



*Since 1894*

October 30, 2020

TO: KJLS Market Steer Carcass Contest Participants

FR: Matt Teagarden

Thank you for participating in the 2020 Kansas Junior Livestock Show market steer division sponsored by Merck Animal Health. Attached are the results of the carcass contest, as well as an explanation of how the contest is calculated. Also attached is a breakdown of the value of each of the steers.

You may notice a few differences in carcass details between the payout sheet and the carcass contest results sheet. Payment was made based off the determination of the USDA grader. The carcass contest was scored based on data collected by the camera system in the plant. Occasionally the camera provides a different result for the quality grade, yield grade, or both.

Below are details of the grid used to determine the final value. Your check reflects additional deductions of \$1.00 for the beef checkoff and \$2.00 for data collection. Checks will be distributed next week.

Grid details

Base price = \$172.66 per cwt. (Choice Quality Grade, Yield Grade 3)

Prime Quality Grade = \$15 per cwt. premium

Certified Angus Beef = \$5 per cwt. premium

Select Quality Grade = \$12.86 per cwt. discount

Yield Grade 1 = \$5 per cwt. premium

Yield Grade 2 = \$2 per cwt. premium

Carcass Weight > 1074# = \$15 per cwt. discount

Thanks to Certified Angus Beef for sponsoring the carcass contest and to Cargill for harvesting the steers. Congratulations to the top 3 finishers – Lakota Persing, Hugoton; Chancey Hauck, Rozel; and, Mileah Backhus, Russell.

Thanks again for participating in the market steer division at KJLS. Please let me know if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Matt Teagarden". The signature is written in a cursive, flowing style.

Matt Teagarden

## 2020 KJLS Carcass Contest Results

Tag	Name	City	Live Weight	Carcass WGT	Dressing Percent	Quality Grade	Yield Grade	Ribeye Area	Fat Depth	Formula Adjustments					Index	Ranking
										Carcass Weight	Quality Grade	REA Required	REA Adjust	Fat Depth		
34157	Lakota Persing	Hugoton	1211	787	65.0%	CH0	YG1	17.6	0.32	0	35	13.24	20.28	0	155.3	1
18325	Chancey Hauck	Rozel	1416	868	61.3%	CH0	YG2	16.0	0.52	0	35	14.22	8.92	-20	123.9	2
64336	Mileah Backhus	Russell	1360	787	57.9%	CH0	YG3	12.3	0.44	0	35	13.24	-4.72	-8	122.3	3
64764	Tanner Hommertzhaim	Andale	1200	752	62.7%	CH-	YG1	17.7	0.36	0	0	12.82	21.38	-1	120.4	4
63779	Steele Brack	Great Bend	1295	804	62.1%	CH-	YG1	16.4	0.40	0	0	13.45	14.76	-2	112.8	5
64668	Chesnie Dickinson	Glasco	1319	838	63.5%	CH0	YG2	16.5	0.68	0	35	13.86	13.22	-36	112.2	6
65094	Rilee McGraw	Garden City	1381	860	62.3%	CH-	YG1	17.3	0.44	0	0	14.12	15.9	-8	107.9	7
63765	Steele Brack	Great Bend	1308	854	65.3%	CH0	YG3	14.7	0.64	0	35	14.05	3.26	-32	106.3	8
64669	Chesnie Dickinson	Glasco	1369	843	61.6%	CH0	YG3	13.4	0.60	0	35	13.92	-2.58	-28	104.4	9
64810	Corbin Russell	Paxico	1465	900	61.4%	CH0	YG3	15.2	0.68	0	35	14.60	3	-36	102.0	10
59863	Dawson Wood	Kingman	1397	853	61.1%	CH+	YG3	12.9	0.60	0	35	14.04	-5.68	-28	101.3	11
49904	Katie Ruckman	Hutchinson	1323	857	64.8%	CH0	YG2	17.2	0.80	0	35	14.08	15.58	-50	100.6	12
49377	Kael Lange	Clifton	1400	883	63.1%	CH-	YG1	18.8	0.44	0	0	14.40	2.52	-8	94.5	13
64887	Cora Anderson	Otis	1355	815	60.1%	CH-	YG2	14.6	0.48	0	0	13.58	5.1	-14	91.1	14
48543	Kylie Fox	Marquette	1377	923	67.0%	CH0	YG3	13.6	0.72	0	35	14.88	-6.38	-40	88.6	15
404	Mackenzie Moldenhauer	Valley Center	1717	1076	62.7%	CH0	YG3	17.7	0.84	-2.7	35	16.71	1.94	-50	84.2	16
91494	Mackenzie Moldenhauer	Valley Center	1736	1075	61.9%	CH+	YG3	16.0	0.76	-2.7	35	16.70	-3.5	-45	83.8	17
63907	Easton Shenk	Dodge City	1385	836	60.4%	SE+	YG2	16.1	0.44	0	-20	13.83	11.34	-8	83.3	18
63810	Myah Elliott	Hope	1240	767	61.9%	SE+	YG1	14.4	0.20	0	-20	13.00	6.98	-4	83.0	19
65747	Oakley Carter	Sedan	1275	824	64.6%	CH-	YG2	15.1	0.60	0	0	13.69	7.06	-28	79.1	20
47833	Kalen Dressler	Eudora	1460	934	64.0%	CH-	YG3	14.8	0.52	0	0	15.01	-1.04	-20	79.0	21
64807	Danica Davis	Maple Hill	1398	868	62.1%	CH-	YG3	13.2	0.56	0	0	14.22	-5.08	-24	70.9	22
64805	Ty Jones	Wamego	1345	817	60.7%	SE+	YG2	16.1	0.56	0	-20	13.60	12.48	-24	68.5	23
49775	Clay Pelton	Paradise	1365	872	63.9%	CH-	YG3	14.0	0.64	0	0	14.26	-1.32	-32	66.7	24
65845	Kristy Beene	Fort Scott	1446	912	63.1%	CH-	YG3	16.3	0.76	0	0	14.74	7.78	-45	62.8	25

## 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.

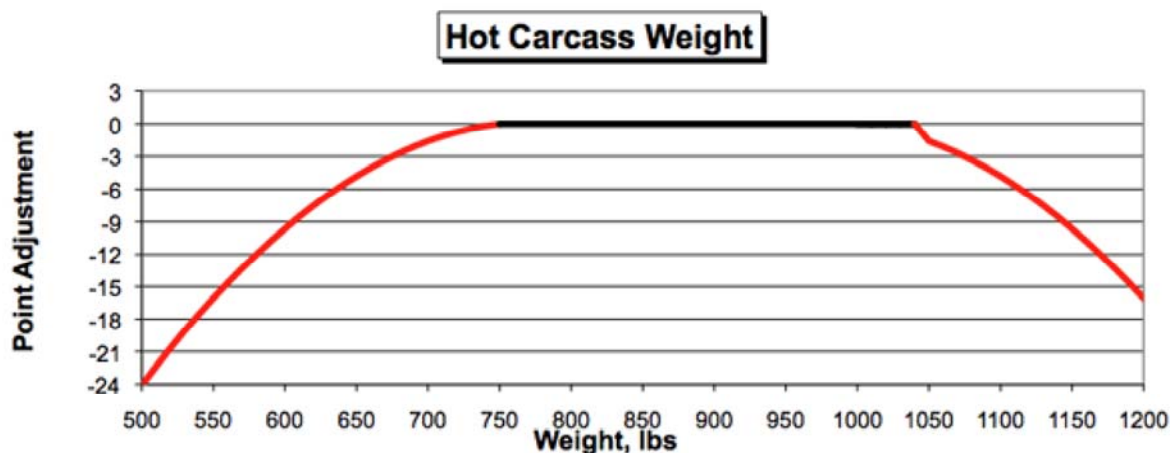
### Hot Carcass Weight

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.



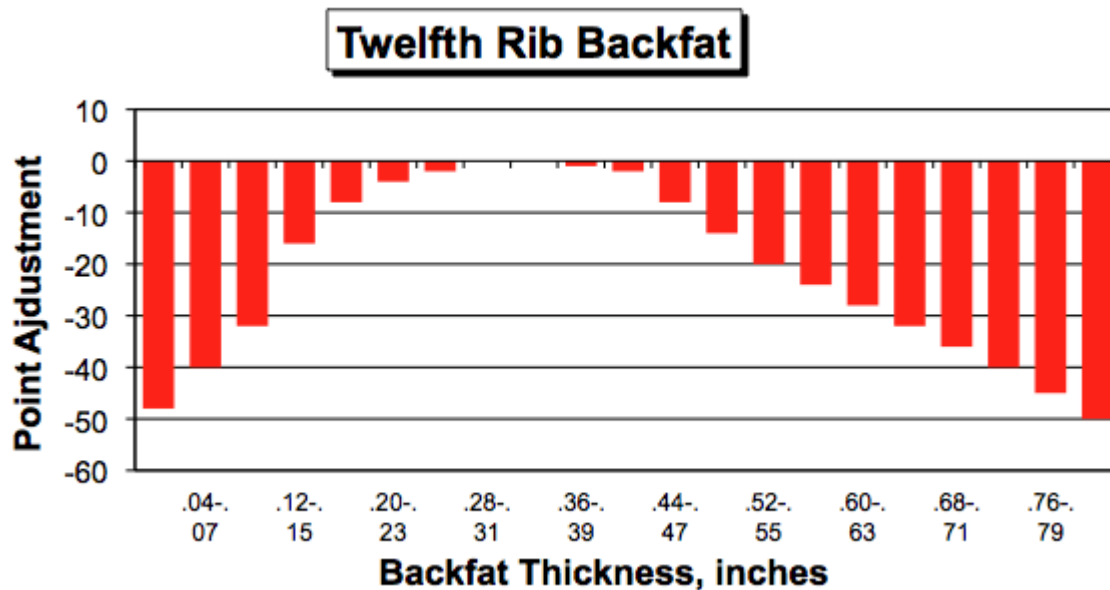
### Adjusted Twelfth Rib Backfat Thickness

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

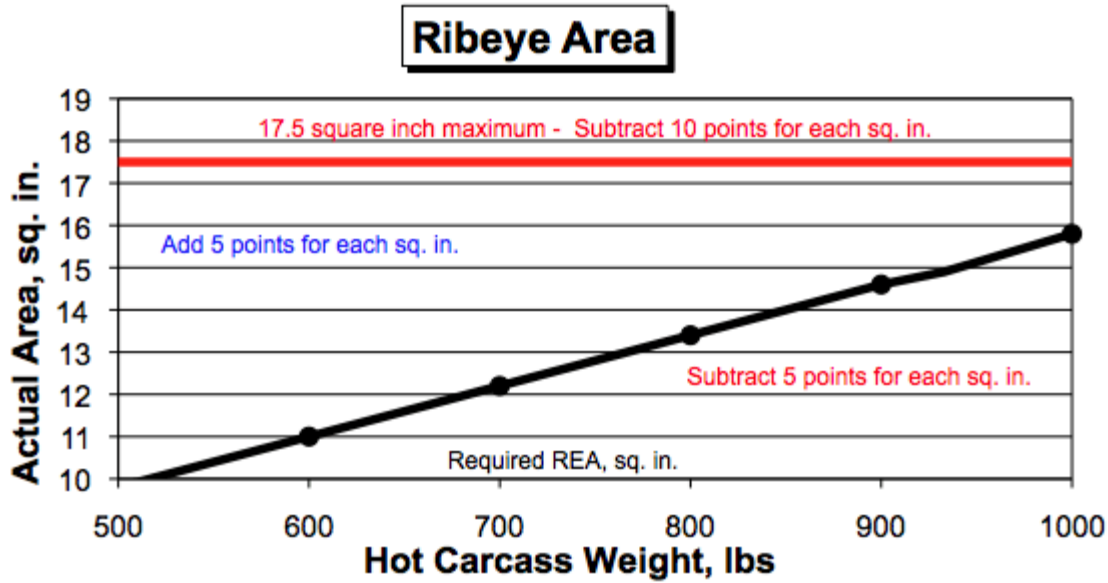
Fat Thickness	Points	Fat Thickness	Points
0.00 - 0.03	-48	0.44 - 0.47	-8
0.04 - 0.07	-40	0.48 - 0.51	-14
0.08 - 0.11	-32	0.52 - 0.55	-20
0.12 - 0.15	-16	0.56 - 0.59	-24
0.16 - 0.19	-8	0.60 - 0.63	-28
0.20 - 0.23	-4	0.64 - 0.67	-32
0.24 - 0.27	-2	0.68 - 0.71	-36
0.28 - 0.35	0	0.72 - 0.75	-40
0.36 - 0.39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

The following figure illustrates the adjustment for backfat thickness.

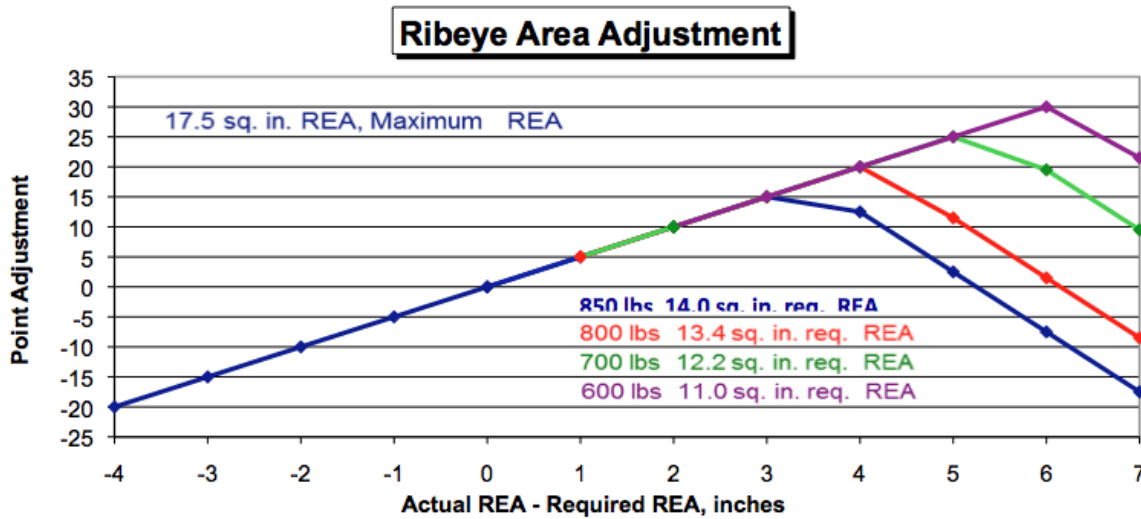


Ribeye Area

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

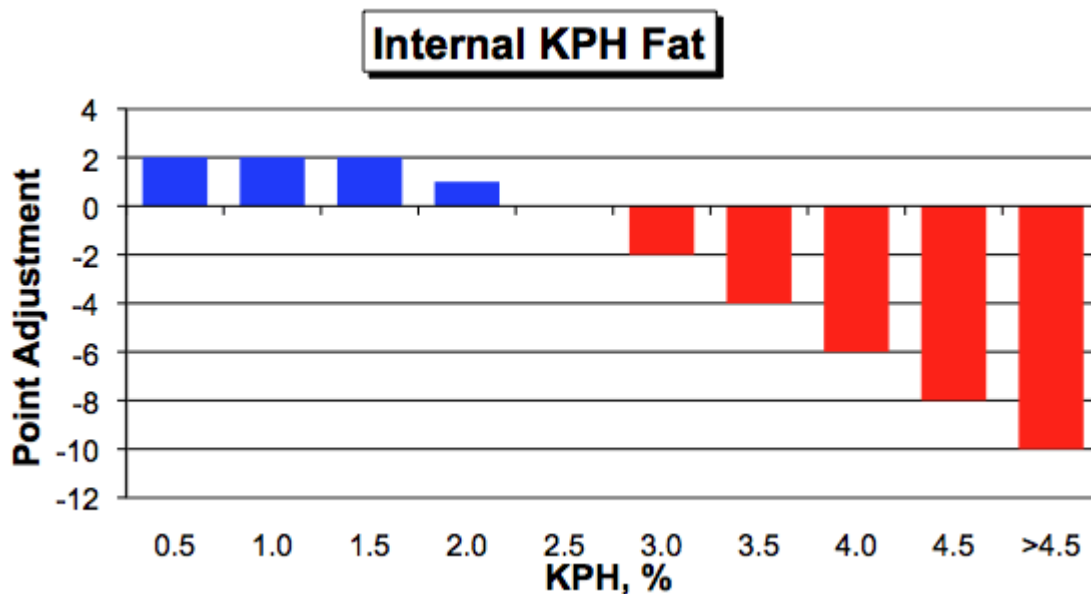
This equals a final REA Index adjustment of +7.5 Points  
 \*\*Note Bonus points are only added for the REA up to 17.5 sq inches

**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.



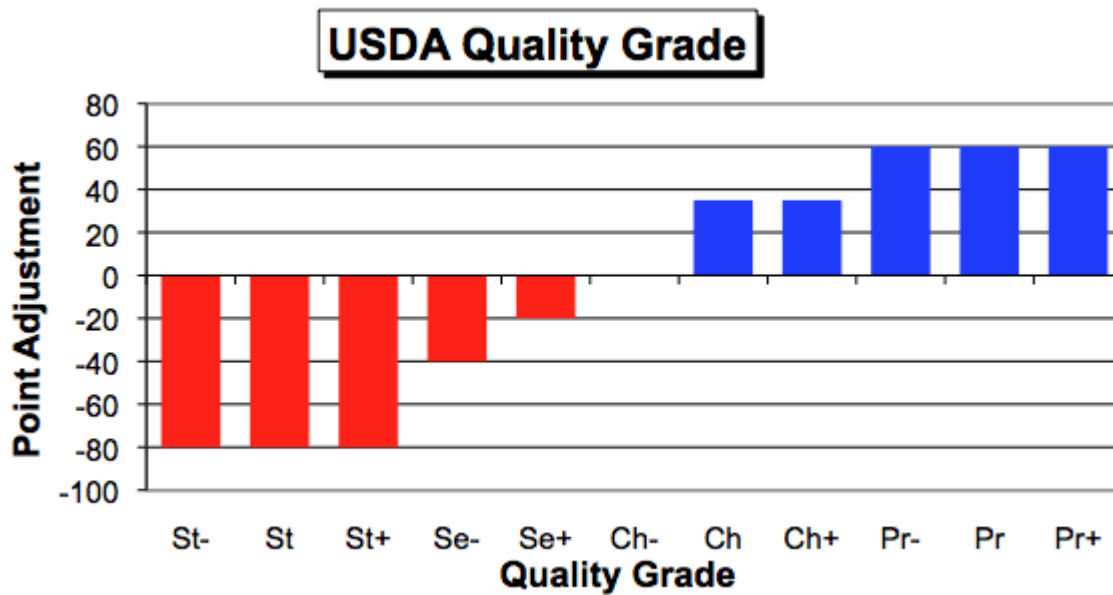
**USDA Quality Grade**

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.

	<b>Carcass Number</b>					
	1	2	3	4	5	6
<b>Carcass Measurements</b>						
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-
<b>Point Adjustments</b>						
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.



Tag	EID	CID	Last	First	City	DivName	Class	Place	Carcass Weight	Quality Grade	Yield Grade	Value per cwt	Carcass Value	Checkoff	Data Collection	Final Value
64887	840003214242028	52348	Anderson	Cora	Otis	Shorthorn	3	8	815	Choice	2	\$174.66	\$1,423.48	\$1.00	\$2.00	\$1,420.48
64336	840003214241477	52345	Backhus	Mileah	Russell	Angus	1	3	787	CAB	3	\$177.66	\$1,398.18	\$1.00	\$2.00	\$1,395.18
65845	840003214242986	52337	Beene	Kristy	Fort Scott	Crossbred	14	4	912	Choice	3	\$172.66	\$1,574.66	\$1.00	\$2.00	\$1,571.66
63779	840003214240920	52350	Brack	Steele	Great Bend	Crossbred	11	0	804	Choice	1	\$177.66	\$1,428.39	\$1.00	\$2.00	\$1,425.39
63765	840003214240918	52357	Brack	Steele	Great Bend	Crossbred	12	8	854	CAB	3	\$177.66	\$1,517.22	\$1.00	\$2.00	\$1,514.22
65742	840003214242883	52353	Carter	Oakley	Sedan	Shorthorn	3	6	824	Choice	2	\$174.66	\$1,439.20	\$1.00	\$2.00	\$1,436.20
64807	840003214241948	52359	Davis	Danica	Maple Hill	Hereford	2	3	868	Choice	3	\$172.66	\$1,498.69	\$1.00	\$2.00	\$1,495.69
64669	840003214241810	52341	Dickinson	Chesnie	Glasco	Angus	1	6	843	CAB	3	\$177.66	\$1,497.67	\$1.00	\$2.00	\$1,494.67
64668	840003214241809	52344	Dickinson	Chesnie	Glasco	Crossbred	12	9	838	CAB	2	\$179.66	\$1,505.55	\$1.00	\$2.00	\$1,502.55
47833	840003205272958	52351	Dressler	Kalen	Eudora	Chianina	8	3	934	Choice	3	\$172.66	\$1,612.64	\$1.00	\$2.00	\$1,609.64
63810	840003214240951	52342	Elliott	Myah	Hope	Shorthorn Plus	4	4	767	Choice	1	\$177.66	\$1,362.65	\$1.00	\$2.00	\$1,359.65
48543	840003205273668	52346	Fox	Kylie	Marquette	Chianina	8	5	923	Prime	3	\$187.66	\$1,732.10	\$1.00	\$2.00	\$1,729.10
18325	840003141649147	52340	Hauck	Chancey	Rozel	AOB	9	3	868	Choice	2	\$174.66	\$1,516.05	\$1.00	\$2.00	\$1,513.05
64764	840003214241905	52335	Hommertzheim	Tanner	Andale	Crossbred	10	2	752	Choice	1	\$177.66	\$1,336.00	\$1.00	\$2.00	\$1,333.00
64805	840003214241946	52349	Jones	Ty	Wamego	Crossbred	12	2	817	Choice	2	\$174.66	\$1,426.97	\$1.00	\$2.00	\$1,423.97
49377	840003205274502	52354	Lange	Kael	Clifton	Crossbred	14	1	883	Choice	1	\$177.66	\$1,568.74	\$1.00	\$2.00	\$1,565.74
65094	840003214242235	52356	McGraw	Rilee	Garden City	Crossbred	13	2	860	Choice	1	\$177.66	\$1,527.88	\$1.00	\$2.00	\$1,524.88
404	840003213113404	52338	Moldenhauer	Mackenzie	Valley Center	Maine-Anjou	7	11	1076	Choice	3	\$157.66	\$1,696.42	\$1.00	\$2.00	\$1,693.42
91494	840003135871164	52343	Moldenhauer	Mackenzie	Valley Center	Maine-Anjou	7	7	1075	Choice	3	\$157.66	\$1,694.85	\$1.00	\$2.00	\$1,691.85
49775	840003205274900	52358	Pelton	Clay	Paradise	Simmental	6	2	872	Choice	3	\$172.66	\$1,505.60	\$1.00	\$2.00	\$1,502.60
34157	840003149248490	52336	Persing	Lakota	Hugoton	Crossbred	10	5	787	Choice	1	\$177.66	\$1,398.18	\$1.00	\$2.00	\$1,395.18
49904	840003205790473	52334	Ruckman	Katie	Hutchinson	Maine-Anjou	7	5	857	Choice	2	\$174.66	\$1,496.84	\$1.00	\$2.00	\$1,493.84
64810	840003214241951	52339	Russell	Corbin	Paxico	Crossbred	14	7	900	Choice	3	\$172.66	\$1,553.94	\$1.00	\$2.00	\$1,550.94
63907	840003214241048	52352	Shenk	Easton	Dodge City	Maine-Anjou	7	4	836	Select	2	\$161.80	\$1,352.65	\$1.00	\$2.00	\$1,349.65
59863	840003014267480	52347	Wood	Dawson	Kingman	Crossbred	13	8	853	CAB	3	\$177.66	\$1,515.44	\$1.00	\$2.00	\$1,512.44