

**Winter/Spring 2010**

**Charolais**  
**Sire Summary**

# P R E F A C E



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On behalf of the American-International Charolais Association we are pleased to present the Spring 2010 Charolais Cattle Evaluation. This current analysis represents the most accurate and comprehensive analysis for the US Charolais cattle population.

This genetic evaluation includes Expected Progeny Differences for economically important traits. EPDs are computed for calving ease (CE), birth weight (BW), weaning weight (WW), yearling weight (YW), maternal milk (Milk), maternal calving ease (MCE), total maternal (MTNL), scrotal circumference (SC) and for carcass merit which is presented on a carcass basis for hot carcass weight (HCW), ribeye area (REA), fat thickness (FAT) and marbling (MARB).

The carcass records for this genetic evaluation represents the combined efforts of breeders that have conducted their own structured sire evaluation program or submitted carcass data on non-replacement Charolais heifers and steers along with carcass data from the AICA Sire Evaluation Program (SEP). Also included in this analysis is ultrasound data on yearling heifers and bulls.

An EPD is currently the best estimate of an animal's genetic worth given the information available for the analysis. Numerous studies using research herds and field records have validated the merit of an EPD as a selection tool to make directional change in beef herds for the traits evaluated. Research has further shown that even for young animals, an EPD can be as much as 9 times more accurate than a within-herd ratio or weight. However, there are many traits that impact the profitability of the beef enterprise, not all of those traits are reported here in this analysis. Furthermore, proper management practices must be matched to your genetics to realize the best opportunity for profitability.

The production of this analysis involves the input of many people. First, the members of AICA supplied the growth and carcass data along with the pedigree and birth information. The accuracy and quality of this analysis can only be as good as this data collectively as the EPD are a direct reflection of the phenotypic data reported. Additionally, Dr. Keith Bertrand and Dr. Igancy Misztal and their professional staff at the University of Georgia for conducting the research, editing the data and finally computing genetic values in the form of Expected Progeny Differences. Without the cumulative effort and dedication to the Charolais breed of all involved, this analysis would not be possible.

A handwritten signature in black ink, appearing to read "Robert E. Williams". The signature is fluid and cursive, with a long horizontal stroke at the end.

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# SIRE SELECTION

## Trait Leaders

Progeny Proven sires identified from the evaluation as trait leaders are those that excel in a specific trait. The determination of a trait leader is based on meeting superior standards in both EPD and accuracy values for a trait. The sires listed include the top 25 sires for BWT, WWT, YWT, and Maternal Milk considering EPD criterion with an accuracy of .55 or greater for that trait. (Top 10 Sires for HCW, REA, FAT, MARB).

**Multiple Trait Sires:** Active Progeny Proven sires identified from the genetic evaluation as multiple trait leaders are those sires that excel in the traits of Birth Weight, Weaning Weight, Yearling Weight and Total Maternal. These traits are each standardized so that equal emphasis can be placed on each of the 4 traits. To qualify for the list a sire must be listed as a Progeny Proven Sire, must have an accuracy value greater than .55 for weaning weight, and must be in the top 50<sup>th</sup> percentile for BWT, WWT, YWT, MAT, and TotMat EPD among active sires.

## Active Sires

**Progeny Proven Sires (Denoted PP):** These sires are those that have met an accuracy standard of .55 in the weaning weight EPD evaluation and have at least five (5) calves sired by him with performance information reported within the last two years. The weaning weight EPD factor is used as a selection criterion as it is least subject to bias and the trait with the most information. EPD and accuracy values for other traits are published for these sires. Sires listed in this category have sired enough performance-tested progeny to warrant considerable predictability.

**Young Sires (Denoted YS):** These sires must be born after January 1, 2005 and meet an accuracy of .35 in the weaning EPD analysis. The value of this category is to distribute information on young sires with potential for use in breeding programs. The EPD values expressed should be considered in relation to lower accuracy values.

## Inactive Sires

The Inactive Sire Section represents sires born since January 1, 1998, that have an accuracy of .55 for weaning weight EPD and are not listed as a Progeny Proven or Young Sire.

## EVALUATION OF SIRE INFORMATION

Name of Bull Date of Birth/Reg. No. Sire	Current Owner/Address	Herds Progeny DIP	CE EPD ACC	BW EPD ACC	WW EPD ACC	YW EPD ACC	Mat. EPD ACC	MCE EPD ACC	Total Matnl. EPD ACC	SC EPD ACC	Carc. Ultra U Hrd	HCW EPD ACC	REA EPD ACC	FAT EPD ACC	MARB EPD ACC
PP BULL'S NAME 03/22/1999 M 000000 BULL'S SIRE	AICA PO BOX 20247 KANSAS CITY, MO 64195	2 107 9	14 0.58	-1.8 0.76	22 0.65	39 0.20	4 0.26	12 0.24	15	N/A	0 1 1	16 0.16	0.17 0.13	-0.003 0.09	0.03 0.05
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>

**1** Bull's official name, birth date, AICA registration number, sire.

**2** Bull's current owner and address.

**3** Herds, Progeny and Daughters in Production (DIP) – reflects the number of herds this sire has been used in, the number of progeny whose performance was evaluated for this edition of the sire summary, and the number of daughters whose offspring were evaluated for calculating the Maternal Milk EPD.

**4** Calving Ease Direct (CE) - expressed as a difference in percentage of unassisted births in first calf heifers. A higher value indicates greater calving ease. It predicts the average difference in unassisted births with which a sire's calves will be born when bred to first-calf heifers.

**5** Birth Weight EPD – the expected difference in average birth weight (pounds) of progeny. Birth weight reflects prenatal growth.

**6** Weaning Weight EPD – the expected difference in average weaning weight of calves. The evaluation reflects the genetic influence on pre-weaning growth rate.

**7** Yearling Weight EPD – the expected difference in average yearling weight of progeny. The evaluation reflects genetic influence on both pre-weaning and post-weaning growth rate.

**8** Maternal Milk EPD – the genetic ability of a sire's daughters to express in pounds of weaning weight in her calves due to her maternal ability through mothering instinct and milk.

**9** Calving Ease Maternal (MCE) - expressed as a difference in percentage of unassisted births in first calf daughters. A higher value indicates greater

calving ease. It predicts the average difference in unassisted births with which a sire's daughters will calve as first-calf heifers when compared to daughters of other sires.

**10** Total Maternal EPD – a value to predict the weaning weight performance of calves from a sire's daughters due to genetics for growth and maternal ability. Total Maternal is calculated by adding 1/2 the WWT EPD to the Maternal Milk EPD.

**11** Scrotal Circumference EPD — the expected difference in scrotal circumference (expressed in centimeters) of a bulls male offspring at yearling compared to progeny of all other bulls evaluated. Research has also indicated a relationship between increased scrotal circumference and decreased age at puberty for a sires daughters.

**12** Carc, Ultra, U Hrd – reflects the number of carcass progeny used in computing the carcass EPD, the number of progeny with ultrasound data used in computing the carcass EPD and the number of herds that have contributed ultrasound records for progeny.

**13** Hot Carcass Weight EPD (HCW) – the expected difference in average hot carcass weight of progeny at a constant age endpoint.

**14** Ribeye Area EPD (REA) – the expected difference in average ribeye area of progeny at a constant age endpoint.

**15** 12th-13th Rib Fat Thickness EPD (FAT) – the expected difference in average fat thickness at the 12th and 13th rib of progeny at a constant age endpoint.

**16** Marbling EPD (MARB) – the expected difference in average USDA marbling score of progeny at a constant age endpoint.

Sire summaries use the term Expected Progeny Difference (EPD) to express genetic transmitting ability of a sire for the various traits listed. An EPD is a prediction of how future progeny of a sire are expected to perform in a particular trait relative to other sires in the analysis. The key word is "difference." The EPD itself does not imply "good" or "bad" performance. But rather, the EPD gives a prediction of the average difference to expect in the performance of a sire's progeny relative to other sires in the same analysis.

The EPD for a given trait on each bull listed in the Sire Summary is compared to every other bull in this sire summary report. The EPD is reported as a plus or minus value in the unit which the trait is measured.

Each EPD reported is accompanied with an Accuracy (ACC) figure. ACC is a measure of reliability regarding the EPD evaluation for a performance trait. Accuracy is reported as a decimal number between zero and one: large values indicate greater accuracy and more certainty that the EPD will show little change as additional progeny information is obtained.

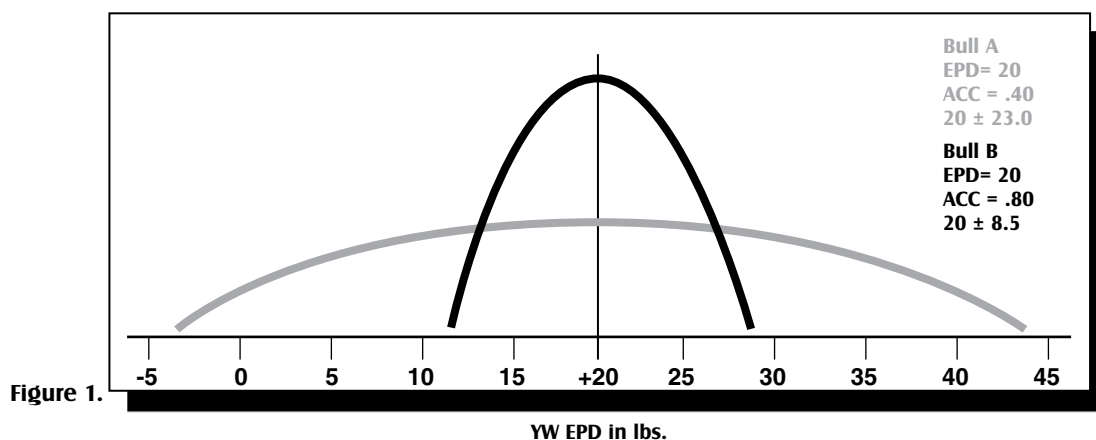
# ACCURACY VALUES

## USING ACCURACY VALUES

Accuracy values give us an indication of how close our estimates are to an animal's true genetic value. Accuracy values are extremely useful to breeders in determining the **reliability** of an EPD. An accuracy value can range from 0.0 to 1.0, depending on the amount of information that is known about an animal for any one of the reported traits. **As the** amount of information included in the analysis of a trait for an individual increases, the accuracy value for that trait increases accordingly.

Table 1 shows the standard error of prediction (possible change value for an EPD) at various levels of accuracy for the traits reported. You will notice that as the accuracy level increases, the possible change value decreases. Still, an EPD can change from year to year even though it may have a high level of accuracy. The point to remember is that the expected change of an EPD with a high ACC is correspondingly less than those of an EPD with a lower ACC value.

The possible change of identical EPD, given different levels of accuracy, can be seen in Figure 1. Two bulls have YW EPD of +20, but different ACC values. This figure illustrates the possible range within where the true genetic value is. Bull A has an ACC of .40 with a possible change of  $\pm 23.0$  pounds, and Bull B has an ACC of .80 with a possible change value of  $\pm 8.5$  pounds. As additional information is reported and accuracy levels increase, we would expect the EPD to stay within the range of the possible change value.



Even though both bulls have an EPD of +20 pounds for yearling weight; Bull B has a higher reliability that his true genetic value is within the narrower range of 11.50 to 28.50 (20~8.50).

The ACC of a given EPD can help determine the amount of risk a breeder is willing to take in his breeding decisions. Let us compare the bulls in Figure 1 again. Which bull is more desirable for your breeding program? The bull with the high ACC is more predictable, but the amount of genetic change that can be made is correspondingly limited as well. Bull A has the same YW EPD, but his true genetic value may be beyond that of Bull B. Therefore Bull A could possibly increase the amount of genetic progress made, but he is also more of a risk because his true genetic value falls within a wider range.

## POSSIBLE CHANGE

Accuracy values help determine the amount of risk associated with genetic repeatability, but they are not foolproof. Table 1 shows the possible change values of an EPD with a given ACC. Approximately 70 percent of the time the EPD will not deviate outside of these parameters.

Table 1.

ACC	BWT	WWT	MILK	YWT	SC	HCW	REA	FAT	MARB	CE	MCE
0.0	4.1	21.1	14.0	31.3	0.75	16.7	0.42	0.038	0.27	14.2	13.4
0.1	3.9	20.4	14.0	30.3	0.69	15.0	0.38	0.034	0.24	12.7	12.0
0.2	3.7	19.4	13.6	28.8	0.62	13.5	0.34	0.030	0.21	11.2	10.6
0.3	3.4	17.8	12.9	26.4	0.55	11.9	0.30	0.027	0.18	9.8	9.2
0.4	3.0	15.5	11.8	23.0	0.48	10.1	0.26	0.023	0.16	8.3	7.9
0.5	2.6	13.1	10.1	19.5	0.41	8.4	0.22	0.019	0.13	6.9	6.5
0.6	2.2	10.7	8.5	16.0	0.35	6.7	0.18	0.015	0.10	5.5	5.2
0.7	1.8	8.2	6.7	12.3	0.28	5.1	0.14	0.011	0.08	4.1	3.9
0.8	1.3	5.7	5.5	8.5	0.21	3.6	0.10	0.008	0.05	2.7	2.6
0.9	0.8	3.1	3.7	5.0	0.14	2.0	0.06	0.004	0.03	1.3	1.3
1.0	0.0	0.0	1.9	0.0	0.00	0.0	0.00	0.000	0.00	0.0	0.0

# HERITABILITY / GENETIC TREND

## HERITABILITY

Heritability may be defined as the proportion of the observed phenotypic variation that is due to genetic variation. For example, when analyzing a group of same sire, one would expect some variation in the weaning weights. Since weaning weight is 25 percent heritable, 25 percent of the observed variation is attributable to genetics while the remaining 75 percent of the observed variation is due to environmental influences.

Traits with low heritability estimates are influenced more by environment than by genetics, thus genetic progress from selection may be slow. Traits with low heritability respond greater to the effects of crossbreeding. Since heritability is already an integral part of the EPD formula, EPD reflect actual differences and require no adjustment.

	ULTRASOUND MEASUREMENTS (Correlated Traits)															
	BWT	WWT	PWG	MAT	SC	REA	HCW	FAT	MARB	CE	MCE	IMF	REA	SCAN WT	FAT THICK	RUMP FAT
BWT	<b>0.49</b>	0.47	0.22							-0.76	0.16					
WWT		<b>0.25</b>	0.49	-0.32	0.28	0.35	0.45	-0.10	-0.07							
PWG			<b>0.31</b>		0.35											
MAT				<b>0.14</b>												
SC					<b>0.31</b>											
REA						<b>0.34</b>	0.40					0.70				
HCW							<b>0.21</b>						0.75			
FAT								<b>0.26</b>	0.15						0.70	0.48
MARB									<b>0.36</b>			0.68				
CE										<b>0.24</b>	-0.06					
MCE											<b>0.16</b>					
IMF												<b>0.23</b>				
REA													<b>0.39</b>			
SCAN WT														<b>0.27</b>		
FAT THICK															<b>0.35</b>	
RUMP FAT																<b>0.38</b>

## GENETIC TREND

This chart lists the genetic trend of the North American Charolais breed for birth weight, weaning weight, yearling weight and maternal milk.

YEAR	BWT	WWT	YWT	MILK	SC	TOTMAT	CE	MCE	CWT	REA	FAT	MARB
1990	1.0	6.2	11.4	0.3	0.10	3.4	-2.0	0.9	4.1	0.03	-0.003	0.00
1991	1.0	7.3	13.2	0.7	0.15	4.3	-1.8	1.2	4.8	0.03	-0.003	0.00
1992	1.0	8.1	14.5	1.0	0.17	5.1	-1.7	1.4	5.2	0.04	-0.003	0.01
1993	1.1	8.9	16.0	1.3	0.22	5.8	-1.6	1.7	5.7	0.05	-0.003	0.00
1994	1.1	9.8	17.5	1.7	0.22	6.6	-1.2	2.1	6.2	0.05	-0.003	0.01
1995	1.1	10.7	18.9	2.2	0.22	7.6	-1.1	2.1	6.7	0.06	-0.003	0.01
1996	1.0	11.8	20.7	2.8	0.25	8.7	-0.7	2.3	7.2	0.07	-0.003	0.01
1997	1.0	12.7	22.2	3.4	0.30	9.7	-0.4	2.6	7.8	0.08	-0.003	0.01
1998	0.9	13.7	23.9	3.6	0.33	10.4	0.0	2.9	8.2	0.09	-0.003	0.01
1999	0.9	14.7	25.5	4.2	0.37	11.6	0.4	3.1	8.6	0.09	-0.003	0.01
2000	0.9	15.7	27.1	4.6	0.39	12.4	1.0	3.4	9.1	0.10	-0.002	0.01
2001	0.9	16.8	29.1	4.8	0.43	13.2	1.1	3.4	10.0	0.11	-0.002	0.01
2002	0.9	18.4	31.7	5.1	0.46	14.3	1.5	3.5	10.7	0.11	-0.002	0.01
2003	0.8	19.3	33.1	5.4	0.49	15.1	1.7	3.5	11.2	0.12	-0.002	0.01
2004	0.8	20.2	35.1	5.6	0.53	15.7	1.9	3.5	11.7	0.13	-0.001	0.01
2005	0.8	21.1	36.7	5.8	0.55	16.3	2.0	3.6	12.1	0.14	-0.001	0.01
2006	0.7	22.0	38.4	6.2	0.58	17.2	2.2	3.6	12.7	0.15	-0.001	0.01
2007	0.7	22.7	39.8	6.4	0.61	17.8	2.4	3.6	13.1	0.16	0.000	0.01
2008	0.6	23.7	41.7	6.7	0.64	18.6	2.5	3.6	13.8	0.18	0.000	0.01
2009	0.4	24.6	43.3	6.8	0.67	19.1	2.9	3.2	14.8	0.18	0.001	0.02

# EPD DISTRIBUTION TABLES

ACTIVE SIRE EPD DISTRIBUTION					
Trait	N	Average	Std Dev	Min	Max
BWT	3,137	0.7	2.26	-11.6	9.2
WWT	3,137	24.8	10.58	-25	68
YWT	3,137	43.5	18.31	-30	122
MAT	3,137	6.6	6.78	-19	27
TOT MAT	3,137	19.0	8.65	-9	46
SC	3,137	0.58	0.4	-0.8	2.2
CE	3,128	2.6	5.38	-20.1	21.3
MCE	3,128	3.5	4.23	-20.3	15.4
HCW	3,120	11.9	9.94	-25	47
REA	3,120	0.15	0.22	-0.70	1.12
FAT	3,120	-0.001	0.017	-0.067	0.080
MARB	3,120	0.01	0.12	-0.48	0.54

NON PARENT EPD DISTRIBUTION (last 2 years)					
Trait	N	Average	Std Dev	Min	Max
BWT	44,595	0.6	2.05	-9.8	9.4
WWT	44,595	24.0	8.74	-22	59
YWT	44,595	42.2	14.9	-28	111
MAT	44,585	6.6	5.21	-16	28
TOT MAT	44,585	18.6	6.94	-9	47
SC	44,585	0.58	0.3	-0.8	2
CE	42,870	2.6	4.74	-23.3	20.6
MCE	42,870	3.5	3.61	-21.7	14.3
HCW	13,666	13.7	8.69	-21	52
REA	13,666	0.18	0.20	-0.61	1.10
FAT	13,666	0.001	0.016	-0.049	0.097
MARB	13,666	0.03	0.10	-0.56	-0.57

ACTIVE DAM EPD DISTRIBUTION					
Trait	N	Average	Std Dev	Min	Max
BWT	37,803	0.8	1.93	-8.5	10.1
WWT	37,803	20.7	9.25	-20	61
YWT	37,803	36.0	16	-28	108
MAT	37,803	6.3	6.33	-20	32
TOT MAT	37,803	16.6	8.27	-17	53
SC	37,803	0.47	0.34	-0.7	1.7
CE	37,494	1.7	4.83	-26.3	17.7
MCE	37,494	3.3	4.35	-25.3	16.8
HCW	25,523	9.4	8.37	-26	46
REA	25,523	0.10	0.17	-0.78	0.96
FAT	25,523	-0.002	0.013	-0.052	0.144
MARB	25,523	0.02	0.09	-0.38	0.48

## CARCASS EPD INTRODUCTION

Carcass traits evaluated in the AICA Genetic Analysis for carcass merit include Carcass Weight, Fat Thickness, Ribeye Area and Marbling. The records were analyzed using multiple trait animal models that included genetic relationships between animals and traits. Carcass and ultrasound records represents the combined efforts of breeders that have conducted their own structured sire evaluation program, submitted carcass data on non-replacement Charolais heifers and steers, reported ultrasound scan data on yearling heifers and bulls, along with carcass data from the AICA Sire Evaluation Program (SEP).

To include more sires in the analysis it is important that Charolais breeders continue collecting and reporting carcass information on fed progeny and ultrasound data on yearling replacement heifers and bulls to AICA. For more information on carcass data collection or ultrasound scanning of yearling bulls and heifers please contact the AICA Director of Breed Improvement programs.

## USING CARCASS EPD

The objective of a carcass evaluation is to provide genetic information that will aid the producer in making selection decisions based on carcass merit. Used properly Carcass EPD provide the best information available to make directional change for carcass merit in breeding programs. Breeders should be cautioned about the dangers of single trait selection for any trait. Genetic correlations exist between many economically important traits, and not all are favorable. Producers should select for multiple traits that have direct impact on the profitability of their enterprise.

Records were adjusted to an age constant endpoint. Therefore selection based on any or all of the carcass merit EPD are comparable among cattle at the same age endpoint. For example selection based on increased EPD for carcass weight will result in heavier carcass weights than those animals with lower EPD for carcass weights when the cattle are harvested at the same age.

**Progeny.** The number of progeny records that contributed to the genetic analysis for carcass weight. The number of progeny that contributed to the other carcass traits may be slightly different due to lost or edited data.

**Carcass Weight EPD (HCW).** Expected Progeny Differences for Carcass weight is a predictor of pounds of retail product at a constant age endpoint. Selection for increased values should result in heavier carcasses, while selection for decreased values should result in lighter carcass weights at the same age endpoint. Carcass Weight EPD are expressed in pounds and is a predictor of the differences in hot carcass weight between sires progeny at an age constant endpoint.

**Ribeye Area (REA).** Ribeye area is measured from a cross-sectional area of the longissimus dorsi muscle at the 12<sup>th</sup> rib. Ribeye area is a major component of the USDA yield grade equation and selection for increased ribeye area should result in larger ribeyes and lower yield grades between animals with the same carcass weight. Ribeye area has a positive relationship with weight, the larger an animal the larger the ribeye area. Ribeye Area EPD are expressed in square inches and is a predictor of differences in ribeye area between sires progeny at a constant age endpoint.

**Fat Thickness (FAT).** Fat thickness is measured at the 12<sup>th</sup> rib and is the primary component to the USDA Yield Grade equation. Fat thickness has a negative relationship to cutability; therefore, selection based on decreased fat thickness should result in lower yield grades and leaner cattle given the same age endpoint. Fat Thickness EPD are expressed in inches and are a predictor of differences in fat thickness between sires progeny at an age constant endpoint.

**Marbling Score (MARB).** Marbling is a subjective measure of the amount of intramuscular fat in the ribeye muscle. Marbling score is the primary component of USDA Quality grade and selection for increased Marbling Score EPD should result in cattle with higher quality grades at the same age endpoints. Marbling score has a small genetic correlation with fat, therefore producers may select for increased marbling score EPD while not changing external fat thickness when cattle are harvested at the same age-constant endpoint. Marbling EPD is a prediction of the differences in the USDA subjective marbling score between sires progeny at an age constant endpoint. Marbling EPD is expressed in the same units as the USDA Marbling Score, see the accompanying table for USDA Marbling Score.

### USDA QUALITY GRADING SYSTEM AND MARBLING SCORE

Quality Grade	Amount of Marbling	Numerical Score
Prime +	Abundant	10.0 - 10.9
Prime	Moderately Abundant	9.0 - 9.9
Prime -	Slightly Abundant	8.0 - 8.9
Choice +	Moderate	7.0 - 7.9
Choice	Modest	6.0 - 6.9
Choice -	Small	5.0 - 5.9
Select	Slight	4.0 - 4.9
Standard	Traces	3.0 - 3.9
Standard	Practically Dvoid	2.0 - 2.9
Utility	Devoid	1.0 - 1.9

# PERCENTILE BREAKDOWNS

EPD Percentile Breakdown for Active Sires												
Top %	BWT	WWT	YWT	MAT	TOT MAT	SC	CE	MCE	HCW	REA	FAT	MARB
1	≤ -5.8	≥ 48.1	≥ 84.6	≥ 22.0	≥ 37.9	≥ 1.6	≥ 14.5	≥ 12.2	≥ 36.5	≥ 0.74	≤ -0.040	≥ 0.328
2	-4.8	46.1	80.8	20.4	36.3	1.4	12.8	10.9	32.4	0.65	-0.035	0.27
3	-4.2	43.8	77.4	18.8	34.9	1.3	11.7	10.3	30.7	0.58	-0.032	0.24
4	-3.7	42.6	74.8	18.2	33.8	1.3	11.0	9.8	29.5	0.54	-0.030	0.23
5	-3.2	41.7	73.2	17.6	33.0	1.2	10.5	9.4	28.4	0.51	-0.027	0.21
6	-3.0	40.8	71.3	16.8	32.0	1.2	10.2	9.1	27.5	0.49	-0.026	0.20
7	-2.7	39.8	70.1	16.3	31.4	1.2	9.9	8.9	26.7	0.47	-0.025	0.19
8	-2.4	39.1	68.7	16.0	30.8	1.1	9.5	8.6	26.0	0.45	-0.023	0.18
9	-2.3	38.5	67.9	15.6	30.3	1.1	9.3	8.4	25.0	0.44	-0.022	0.17
10	-2.1	38.1	67.0	15.2	29.9	1.1	9.1	8.2	24.3	0.42	-0.021	0.16
15	-1.4	35.7	62.1	13.6	27.9	1.0	7.9	7.5	21.8	0.36	-0.017	0.13
20	-1.0	33.6	58.7	12.3	26.5	0.9	7.0	6.9	19.7	0.32	-0.015	0.11
25	-0.6	31.9	55.6	11.1	25.2	0.8	6.2	6.3	18.1	0.28	-0.012	0.08
30	-0.2	30.3	52.7	10.1	23.7	0.8	5.5	5.8	16.8	0.25	-0.010	0.06
35	0.0	28.8	50.2	9.3	22.5	0.7	4.9	5.4	15.5	0.22	-0.008	0.05
40	0.3	27.5	48.0	8.5	21.3	0.7	4.2	4.8	14.3	0.19	-0.006	0.04
45	0.6	26.3	45.9	7.7	20.3	0.6	3.6	4.4	13.2	0.17	-0.004	0.02
50	0.8	25.1	43.6	6.8	19.3	0.6	3.0	3.9	12.1	0.14	-0.002	0.01
55	1.0	23.7	41.3	6.0	18.2	0.5	2.3	3.4	10.8	0.12	0.000	0.00
60	1.3	22.4	38.9	5.0	17.0	0.5	1.7	3.0	9.5	0.09	0.002	-0.01
65	1.5	21.1	36.9	4.1	15.9	0.4	0.9	2.5	8.2	0.06	0.004	-0.03
70	1.8	19.7	34.6	3.1	14.7	0.4	0.1	1.9	7.1	0.04	0.006	-0.04
75	2.1	18.4	32.1	2.1	13.5	0.3	-0.7	1.4	5.7	0.01	0.009	-0.06
80	2.4	16.8	29.0	0.9	12.0	0.3	-1.7	0.5	4.2	-0.03	0.012	-0.08
85	2.8	14.4	26.0	-0.4	10.3	0.2	-2.7	-0.4	2.1	-0.07	0.015	-0.10
90	3.2	11.4	20.8	-2.0	7.7	0.1	-4.3	-1.8	-0.5	-0.12	0.019	-0.13
95	4.1	6.9	12.6	-4.4	4.2	-0.1	-6.9	-4.1	-4.2	-0.18	0.026	-0.18
100	9.2	-24.8	-29.8	-19.3	-9.2	-0.8	-20.1	-20.3	-25.0	-0.70	0.080	-0.48

Percentile breakdowns make it possible to determine where an animal ranks within the Charolais breed, based on its EPD. For example, if your herd sire's WWT EPD is +24, he would rank in the top 55 percent for active Charolais sires for weaning weight.

This chart is applicable to all active bulls that have progeny registered with the AICA or CCA.

EPD Percentile Breakdown for Active Dams												
Top %	BWT	WWT	YWT	MAT	TOT MAT	SC	CE	MCE	HCW	REA	FAT	MARB
1	≤ -4.1	≥ 41.3	≥ 71.8	≥ 20.8	≥ 35.6	≥ 1.2	≥ 11.8	≥ 11.4	≥ 29.4	≥ 0.52	-0.031	≥ 0.25
2	-3.5	38.9	67.8	19.1	33.4	1.2	10.7	10.6	26.9	0.47	-0.028	0.22
3	-3.0	37.4	65.2	18.0	31.9	1.1	10.0	10.1	25.3	0.43	-0.025	0.20
4	-2.7	36.2	63.1	17.2	30.8	1.1	9.4	9.6	24.1	0.41	-0.024	0.18
5	-2.5	35.3	61.5	16.6	30.0	1.0	9.0	9.3	23.2	0.38	-0.023	0.17
6	-2.3	34.5	60.1	16.0	29.3	1.0	8.6	9.1	22.3	0.37	-0.021	0.16
7	-2.1	33.8	58.9	15.5	28.7	1.0	8.3	8.8	21.7	0.35	-0.020	0.15
8	-1.9	33.2	57.9	15.1	28.1	0.9	8.0	8.6	21.0	0.34	-0.020	0.15
9	-1.8	32.7	57.0	14.7	27.6	0.9	7.7	8.4	20.4	0.33	-0.019	0.14
10	-1.6	32.1	56.1	14.3	27.1	0.9	7.5	8.2	19.9	0.32	-0.018	0.13
15	-1.1	30.1	52.3	12.8	25.1	0.8	6.5	7.4	17.8	0.27	-0.015	0.11
20	-0.7	28.5	49.4	11.5	23.6	0.8	5.7	6.8	16.1	0.24	-0.013	0.09
25	-0.4	27.1	46.9	10.5	22.3	0.7	5.0	6.2	14.8	0.21	-0.011	0.07
30	-0.1	25.7	44.7	9.6	21.0	0.6	4.3	5.7	13.6	0.19	-0.009	0.06
35	0.2	24.5	42.5	8.7	19.9	0.6	3.7	5.3	12.5	0.16	-0.007	0.05
40	0.4	23.4	40.5	7.9	18.8	0.5	3.2	4.8	11.4	0.14	-0.006	0.04
45	0.7	22.2	38.5	7.1	17.8	0.5	2.6	4.3	10.4	0.12	-0.004	0.02
50	0.9	21.1	36.5	6.3	16.8	0.5	2.1	3.9	9.4	0.10	-0.003	0.01
55	1.1	20.0	34.5	5.6	15.7	0.4	1.5	3.4	8.3	0.08	-0.001	0.00
60	1.3	18.7	32.5	4.8	14.7	0.4	0.9	2.9	7.3	0.06	0.000	-0.01
65	1.6	17.5	30.4	3.9	13.5	0.3	0.2	2.4	6.3	0.04	0.002	-0.02
70	1.8	16.1	28.1	3.0	12.4	0.3	-0.4	1.8	5.2	0.01	0.004	-0.03
75	2.1	14.6	25.6	2.0	11.1	0.2	-1.2	1.1	4.0	-0.01	0.006	-0.04
80	2.4	13.0	22.7	1.0	9.7	0.2	-2.1	0.3	2.6	-0.04	0.008	-0.06
85	2.7	11.0	19.3	-0.5	8.0	0.1	-3.1	-0.8	1.0	-0.07	0.011	-0.07
90	3.2	8.5	15.1	-1.8	5.9	0.0	-4.5	-2.3	-1.2	-0.11	0.015	-0.10
95	3.9	4.8	8.7	-4.2	2.8	-0.1	-6.8	-4.9	-4.4	-0.18	0.020	-0.13
100	10.1	-19.8	-28.4	-19.5	-17.2	-0.7	-26.3	-25.3	-26.1	-0.78	0.144	-0.38

This chart is applicable to all active cows that have progeny registered with the AICA or CCA.

EPD Percentile Breakdown for Non-Parent												
Top %	BWT	WWT	YWT	MAT	TOT MAT	SC	CE	MCE	HCW	REA	FAT	MARB
1	≤ -4.9	≥ 43.5	≥ 75.7	≥ 18.7	≥ 34.4	≥ 1.3	≥ 12.9	≥ 10.7	≥ 34.6	≥ 0.67	-0.033	≥ 0.28
2	-4.2	41.3	71.6	17.1	32.6	1.2	11.6	9.8	31.9	0.61	-0.029	0.25
3	-3.7	39.7	69.1	16.3	31.4	1.1	10.9	9.3	30.3	0.57	-0.027	0.23
4	-3.3	38.7	67.4	15.7	30.5	1.1	10.3	8.9	29.0	0.54	-0.025	0.21
5	-3.0	37.8	65.9	15.2	29.8	1.1	9.8	8.6	28.0	0.51	-0.024	0.20
6	-2.7	37.1	64.6	14.7	29.2	1.0	9.5	8.3	27.1	0.49	-0.022	0.19
7	-2.5	36.5	63.6	14.3	28.7	1.0	9.2	8.1	26.4	0.48	-0.021	0.18
8	-2.3	35.9	62.6	14.0	28.2	1.0	8.8	7.9	25.7	0.46	-0.020	0.17
9	-2.2	35.4	61.7	13.6	27.8	1.0	8.6	7.8	25.2	0.45	-0.019	0.17
10	-2.0	34.9	60.8	13.3	27.4	1.0	8.3	7.6	24.7	0.43	-0.019	0.16
15	-1.4	32.9	57.4	12.0	25.8	0.9	7.3	6.9	22.6	0.38	-0.016	0.13
20	-1.0	31.3	54.7	11.0	24.5	0.8	6.5	6.3	20.9	0.34	-0.013	0.11
25	-0.6	29.9	52.3	10.0	23.4	0.8	5.8	5.9	19.4	0.31	-0.011	0.09
30	-0.3	28.6	50.1	9.4	22.3	0.7	5.2	5.5	18.2	0.28	-0.008	0.08
35	0.0	27.5	48.1	8.7	21.3	0.7	4.6	5.1	17.0	0.25	-0.006	0.07
40	0.2	26.4	46.2	8.0	20.4	0.6	4.0	4.7	15.9	0.22	-0.004	0.05
45	0.5	25.3	44.3	7.3	19.5	0.6	3.5	4.2	14.8	0.20	-0.002	0.04
50	0.7	24.2	42.4	6.7	18.7	0.6	2.9	3.9	13.7	0.17	-0.001	0.03
55	0.9	23.1	40.6	6.0	17.8	0.5	2.4	3.5	12.6	0.15	0.002	0.01
60	1.1	22.0	38.7	5.3	17.0	0.5	1.8	3.1	11.6	0.12	0.004	0.00
65	1.4	20.9	36.8	4.6	16.1	0.5	1.2	2.7	10.5	0.10	0.006	-0.01
70	1.6	19.7	34.7	3.9	15.1	0.4	0.6	2.2	9.3	0.07	0.008	-0.03
75	1.9	18.3	32.5	3.1	14.0	0.4	-0.2	1.6	8.0	0.04	0.011	-0.04
80	2.2	16.8	30.6	2.2	12.8	0.3	-1.0	0.9	6.5	0.01	0.014	-0.05
85	2.6	15.0	27.0	1.2	11.4	0.3	-2.0	0.1	4.8	-0.02	0.018	-0.07
90	3.0	12.7	23.0	-0.1	9.7	0.2	-3.5	-1.1	2.8	-0.07	0.022	-0.10
95	3.8	9.1	16.9	-2.0	7.0	0.1	-5.7	-3.0	-0.5	-0.14	0.029	-0.13
100	9.4	-21.7	-28.2	-16.4	-9.1	-0.8	-23.3	-21.7	-21.4	-0.61	0.097	-0.56

This chart is applicable to all active heifers and bulls born in the last two years that do not have progeny registered with the AICA or CCA.

# P H E N O T Y P I C   T R E N D S

Includes all animals in the AICA Performance Database used in computation of EPD

	MALES				FEMALES			
YEAR	BWT	WWT	GAIN	YWT	BWT	WWT	GAIN	YWT
1990	92	634	494	1131	88	580	287	871
1991	92	634	491	1124	88	580	298	876
1992	92	645	486	1134	88	591	292	882
1993	92	643	495	1151	87	592	288	882
1994	91	637	493	1135	87	584	290	875
1995	91	635	481	1128	87	583	287	871
1996	90	626	484	1114	86	574	282	861
1997	90	634	495	1141	86	579	293	884
1998	90	635	498	1143	85	582	300	888
1999	89	648	519	1175	85	592	310	906
2000	89	657	500	1166	85	598	304	913
2001	89	652	499	1159	85	596	299	902
2002	89	654	507	1171	85	594	312	914
2003	89	653	503	1172	85	596	308	912
2004	89	669	511	1193	84	603	291	906
2005	89	665	513	1195	85	600	314	923
2006	89	674	499	1185	84	608	308	913
2007	89	665	502	1182	84	595	300	898
2008	89	666	509	1198	84	600	277	882
2009	89	688			84	616		

### Phenotypic Distribution for Carcasses in the Charolais Database. Adjusted to 480 days (Steers).

Trait	No. of Records	Avg	Std. Dev	Min	Max
Hot Carcass Weight (HCW)	6,381	806	97.01	410	1135
Ribeye Area (REA)	6,558	14.10	1.58	9.10	20.10
Fat Thickness (FAT)	6,527	0.40	0.15	0.01	1.22
Marbling (MARB)	6,513	4.99	0.92	1.10	10.00

### Phenotypic Distribution for Carcasses in the Charolais Database. Adjusted to 480 days (Heifers).

Trait	No. of Records	Avg	Std. Dev	Min	Max
Hot Carcass Weight (HCW)	2,870	800	76.90	466	1063
Ribeye Area (REA)	2,871	14.95	1.79	9.50	21.70
Fat Thickness (FAT)	2,664	0.37	0.17	0.05	3.53
Marbling (MARB)	2,646	4.50	1.03	2.12	9.55

### Phenotypic Distribution for Ultrasound (Bulls) in the Charolais Database. Adjusted to 365 days.

Trait	No. of Records	Avg	Std. Dev	Min	Max
Scan Weight	28,799	1147	131	405	1653
Ribeye Area	29,360	13.61	1.81	5.70	20.70
Rib Fat Thickness	27,086	0.17	0.06	0.04	0.60
Rump Fat Thickness	23,008	0.19	0.06	0.04	0.50
% IMF	28,247	2.75	0.64	0.65	6.04

### Phenotypic Distribution for Ultrasound (Heifers) in the Charolais Database. Adjusted to 365 days.

Trait	No. of Records	Avg	Std. Dev	Min	Max
Scan Weight	7,915	853	108	424	1438
Ribeye Area	7,905	10.33	1.57	5.80	17.00
Rib Fat Thickness	7,113	0.16	0.06	0.03	0.47
Rump Fat Thickness	6,142	0.21	0.08	0.03	0.58
% IMF	7,698	3.28	0.78	0.95	6.73

# G L O S S A R Y

**Accuracy-** the correlation between an animal's unknown actual breeding value and a calculated estimated breeding value. This figure will range between 0.0 and 1.0.

**Backsolution EPD (BKS)-** a matrix technique that is used with the Reduced Animal Model to obtain breeding values of non-parents by back-solving from the predicted parental breeding values. A BKS EPD is exactly the same as it would be from the full model.

**Correlation-** a measure of how two (2) traits vary or influence each other. Correlations range from -1.0 to +1.0. A positive correlation indicates that as one trait increases the other trait increases, and a negative correlation indicates that as one trait increases the other trait decreases. A correlation of, or around 0.0 indicates that neither trait influences the other.

**Contemporary group-** the proper identification of contemporary groups is of critical importance to the overall accuracy of the analysis. Contemporary groups are defined as 1) animals of the same sex, 2) animals of similar ages (usually not more than a 90-day spread in birth dates), and 3) animals managed together and given equal opportunity to perform (same pasture, same weigh dates, etc.).

**Deviation-** the difference between an individual record and the average for that trait for that contemporary group.

**Environmental effects-** all external (non-genetic) conditions that influence the reproduction, performance and carcass merit of cattle. These effects are accounted for in EPD calculation so that animals of the same breed from different parts of the country can be compared.

**Expected Progeny Difference (EPD)-** the difference in performance to be expected from future progeny of an individual, compared with the average. EPD is an estimate based on available performance data and is equal to one-half the estimate of breeding value. EPDs are generally reported in the units of measure of the trait (e.g., lb., cm., etc.).

**Genes-** the basic units of heredity that occur in pairs and have their effect in pairs in the individual, but which are transmitted singly from each parent to the offspring.

**Genetic correlations-** correlations between two traits that arise because some of the same genes affect both traits. When two traits (i.e., weaning and yearling weight) are positively and highly correlated to one another, successful selection for one will result in an increase in the other trait. When two traits are negatively and highly correlated, successful selection for one will result in a decrease in the other trait.

**Genotype-** actual genetic makeup of an individual determined by its genes or germplasm.

**Genotype-environment interaction-** variation in the relative performance of different genotypes from one environment to another. For example, the best cattle (genotypes) for one environment may not be the best cattle for another environment.

**Half sibs-** individuals having the same sire or dam. Half brothers and/or half sisters.

**Heritability-** the proportion of the differences among cattle, measured or observed, that is transmitted to the offspring. Heritability varies from 0.0 to 1.0. the higher the heritability of a trait, the more accurately the independent performance predict breeding value and the more rapid should be the response due to selection for the trait.

**Heterosis (hybrid vigor)-** amount by which measured traits of the crossbreds exceed the average of the two or more purebreds that are mated to produce the crossbreds.

**Heterozygous-** genes of a specific pair that are different in an individual. This gene combination has one gene that is dominant and one gene that is recessive (e.g., a bull that is heterozygous polled has the following gene combination, Pp, P=polled, p=horned).

**Homozygous-** genes of a specific pair that are alike in an individual. This gene combination expresses both genes in either the dominant or recessive form (e.g., PP=polled or pp=horned).

**Intensity of selection-** the difference between the selected animals and the average of the animals from which they came, expressed relative to the amount of variation in the traits. Intensity is a function of the fraction of a population saved as replacements.

**Interim EPD-** An expected progeny difference computed from an individual's own performance information and (or) the EPD of its parents. Interim EPD may be used to support selection and merchandizing decisions before EPD from regularly scheduled national cattle evaluation runs become available.

**National Cattle Evaluation-** Programs of cattle evaluation conducted by breed associations to compute estimated genetic merit of a population of animals. Carefully conducted national cattle evaluation programs give unbiased estimates of expected progeny differences (EPD). Cattle evaluations are based on field data and rely on information from the individual animal, relatives, and progeny to calculate EPD.

**Number of contemporaries-** the number of animals of the same breed, sex and age, against which an animal was compared in performance tests. The greater the number of contemporaries, the greater the accuracy of comparisons.

**Optimum level of performance-** the most profitable or favorable ranges in levels of performance for the economically important traits in a given environment and management system. For example, matching the mature size and milk production of a cow to her environment and available feed stuffs, to maximize her fertility and productivity.

**Pedigree-** a record of the names of the ancestors of an individual.

**Pedigree estimate EPD (PE)-** an EPD that is calculated by taking half of the EPD from each parent for a particular trait and adding them together. The resulting EPD has no accuracy value associated with it.

**Performance pedigree-** a pedigree that includes performance records of ancestors, half and full sibs, and progeny in addition to the usual pedigree information.

**Performance testing-** the systematic collection of comparative production information for use in decision making to improve efficiency and profitability in beef production. Differences in performance among cattle must be used in decision making for performance testing to be beneficial. The most useful performance records for management, selection and promotion decisions will vary among breeders.

**Phenotype-** the visible or measurable expression of a character; for example, weaning weight, post-weaning gain, reproduction, etc. Phenotype is influenced by genotype and environment.

**Phenotypic correlations-** correlations between two traits caused by both genetic and environmental factors influencing both traits.

**Polled-** naturally hornless cattle. Having no horns or scurs.

**Possible change-** the variation (either plus or minus) that is possible for each expected progeny difference (EPD). This measurement of error in prediction or estimation of EPD decreases as the number of progeny, with usable performance records, from a sire increases.

**Progeny-** the offspring of an animal.

**Progeny records-** the average, comparative performance of the progeny of sires and dams.

**Progeny testing-** evaluating the genotype of an individual by a study of its progeny.

**Rate of genetic improvement-** rate of improvement per unit of time (year). The rate of improvement is dependent upon: (1) heritability of traits considered; (2) selection differentials; (3) genetic correlations among traits considered; (4) generation interval in the herd; (5) the number of traits for which selections are made.

**Scurs-** horny tissue of rudimentary horns that are attached to the skin rather than the bony parts of the head.

**Selection differential-** the difference between the average for a trait in selected cattle and the average for the group from which they came.

**Selection index-** a formula that combines performance records from several traits or different measurements of the same trait into a single value for each animal.

**Sibs-** brothers and sisters of an individual.

**Sire summary-** published results of national sire evaluation programs.

**Trait ratio-** an expression of an animal's performance for a particular trait relative to the herd or contemporary group average. It is usually calculated for most traits as:

$$\frac{\text{Individual record}}{\text{Average of animals in group}} \times 100$$

**Variance-** a statistic that describes the variation we see in a trait. Without variation, no genetic progress is possible, since genetically superior animals would not be distinguishable from genetically inferior ones.

**TRAIT LEADERS**

Name of Bull Date of Birth/Reg. No. Sire	Current Owner/Address	Herds Progeny DIP	CE EPD ACC	BW EPD ACC	WW EPD ACC	YW EPD ACC	Mat. EPD ACC	MCE EPD ACC	Total Mtnl. EPD	SC EPD ACC	Carc. Ultra U Hrd	HCW EPD ACC	REA EPD ACC	FAT EPD ACC	MARB EPD ACC
WCR BOOTS ON3 POLLED 03/05/1995 M 423097 RAC NINTENDO G1249 POLD	SAND HILL CHAROLAIS INC BOISE CITY OK	2 353 55	21 0.80	-9.5 0.86	-3 0.80	-8 0.23	0 0.61	14 0.52	-2	0.0 PE	0 0 0	N/A	N/A	N/A	N/A
BAR S HIGH NOON 68L PLD 02/14/2001 M 622467 BALDRIDGE FASTTRACK 82F	BAR S RANCH PARADISE KS	2 104 5	18 0.64	-5.8 0.76	6 0.63	-1 0.38	20 0.31	11 0.28	23	-0.1 0.36	0 23 1	-20 0.31	-0.52 0.31	-0.005 0.28	0.01 0.26
GCR D8 02/22/2003 M 671451 GCR SUPREME 102	GRAU CHAROLAIS GRADY NM	1 84 4	18 0.63	-9.1 0.74	-15 0.64	-16 0.15	14 0.22	8 0.16	7	0.1 PE	0 0 0	N/A	N/A	N/A	N/A
CMF 192 WRANGLER 256 11/22/2000 M 615145 BALDRIDGE FASTTRACK 82F	YOST FARMS KINGFISHER OK	14 102 2	18 0.59	-5.7 0.75	21 0.62	39 0.56	12 0.26	11 0.25	23	0.7 0.49	0 12 2	10 0.28	-0.04 0.28	0.007 0.24	-0.03 0.23
ACF DUKE 422 POLL 03/12/2004 M 684791 BALDRIDGE KOJACK 29K	AMBURGEY CHAROLAIS FARM MT STERLING KY	1 88 0	17 0.59	-6.2 0.74	21 0.62	27 0.57	17 0.24	9 0.19	27	0.0 PE	0 0 0	6 PE	-0.07 PE	-0.012 PE	0.01 PE
SCHURRTOP JK 2201-2283P 03/13/2001 M 624670 SCHURRTOP JK 5627 2201P	RAY D WINZ & SONS HOLDREGE NE	1 126 20	15 0.69	-5.7 0.78	21 0.69	40 0.67	4 0.41	14 0.37	14	1.0 0.52	0 0 0	15 BK	0.38 BK	0.008 BK	0.02 BK
JES CORONA J370 04/04/1999 M 498013 HCR CORONA 2105 POLLED	JEROME (JERRY) M STOUT KADOKA SD	2 146 21	15 0.69	-5.9 0.79	21 0.70	45 0.72	15 0.44	9 0.37	25	0.7 0.34	0 15 1	11 0.24	-0.08 0.24	-0.004 0.21	-0.11 0.17
LT EASY AIR 3920 PLD ET 03/27/2003 M 671248 LT UNLIMITED EASE 9108	BREVIG CHAROLAIS RANCH LEWISTOWN MT	4 135 8	15 0.60	-4.1 0.78	20 0.68	22 0.52	7 0.32	6 0.32	17	0.6 0.48	0 47 3	1 0.33	-0.24 0.33	0.004 0.30	0.04 0.28
HCR PHOENIX 8007 POLLED 02/11/1998 M 479933 LT UNLIMITED EASE 9108	JOHN F ALLISON NEW CASTLE KY	2 98 9	15 0.60	-3.1 0.75	25 0.65	37 0.27	12 0.36	8 0.29	25	0.6 PE	0 0 0	12 PE	0.16 PE	0.007 PE	-0.02 PE
BALDRIDGE FASTTRACK 82F 02/10/1996 M 447863 LT UNLIMITED EASE 9108	L R WAKEFIELD & SONS NEW RICHLAND MN JERRY D VAUGHAN DERBY KS MITCHELL R COX CAMPBELLSVILLE KY	409 3670 801	14 0.91	-2.9 0.96	26 0.93	40 0.90	16 0.86	8 0.83	30	-0.1 0.81	48 435 66	10 0.58	-0.03 0.65	0.019 0.59	-0.06 0.63
NWMSU DOC SILVER 362 PLD 03/07/2003 M 669488 S\$ MONTANA SILVER	BJR SUMMERFORD CHAROLAIS FALKVILLE AL HUBERT CHAROLAIS RANCH OAKLEY KS	25 416 35	14 0.77	-4.9 0.87	34 0.80	63 0.75	-5 0.46	8 0.46	12	0.4 0.65	25 168 11	17 0.50	-0.16 0.55	0.057 0.50	0.26 0.53
THREE TREES WIND 0383 ET 09/15/2000 M 637722 LT WYOMING WIND 4020 PLD	CROSSTIMBER CATTLE CO CANTON TX LINDSKOV-THIEL CHAROLAIS ISABEL ND ANDREW DOUB DANVILLE INDIANA	73 437 37	14 0.75	-2.8 0.87	27 0.78	58 0.65	0 0.44	6 0.41	14	1.0 0.51	0 55 19	17 0.35	0.23 0.35	0.017 0.32	0.05 0.30
NF POWERBALL II POLLED 01/02/1996 M 432926 ASC ELIMINATOR 032	NOLLER & FRANK SIGOURNEY IA	33 344 82	14 0.71	-1.2 0.86	24 0.78	22 0.68	-12 0.61	10 0.54	0	0.2 0.48	33 49 7	5 0.49	-0.21 0.56	0.001 0.50	-0.10 0.54
WCCC-RC PROMISEKEEPER0323 02/24/2003 M 679955 SCR ROCKER 1755 PLD	WOODEN CROSS CATTLE CO HILLSBORO KS	6 133 12	14 0.63	-3.8 0.78	16 0.67	35 0.64	9 0.29	8 0.27	17	0.7 PE	0 0 0	11 BK	0.21 BK	-0.017 BK	-0.08 BK
RC PHASE 450 PD 02/21/2004 M 686837 LT DISTANCE 5025 PLD	RAMBUR CHAROLAIS SIDNEY MT CREEKSIDES CHAROLAIS HOLYOKE CO	1 67 0	14 0.56	-4.8 0.71	-8 0.59	8 0.46	16 0.23	11 0.18	11	0.2 PE	0 16 1	-3 0.29	-0.10 0.29	0.022 0.26	0.24 0.24
BALDRIDGE KOJACK 29K 01/16/2000 M 602060 BALDRIDGE FASTTRACK 82F	SELECT SIRES INC PLAIN CITY OH	217 1414 197	13 0.86	-4.3 0.93	30 0.88	46 0.82	22 0.70	6 0.67	37	-0.7 0.62	5 114 37	4 0.41	-0.17 0.44	-0.001 0.39	-0.01 0.39
SVY BEDROCK PLD 816H 01/15/1998 M 489953 SLY EASTWOOD PLD 32F	DENNIS REICH,KAY R, M T C,SAUNDERS & VOEGELI DENNIS R REICH RICHARDTON ND	3 201 22	13 0.74	1.2 0.82	-12 0.74	-21 0.21	10 0.40	10 0.36	4	N/A	0 24 1	-21 0.30	-0.06 0.30	0.012 0.27	0.14 0.24
LT PRIMED 0262 PLD 04/13/2000 M 517206 WCR PRIME CUT 764 PLD	BIERLE CHAROLAIS LESTERVILLE SD	1 109 5	13 0.57	-3.4 0.76	22 0.66	58 0.54	10 0.30	8 0.25	21	0.8 PE	0 2 1	21 0.28	-0.17 0.27	0.020 0.24	0.06 0.23
LT UNLIMITED EASE 9108 04/17/1989 M 301930 BCR POLLED UNLIMITED 003	THOUSAND OAKS RANCH CARTHAGE MO LINDSKOV-THIEL CHAROLAIS ISABEL SD ABS GLOBAL INC DE FOREST WI	373 3762 1038	12 0.92	-2.2 0.96	23 0.94	29 0.91	9 0.89	0 0.86	21	0.6 0.81	67 486 77	7 0.64	-0.05 0.70	0.010 0.65	0.12 0.69
LT LEADER BOARD 6110 P 03/04/2006 M 724126 EATONS LEADER 2233 P	HEBBERT CHAROLAIS HYANNIS NE	2 104 0	12 0.60	-1.6 0.76	15 0.65	24 0.34	-5 0.22	11 0.18	3	0.7 PE	0 16 1	10 0.28	0.19 0.28	0.041 0.26	0.04 0.23
LT WIND STORM 8223 PLD 04/08/1998 M 480910 LT WYOMING WIND 4020 PLD	LINDSKOV-THIEL CHAROLAIS ISABEL SD GROSS & SONS FARMS MOUNTAIN HOME AR MARY E MALZAHN PERRY OK	23 446 76	12 0.74	-4.2 0.88	0 0.81	-3 0.74	14 0.60	6 0.56	14	0.0 0.62	39 59 8	-10 0.52	-0.24 0.58	0.040 0.52	0.10 0.57
BBCR MIGHTY MAN 836 PLD 03/27/1996 M 445862 HCR MAC 0177 POLLED	ALVIE FRED MERNA NE	12 375 71	12 0.71	-6.5 0.87	16 0.81	36 0.81	19 0.62	4 0.56	27	-0.2 0.61	23 37 3	7 0.46	0.42 0.52	-0.039 0.46	-0.16 0.50
EC NO DOUBT 2022 P 03/10/2004 M 685500 M6 GRID MAKER 104 PET	GENEX COOPERATIVE INC SHAWANO WI JAMIE EGGLESTON WESSINGTON SD CARSTENS FARMS LTD ADAIR IA	25 240 16	12 0.67	-0.1 0.83	33 0.74	74 0.61	13 0.34	9 0.33	29	0.9 0.38	0 30 8	26 0.30	0.62 0.30	-0.016 0.27	0.19 0.24
BCR CHINOOK TIME 2000 02/06/2000 M 508417 LT WIND TIME 7070 PLD	BREVIG CHAROLAIS RANCH LEWISTOWN MT	4 19 34	12 0.56	-1.8 0.82	12 0.73	14 0.63	21 0.48	15 0.40	27	0.8 0.59	0 53 4	6 0.31	0.12 0.30	0.000 0.28	0.08 0.25
VCR SIR DUKE 9918 ET P 08/20/1999 M 508800 VCR SIR DUKE 914 PLD	VEDVEI CHAROLAIS RANCH LAKE PRESTON SD	22 224 25	11 0.63	-5.0 0.82	29 0.73	46 0.69	11 0.43	5 0.40	25	0.5 0.54	0 34 5	7 0.32	-0.16 0.32	-0.032 0.29	0.02 0.27

**TRAIT LEADERS**

Name of Bull Date of Birth/Reg. No. Sire	Current Owner/Address	Herds Progeny DIP	CE EPD ACC	BW EPD ACC	WW EPD ACC	YW EPD ACC	Mat. EPD ACC	MCE EPD ACC	Total Mtnl. EPD	SC EPD ACC	Carc. Ultra U Hrd	HCW EPD ACC	REA EPD ACC	FAT EPD ACC	MARB EPD ACC
CF SIR DUKE 821 PLD ET 05/08/2004 M 690921 VCR SIR DUKE 914 PLD	NATHAN S SMITH APPOMATTOX VA	1 51 8	21 0.42	-10.0 0.67	1 0.56	-5 0.57	17 0.30	11 0.29	18	0.1 0.41	0 17 2	-1 0.27	-0.04 0.28	-0.026 0.25	0.03 0.23
WCR BOOTS ON3 POLLED 03/05/1995 M 423097 RAC NINTENDO G1249 POLD	SAND HILL CHAROLAIS INC BOISE CITY OK	2 353 55	21 0.80	-9.5 0.86	-3 0.80	-8 0.23	0 0.61	14 0.52	-2	0.0 PE	0 0 0	N/A	N/A	N/A	N/A
GCR D8 02/22/2003 M 671451 GCR SUPREME 102	GRAU CHAROLAIS GRADY NM	1 84 4	18 0.63	-9.1 0.74	-15 0.64	-16 0.15	14 0.22	8 0.16	7	0.1 PE	0 0 0	N/A	N/A	N/A	N/A
WR EASE 4434 03/27/2004 M 689431 LT UNLIMITED EASE 9108	SCHUTTE CHAROLAIS IDAHO FALLS ID	2 84 0	19 0.47	-8.7 0.73	14 0.58	21 0.49	14 0.25	4 0.22	21	0.7 PE	0 10 1	5 0.29	-0.20 0.29	0.008 0.25	0.05 0.24
BBCR MIGHTY MAN 836 PLD 03/27/1996 M 445862 HCR MAC 0177 POLLED	ALVIE FRED MERNA NE	12 375 71	12 0.71	-6.5 0.87	16 0.81	36 0.81	19 0.62	4 0.56	27	-0.2 0.61	23 37 3	7 0.46	0.42 0.52	-0.039 0.46	-0.16 0.50
KC IMPRESSED 152 P 03/16/2001 M 620174 PF EL DUKE 9021 P ET	KEPPEN CHAROLAIS RANCH VOLGA SD	3 91 13	15 0.45	-6.5 0.74	9 0.62	21 0.54	6 0.34	4 0.28	11	1.1 0.48	0 27 3	1 0.25	-0.10 0.25	-0.008 0.23	0.08 0.19
DC-OW MAXIMIZER 385PLD 03/17/2003 M 675875 FC MAGIC WIND 0105 P	OAKWATER RANCH SHREVEPORT LA	3 121 16	8 0.54	-6.4 0.78	20 0.67	27 0.64	5 0.33	4 0.30	15	1.2 0.53	1 32 3	5 0.28	0.13 0.28	0.029 0.23	-0.01 0.20
WCR SIR TRADITION5056ETP 08/25/2005 M 716920 WCR SIR TRADITION 066	WIENK CHAROLAIS RANCH LAKE PRESTON SD	1 109 0	13 0.42	-6.2 0.76	27 0.67	53 0.59	1 0.26	6 0.22	14	0.5 0.46	0 17 2	19 0.29	0.42 0.29	-0.002 0.25	-0.06 0.24
ACF DUKE 422 POLL 03/12/2004 M 684791 BALDRIDGE KOJACK 29K	AMBURGEY CHAROLAIS FARM MT STERLING KY	1 88 0	17 0.59	-6.2 0.74	21 0.62	27 0.57	17 0.24	9 0.19	27	0.0 PE	0 0 0	6 PE	-0.07 PE	-0.012 PE	0.01 PE
MC-OW SANDCREEK 375 03/06/2003 M 666702 HOODOO SANDCREEK 9008	OAKWATER RANCH SHREVEPORT LA	1 92 2	10 0.56	-6.2 0.74	11 0.62	20 0.59	-1 0.19	5 0.12	5	-0.1 0.48	3 29 1	-6 0.27	0.30 0.29	-0.001 0.21	0.09 0.16
JES CORONA J370 04/04/1999 M 498013 HCR CORONA 2105 POLLED	JEROME (JERRY) M STOUT KADOKA SD	2 146 21	15 0.69	-5.9 0.79	21 0.70	45 0.72	15 0.44	9 0.37	25	0.7 0.34	0 15 1	11 0.24	-0.08 0.24	-0.004 0.21	-0.11 0.17
BAR S HIGH NOON 68L PLD 02/14/2001 M 622467 BALDRIDGE FASTTRACK 82F	BAR S RANCH PARADISE KS	2 104 5	18 0.64	-5.8 0.76	6 0.63	-1 0.38	20 0.31	11 0.28	23	-0.1 0.36	0 23 1	-20 0.31	-0.52 0.31	-0.005 0.28	0.01 0.26
SCHURRTOP JK 2201-2283P 03/13/2001 M 624670 SCHURRTOP JK 5627 2201P	RAY D WINZ & SONS HOLDREGE NE	1 126 20	15 0.69	-5.7 0.78	21 0.69	40 0.67	4 0.41	14 0.37	14	1.0 0.52	0 0 0	15 BK	0.38 BK	0.008 BK	0.02 BK
CMF 192 WRANGLER 256 11/22/2000 M 615145 BALDRIDGE FASTTRACK 82F	YOST FARMS KINGFISHER OK	14 102 2	18 0.59	-5.7 0.75	21 0.62	39 0.56	12 0.26	11 0.25	23	0.7 0.49	0 12 2	10 0.28	-0.04 0.28	0.007 0.24	-0.03 0.23
VCR SIR DUKE 9918 ET P 08/20/1999 M 508800 VCR SIR DUKE 914 PLD	VEDVEI CHAROLAIS RANCH LAKE PRESTON SD	22 224 25	11 0.63	-5.0 0.82	29 0.73	46 0.69	11 0.43	5 0.40	25	0.5 0.54	0 34 5	7 0.32	-0.16 0.32	-0.032 0.29	0.02 0.27
SWAN TRACKER N036 PLD 02/12/2003 M 663259 BALDRIDGE FASTTRACK 82F	HARLAN CHAROLAIS FARMS LORETTO TN	1 76 3	16 0.50	-5.0 0.71	10 0.58	19 0.26	20 0.24	6 0.21	25	0.2 PE	0 0 0	19 PE	-0.04 PE	0.005 PE	0.02 PE
NWMSU DOC SILVER 362 PLD 03/07/2003 M 669488 SS MONTANA SILVER	BJR SUMMERFORD CHAROLAIS FALKVILLE AL HUBERT CHAROLAIS RANCH OAKLEY KS	25 416 35	14 0.77	-4.9 0.87	34 0.80	63 0.75	-5 0.46	8 0.46	12	0.4 0.65	25 168 11	17 0.50	-0.16 0.55	0.057 0.50	0.26 0.53
RC PHASE 450 PD 02/21/2004 M 686837 LT DISTANCE 5025 PLD	RAMBUR CHAROLAIS SIDNEY MT CREEKSIDE CHAROLAIS HOLYOKE CO	1 67 0	14 0.56	-4.8 0.71	-8 0.59	8 0.46	16 0.23	11 0.18	11	0.2 PE	0 16 1	-3 0.29	-0.10 0.29	0.022 0.26	0.24 0.24
WR-WCR POLLED PRINCE S602 02/09/2006 M 729768 OAKDALE DUKE 9003P	GENEX COOPERATIVE INC SHAWANO WI WIENK CHAROLAIS RANCH LAKE PRESTON SD WAGONHAMMER RANCHES ALBION NE	2 58 0	11 0.43	-4.7 0.69	22 0.55	50 0.31	17 0.18	5 0.13	28	0.7 PE	0 0 0	16 BK	0.22 BK	0.011 BK	0.08 BK
LT SILVER DISTANCE 5342P 03/31/2005 M 707559 LT SILVER YIELD 3196 P	SHANE D JOHNSON BROOKINGS SD LINDSKOV-THIEL CHAROLAIS ISABEL SD	10 142 8	7 0.67	-4.6 0.79	26 0.67	48 0.46	7 0.25	3 0.24	21	0.4 0.36	0 24 3	12 0.28	0.02 0.27	0.033 0.24	0.01 0.21
LT SILVER PATH 3233 P 03/25/2003 M 665510 SS MONTANA SILVER	OAKWATER RANCH SHREVEPORT LA	1 69 7	10 0.40	-4.6 0.72	3 0.60	21 0.57	7 0.30	4 0.27	9	0.5 0.44	3 13 1	4 0.32	-0.09 0.34	0.012 0.27	0.19 0.25
M&M LT9108 3004 PLD ET 03/16/2003 M 671017 LT UNLIMITED EASE 9108	MARY E MALZAHN PERRY OK	2 48 4	12 0.54	-4.6 0.66	31 0.56	41 0.48	2 0.29	3 0.26	17	0.6 0.40	0 9 1	8 0.28	0.06 0.27	-0.003 0.25	-0.05 0.23
EATONS BEYOND VALUE 3025 03/10/2003 M 667155 EATONS BEYOND 7243	EATON CHAROLAIS LINDSAY MT	1 77 5	9 0.44	-4.5 0.73	7 0.60	17 0.61	17 0.28	8 0.25	21	1.2 0.50	5 9 1	-6 0.33	0.10 0.36	0.007 0.32	0.18 0.33
EATONS VISIONARY 2044 P 03/21/2002 M 652186 EATONS VISION 0484	WIENK CHAROLAIS RANCH LAKE PRESTON SD EATON CHAROLAIS LINDSAY MT DEER VALLEY CHAROLAIS RANCH LAURENS SC	21 397 63	6 0.77	-4.4 0.87	16 0.80	52 0.79	17 0.55	6 0.54	25	1.8 0.69	46 98 7	6 0.56	-0.63 0.62	0.022 0.57	-0.08 0.61
PLT SIR DUKES FLASH 5527 03/23/1997 M 462166 HCR FLASH 5074 POLLED	VEDVEI CHAROLAIS RANCH LAKE PRESTON SD	22 166 40	2 0.68	-4.4 0.80	19 0.71	31 0.68	8 0.51	-5 0.44	17	0.4 0.49	16 15 3	-9 0.40	-0.01 0.45	-0.060 0.39	0.31 0.42

# TRAIT LEADERS

Name of Bull Date of Birth/Reg. No. Sire	Current Owner/Address	Herds Progeny DIP	CE EPD ACC	BW EPD ACC	WW EPD ACC	YW EPD ACC	Mat. EPD ACC	MCE EPD ACC	Total Mtnl. EPD	SC EPD ACC	Carc. Ultra U Hrd	HCW EPD ACC	REA EPD ACC	FAT EPD ACC	MARB EPD ACC
LCWYOMINGTRADITION062PET 02/11/2000 M 604789 LT WYOMING WIND 4020 PLD	JOSEPH HOLUB WHAT CHEER IA	4 241 14	8 0.50	-3.2 0.83	68 0.75	97 0.74	-17 0.37	4 0.32	17	1.2 PE	0 0 0	7 PE	0.18 PE	0.004 PE	0.02 PE
SC KING KOBY 23 ET 02/07/2003 M 669216 WCR PRIME TIME 908 P	TIM REICH BELLE FOURCHE SD	1 75 4	0 0.41	3.2 0.72	55 0.61	84 0.26	-1 0.27	2 0.24	27	0.9 PE	0 33 1	28 0.32	0.46 0.32	-0.027 0.29	-0.04 0.27
SC SHADOWBROOK 484 ET 08/31/2004 M 690415 LC BUSINESS 06P	PATE CHAROLAIS RANCH LOWNDESBORO AL	1 66 0	2 0.48	3.4 0.69	54 0.57	92 0.22	10 0.20	6 0.16	37	0.9 PE	0 0 0	18 PE	0.27 PE	-0.012 PE	-0.05 PE
CMR ELI ALI 9184 PLD 03/20/1999 M 502308 ASC ELIMINATOR 032	MARVIN & FRANCES BROWN HOPKINS MO	12 258 35	-3 0.52	0.9 0.84	52 0.75	73 0.66	2 0.46	1 0.42	28	0.3 0.44	0 89 5	24 0.35	0.52 0.34	-0.003 0.31	0.13 0.29
LT SILVER VALUE 2122 P 03/12/2002 M 645761 SS MONTANA SILVER	SPRING RIDGE CATTLE CO WINCHESTER KY LINDSKOV-THIEL CHAROLAIS ISABEL SD HIGHVIEW CHAROLAIS FARM MORRIS MN	13 183 44	-12 0.49	5.5 0.82	51 0.71	89 0.61	5 0.49	2 0.46	30	1.1 0.45	14 28 6	42 0.42	0.40 0.47	0.020 0.41	0.03 0.44
SM MR TARGET P4001 03/31/2004 M 692488 SM MR CIGAR SON M223 S	SHAWN MC CRACKEN CHOTEAU MT	2 62 4	-11 0.35	3.5 0.70	51 0.57	105 0.55	6 0.21	-8 0.17	32	1.0 0.44	0 0 0	N/A	N/A	N/A	N/A
WCR SIR POWERPOINT 923 02/25/1989 M 299541 HCR POWERPOINT 7047	JOHN M WOOD REYNOLDS IL	7 263 48	4 0.53	1.7 0.84	50 0.77	122 0.78	-6 0.58	10 0.48	19	0.5 0.32	17 0 0	38 0.37	0.12 0.44	-0.005 0.37	-0.04 0.42
JCR IMPRESSIVE 573 P 03/09/2005 M 704065 WCR SIR IMPRESS 1325 P	PRAIRIE VALLEY FARMS INC PLATTE SD	1 66 0	1 0.38	1.2 0.71	50 0.59	85 0.47	5 0.20	-6 0.15	30	1.4 0.27	0 0 0	14 PE	0.05 PE	-0.012 PE	0.09 PE
ANKONIAN DUKE G034 01/14/1997 M 468745 VCR SIR DUKE 914 PLD	ACCELERATED GENETICS BARABOO WI BAR S RANCH INC PARADISE KS	8 187 29	5 0.49	1.5 0.82	49 0.72	73 0.40	13 0.46	8 0.45	37	1.1 0.36	0 60 2	18 0.34	-0.05 0.33	-0.019 0.31	0.01 0.29
JDS HE'SMYKING 2038 P ET 11/28/2000 M 613519 VCR SIR DUKE 914 PLD	MID TENN CHAROLAIS MANCHESTER TN MYERS' CIRCLE FARM ELKTON KY	4 193 14	5 0.63	0.7 0.81	49 0.67	78 0.63	9 0.37	3 0.38	34	0.4 0.43	0 40 3	28 0.32	0.36 0.32	-0.010 0.29	0.04 0.27
FC HARVESTER 03/17/2005 M 703251 SCR NEW MOON 2350	J C H DOLL NEW SALEM ND	2 117 1	-4 0.42	3.2 0.77	49 0.67	81 0.57	-8 0.21	-1 0.16	16	1.1 0.27	0 6 1	24 0.18	0.33 0.17	0.016 0.12	0.02 0.11
M6 HOUSE BRAND 062 PLD 02/22/2000 M 609849 WCR SIR TRADITION 066	KEVIN J MOORE ALVARADO TX MOUNTAIN VIEW CHAROLAIS CLARKSVILLE GA	6 138 13	-6 0.46	4.2 0.79	48 0.67	82 0.54	-2 0.36	2 0.39	22	0.6 0.42	29 27 3	12 0.47	0.23 0.53	-0.037 0.48	0.06 0.52
HBR PROGRAM 218 P 03/09/2002 M 634843 VCR SIR DUKE 914 PLD	DR HARLAN B ROGERS COLLINS MS	17 124 9	3 0.50	1.5 0.77	48 0.62	77 0.41	18 0.30	1 0.30	42	1.1 0.29	0 4 3	23 0.25	0.20 0.24	-0.016 0.20	0.05 0.20
LT EASY BLEND 5125 PLD 03/01/2005 M 705113 LT UNLIMITED EASE 9108	LINDSKOV-THIEL CHAROLAIS ISABEL SD IBACH PROPERTIES INC ANSLEY NE	46 327 25	5 0.58	1.3 0.85	47 0.78	77 0.63	5 0.39	0 0.39	28	0.9 0.52	0 55 11	43 0.35	0.24 0.34	0.015 0.32	0.09 0.30
SR/NC FIELD REP 2158 P ET 10/21/2002 M 665948 LHD MR PERFECT Y416	DENNIS CHAROLAIS FARMS SAINT JO TX NIPP CHAROLAIS OVERBROOK OK GRISSOM CHAROLAIS WILSON OK	29 412 20	1 0.53	1.7 0.87	47 0.77	77 0.73	9 0.38	4 0.37	32	1.3 0.66	0 106 8	31 0.36	0.52 0.35	-0.002 0.32	-0.10 0.30
WM ALI STAR 250 PET 03/18/2002 M 648601 VCR SIR DUKE 914 PLD	DOUBLE O CHAROLAIS MARSHALL TX	12 289 5	6 0.58	0.7 0.84	47 0.74	82 0.32	14 0.30	3 0.25	38	1.3 0.21	0 1 1	24 0.24	0.26 0.22	-0.037 0.18	0.07 0.18
HCR RANCHER 0161 PLD 04/03/2000 M 603259 SCHURRTOP HCR RANCHER	TIM D LESLIE SALEM AR	3 143 8	7 0.55	1.1 0.79	47 0.64	82 0.27	11 0.31	8 0.29	35	0.7 PE	0 0 0	27 BK	0.40 BK	0.004 BK	-0.05 BK
HEP AUTO PILOT 101H ET 10/22/1998 M 492170 HEP KING GRAZER 25A	A W COMPTON NANAFALIA AL DR HARLAN B ROGERS COLLINS MS	5 123 19	-2 0.49	4.8 0.78	47 0.63	94 0.39	20 0.41	7 0.37	44	0.2 PE	0 1 1	42 0.20	0.49 0.19	0.009 0.15	-0.04 0.14
M6 FULL THROTTLE 2138 PET 09/01/2002 M 660646 VCR SIR DUKE 914 PLD	DOUG SHOCKEY MALVERN AR JACK GAMBILL WARREN AR	22 127 19	6 0.47	2.1 0.77	47 0.62	77 0.38	19 0.35	8 0.34	43	1.4 0.24	0 9 2	29 0.28	0.44 0.28	-0.043 0.25	0.00 0.23
JDJ AZTEC H608 03/13/1998 M 489706 SS DAYLIGHT 28E	JACQUE DE BRUYCKER DUTTON MT JACK O'REAR SCOTTSBORO AL	3 89 22	-3 0.39	4.4 0.74	47 0.62	82 0.38	9 0.39	3 0.29	32	0.9 PE	0 0 0	25 PE	0.41 PE	-0.019 PE	-0.06 PE
HCR PRIME TIME 3016 PLD 02/14/2003 M 668104 WCR PRIME TIME 908 P	JOHN F ALLISON NEW CASTLE KY	1 59 3	6 0.39	0.2 0.69	47 0.59	76 0.24	-1 0.27	7 0.22	23	0.6 PE	0 0 0	40 BK	0.53 BK	0.002 BK	-0.02 BK
LT RIO BLANCO 1234 P 04/04/2001 M 620591 WCR PRIME CUT 764 PLD	MIKE CALLIS MILLBROOK AL PATE CHAROLAIS RANCH LOWNDESBORO AL LINDSKOV-THIEL CHAROLAIS ISABEL SD	138 1120 228	-1 0.75	3.5 0.92	46 0.87	89 0.82	4 0.71	2 0.69	27	1.3 0.73	1 188 37	47 0.39	0.53 0.39	0.045 0.35	0.12 0.35
KEYS MCHENRY 24M 02/01/2002 M 645472 KEYS HANDYMAN PLD 255H	EFFERTZ KEY RANCH VELVA ND	69 576 81	4 0.60	1.2 0.89	46 0.83	75 0.80	1 0.58	3 0.55	24	0.6 0.47	0 28 14	45 0.25	0.72 0.24	-0.001 0.21	-0.05 0.16
FREDS MIGHTY 0116 PLD 03/15/2000 M 608079 BBCR MIGHTY MAN 836 PLD	MR & MRS ALVIE FRED & CHILDREN MERNA NE DAN D & RHONDA PETERSON GOTHENBURG NE	7 119 23	1 0.47	0.1 0.77	46 0.68	72 0.63	3 0.42	-1 0.35	26	0.5 0.49	2 19 3	23 0.30	0.56 0.32	-0.009 0.28	-0.14 0.27
DVCR DUKE K09 P ET 05/09/2000 M 606732 WCR SIR DUKE 761	DEER VALLEY CHAROLAIS RANCH LAURENS SC SOUTHERN CATTLE COMPANY MARIANNA FL	9 167 19	6 0.57	0.4 0.80	46 0.67	67 0.51	14 0.42	4 0.37	37	0.7 PE	40 24 1	15 0.51	-0.07 0.58	-0.034 0.53	0.15 0.57
BHD STARCRAFT L1510 08/10/2001 M 660291 LHD CIGAR E46	JACK O'REAR SCOTTSBORO AL BRETT DE BRUYCKER DUTTON MT JERRY L CLARK HENAGAR AL	6 137 16	-2 0.45	3.2 0.78	46 0.68	75 0.53	1 0.38	8 0.36	24	1.4 0.44	0 9 1	32 0.26	0.68 0.26	-0.014 0.22	-0.22 0.21

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WCR SIR POWERPOINT 923 02/25/1989 M 299541 HCR POWERPOINT 7047	JOHN M WOOD REYNOLDS IL	7 263 48	4 0.53	1.7 0.84	50 0.77	122 0.78	-6 0.58	10 0.48	19	0.5 0.32	17 0 0	38 0.37	0.12 0.44	-0.005 0.37	-0.04 0.42
SM MR TARGET P4001 03/31/2004 M 692488 SM MR CIGAR SON M223 S	SHAWN MC CRACKEN CHOTEAU MT	2 62 4	-11 0.35	3.5 0.70	51 0.57	105 0.55	6 0.21	-8 0.17	32	1.0 0.44	0 0 0	N/A	N/A	N/A	N/A
LCWYOMINGTRADITION062PET 02/11/2000 M 604789 LT WYOMING WIND 4020 PLD	JOSEPH HOLUB WHAT CHEER IA	4 241 14	8 0.50	-3.2 0.83	68 0.75	97 0.74	-17 0.37	4 0.32	17	1.2 PE	0 0 0	7 PE	0.18 PE	0.004 PE	0.02 PE
LT RIO BLANCO 1234 P 04/04/2001 M 620591 WCR PRIME CUT 764 PLD	MIKE CALLIS MILLBROOK AL PATE CHAROLAIS RANCH LOWNDESBORO AL LINDSKOV-THIEL CHAROLAIS ISABEL SD	138 1120 228	-1 0.75	3.5 0.92	46 0.87	89 0.82	4 0.71	2 0.69	27	1.3 0.73	1 188 37	47 0.39	0.53 0.39	0.045 0.35	0.12 0.35
LT SILVER VALUE 2122 P 03/12/2002 M 645761 SS MONTANA SILVER	SPRING RIDGE CATTLE CO WINCHESTER KY LINDSKOV-THIEL CHAROLAIS ISABEL SD HIGHVIEW CHAROLAIS FARM MORRIS MN	13 183 44	-12 0.49	5.5 0.82	51 0.71	89 0.61	5 0.49	2 0.46	30	1.1 0.45	14 28 6	42 0.42	0.40 0.47	0.020 0.41	0.03 0.44
EATONS DOMINANT 1315 04/03/2001 M 628284 EATONS DETERMINE 8426	EATON CHAROLAIS LINDSAY MT	2 141 7	-11 0.53	4.4 0.79	44 0.69	88 0.62	8 0.27	-3 0.19	30	1.9 0.48	0 6 2	21 0.23	0.04 0.23	-0.014 0.18	0.22 0.17
WCR SIR IMPRESSIVE 8191P 03/26/1998 M 477998 JWK IMPRESSIVE D040 ET	JERRY DALLING SUGAR CITY ID PLUCKER CHAROLAIS PARKER SD MYERS' CIRCLE FARM ELKTON KY	64 669 129	2 0.72	0.8 0.90	43 0.84	84 0.82	2 0.67	1 0.64	23	1.7 0.72	14 94 23	32 0.45	0.13 0.49	0.035 0.43	0.17 0.46
LHD AUTUMN RUN P1397 03/01/2004 M 696583 LHD AUTUMN L238	LLOYD & JANE DE BRUYCKER DUTTON MT	2 52 6	1 0.38	2.1 0.68	40 0.58	83 0.55	6 0.24	2 0.20	26	0.3 0.43	0 0 0	31 BK	0.34 BK	-0.013 BK	0.00 BK
FC HARVESTER 03/17/2005 M 703251 SCR NEW MOON 2350	J C H DOLL NEW SALEM ND	2 117 1	-4 0.42	3.2 0.77	49 0.67	81 0.57	-8 0.21	-1 0.16	16	1.1 0.27	0 6 1	24 0.18	0.33 0.17	0.016 0.12	0.02 0.11
G-BAR DUKES DELIGHT K06 10/02/2000 M 613638 VCR SIR DUKE 914 PLD	H W GLOVER LULING TX	1 118 16	1 0.43	2.1 0.77	41 0.64	81 0.57	11 0.38	6 0.31	31	1.1 0.46	0 0 0	N/A	N/A	N/A	N/A
TR AVENGER 3649N 03/17/2003 M 665035 HAMMS TR AVALANCHE Y17 K	JEFF STEWART FAMILY LAKE PRESTON SD THOMAS RANCH HARROLD SD JAMIE EGLESTON WESSINGTON SD	4 156 16	10 0.56	0.0 0.80	31 0.70	80 0.57	1 0.37	8 0.31	17	1.5 0.42	0 39 3	21 0.29	0.32 0.28	-0.004 0.26	0.02 0.22
BEM BULLDOZER 51M 01/24/2002 M 662948 HTA WHITEHOT 105A	J C H DOLL NEW SALEM ND	3 242 41	N/A	0.2 0.83	37 0.77	78 0.69	-1 0.48	N/A	17	1.4 0.49	0 0 0	N/A	N/A	N/A	N/A
JDS HE'SMYKING 2038 P ET 11/28/2000 M 613519 VCR SIR DUKE 914 PLD	MID TENN CHAROLAIS MANCHESTER TN MYERS' CIRCLE FARM ELKTON KY	4 193 14	5 0.63	0.7 0.81	49 0.67	78 0.63	9 0.37	3 0.38	34	0.4 0.43	0 40 3	28 0.32	0.36 0.32	-0.010 0.29	0.04 0.27
SR/NC FIELD REP 2158 P ET 10/21/2002 M 665948 LHD MR PERFECT Y416	DENNIS CHAROLAIS FARMS SAINT JO TX NIPP CHAROLAIS OVERBROOK OK GRISSOM CHAROLAIS WILSON OK	29 412 20	1 0.53	1.7 0.87	47 0.77	77 0.73	9 0.38	4 0.37	32	1.3 0.66	0 106 8	31 0.36	0.52 0.35	-0.002 0.32	-0.10 0.30
LT EASY BLEND 5125 PLD 03/01/2005 M 705113 LT UNLIMITED EASE 9108	LINDSKOV-THIEL CHAROLAIS ISABEL SD IBACH PROPERTIES INC ANSLEY NE	46 327 25	5 0.58	1.3 0.85	47 0.78	77 0.63	5 0.39	0 0.39	28	0.9 0.52	0 55 11	43 0.35	0.24 0.34	0.015 0.32	0.09 0.30
LT WESTERN EDGE 4057 PLD 03/02/2004 M 686616 LT WESTERN SPUR 2061 PLD	HUBERT/LEHMAN/WRIGHT CHAROLAIS OAKLEY KS LINDSKOV-THIEL CHAROLAIS ISABEL SD LANE & PETERSON CATTLE CO CHARLES CITY IA	56 605 63	1 0.68	-0.5 0.89	37 0.84	76 0.74	12 0.50	4 0.52	30	1.6 0.57	1 183 26	28 0.37	0.14 0.36	0.026 0.32	-0.09 0.31
KEYS MCHENRY 24M 02/01/2002 M 645472 KEYS HANDYMAN PLD 255H	EFFERTZ KEY RANCH VELVA ND	69 576 81	4 0.60	1.2 0.89	46 0.83	75 0.80	1 0.58	3 0.55	24	0.6 0.47	0 28 14	45 0.25	0.72 0.24	-0.001 0.21	-0.05 0.16
EATONS PREDCTABLEVALUE3294 04/07/2003 M 667046 EATONS SUPREMEVAL1003	EATON CHAROLAIS LINDSAY MT	1 100 12	-2 0.44	1.8 0.76	34 0.66	75 0.64	17 0.31	3 0.27	34	1.2 0.47	2 23 1	37 0.31	0.42 0.33	0.040 0.27	0.15 0.28
LHD TRADELINE N1145 02/18/2003 M 676649 CJC TRADEMARK H45	LLOYD & JANE DE BRUYCKER DUTTON MT	8 85 4	2 0.44	3.5 0.74	29 0.64	75 0.58	18 0.27	1 0.23	33	0.4 0.51	0 5 4	22 0.23	0.42 0.23	-0.010 0.19	0.03 0.18
KEYS MCTENDER 279P 04/08/2004 M 686129 KEYS MCHENRY 24M	EFFERTZ KEY RANCH VELVA ND SANDMEIER CHAROLAIS RANCH BOWDLE SD	6 241 31	6 0.52	1.2 0.83	38 0.76	74 0.72	2 0.40	6 0.39	21	0.5 PE	0 2 2	33 0.15	0.52 0.13	-0.006 0.07	-0.04 0.05
EC NO DOUBT 2022 P 03/10/2004 M 685500 M6 GRID MAKER 104 PET	GENEX COOPERATIVE INC SHAWANO WI JAMIE EGLESTON WESSINGTON SD CARSTENS FARMS LTD ADAIR IA	25 240 16	12 0.67	-0.1 0.83	33 0.74	74 0.61	13 0.34	9 0.33	29	0.9 0.38	0 30 8	26 0.30	0.62 0.30	-0.016 0.27	0.19 0.24
ENDSLEY'S DUKE STONE 257 03/24/2002 M 641628 VCR SIR DUKE 914 PLD	ENDSLEY'S CHAROLAIS FARMS HASTINGS MI	3 274 37	8 0.55	0.5 0.84	39 0.77	73 0.77	12 0.46	9 0.42	31	N/A	0 0 0	N/A	N/A	N/A	N/A
M6 TRADE MARK 2234 P ET 10/30/2002 M 660997 CJC TRADEMARK H45	KEVIN J MOORE ALVARADO TX ALBERT CHAROLAIS RANCH KENEDY TX	1 92 8	6 0.41	1.8 0.74	33 0.64	73 0.62	7 0.30	2 0.27	23	1.2 0.51	0 0 0	17 PE	0.28 PE	-0.024 PE	-0.04 PE
LHD FEDERAL L1552 08/14/2001 M 656236 JDJSSRMOKINJOEJ1382ET	LLOYD & JANE DE BRUYCKER DUTTON MT	6 75 10	-9 0.39	5.5 0.73	43 0.62	73 0.57	-3 0.30	0 0.27	19	1.6 0.46	3 9 4	31 0.28	0.90 0.30	-0.025 0.25	-0.26 0.27
COOLEY WOODEN 1107N2 01/23/2003 M 661252 MR INLAND EXPDITER 501	DON & BECKY RAASCH BRIDGEWATER IA	3 81 5	-6 0.41	4.6 0.73	36 0.60	73 0.55	5 0.29	4 0.28	23	0.3 0.46	21 39 1	43 0.44	-0.11 0.50	0.071 0.45	0.08 0.49

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EC BRONSON 204 POLLED 04/05/1993 M 375306 SIR EC STINGER 48	LONE TREE CHAROLAIS RAPID CITY SD	24 222 74	-2 0.58	3.1 0.84	17 0.77	61 0.65	26 0.65	0 0.55	34	1.0 0.27	0 0 0	N/A	N/A	N/A	N/A
SCHURRTOP RC SIGNATURE 03/15/1999 M 499155 SKYMONT EASE 3001	SCHURR BROS FARNAM NE RAMBUR CHAROLAIS SIDNEY MT COLONIAL FARMS WAYNESBORO VA	14 279 79	-1 0.60	2.6 0.85	30 0.78	46 0.76	26 0.64	7 0.58	41	0.8 0.54	18 81 2	13 0.46	-0.05 0.51	-0.019 0.45	0.14 0.49
JDJ SMOKESTER J1377 P ET 02/25/1999 M 509419 LHD CIGAR E46	JACQUE DE BRUYCKER DUTTON MT RAMBUR CHAROLAIS SIDNEY MT RIVERDALE LAND & LIVESTOCK CORP SUNSET HILLS MO	72 694 112	-5 0.67	2.4 0.90	29 0.84	40 0.81	25 0.67	-6 0.63	40	1.1 0.70	18 140 20	18 0.49	0.92 0.54	-0.046 0.49	-0.46 0.52
BALDRIDGE KOJACK 29K 01/16/2000 M 602060 BALDRIDGE FASTTRACK 82F	SELECT SIRES INC PLAIN CITY OH	217 1414 197	13 0.86	-4.3 0.93	30 0.88	46 0.82	22 0.70	6 0.67	37	-0.7 0.62	5 114 37	4 0.41	-0.17 0.44	-0.001 0.39	-0.01 0.39
VCR SIR DUKE 914 PLD 03/01/1989 M 297007 WCR SIR DUKE 761	VEDVEI CHAROLAIS RANCH LAKE PRESTON SD ABS GLOBAL INC DE FOREST WI	404 3738 1404	10 0.91	-0.3 0.96	40 0.94	64 0.92	21 0.90	5 0.88	41	1.3 0.83	37 321 63	16 0.59	0.08 0.64	-0.045 0.59	0.06 0.63
HEP KING GRAZER 25A 02/01/1991 M 333937 BR DUKE 261	PATE CHAROLAIS RANCH LOWNDESBORO AL KINMONT FARM WAYNESBORO VA	123 1155 324	6 0.79	0.5 0.93	32 0.88	63 0.82	21 0.80	11 0.75	37	-0.3 0.55	0 67 15	31 0.39	0.25 0.39	0.032 0.35	0.09 0.35
LT EASY PRO 1158 PLD 03/18/2001 M 620348 LT UNLIMITED EASE 9108	LINDSKOV-THIEL CHAROLAIS ISABEL SD BJR SUMMERFORD CHAROLAIS FALKVILLE AL	73 880 130	7 0.81	-1.4 0.91	25 0.86	42 0.82	19 0.64	-5 0.62	31	-0.1 0.71	41 285 28	16 0.56	-0.03 0.61	0.019 0.56	0.37 0.60
BBCR MIGHTY MAN 836 PLD 03/27/1996 M 445862 HCR MAC 0177 POLLED	ALVIE FRED MERNA NE	12 375 71	12 0.71	-6.5 0.87	16 0.81	36 0.81	19 0.62	4 0.56	27	-0.2 0.61	23 37 3	7 0.46	0.42 0.52	-0.039 0.46	-0.16 0.50
MD SENTINAL RULER G1520 09/18/1997 M 509416 LHD MR RULER D310	MARK & BELVA DE BRUYCKER BYNUM MT	15 253 42	6 0.44	-0.9 0.84	15 0.77	35 0.74	19 0.55	5 0.38	27	-0.4 0.62	11 42 4	15 0.38	0.26 0.43	-0.002 0.37	0.47 0.38
EATONS VISIONARY 2044 P 03/21/2002 M 652186 EATONS VISION 0484	WIENK CHAROLAIS RANCH LAKE PRESTON SD EATON CHAROLAIS LINDSAY MT DEER VALLEY CHAROLAIS RANCH LAURENS SC	21 397 63	6 0.77	-4.4 0.87	16 0.80	52 0.79	17 0.55	6 0.54	25	1.8 0.69	46 98 7	6 0.56	-0.63 0.62	0.022 0.57	-0.08 0.61
BALDRIDGE FASTTRACK 82F 02/10/1996 M 447863 LT UNLIMITED EASE 9108	L R WAKEFIELD & SONS NEW RICHLAND MN JERRY D VAUGHAN DERBY KS MITCHELL R COX CAMPBELLSVILLE KY	409 3670 801	14 0.91	-2.9 0.96	26 0.93	40 0.90	16 0.86	8 0.83	30	-0.1 0.81	48 435 66	10 0.58	-0.03 0.65	0.019 0.59	-0.06 0.63
HCR FLASH 5074 POLLED 03/21/1985 M 252884 HCR EXODUS 9033 POLLED	MARK THOMPSON ELK RIVER MN	241 1745 516	5 0.88	-2.6 0.94	15 0.91	39 0.85	16 0.85	4 0.80	23	-0.3 0.65	17 35 11	1 0.49	0.02 0.53	-0.019 0.47	0.54 0.50
SCHURRTOP HCR RANCHER 03/02/1998 M 479774 SCHURRTOP EASE 8953 PLD	SCHURR BROS FARNAM NE HUBERT CHAROLAIS RANCH OAKLEY KS LARRY & ROBBIE LEHMAN TIOGA TX	44 793 131	4 0.74	1.9 0.91	29 0.86	59 0.76	16 0.67	3 0.63	31	0.8 0.62	0 281 11	23 0.36	0.41 0.33	-0.013 0.31	0.15 0.28
M6 GRID MAKER 104 PET 01/01/2001 M 633377 WCR SIR TRADITION 066	LINDSKOV-THIEL CHAROLAIS & TIM LESLIE ISABEL SD LARRY BANEY MOUNTAIN GROVE MO ABS GLOBAL INC DE FOREST WI	258 2468 349	6 0.85	0.6 0.95	34 0.91	65 0.88	15 0.76	3 0.74	32	0.8 0.78	22 470 86	23 0.50	0.75 0.54	-0.031 0.48	0.12 0.51
HCR MAC 9176 POLLED 04/07/1998 M 301627 FZ MIGHTY MAC POLLED 828	M J MOORE ALVARADO TX MARY E MALZAHN PERRY OK	41 664 196	-1 0.80	0.3 0.90	31 0.85	36 0.82	15 0.76	-1 0.70	30	0.7 0.61	25 41 4	15 0.47	0.24 0.53	-0.043 0.47	0.35 0.50
JWK CHOICE PLUS E203 ET 09/03/1995 M 439382 VCR SIR DUKE 914 PLD	SELECT SIRES INC PLAIN CITY OH	119 804 140	11 0.73	0.5 0.90	40 0.84	64 0.78	15 0.67	3 0.63	35	1.3 0.55	6 43 15	15 0.38	0.18 0.41	-0.031 0.36	-0.08 0.35
CJ STING 782C 11/21/1997 M 474293 ASC ELIMINATOR 032	ALLISON CHAROLAIS BREMOND TX	2 412 61	2 0.51	0.5 0.87	17 0.81	32 0.57	15 0.58	5 0.40	23	0.2 0.26	0 0 0	N/A	N/A	N/A	N/A
CJC TRADEMARK H45 02/24/1998 M 488766 LHD ALI MARK T214	LLOYD & JANE DE BRUYCKER DUTTON MT HARLAN CHAROLAIS AUSTIN TX	118 2211 395	7 0.88	2.7 0.94	32 0.90	65 0.89	14 0.80	-1 0.76	30	0.5 0.84	17 190 33	19 0.48	0.12 0.52	-0.019 0.47	-0.05 0.49
SKYMONT FLASH 5030 02/27/1995 M 427074 HCR FLASH 5074 POLLED	SELECT SIRES INC PLAIN CITY OH	108 528 105	7 0.73	0.8 0.89	27 0.81	35 0.66	14 0.65	9 0.59	28	-0.2 0.38	54 16 9	2 0.56	-0.10 0.63	-0.005 0.57	0.31 0.62
WCR SIR DUKE 17J ET P 01/01/2000 M 511446 VCR SIR DUKE 914 PLD	WIENK CHAROLAIS/MID TENN CHAROLAIS LAKE PRESTON SD DUBAS CHAROLAIS PAT DUBAS WOODBINE IA LEE FARMS CHAROLAIS MOORHEAD IA	16 527 96	-1 0.74	0.8 0.89	31 0.83	60 0.81	14 0.62	-1 0.61	29	0.5 0.72	0 214 7	19 0.37	0.07 0.36	-0.012 0.33	0.00 0.31
LT WIND STORM 8223 PLD 04/08/1998 M 480910 LT WYOMING WIND 4020 PLD	LINDSKOV-THIEL CHAROLAIS ISABEL SD GROSS & SONS FARMS MOUNTAIN HOME AR MARY E MALZAHN PERRY OK	23 446 76	12 0.74	-4.2 0.88	0 0.81	-3 0.74	14 0.60	6 0.56	14	0.0 0.62	39 59 8	-10 0.52	-0.24 0.58	0.040 0.52	0.10 0.57
EC NEW TREND 6G 03/28/1999 M 498475 RC BUDSMYDAD 225 POLLED	JAMIE EGGLESTON WESSINGTON SD SEMEX (USA) MADISON WI LLOYD & JANE DE BRUYCKER DUTTON MT	38 250 57	5 0.55	1.4 0.84	31 0.76	54 0.66	14 0.58	7 0.52	30	0.2 0.53	0 49 9	29 0.35	0.23 0.35	0.002 0.32	0.02 0.30
4-L UNLIMITED YL13POLLED 02/26/1989 M 301495 BCR POLLED UNLIMITED 003	DARWIN H OLIVER SHADEHILL S D PETERSON'S 4L PIERRE SD & MATT SUTTON AG GOOSE POND FARM PULASKI TN	200 2012 596	9 0.88	-3.8 0.94	13 0.91	31 0.90	13 0.86	4 0.81	19	0.0 0.68	53 45 10	-3 0.58	-0.17 0.63	-0.003 0.58	-0.12 0.62
LT POLLED VALUE 9089 03/10/1999 M 501702 WCR PRIME CUT 764 PLD	LINDSKOV-THIEL CHAROLAIS ISABEL SD EATON CHAROLAIS LINDSAY MT MYERS' CIRCLE FARM ELKTON KY	140 1606 308	3 0.86	-0.9 0.94	35 0.90	65 0.88	13 0.78	7 0.76	30	1.5 0.82	48 433 45	38 0.62	0.24 0.68	0.028 0.63	0.00 0.67
JDJSSRMOKINJOEJ1382ET 02/26/1999 M 506485 LHD CIGAR E46	JACQUE DE BRUYCKER DUTTON MT SILVER SPUR LAND AND CATTLE LLC ENCAMPMENT WY	28 548 82	-8 0.59	4.5 0.89	35 0.84	40 0.79	12 0.64	-3 0.56	30	1.8 0.72	35 96 7	23 0.52	0.62 0.58	-0.036 0.53	-0.25 0.56

# TRAIT LEADERS

Name of Bull Date of Birth/Reg. No. Sire	Current Owner/Address	Herds Progeny DIP	CE EPD ACC	BW EPD ACC	WW EPD ACC	YW EPD ACC	Mat. EPD ACC	MCE EPD ACC	Total Mtnl. EPD	SC EPD ACC	Carc. Ultra U Hrd	HCW EPD ACC	REA EPD ACC	FAT EPD ACC	MARB EPD ACC
HTA WHITEHOT 105A 01/19/1991 M 402510 KJP SKY FIRE 51T	H T AIREY RIVERS MANITOBA CAN NORHEIM CHAROLAIS FARM SASK CAN SANDRA CARLES RADVILLE SASK CANADA	44 234 90	9 0.68	2.0 0.86	29 0.79	66 0.73	2 0.72	14 0.66	17	1.5 0.63	0 42 7	30 0.43	0.23 0.45	-0.011 0.41	0.09 0.42
LT WIND TIME 7070 PLD 03/10/1997 M 462119 LT WYOMING WIND 4020 PLD	BREVIK CHAROLAIS RANCH LEWISTOWN MT	8 292 92	7 0.69	0.4 0.86	25 0.79	35 0.71	2 0.67	14 0.59	15	1.8 0.64	7 56 7	7 0.40	-0.06 0.43	0.018 0.38	0.24 0.39
EATONS BEYOND 7243 04/03/1997 M 492440 EATONS CENTURION 3324	DEER VALLEY CHAROLAIS RANCH LAURENS SC EATON CHAROLAIS LINDSAY MT SOUTHERN CATTLE COMPANY MARIANNA FL	29 373 106	4 0.74	-2.2 0.87	11 0.81	25 0.77	6 0.65	13 0.60	12	0.6 0.66	54 69 13	-9 0.61	-0.21 0.67	0.024 0.62	0.48 0.66
HEP KING GRAZER 25A 02/01/1991 M 333937 BR DUKE 261	PATE CHAROLAIS RANCH LOWNDESBORO AL KINMONT FARM WAYNESBORO VA	123 1155 324	6 0.79	0.5 0.93	32 0.88	63 0.82	21 0.80	11 0.75	37	-0.3 0.55	0 67 15	31 0.39	0.25 0.39	0.032 0.35	0.09 0.35
ASC ELIMINATOR 032 03/17/1997 M 319454 HCR EXONERATOR POLLED	ARROW S FARMS SHARON SPGS KS JUDSON & DENISE BALDRIDGE NORTH PLATTE NE	494 4527 1319	9 0.92	-2.2 0.96	31 0.94	40 0.92	10 0.90	10 0.88	26	0.5 0.81	19 182 45	4 0.54	0.36 0.59	-0.005 0.54	-0.28 0.57
SCHURRTOP 5627 03/13/1989 M 300802 WCR SIR DUKE 783	SCHURR BROS FARNAM NE HEBBERT CHAROLAIS HYANNIS NE	13 389 145	4 0.78	-1.1 0.88	14 0.83	34 0.74	9 0.76	10 0.71	16	0.2 0.57	3 21 3	3 0.41	-0.27 0.43	0.031 0.39	0.11 0.40
PF IMPRESSED 620 P ET 07/10/1996 M 450023 JWK IMPRESSIVE D040 ET	STEVE PETERSON MT GROVE MO WOODEN CROSS CATTLE CO HILLSBORO KS	77 498 133	10 0.68	1.6 0.89	30 0.82	53 0.79	4 0.70	10 0.63	19	0.8 0.51	0 19 12	17 0.33	0.19 0.32	0.010 0.29	0.14 0.27
LT WYOMING WIND 4020 PLD 02/27/1994 M 411450 SCHURRTOP 5627	LINDSKOV-THIEL CHAROLAIS ISABEL SD LARRY & ROBBIE LEHMAN TIOGA TX	544 5374 1925	5 0.92	1.1 0.97	26 0.95	42 0.93	0 0.91	9 0.89	13	1.5 0.87	56 869 119	5 0.65	0.19 0.70	0.027 0.66	0.01 0.69
JWK IMPRESSIVE D040 ET 03/29/1994 M 413653 WCR SIR FA MAC 2244	WIENK CHAROLAIS RANCH LAKE PRESTON SD	325 2273 764	10 0.86	0.8 0.95	24 0.92	43 0.89	4 0.87	9 0.84	16	0.1 0.78	27 165 47	13 0.57	-0.14 0.61	0.029 0.57	0.22 0.60
SKYMONT FLASH 5030 02/27/1995 M 427074 HCR FLASH 5074 POLLED	SELECT SIRES INC PLAIN CITY OH	108 528 105	7 0.73	0.8 0.89	27 0.81	35 0.66	14 0.65	9 0.59	28	-0.2 0.38	54 16 9	2 0.56	-0.10 0.63	-0.005 0.57	0.31 0.62
BALDRIDGE FASTTRACK 82F 02/10/1996 M 447863 LT UNLIMITED EASE 9108	L R WAKEFIELD & SONS NEW RICHLAND MN JERRY D VAUGHAN DERBY KS MITCHELL R COX CAMPBELLSVILLE KY	409 3670 801	14 0.91	-2.9 0.96	26 0.93	40 0.90	16 0.86	8 0.83	30	-0.1 0.81	48 435 66	10 0.58	-0.03 0.65	0.019 0.59	-0.06 0.63
LHD MR PERFECT Y416 03/19/1989 M 314744 WCR SIR PERFECTION 734	SCHURR BROS FARNAM NE COBB CHAROLAIS RANCH INC AUGUSTA MT LLOYD & JANE DE BRUYCKER DUTTON MT	169 1616 661	0 0.89	-0.1 0.94	20 0.91	28 0.89	9 0.88	7 0.83	19	1.0 0.77	16 19 10	13 0.54	0.26 0.59	0.022 0.52	-0.06 0.55
LT POLLED VALUE 9089 03/10/1999 M 501702 WCR PRIME CUT 764 PLD	LINDSKOV-THIEL CHAROLAIS ISABEL SD EATON CHAROLAIS LINDSAY MT MYERS' CIRCLE FARM ELKTON KY	140 1606 308	3 0.86	-0.9 0.94	35 0.90	65 0.88	13 0.78	7 0.76	30	1.5 0.82	48 433 45	38 0.62	0.24 0.68	0.028 0.63	0.00 0.67
LT ASSERTION 1277 P 05/04/2001 M 620193 EATONS ASSERT 9171	LINDSKOV-THIEL CHAROLAIS ISABEL SD HARRIS MORGAN CAMILLA GA	92 711 134	7 0.82	-1.9 0.90	14 0.85	27 0.78	-7 0.65	7 0.61	1	-0.1 0.68	1 127 34	-10 0.36	-0.12 0.35	0.026 0.32	-0.04 0.30
LT DISTANCE 5025 PLD 03/06/1995 M 428076 HTA TUNDRA PLD 222B	LINDSKOV-THIEL CHAROLAIS ISABEL SD RAMBUR CHAROLAIS SIDNEY MT LAWRENCE J DANNA WEST MONROE LA	8 407 78	5 0.76	-2.2 0.88	8 0.81	24 0.79	8 0.64	7 0.59	13	0.5 0.67	40 101 3	7 0.54	0.25 0.61	0.041 0.55	0.29 0.59
SCHURRTOP RC SIGNATURE 03/15/1999 M 499155 SKYMONT EASE 3001	SCHURR BROS FARNAM NE RAMBUR CHAROLAIS SIDNEY MT COLONIAL FARMS WAYNESBORO VA	14 279 79	-1 0.60	2.6 0.85	30 0.78	46 0.76	26 0.64	7 0.58	41	0.8 0.54	18 81 2	13 0.46	-0.05 0.51	-0.019 0.45	0.14 0.49
DOUBLE D P10 03/08/1990 M 321300 WDW PRESTIGE 650U	DOUBLE D CATTLE CO COSHOCTON OH SELECT SIRES INC PLAIN CITY OH	121 479 104	-3 0.66	1.6 0.88	12 0.79	39 0.70	7 0.66	7 0.56	13	0.3 0.22	0 0 0	N/A	N/A	N/A	N/A
SPARROWS ALLIANCE 513G 02/11/1997 M 469401 LT WYOMING WIND 4020 PLD	BRIGGS.BROBERG,DYBDAL,GREER, & WILSON CHICHESTER NH LINDSKOV-THIEL CHAROLAIS ISABEL SD SOUTHERN CATTLE COMPANY MARIANNA FL	21 700 231	6 0.75	2.2 0.91	22 0.86	40 0.79	-10 0.76	6 0.72	1	0.8 0.67	11 105 5	6 0.45	0.42 0.48	0.033 0.43	-0.09 0.45
2UP PEUGEOT ET 05/16/1994 M 451420 2UP LIMITED EDITIONL147	EFFERTZ KEY RANCH VELVA ND SOUTHERN CATTLE COMPANY MARIANNA FL	18 562 213	-3 0.67	3.9 0.90	32 0.85	48 0.83	6 0.77	6 0.71	22	0.7 0.39	0 60 5	25 0.32	0.45 0.31	0.006 0.28	-0.09 0.25
BALDRIDGE KOJACK 29K 01/16/2000 M 602060 BALDRIDGE FASTTRACK 82F	SELECT SIRES INC PLAIN CITY OH	217 1414 197	13 0.86	-4.3 0.93	30 0.88	46 0.82	22 0.70	6 0.67	37	-0.7 0.62	5 114 37	4 0.41	-0.17 0.44	-0.001 0.39	-0.01 0.39
LHD PERFECT MARK C237 02/27/1993 M 395309 LHD MR PERFECT Y416	LLOYD & JANE DE BRUYCKER DUTTON MT SELECT SIRES INC PLAIN CITY OH	137 694 168	-1 0.79	0.5 0.90	23 0.83	28 0.65	5 0.71	6 0.63	17	0.7 0.35	25 20 4	10 0.45	0.46 0.51	-0.009 0.44	-0.08 0.49
LT WIND STORM 8223 PLD 04/08/1998 M 480910 LT WYOMING WIND 4020 PLD	LINDSKOV-THIEL CHAROLAIS ISABEL SD GROSS & SONS FARMS MOUNTAIN HOME AR MARY E MALZAHN PERRY OK	23 446 76	12 0.74	-4.2 0.88	0 0.81	-3 0.74	14 0.60	6 0.56	14	0.0 0.62	39 59 8	-10 0.52	-0.24 0.58	0.040 0.52	0.10 0.57
LHD CIGAR E46 02/15/1995 M 434790 LHD MR PERFECT Y416	LLOYD & JANE DE BRUYCKER DUTTON MT JOCKO VALLEY CHAROLAIS ARLEE MT	281 3423 982	-4 0.86	3.2 0.96	31 0.93	51 0.91	10 0.87	5 0.84	25	0.8 0.86	11 378 74	15 0.55	0.60 0.60	-0.011 0.55	-0.35 0.58
EATONS TRUEVALUE 1026 03/03/2001 M 628479 LT POLLED VALUE 9089	VEDVEI CHAROLAIS RANCH LAKE PRESTON SD EATON CHAROLAIS LINDSAY MT NOLLER & FRANK SIGOURNEY IA	53 475 103	1 0.76	1.2 0.88	26 0.82	56 0.79	10 0.63	5 0.59	23	0.7 0.65	26 95 16	21 0.49	0.48 0.55	0.008 0.49	-0.19 0.53
LT WESTERN SPUR 2061 PLD 03/04/2002 M 645786 EATONS PREDICTOR 9230	LINDSKOV-THIEL CHAROLAIS ISABEL SD ROCKY MEADOW FARM CHICHESTER NH HIGHVIEW CHAROLAIS FARM MORRIS MN	109 677 78	0 0.75	-1.0 0.90	23 0.84	44 0.78	-5 0.56	5 0.57	7	1.3 0.69	19 188 36	7 0.48	0.35 0.52	0.028 0.47	0.06 0.49

# TRAIT LEADERS

## Multiple Trait

Name of Bull Date of Birth/Reg. No. Sire	Current Owner/Address	Herds Progeny DIP	CE EPD ACC	BW EPD ACC	WW EPD ACC	YW EPD ACC	Mat. EPD ACC	MCE EPD ACC	Total Mtnl. EPD	SC EPD ACC	Carc. Ultra U Hrd	HCW EPD ACC	REA EPD ACC	FAT EPD ACC	MARB EPD ACC
HBR CANNON 2250 ET 05/02/2002 M 652166 VCR SIR DUKE 914 PLD	DR HARLAN ROGERS PO BOX 1718 COLLINS MS 39428	8 118 8	4 0.54	0.4 0.76	43 0.60	74 0.28	25 0.33	2 0.32	46	1.0 PE	0 0 0	N/A	N/A	N/A	N/A
LCOC POLLED VALUE P063S P 02/20/2006 M 724767 LT POLLED VALUE 9089	SILVER SPUR LAND AND CATTLE LLC P O BOX 714 ENCAMPMENT WY 82325	1 48 0	5 0.41	-1.2 0.67	39 0.56	84 0.43	15 0.23	5 0.19	35	0.3 0.37	0 0 0	35 BK	0.25 BK	0.018 BK	-0.07 BK
WM ALI STAR 250 PET 03/18/2002 M 648601 VCR SIR DUKE 914 PLD	DOUBLE O CHAROLAIS MARSHALL TX	12 289 5	6 0.58	0.7 0.84	47 0.74	82 0.32	14 0.30	3 0.25	38	1.3 0.21	0 1 1	24 0.24	0.26 0.22	-0.037 0.18	0.07 0.18
JCR SIR DUKE 041 03/05/2000 M 509856 VCR SIR DUKE 914 PLD	DANIELLE MIKKELSON LAKE KIMBALL SD C-B CHAROLAIS MONTPELIER ND LINDSKOV-THIEL CHAROLAIS ISABEL SD	5 202 35	2 0.59	-0.9 0.82	39 0.74	68 0.58	21 0.49	-3 0.40	40	1.3 0.50	0 11 1	24 0.29	0.18 0.28	-0.022 0.25	0.11 0.23
JDS HE'SMYKING 2038 P ET 11/28/2000 M 613519 VCR SIR DUKE 914 PLD	MID TENN CHAROLAIS MANCHESTER TN MYERS' CIRCLE FARM ELKTON KY	4 193 14	5 0.63	0.7 0.81	49 0.67	78 0.63	9 0.37	3 0.38	34	0.4 0.43	0 40 3	28 0.32	0.36 0.32	-0.010 0.29	0.04 0.27
VCR SIR DUKE 914 PLD 03/01/1989 M 297007 WCR SIR DUKE 761	VEDVEI CHAROLAIS RANCH LAKE PRESTON SD ABS GLOBAL INC DE FOREST WI VEDVEI CHAROLAIS RANCH LAKE PRESTON SD	404 3738 1404	10 0.91	-0.3 0.96	40 0.94	64 0.92	21 0.90	5 0.88	41	1.3 0.83	37 321 63	16 0.59	0.08 0.64	-0.045 0.59	0.06 0.63
DVCR DUKE K09 P ET 05/09/2000 M 606732 WCR SIR DUKE 761	DEER VALLEY CHAROLAIS RANCH LAURENS SC SOUTHERN CATTLE COMPANY MARIANNA FL	9 167 19	6 0.57	0.4 0.80	46 0.67	67 0.51	14 0.42	4 0.37	37	0.7 PE	40 24 1	15 0.51	-0.07 0.58	-0.034 0.53	0.15 0.57
BALDRIDGE KOJACK 29K 01/16/2000 M 602060 BALDRIDGE FASTTRACK 82F	SELECT SIRES INC 11740 US 42 PLAIN CITY OH 43064	217 1414 197	13 0.86	-4.3 0.93	30 0.88	46 0.82	22 0.70	6 0.67	37	-0.7 0.62	5 114 37	4 0.41	-0.17 0.44	-0.001 0.39	-0.01 0.39
TW ELIMINATOR J102 P 09/02/1999 M 508565 ASC ELIMINATOR 032	AMBURGEY CHAROLAIS FARM 3171 CAMARGO RD MT STERLING KY 40353	2 268 23	5 0.50	-0.5 0.84	40 0.76	70 0.71	13 0.39	7 0.38	32	0.5 PE	0 0 0	7 PE	0.18 PE	-0.001 PE	-0.11 PE
LT RIO BRAVO 3181 P 03/17/2003 M 665507 LT RIO BLANCO 1234 P	LINDSKOV-THIEL CHAROLAIS ISABEL SD ABS GLOBAL INC DE FOREST WI	57 465 60	3 0.61	0.1 0.88	36 0.82	72 0.75	18 0.53	1 0.51	36	1.5 0.58	2 161 33	37 0.36	0.66 0.35	0.045 0.31	0.17 0.30
LT WESTERN EDGE 4057 PLD 03/02/2004 M 686616 LT WESTERN SPUR 2061 PLD	HUBERT/LEHMAN/WRIGHT CHAROLAIS OAKLEY KS LINDSKOV-THIEL CHAROLAIS ISABEL SD LANE & PETERSON CATTLE CO CHARLES CITY IA	56 605 63	1 0.68	-0.5 0.89	37 0.84	76 0.74	12 0.50	4 0.52	30	1.6 0.57	1 183 26	28 0.37	0.14 0.36	0.026 0.32	-0.09 0.31
OAKDALE DUKE 9003P 08/18/1998 M 499574 VCR SIR DUKE 135 PLD	NORD FARMS BLOOMINGTON IL ROGER E PARKS REVOCABLE TRUST EARLSBORO OK	26 201 17	5 0.68	-3.2 0.82	26 0.73	60 0.63	21 0.34	3 0.31	34	0.9 0.39	0 39 6	12 0.30	0.19 0.29	0.002 0.26	0.10 0.23
JWK CHOICE PLUS E203 ET 09/03/1995 M 439382 VCR SIR DUKE 914 PLD	SELECT SIRES INC 11740 US 42 PLAIN CITY OH 43064	119 804 140	11 0.73	0.5 0.90	40 0.84	64 0.78	15 0.67	3 0.63	35	1.3 0.55	6 43 15	15 0.38	0.18 0.41	-0.031 0.36	-0.08 0.35
M6 GAIN & GRADE 927 PLD 01/20/1999 M 511007 WCR SIR DUKE 761	ABS GLOBAL INC DE FOREST WI SPRING RIDGE CATTLE CO WINCHESTER KY KEVIN J MOORE ALVARADO TX	146 984 178	1 0.80	0.4 0.91	41 0.87	68 0.80	12 0.67	1 0.64	32	1.1 0.65	43 199 41	18 0.54	-0.37 0.60	-0.040 0.54	0.40 0.58
ENDSLEY'S DUKE STONE 257 03/24/2002 M 641628 VCR SIR DUKE 914 PLD	ENDSLEY'S CHAROLAIS FARMS 5590 E STATE RD HASTINGS MI 49058	3 274 37	8 0.55	0.5 0.84	39 0.77	73 0.77	12 0.46	9 0.42	31	N/A	0 0 0	N/A	N/A	N/A	N/A
SCC SIR DUKE K255 PET 02/27/2000 M 602976 VCR SIR DUKE 914 PLD	F B G I FARMS 18159 LEE HWY ABINGDON VA 24210	2 145 34	11 0.57	-0.9 0.79	40 0.69	64 0.27	8 0.43	5 0.39	28	0.9 PE	0 7 1	13 0.26	0.08 0.25	-0.022 0.22	0.07 0.21
BHD AMPLIFIE M176 02/15/2002 M 655317 CJC TRADEMARK H45	BRETT DE BRUYCKER DUTTON MT THOMAS RANCH HARROLD SD	2 126 17	8 0.50	0.0 0.78	39 0.70	65 0.69	12 0.38	0 0.32	32	0.8 0.52	0 36 2	27 0.31	0.53 0.30	0.003 0.27	-0.12 0.25
WCR SIR DUKE 0367 ET P 02/07/2000 M 516550 BR DUKE 261	PETERSON'S 4L CHAROLAIS 4703 S KENANSVILLE RD OKEECHOBEE FL 34972	4 66 6	5 0.41	-1.1 0.70	37 0.55	65 0.44	9 0.32	2 0.30	28	1.0 0.30	0 0 0	12 PE	-0.02 PE	0.000 PE	0.02 PE
LT POLLED VALUE 9089 03/10/1999 M 501702 WCR PRIME CUT 764 PLD	LINDSKOV-THIEL CHAROLAIS ISABEL SD EATON CHAROLAIS LINDSAY MT MYERS' CIRCLE FARM ELKTON KY PLUCKERS CHAROLAIS PARKER SD	140 1606 308	3 0.86	-0.9 0.94	35 0.90	65 0.88	13 0.78	7 0.76	30	1.5 0.82	48 433 45	38 0.62	0.24 0.68	0.028 0.63	0.00 0.67
VCR SIR DUKE 9918 ET P 08/20/1999 M 508800 VCR SIR DUKE 914 PLD	VEDVEI CHAROLAIS RANCH 44213 204TH ST LAKE PRESTON SD 57249	22 224 25	11 0.63	-5.0 0.82	29 0.73	46 0.69	11 0.43	5 0.40	25	0.5 0.54	0 34 5	7 0.32	-0.16 0.32	-0.032 0.29	0.02 0.27
CFR POWER HOUSE 304 P ET 01/28/2003 M 664577 LHD CIGAR E46	THOMAS L WILKES PO BOX 118 PATRICK SC 29584	1 62 6	-2 0.41	0.7 0.68	41 0.55	68 0.36	10 0.32	3 0.29	31	0.9 0.22	0 6 1	28 0.23	0.52 0.23	-0.009 0.20	-0.26 0.19
VCR SIR DUKE 199 P 04/01/2001 M 618825 VCR SIR DUKE 914 PLD	MEADOWS CREEK FARM 4421 COUNTY RD 33N COLUMBIA AL 36319	6 69 9	5 0.49	0.5 0.72	39 0.61	67 0.60	11 0.33	5 0.31	31	0.5 0.45	0 41 3	15 0.32	0.28 0.32	-0.026 0.29	-0.16 0.28
EC NO DOUBT 2022 P 03/10/2004 M 685500 M6 GRID MAKER 104 PET	GENEX COOPERATIVE INC SHAWANO WI JAMIE EGLESTON WESSINGTON SD CARSTENS FARMS LTD ADAIR IA	25 240 16	12 0.67	-0.1 0.83	33 0.74	74 0.61	13 0.34	9 0.33	29	0.9 0.38	0 30 8	26 0.30	0.62 0.30	-0.016 0.27	0.19 0.24
SCHURRTOP V351 E423 P 04/09/2000 M 603158 SCHURRTOP 3001 V351 P	SCHURR BROS 40842 E FARNAM ROAD FARNAM NE 68029-7114	4 264 36	5 0.54	0.7 0.85	41 0.77	69 0.76	8 0.45	12 0.43	28	0.7 0.53	0 91 2	27 0.33	0.66 0.31	-0.004 0.28	0.25 0.26
HEP KING GRAZER 25A 02/01/1991 M 333937 BR DUKE 261	PATE CHAROLAIS RANCH LOWNDESBORO AL KINMONT FARM WAYNESBORO VA PATE CHAROLAIS RANCH LOWNDESBORO AL	123 1155 324	6 0.79	0.5 0.93	32 0.88	63 0.82	21 0.80	11 0.75	37	-0.3 0.55	0 67 15	31 0.39	0.25 0.39	0.032 0.35	0.09 0.35

**TRAIT LEADERS**

Name of Bull Date of Birth/Reg. No. Sire	Current Owner/Address	Herds Progeny DIP	CE EPD ACC	BW EPD ACC	WW EPD ACC	YW EPD ACC	Mat. EPD ACC	MCE EPD ACC	Total Mtnl. EPD	SC EPD ACC	Carc. Ultra U Hrd	HCW EPD ACC	REA EPD ACC	FAT EPD ACC	MARB EPD ACC
LT POLLED VALUE 9089 03/10/1999 M 501702 WCR PRIME CUT 764 PLD	LINDSKOV-THIEL CHAROLAIS ISABEL SD EATON CHAROLAIS LINDSAY MT MYERS' CIRCLE FARM ELKTON KY	140 1606 308	3 0.86	-0.9 0.94	35 0.90	65 0.88	13 0.78	7 0.76	30	1.5 0.82	48 433 45	38 0.62	0.24 0.68	0.028 0.63	0.00 0.67
WCR PRIME CUT 764 PLD 03/01/1997 M 460645 JWK IMPRESSIVE D040 ET	WIENK CHAROLAIS RANCH LAKE PRESTON SD ASCHERMANN CHAROLAIS CARTHAGE MO LINDSKOV-THIEL AND KARR FARMS HOLLY SPRINGS MS	354 3382 893	8 0.89	-0.3 0.96	28 0.93	57 0.92	-1 0.87	4 0.84	13	1.1 0.82	50 467 61	37 0.61	-0.09 0.67	0.045 0.62	0.11 0.65
RC MONTANA 644 POLLED 02/17/1996 M 444364 HTA WHITEHOT 105A	RAMBUR CHAROLAIS SIDNEY MT HEBBERT CHAROLAIS HYANNIS NE	36 790 219	2 0.75	1.8 0.91	18 0.87	50 0.82	12 0.77	4 0.73	21	0.9 0.67	82 261 9	32 0.64	-0.18 0.70	0.007 0.66	0.20 0.70
SKYMONT EASE 2078 03/12/1992 M 360699 LT UNLIMITED EASE 9108	SILVER HILLS FARM HOLLAND MN WIENK CHAROLAIS RANCH LAKE PRESTON SD	254 1581 537	-3 0.84	1.1 0.94	26 0.90	52 0.88	-3 0.85	0 0.81	10	0.9 0.76	32 80 21	28 0.56	0.24 0.61	-0.010 0.56	-0.02 0.59
WCR PRIME TIME 908 P 02/05/1999 M 496121 WCR PRIME CUT 764 PLD	WIENK CHAROLAIS RANCH LAKE PRESTON SD MITCHELL R COX CAMPBELLSVILLE KY	167 1105 307	5 0.84	-0.1 0.92	30 0.88	52 0.84	-4 0.78	3 0.75	11	1.0 0.69	59 226 34	26 0.61	0.56 0.67	-0.005 0.62	0.05 0.66
LHD ALI MARK T214 03/28/1985 M 260394 ABC ALI HERCULES	DENNIS & MARTHA DREYER SEELEY LAKE LLOYD & JANE DE BRUYCKER DUTTON MT	56 1513 583	3 0.86	0.4 0.94	20 0.91	33 0.89	11 0.86	1 0.82	21	0.9 0.76	25 35 9	24 0.56	0.38 0.62	-0.043 0.55	-0.07 0.59
LT THUNDERING WIND 5200P 03/09/2005 M 705186 LT WYOMING WIND 4020 PLD	LINDSKOV-THIEL CHAROLAIS ISABEL SD BJR SUMMERFORD CHAROLAIS FALKVILLE AL	31 383 8	8 0.55	0.3 0.86	42 0.79	71 0.71	0 0.31	7 0.30	21	1.7 0.64	40 125 14	22 0.55	0.02 0.60	0.060 0.55	0.18 0.59
BR DUKE 261 04/24/1983 M 246564 BR DUKE 295	WIENK CHAROLAIS RANCH LAKE PRESTON SD	246 2636 1146	-7 0.89	2.2 0.95	34 0.93	51 0.92	12 0.91	-3 0.88	29	0.4 0.84	26 32 8	21 0.56	-0.04 0.62	0.000 0.56	0.07 0.59
WCR SIR FA MAC 2244 04/05/1982 M 234430 WCR SIR FAB MAC 809	VEDVEI CHAROLAIS RANCH LAKE PRESTON SD	200 1629 824	-5 0.85	3.0 0.95	29 0.92	58 0.90	11 0.89	5 0.85	25	0.4 0.77	13 26 11	19 0.55	0.01 0.59	0.007 0.55	0.11 0.57
VCR SIR DUKE 914 PLD 03/01/1989 M 297007 WCR SIR DUKE 761	VEDVEI CHAROLAIS RANCH LAKE PRESTON SD ABS GLOBAL INC DE FOREST WI	404 3738 1404	10 0.91	-0.3 0.96	40 0.94	64 0.92	21 0.90	5 0.88	41	1.3 0.83	37 321 63	16 0.59	0.08 0.64	-0.045 0.59	0.06 0.63
LT EASY PRO 1158 PLD 03/18/2001 M 620348 LT UNLIMITED EASE 9108	LINDSKOV-THIEL CHAROLAIS ISABEL SD BJR SUMMERFORD CHAROLAIS FALKVILLE AL	73 880 130	7 0.81	-1.4 0.91	25 0.86	42 0.82	19 0.64	-5 0.62	31	-0.1 0.71	41 285 28	16 0.56	-0.03 0.61	0.019 0.56	0.37 0.60

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M6 BIG TOP 268 PLD ET 03/19/2002 M 655289 LHD CIGAR E46	ROGER E PARKS REVOCABLE TRUST	17 248 26	3 0.56	1.7 0.83	29 0.70	33 0.64	4 0.40	4 0.39	18	0.3 0.43	38 89 6	13 0.53	0.90 0.59	0.022 0.54	0.18 0.58
M6 FUNCTION 169 PET 03/07/2001 M 631721 LHD CIGAR E46	STALLINGS CHAROLAIS	44 270 29	4 0.60	1.1 0.84	13 0.74	34 0.63	26 0.41	3 0.41	32	0.5 0.49	26 53 10	1 0.50	0.84 0.56	-0.049 0.51	-0.13 0.55
RCR TRADITIONS NED P0425 04/01/2000 M 600127 WCR SIR TRADITION 066	RICKETTS CHAROLAIS RANCH	14 129 14	3 0.47	0.9 0.77	30 0.66	53 0.63	-1 0.36	7 0.28	14	0.0 0.41	37 8 3	8 0.49	0.80 0.56	-0.039 0.51	-0.18 0.56
JDJSSRSKINJOEJ1382ET 02/26/1999 M 506485 LHD CIGAR E46	JACQUE DE BRUYCKER DUTTON MT SILVER SPUR LAND AND CATTLE LLC ENCAMPMENT WY	28 548 82	-8 0.59	4.5 0.89	35 0.84	40 0.79	12 0.64	-3 0.56	30	1.8 0.72	35 96 7	23 0.52	0.62 0.58	-0.036 0.53	-0.25 0.56
LHD CIGAR E46 02/15/1995 M 434790 LHD MR PERFECT Y416	LLOYD & JANE DE BRUYCKER DUTTON MT JOCKO VALLEY CHAROLAIS ARLEE MT	281 3423 982	-4 0.86	3.2 0.96	31 0.93	51 0.91	10 0.87	5 0.84	25	0.8 0.86	11 378 74	15 0.55	0.60 0.60	-0.011 0.55	-0.35 0.58
WCR PRIME TIME 908 P 02/05/1999 M 496121 WCR PRIME CUT 764 PLD	WIENK CHAROLAIS RANCH LAKE PRESTON SD MITCHELL R COX CAMPBELLSVILLE KY	167 1105 307	5 0.84	-0.1 0.92	30 0.88	52 0.84	-4 0.78	3 0.75	11	1.0 0.69	59 226 34	26 0.61	0.56 0.67	-0.005 0.62	0.05 0.66
EATONS TRUEVALUE 1026 03/03/2001 M 628479 LT POLLED VALUE 9089	VEDVEI CHAROLAIS RANCH LAKE PRESTON SD EATON CHAROLAIS LINDSAY MT NOLLER & FRANK SIGOURNEY IA	53 475 103	1 0.76	1.2 0.88	26 0.82	56 0.79	10 0.63	5 0.59	23	0.7 0.65	26 95 16	21 0.49	0.48 0.55	0.008 0.49	-0.19 0.53
LHD ALI MARK T214 03/28/1985 M 260394 ABC ALI HERCULES	DENNIS & MARTHA DREYER SEELEY LAKE LLOYD & JANE DE BRUYCKER DUTTON MT	56 1513 583	3 0.86	0.4 0.94	20 0.91	33 0.89	11 0.86	1 0.82	21	0.9 0.76	25 35 9	24 0.56	0.38 0.62	-0.043 0.55	-0.07 0.59
WCR SIR TRADITION 066 02/27/1990 M 318119 WCR SIR TRADITION 4402	WIENK CHAROLAIS RANCH LAKE PRESTON SD J-MAR GENETICS GOODE VA	175 1789 681	-2 0.86	1.7 0.94	28 0.91	51 0.90	2 0.86	-3 0.83	16	0.4 0.81	29 158 31	9 0.57	0.36 0.61	-0.037 0.57	0.03 0.60
ASC ELIMINATOR 032 03/17/1990 M 319454	ARROW S FARMS SHARON SPGS KS JUDSON & DENISE BALDRIDGE NORTH PLATTE NE	494 4527	9 0.92	-2.2 0.96	31 0.94	40 0.92	10 0.90	10 0.88	26	0.5 0.81	19 182	4 0.54	0.36 0.59	-0.005 0.54	-0.28 0.57

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VCR SIR DUKE 914 PLD 03/01/1989 M 297007 WCR SIR DUKE 761	VEDVEI CHAROLAIS RANCH LAKE PRESTON SD ABS GLOBAL INC DE FOREST WI	404 3738 1404	10 0.91	-0.3 0.96	40 0.94	64 0.92	21 0.90	5 0.88	41	1.3 0.83	37 321 63	16 0.59	0.08 0.64	-0.045 0.59	0.06 0.63
LHD ALI MARK T214 03/28/1985 M 260394 ABC ALI HERCULES	DENNIS & MARTHA DREYER SEELEY LAKE LLOYD & JANE DE BRUYCKER DUTTON MT	56 1513 583	3 0.86	0.4 0.94	20 0.91	33 0.89	11 0.86	1 0.82	21	0.9 0.76	25 35 9	24 0.56	0.38 0.62	-0.043 0.55	-0.07 0.59
WCR SIR TRADITION 066 02/27/1990 M 318119 WCR SIR TRADITION 4402	WIENK CHAROLAIS RANCH LAKE PRESTON SD J-MAR GENETICS GOODE VA	175 1789 681	-2 0.86	1.7 0.94	28 0.91	51 0.90	2 0.86	-3 0.83	16	0.4 0.81	29 158 31	9 0.57	0.36 0.61	-0.037 0.57	0.03 0.60
LHD CIGAR E46 02/15/1995 M 434790 LHD MR PERFECT Y416	LLOYD & JANE DE BRUYCKER DUTTON MT JOCKO VALLEY CHAROLAIS ARLEE MT	281 3423 982	-4 0.86	3.2 0.96	31 0.93	51 0.91	10 0.87	5 0.84	25	0.8 0.86	11 378 74	15 0.55	0.60 0.60	-0.011 0.55	-0.35 0.58
SKYMONT EASE 2078 03/12/1992 M 360699 LT UNLIMITED EASE 9108	SILVER HILLS FARM HOLLAND MN WIENK CHAROLAIS RANCH LAKE PRESTON SD	254 1581 537	-3 0.84	1.1 0.94	26 0.90	52 0.88	-3 0.85	0 0.81	10	0.9 0.76	32 80 21	28 0.56	0.24 0.61	-0.010 0.56	-0.02 0.59
WCR PRIME TIME 908 P 02/05/1999 M 496121 WCR PRIME CUT 764 PLD	WIENK CHAROLAIS RANCH LAKE PRESTON SD MITCHELL R COX CAMPBELLSVILLE KY	167 1105 307	5 0.84	-0.1 0.92	30 0.88	52 0.84	-4 0.78	3 0.75	11	1.0 0.69	59 226 34	26 0.61	0.56 0.67	-0.005 0.62	0.05 0.66
SKYMONT FLASH 5030 02/27/1995 M 427074 HCR FLASH 5074 POLLED	SELECT SIRES INC PLAIN CITY OH	108 528 105	7 0.73	0.8 0.89	27 0.81	35 0.66	14 0.65	9 0.59	28	-0.2 0.38	54 16 9	2 0.56	-0.10 0.63	-0.005 0.57	0.31 0.62
4-L UNLIMITED YL13POLLED 02/26/1989 M 301495 BCR POLLED UNLIMITED 003	DARWIN H OLIVER SHADEHILL S D PETERSON'S 4L PIERRE SD & MATT SUTTON AG GOOSE POND FARM PULASKI TN	200 2012 596	9 0.88	-3.8 0.94	13 0.91	31 0.90	13 0.86	4 0.81	19	0.0 0.68	53 45 10	-3 0.58	-0.17 0.63	-0.003 0.58	-0.12 0.62
BR DUKE 261 04/24/1983 M 246564 BR DUKE 295	WIENK CHAROLAIS RANCH	246 2636 1146	-7 0.89	2.2 0.95	34 0.93	51 0.92	12 0.91	-3 0.88	29	0.4 0.84	26 32 8	21 0.56	-0.04 0.62	0.000 0.56	0.07 0.59
RC MONTANA 644 POLLED 02/17/1996 M 444364 HTA WHITEHOT 105A	RAMBUR CHAROLAIS SIDNEY MT HEBBERT CHAROLAIS HYANNIS NE	36 790 219	2 0.75	1.8 0.91	18 0.87	50 0.82	12 0.77	4 0.73	21	0.9 0.67	82 261 9	32 0.64	-0.18 0.70	0.007 0.66	0.20 0.70
WCR SIR FA MAC 2244 04/05/1982 M 234430 WCR SIR FAB MAC 809	VEDVEI CHAROLAIS RANCH LAKE PRESTON SD	200 1629 824	-5 0.85	3.0 0.95	29 0.92	58 0.90	11 0.89	5 0.85	25	0.4 0.77	13 26 11	19 0.55	0.01 0.59	0.007 0.55	0.11 0.57

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EATONS BEYOND 7243 04/03/1997 M 492440 EATONS CENTURION 3324	DEER VALLEY CHAROLAIS RANCH LAURENS SC EATON CHAROLAIS LINDSAY MT SOUTHERN CATTLE COMPANY MARIANNA FL	29 373 106	4 0.74	-2.2 0.87	11 0.81	25 0.77	6 0.65	13 0.60	12	0.6 0.66	54 69 13	-9 0.61	-0.21 0.67	0.024 0.62	0.48 0.66
M6 GAIN & GRADE 927 PLD 01/20/1999 M 511007 WCR SIR DUKE 761	ABS GLOBAL INC DE FOREST WI SPRING RIDGE CATTLE CO WINCHESTER KY KEVIN J MOORE ALVARADO TX	146 984 178	1 0.80	0.4 0.91	41 0.87	68 0.80	12 0.67	1 0.64	32	1.1 0.65	43 199 41	18 0.54	-0.37 0.60	-0.040 0.54	0.40 0.58
EATONS BULLSEYE 3033 TW 03/13/2003 M 660576 EATONS BEYOND 7243	RIVERDALE BULLSEYE SYNDICATE 3287 LICK CREEK ROAD LEASBURG MO 65535	14 150 16	5 0.65	0.2 0.79	12 0.67	40 0.61	17 0.34	13 0.36	23	1.3 0.44	45 33 9	5 0.53	-0.63 0.60	0.030 0.54	0.39 0.59
LT EASY PRO 1158 PLD 03/18/2001 M 620348 LT UNLIMITED EASE 9108	LINDSKOV-THIEL CHAROLAIS ISABEL SD BJR SUMMERFORD CHAROLAIS FALKVILLE AL	73 880 130	7 0.81	-1.4 0.91	25 0.86	42 0.82	19 0.64	-5 0.62	31	-0.1 0.71	41 285 28	16 0.56	-0.03 0.61	0.019 0.56	0.37 0.60
SKYMONT FLASH 5030 02/27/1995 M 427074 HCR FLASH 5074 POLLED	SELECT SIRES INC PLAIN CITY OH	108 528 105	7 0.73	0.8 0.89	27 0.81	35 0.66	14 0.65	9 0.59	28	-0.2 0.38	54 16 9	2 0.56	-0.10 0.63	-0.005 0.57	0.31 0.62
LT DISTANCE 5025 PLD 03/06/1995 M 428076 HTA TUNDRA PLD 222B	LINDSKOV-THIEL CHAROLAIS ISABEL SD RAMBUR CHAROLAIS SIDNEY MT LAWRENCE J DANNA WEST MONROE LA	8 407 78	5 0.76	-2.2 0.88	8 0.81	24 0.79	8 0.64	7 0.59	13	0.5 0.67	40 101 3	7 0.54	0.25 0.61	0.041 0.55	0.29 0.59
SS MONTANA SILVER 01/17/1996 M 454024 \$ CECILE COBB	LINDSKOV-THIEL CHAROLAIS ISABEL SD CHARNICH FARMS HIGH PRAIRE ALBERTA CANA ALTA GENETICS INC BALZAC AB	83 701 167	-1 0.76	0.2 0.90	31 0.85	58 0.81	-13 0.71	1 0.67	2	0.6 0.70	43 117 19	15 0.56	-0.19 0.62	0.014 0.56	0.28 0.60
WCR SIR FAB MAC 809 03/05/1978 M 202427 FRISBIE MAC POLLED 257	WIENK CHAROLAIS RANCH LAKE PRESTON SD	57 875 517	-2 0.85	-2.0 0.93	14 0.91	21 0.91	8 0.88	-12 0.83	15	0.5 0.81	26 8 3	9 0.53	-0.32 0.58	0.013 0.53	0.25 0.56
JWK IMPRESSIVE D040 ET 03/29/1994 M 413653 WCR SIR FA MAC 2244	WIENK CHAROLAIS RANCH LAKE PRESTON SD	325 2273 764	10 0.86	0.8 0.95	24 0.92	43 0.89	4 0.87	9 0.84	16	0.1 0.78	27 165 47	13 0.57	-0.14 0.61	0.029 0.57	0.22 0.60
RC MONTANA 644 POLLED 02/17/1996 M 444364 HTA WHITEHOT 105A	RAMBUR CHAROLAIS SIDNEY MT HEBBERT CHAROLAIS HYANNIS NE	36 790 219	2 0.75	1.8 0.91	18 0.87	50 0.82	12 0.77	4 0.73	21	0.9 0.67	82 261 9	32 0.64	-0.18 0.70	0.007 0.66	0.20 0.70