What can I afford to pay for feeder cattle during 2012-2013?

Dr. Steven Rust, Animal Science and Dr. Roy Black, Agricultural, Food, and Resource Economics

Similar to 2011-2012, an uncertain corn market and short feeder cattle supply contributes to a challenging decision on feeder cattle purchases this coming year. A series of breakeven analyses are presented below to assist in making the decision on prices to pay for various classes of livestock.

The general description of cattle and selected financial information used in the budgets are shown in Table 1. The ration used for all classes of cattle was a typical feedlot diet that contained 35% modified wet distiller's grain with soluble, 47.5% corn, 15% corn silage and 2.5% mineral supplement on a dry matter (DM) basis. Modified distiller's grain with soluble was priced at 80% the value of corn on a DM basis. If your ration is different, use the ration price rather than corn bushel price to select column to determine breakeven and return to management. Transportation costs used in the analyses were $3.00/mile for longer hauls (beef cattle) and $4.00/mile for short hauls (Holsteins). All final weights were shrunk 4% in these budgets. Marketing ($5.00/ head) and check-off ($1.00/head) fees were applied to the budgets for each class of cattle. Interest was charged on the entire purchase cost and half of the feed and operating cost. Yardage at $0.40/day represents fixed and variable operating costs in addition to those described above. All labor costs were included in the $0.40/day yardage charge. For determination of return to management, the futures price quoted on the Chicago Mercantile Exchange on August 13, 2012 was used for the spot month price closest to the projected harvest date. Heifers and Holstein steers were sold at a $.75/cwt and $6/cwt discount, respectively to native (beef) steers. The purchase and sale weight, performance, and additional financial information are presented in Table 1 for the types and weights of cattle considered.

To assist with the interpretation of the tables, consider the breakeven purchase prices for 550 lb steer calves in Table 2. If you have a similar ration as described in this budgeting exercise, you can use the price of corn to select the appropriate column. For different diets and feed prices, use the total ration cost in the row above the corn price ($/bu). For example, if your ration cost is $180/ton as-fed, select the column with the ration price closest to yours. In this case it is column 4 in the table ($176.99/cwt as-fed). An estimate of the likely selling price for the finished steer is $135.42/cwt. based upon an August 13, 2012 placement date and an April, 2013 sale date. Most often, this expected sale price is determined from the futures market price for the spot month nearest the expected sale date adjusted for basis. From the table, it indicates one could pay between $133.24 and $154.73/cwt for the steer calves. One can interpolate a more precise price by using the following equation: 133.24 + ((154.73-133.24) * ((135.42-130)/10))). The recalculated purchase price for a 550 lb steer is $144.89/cwt. This calculated breakeven purchase price does not include a net positive return on this group of steers, but should cover all fixed and variable costs. An expected $30 net return per steer would lower the purchase price from $144.89/cwt to $139.44/cwt ($144.89– ($30/550/100)). The breakeven purchase prices and returns to management presented in the tables should be used as guidelines as values used were based on estimates of cattle performance, sale weight, sale date and price.

The benefits of a wise purchase and the consequences of paying to much for 550 lb steers are shown in Table 3. In the previous scenario with an as-fed ration cost of $177/ton and a projected sale price of $135.42/cwt, a set of steers bought for $150/cwt would lose $29.75/ head. Conversely, a set of steers purchased at $140/cwt would return $28.42 to management.

Breakeven purchase price and return to management are presented for beef steers (purchase weights of 550, 800, and 950 lb), beef heifers (purchase weights of 475, 750, and 900 lb) and Holstein steers (purchase weights of 300, 600 and 900 lb) in Tables 2-19.

MSU is an affirmative-action, equal-opportunity employer. Michigan State University Extension programs and materials are open to all without regard to race, color, national origin, gender, gender identity, religion, age, height, weight, disability, political beliefs, sexual orientation, marital status, family status or veteran status. This information is for educational purposes only. Reference to commercial products or trade names does not imply endorsement by MSU Extension or bias against those not mentioned.

Table 1. Description of animal performance and selected financial information used in budgets

	Steer calf	Heifer calf	Yearling steer	Yearling steer	Yearling heifer	Yearling heifer	Holstein calf	Holstein yearling	Holstein yearling
Purchase weight, lb	550	475	800	950	750	900	300	600	900
Harvest weight, lb	1250	1175	1300	1350	1225	1275	1300	1350	1400
Days on feed	221	250	158	143	170	148	361	264	193
Daily gain, lb	3.40	3.00	3.50	3.20	3.10	2.90	3.20	3.05	2.90
Feed/gain	6.75	7.00	7.25	7.75	7.50	8.00	6.50	7.50	8.50
Vet/med, $/hd	25.00	30.00	20.00	15.00	25.00	20.00	35.00	25.00	15.00
Death loss, %	2.0	2.5	0.6	0.6	1.0	1.0	4.0	1.0	0.8
Yardage, $/hd/d	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Interest, %	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Ration DM, %	65.6	65.6	65.6	65.6	65.6	65.6	65.6	65.6	65.6
Transportation, $/hd	30.00	30.00	32.00	32.00	30.00	32.00	16.00	16.00	17.00
Proj. sale prices, /cwt	135.42	131.50	131.67	128.95	130.92	130.92	120.00	126.75	129.42

Table 2. Breakeven purchase prices for beef steers calves weighing 550 lb.

	Ration prices, $/ton as-fed							
	141.58	153.38	165.19	176.99	188.80	200.60	212.41	224.21
Corn, $/bu	$5.50	$6.00	$6.50	$7.00	$7.50	$8.00	$8.50	$9.00
Proj. sale prices, $/cwt	Breakeven purchase prices, $/cwt							
90	71.28	63.28	55.28	47.28	39.28	31.28	23.28	15.28
100	92.77	84.77	76.77	68.77	60.77	52.77	44.77	36.77
110	114.26	106.26	98.26	90.26	82.26	74.26	66.26	58.26
120	135.75	127.75	119.75	111.75	103.75	95.75	87.75	79.75
130	157.24	149.24	141.24	133.24	125.24	117.24	109.24	101.24
140	178.73	170.73	162.73	154.73	146.73	138.73	130.73	122.73
150	200.22	192.22	184.22	176.22	168.22	160.22	152.22	144.22

Table 3. Projected returns to labor and management for steer calves (550 lb) purchased at various prices and sold for $135.42/cwt.

	Ration prices, $/ton as-fed							
	141.58	153.38	165.19	176.99	188.80	200.60	212.41	224.21
Corn, $/bu	$5.50	$6.00	$6.50	$7.00	$7.50	$8.00	$8.50	$9.00
Proj. purchase prices, $/cwt	Returns to management, $/hd							
100	400.72	354.18	307.63	261.19	214.56	168.03	121.50	74.94
110	342.55	296.02	249.46	202.93	156.40	109.86	63.33	16.78
120	284.38	237.85	191.29	144.76	98.23	51.70	5.17	-41.39
130	226.21	179.68	133.12	86.59	40.06	-6.47	-53.00	-99.56
140	168.04	121.51	74.95	28.42	-18.11	-64.64	-111.17	-157.73
150	109.87	63.34	16.79	-29.75	-76.28	-122.81	-169.34	-215.90
160	51.71	5.17	-41.38	-87.91	-134.45	-180.98	-227.51	-274.06

Michigan State University
AgBioResearch
www.agbioresearch.msu.edu

To contact an expert in your area, visit people.msue.msu.edu, or call 888-MSUE4MI (888-678-3364).

MSU is an affirmative-action, equal-opportunity employer. Michigan State University Extension programs and materials are open to all without regard to race, color, national origin, gender, gender identity, religion, age, height, weight, disability, political beliefs, sexual orientation, marital status, family status or veteran status. This information is for educational purposes only. Reference to commercial products or trade names does not imply endorsement by MSU Extension or bias against those not mentioned.

Table 4. Breakeven purchase prices for yearling steers weighing 800 lb.

	Ration prices, $/ton as-fed							
	141.58	153.38	165.19	176.99	188.80	200.60	212.41	224.21
Corn, $/bu	$5.50	$6.00	$6.50	$7.00	$7.50	$8.00	$8.50	$9.00
Proj. sale prices, $/cwt	Breakeven purchase prices, $/cwt							
90	73.56	69.12	64.69	60.25	55.82	51.38	46.95	42.51
100	89.30	84.86	80.42	75.99	71.55	67.12	62.68	58.25
110	105.04	100.60	96.16	91.73	87.29	82.86	78.42	73.98
120	120.77	116.34	111.90	107.47	103.03	98.59	94.16	89.72
130	135.51	132.08	127.64	123.20	118.77	114.33	109.90	105.46
140	152.25	147.81	143.38	138.94	134.51	130.07	125.63	121.20
150	167.99	163.55	159.11	154.68	150.24	145.81	141.37	136.94

Table 5. Projected returns to labor and management for yearling steers (800 lb) purchased at various prices and sold for $131.67/cwt.

	Ration prices, $/ton as-fed							
	141.58	153.38	165.19	176.99	188.80	200.60	212.41	224.21
Corn, $/bu	$5.50	$6.00	$6.50	$7.00	$7.50	$8.00	$8.50	$9.00
Proj. purchase prices, $/cwt	Returns to management, $/hd							
100	323.30	286.67	250.01	213.37	176.74	140.10	103.46	66.81
110	240.70	204.06	167.41	130.77	94.13	57.50	20.86	-15.80
120	158.10	121.46	84.80	48.17	11.53	-25.11	-61.74	-98.40
130	75.49	38.86	2.20	-34.44	-71.07	-107.71	-144.35	-181.00
140	-7.11	-43.75	-80.40	-117.04	-153.68	-190.31	-226.95	-263.61

Table 6. Breakeven purchase prices for yearling steers weighing 950 lb.

	Ration prices, $/ton as-fed							
	141.58	153.38	165.19	176.99	188.80	200.60	212.41	224.21
Corn, $/bu	$5.50	$6.00	$6.50	$7.00	$7.50	$8.00	$8.50	$9.00
Proj. sale prices, $/cwt	Breakeven purchase prices, $/cwt							
90	73.33	70.03	66.74	63.45	60.16	56.87	53.58	50.28
100	87.12	83.83	80.54	77.25	73.96	70.67	67.37	64.08
110	100.92	97.63	94.34	91.05	87.75	84.46	81.17	77.88
120	114.72	111.43	108.13	104.84	101.55	98.26	94.97	91.68
130	128.52	125.23	121.93	118.64	115.35	112.06	108.77	105.47
140	142.31	139.02	135.73	132.44	129.15	125.86	122.57	119.27
150	156.11	152.82	149.53	146.24	142.95	139.65	136.36	133.07

MSU is an affirmative-action, equal-opportunity employer. Michigan State University Extension programs and materials are open to all without regard to race, color, national origin, gender, gender identity, religion, age, height, weight, disability, political beliefs, sexual orientation, marital status, family status or veteran status. This information is for educational purposes only. Reference to commercial products or trade names does not imply endorsement by MSU Extension or bias against those not mentioned.

Table 7. Projected returns to labor and management for yearling steers (950 lb) purchased at various prices and sold for $120.00/cwt.

	Ration prices, $/ton as-fed							
	141.58	153.38	165.19	176.99	188.80	200.60	212.41	224.21
Corn, $/bu	$5.50	$6.00	$6.50	$7.00	$7.50	$8.00	$8.50	$9.00
Proj. purchase prices, $/cwt	Returns to management, $/hd							
100	264.84	232.63	200.42	168.21	136.01	103.81	71.61	39.39
110	167.00	134.79	102.57	70.37	38.17	5.97	-26.23	-58.45
120	69.15	36.95	4.73	-27.47	-59.67	-91.87	-124.07	-156.29
130	-28.69	-60.89	-93.11	-125.31	-157.51	-189.71	-221.91	-254.13

Table 8. Breakeven purchase prices for heifer calves weighing 475 lb.

	Ration prices, $/ton as-fed							
	141.58	153.38	165.19	176.99	188.80	200.60	212.41	224.21
Corn, $/bu	$5.50	$6.00	$6.50	$7.00	$7.50	$8.00	$8.50	$9.00
Proj. sale prices, $/cwt	Breakeven purchase prices, $/cwt							
90	61.22	51.72	42.22	32.72	23.22	13.73	4.23	-5.28
100	84.39	74.89	65.39	55.89	46.39	36.89	27.40	17.89
110	107.56	98.06	88.56	79.06	69.56	60.06	50.57	41.06
120	130.73	121.23	111.73	102.23	92.73	83.23	73.74	64.23
130	153.90	144.40	134.90	125.40	115.90	106.40	96.91	87.40
140	177.07	167.57	158.07	148.57	139.07	129.57	120.08	110.57
150	200.24	190.74	181.24	171.74	162.24	152.74	143.24	133.74

Table 9. Projected returns to labor and management for heifer calves (475 lb) purchased at various prices and sold for $131.50/cwt.

	Ration prices, $/ton as-fed							
	141.58	153.38	165.19	176.99	188.80	200.60	212.41	224.21
Corn, $/bu	$5.50	$6.00	$6.50	$7.00	$7.50	$8.00	$8.50	$9.00
Proj. purchase prices, $/cwt	Returns to management, $/hd							
90	341.67	293.50	245.31	197.14	148.98	100.81	52.65	4.45
100	290.96	242.79	194.60	146.43	98.26	50.10	1.93	-46.26
110	240.24	192.08	143.88	95.72	47.55	-0.61	-48.78	-96.97
120	189.53	141.36	93.17	45.00	-3.16	-51.33	-99.49	-147.69
130	138.82	90.65	42.46	-5.71	-53.88	-102.04	-150.21	-198.40
140	88.10	39.94	-8.26	-56.42	-104.59	-152.75	-200.92	-249.11
150	37.39	-10.78	-58.97	-107.14	-155.30	-203.47	-251.63	-299.83

MSU is an affirmative-action, equal-opportunity employer. Michigan State University Extension programs and materials are open to all without regard to race, color, national origin, gender, gender identity, religion, age, height, weight, disability, political beliefs, sexual orientation, marital status, family status or veteran status. This information is for educational purposes only. Reference to commercial products or trade names does not imply endorsement by MSU Extension or bias against those not mentioned.

Table 10. Breakeven purchase prices for yearling heifers weighing 750 lb.

	Ration prices, $/ton as-fed							
	141.58	153.38	165.19	176.99	188.80	200.60	212.41	224.21
Corn, $/bu	$5.50	$6.00	$6.50	$7.00	$7.50	$8.00	$8.50	$9.00
Proj. sale prices, $/cwt	Breakeven purchase prices, $/cwt							
90	69.31	64.69	60.06	55.44	50.82	46.19	41.57	36.94
100	85.04	80.42	75.79	71.17	66.54	61.92	57.30	52.67
110	100.76	96.14	91.52	86.89	82.27	77.65	73.02	68.40
120	116.49	111.87	107.24	102.62	98.00	93.37	88.75	84.13
130	132.22	127.60	122.97	118.35	113.72	109.10	104.48	99.85
140	147.95	143.32	138.70	134.07	129.45	124.83	120.20	115.58
150	163.67	159.05	154.42	149.80	145.18	140.55	135.93	131.31

Table 11. Projected returns to labor and management for yearling heifers (750 lb) purchased at various prices and sold for $130.17/cwt.

	Ration prices, $/ton as-fed							
	141.58	153.38	165.19	176.99	188.80	200.60	212.41	224.21
Corn, $/bu	$5.50	$6.00	$6.50	$7.00	$7.50	$8.00	$8.50	$9.00
Proj. purchase prices, $/cwt	Returns to management, $/hd							
90	340.12	304.11	268.08	232.07	196.06	160.05	124.04	88.01
100	262.23	226.22	190.19	154.18	118.17	82.16	46.15	10.12
110	184.34	148.33	112.30	76.29	40.28	4.27	-31.74	-67.77
120	106.44	70.43	34.40	-1.61	-37.62	-73.63	-109.64	-145.67
130	28.55	-7.46	-43.49	-79.50	-115.51	-151.52	-187.53	-223.56

Table 12. Breakeven purchase prices for yearling heifers weighing 900 lb.

	Ration prices, $/ton as-fed							
	141.58	153.38	165.19	176.99	188.80	200.60	212.41	224.21
Corn, $/bu	$5.50	$6.00	$6.50	$7.00	$7.50	$8.00	$8.50	$9.00
Proj. sale prices, $/cwt	Breakeven purchase prices, $/cwt							
90	70.30	66.95	63.60	60.24	56.89	53.54	50.19	46.84
100	83.99	80.64	77.28	73.93	70.58	67.23	63.88	60.53
110	97.68	94.33	90.97	87.62	84.27	80.92	77.57	74.22
120	111.37	108.02	104.66	101.31	97.96	94.61	91.26	87.91
130	125.06	121.71	118.35	115.00	111.65	108.30	104.95	101.60
140	138.75	135.40	132.04	128.69	125.34	121.99	118.64	115.29
150	152.44	149.08	145.73	142.38	139.03	135.68	132.33	128.98

MSU is an affirmative-action, equal-opportunity employer. Michigan State University Extension programs and materials are open to all without regard to race, color, national origin, gender, gender identity, religion, age, height, weight, disability, political beliefs, sexual orientation, marital status, family status or veteran status. This information is for educational purposes only. Reference to commercial products or trade names does not imply endorsement by MSU Extension or bias against those not mentioned.

Table 13. Projected returns to labor and management for yearling heifers (900 lb) purchased at various prices and sold for $130.17/cwt.

	Ration prices, $/ton as-fed							
	141.58	153.38	165.19	176.99	188.80	200.60	212.41	224.21
Corn, $/bu	$5.50	$6.00	$6.50	$7.00	$7.50	$8.00	$8.50	$9.00
Proj. purchase prices, $/cwt	Returns to management, $/hd							
90	338.23	307.03	275.81	244.60	213.40	182.19	150.99	119.77
100	245.10	213.89	182.67	151.47	120.26	89.06	57.85	26.63
110	151.96	120.75	89.53	58.33	27.12	-4.08	-35.28	-66.51
120	58.82	27.62	-3.60	-34.81	-66.01	-97.22	-128.42	-159.64
130	-34.31	-65.52	-96.74	-127.94	-159.15	-190.35	-221.56	-252.78

Table 14. Breakeven purchase prices for Holstein steer calves weighing 300 lb.

	Ration prices, $/ton as-fed							
	141.58	153.38	165.19	176.99	188.80	200.60	212.41	224.21
Corn, $/bu	$5.50	$6.00	$6.50	$7.00	$7.50	$8.00	$8.50	$9.00
Proj. sale prices, $/cwt	Breakeven purchase prices, $/cwt							
90	65.65	46.39	27.13	7.88	-11.37	-30.62	-49.87	-69.13
100	105.14	85.89	66.63	47.38	28.13	8.88	-10.37	-29.64
110	144.64	125.39	106.13	86.88	67.63	48.37	29.12	9.86
120	184.14	164.89	145.63	126.38	107.12	87.87	68.62	49.36
130	223.64	204.39	185.12	165.87	146.62	127.37	108.12	88.86
140	263.14	243.88	224.62	205.37	186.12	166.87	147.62	128.36
150	302.63	283.38	264.12	244.87	225.62	206.37	187.12	167.85

Table 15. Projected returns to labor and management for Holstein steer calves (300 lb) purchased at various prices and sold for $120.00/cwt.

	Ration prices, $/ton as-fed							
	141.58	153.38	165.19	176.99	188.80	200.60	212.41	224.21
Corn, $/bu	$5.50	$6.00	$6.50	$7.00	$7.50	$8.00	$8.50	$9.00
Proj. purchase prices, $/cwt	Returns to management, $/hd							
60	408.58	345.22	281.82	218.46	155.10	91.74	28.38	-35.02

Michigan State University
AgBioResearch
www.agbioresearch.msu.edu

To contact an expert in your area, visit people.msue.msu.edu, or call 888-MSUE4MI (888-678-3364).

MSU is an affirmative-action, equal-opportunity employer. Michigan State University Extension programs and materials are open to all without regard to race, color, national origin, gender, gender identity, religion, age, height, weight, disability, political beliefs, sexual orientation, marital status, family status or veteran status. This information is for educational purposes only. Reference to commercial products or trade names does not imply endorsement by MSU Extension or bias against those not mentioned.

70	375.67	312.31	248.91	185.55	122.19	58.82	-4.54	-67.93
80	342.75	279.39	216.00	152.63	89.27	25.91	-37.45	-100.85
90	309.84	246.48	183.08	119.72	56.36	-7.00	-70.36	-133.76
100	276.93	213.57	150.17	86.81	23.45	-39.92	-103.28	-166.67
110	244.02	180.65	117.26	53.90	-9.47	-72.83	-136.19	-199.59
120	211.10	147.74	84.34	20.98	-42.38	-105.74	-169.10	-232.50
130	178.19	114.83	51.43	-11.93	-75.29	-138.65	-202.02	-265.41
140	145.28	81.91	18.52	-44.84	-108.21	-171.57	-234.93	-298.33
150	112.36	49.00	-14.40	-77.76	-141.12	-204.48	-267.84	-331.24
160	79.45	16.09	-47.31	-110.67	-174.03	-237.39	-300.76	-364.15
170	46.54	-16.82	-80.22	-143.58	-206.94	-270.31	-333.67	-397.06

Table 16. Breakeven purchase prices for Holstein steer calves weighing 600 lb.

	Ration prices, $/ton as-fed							
	141.58	153.38	165.19	176.99	188.80	200.60	212.41	224.21
Corn, $/bu	$5.50	$6.00	$6.50	$7.00	$7.50	$8.00	$8.50	$9.00
Proj. sale prices, $/cwt	Breakeven purchase prices, $/cwt							
90	61.92	53.13	44.33	35.54	26.75	17.96	9.17	0.37
100	83.26	74.46	65.67	56.88	48.09	39.30	30.50	21.71
110	104.59	95.80	87.01	78.21	69.42	60.63	51.84	43.05
120	125.93	117.14	108.34	99.55	90.76	81.97	73.18	64.38
130	147.27	138.48	129.68	120.89	112.10	103.31	94.52	85.72
140	168.60	159.81	151.02	142.23	133.44	124.64	115.85	107.06
150	189.94	181.15	172.35	163.56	154.77	145.98	137.19	128.39

Table 17. Projected returns to labor and management for Holstein steers (600 lb) purchased at various prices and sold for $126.75/cwt.

	Ration prices, $/ton as-fed							
	141.58	153.38	165.19	176.99	188.80	200.60	212.41	224.21
Corn, $/bu	$5.50	$6.00	$6.50	$7.00	$7.50	$8.00	$8.50	$9.00
Proj. purchase prices, $/cwt	Returns to management, $/hd							
70	444.99	389.37	333.72	278.10	222.48	166.86	111.24	55.59
80	381.72	326.10	270.45	214.83	159.21	103.59	47.97	-7.68
90	318.45	262.83	207.18	151.56	95.94	40.32	-15.30	-70.95
100	255.18	199.56	143.91	88.29	32.67	-22.95	-78.57	-134.22
110	191.91	136.29	80.64	25.02	-30.60	-86.22	-141.84	-197.49
120	128.64	73.02	17.37	-38.25	-93.87	-149.49	-205.11	-260.76
130	65.37	9.75	-45.90	-101.52	-157.14	-212.76	-268.38	-324.03
140	2.10	-53.52	-109.17	-164.79	-220.41	-276.03	-331.65	-387.30

Table 18. Breakeven purchase prices for Holstein steers weighing 900 lb.

	Ration prices, $/ton as-fed							
	141.58	153.38	165.19	176.99	188.80	200.60	212.41	224.21

MSU is an affirmative-action, equal-opportunity employer. Michigan State University Extension programs and materials are open to all without regard to race, color, national origin, gender, gender identity, religion, age, height, weight, disability, political beliefs, sexual orientation, marital status, family status or veteran status. This information is for educational purposes only. Reference to commercial products or trade names does not imply endorsement by MSU Extension or bias against those not mentioned.

Corn, $/bu	$5.50	$6.00	$6.50	$7.00	$7.50	$8.00	$8.50	$9.00
Proj. sale prices, $/cwt			Breakeven purchase prices, $/cwt					
90	66.50	61.86	57.22	52.59	47.95	43.32	38.68	34.05
100	81.45	76.81	72.18	67.54	62.91	58.27	53.64	49.00
110	96.40	91.77	87.13	82.49	77.86	73.22	68.59	63.95
120	111.35	106.72	102.08	97.45	92.81	88.18	83.54	78.90
130	126.31	121.67	117.03	112.40	107.76	103.13	98.49	93.86
140	141.26	136.62	131.99	127.35	122.72	118.08	113.45	108.81
150	156.21	151.58	146.94	142.30	137.67	133.03	128.40	123.76

Table 19. Projected returns to labor and management for Holstein steers (900 lb) purchased at various prices and sold for $129.42/cwt.

	Ration prices, $/ton as-fed							
	141.58	153.38	165.19	176.99	188.80	200.60	212.41	224.21
Corn, $/bu	$5.50	$6.00	$6.50	$7.00	$7.50	$8.00	$8.50	$9.00
Proj. purchase prices, $/cwt			Returns to management, $/hd					
90	331.81	288.41	244.99	201.59	158.20	114.80	71.40	27.98
100	238.18	194.78	151.36	107.96	64.57	21.17	-22.23	-65.65
110	144.55	101.15	57.73	14.33	-29.07	-72.46	-115.86	-159.28
120	50.92	7.52	-35.90	-79.30	-122.70	-166.09	-209.49	-252.91
130	-42.71	-86.11	-129.53	-172.93	-216.33	-259.73	-303.12	-346.55

MSU is an affirmative-action, equal-opportunity employer. Michigan State University Extension programs and materials are open to all without regard to race, color, national origin, gender, gender identity, religion, age, height, weight, disability, political beliefs, sexual orientation, marital status, family status or veteran status. This information is for educational purposes only. Reference to commercial products or trade names does not imply endorsement by MSU Extension or bias against those not mentioned.