

Market and Financial Outlook for Production Agriculture in Nebraska



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March 2014

Market Outlook for Crops

Prices

Entering the 2014 growing season, the U.S. grains complex faces an exceptionally larger inventory of corn, slightly larger inventory of soybeans, and smaller inventory of wheat (*Figure 1*). Globally, the picture is different: corn inventory increased but not as much as domestically, soybean inventory increased considerably more than domestically, and wheat inventory increased compared to a reduction in the U.S.

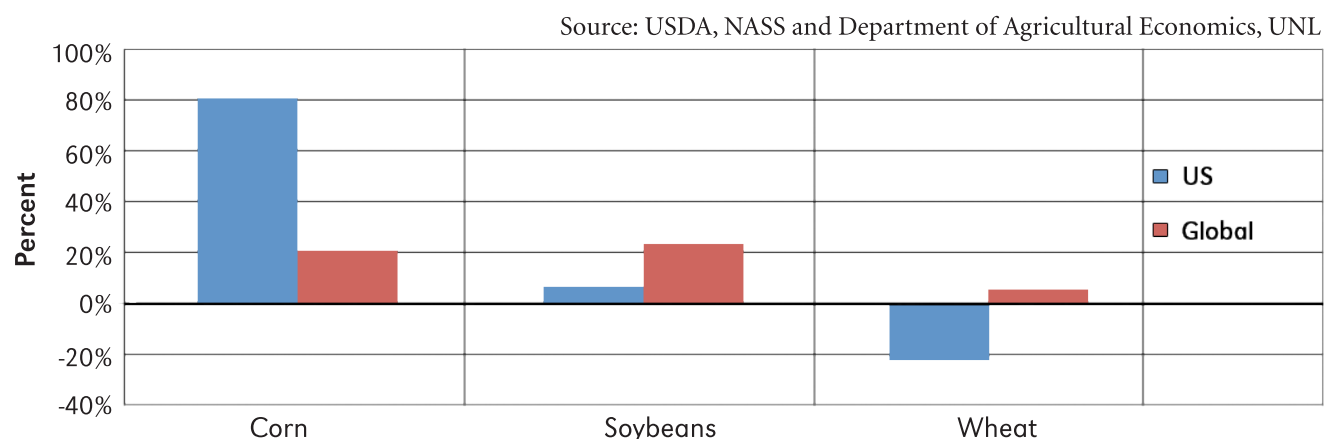


Figure 1. Percent change in corn, soybeans, and wheat inventories in the U.S. between 2013 and 2014

Since the highs in 2013, prices have moved downward for all three commodities. The lower prices since August 2013 for corn and soybeans have increased use which has “eaten up” ending stocks. Comparing the World Agricultural Supply and Demand Estimates (WAS-DE, USDA) from August 2013 to February 2014, the use estimates show a 5 percent or 625 million bushel increase for corn, a 4.2 percent or 133 million bushel increase for soybeans, and a 2 percent or 48 million bushel increase for wheat. This growth is expected to continue through the remainder of the marketing year.

The 2014 price forecasts for corn, soybeans, and wheat were based on expected prices reflected in the current futures and options markets adjusted to Nebraska with a harvest-time basis (*Table 1*). One certainty is that commodity prices during planting and growing seasons will be sensitive to changes in production, use, and prospects.

Table 1. Prices in Nebraska, marketing year average (\$/bushel)

Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014F
Corn	1.92	3.00	4.14	4.05	3.58	5.09	6.11	6.85	4.26	4.10
Soybeans	5.55	6.05	9.92	9.79	9.48	11.00	12.00	14.10	11.78	10.42
Wheat	3.36	4.57	5.82	6.68	4.73	5.27	6.70	7.87	6.67	5.74

Source: USDA, NASS and Department of Agricultural Economics, UNL

Production

Production prospects are a wild card at this point; consequently, production estimates that follow are based on a “normal” planting and growing season. Production for 2014 is estimated as the product of a projected yield, based on a trend, times a forecast of harvested acres. The acres for corn are forecasted by using a soybean-to-corn price ratio and the relative profitability of soybeans versus corn. Ten percent fewer corn acres are expected for 2014 compared to 2013 with most of the change going to soybeans. With fewer corn acres and a slightly higher yield, production is expected to be down from 2013 levels. With additional soybean acres and a slightly higher yield, we expect an increase in production over 2013 levels. Wheat yield, acres and, consequently, production are all expected to be up (*Figures 2-10 and Tables 2-4*).

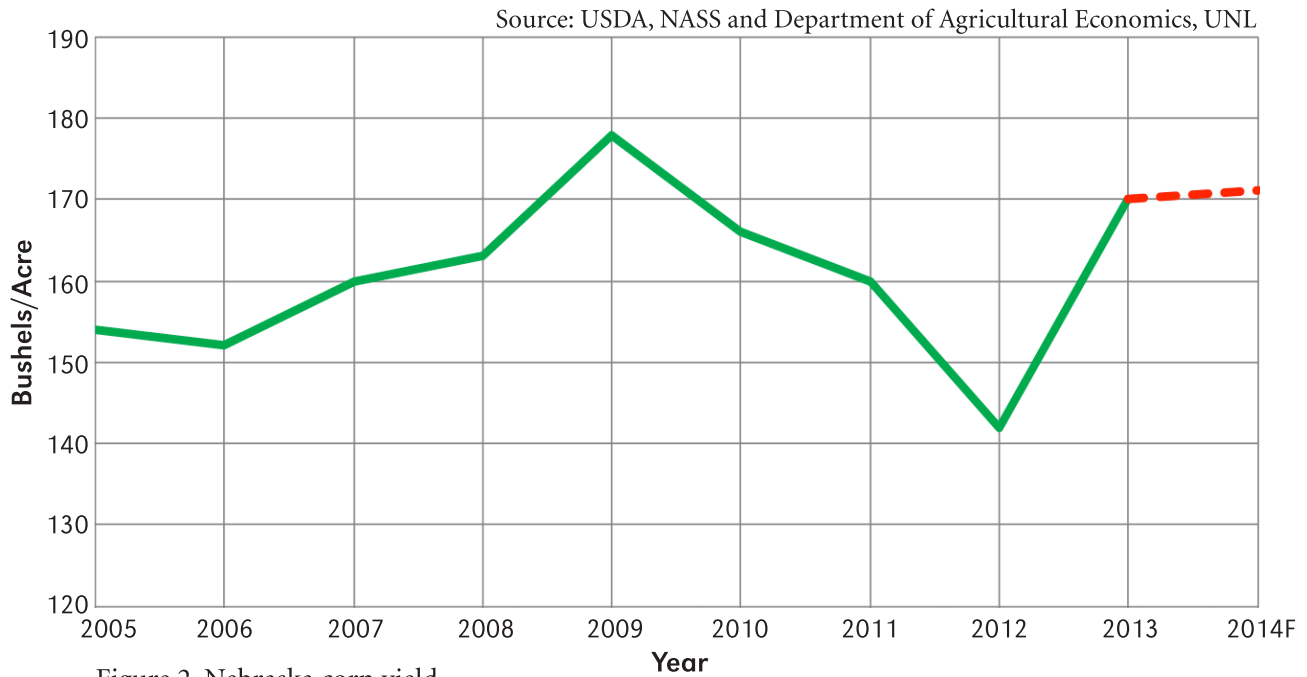


Figure 2. Nebraska corn yield

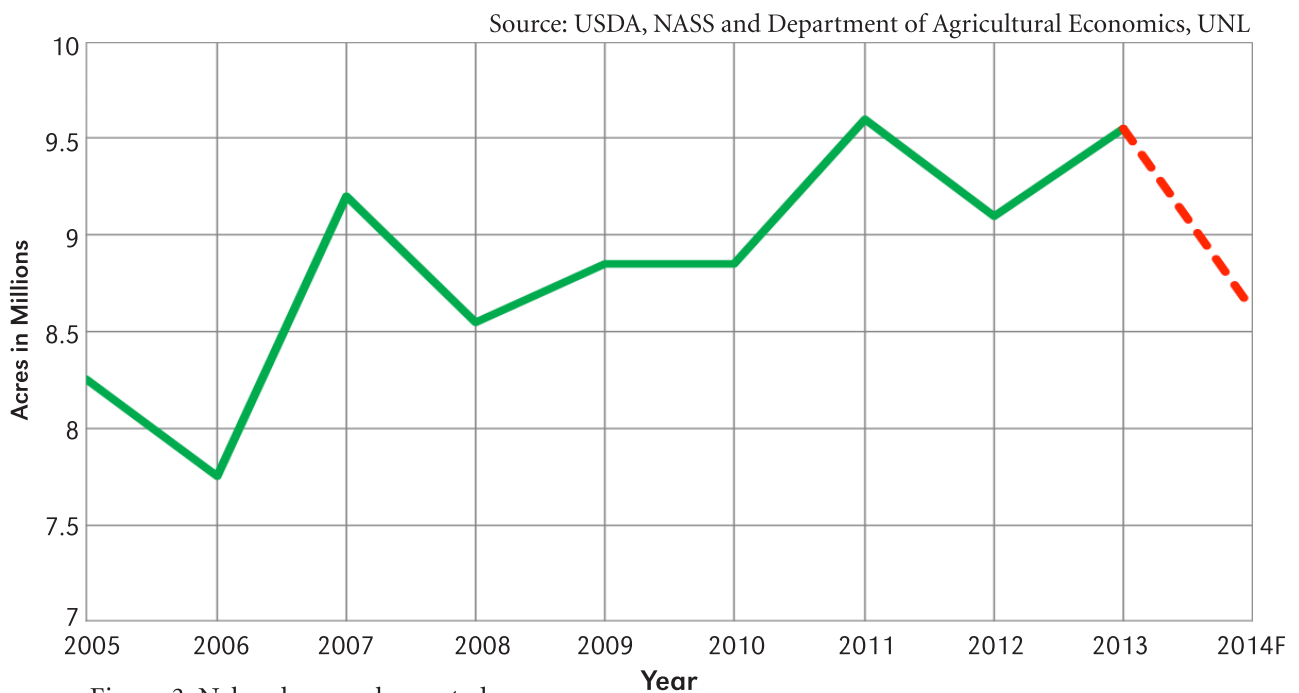


Figure 3. Nebraska corn harvested acres

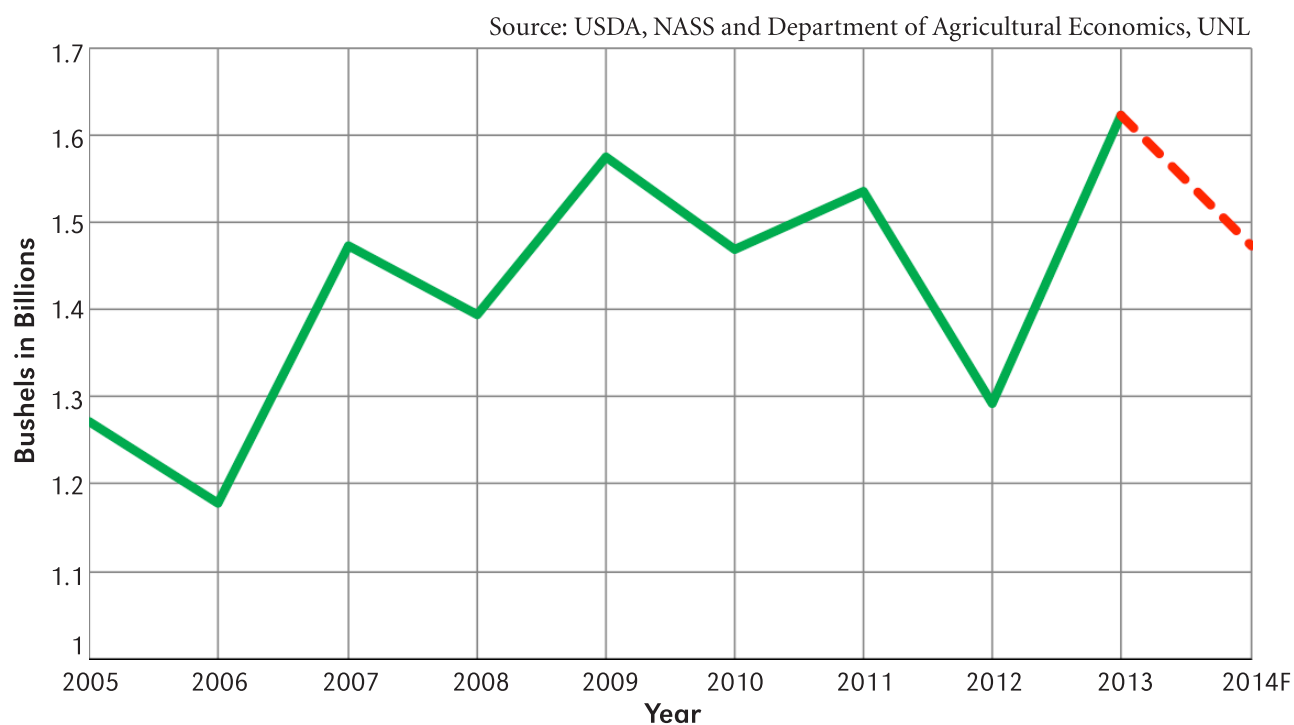


Figure 4. Nebraska corn production

Table 2. Corn production

Year	Yield Bushels/Acre	Harvested Acres	Production Bushels
2005	154	8,250,000	1,270,500,000
2006	152	7,750,000	1,178,000,000
2007	160	9,200,000	1,472,000,000
2008	163	8,550,000	1,393,650,000
2009	178	8,850,000	1,575,300,000
2010	166	8,850,000	1,469,100,000
2011	160	9,600,000	1,536,000,000
2012	142	9,100,000	1,292,200,000
2013	170	9,550,000	1,623,500,000
2014F	171	8,611,750	1,473,253,000

Source: USDA, NASS and Department of Agricultural Economics, UNL

Source: USDA, NASS and Department of Agricultural Economics, UNL

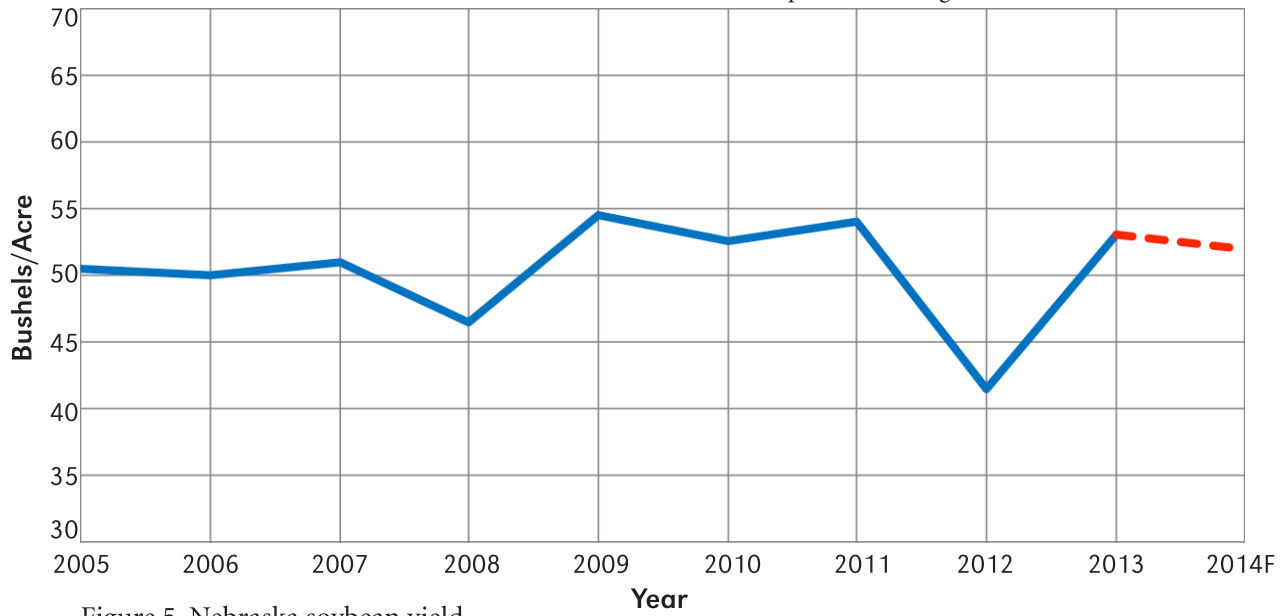


Figure 5. Nebraska soybean yield

Source: USDA, NASS and Department of Agricultural Economics, UNL

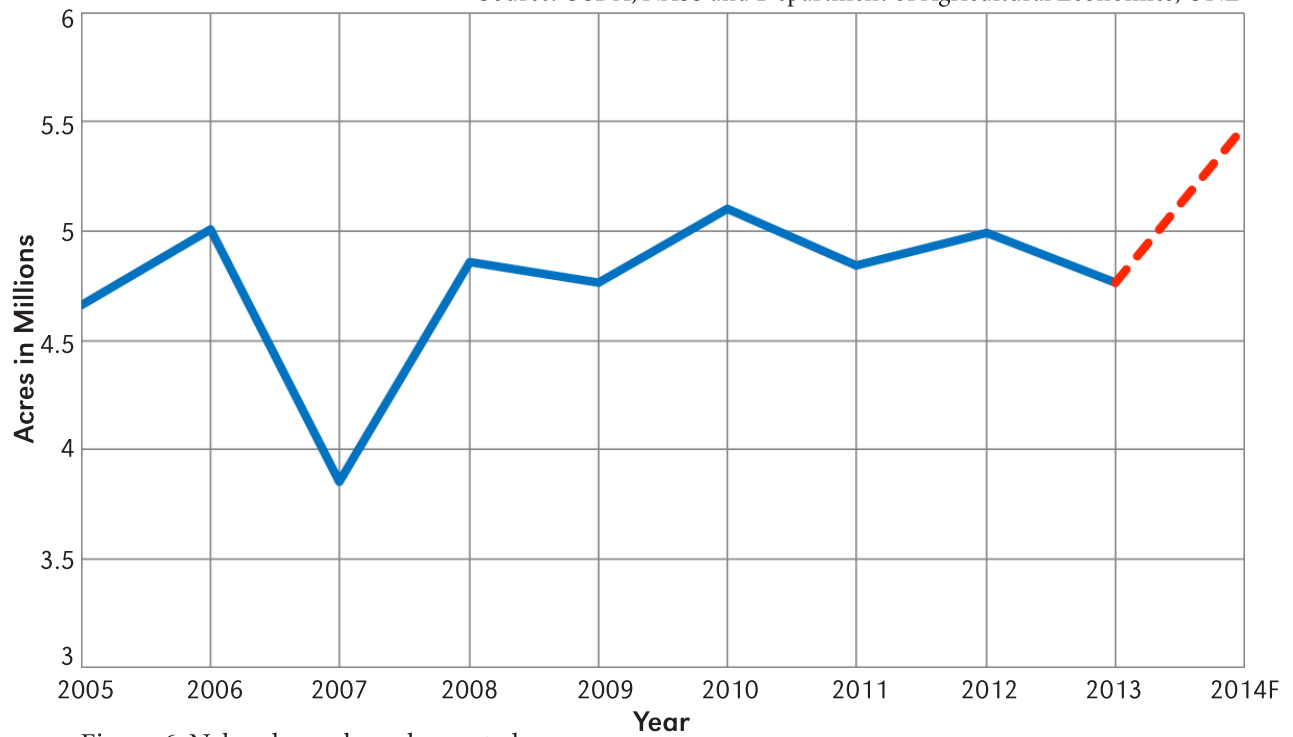


Figure 6. Nebraska soybean harvested acres

Source: USDA, NASS and Department of Agricultural Economics, UNL

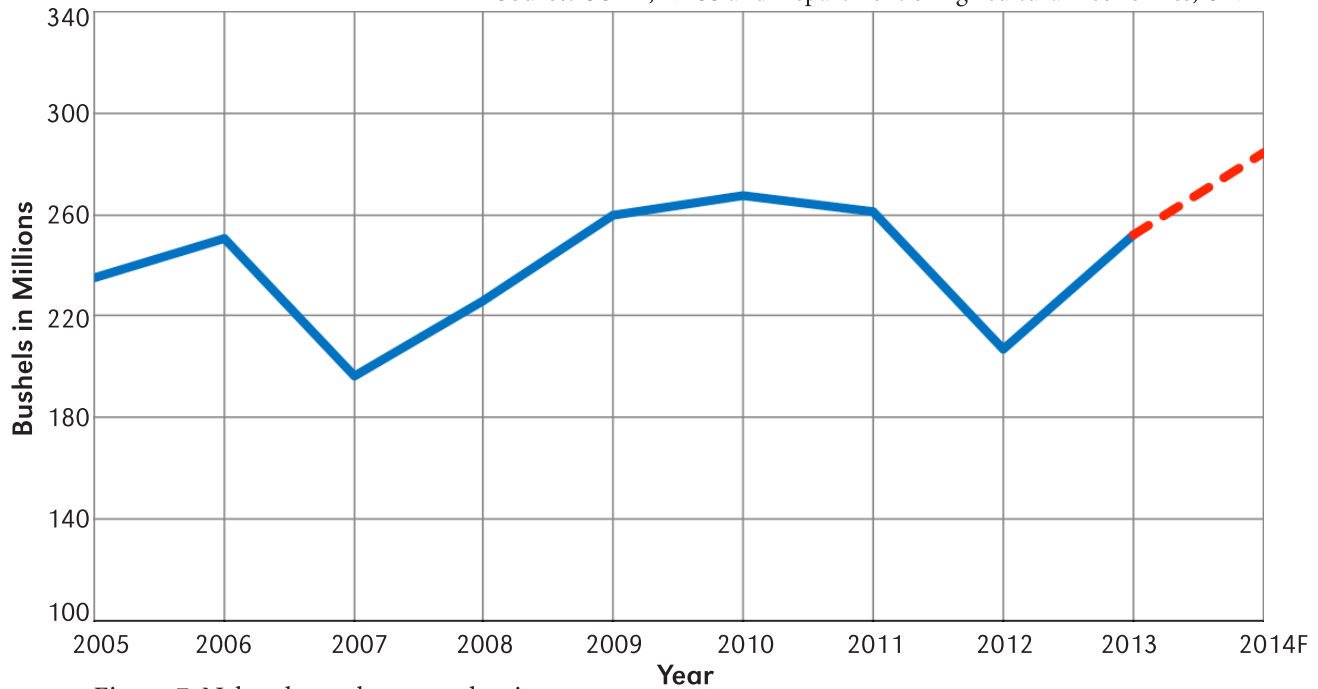


Figure 7. Nebraska soybean production

Table 3. Soybean production

Year	Yield Bushels/Acre	Harvested Acres	Production Bushels
2005	50.5	4,660,000	235,330,000
2006	50.0	5,010,000	250,500,000
2007	51.0	3,850,000	196,350,000
2008	46.5	4,860,000	225,990,000
2009	54.5	4,760,000	259,420,000
2010	52.5	5,100,000	267,750,000
2011	54.0	4,840,000	261,360,000
2012	41.5	4,990,000	207,085,000
2013	53.0	4,760,000	252,280,000
2014F	52.0	5,478,250	284,616,563

Source: USDA, NASS and Department of Agricultural Economics, UNL

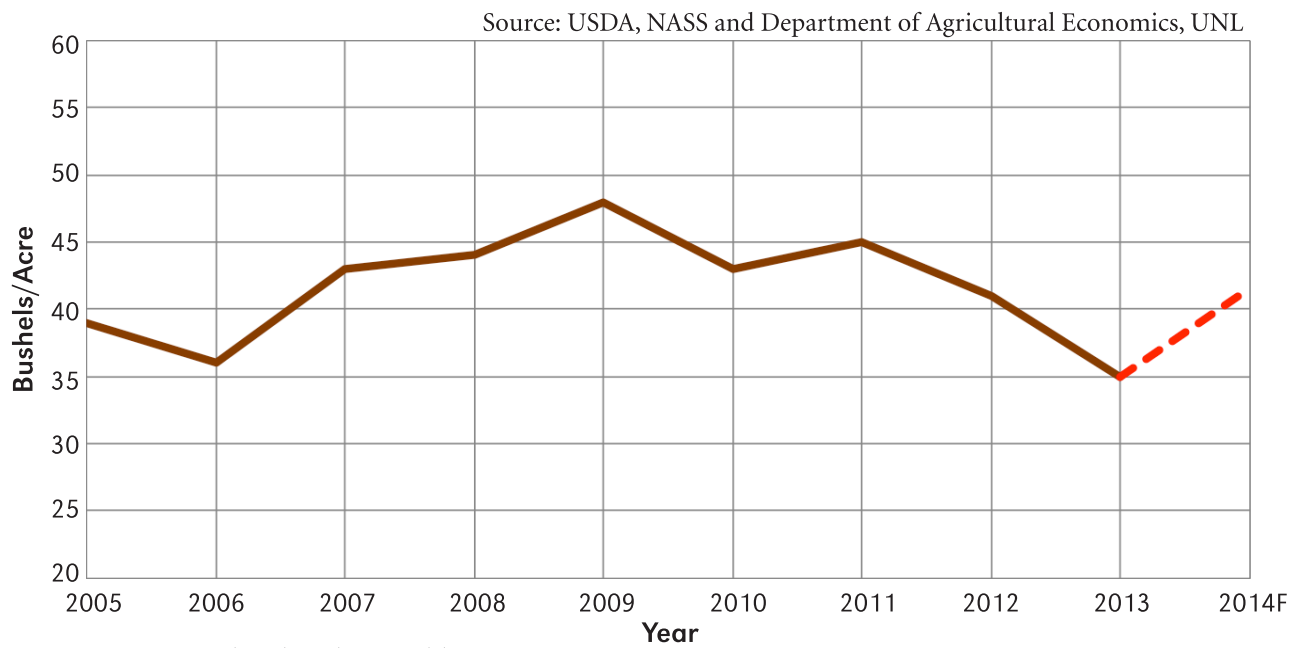


Figure 8. Nebraska wheat yield

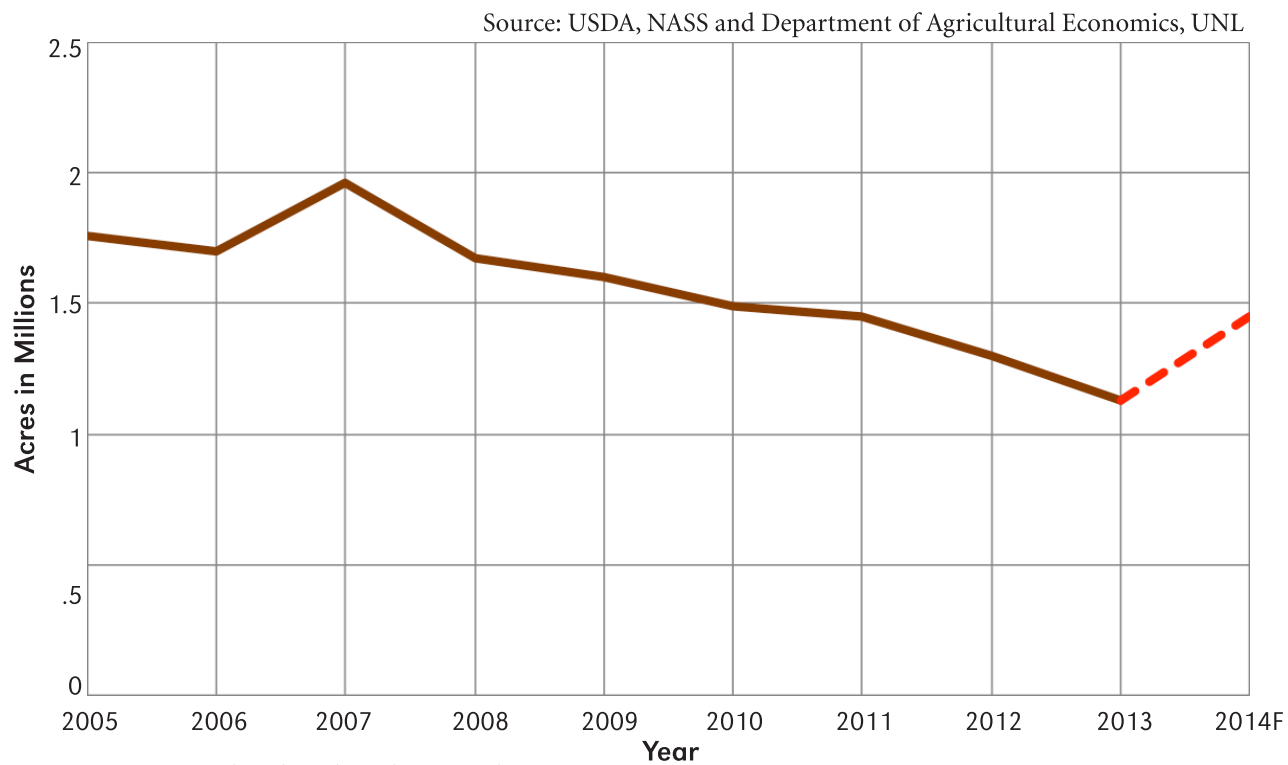


Figure 9. Nebraska wheat harvested acres

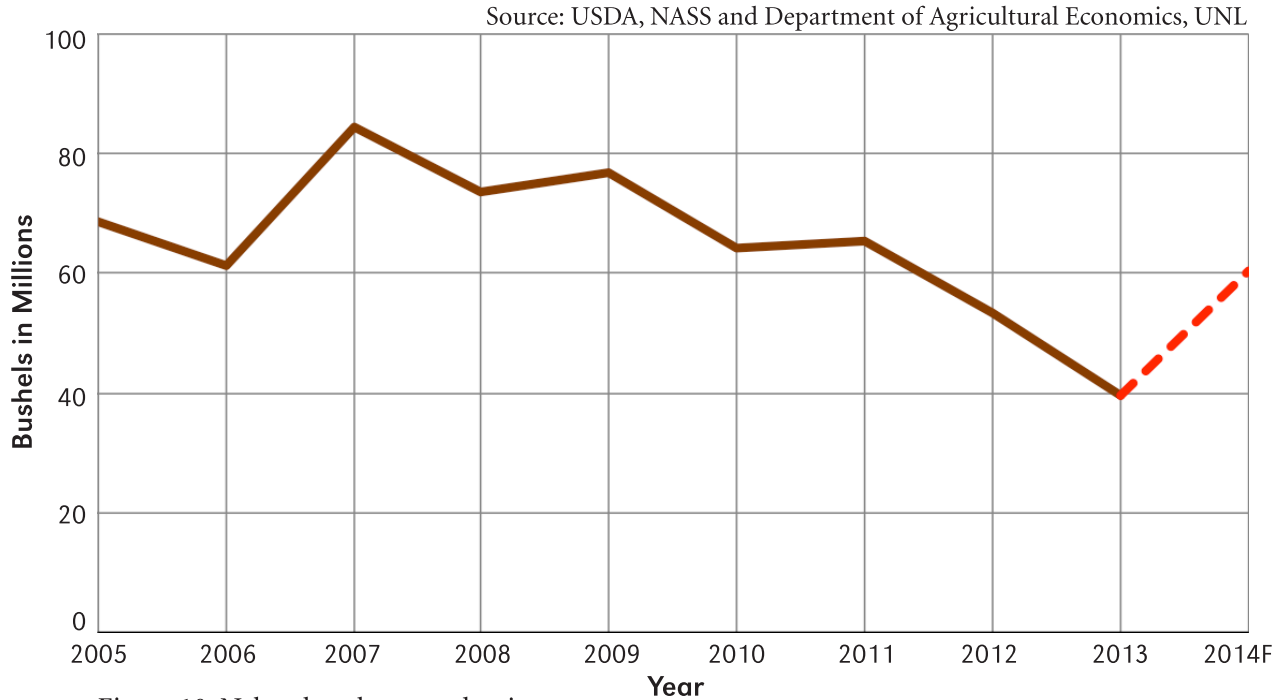


Figure 10. Nebraska wheat production

Table 4. Wheat production

Year	Yield Bushels/Acre	Harvested Acres	Production Bushels
2005	39	1,760,000	68,640,000
2006	36	1,700,000	61,200,000
2007	43	1,960,000	84,280,000
2008	44	1,670,000	73,480,000
2009	48	1,600,000	76,800,000
2010	43	1,490,000	64,070,000
2011	45	1,450,000	65,250,000
2012	41	1,300,000	53,300,000
2013	35	1,130,000	39,550,000
2014F	42	1,453,000	60,464,480

Source: USDA, NASS and Department of Agricultural Economics, UNL

Market Outlook for Livestock

Beef Cattle

The U.S. cattle herd continued to decline through 2013. The Jan. 1 cattle inventory report reported all cattle and calves inventory at 87.7 million head, the smallest total U.S. cattle herd since 1951. The beef cow inventory was the lowest since 1962 at 29.0 million head.

Since 2001, herd liquidation was the result of external factors: 1) market shocks caused by the ethanol boom which resulted in increased feed prices and reduced cow-calf profitability; 2) the U.S. and global recessions that caused the herd expansion of 2004 and 2005 to be aborted and further liquidation to occur due to declining cattle prices and tempered producer expectations; 3) drought in early 2000s as well as the severe drought since 2011.

Improving drought conditions through the end of 2013 coupled with strengthening cattle prices sent strong market signals for expansion. Inventory for beef heifers held for replacement was up 1.7 percent over the previous year and accounted for 18.8 percent of the beef cow herd. This was the largest percentage of the beef cow herd in over 20 years. As 2014 begins, these cattle inventories could be the lows from which the industry rebuilds, assuming Mother Nature continues to cooperate.

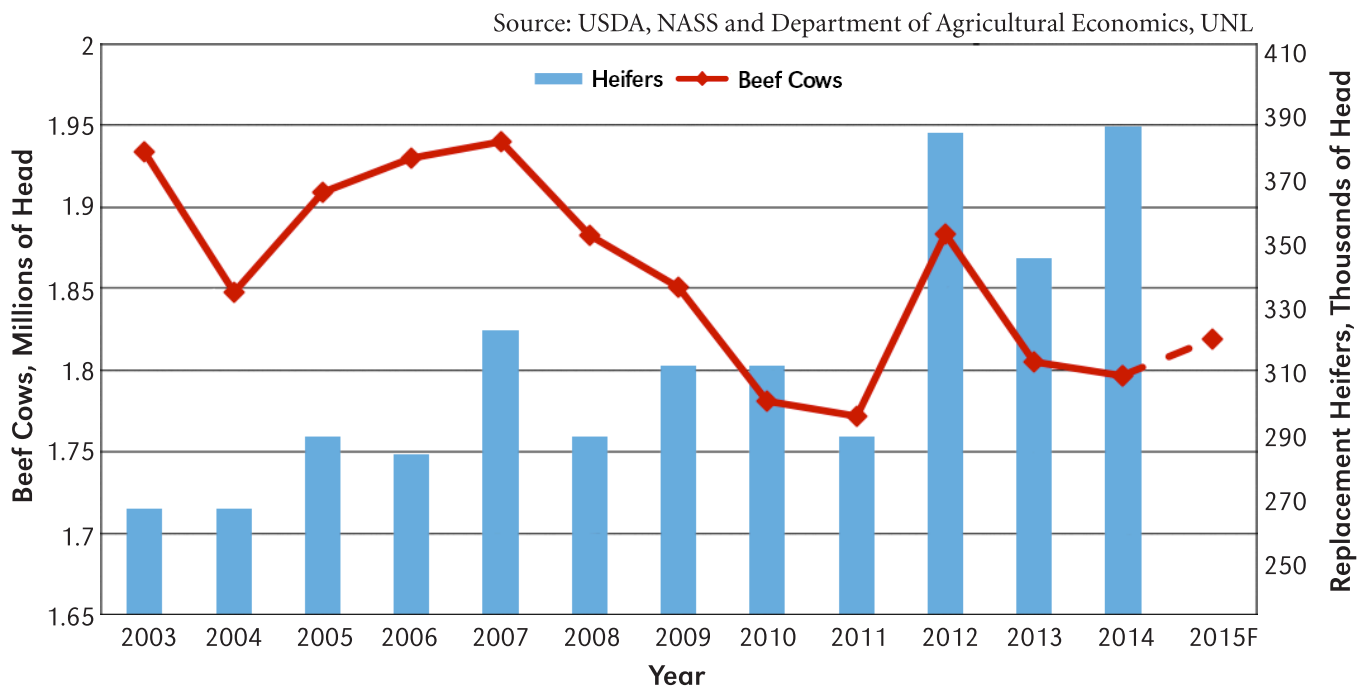


Figure 11. Jan. 1 beef cow and replacement heifer inventory, Nebraska

As can be seen in *Figure 11*, Nebraska began to expand herd numbers in 2011 but the severe drought caused liquidation in 2012 and 2013. As of Jan. 1, Nebraska beef cow inventory was 1.797 million head. The number of heifers held for beef replacement was the highest in over 10 years at 387,000 head. This was a 10.6 percent increase over the previous year. Nebraska's calf crop inventory was at 1.68 million head. Continued improvements in drought conditions coupled with current market signals signify growth within the beef cattle inventory in Nebraska over the next several years.

As cattle supplies have declined, there is recent strength within cattle prices. As the cattle herd begins to rebuild, calf supplies will decline further as more heifers are retained for replacement heifers rather than being sent into the food supply. This signifies strengthening calf prices throughout 2014. Cull cow prices also will remain strong, as less cows are culled in order to rebuild herds. These increasing prices will help lead to potentially higher cow-calf profitability in 2014.

Hogs

Declining corn and soybean meal prices and potential for strong and sustained profits through 2014 should encourage producers to maximize sows farrowing. The total hog supplies in 2014 will be affected by producer intentions to farrow sows during the first part of the year. As of the Dec. 1, 2013, hogs and pigs report, the total hogs and pigs inventory for Nebraska was 3.3 percent above year-ago levels at 3.1 million head. The total market hog inventory was up 3.4 percent at 2.71 million head, and the breeding herd inventory was up 2.6 percent at 390,000 head. Nebraska producers' intentions to farrow sows in the coming months align with the current size of the breeding herd with indications of stabilization and then growth within the industry. December–February 2013/2014 sows farrowing were up 3 percent over year ago levels at 170,000 head with March–May 2014 sows farrowing at 175,000 head, up 9.3 percent over year ago levels. Pigs per litter in Nebraska have also remained relatively flat with some strength, which could indicate a continued increase in pig crops during the first half of 2014.

Sales are expected to decline as cattle herds are rebuilt and expanded within Nebraska over the next year (*Figure 12 and Table 5*). Fewer heifers, as well as cull cows, will enter the market, which will cause a reduction in total sales. Slightly stronger prices are expected in 2014 due to the decline in inventory numbers and supply within the U.S. This will adjust for the decline in sales with expected cash receipts similar to 2013. Until additional information is available, hogs in 2013–2014 are expected to remain the same as in 2012 (*Figure 12*) and *Table 6*.

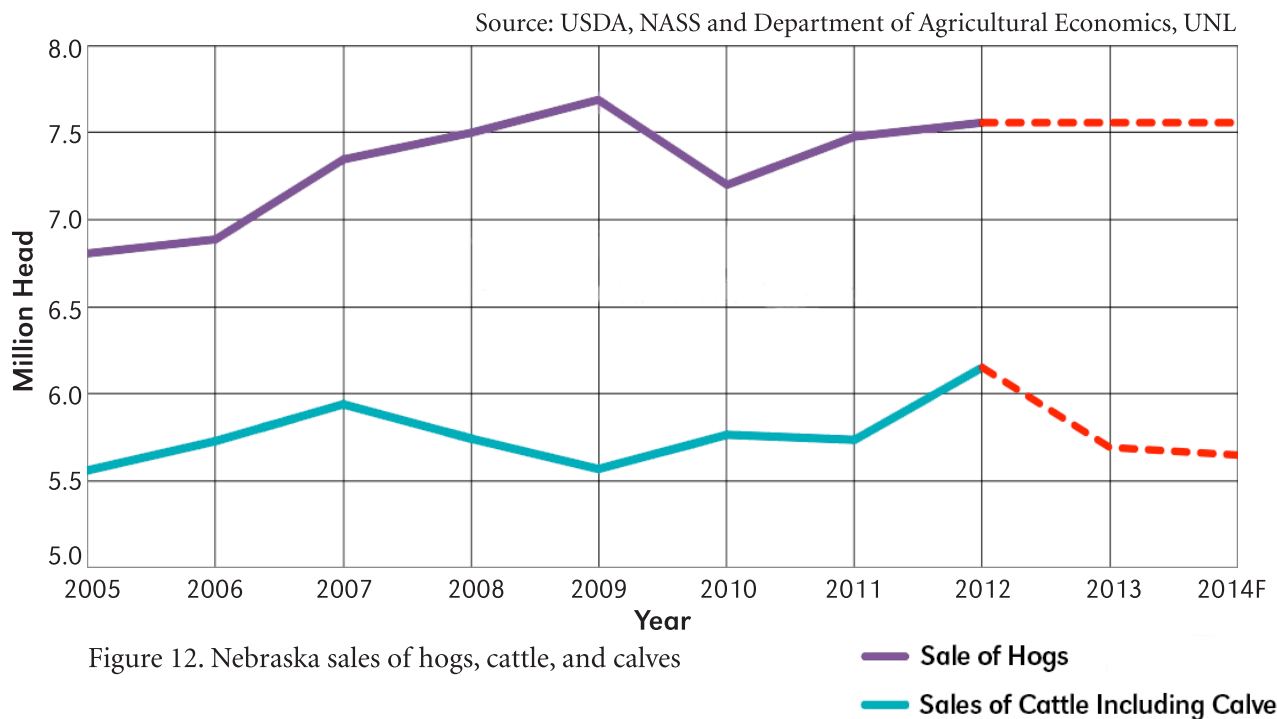


Table 5. Nebraska sales of cattle and calves

	Sales of cattle, excluding calves	Sales of cattle, calves	Sales of cattle, including calves		
Excluding inter-farm, in-state sales					
Year	Head	Head	Pounds	Dollars	Dollar per lb
2005	5,473,000	85,000	7,082,610,000	6,553,531,000	0.92
2006	5,643,000	85,000	7,474,320,000	6,735,704,000	0.90
2007	5,853,000	85,000	7,693,910,000	7,236,076,000	0.94
2008	5,658,000	85,000	7,494,960,000	7,068,679,000	0.94
2009	5,478,000	85,000	7,390,330,000	6,239,571,000	0.84
2010	5,678,000	85,000	7,464,660,000	7,193,865,000	0.96
2011	5,646,000	86,000	7,480,920,000	8,614,978,000	1.15
2012	6,067,000	85,000	8,275,630,000	10,360,532,000	1.25
2013F	5,607,000	86,000	7,376,818,610	9,294,791,449	1.26
2014F	5,562,500	85,000	7,317,861,075	9,295,166,110	1.27

Source: USDA, NASS and Department of Agricultural Economics, UNL

Table 6. Nebraska sales of hogs

Sale of hogs				
Excluding inter-farm, in-state sales				
Year	Head	Pounds	Dollars	Dollar per lb
2005	6,805,000	1,387,846,000	762,609,000	0.55
2006	6,884,000	1,425,925,000	728,578,000	0.51
2007	7,349,000	1,441,750,000	749,798,000	0.52
2008	7,498,000	1,391,173,000	728,702,000	0.52
2009	7,687,000	1,396,882,000	650,462,000	0.47
2010	7,197,000	1,370,292,000	823,397,000	0.60
2011	7,480,000	1,323,867,000	918,228,000	0.69
2012	7,556,000	1,297,656,000	888,735,000	0.68
2013F	7,556,000	1,306,963,235	888,735,000	0.68
2014F	7,556,000	1,306,963,235	888,735,000	0.68

Source: USDA, NASS and Department of Agricultural Economics, UNL

Financial Outlook

Cash Receipts from Crops

Figure 13 shows the cash receipts from crops in Nebraska. Taking a long view and looking over the 10-year period of 2005 to the forecast year of 2014, the cash receipts from corn will have nearly tripled. Soybeans would be the same and wheat will have increased by 1 ½ times.

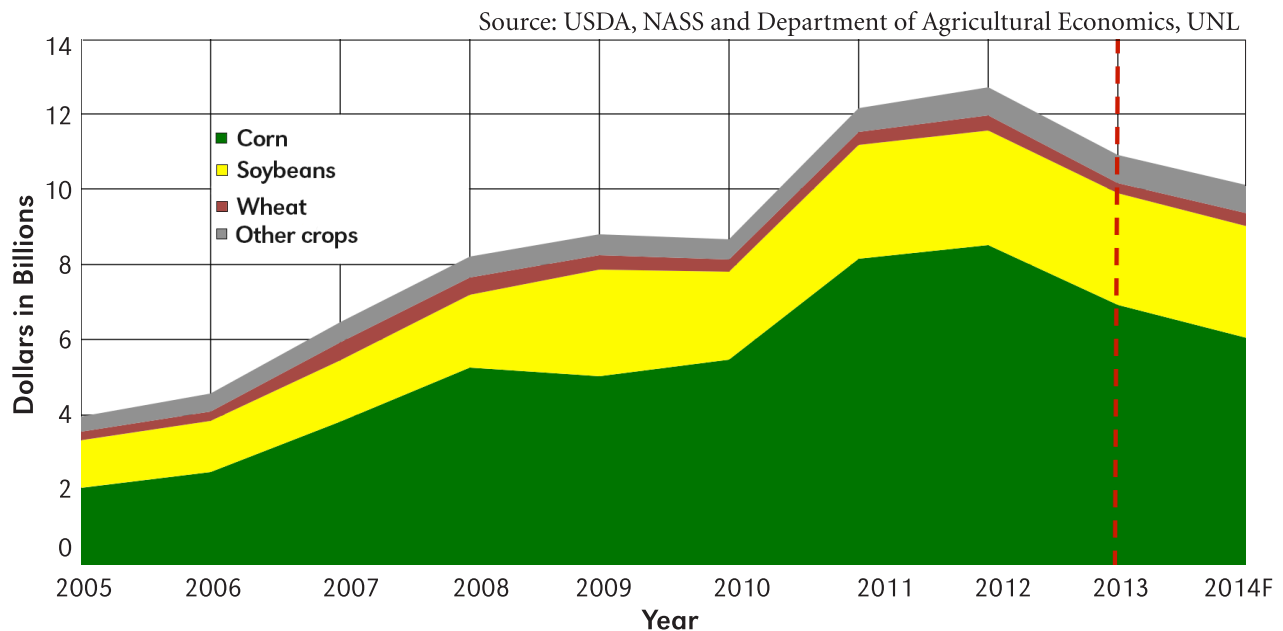


Figure 13. Cash receipts from crops in Nebraska calendar years 2005-2012, **forecast 2013-2014**

The rise in cash receipts, starting in 2006, has its roots in the Clean Air Act signed into law by President Lyndon B. Johnson on Dec. 17, 1963. The Act was designed to control air pollution at a national level and required the Environmental Protection Agency (EPA) to develop and enforce regulations protecting the public from airborne contaminants known to be hazardous to human health. In 1992, amendments to the Clean Air Act required reduction of carbon monoxide emissions, primarily from vehicles. This led to the widespread use of methyl tertiary butyl ether (MTBE) as an oxygenate additive to gasoline. However, once it was discovered that MTBE contaminated groundwater, the additive was banned in almost 20 states by 2006. Suppliers were concerned about potential litigation stemming from a 2005 court decision denying legal protection for MTBE. This was a tipping point for the ethanol industry because ethanol became the oxygenate of choice for gasoline. Demand for ethanol was substantial and supplies were short resulting in record high prices and a surge in the construction of plants. It was the “gold rush” period for ethanol and, as a result, the derived demand for corn accelerated. At the same time, U.S. exports of corn were sustained even with rising prices. The average price of corn in Nebraska more than doubled from \$2.12 to \$4.42 per bushel. This also affected soybeans, wheat, grain sorghum, oats, etc., along with the economics of feed-grain livestock production.

The 2013 forecast of cash receipts from corn, soybeans, wheat, and all other crops came from Nebraska's long-term average pro rata shares of USDA's national forecast for the same crops.

The figures in *Table 7* show cash receipts from corn in 2005 of \$2.068 billion, and the forecast for 2014 is \$6.040 billion. For soybeans the figures are \$1.262 billion in 2005 and \$2.966 billion forecast for 2014. Wheat is \$224 million and \$347 million, respectively. The forecast of total cash receipts for 2014 of \$10.093 billion is a little more than 2 ½ times greater than the \$3.955 billion seen 10 years earlier in 2005.

Table 7. Cash receipts from crops in Nebraska calendar years 2005-2012, **forecast 2013-2014**

\$ millions										
Crops	2005	2006	2007	2008	2009	2010	2011	2012	2013F	2014F
Corn	2,068	2,484	3,818	5,262	5,031	5,478	8,146	8,520	6,923	6,040
Soybeans	1,262	1,352	1,633	1,929	2,838	2,325	3,015	3,028	2,972	2,966
Wheat	224	254	475	455	381	324	355	415	264	347
Hay	76	98	152	150	127	120	155	211	211	211
Dry Beans	60	59	77	89	79	70	103	112	115	115
Sugar Beets	40	60	42	43	71	82	93	106	79	79
Potatoes	50	67	60	62	74	75	70	83	85	85
Grain Sorghum	45	54	63	59	59	38	34	29	77	77
Sunflower	13	14	11	14	17	17	26	14	17	17
Oats	4	3	3	6	2	2	2	1	4	4
Other Crops	114	117	124	133	128	130	146	175	152	152
Total	3,955	4,562	6,459	8,201	8,807	8,660	12,145	12,695	10,898	10,093

Source: USDA, NASS and Department of Agricultural Economics, UNL

Cash Receipts from Livestock

Figure 14 shows cash receipts from livestock in Nebraska. Over the 10-year period of 2005 to the forecast year of 2014, the cash receipts for cattle and calves will have increased by almost 1 ½ times. Hogs will be the same, as will all other livestock combined.

The dip in 2009 came from fewer sales, measured both in head and pounds of meat, and a lowered price per pound of 10 percent. Since then the cash receipts have reached new levels being up by 50 percent.

The 2013 forecast of cash receipts from cattle of feed, hogs and all other livestock came from Nebraska's long-term average pro rata shares of USDA's national forecast for the same.

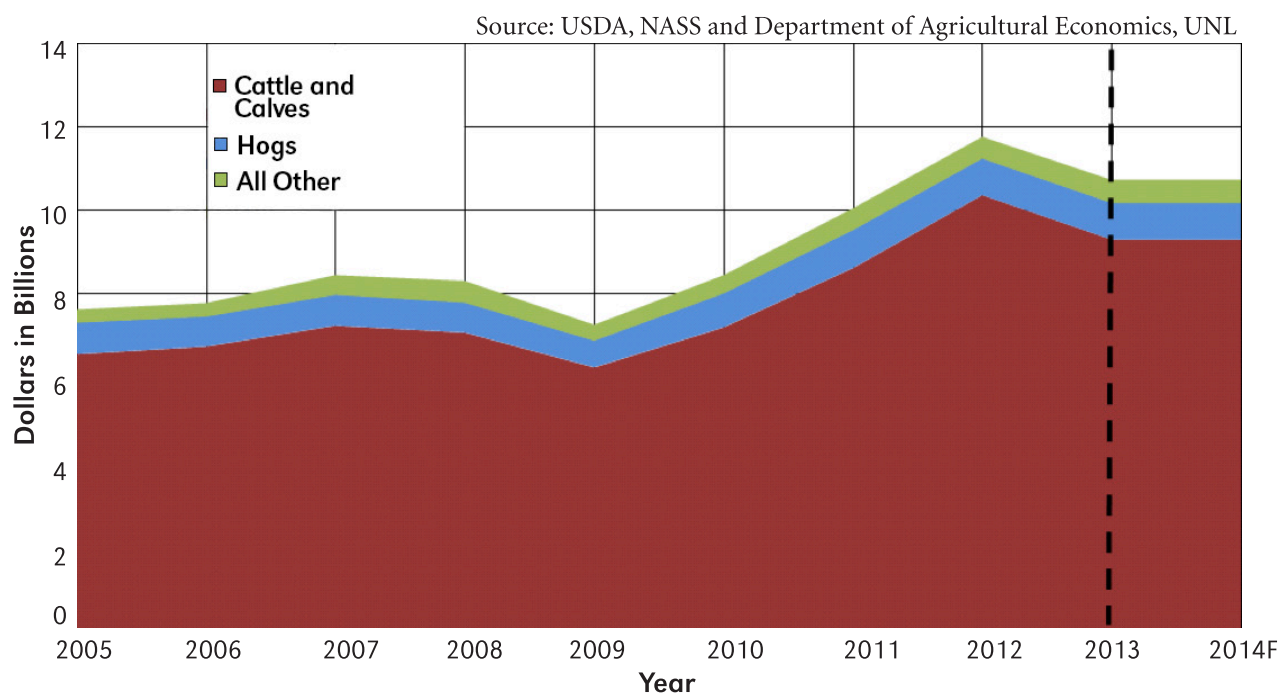


Figure 14. Cash receipts from livestock in Nebraska calendar years 2000-2012, **forecast 2013-2014**

The figures in *Table 8* detail the cash receipts from cattle and calves in 2005 of \$6.554 billion, and the forecast for 2014 is \$9.495 billion. For hogs the figures are \$763 million in 2005 and \$889 million forecast in 2014. The forecast of total cash receipts for 2014 of \$10.942 billion is almost 1 ½ times greater than the \$7.638 billion of 10 years earlier.

Table 8. Cash receipts from livestock in Nebraska calendar years 2005-2012, **forecast 2013-2014**

\$ millions										
Livestock	2005	2006	2007	2008	2009	2010	2011	2012	2013F	2014F
Cattle and Calves	6,554	6,736	7,236	7,069	6,235	7,194	8,615	10,361	9,227	9,495
Hogs	763	729	750	729	650	823	918	889	889	889
Poultry and Eggs	118	138	230	272	178	192	220	234	255	255
Dairy, Milk	164	148	200	203	160	201	248	231	257	257
Other Livestock	40	42	44	48	47	50	56	57	46	46
Total	7,638	7,792	8,460	8,321	7,271	8,460	10,058	11,771	10,674	10,942

Source: USDA, NASS and Department of Agricultural Economics, UNL

Government Programs and Payments

Farm program payments in 2013 were expected to remain high as producers received the final installment of the Direct Payments under the 2008 Farm Bill and its extension for 2013 (*Figure 15*). In addition, large ACRE (Average Crop Revenue Election) Program payments that cover 2012 drought losses on non-irrigated corn, soybean, and other crops were paid in 2013.

The projections for 2014 are for a major drop in farm program payments. Commodity programs passed in the 2014 Farm Bill that protect 2014 crops will not make payments, if any, before fall 2015. Conservation program payments in 2014 will include larger payments for working lands programs and incentives such as the Environmental Quality Incentives Program (EQIP) and the Conservation Security Program (CSP), but a continued decline in Conservation Reserve Program (CRP) acres should reduce CRP payments.

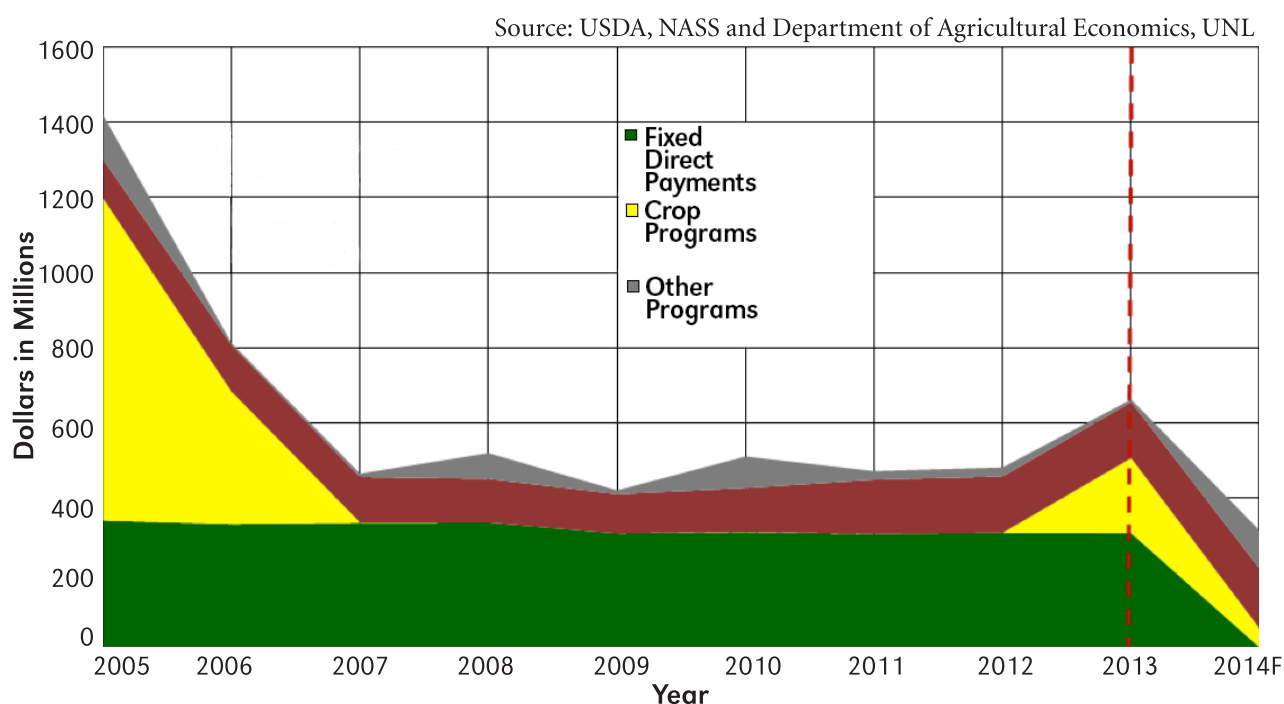


Figure 15. Cash payments from federal farm programs in Nebraska calendar years 2005-2012, **forecast 2013-2014**

The biggest component of farm program payments in 2014 could be disaster assistance, as the 2014 Farm Bill reauthorized and funded expired disaster assistance programs including the Livestock Forage Disaster Program (LFP) and the Livestock Indemnity Program (LIP) to cover grazing losses due to drought and death losses from disasters. The drought losses in Nebraska in 2012 and again in 2013, coupled with the blizzard death losses in 2013, should be covered and paid in 2014. Those programs could pay as much as \$100 million to Nebraska producers in 2014 for 2012 and 2013 losses. Any further losses in 2014, including current concerns about lingering drought conditions, could result in even higher disaster payments in 2014.

Table 9. Cash payments from federal farm programs in Nebraska calendar years 2005-2012, *forecast 2013-2014*

\$ millions										
Program	2005	2006	2007	2008	2009	2010	2011	2012	2013F	2014F
Fixed Direct Payments	339	329	332	333	304	307	303	306	305	0
Crop Programs	860	353	1	0	0	1	0	0	200	50
Conservation	104	125	121	116	105	117	145	150	150	160
Supplemental and Ad Hoc Disaster Assistance	118	2	8	69	5	84	23	22	5	100
Dairy Programs	0	3	1	0	5	0	0	3	2	2
Miscellaneous Programs	0	0	0	0	0	0	0	0	0	0
Total Direct Payments	1,421	812	464	518	419	509	470	480	662	332

Source: USDA, NASS and Department of Agricultural Economics, UNL

Revenue, Expenses, and Net Farm Income

Revenue in 2013 and 2014 for the major crops and livestock came from the cash receipts documented in *Table 9*. The other line items for both revenue and expenses in 2013 came from Nebraska's long-term average pro rata shares of USDA's national forecast for the same. For 2014, those line items were held at the same figures. As a result, the changes in cash receipts (revenue) for the major crops and livestock accounted for the changes in net farm income from 2013 to 2014.

Shown in *Figure 16*, for the 10-year period of 2005 to the forecast year of 2014, total revenue will have increased by 70 percent. Total expenses over the same period are forecast to be 64 percent higher. The resulting net farm income increases by 92 percent.

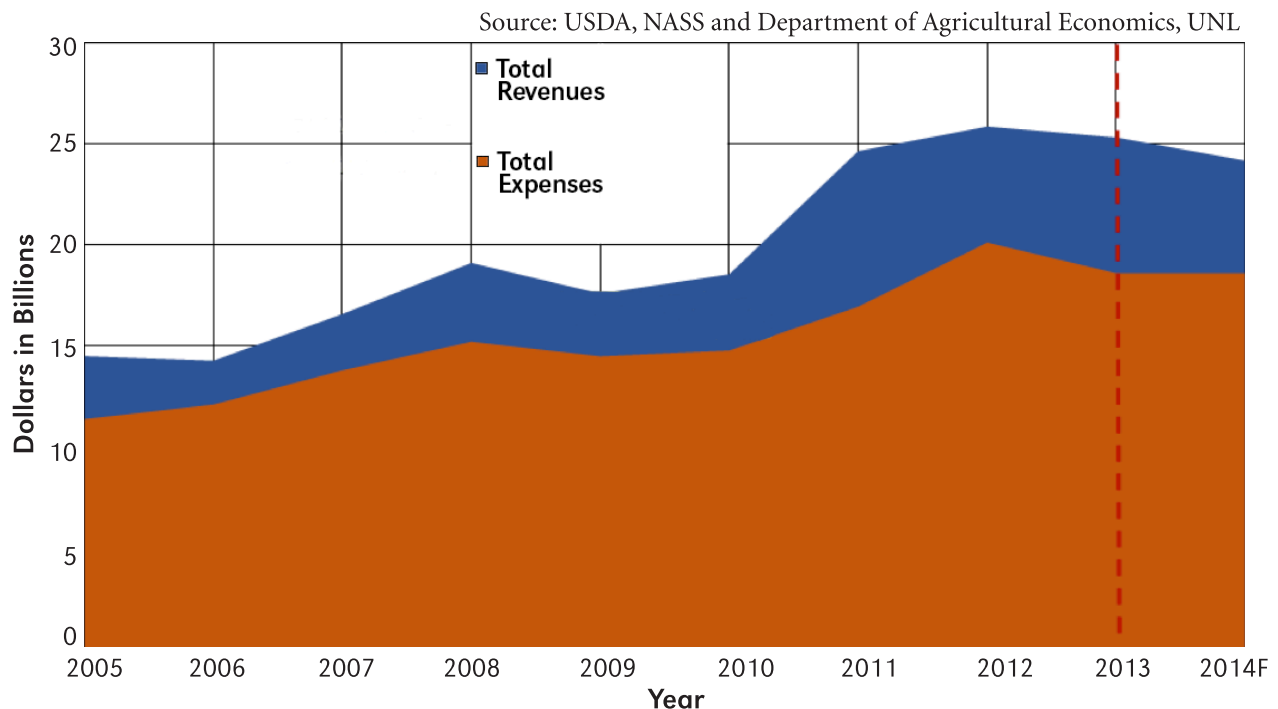


Figure 16. Total revenue, expenses, and net farm income in Nebraska calendar years 2005-2012, *forecast 2013-2014*

The figures in *Table 10* show that while cash receipts from crop and livestock production have shown substantial increases over time, so have services and forestry. In contrast, government payments have declined. Total revenues in 2005 were \$14.480 billion and the forecast for 2014 is \$24.368 billion—a 68 percent increase. Expenses have gone up as well.

Farm origin, manufactured and other inputs, along with capital consumption and payments to stakeholders, are each forecast in 2014 to be 1 ½ to almost 2 times greater than 10 years earlier in 2005. Net farm income for 2014 is forecast to be \$5.781 billion—almost double the \$3.127 billion seen in 2005.

Table 10. Net farm income in Nebraska calendar years 2005-2012, **forecast 2013-2014**

\$ millions										
Revenues	2005	2006	2007	2008	2009	2010	2011	2012	2013F	2014F
Crop Production	3,955	4,562	6,459	8,201	8,807	8,660	12,145	12,695	10,898	10,093
Livestock Production	7,794	7,962	8,308	8,235	7,215	8,380	10,353	11,572	10,674	10,942
Services & Forestry	1,176	1,138	1,108	1,321	1,320	1,236	1,451	2,586	2,063	2,063
Government Payments	1,421	812	464	518	419	509	470	480	662	312
Home Consumption	14	15	11	9	10	11	9	6	12	12
Inventory Adjustment	120	-237	216	814	-204	-260	215	-1,476	947	947
Total Revenues	14,480	14,253	16,564	19,099	17,568	18,537	24,642	25,863	25,255	24,368
Expenses										
Farm Origin Inputs	4,606	4,876	5,625	6,082	5,398	5,692	6,687	8,365	8,045	8,045
Manufactured Inputs	1,694	1,765	2,157	2,670	2,480	2,471	3,168	3,748	2,988	2,988
Other Inputs	1,987	2,257	2,611	2,678	2,730	2,527	2,871	3,299	3,043	3,043
Vehicle Reg./License	30	27	33	32	31	40	39	40	34	34
Property Taxes	470	580	640	670	710	760	790	770	734	734
Capital Consumption	755	787	796	848	888	905	947	1,011	1,022	1,022
Payments to Stakeholders	1,811	1,783	1,911	2,213	2,231	2,360	2,426	2,876	2,723	2,723
Total Expenses	11,353	12,076	13,772	15,192	14,469	14,754	16,929	20,110	18,587	18,587
Net Farm Income	3,127	2,178	2,792	3,907	3,100	3,783	7,714	5,753	6,668	5,781

Source: USDA, NASS and Department of Agricultural Economics, UNL

Drought in 2012

There was widespread drought in 2012 that affected much of the production acres for corn, soybeans, wheat, and other crops. Yet, as seen in *Figure 16* and *Table 10*, it was a year that had the highest cash receipts in Nebraska. The year 2012 magnifies the benefits of irrigation in Nebraska compared to other states that rely solely on rain-fed production.

Over the five-year period of 2007–2011, an average of 60 percent of harvested acres for corn in Nebraska was irrigated, and 40 percent was non-irrigated. In 2012, the respective shares were 85 and 15 percent. For soybeans the shares were 68 and 32 percent.

In 2012, the yield on irrigated corn acres was 190 bushels and was actually higher than the previous five-year average of 186 bushels. The yield on non-irrigated corn acres was 59 bushels in 2012 compared to the five-year average of 135 bushels. For soybeans the irrigated yield in 2012 was 61 bushels compared to the previous five-year average of 59 bushels. Non-irrigated yields were 25 bushels versus 46 bushels, respectively.

Given the drought in 2012, a conservative estimate of the financial value of irrigation can be made. Cash receipts from corn in 2012 were \$8.520 billion. If the non-irrigated yield of 59 bushels is applied to all the harvested acres, which assumes no irrigation, then the cash receipts drop to \$3.510 billion. The difference of \$5.010 billion would be a conservative estimate of the value of irrigation that year. The corresponding value for soybeans was \$2.053 billion for a combined \$7.063 billion. For Nebraska, being confronted by a severe drought, availability of water and use of irrigation were clearly valuable components of crop production.

Crop insurance played a critical role in the 2012 drought across all three commodities. While the Risk Management Agency (RMA) does not break indemnities (or producer payments) into separate categories for irrigated versus non-irrigated acres by crop, the majority of payments came from non-irrigated acres. As a whole, crop insurance indemnities in 2012 alone were \$1.55 billion. This can be broken down into \$1.2 billion for corn, \$307 million for soybeans, \$14 million for wheat, and the remainder coming from other insurable crops. Producers paid \$271 million in premiums to insure 2012 crops, leaving Nebraska with \$1.28 billion in crop insurance payments. When a severe drought hits Nebraska, crop insurance represents a valuable component to non-irrigated production.

Percent of GDP

Figure 17 shows the Gross Domestic Product (GDP) from crop and animal production farms) in Nebraska as a percent of the total GDP from private industries in the state. Between 2000 and 2007, crop and animal production ranged from 4 to 7 percent of private industry GDP. Starting in 2007 and through 2012, the range was higher at 7 to 9 percent.

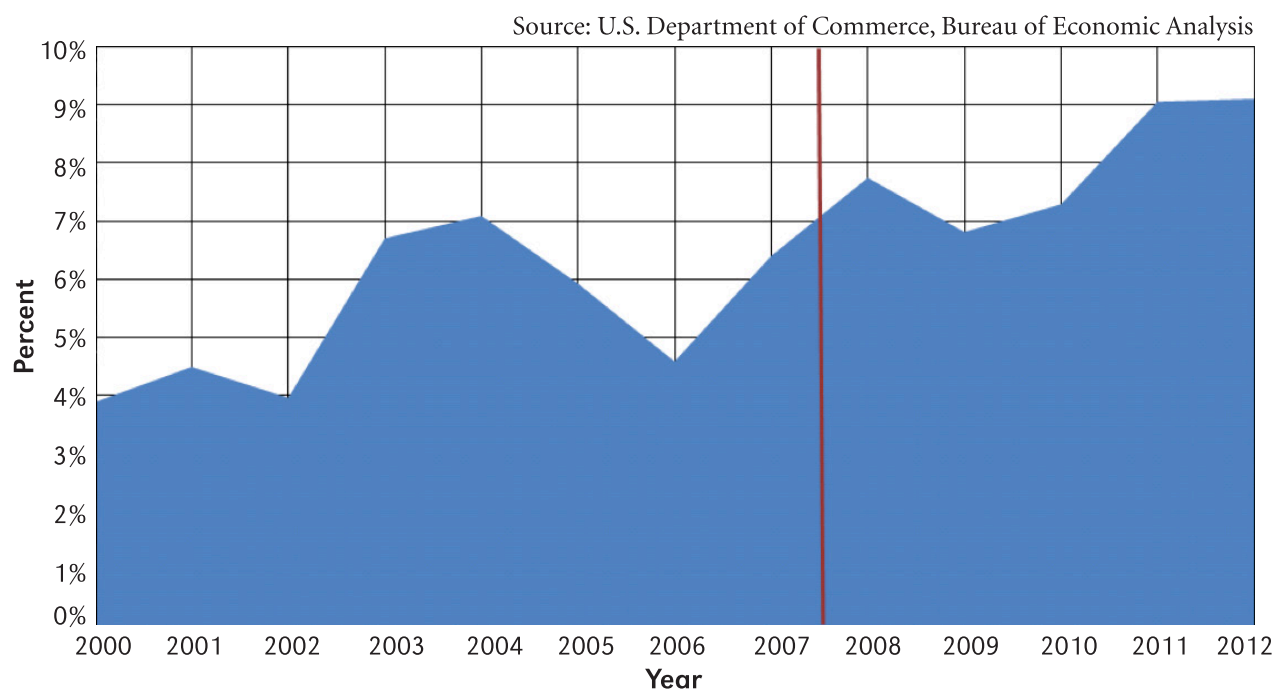


Figure 17. GDP from crop and animal production (farms) as a percent of Nebraska's GDP from private industries

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