



Since 1894

October 23, 2018

TO: KJLS Beef Carcass Contest Participants

FR: Matt Teagarden

RE: Beef Carcass Contest Results

Thank you for participating in the 2018 Kansas Junior Livestock Show market beef division sponsored by Merck Animal Health. Enclosed are the results of the beef carcass contest, an explanation of the carcass merit grid on which the steers were valued and an explanation of how the results were determined. Thanks to the Beef Empire Days folks for letting us use their formula for our contest.

The steer show included 103 steers with 33 head competing in the carcass contest. The contest, including cash awards for the top 3 places, was sponsored by Certified Angus Beef, LLC.

Clay Pelton from Rooks County owned the top placing carcass steer. Clay's Simmental steer graded Low Prime and was a Yield Grade 1.39. Second place went to Chancey Hauck of Pawnee County. Chancey's Crossbred steer was Middle High quality and a Yield Grade 2.53. Taylor Riedel from Trego County owned the 3rd place steer. The Crossbred was Middle Prime with a Yield Grade value of 3.35.

Overall, 32 of the 33 steers graded at least Choice and Yield Grade 3 or better. Four steers graded Prime and six qualified for the Certified Angus Beef program. On average, the carcass merit grid provided an \$81 per head premium compared to the cash market that week.

Please take a minute to express your appreciation to Certified Angus Beef, LLC for supporting the carcass contest. Address thank you notes to:

Steve Suther
Certified Angus Beef, LLC
16360 Victory Road
Onaga KS 66521

Congratulations to Clay, Chauncey and Taylor! Let me know if you have any questions or concerns. And again, thanks to Merck Animal Health and Certified Angus Beef for their support of the cattle divisions at KJLS.

2018 KJLS Steer Carcass Contest

Tag	Exhibitor	County	Weight	Yield Grade	HCW	DRESS %	FAT	REA	KPH	QG	Adjustments						FINAL	
											HCW	FAT	REA REQ	REA	KPH	QG	INDEX	RANK
32523	Clay Pelton	Rooks	1345	1.39	871	64.8%	0.40	18.5	2.5	PR-	0	-2	14.25	6.24	0	60	164.2	1
18306	Chancey Hauck	Pawnee	1543	2.53	993	64.4%	0.44	16.7	2.5	PR0	0	-8	15.72	4.92	0	60	156.9	2
18694	Taylor Riedel	Trego	1437	3.35	971	67.6%	0.52	14.5	2.5	PR0	0	-20	15.45	-4.76	0	60	135.2	3
34165	John Emmerson	Bourbon	1342	3.13	860	64.1%	0.60	14.5	2.5	PR-	0	-28	14.12	1.9	0	60	133.9	4
75239	Chance Kerr	Ford	1310	1.87	808	61.7%	0.52	17.2	2.5	CH0	0	-20	13.50	18.52	0	35	133.5	5
18518	Madison Hall	Stevens	1270	2.56	790	62.2%	0.44	14.2	2.5	CH+	0	-8	13.28	4.6	0	35	131.6	6
33045	Aidan Marks (Ross)	Labette	1338	3.06	897	67.0%	0.44	13.9	2.5	CH0	0	-8	14.56	-3.32	0	35	123.7	7
91481	MacKenzie Moldenhauer	Sedgwick	1632	1.76	1003	61.5%	0.40	18.9	2.5	CH0	0	-2	15.84	-11.68	0	35	121.3	8
17457	Madison V Vaught	Jefferson	1301	2.69	873	67.1%	0.52	15.4	2.5	CH0	0	-20	14.28	5.62	0	35	120.6	9
33015	Mia Hastings	Wabaunsee	1540	2.93	950	61.7%	0.64	16.5	2.5	CH+	0	-32	15.20	6.5	0	35	109.5	10
18534	Martin Beikman	Cheyenne	1393	1.96	948	68.1%	0.32	17.0	2.5	CH-	0	0	15.18	9.12	0	0	109.1	11
32193	Morgan Woodbury	Osage	1484	2.87	857	57.7%	0.72	16.2	2.5	CH0	0	-40	14.08	10.58	0	35	105.6	12
32792	Trextan Anderson	Reno	1444	2.55	926	64.1%	0.32	14.9	2.5	CH-	0	0	14.91	-0.06	0	0	99.9	13
18700	Wyatt Littlechild	Trego	1298	3.07	855	65.9%	0.84	16.5	2.5	CH0	0	-50	14.06	12.2	0	35	97.2	14
17737	Colby Jones	Pottawatomie	1258	2.79	753	59.9%	0.36	12.4	2.5	CH-	0	-1	12.84	-2.18	0	0	96.8	15
91482	MacKenzie Moldenhauer	Sedgwick	1463	1.15	899	61.4%	0.16	17.7	2.5	CH-	0	-8	14.59	4.56	0	0	96.6	16
33941	Reese Meng	Finney	1254	2.67	770	61.4%	0.44	13.6	2.5	CH-	0	-8	13.04	2.8	0	0	94.8	17
33580	Katherine Krauss	Russell	1458	3.71	891	61.1%	0.72	14.0	2.5	CH0	0	-40	14.49	-2.46	0	35	92.5	18
73852	Amber Ross	Labette	1341	3.99	891	66.4%	0.68	12.8	2.5	CH0	0	-36	14.49	-8.46	0	35	90.5	19
17747	Eva Hinrichsen	Pottawatomie	1482	2.66	875	59.0%	0.48	15.2	2.5	CH-	0	-14	14.30	4.5	0	0	90.5	20
17083	Bryce Hatfield	Franklin	1321	3.63	827	62.6%	0.76	13.8	2.5	CH0	0	-45	13.72	0.38	0	35	90.4	21
16633	Sadie Albert	Greenwood	1140	3.40	732	64.2%	0.80	13.7	2.5	CH0	-0.45	-50	12.58	5.58	0	35	90.1	22
33052	Amber Ross	Labette	1228	4.91	857	69.8%	1.24	13.9	2.5	CH+	0	-50	14.08	-0.92	0	35	84.1	23
33838	Marisa O'Brien	Neosho	1236	4.42	801	64.8%	1.04	13.2	2.5	CH+	0	-50	13.41	-1.06	0	35	83.9	24
17227	Kayla Fox	McPherson	1327	4.24	796	60.0%	0.76	11.5	2.5	CH0	0	-45	13.35	-9.26	0	35	80.7	25
91478	Tyler Hommertzheim	Sedgwick	1286	2.78	811	63.1%	0.60	15.0	2.5	CH-	0	-28	13.53	7.34	0	0	79.3	26
18307	Chancey Hauck	Pawnee	1383	4.66	891	64.4%	1.00	13.2	2.5	CH0	0	-50	14.49	-6.46	0	35	78.5	27
16764	T.J. Mills	Elk	1474	4.66	959	65.1%	1.00	14.0	2.5	CH0	0	-50	15.31	-6.54	0	35	78.5	28
33041	Derek Ross	Labette	1470	4.70	980	66.7%	0.92	13.5	2.5	CH0	0	-50	15.56	-10.3	0	35	74.7	29
33969	Rilee McGraw	Finney	1410	3.27	930	66.0%	0.68	15.5	2.5	CH-	0	-36	14.96	2.7	0	0	66.7	30
89956	Haylee Lanham	Linn	1514	4.01	964	63.7%	0.68	13.6	2.5	CH-	0	-36	15.37	-8.84	0	0	55.2	31
17252	Jalyn Davis	Wabaunsee	1374	4.20	866	63.0%	0.84	13.1	2.5	CH-	0	-50	14.19	-5.46	0	0	44.5	32
33208	Macy Elliott	Dickinson	1129	3.39	755	66.9%	0.84	14.3	2.5	DK	0	-50	12.86	7.2	0	-40	17.2	33

KJLS Base Bid Steer Grid Details

Steers are sold to Cargill and are marketed on a value-based grid. The grid base price was \$177.50/cwt on a carcass basis.

The grid includes premiums and discounts calculated on a carcass weight basis.

Base = Choice, Yield Grade 3

Prime = \$15/cwt. premium

Certified Angus Beef = \$4/cwt. premium

Select = \$10/cwt. discount

Yield Grade 1 = \$6/cwt. premium

Yield Grade 2 = \$3/cwt. premium

Yield Grade 4 = \$10/cwt. discount

Yield Grade 5 = \$20/cwt. discount

Carcass Weight \geq 1050# = \$15/cwt. discount

Dark Cutter = \$25/cwt. discount

The following were deducted from gross sale proceeds:

Data Collection = \$2 per head

Beef Checkoff = \$1 per head

Beef Empire Days Carcass Index System

The Beef Empire Days Carcass Index is calculated from a base of 100 points with bonus and penalty point adjustments for hot carcass weight (HCW), adjusted backfat, ribeye area (REA), internal kidney-pelvic-heart fat (KPH), and USDA Quality Grade (QG). Carcass traits that are closer to the desired ideal specifications will have higher indices. Bonus points awarded to carcasses having larger ribeyes, low KPH fat, and QG above low Choice will improve indices. The following is a description of the index adjustment procedures for each of the carcass traits.

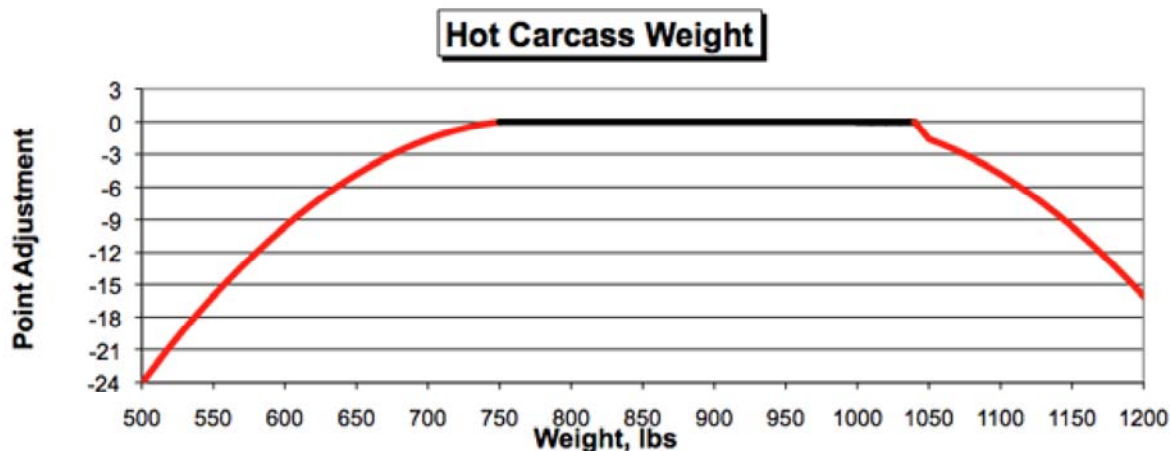
Hot Carcass Weight

The optimum range for hot carcass weight is defined as 750 to 1050 lbs. for both steers and heifers. The indices of carcasses with weights outside that range are penalized according to the following table.

Hot Carcass Weight Adjustment

HCW Points	HCW Points	HCW Points
500 -24.10	610 -8.55	720 -0.77
510 -22.36	620 -7.52	730 -0.45
520 -20.69	630 -6.55	740 -0.19
530 -19.08	640 -5.65	
540 -17.54	650 -4.82	
550 -16.06	660 -4.05	1050 -1.61
560 -14.65	670 -3.34	1060 -2.12
570 -13.30	680 -2.70	1070 -2.70
580 -12.02	690 -2.12	1080 -3.34
590 -10.79	700 -1.61	1090 -4.05
600 -9.64	710 -1.16	1100 -4.82

The following figure graphically illustrates the adjustments for heifers and steers.



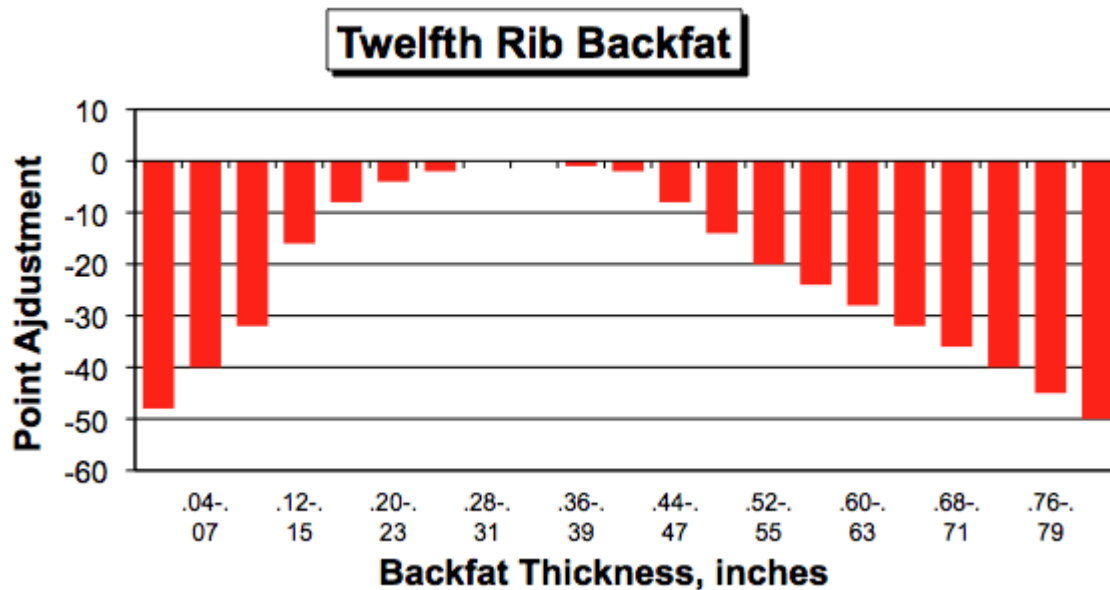
Adjusted Twelfth Rib Backfat Thickness

The optimum 12th rib fat thickness is defined as 0.30 inches which corresponds to a preliminary yield grade of 2.75 for both heifers and steers. Indices are negatively affected for carcasses having less than 0.28 inches or more than 0.36 inches of backfat.

Twelfth Rib Backfat Adjustment

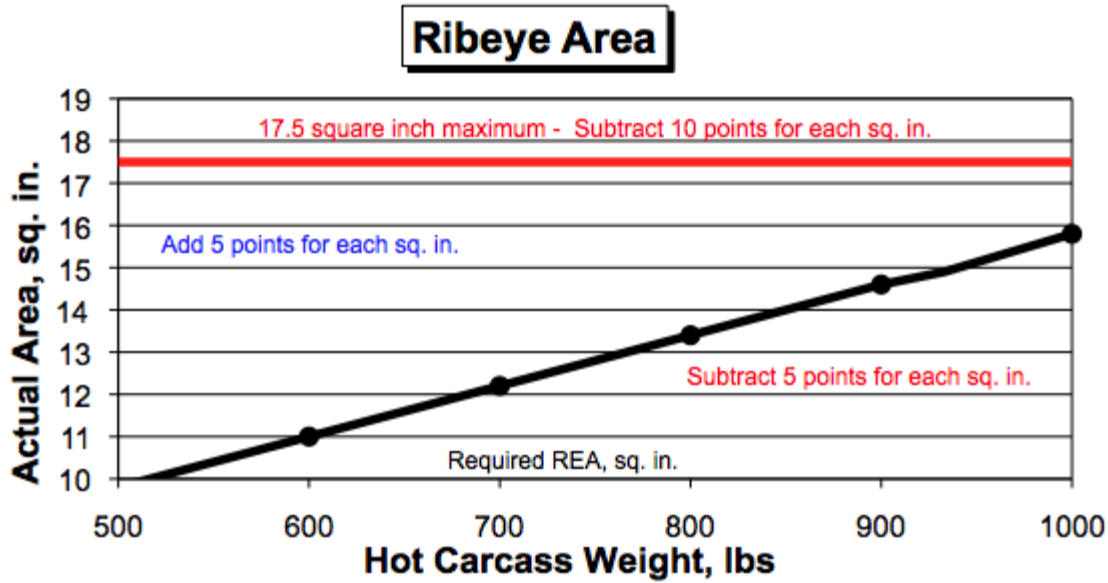
Fat Thickness	Points	Fat Thickness	Points
0.00 - 0.03	-48	0.44 - 0.47	-8
0.04 - 0.07	-40	0.48 - 0.51	-14
0.08 - 0.11	-32	0.52 - 0.55	-20
0.12 - 0.15	-16	0.56 - 0.59	-24
0.16 - 0.19	-8	0.60 - 0.63	-28
0.20 - 0.23	-4	0.64 - 0.67	-32
0.24 - 0.27	-2	0.68 - 0.71	-36
0.28 - 0.35	0	0.72 - 0.75	-40
0.36 - 0.39	-1	0.76 - 0.79	-45
0.40 - 0.43	-2	>0.79	-50

The following figure illustrates the adjustment for backfat thickness.

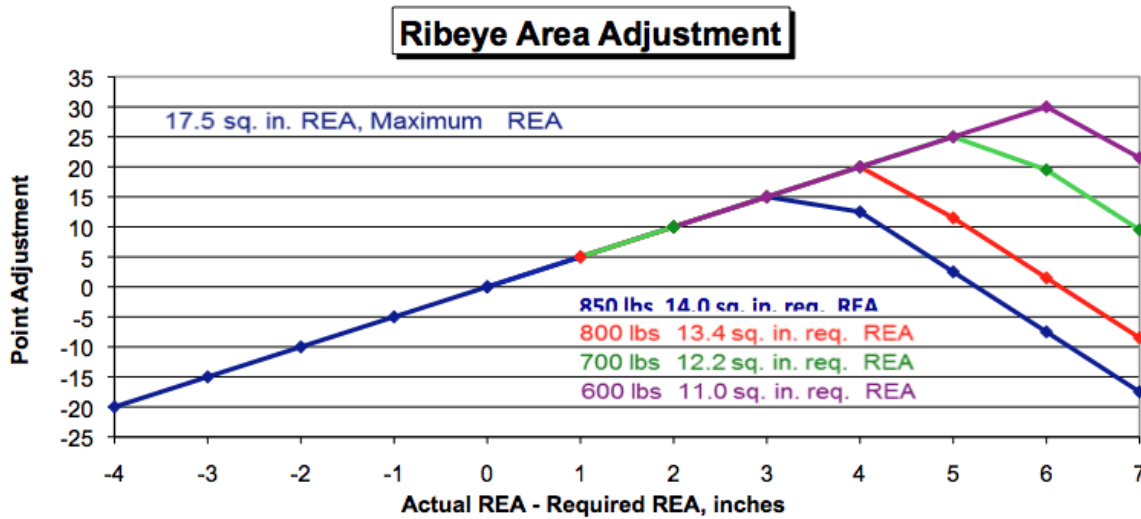


Ribeye Area

A ribeye requirement is calculated for each carcass based on hot carcass weight. The equation for both steers and heifers is: Required REA, sq. in. = HCW x .012 + 3.8. A 5 point adjustment will be made to the index for every square inch that a carcass ribeye area deviates from the required value. There is also a maximum REA of 17.5 square inches for steers and heifers. Carcasses with excessively large ribeyes will be penalized 10 points for each inch, or fraction of an inch, over the 17.5 square inch REA maximum. The relationship of actual and required REA, the maximum REA, and the associated bonus or penalty points is illustrated in the graph below. This is equivalent to the USDA required REA area for yield grade calculation.



The preceding graph demonstrates adjustment for the difference of the actual and required REA for various carcass weights.



Bonus and penalty points can also be calculated mathematically. For example, an 850 pound steer carcass would have a required REA of 14.0 square inches. If the carcass REA was 16.5 inches the index adjustment calculated as follows:

17.5 Maximum REA
 14.0 Required REA
 16.5 Actual REA
 Difference of 2.5 sq inches x 5 = + 12.5 Bonus Points

Example #2

850 pound steer carcass would have a required REA of 14.0 square inches. If the carcass REA was 18.5 inches the index adjustment calculated as follows:

17.5 Maximum REA
 14.0 Required REA
 18.5 Actual REA
 17.5-14.0 = 3.5 sq inches x 5 = 17.5 Bonus Points
 REA Actual +1.0 over Maximum Allowable = -10 Points

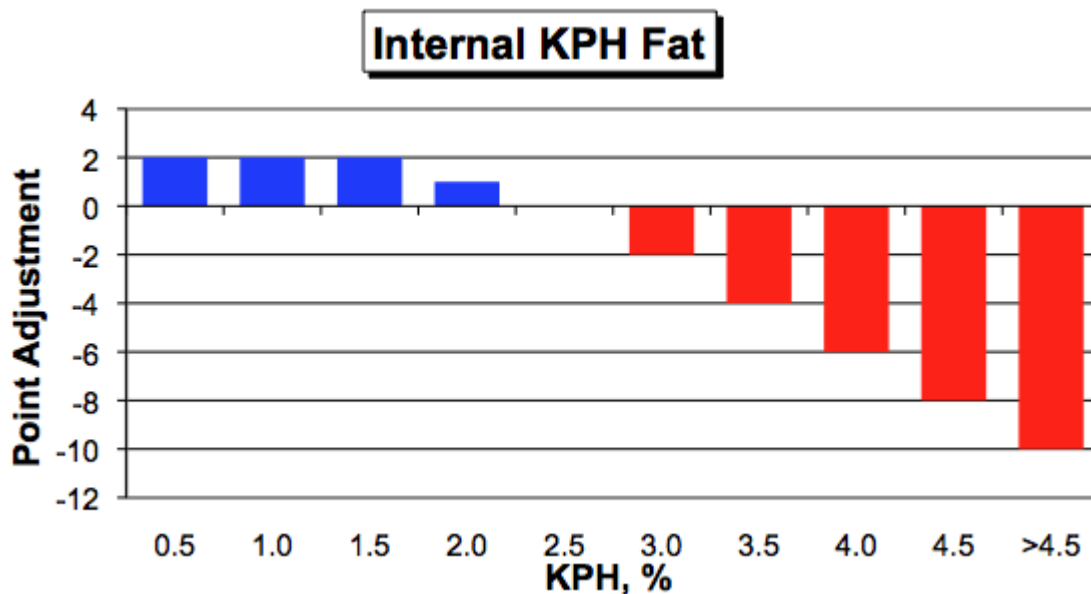
This equals a final REA Index adjustment of +7.5 Points
 **Note Bonus points are only added for the REA up to 17.5 sq inches

Kidney, Pelvic and Heart Fat Adjustment

The internal kidney-pelvic-heart fat index basis is 2.5%. Carcasses with a lower KPH will receive bonus points while those with a higher KPH will be penalized as shown in the following table.

Internal Fat Adjustment	
KPH	Points
0.0-1.5	2
1.6-2.0	1
2.1-2.9	0
3.0-3.4	-2
3.5-3.9	-4
4.0-4.4	-6
4.5-4.9	-8
≥5.0	-10

The following graph illustrates these adjustments.



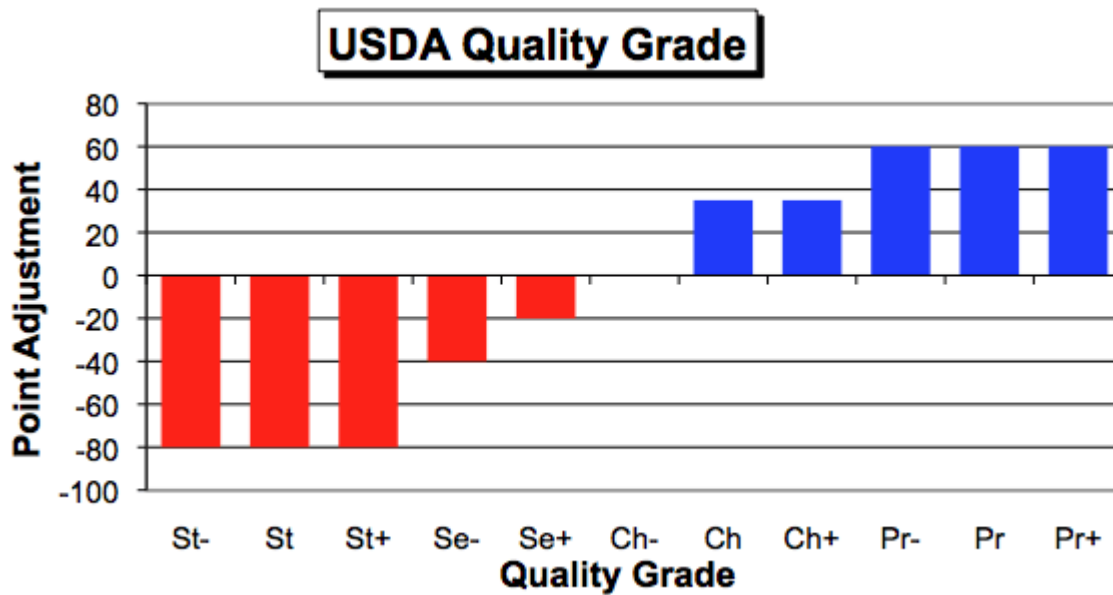
USDA Quality Grade

To be competitive in the carcass show, a carcass must grade at least low Choice. The index system severely penalizes a carcass grading Select or lower. Bonus points are given to carcasses that grade above low Choice.

Quality Grade Adjustment

Quality Grade	Points	
Standard	Low	-80
	Average	-80
	High	-80
Select	Low	-40
	High	-20
Choice	Low	0
	Average	35
	High	35
Prime	Low	60
	Average	60
	High	60

These adjustments are illustrated in the following graph.



BED Carcass Index Examples

The following table demonstrates the bonus and penalty points for various potential carcass traits using the currently defined Beef Empire Days Carcass Index System.

	Carcass Number					
	1	2	3	4	5	6
Carcass Measurements						
Hot carcass weight, lbs.	750	800	850	900	700	800
Backfat, in.	0.3	0.33	0.40	0.21	0.53	0.37
Kidney-pelvic-heart fat, %	2.5	2.5	3.0	1.5	2.5	2.0
Ribeye area, sq. in.						
Actual	15.5	14.4	17.0	15.2	11.0	14.7
Required	12.8	13.4	14.0	14.6	12.2	13.4
Quality grade	Ch-	Ch-	Ch+	Pr	Se-	Ch-
Point Adjustments						
Hot carcass weight	0	0	0	0	-1.6	0
Backfat	0	0	-1	-4	-20	-1
Kidney-pelvic-heart fat	0	0	-2	2	1	1
Ribeye area	13.5	5	15	3	-6	6.5
Quality grade	0	0	35	60	-40	0
Total adjustment	13.5	5	47	61	-66.6	6.5
Index base	100	100	100	100	100	100
Index total	113.5	105	147	161	33.4	106.5

The BED Carcass Index was last updated 5/10/15.