

**Costs to Produce Beef in Illinois—2015**

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Total economic costs in 2015 for Illinois beef feeding enterprises exceeded total returns by \$45.29 per 100 pounds of beef produced on farms enrolled in Illinois Farm Business Farm Management (see Table 1). The 2015 returns were lower than the 2014 returns where total returns exceeded total costs by \$35.82 per 100 pounds produced. Total returns have exceeded total economic costs three out of the last ten years. The 2015 level of return above all costs were \$34.73 per 100 pounds beef produced below the average return above all costs for the 2006 through 2015 time period. Figure 1 illustrates average returns, cash operating costs and total costs for the 2006 through 2015 period.

A negative inventory change in values contributed to the lower total returns for these enterprises. Total returns per 100 pounds produced decreased from \$131.16 in 2014 to \$50.67 in 2015. Total returns for 2014 were the highest on record. The average price received per 100 pounds of beef sold of \$149.19 was about 2 percent higher than 2014. This price was the highest price received since this study began and the second year in a row that the price received

averaged over \$140 per hundredweight. The average price paid for feeder cattle replacements in 2015 of \$210.69 was about 2 percent higher than 2014. The 2015 prices paid for feeder cattle replacements are the highest since this study began. The price paid for feeder cattle in 2014 and 2015 were the only years where the price paid averaged over \$200.00 per hundredweight. The purchase cost of feeder cattle is subtracted from finished cattle sales in determining total returns per 100 pounds produced.

Slightly lower feed costs were not enough to improved returns as compared to 2014. Feed costs decreased about 5 percent in 2015 as compared to 2014. Feed costs were \$58.25 per 100 pounds produced in 2015 compared to \$61.32 in 2014. Non-feed costs increased from \$34.02 per 100 pounds produced in 2014 to \$37.71 in 2015 and were the highest on record since this study began. Maintenance and power expenses of \$8.68 per 100 pounds produced make up the largest portion of the non-feed costs. Feed and non-feed costs totaled \$95.96 per 100 pounds produced in 2015. Total costs in 2015 were 62 cents per 100 pounds produced above

2014 and \$1.65 above the last ten year average of \$94.31. Excluding the cost of feeder cattle, feed costs were 61 percent of the total cost to produce beef in 2015, compared to 69% for the four-year average.

Total cash costs in 2015 averaged \$83.15 per 100 pounds of beef produced. This cost was 6 cents per 100 pounds produced below 2014 costs on the same farms and \$15.03 below the 2012-2015 average. This cost includes all grain fed priced at average market price for the year—corn \$3.70 per bushel. Roughage fed was valued at on-farm market prices while protein and minerals were valued at cost. The study assumes all feeds fed had alternative markets other than for feed to cattle. Other cash costs include utilities, machinery, equipment and building repairs, machine hire and fuel, insurance, taxes, and overhead, as well as an interest charge on investment in cattle.

Total costs, both cash and non-cash, on these farms, including depreciation, labor and an interest charge on facilities used, were accounted for in either crop or livestock production. The farms had no other kind of livestock enterprises. These were considered farms specializing primarily in beef production. These results were compiled in the University of Illinois, Department of Agricultural and Consumer Economics from Illinois Farm Business Records kept by farmers enrolled in the Illinois Farm Business Farm Management (FBFM) Association recordkeeping and business analysis program.

Note in the table that the 2012-2015 average total returns per 100 pounds of beef produced

of \$99.02 is 84 cents above the average total cash costs of \$98.18 for this period. The return above cash costs has fluctuated from \$47.95 per 100 pounds gain in 2014 to a negative \$32.48 in 2015. Producers may decide to continue to feed cattle as long as there is at least a small return after cash costs are paid, but will be hesitant to expand production without an equitable return to cover depreciation, labor, and interest on investment costs.

During the last ten years, the average pounds of beef produced in this sample has fluctuated. In 2015, operators in this group produced an average of 5,929 cwt. of beef, or finished 1,248 head of cattle at 475-pound gain equivalents. In 2014, operators produced an average of 5,843 cwt. of beef, or 1,230 head and in 2006 they produced an average of 4,734 cwt. of beef, or 997 head. These producers also farmed an average of 575 tillable acres in 2015.

Returns to cattle feeders decreased in 2015 compared to 2014 and were below the last four-year average. The decrease in inventory values was the main factors for the decreased returns. Lower feed costs offset some of the higher cash operating expenses. Projections for 2016 show that beef production is estimated to increase about 6% and thus market cattle prices are expected to decrease about 19%. Returns for 2016 will not include a large inventory value change, however lower cattle prices are projected. Feed costs will be lower to lower grain and forage prices. With these factors combined, returns to all costs for 2016 are estimated to be similar to 2015.

**Table 1. Costs and Returns for Beef Feeding Enterprises, 2012-2015**

	2015	2014	2013	2012	Average 2012-15
Number of farms .....	12	15	14	9	13
<b>Average per farm</b>					
Tillable acres .....	575	570	704	724	643
Hundredweight beef produced .....	5,929	5,843	5,241	6,441	5,864
Number head @ 475-lb. gain equivalents .....	1,248	1,230	1,103	1,356	1,234
Average weight purchased, lb .....	650	635	659	553	624
Average weight sold, lb .....	1,348	1,324	1,270	1,254	1,299
Price received per 100 lb. sold .....	\$149.47	\$147.19	\$122.87	\$116.58	\$134.03
Price paid per 100 lb. purchased .....	\$210.69	\$206.98	\$141.12	\$137.24	\$174.01
<b>per 100 pounds of beef produced</b>					
Cash costs					
Feed <sup>a</sup> .....	\$58.25	\$61.32	\$91.53	\$93.39	\$76.12
Operating expenses					
Maintenance and power <sup>b</sup> .....	8.68	8.61	8.45	7.61	8.34
Livestock expense .....	7.88	6.20	6.93	5.32	6.58
Insurance, taxes and overhead .....	1.23	0.85	0.94	1.13	1.04
Interest on cattle <sup>c</sup> .....	<u>7.11</u>	<u>6.23</u>	<u>5.02</u>	<u>6.03</u>	<u>6.10</u>
Total operating expense .....	\$24.90	\$21.89	\$21.34	\$20.09	\$22.06
<b>TOTAL CASH COSTS</b> .....	<b>\$83.15</b>	<b>\$83.21</b>	<b>\$112.87</b>	<b>\$113.48</b>	<b>\$98.18</b>
Other costs					
Depreciation <sup>d</sup> .....	\$3.93	\$3.64	\$3.37	\$3.61	\$3.64
Labor .....	6.09	5.88	6.47	6.69	6.28
Interest on other capital .....	<u>2.78</u>	<u>2.61</u>	<u>2.16</u>	<u>2.45</u>	<u>2.50</u>
<b>TOTAL OTHER COSTS</b> .....	<b>\$12.81</b>	<b>\$12.13</b>	<b>\$12.00</b>	<b>\$12.75</b>	<b>\$12.42</b>
<b>TOTAL ALL COSTS</b> .....	<b>\$95.96</b>	<b>\$95.34</b>	<b>\$124.87</b>	<b>\$126.23</b>	<b>\$110.60</b>
Total returns <sup>e</sup> .....	<u>\$50.67</u>	<u>\$131.16</u>	<u>\$109.27</u>	<u>\$104.98</u>	<u>\$ 99.02</u>
<b>Return above all costs</b> .....	<b>\$-45.29</b>	<b>\$35.82</b>	<b>\$-15.60</b>	<b>\$-21.25</b>	<b>\$-11.58</b>

<sup>a</sup> All grain fed was priced at average market price for the year. Market values were used for roughage fed while protein and minerals were charged at cost. Assumes all feed fed were marketable.

<sup>b</sup> Includes utilities, machinery, equipment and building repairs, machine hire and fuel.

<sup>c</sup> Interest is a charge on average value of beginning- and end-of-year inventories on hand. Rate was 4.5% for 2012 and 4.0 percent for 2013 to 2015.

<sup>d</sup> Includes machinery, equipment, and building depreciation.

<sup>e</sup> Sales less cost of purchased animals plus or minus inventory value change. No credit has been calculated for reduced fertility cost for manure applied to crops.

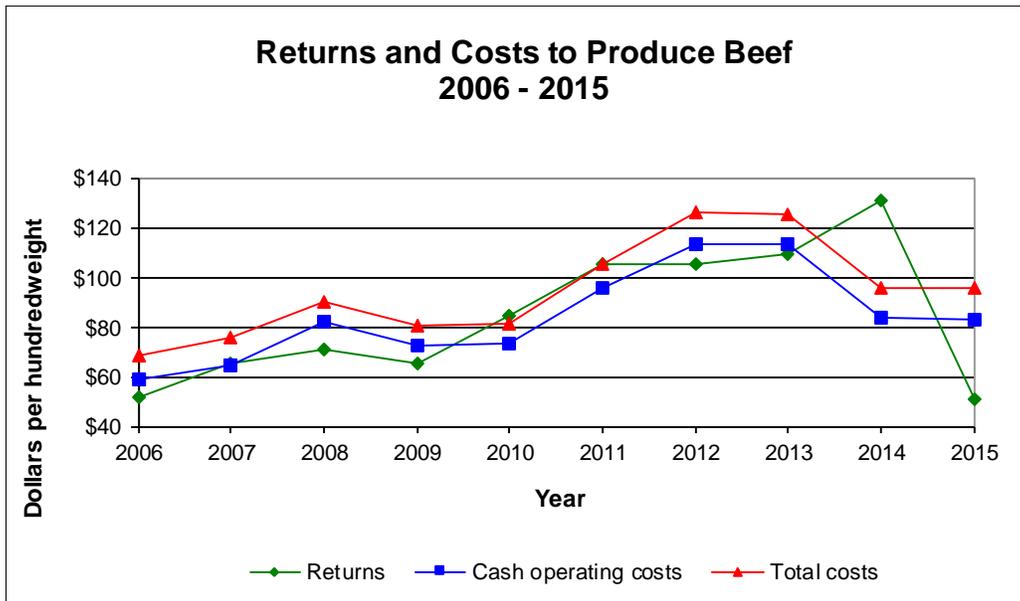


Figure 1. Returns and costs to produce beef on Illinois farms, 2006 - 2015.

The author would like to acknowledge that data used in this study comes from the local Farm Business Farm Management (FBFM) Associations across the State of Illinois. Without their cooperation, information as comprehensive and accurate as this would not be available for educational purposes. FBFM, which consists of 5,600 plus farmers and 60 professional field staff, is a not-for-profit organization available to all farm operators in Illinois. FBFM field staff provide on-farm counsel with computerized recordkeeping, farm financial management, business entity planning and income tax management. For more information, please contact the State FBFM Office located at the University of Illinois Department of Agricultural and Consumer Economics at 217-333-5511 or visit the FBFM website at [www.fbfm.org](http://www.fbfm.org).