Scrotal Circumference</u> |
|---------------------|------------------------------|
| 12-14               | 31                           |
| 15-20               | 33                           |
| 21-30               | 34                           |
| > 30                | 35                           |

Bull age has a large effect on scrotal circumference between the ages of 6 to 36 months, with the most rapid testicular growth taking place between 6 and 16 months. ***Research suggests that the scrotal circumference for Black Hereford bulls increases 0.025 cm. per day for animals between the ages of 320 to 410 days.***

As well as bull age, dam age has an effect on scrotal circumference. Scrotal age of dam adjustments is:

| <u>Age of Dam</u> | <u>Scrotal Adjustment</u> |
|-------------------|---------------------------|
| 2                 | 0.7                       |
| 3                 | 0.3                       |
| 4                 | 0.2                       |
| 5                 | 0.2                       |
| >8                | 0.3                       |

**Scrotal Circumference and Male Fertility:** There is a high correlation (0.81) between scrotal circumference and sperm output. As scrotal circumference increases in yearling bulls it has been noted that motility, percent normal sperm, volume, and sperm concentration all increase while percent abnormalities decrease. Scrotal circumference is moderate to highly heritable so change can be made with selection. Yearling scrotal circumference is a good indicator of bull fertility.

**Scrotal Circumference and Female Fertility** – Research has shown that scrotal circumference is highly correlated with age of puberty in half-sib heifers. It has been estimated that for every one centimeter increase of a sire's scrotal circumference over the population average, one can expect a four day decrease in the age at onset of puberty in heifer offspring. Sires with above average scrotal circumference should produce female offspring that reach puberty sooner and have greater lifetime reproductive potential.