



USPB UPDATE

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Premium data provides detailed analysis

Fiscal Year 2006 Carcass Data Trends

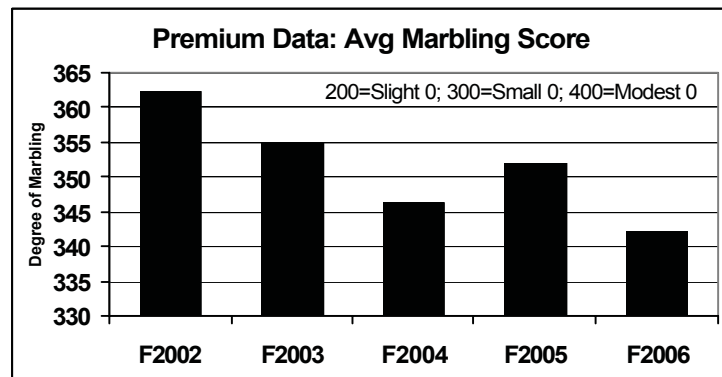
By Brian Bertelsen, Director of Field Operations

As previously mentioned in the September *UPDATE*, nationwide USDA Quality grading in 2006 was the lowest in the last nine years. USPB also recorded its lowest percentage of Choice or better in its nine year history of cattle performance.

At the same time, the percentage of Yield Grade 4 and 5's within USDA graded carcasses was record high. In fact, they have increased every year for nine years. USPB's Yield Grade 4 and 5 percentage was also a record high during fiscal year 2006.

Normally, one would not expect fatter Yield Grades and less marbling to occur at the same time. USPB "Premium" individual data, which members request when they schedule cattle, offers more detail for analysis. We have been compiling this information since fiscal year 2002. It includes marbling, ribeye area and backfat scores of more than 258,000 head.

The trend for average marbling within the Premium data cattle has been decreasing since fiscal year 2002. This was also the company's record high year for percent Choice or better. During the last four years, the carcasses with Premium data have decreased less than the total company average for Choice or better. Premium data cattle are definitely above average quality within USPB—averaging about 11% higher Choice or better than the total company average. Yet, their decrease has been a total of 20 degrees of marbling during that time. See graph below for the average marbling within Premium data carcasses.



Twenty degrees of marbling may not sound like much. The Select Grade covers a total of 100 degrees of marbling and

Choice includes 300 degrees total. However, many carcasses fall near the critical line that separates Choice from Select. During fiscal year 2006 there was a greater percentage of carcasses that were near the line on both sides. The table below shows the percentage of Premium data carcasses that fell just below or above the line. Carcasses with marbling codes of Slight 80 and 90 were graded Select but were almost Choice. Those with marbling of Small 00 and 10 were graded Choice but just barely made it across the line from Select. In total, 20.16% of all carcasses were close to that line in fiscal year 2006. This is a total span of 40 degrees of marbling. So, it is easy to understand how a small shift in overall marbling could

USPB Premium Data by Degree of Marbling

	Degree of Marbling	
	Slight 80-90	Small 00-10
5 Year Average	4.22%	11.98%
Fiscal Year 2006	7.74%	12.42%

drastically change the percent Choice.

Within the Premium data carcasses, the decrease in marbling is more pronounced in the larger, fatter carcasses. In fiscal year 2002, carcasses weighing between 900 and 999 pounds had the highest average marbling and those weighing 600 to 699 pounds had the lowest average marbling. In fiscal year 2006, that completely reversed. Over those years, the lighter carcasses have not changed much in terms of their amount of marbling. However, the heavier the carcass, the more pronounced the decrease in marbling.

When comparing carcasses with different backfat thickness, those with more external backfat had slightly less marbling in fiscal year 2006 compared to 2005. However, those with less external fat had a very slight increase in marbling.

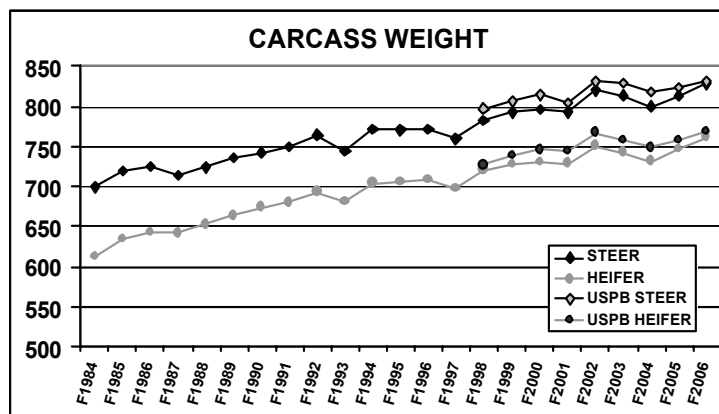
The entire distribution of marbling has shifted. There is now a smaller percentage of Premium data carcasses with Modest or higher marbling. These are the levels of marbling required for Certified Angus Beef® (CAB) and Prime. Obviously, this results in more carcasses with Small or lower marbling.

One reason why CAB percentages are down is that there are less carcasses with enough marbling to qualify. A second reason is that within those carcasses that have Modest and Moderate degrees of marbling, there are more Yield Grade 4 and 5 carcasses which makes them ineligible for the CAB brand, especially in fiscal year 2006.

Across the industry, carcass weights have been steadily

...continued on page 2

increasing for more than twenty years. The Carcass Weight graph below shows the average steer and heifer carcass weights for the industry and for all USPB cattle. Compared to twenty years ago, steer carcasses are now 102 pounds heavier and heifers are now 117 pounds heavier. That is an average



increase of 5.1 and 5.9 pounds per year, respectively.

USPB steer carcasses have been growing at an average of 4.1 pounds per year and heifers have increased 4.8 pounds per year, on average compared to nine years ago.

I have spoken with several USPB member-ranchers who have seen an increase of as much as 47 pounds of carcass weight in fiscal year 2006 compared to recent years on their own home-raised calves raised under very similar production schedules.

Along with the trend for increased carcass weight, there is a consistent trend for more total pounds of gain added per animal during finishing. This is simply the “out” weight minus the “in” weight at the feedyard.

According to data from Professional Cattle Consultants, a database benchmarking company for feedlot performance data, total steer feedlot gain increased 51 pounds and total heifer gain increased 38 pounds in fiscal year 2006 compared to 1998. Total feedlot gain of USPB cattle has increased by 66 pounds for steers and 45 pounds for heifers during the same period.

One of the most apparent trends within the Premium carcass data has been a decrease in ribeye size in relation to carcass weight, especially in the last few years. Premium data carcass weights have **increased 27 pounds** in just the last two years. However, the average ribeye area has **decreased by 0.34 square inches** from 13.52 in fiscal year 2004 to 13.18 square inches in fiscal year 2006.

The USDA Yield Grade equation compares ribeye size to the total weight of the carcass. Heavier carcasses should have larger ribeyes. In fiscal year 2004, ribeye size was **0.36 square inches larger** than normal. However, in fiscal year 2006, with a lot more carcass weight, ribeyes were **0.30 square inches too small**. That’s a change of 0.66 square inches in just two years. As a result, carcasses in fiscal year 2006 were 0.22 of a Yield Grade higher, on average, due to insufficient ribeye size in relation to carcass weight.

Once again, carcass weight seems to be a factor. The larger the carcass, the more pronounced the drop in ribeye size, especially over the past two years. The table below shows the ribeye size for Premium data carcasses with different carcass weights.

Hot Carcass Weight	Ribeye Area (Square Inches)		
	FY 2004	FY 2006	Difference
600-699 lbs.	12.42	12.12	-0.30
700-799 lbs.	13.26	12.83	-0.43
800-899 lbs.	14.11	13.45	-0.66
900-999 lbs.	15.00	14.13	-0.87

So what’s causing these changes? Analyzing this type of data shows the results. It doesn’t show the cause. However, we can sometimes find correlations and relationships in the trends.

Many in the industry mention genetics when this topic is discussed. It seems obvious that seedstock breeders have been selecting for improved carcass merit for some time now. Many of our Premium data cattle are enrolled in some sort of genetic improvement program, either within a specific herd or within a breed. That’s usually why that data was requested. So if any cattle are improving in genetic carcass merit, I think these would be.

Genetics is important because it determines the genetic potential. That is, what an animal can become if its environment is perfect, or not limiting. Heritability is the measurement, through research, that quantifies the fraction of the phenotypic differences due to the genetics or breeding value transmitted from the parents. Phenotype is what can be seen or what is actually measured. It quantifies how much of the differences, within a population, in actual performance is due to genetic merit that was passed on from the parents.

Carcass traits are highly heritable compared to reproduction, for example. Carcass heritability values tend to be about 0.40. That means genetics is accounting for about 40% of the differences in the phenotype. That leaves another 60% that is due to other factors, of which, environment is the primary one. Environment includes things such as weather, feed, stress and general management of the animal.

Even though we have likely made genetic improvements, it’s still possible that environment could be limiting the outcome, or the phenotype during the past five years.

Over the last several years, much of the United States has experienced extended portions of drought. There seems to be a direct relationship between higher temperatures and decreased marbling.

During fiscal year 2006, the average temperature in Kansas, Nebraska and Oklahoma was the highest it has been in 20 years. It was 2.6 degrees warmer than the 20-year average. During the last 5 years, the temperature has been 0.74 degrees warmer than the 20-year average. In the last 4 years, the corre-

...continued on page 4

U.S. Premium Beef, LLC

Annual Meeting Pre-Registration Form

Wednesday, November 29, 2006

Century II Convention Center, 225 W. Douglas St., Wichita, KS

Please complete and fax or mail to the USBP office by November 10, 2006.

Member Name: _____

Name for Name Badge: _____

Address: _____

City, State Zip: _____

Phone: _____ E-Mail Address: _____

Events:

LLC Structure Overview (Unitholders Only)

3:00 p.m. Cypress Room

_____ Number of people attending

Dinner & National Beef Presentation

6:00 p.m. Redbud Ballroom

_____ Number of people attending

USBP Business Meeting

7:30 p.m. Redbud Ballroom

_____ Number of people attending

Driving Directions to USBP Annual Meeting

Location: Century II Convention Center

From the North or South:

Take I-135 to US Highway 54/E. Kellogg St. Go west on E. Kellogg (US Highway 54) to S. Broadway St. Turn north and go to E. William St. Turn west to Century II.

From the East or West:

Take Kellogg St. (US Highway 54) to S. Broadway St. Turn north and go to E. William St. Turn west to Century II.

Additional Registrations:

(This meeting is exclusive to USBP members, family members and employees.)

Name: _____

Name Badge: _____

Relationship to USBP Member: _____

Annual Meeting Hotel:

Hyatt Regency Wichita—400 West Waterman—316-293-1234—(When making reservations request USBP's annual meeting rate or the Kansas Livestock Association convention rate. If you have questions or concerns please call USBP at 866-877-2525.)

Other Hotels Close to Century II:

Hotel at Old Town:

830 East First—316-267-4800

Holiday Inn:

221 East Kellogg—316-269-2090

Please complete form and return to:

U.S. Premium Beef, P.O. Box 20103, Kansas City, MO 64195

(866) 877-2525 phone • (816) 713-8810 fax

lation between the average temperature in that region and the USPB percent Choice or better is -0.88, which is very high. As temperatures go up, the Quality Grade goes down.

The total cumulative annual rainfall was also the lowest for that region in 20 years during fiscal year 2006. On average, those states received 7 inches less rainfall than the 20-year average.

It's possible drought has affected the feed quantity and quality cattle have eaten over the last several years. This can affect the grass and feed the calf consumes as well as the cow and her milk production. Some researchers even wonder about the affect of drought upon the fetus. You can read more about this on the USPB website under *"Brian's Items of Interest"*.

It appears there is no single factor that can be blamed for the changes that are occurring in carcass performance over the last several years. However, it seems logical that weather and increased carcass weights might be related.

Within the Premium data carcasses, external backfat has not changed much over the years. In fact, it appears slightly lower during fiscal year 2006. It seems that inferior ribeye size, especially within the larger carcasses has contributed to the increase in Yield Grade 4 and 5 carcasses, at least during the last few years.

The decrease in marbling has actually been trending lower for about 4 years. Across all USPB cattle, the percent Choice or better decreased by 5.5% from the previous year. This also appears to be related to increased carcass weights and perhaps, to some degree, the climatic weather conditions over the last 5 years. ♦

USPB BENCHMARK PERFORMANCE DATA

Cattle Marketed Between 9/24/06 and 10/21/06				
(Numbers in Percent)	Base Grid		Market Grid	
	All	Top 25%	All	Top 25%
Yield	64.08	64.63	64.53	65.12
Prime	3.33	5.52	1.16	1.45
Choice	60.59	69.63	45.63	49.76
CAB	9.86	13.82	5.77	7.14
NAB	7.95	10.05	2.17	1.35
Black Hided	75.00	81.26	61.94	58.61
Ungraded	2.89	1.44	5.62	4.46
Hard Bone	0.88	0.39	0.75	0.38
YG1	3.28	1.90	6.38	6.75
YG2	25.01	19.77	33.34	34.36
YG3	48.89	53.90	42.72	43.79
YG4	19.52	20.68	15.35	13.30
YG5	3.29	3.75	2.21	1.79
Light Wt.	0.30	0.19	0.28	0.21
Heavy Wt.	2.72	2.95	1.61	0.73
QG Premium	\$17.90	\$32.39	\$3.79	\$10.93
Yield Benefit	\$11.63	\$26.67	\$8.84	\$19.88
YG P/D	-\$6.62	-\$7.18	\$0.33	\$3.01
OW Discount	-\$3.99	-\$4.19	-\$2.61	-\$1.34
S/H Premium	\$1.15	\$1.26	\$2.96	\$3.12
AV Premium	\$0.55	\$0.40	\$0.30	\$0.75
Total Prem.	\$20.62	\$49.35	\$13.61	\$36.35

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