

# Missouri Soybean Resource Guide

Commissioned by the  
**Missouri Soybean Merchandising Council**

2011 Edition

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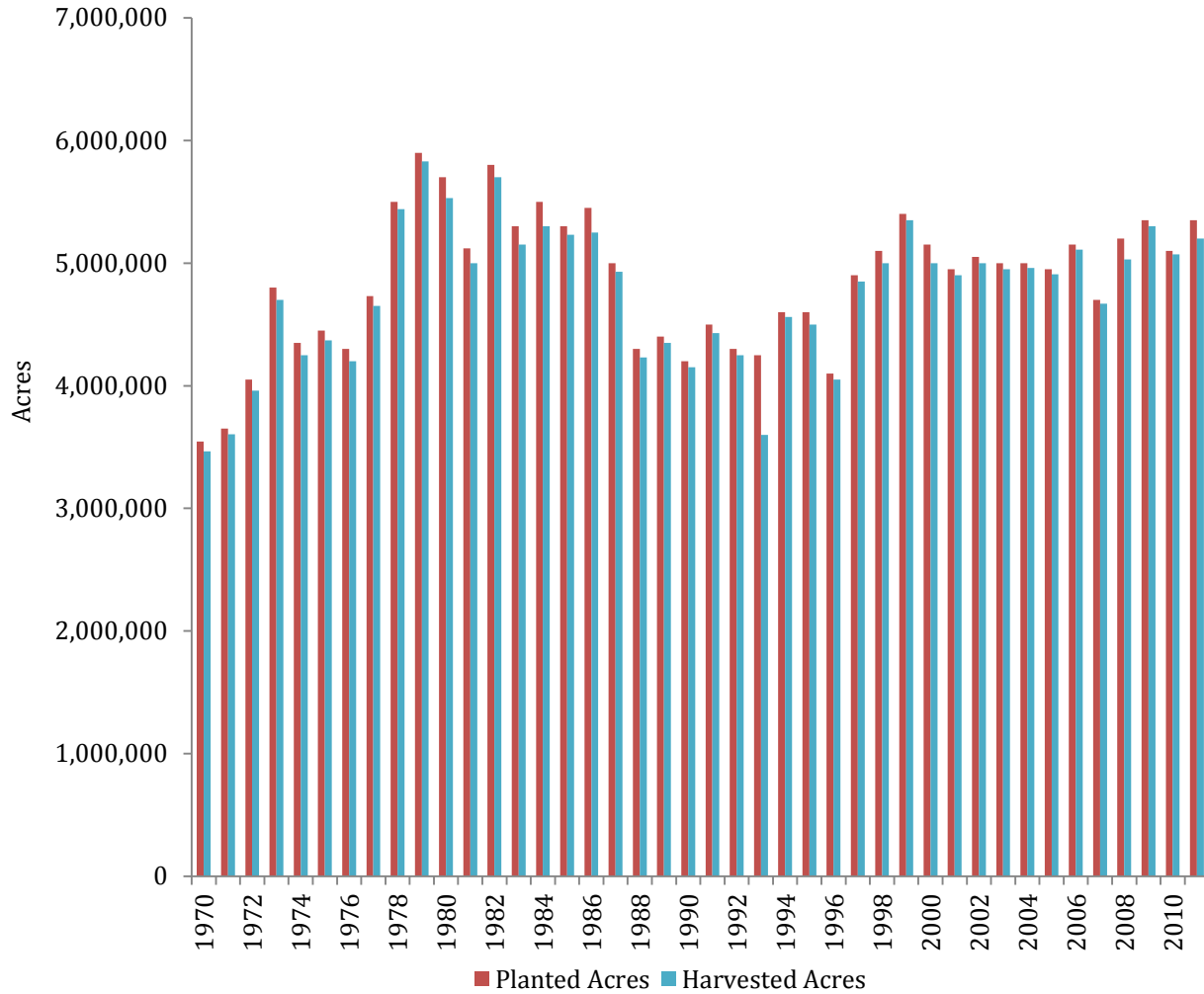
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# Chapter 1: Soybean Production

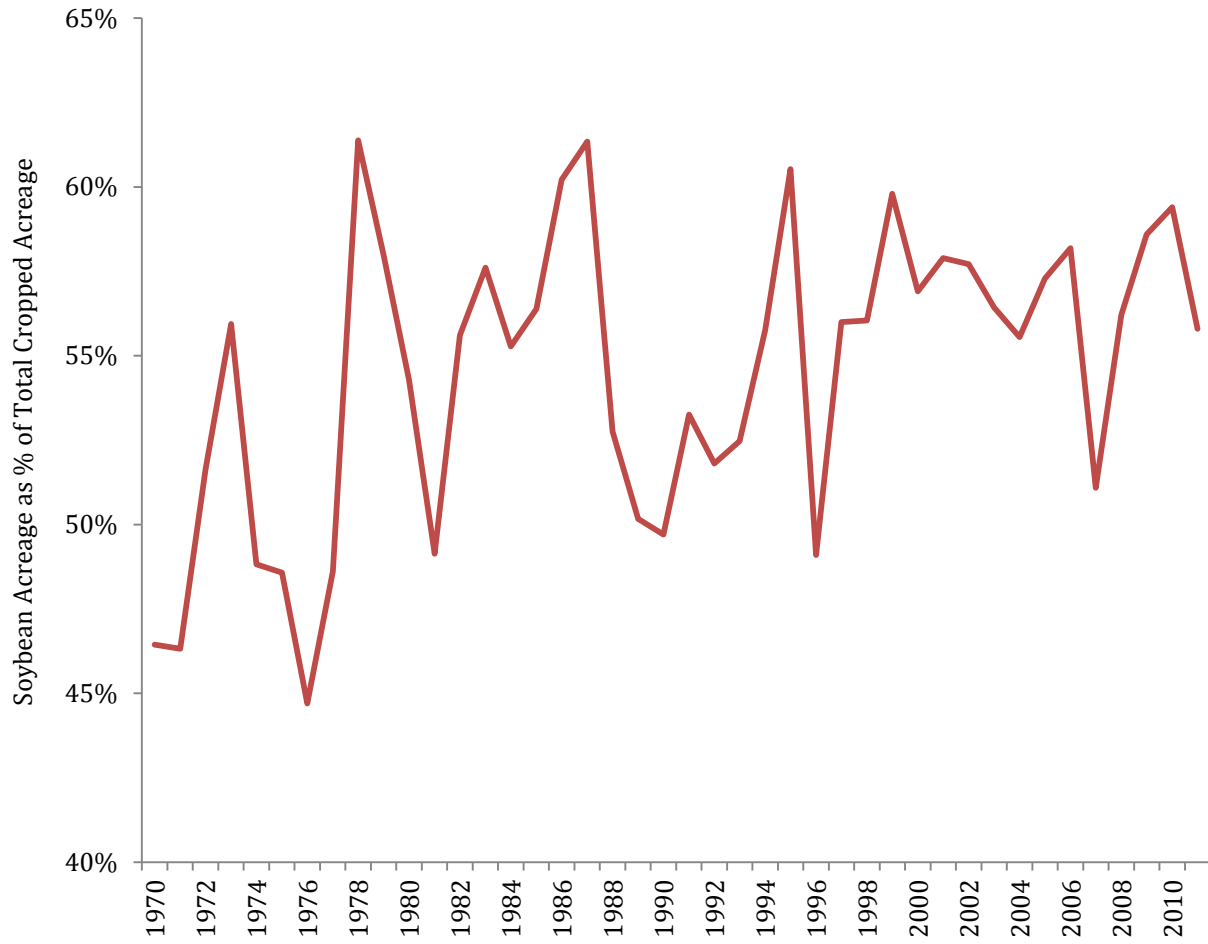
## 1.1 Acreage

Exhibit 1.1.1 – Missouri Planted and Harvested Soybean Acreage, 1970 to 2011



Source: USDA National Agricultural Statistics Service

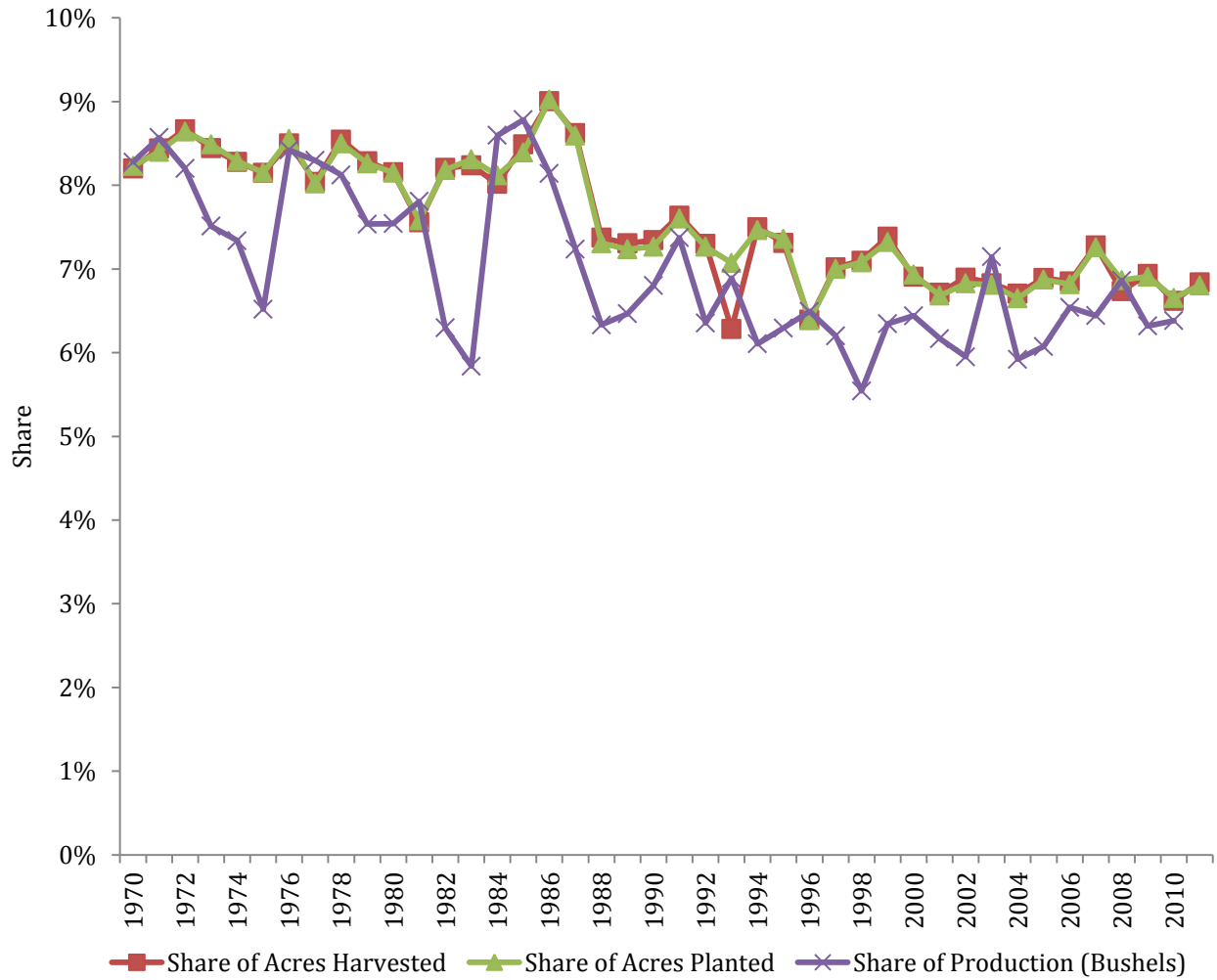
**Exhibit 1.1.2 - Missouri Soybean Acres as a Percent of Total Missouri Crop Production Acreage, 1990 to 2011**



Source: USDA National Agricultural Statistics Service

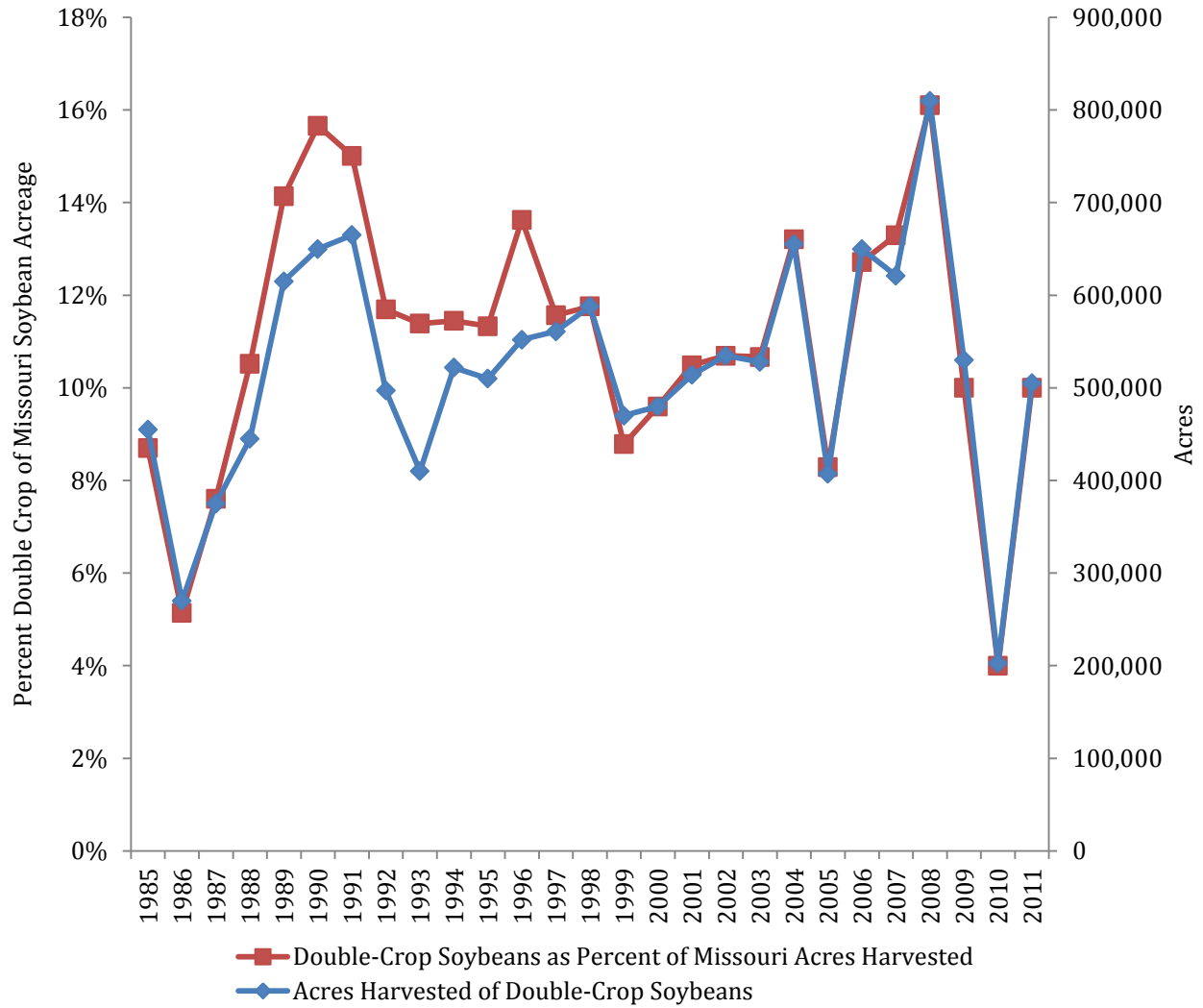


**Exhibit 1.1.3 – Missouri’s Share of U.S. Soybean Production, 1970 to 2011**



Source: USDA National Agricultural Statistics Service

**Exhibit 1.1.4 – Double Cropped Missouri Soybean Acreage Harvested as a Percent of Total Missouri Soybean Acreage Harvested, 1985 to 2011**



Source: USDA National Agricultural Statistics Service

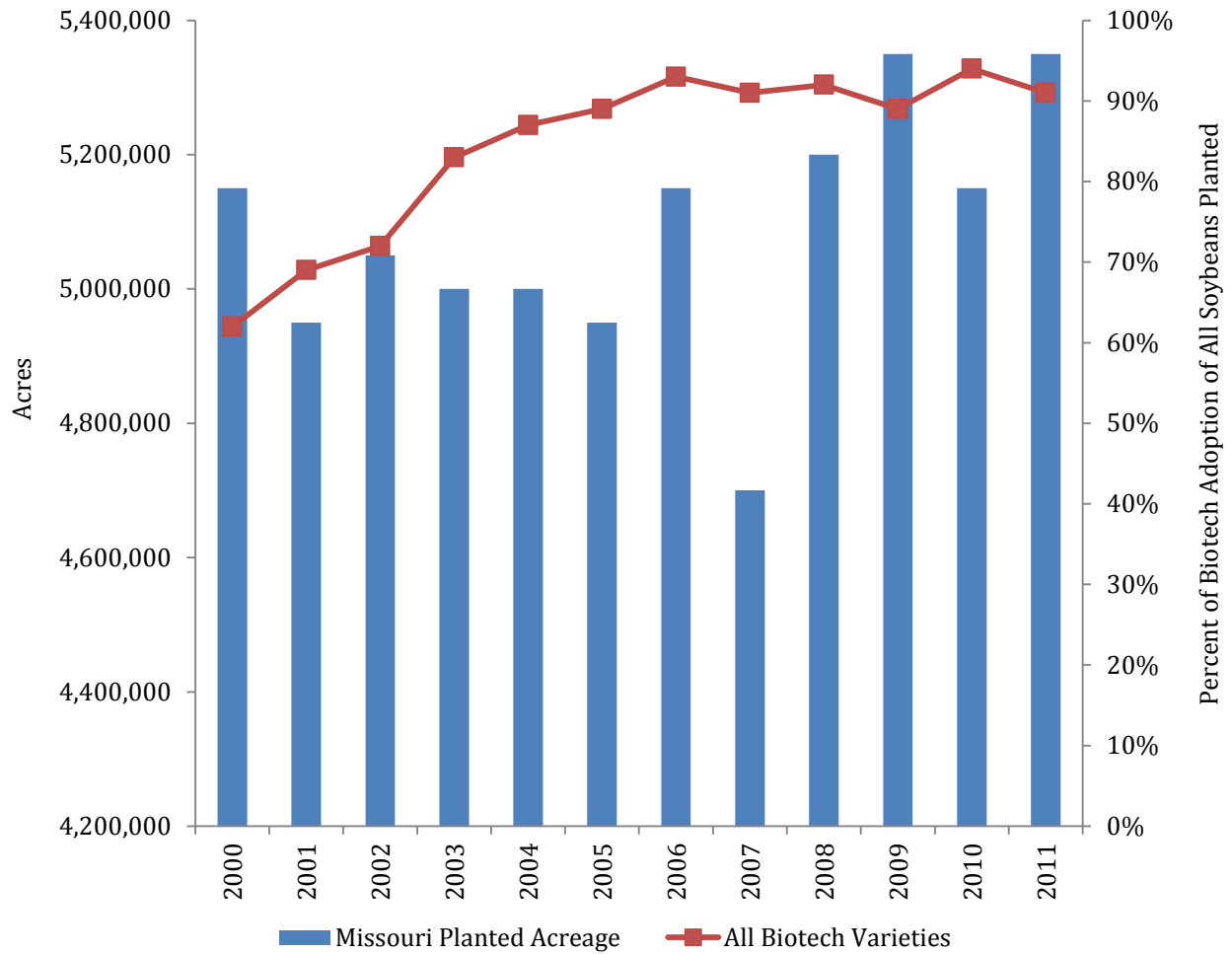
**Exhibit 1.1.5 – Soybean Irrigated and Nonirrigated in Missouri, 1992 to 2007**

		<b>1992</b>	<b>% of Total</b>	<b>1997</b>	<b>% of Total</b>	<b>2002</b>	<b>% of Total</b>	<b>2007</b>	<b>% of Total</b>
Entire Crop Irrigated	<i>Farms</i>	272	1.0%	281	1.2%	288	1.3%	277	1.5%
	<i>Acres</i>	64,874	1.5%	78,553	1.7%	83,149	1.7%	83,623	1.8%
	<i>Avg. Yield per Acre*</i>	39.9	1.7%	37.5	1.8%	35.8	1.8%	40.3	2.0%
Part of Crop Irrigated	<i>Farms</i>	741	2.8%	871	3.6%	1,004	4.6%	972	5.3%
	<i>Acres Irrigated</i>	128,074	3.0%	194,833	4.2%	265,137	5.3%	281,471	6.0%
	<i>Acres Not Irrigated</i>	240,065	5.7%	336,645	7.2%	415,150	8.3%	425,416	9.1%
	<i>Avg. Yield per Acre*</i>	36.6	9.0%	34.9	11.3%	34.1	14.0%	33.0	14.0%
None of Crop Irrigated	<i>Farms</i>	25,587	96.2%	23,049	95.2%	20,395	94.0%	17,139	93.2%
	<i>Acres</i>	3,775,716	89.7%	4,061,766	86.9%	4,238,422	84.7%	3,882,228	83.1%
	<i>Avg. Yield per Acre*</i>	35.6	89.3%	35.2	86.9%	32.8	84.2%	35.9	83.9%

Source: USDA National Agricultural Statistics Service and Census of Agriculture

\* Average yield per acre is measured in bushels/acre.

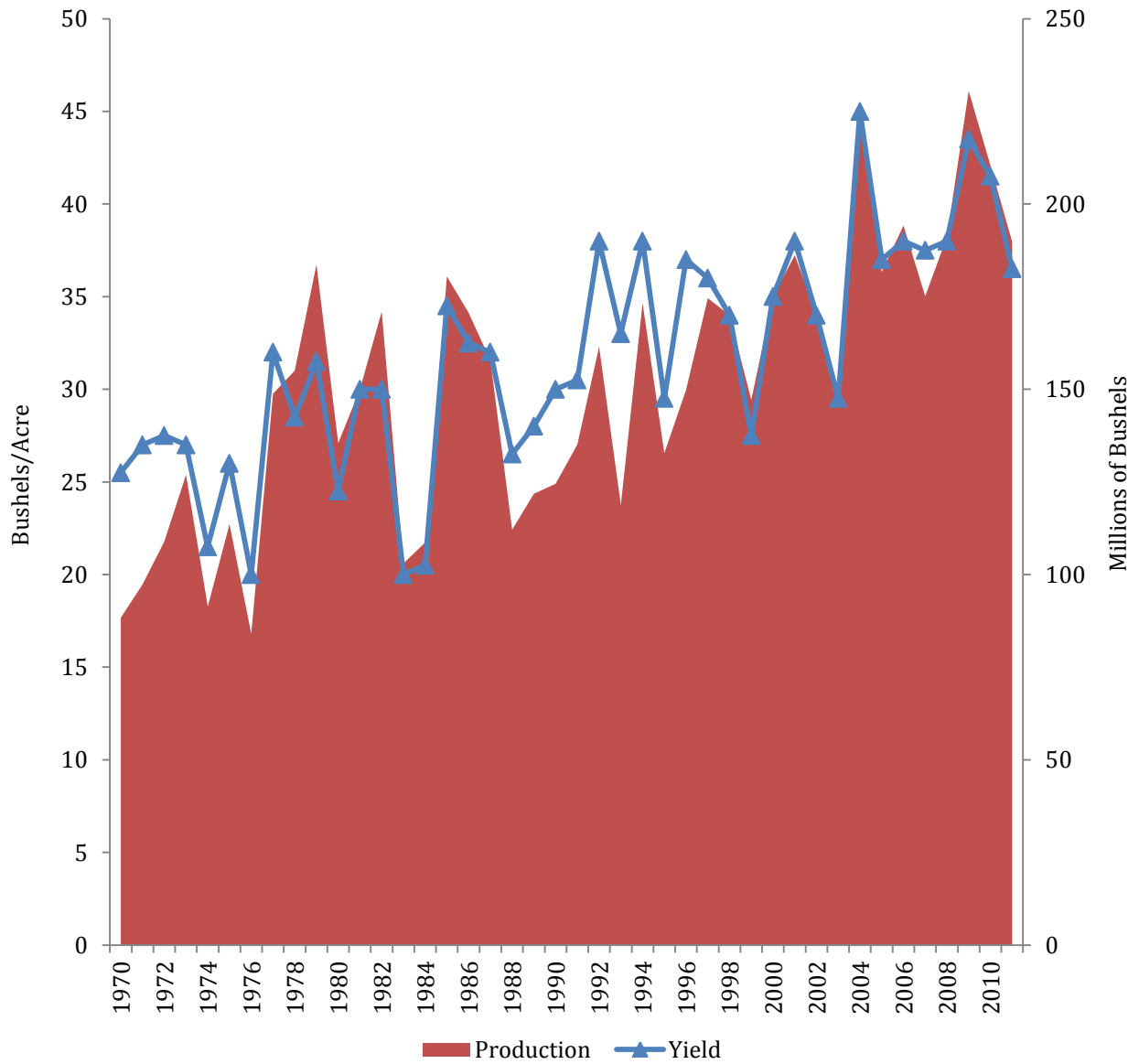
**Exhibit 1.1.6 – Soybean Acreage and All Biotech Variety Adoption in Missouri, 2000 to 2011**



Source: USDA National Agricultural Statistics Service

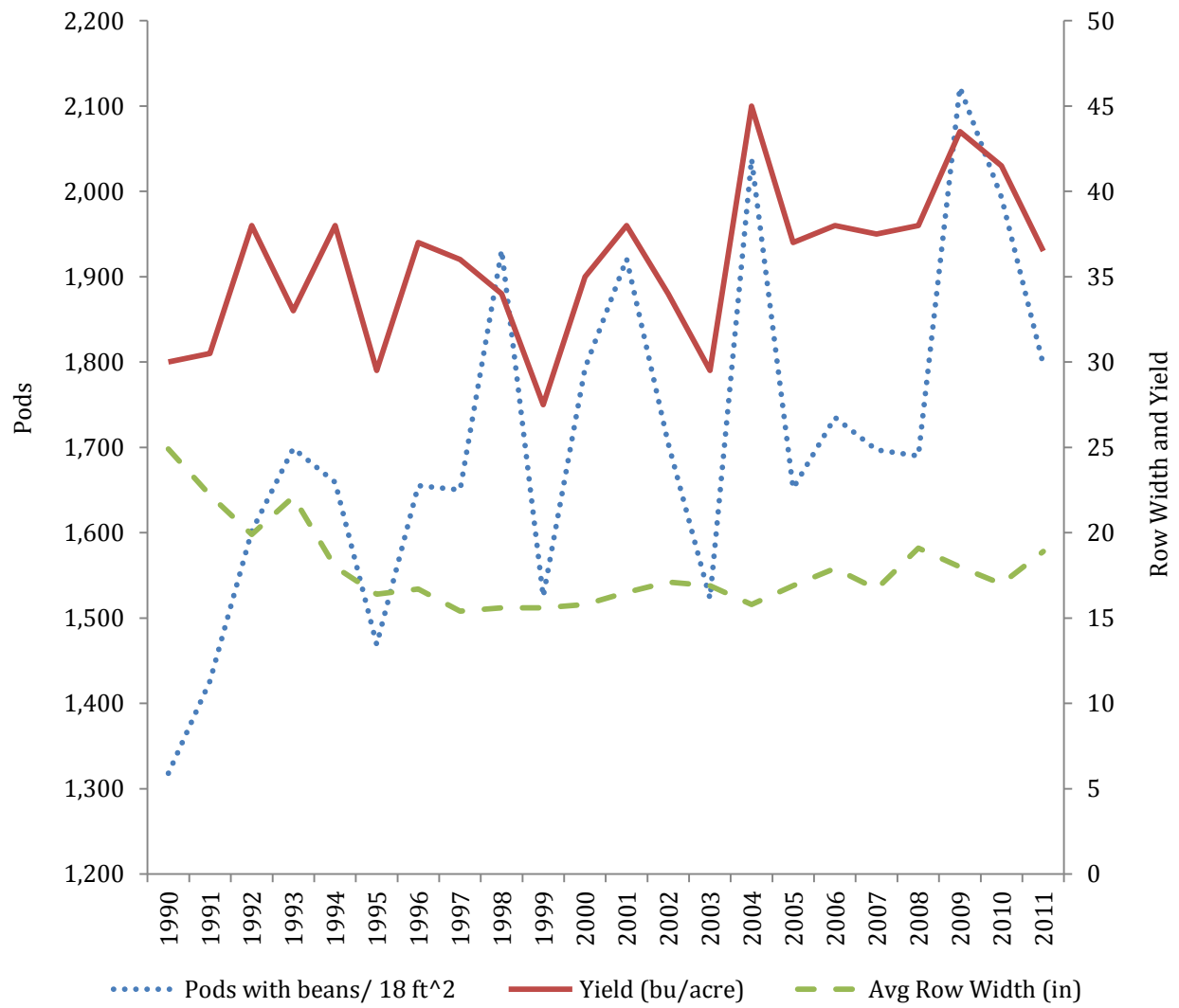
## 1.2 Production and Yield

Exhibit 1.2.1 - Missouri Soybean Production Yield



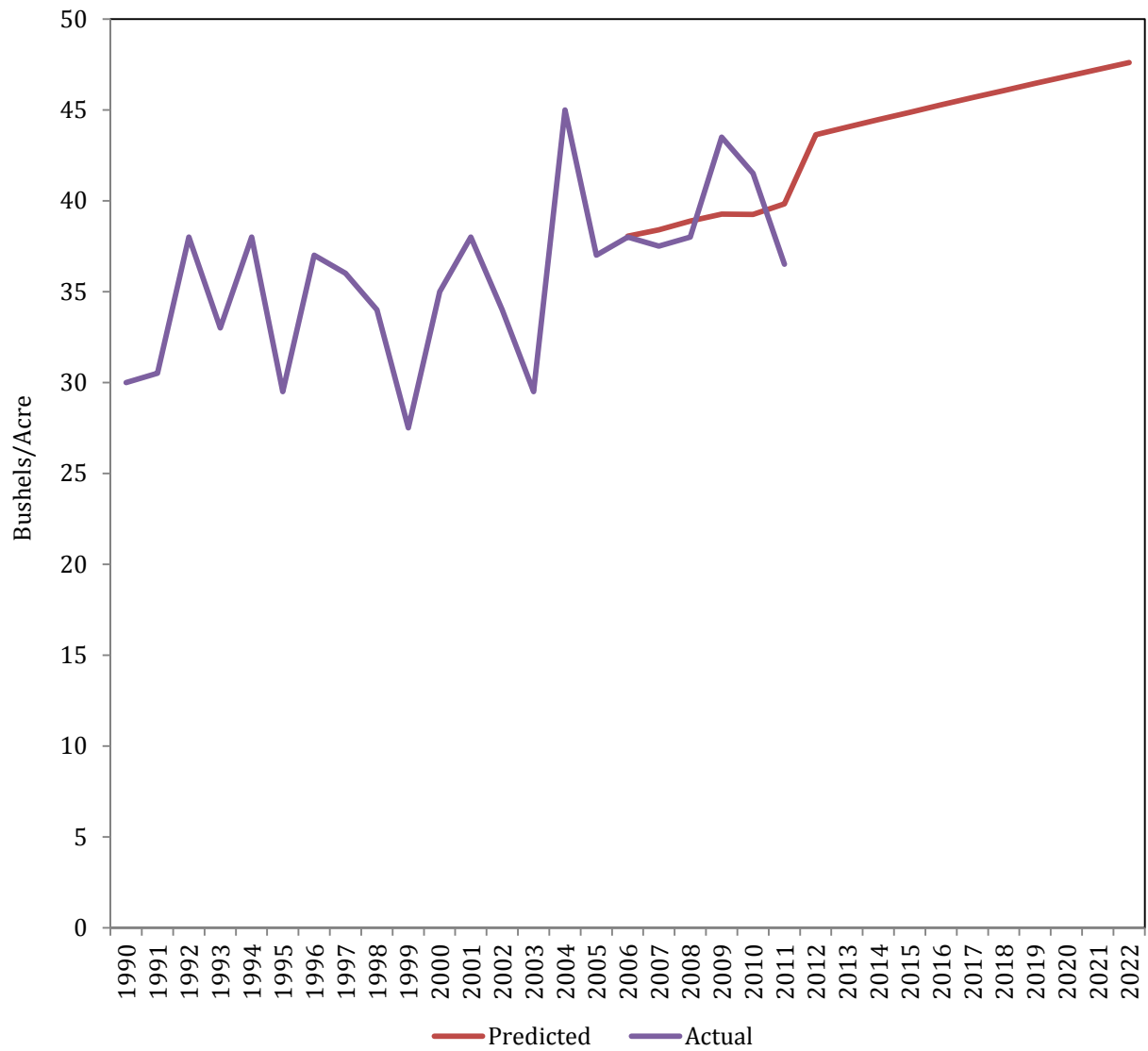
Source: USDA National Agricultural Statistics Service Acreage Report

**Exhibit 1.2.2 – Missouri Soybean Yield, Pod Count and Row Width**



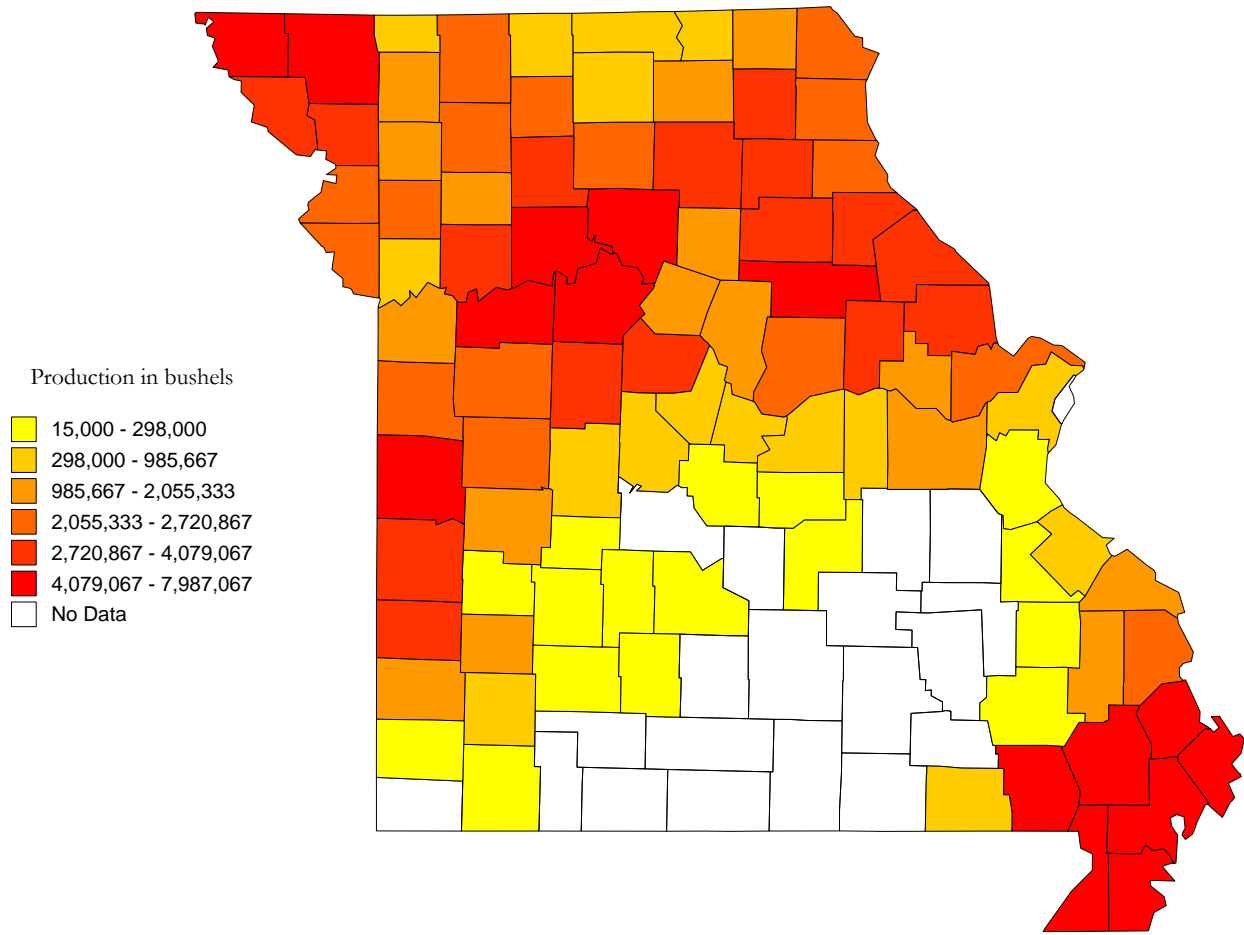
Source: USDA National Agricultural Statistics Service

**Exhibit 1.2.3 – Missouri Actual Soybean Yield and Predicted Yield to 2022**



Source: USDA National Agricultural Statistics Service and Value Ag, LLC

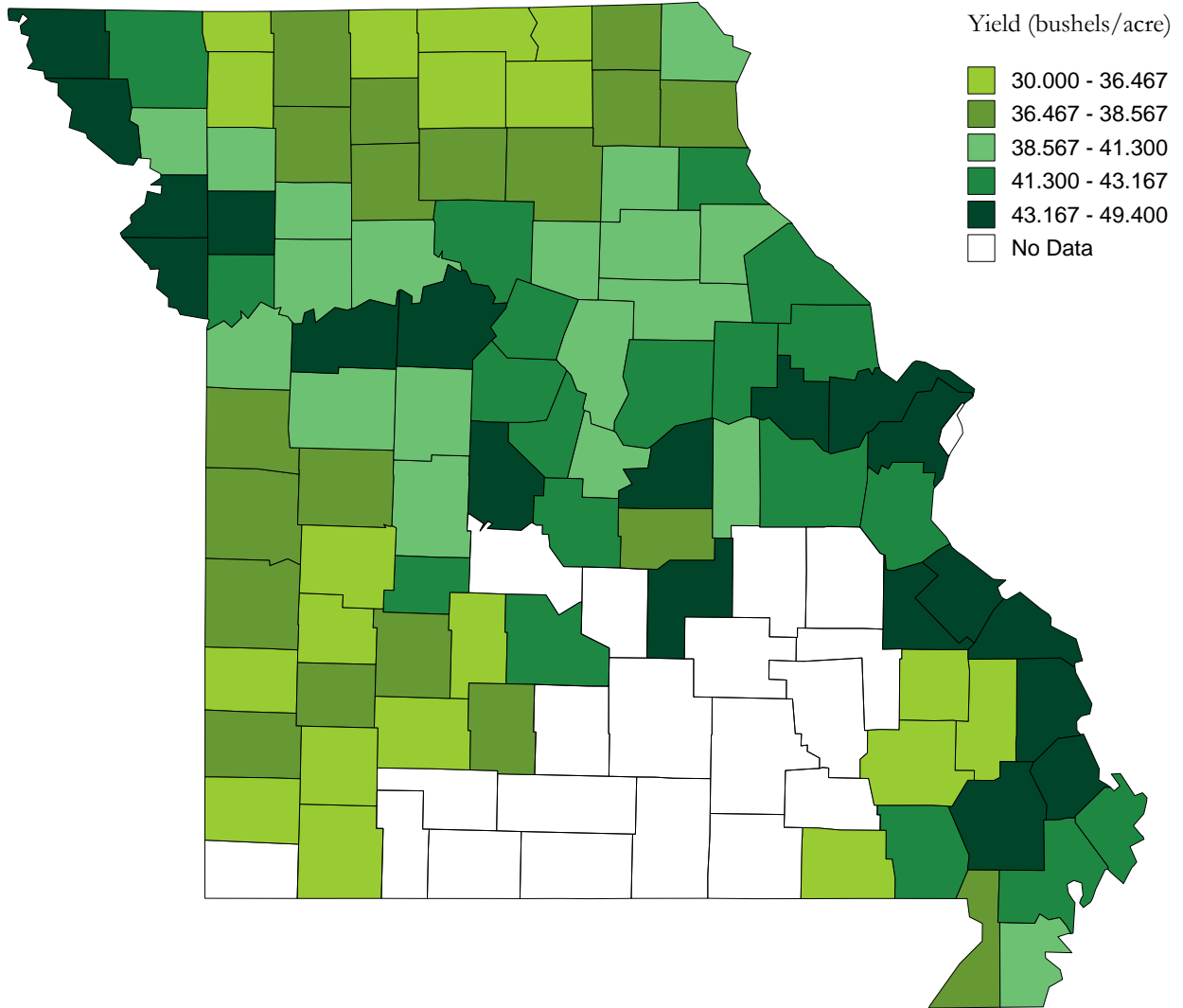
**Exhibit 1.2.4 – Missouri Average Soybean Production by County, 2008 to 2010**



*Source: USDA National Agricultural Statistics Service*

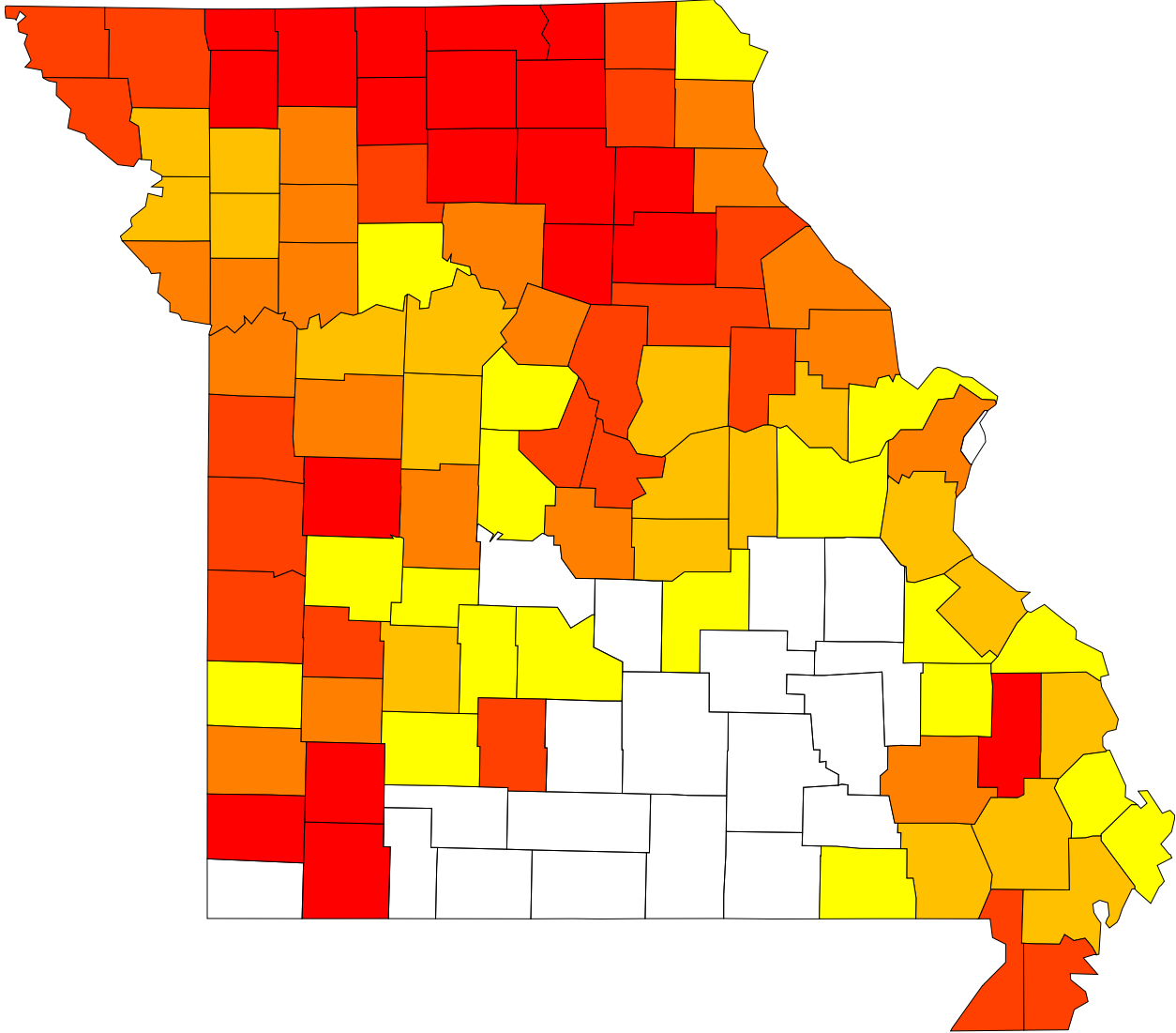


**Exhibit 1.2.5 - Missouri Average Soybean Yields, by County, 2008 to 2010**



*Source: USDA National Agricultural Statistics Service*

**Exhibit 1.2.6 – Missouri Soybean Production Risk, 2008 to 2010**



*Source: USDA National Agricultural Statistics Service*  
*\* Note: Lighter colors indicate low yield variability after accounting for yield level. No color indicates that no data are available.*

**Exhibit 1.2.7 – Missouri Soybean Production Relative to Other States’ Production, 2008-to-2010 Average**

<b>State</b>	<b>Yield (Bushels/Acre)</b>	<b>Area Harvested (1,000 Acres)</b>
Nebraska	51.5	4,907
Iowa	49.7	9,643
Illinois	48.2	9,487
Indiana	47.5	5,400
New York	45.7	253
Ohio	44.3	4,533
Pennsylvania	42.7	457
Wisconsin	41.8	1,613
<b>Missouri</b>	<b>41.2</b>	<b>5,133</b>
Minnesota	41.0	7,133
Kentucky	39.0	1,393
Michigan	39.0	1,973
Mississippi	38.8	1,990
South Dakota	38.0	4,130
Kansas	37.8	3,717
Louisiana	37.7	970
Arkansas	37.0	3,223
Tennessee	36.7	1,467
Maryland	35.3	475
Delaware	34.0	183
Alabama	33.7	375
New Jersey	32.0	90
Virginia	31.7	560
Georgia	31.0	370
North Carolina	31.0	1,657
North Dakota	30.7	3,900
Oklahoma	30.3	408
Texas	26.7	193
South Carolina	26.7	517

Source: American Soybean Association

\* Note: Yield and area harvested data are simple averages of data from 2008 to 2010.

## 1.3 Soybean Quality

**Exhibit 1.3.1 – U.S. Soybean Production Quality**

State	Weighted Average Percent Protein	Weighted Average Percent Oil	Weighted Average Percent FM	Weighted Average Seed Weight (Grams/100 Seeds)
Alabama	35.50	19.16	1.11	13.69
Arkansas	35.64	19.27	0.54	14.62
Delaware	35.36	19.15	0.39	14.72
Florida*	36.50			
Georgia**	36.08	19.43	0.30	15.48
Illinois	35.02	18.64	0.29	15.54
Indiana	35.34	18.63	0.28	15.01
Iowa	34.39	18.81	0.27	15.26
Kansas	34.36	18.82	0.44	15.15
Kentucky	34.70	19.23	0.35	14.49
Louisiana	36.62	19.37	0.61	14.51
Maryland	35.58	18.77	0.23	16.48
Michigan	35.29	18.63	0.17	15.25
Minnesota	34.09	18.64	0.22	15.34
Mississippi	35.87	19.28	0.68	14.47
Missouri	34.62	18.73	0.30	15.03
Nebraska	34.06	18.80	0.23	15.21
New Jersey	36.47	18.80	0.96	14.47
New York	36.14	17.85	0.14	16.35
North Carolina	35.22	19.32	0.28	14.88
North Dakota	33.87	18.43	0.23	14.84
Ohio	35.29	18.78	0.22	15.56
Oklahoma	35.92	18.41	0.41	15.33
Pennsylvania	35.19	18.51	0.17	15.45
South Carolina	35.38	19.14	0.27	14.71
South Dakota	34.13	18.37	0.38	14.69
Tennessee	34.81	19.50	0.42	14.61
Texas	34.30	19.98	0.27	15.14
Virginia	34.93	18.75	0.62	15.74
Wisconsin	34.52	18.63	0.34	16.08
<i>Unless noted, percent averages are weighted based on samples taken from 2008 to 2010.</i>				
<i>* Just 2009 data.</i>				
<i>** Averages computed with 2008 to 2009 data.</i>				

Source: American Soybean Association

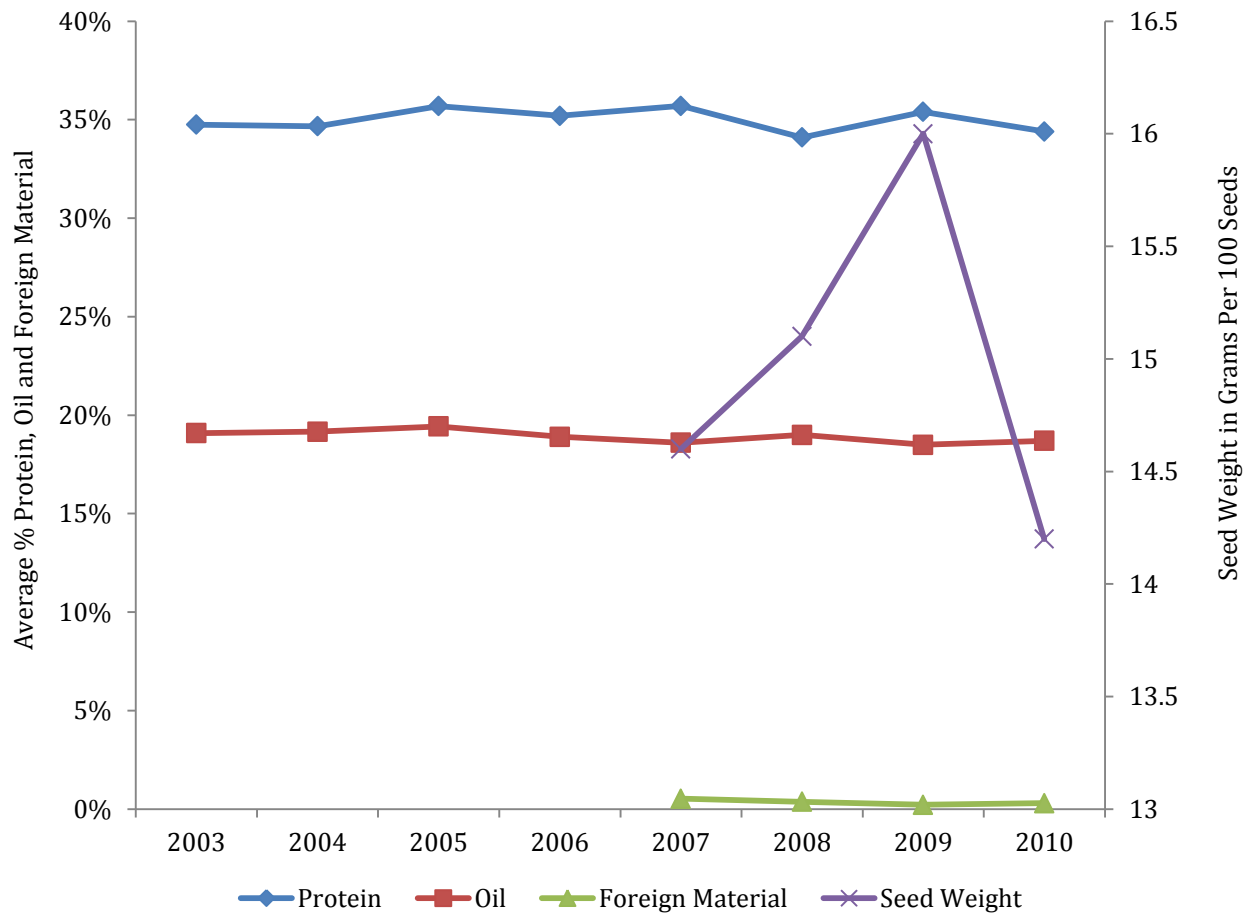
**Exhibit 1.3.2 – Trends in Missouri Soybean Quality**

	<b>Protein (%)</b>			<b>Oil (%)</b>	
	<i>Number of Samples</i>	<i>Percent Average</i>	<i>Standard Deviation</i>	<i>Percent Average</i>	<i>Standard Deviation</i>
2003	67	34.75	2.17	19.09	1.09
2004	65	34.67	1.22	19.16	0.7
2005	96	35.69	1.65	19.43	0.87
2006	82	35.2	1.98	18.9	0.98
2007	109	35.7	1.55	18.6	0.78
2008	81	34.1	1.5	19	0.9
2009	83	35.4	1	18.5	0.9
2010	105	34.4	1.3	18.7	1.1

	<b>Foreign Material (%)</b>			<b>Seed Weight (Grams/100 Seeds)</b>	
	<i>Number of Samples</i>	<i>Percent Average</i>	<i>Standard Deviation</i>	<i>Percent Average</i>	<i>Standard Deviation</i>
2007	109	0.53	0.0233	14.6	1.96
2008	81	0.37	0.62	15.1	1.5
2009	83	0.22	0.28	16	1.5
2010	105	0.3	0.4	14.2	1.4

*Source: American Soybean Association*

**Exhibit 1.3.3 – Changes in Missouri Soybean Quality**



Source: American Soybean Association

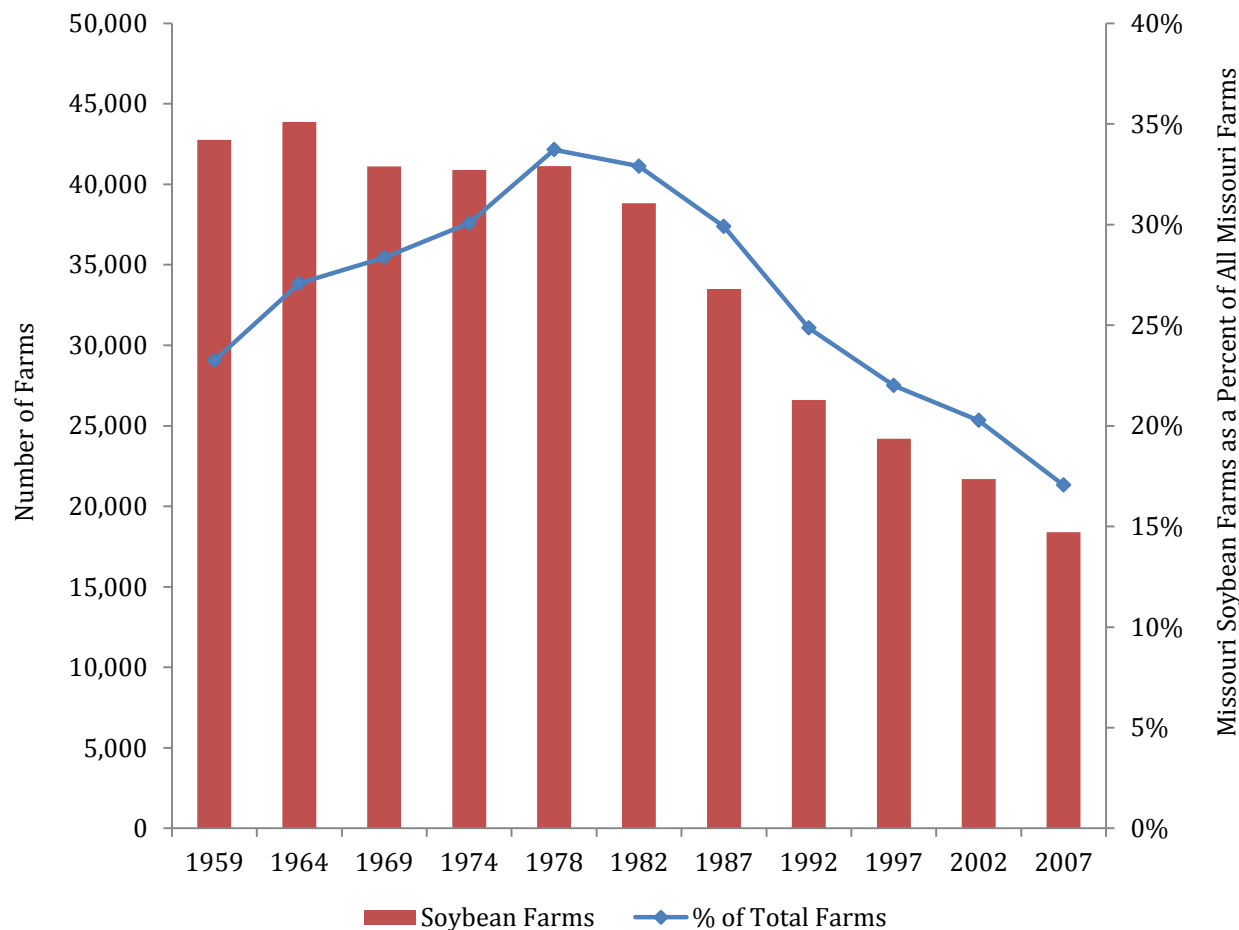
## 1.4 Soybean Farms and Soybean Farm Characteristics

**Exhibit 1.4.1 – Missouri Farms with Soybeans, Acreage and Bushels Produced, 2007**

Farm Size	Number of Soybean Farms	% of Total Farms	Number of Acres	% of Total Acres	Bushels Produced	% of Total Bushels Produced
1 to 99 acres	2,356	13%	67,161	1%	2,117,299	1%
100 to 259 acres	4,268	23%	261,755	6%	8,754,809	5%
260 to 499 acres	3,781	21%	420,120	9%	13,895,880	8%
500 to 999 acres	3,756	20%	882,319	19%	30,562,191	18%
1,000 to 1,999 acres	2,740	15%	1,358,117	29%	48,034,385	29%
2,000 or more acres	1,487	8%	1,683,266	36%	62,582,759	38%
<b>Total</b>	<b>18,388</b>	<b>100%</b>	<b>4,672,738</b>	<b>100%</b>	<b>165,947,323</b>	<b>100%</b>

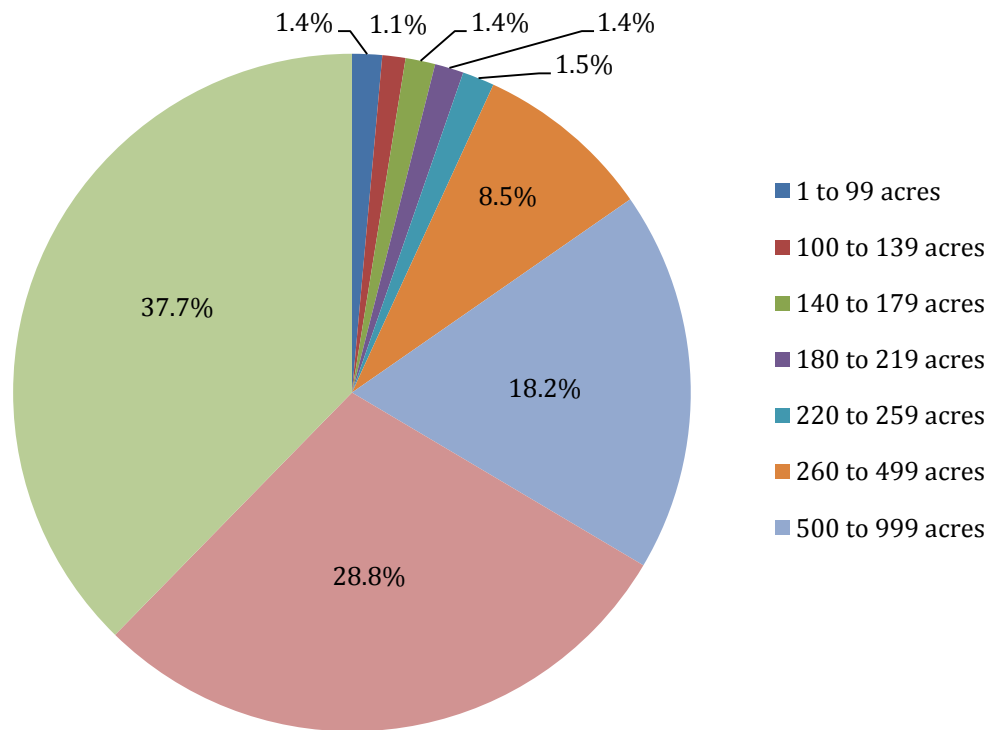
Source: USDA – National Agricultural Statistics Service, Census of Agriculture, 2007

**Exhibit 1.4.2 – Missouri Soybean Farms, 1959 to 2007**



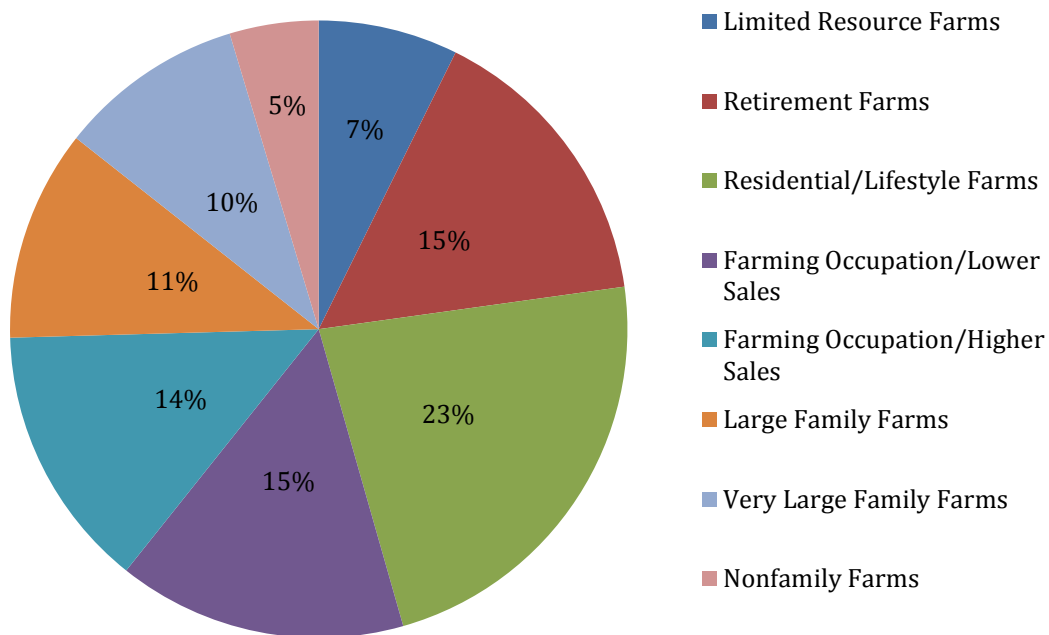
Source: USDA – National Agricultural Statistics Service, Census of Agriculture

**Exhibit 1.4.3 – Missouri Percent Market Value of Soybeans Sold, by Farm Size, 2007**



Source: USDA – National Agricultural Statistics Service, Census of Agriculture, 2007

**Exhibit 1.4.4 – Missouri Soybean Farms by Typology, 2007**

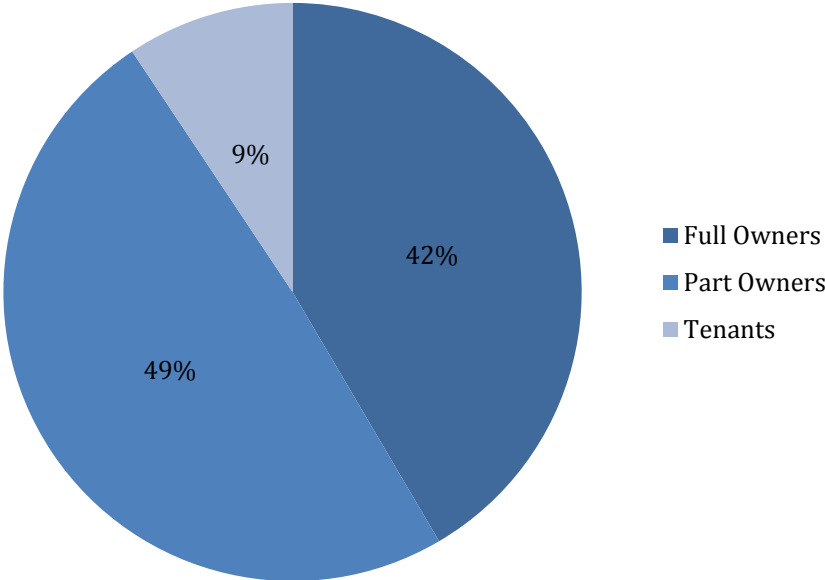


Source: USDA – National Agricultural Statistics Service, Census of Agriculture, 2007

\* Note: Limited resource, retirement, residential/lifestyle, farming occupation/lower sales and farming occupation/higher sales are subsets of the “small family farm” designation.



**Exhibit 1.4.5 – Missouri Soybean Farm Operator Classification, 2007**



*Source: USDA – National Agricultural Statistics Service, Census of Agriculture, 2007*

## 1.5 Cost of Production

**Exhibit 1.5.1 – Missouri Soybean Cost of Production**

	2008 (\$ Per Acre)	2009 (\$ Per Acre)	2010 (\$ Per Acre)	Three-Year Average (\$ Per Acre)
<b>Operating Costs</b>				
Seed	\$42.98	\$53.50	\$57.49	\$51.32
Fertilizer *	\$23.42	\$22.01	\$16.88	\$20.77
Chemicals	\$15.29	\$16.87	\$16.64	\$16.27
Custom operations	\$5.54	\$6.03	\$6.10	\$5.89
Fuel, lube and electricity	\$15.82	\$10.48	\$13.06	\$13.12
Repairs	\$11.25	\$11.47	\$11.69	\$11.47
Interest on operating capital	\$2.56	\$0.17	\$0.12	\$0.95
<b>Total, nonland labor and management operating costs</b>	<b>\$116.86</b>	<b>\$120.53</b>	<b>\$121.98</b>	<b>\$119.79</b>
<b>Allocated Overhead Costs</b>				
Hired labor	\$1.23	\$1.26	\$1.27	\$1.25
Opportunity cost of unpaid labor	\$15.34	\$15.67	\$15.84	\$15.62
Capital recovery of machinery and equipment	\$67.16	\$71.33	\$73.90	\$70.80
Opportunity cost of land (rental rate)	\$96.91	\$101.29	\$105.67	\$101.29
Taxes and insurance	\$9.51	\$10.68	\$9.29	\$9.83
General farm overhead	\$14.34	\$14.62	\$14.90	\$14.62
<b>Total, allocated overhead</b>	<b>\$218.25</b>	<b>\$241.48</b>	<b>\$263.53</b>	<b>\$241.09</b>
<b>TOTAL</b>	<b>\$321.35</b>	<b>\$362.01</b>	<b>\$385.51</b>	<b>\$356.29</b>

\* Represents commercial fertilizer, soil conditioners and manure.

Source: USDA Economic Research Service and University of Missouri Extension

### Exhibit 1.5.2 – Soybean Seed Cost Incurred by Missouri Farmers

Year	MU Seed Cost Estimate (\$/acre)	Missouri Planted Soybean Acres	Total Missouri Seed Cost	Inflation Multiplier	Inflation-Adjusted (2011 Dollars)
1975	\$8.00	4,450,000	\$35,600,000	4.18	\$148,808,000
1980	\$7.50	5,700,000	\$42,750,000	2.73	\$116,707,500
1985	\$10.25	5,300,000	\$54,325,000	2.09	\$113,539,250
1990	\$11.09	4,200,000	\$46,578,000	1.72	\$80,114,160
1995	\$12.81	4,600,000	\$58,926,000	1.48	\$87,210,480
2000	\$20.00	5,150,000	\$103,000,000	1.31	\$134,930,000
2005	\$30.60	4,950,000	\$151,470,000	1.15	\$174,190,500
2008	\$36.27	5,200,000	\$188,604,000	1.04	\$196,148,160
2010	\$47.60	5,150,000	\$245,140,000	1.03	\$252,494,200
2011	\$49.87	5,350,000	\$266,804,500		

Source: MU Ag Lender and Farm Management Reports, USDA National Agricultural Statistics Service and U.S. Bureau of Labor Statistics

### Exhibit 1.5.3 – Soybean Chemical Cost Incurred by Missouri Farmers

Year	MU Chemical Cost Estimate (\$/acre)	Missouri Planted Soybean Acres	Total Missouri Chemical Cost	Inflation Multiplier	Inflation-Adjusted (2011 Dollars)
1975	\$9.50	4,450,000	\$42,275,000	4.18	\$176,709,500
1980	\$15.50	5,700,000	\$88,350,000	2.73	\$241,195,500
1985	\$19.00	5,300,000	\$100,700,000	2.09	\$210,463,000
1990	\$21.39	4,200,000	\$89,838,000	1.72	\$154,521,360
1995	\$29.95	4,600,000	\$137,770,000	1.48	\$203,899,600
2000	\$25.00	5,150,000	\$128,750,000	1.31	\$168,662,500
2005	\$10.29	4,950,000	\$50,935,500	1.15	\$58,575,825
2008	\$6.07	5,200,000	\$31,564,000	1.04	\$32,826,560
2010	\$8.40	5,150,000	\$43,260,000	1.03	\$44,557,800
2011	\$6.40	5,350,000	\$34,240,000		

Source: MU Ag Lender and Farm Management Reports, USDA National Agricultural Statistics Service and U.S. Bureau of Labor Statistics

### Exhibit 1.5.4 – Missouri Soybean Herbicide Application and Rates, 1990 to 2006

	2,4-D			Chlorimuron-ethyl			Glyphosate			Trifluralin			Pendimethalin			
	Planted Acres (1,000)	Area Applied (%)	Rate (lb/acre)	Total Applied (1,000 lbs)	Area Applied (%)	Rate (lb/acre)	Total Applied (1,000 lbs)	Area Applied (%)	Rate (lb/acre)	Total Applied (1,000 lbs)	Area Applied (%)	Rate (lb/acre)	Total Applied (1,000 lbs)	Area Applied (%)	Rate (lb/acre)	Total Applied (1,000 lbs)
1990	4,200				17	0.03	21							26	0.75	819
1991	4,500				22	0.02	25				27	0.85	1,050	27	0.78	955
1992	4,300				21	0.03	23	8	0.72	252	34	0.83	1,193	27	0.77	877
1993	4,200	6	0.41	104	21	0.03	24	15	0.69	446	19	0.69	552	35	0.78	1,152
1994	4,600	7	0.40	123	15	0.02	18	16	0.59	438	17	0.82	637	37	0.79	1,349
1995	4,600	8	0.48	178	16	0.02	13	31	0.86	1,218	16	0.69	514	30	0.82	1,131
1996	4,100				16	0.02	15	24	0.81	803	32	1.09	1,450	17	0.77	541
1997	4,900	13	0.33	206	13	0.03	16	22	0.91	999	26	0.94	1,176	32	1.12	1,772
1998	5,100	3	0.41	71	7	0.02	7	41	1.02	2,163	22	0.94	1,043	18	0.92	844
1999	5,400				17	0.03	29	63	0.96	3,234	14	1.00	751	12	0.90	608
2000	5,150				25	0.02	32	66	0.97	3,309	6	1.01	299	15	0.97	718
2001	4,950				11	0.02	8	73	0.85	3,080	11	0.78	411	5	1.10	280
2002	5,050	6	0.52	160	8	0.02	9	84	1.03	4,328						
2004	5,000	4	1.08	238	7	0.02	8	90	1.05	4,717	2	1.26	130	2	0.92	81
2006	5,150	3	1.15	155	7	0.02	7	93	1.27	6,061						

Source: USDA – National Agricultural Statistics Service

\* Note: Data have not been published since 2006.

**Exhibit 1.5.5 – Missouri Soybean Production Budgets, Revenues and Costs**

	1975	1980	1985	1990	1995	2000	2005	2008	2009	2010	2011
Yield/acre	29.50	36.30	31.30	30.95	35.00	35.00	45.00	50.00	50.00	50.00	50.00
Market price/bushel	-	-	-	-	-	-	5.36	7.90	8.00	9.00	10.00
<b><i>Estimated Income/acre</i></b>											
Crop income (yield x price)	-	-	-	-	-	-	241.20	395.00	400.00	450.00	500.00
Net payments (fixed)	-	-	-	-	-	-	14.15	14.15	14.15	14.15	14.15
<b>Estimated Total Income/Acre</b>	-	-	-	-	-	-	<b>255.35</b>	<b>409.15</b>	<b>414.15</b>	<b>464.15</b>	<b>514.15</b>
<b><i>Estimated Operating Costs/Acre</i></b>											
Seed	8.00	7.50	10.25	11.09	12.81	20.00	30.60	36.27	43.07	47.60	49.87
Fertilizer and soil amendments	3.50	10.00	4.25	5.45	5.12	7.75	28.55	37.80	95.20	47.70	52.90
Crop protection chemicals	9.50	15.50	19.00	21.39	29.95	25.00	10.29	6.07	12.90	8.40	6.40
Crop supplies, storage, marketing	-	-	-	-	-	-	-	1.00	1.00	1.00	1.00
Crop insurance and consulting	-	-	2.25	1.62	1.99	-	-	9.35	18.00	16.00	18.00
Custom hire and rental	2.50	3.50	5.50	4.71	-	4.50	6.75	-	-	-	-
Machinery fuel, drying and irrigation energy	-	-	-	-	4.14	20.00	18.53	12.87	13.71	11.60	10.69
Machinery repairs and maintenance	12.50	22.58	22.25	26.09	22.99	-	-	11.25	10.96	11.79	10.61
Operator and hired labor	14.00	18.00	19.00	22.69	20.12	23.50	20.44	10.58	11.02	11.32	10.50
Operating interest @ 7% x 1/2 year	5.50	9.00	6.50	9.50	9.16	5.12	3.92	5.01	8.75	5.44	5.20
Miscellaneous*	4.00	6.50	6.50	7.52	8.29	13.00	15.36	-	-	-	-
<b>Total Operating Costs/Acre</b>	<b>59.50</b>	<b>92.58</b>	<b>95.50</b>	<b>110.06</b>	<b>114.57</b>	<b>118.87</b>	<b>134.44</b>	<b>130.20</b>	<b>214.61</b>	<b>160.85</b>	<b>165.17</b>
<b><i>Estimated Ownership Costs/Acre</i></b>											
Farm business overhead	-	-	-	-	-	-	-	4.20	4.32	4.32	4.50
Machinery overhead	-	-	-	-	-	-	-	17.48	18.69	19.08	17.31
Machinery depreciation	15.50	26.50	27.00	17.35	21.69	28.00	31.36	22.09	24.65	23.98	21.05
Real estate charge	43.00	79.50	78.00	68.71	76.93	83.00	89.76	107.50	121.50	112.60	133.50
<b>Total Ownership Costs/Acre</b>	<b>58.50</b>	<b>106.00</b>	<b>105.00</b>	<b>86.06</b>	<b>98.62</b>	<b>111.00</b>	<b>121.12</b>	<b>151.27</b>	<b>169.16</b>	<b>159.98</b>	<b>176.36</b>

<b>Estimated Total Costs/Acre</b>	<b>118.00</b>	<b>198.58</b>	<b>200.50</b>	<b>196.12</b>	<b>213.19</b>	<b>229.87</b>	<b>255.56</b>	<b>281.47</b>	<b>383.77</b>	<b>320.83</b>	<b>341.53</b>	
<b>Income over Operating Costs/Acre</b>	-	-	-	-	-	-	118.87	120.91	278.95	199.54	303.30	348.98
<b>Income over Total Costs/Acre</b>	-	-	-	-	-	-	-	-0.21	127.68	30.38	143.32	172.62
<b>Operating Costs/bushel</b>	<b>2.02</b>	<b>1.79</b>	<b>2.31</b>	<b>2.42</b>	<b>3.25</b>	<b>3.40</b>	<b>2.99</b>	<b>2.60</b>	<b>4.29</b>	<b>3.22</b>	<b>3.30</b>	
<b>Total Costs/Bushel</b>	<b>4.00</b>	<b>6.97</b>	<b>5.52</b>	<b>6.27</b>	<b>6.89</b>	<b>6.57</b>	<b>5.68</b>	<b>5.63</b>	<b>7.68</b>	<b>6.42</b>	<b>6.83</b>	

*Source: University of Missouri Extension Ag Lender & Farm Management Reports*

*\* Note: Information before 2000 is based on estimates of actual costs. From 2000 onward, the statistics represent projections made based on prior year data. Miscellaneous category contains information on operating costs for categories for which a dash (-) is reported prior to 2008.*

**Exhibit 1.5.6 – Missouri Soybean Production Total Budgets, Revenues and Costs, Inflation-Adjusted to 2011 Dollars**

	1975	1975- Adjusted	1980	1980- Adjusted	1985	1985- Adjusted	1990	1990- Adjusted
<b><i>Estimated Operating Costs</i></b>								
Seed	\$35,600,000	\$150,232,000	\$42,750,000	\$117,563,000	\$52,480,000	\$110,733,000	\$46,578,000	\$81,046,000
Fertilizer and soil amendments	\$15,575,000	\$65,727,000	\$57,000,000	\$156,750,000	\$21,760,000	\$45,914,000	\$22,890,000	\$39,829,000
Crop protection chemicals	\$42,275,000	\$178,401,000	\$88,350,000	\$242,963,000	\$97,280,000	\$205,261,000	\$89,838,000	\$156,318,000
Crop supplies, storage, marketing	-	-	-	-	-	-	-	-
Crop insurance and consulting	-	-	-	-	\$11,520,000	\$24,307,000	\$6,804,000	\$11,839,000
Custom hire and rental	\$11,125,000	\$46,948,000	\$19,950,000	\$54,863,000	\$28,160,000	\$59,418,000	\$19,782,000	\$34,421,000
Machinery fuel, drying and irrigation energy	-	-	-	-	-	-	-	-
Machinery repairs and maintenance	\$55,625,000	\$234,738,000	\$128,706,000	\$353,942,000	\$133,920,000	\$240,371,000	\$109,578,000	\$190,666,000
Operator and hired labor	\$62,300,000	\$262,906,000	\$102,600,000	\$282,150,000	\$97,280,000	\$205,261,000	\$95,298,000	\$165,819,000
Operating interest @ 7% x 1/2 year	\$24,475,000	\$103,285,000	\$51,300,000	\$141,075,000	\$33,280,000	\$70,221,000	\$39,900,000	\$69,426,000
Miscellaneous*	\$17,800,000	\$75,116,000	\$37,050,000	\$101,888,000	\$33,280,000	\$70,221,000	\$31,584,000	\$54,956,000
<b>Total Operating Costs</b>	<b>\$264,775,000</b>	<b>\$1,117,351,000</b>	<b>\$527,706,000</b>	<b>\$1,451,192,000</b>	<b>\$488,960,000</b>	<b>\$1,031,706,000</b>	<b>\$462,252,000</b>	<b>\$804,318,000</b>
<b><i>Estimated Ownership Costs</i></b>								
Farm business overhead	-	-	-	-	-	-	-	-
Machinery overhead	-	-	-	-	-	-	-	-
Machinery depreciation	\$68,975,000	\$291,075,000	\$151,050,000	\$415,388,000	\$138,240,000	\$291,686,000	\$72,870,000	\$126,794,000
Real estate charge	\$191,350,000	\$807,497,000	\$453,150,000	\$1,246,163,000	\$399,360,000	\$842,650,000	\$288,582,000	\$502,133,000
<b>Total Ownership Costs</b>	<b>\$260,325,000</b>	<b>\$1,098,572,000</b>	<b>\$604,200,000</b>	<b>\$1,661,550,000</b>	<b>\$537,600,000</b>	<b>\$1,134,336,000</b>	<b>\$361,452,000</b>	<b>\$628,926,000</b>
<b>Estimated Total Costs</b>	<b>\$525,100,000</b>	<b>\$2,215,922,000</b>	<b>\$1,131,906,000</b>	<b>\$3,112,742,000</b>	<b>\$1,026,560,000</b>	<b>\$2,166,042,000</b>	<b>\$823,704,000</b>	<b>\$1,433,245,000</b>

	1995	1995- Adjusted	2000	2000- Adjusted	2005	2005- Adjusted	2007	2007- Adjusted
<b><i>Estimated Operating Costs</i></b>								
Seed	\$58,926,000	\$87,800,000	\$103,000,000	\$135,960,000	\$151,470,000	\$175,705,200	\$159,800,000	\$174,182,000
Fertilizer and soil amendments	\$23,552,000	\$35,092,000	\$39,912,500	\$52,684,500	\$141,322,500	\$163,934,100	\$131,600,000	\$143,444,000
Crop protection chemicals	\$137,770,000	\$205,277,000	\$128,750,000	\$169,950,000	\$50,935,500	\$59,085,180	\$28,529,000	\$31,096,610
Crop supplies, storage, marketing	-	-	-	-	-	-	\$4,700,000	\$5,123,000
Crop insurance and consulting	\$9,154,000	\$13,639,000	-	-	-	-	\$24,769,000	\$26,998,210
Custom hire and rental	-	-	\$23,175,000	\$30,591,000	\$33,412,500	\$38,758,500	-	-
Machinery fuel, drying and irrigation energy	\$19,044,000	\$28,376,000	\$103,000,000	\$135,960,000	\$91,723,500	\$106,399,260	\$46,906,000	\$51,127,540
Machinery repairs and maintenance	\$105,754,000	\$151,573,000	-	-	-	-	\$48,269,000	\$52,613,210
Operator and hired labor	\$92,552,000	\$137,902,000	\$121,025,000	\$159,753,000	\$101,178,000	\$117,366,480	\$45,637,000	\$49,744,330
Operating interest @ 7% x 1/2 year	\$42,136,000	\$62,783,000	\$26,368,000	\$34,805,760	\$19,404,000	\$22,508,640	\$21,432,000	\$23,360,880
Miscellaneous*	\$38,134,000	\$56,820,000	\$66,950,000	\$88,374,000	\$76,032,000	\$88,197,120	-	-
<b>Total Operating Costs</b>	<b>\$527,022,000</b>	<b>\$785,263,000</b>	<b>\$612,180,500</b>	<b>\$808,078,260</b>	<b>\$665,478,000</b>	<b>\$771,954,480</b>	<b>\$511,642,000</b>	<b>\$557,689,780</b>
<b><i>Estimated Ownership Costs</i></b>								
Farm business overhead	-	-	-	-	-	-	\$19,176,000	\$20,901,840
Machinery overhead	-	-	-	-	-	-	\$78,114,000	\$85,144,260
Machinery depreciation	\$99,774,000	\$148,663,000	\$144,200,000	\$190,344,000	\$155,232,000	\$180,069,120	\$98,465,000	\$107,326,850
Real estate charge	\$353,878,000	\$527,278,000	\$427,450,000	\$564,234,000	\$444,312,000	\$515,401,920	\$437,100,000	\$476,439,000
<b>Total Ownership Costs</b>	<b>\$453,652,000</b>	<b>\$675,941,000</b>	<b>\$571,650,000</b>	<b>\$754,578,000</b>	<b>\$599,544,000</b>	<b>\$695,471,040</b>	<b>\$632,855,000</b>	<b>\$689,811,950</b>
<b>Estimated Total Costs</b>	<b>\$980,674,000</b>	<b>\$1,461,204,000</b>	<b>\$1,183,830,500</b>	<b>\$1,562,656,260</b>	<b>\$1,265,022,000</b>	<b>\$1,467,425,520</b>	<b>\$1,144,497,000</b>	<b>\$1,247,501,730</b>



	2008	2008- Adjusted	2009	2009- Adjusted	2010	2010- Adjusted	2011
<b><i>Estimated Operating Costs</i></b>							
Seed	\$188,604,000	\$198,034,200	\$230,424,500	\$244,249,970	\$245,140,000	\$252,494,200	\$266,804,500
Fertilizer and soil amendments	\$196,560,000	\$206,338,000	\$509,320,000	\$539,879,000	\$245,655,000	\$253,024,650	\$283,015,000
Crop protection chemicals	\$31,564,000	\$33,142,200	\$69,015,000	\$73,155,900	\$43,260,000	\$44,557,800	\$34,240,000
Crop supplies, storage, marketing	\$5,200,000	\$5,460,000	\$5,350,000	\$5,671,000	\$5,150,000	\$5,304,500	\$5,350,000
Crop insurance and consulting	\$48,620,000	\$51,051,000	\$96,300,000	\$102,078,000	\$82,400,000	\$84,872,000	\$96,300,000
Custom hire and rental	-	-	-	-	-	-	-
Machinery fuel, drying and irrigation energy	\$66,924,000	\$70,270,200	\$73,348,500	\$77,749,410	\$59,740,000	\$61,532,200	\$57,191,500
Machinery repairs and maintenance	\$58,500,000	\$61,425,000	\$58,636,000	\$62,154,160	\$60,718,500	\$62,540,055	\$56,763,500
Operator and hired labor	\$55,016,000	\$57,766,700	\$58,957,000	\$62,494,420	\$58,298,000	\$60,046,940	\$56,175,000
Operating interest @ 7% x 1/2 year	\$26,052,000	\$27,354,600	\$46,812,500	\$49,621,250	\$28,016,000	\$28,856,480	\$27,820,000
Miscellaneous*	-	-	-	-	-	-	-
<b>Total Operating Costs</b>	<b>\$677,040,000</b>	<b>\$710,892,000</b>	<b>\$1,148,163,500</b>	<b>\$1,217,053,310</b>	<b>\$828,377,500</b>	<b>\$853,228,825</b>	<b>\$883,659,500</b>
<b><i>Estimated Ownership Costs</i></b>							
Farm business overhead	\$21,840,000	\$22,932,000	\$23,112,000	\$24,498,720	\$22,248,000	\$22,915,440	\$24,075,000
Machinery overhead	\$90,896,000	\$95,440,800	\$99,991,500	\$105,990,990	\$98,262,000	\$101,209,860	\$92,608,500
Machinery depreciation	\$114,868,000	\$120,611,400	\$131,877,500	\$139,790,150	\$123,497,000	\$127,201,910	\$112,617,500
Real estate charge	\$559,000,000	\$586,950,000	\$650,025,000	\$689,026,500	\$579,890,000	\$597,286,700	\$714,225,000
<b>Total Ownership Costs</b>	<b>\$786,604,000</b>	<b>\$825,934,200</b>	<b>\$905,006,000</b>	<b>\$959,306,360</b>	<b>\$823,897,000</b>	<b>\$848,613,910</b>	<b>\$943,526,000</b>
<b>Estimated Total Costs</b>	<b>\$1,463,644,000</b>	<b>\$1,536,826,200</b>	<b>\$2,053,169,500</b>	<b>\$2,176,359,670</b>	<b>\$1,652,274,500</b>	<b>\$1,701,842,735</b>	<b>\$1,827,185,500</b>

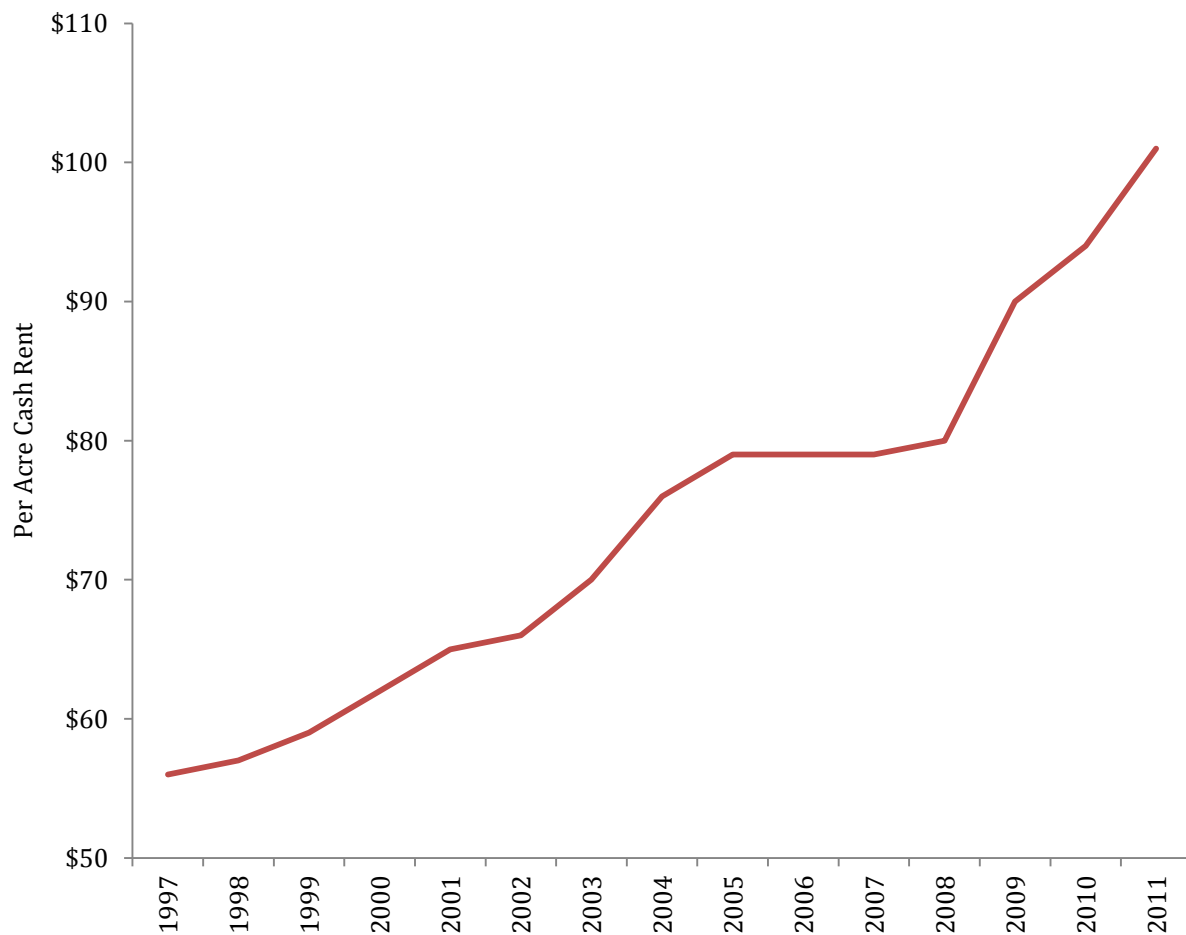
Source: USDA – National Agricultural Statistics Service

**Exhibit 1.5.7 – Missouri Farmland Prices and Appreciation, 1918 to 2011**

Look-Back Period	Time Period	Starting Value Land Price: \$/Acre	Ending Value Land Price: \$/Acre	Compound Annual % Appreciation
13 years	1998 to 2011	\$1,130	\$2,530	6.95%
23 years	1988 to 2011	\$684	\$2,530	6.13%
33 years	1978 to 2011	\$628	\$2,530	4.45%
43 years	1968 to 2011	\$217	\$2,530	6.02%
53 years	1958 to 2011	\$110	\$2,530	6.22%
63 years	1948 to 2011	\$64	\$2,530	6.11%
73 years	1938 to 2011	\$31	\$2,530	6.30%
83 years	1928 to 2011	\$54	\$2,530	4.80%
93 years	1918 to 2011	\$72	\$2,530	3.94%

Source: USDA National Agricultural Statistics Service

**Exhibit 1.5.8 – Missouri Cropland Cash Rents, Per Acre, 1997 to 2011**



Source: USDA National Agricultural Statistics Service

**Exhibit 1.5.9 –Cash Rent Land Value of Acreage Used for Missouri Soybeans**

<b>Year</b>	<b>Land Value</b>
1997	\$274,400,000
1998	\$290,700,000
1999	\$318,600,000
2000	\$319,300,000
2001	\$321,750,000
2002	\$333,300,000
2003	\$350,000,000
2004	\$380,000,000
2005	\$391,050,000
2006	\$406,850,000
2007	\$371,300,000
2008	\$416,000,000
2009	\$481,500,000
2010	\$484,100,000
2011	\$540,350,000

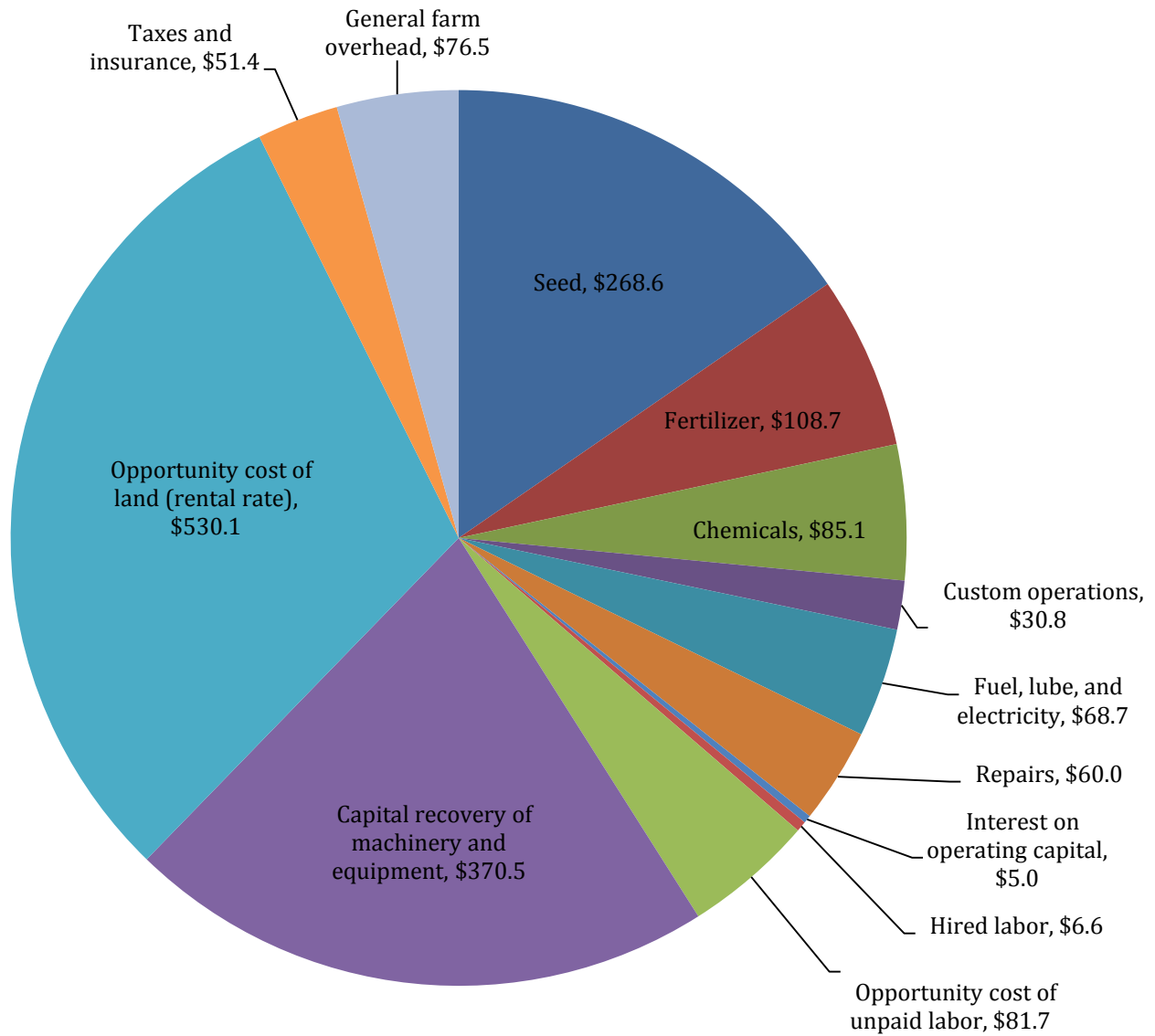
Source: USDA National Agricultural Statistics Service

**Exhibit 1.5.10 – Missouri Total State Herbicide Costs Paid Out by Soybean Farmers**

	<b>2,4-D</b>	<b>Chlorimuron-ethyl</b>	<b>Glyphosate</b>	<b>Trifluralin</b>	<b>Pendimethalin</b>
1991	-	\$7,120,000	-	\$3,368,984	\$3,630,044
1992	-	\$6,587,200	\$1,316,333	\$4,082,995	\$3,493,387
1993	\$134,715	\$6,912,000	\$2,758,577	\$1,901,005	\$4,573,809
1994	\$172,073	\$5,270,400	\$2,787,093	\$2,214,171	\$5,285,720
1995	\$261,927	\$3,848,000	\$7,822,708	\$1,803,123	\$4,254,869
1996	-	\$4,464,000	\$5,309,863	\$5,055,615	\$2,056,392
1997	\$318,073	\$4,864,000	\$6,724,517	\$3,949,348	\$6,781,671
1998	\$109,627	\$1,444,800	\$14,456,977	\$3,335,369	\$3,252,070
1999	-	\$5,382,400	-	\$2,345,369	\$2,271,492
2000	-	\$6,092,800	\$17,009,723	\$815,455	\$2,205,780
2001	-	\$1,587,200	\$16,271,339	\$1,112,118	\$841,968
2002	\$247,047	\$1,785,600	\$22,350,595	-	-
2004	\$374,881	\$1,702,400	\$22,231,510	\$321,176	\$243,569
2006	\$260,207	\$1,556,800	\$21,082,615	-	-
2007	-	-	\$20,215,849	-	-
2008	-	-	\$32,661,366	-	-
2009	-	-	\$22,943,040	-	-
2010	-	-	\$35,743,500	-	-
2011	-	-	\$23,887,500	-	-

Source: USDA/NASS and estimated.

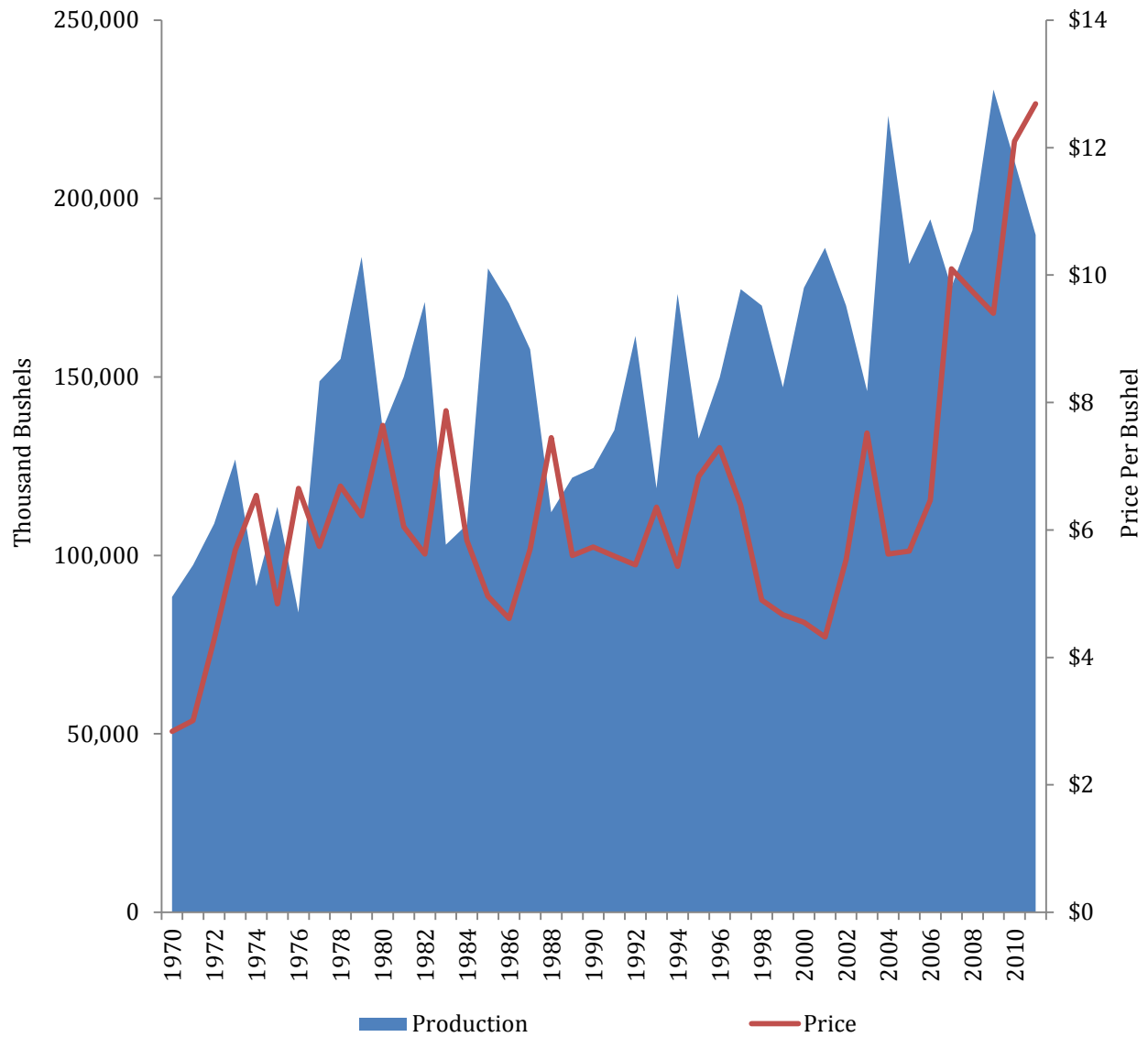
**Exhibit 1.5.11 – Soybean Production Dollars Spent, 2008 to 2010 Average, Millions**



Source: USDA Economic Research Service, USDA National Agricultural Statistics Service and University of Missouri Extension

## 1.6. Farm Revenue and Profits

Exhibit 1.6.1 - Missouri Season Average Farm Price and Production, 1970 to 2011



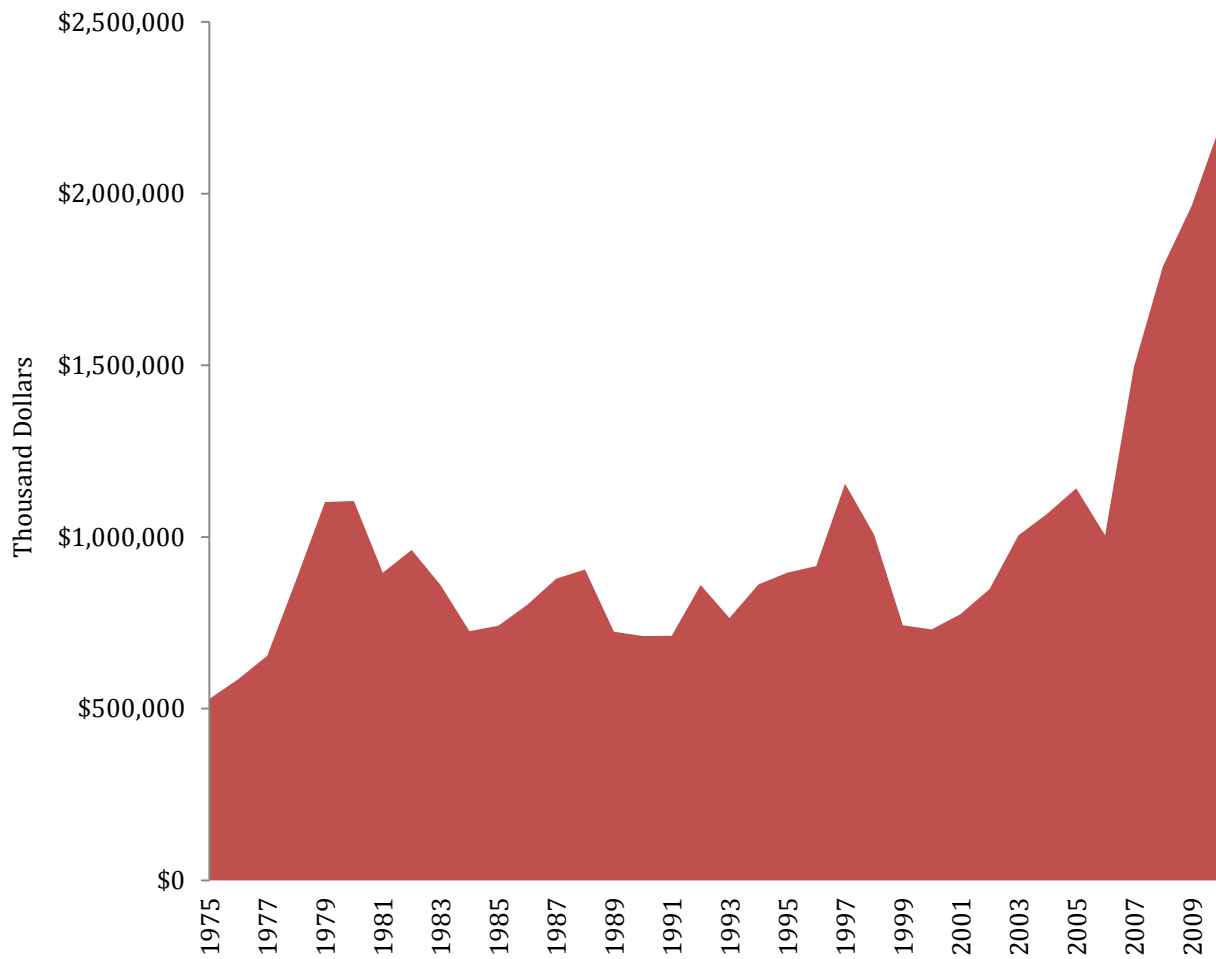
Source: USDA National Agricultural Statistics Service

**Exhibit 1.6.2 – Missouri Leading Commodities for Cash Receipts, 2008 to 2010**

	2008	2009	2010	Three-Year Average
Soybeans	\$1,787,765,000	\$1,965,489,000	\$2,202,942,000	\$1,985,398,667
Corn	\$1,695,154,000	\$1,434,104,000	\$1,527,645,000	\$1,552,301,000
Cattle and calves	\$1,265,139,000	\$1,224,631,000	\$1,408,910,000	\$1,299,560,000
Hogs	\$870,817,000	\$765,545,000	\$783,628,000	\$806,663,333
Turkeys	\$371,070,000	\$305,250,000	\$364,932,000	\$347,084,000

Source: USDA Economic Research Service

**Exhibit 1.6.3 – Missouri Cash Receipts for Soybeans, 1975 to 2010**



Source: USDA Economic Research Service

**Exhibit 1.6.4 – Top Crops’ Share of Missouri Total Farm Receipts, 2008 to 2010**

	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Three-Year Average</b>
Soybeans	21.5%	25.7%	26.5%	24.6%
Corn	20.4%	18.8%	18.4%	19.2%
Cattle and calves	15.2%	16.0%	17.0%	16.1%
Hogs	10.5%	10.0%	9.4%	10.0%
Turkeys	4.5%	4.0%	4.4%	4.3%

*Source: USDA Economic Research Service*

**Exhibit 1.6.5 – Missouri Top Crops’ Share of U.S. Total Cash Receipts, Per Crop, 2008 to 2010**

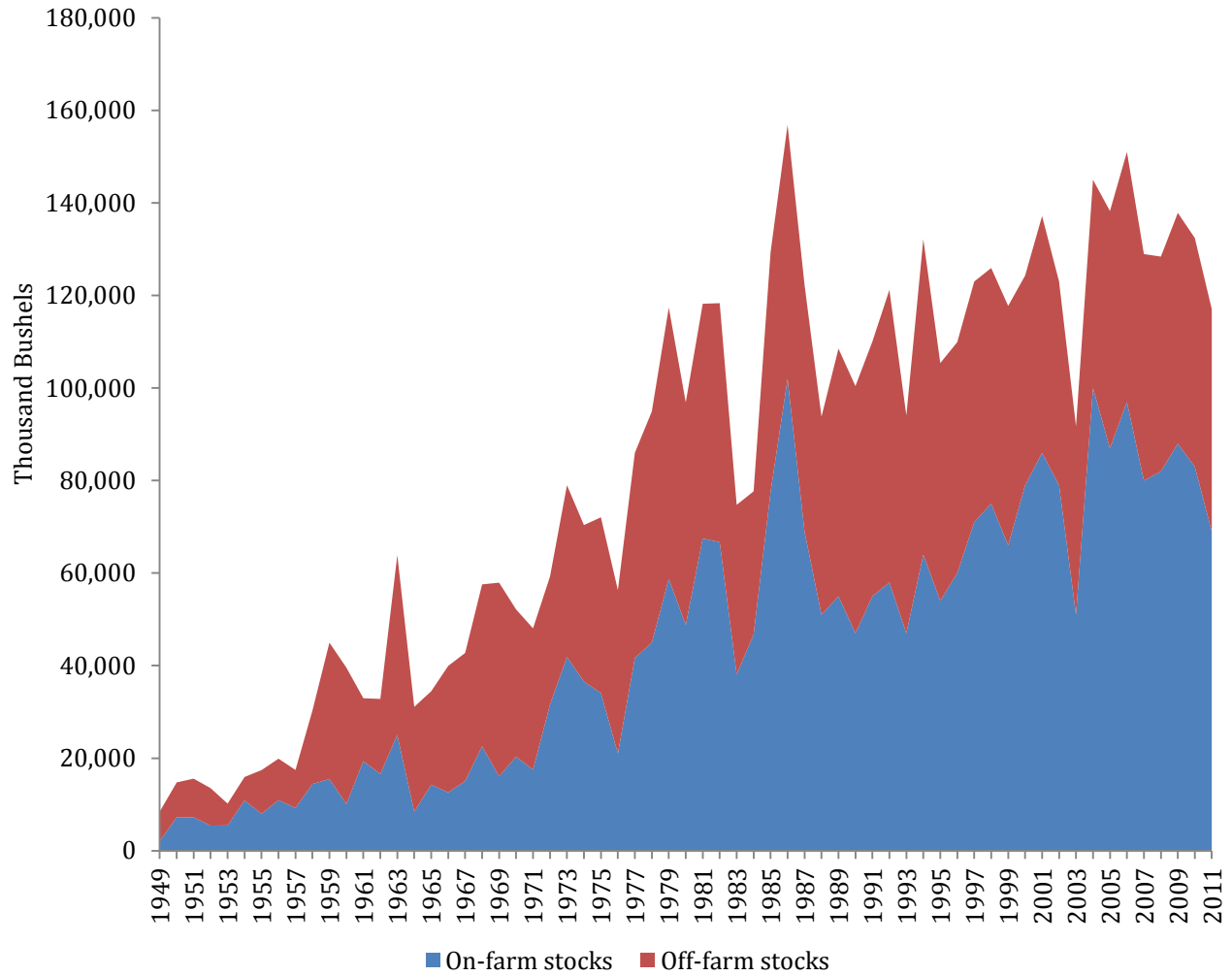
	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Three-Year Average</b>
Soybeans	6.8%	5.8%	6.6%	6.4%
Corn	3.5%	3.4%	3.4%	3.4%
Cattle and calves	2.6%	2.8%	2.7%	2.7%
Hogs	5.4%	5.2%	4.4%	5.0%
Turkeys	8.3%	8.5%	8.3%	8.4%

*Source: USDA Economic Research Service*

## Chapter 2: Beyond the Farm

### 2.1 Storage

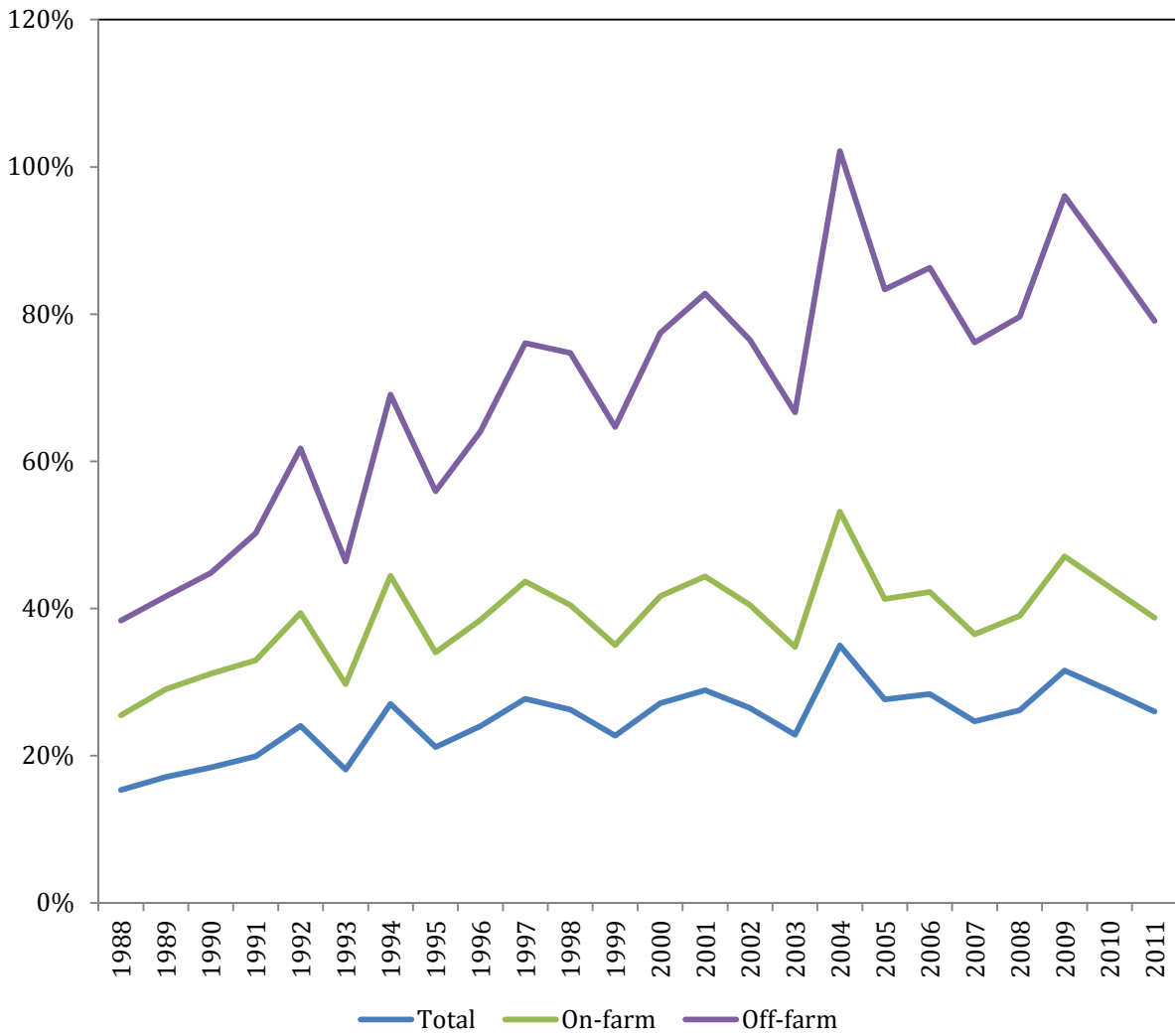
Exhibit 2.1.1 – Missouri Soybean Stocks on Dec. 1, 1949, to Dec. 1, 2011



Source: USDA National Agricultural Statistics Service

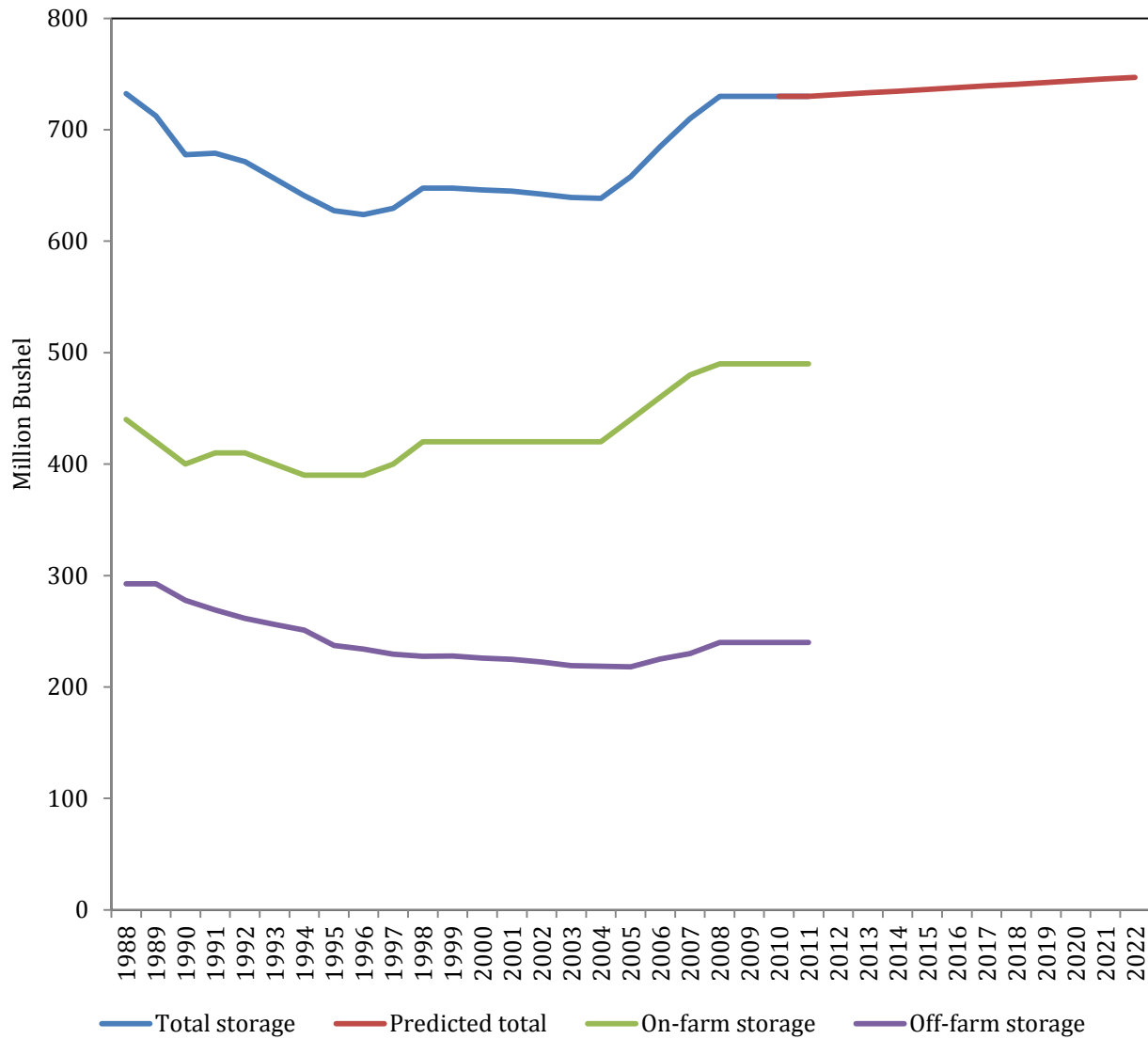


**Exhibit 2.1.2 – Percent of Missouri Soybean Crop Relative to Given Categories of Storage Capacity**



Source: USDA National Agricultural Statistics Service

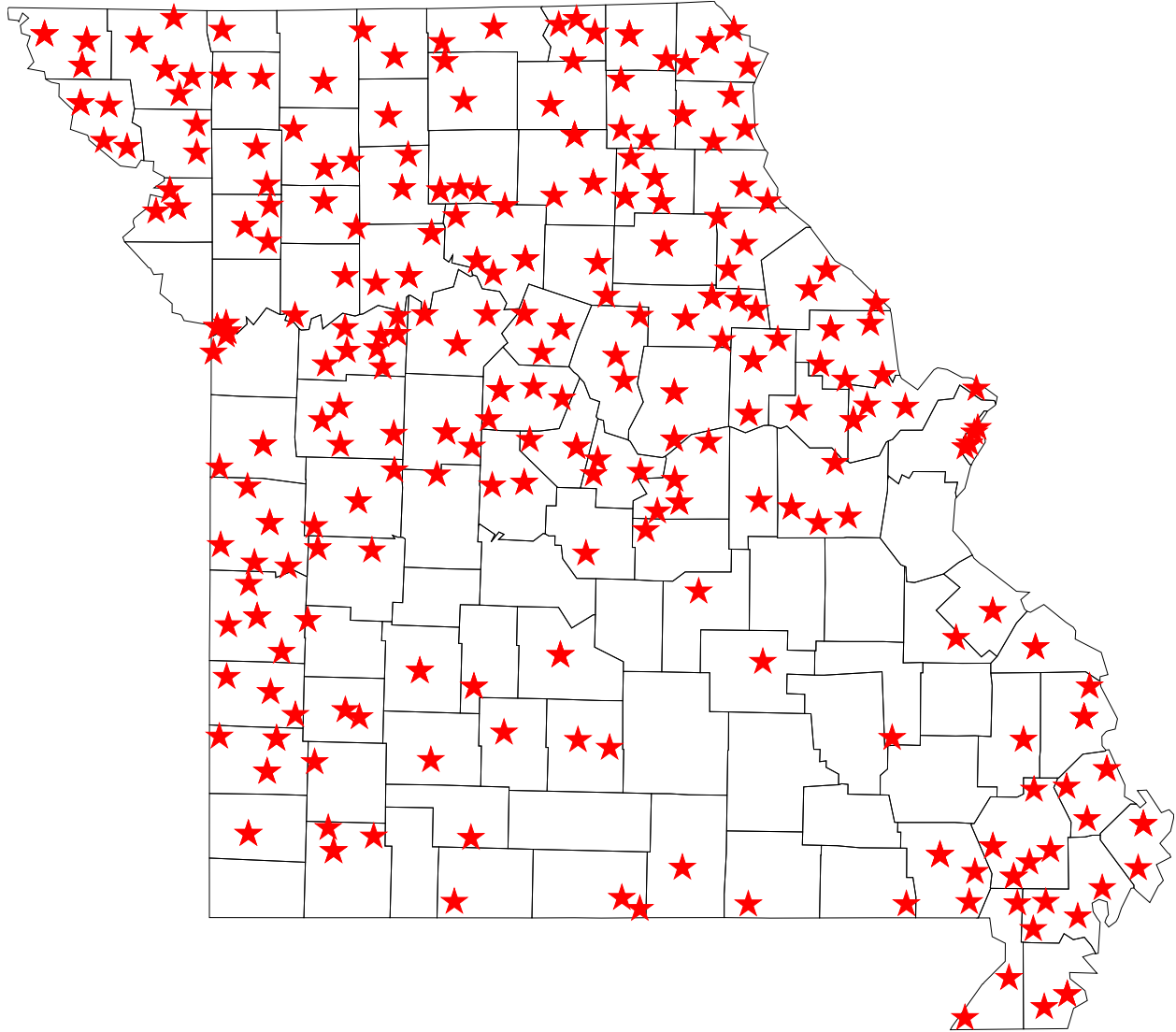
**Exhibit 2.1.3 – Missouri On-Farm, Off-Farm and Total Storage Capacity and Predicted Storage Capacity through 2022**



Source: USDA National Agricultural Statistics Service and Value Ag, LLC

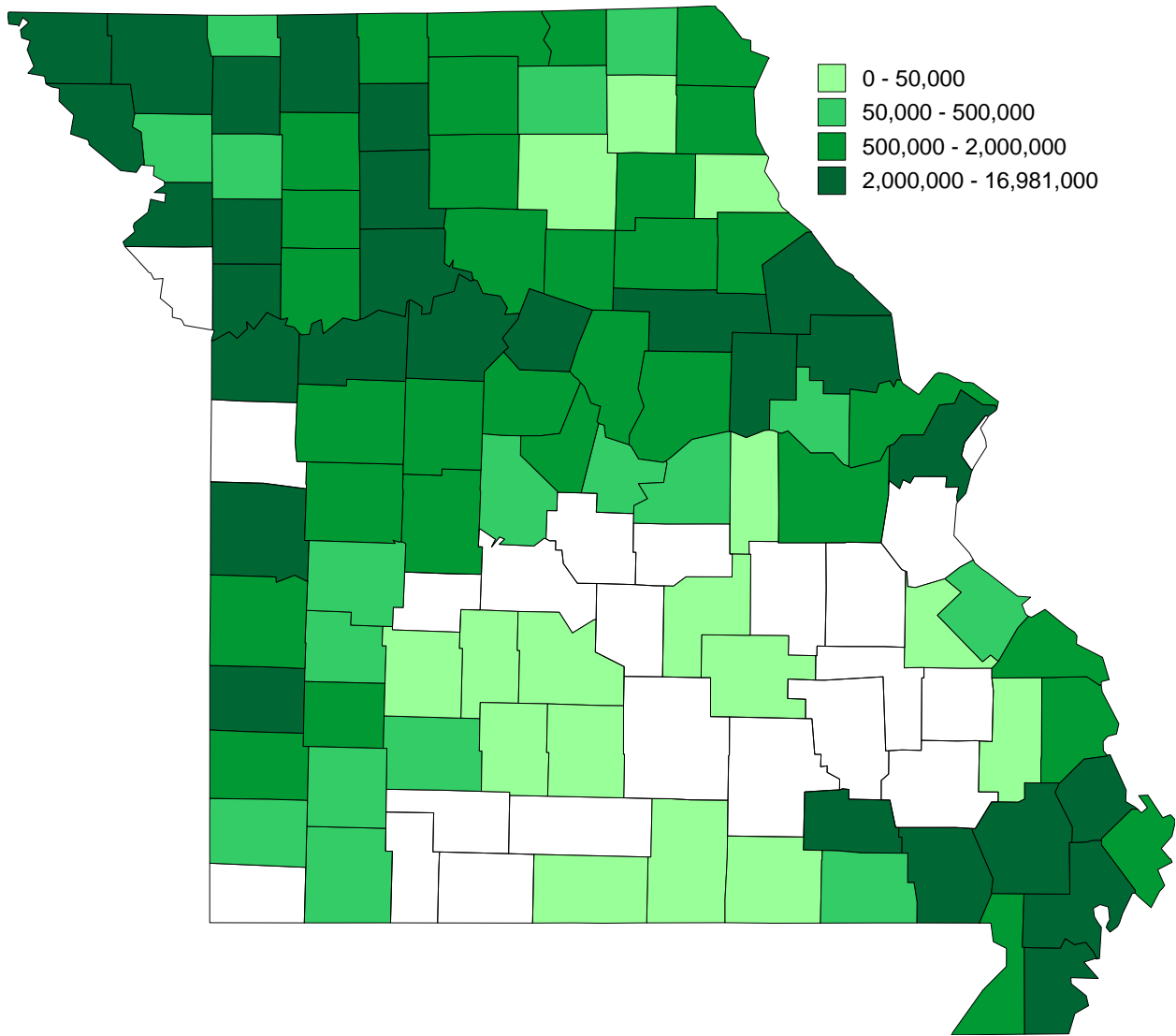
## 2.2 Commercial Storage

**Exhibit 2.2.1 - Locations of Missouri Grain Elevators**



*Source: MDA Grain Dealer Database*

**Exhibit 2.2.2 – One-Time Capacity (Bushels) of Missouri Grain Elevators**



*Source: MDA Grain Dealer Database*

*\* Note: Counties without contributing data are not shaded.*

## 2.3 Transportation

**Exhibit 2.3.1 – Assumed Share of Soybean Shipments from Farms by Vehicle Size**

	Wagon- less than 500 bu.	Wagon- 500 bu. or more	Single Axle Truck	Tandem Axle Truck	Semi
Average	9%	16%	4%	7%	65%

Source: Iowa Transportation Study

**Exhibit 2.3.2 – Modes of Missouri Commodity Transportation from Elevators, Shipment Value, Millions of Dollars**

	2002	Percent of Total	2007	Percent of Total
All Commodities	\$185,392	100.0%	\$225,954	100%
Truck, single mode	\$134,904	72.8%	\$162,243	71.8%
For-hire truck, single mode	\$77,930	42.0%	\$94,645	41.9%
Private truck, single mode	\$56,727	30.6%	\$67,598	29.9%
Rail, single mode	\$19,652	10.6%	\$7,221	3.2%
Shallow draft, single mode	\$1,043	0.6%	\$2,966	1.3%
Cereal Grains	\$2,150	100.0%	\$4,085	100.0%
Truck total	\$980	45.0%	S	S
For-hire truck	\$885	41.0%	\$73	1.8%
Rail	\$756	35.0%	\$1,098	26.0%
Water	\$370	17.0%	\$1,608	39.4%
Shallow draft	\$370	17.0%	\$11,634	39.3%
Animal Feed and Products of Animal Origin	\$1,839	100.0%	\$2,297	100.0%
Truck total	\$1,675	91.0%	\$2,255	98.1%
For-hire truck	\$736	40.0%	\$1,508	65.6%
Private truck			\$747	32.5%
Rail	\$129	7.0%	\$29	1.3%
Other Prepared Foodstuffs and Fats and Oil	\$8,545	100.0%	\$10,087	100.0%
Truck total	\$7,801	91.0%	\$9,301	92.2%
For-hire truck	\$4,211	49.0%	\$5,855	58.0%
Private truck	\$3,590	42.0%	\$3,446	34.2%
Rail	\$472	5.0%	\$552	5.5%

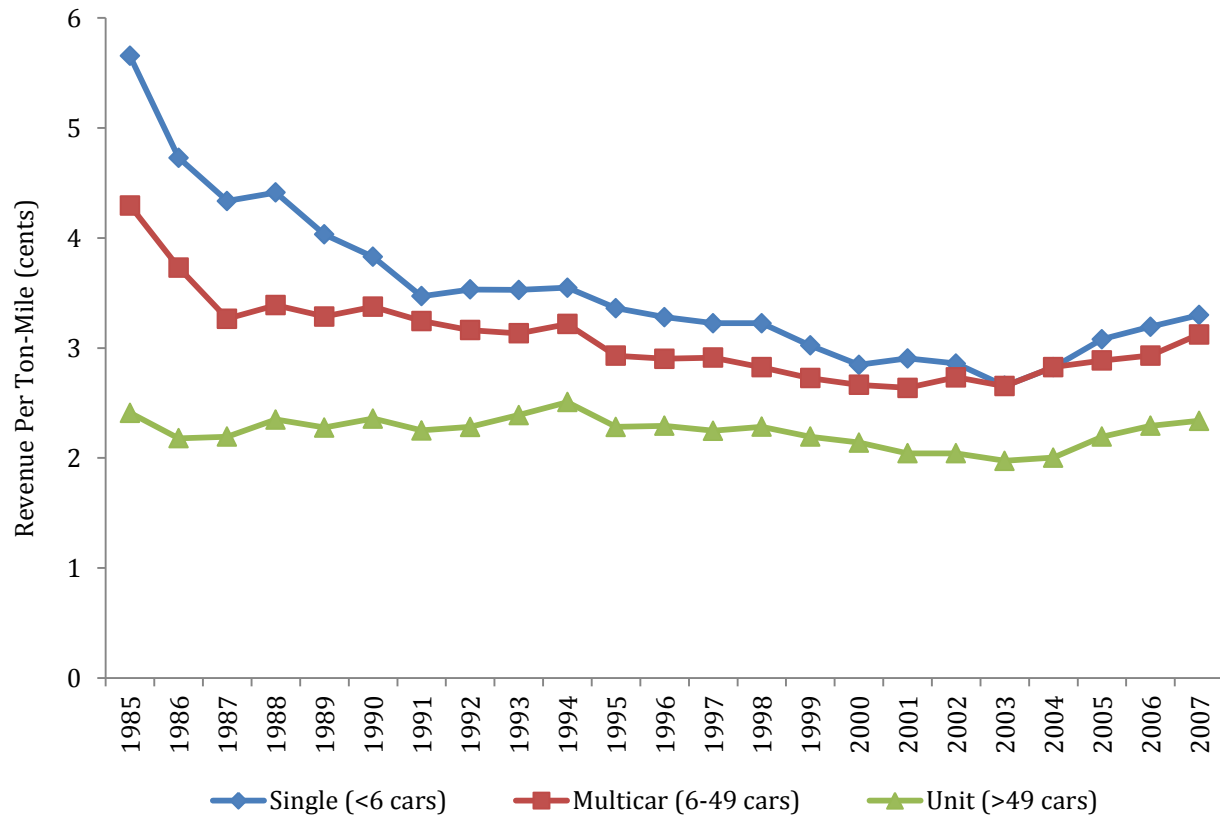
Source: Department of Transportation Commodity Flow Survey

**Exhibit 2.3.3 – Modes of Missouri Commodity Transportation from Elevators,  
Shipment Volume, Thousands of Tons**

	<b>2002</b>	<b>Percent of Total</b>	<b>2007</b>	<b>Percent of Total</b>
All Commodities	254,827	100.0%	305,184	100.0%
Truck, single mode	189,434	74.3%	75	42.3%
For-hire truck, single mode	98,150	38.5%	31	30.8%
Private truck, single mode	86,588	34.0%	45	11.5%
Rail, single mode	31,118	12.2%	7	17.6%
Shallow draft, single mode	S	S	10	28.7%
Cereal Grains	22,548	100.0%	29,614	100.0%
Truck total	10,318	45.0%	S	S
For-hire truck	S	S	475	1.6%
Rail	7,473	33.0%	7,961	26.9%
Water	4,311	19.0%	11,634	39.3%
Shallow draft	4,311	19.0%	11,634	39.3%
Animal Feed and Products of Animal Origin	S	S	6,328	100.0%
Truck total	S	S	5,905	93.3%
For-hire truck	S	S	3,278	51.8%
Private truck			2,627	41.5%
Rail	790	5.0%	176	2.8%
Other Prepared Foodstuffs and Fats and Oil	12,232	100.0%	11,449	100.0%
Truck total	10,117	82.0%	9,864	86.2%
For-hire truck	4,589	37.0%	5,587	48.8%
Private truck	S	S	4,277	37.4%
Rail	1,617	13.0%	1,429	12.5%

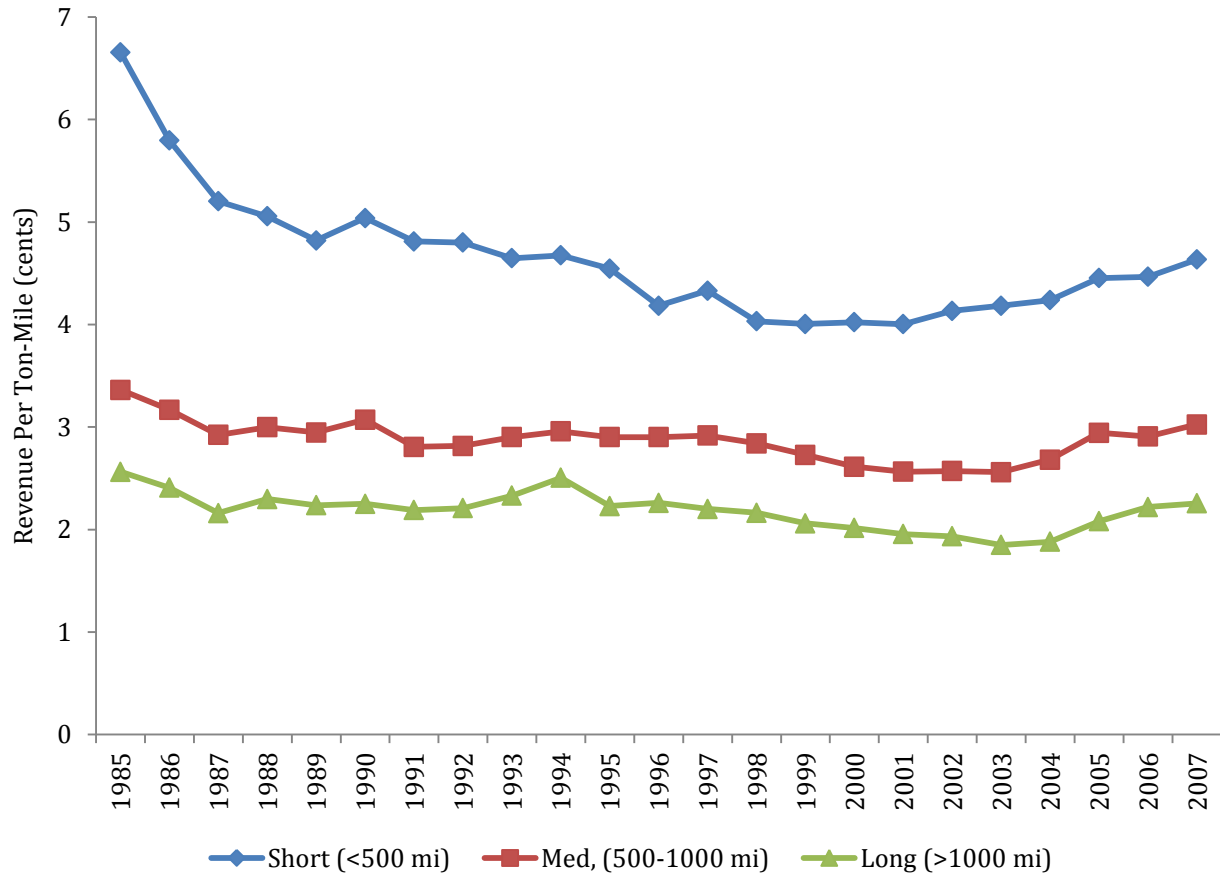
*Source: Department of Transportation Commodity Flow Survey*

**Exhibit 2.3.4 – Grain Rates and Train Type**



Source: Surface Transportation Board, 2009

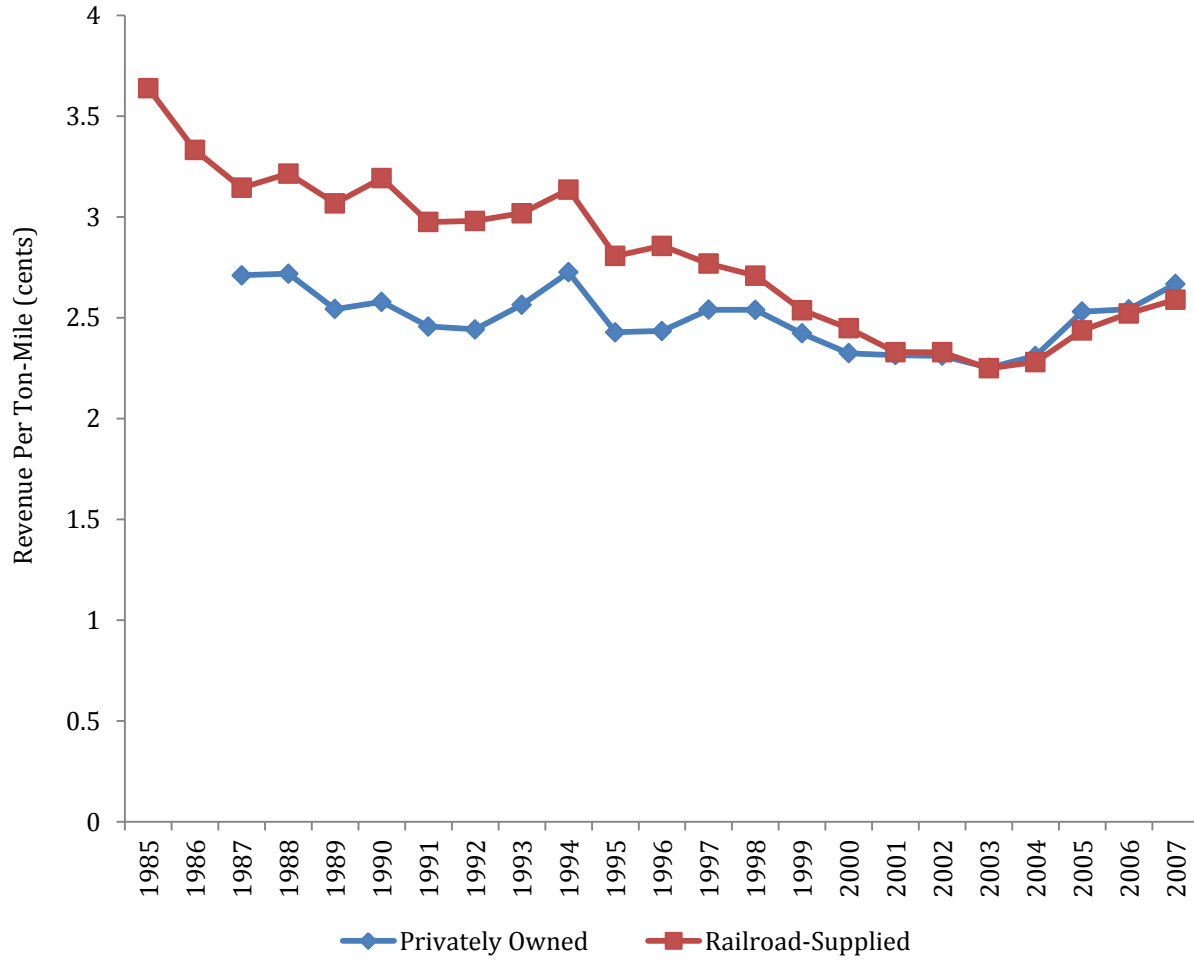
**Exhibit 2.3.5 – Grain Rates and Shipment Distance**



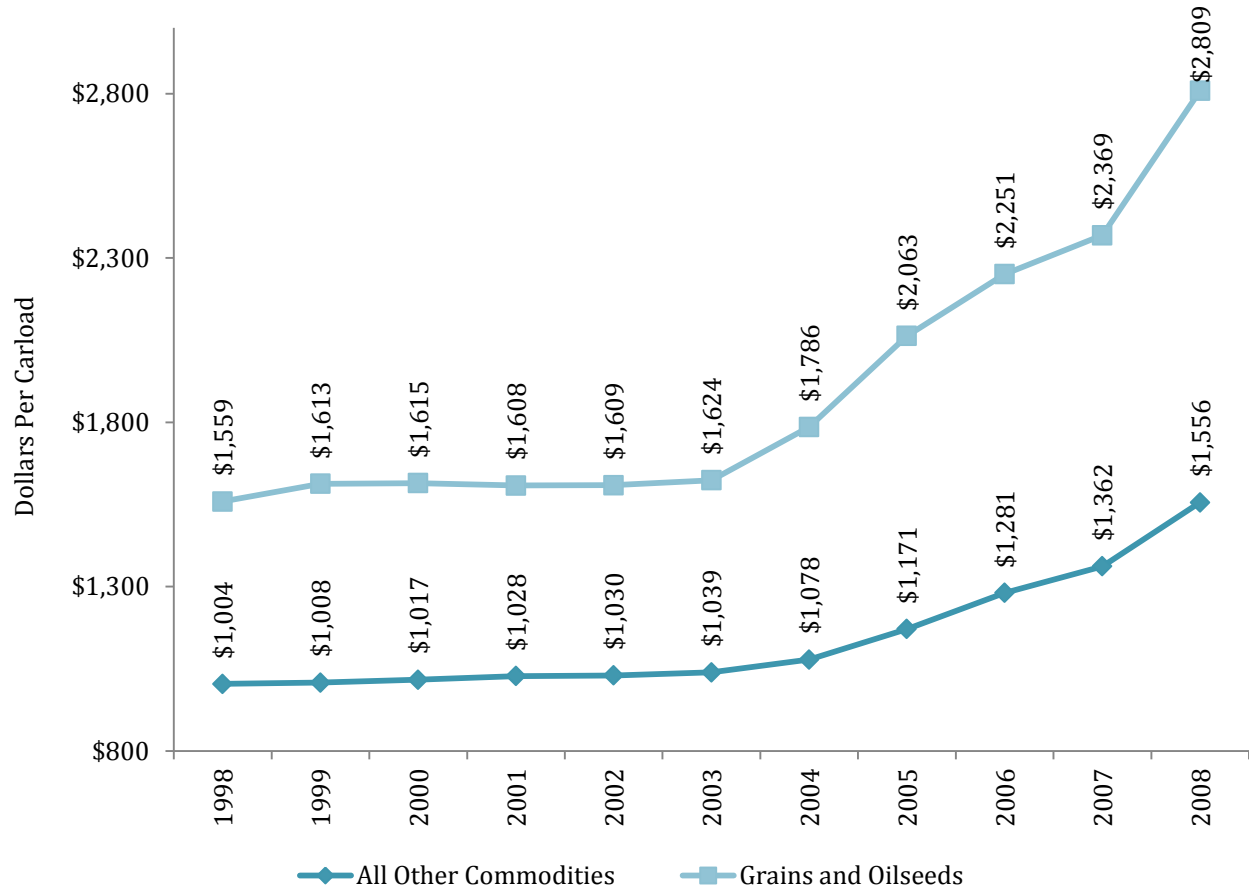
Source: Surface Transportation Board, 2009



**Exhibit 2.3.6 – Grain Rates and Car Ownership**



**Exhibit 2.3.7 – Historical Average Freight Revenue Per Grains and Oilseeds Carload**



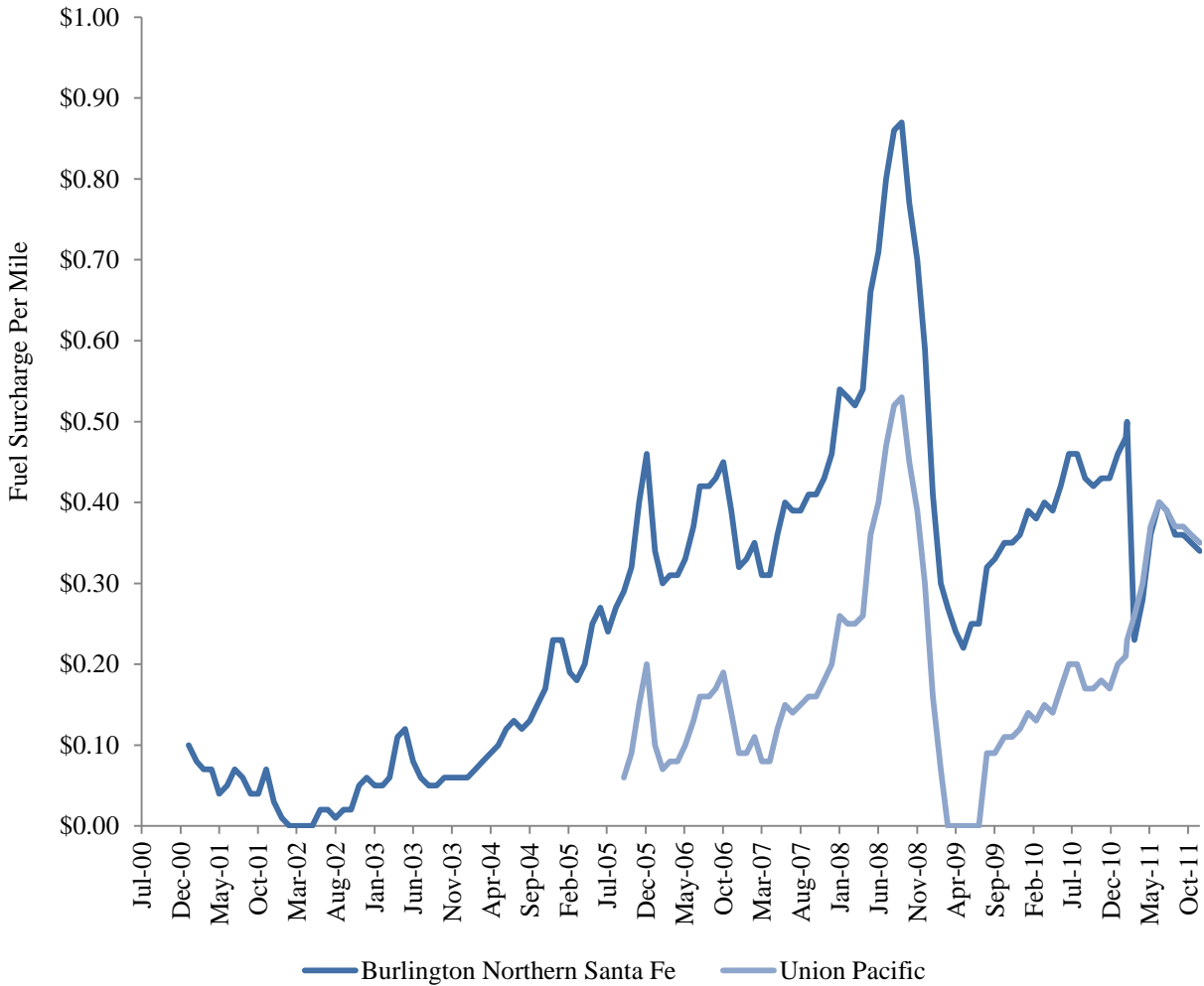
Source: Association of American Railroads, Freight Commodity Statistics

### Exhibit 2.3.8 – Freight Revenue for Commodity Rail Shipments

		First Quarter 2011				Second Quarter 2011				Third Quarter 2011			
		Car Loads	Tons	Gross Freight Revenue Per Car	Gross Freight Revenue Per Ton	Car Loads	Tons	Gross Freight Revenue Per Car	Gross Freight Revenue Per Ton	Car Loads	Tons	Gross Freight Revenue Per Car	Gross Freight Revenue Per Ton
Burlington Northern Santa Fe	Field crops	199,621	17,592,254	\$3,249	\$36.87	196,581	17,075,484	\$3,248	\$37.39	180,452	15,119,959	\$3,164	\$37.76
	Oilseeds and nuts	33,603	3,431,988	\$4,355	\$42.64	11,585	1,167,622	\$4,464	\$44.29	14,755	1,378,830	\$4,322	\$46.25
	Soybeans	31,208	3,223,096	\$4,326	\$41.89	9,423	979,223	\$4,404	\$42.38	1,268	112,543	\$4,754	\$53.56
Consolidated U.S. Railroad Companies	Field crops	30,721	3,058,736	\$1,729	\$17.37	23,712	2,343,486	\$1,477	\$14.94	25,421	2,510,482	\$1,364	\$13.81
	Oilseeds and nuts	11,134	1,133,745	\$2,032	\$19.96	3,386	342,303	\$1,252	\$12.39	3,536	352,066	\$1,360	\$13.66
	Soybeans	10,824	1,109,827	\$2,061	\$20.10	3,034	313,991	\$1,263	\$12.21	3,253	330,346	\$1,371	\$13.50
CSX Transportation	Field crops	54,034	5,150,331	\$1,535	\$16.38	50,404	4,571,051	\$2,007	\$22.13	40,370	3,927,042	\$2,031	\$20.88
	Oilseeds and nuts	12,185	1,141,705	\$1,535	\$16.38	9,131	900,741	\$1,698	\$17.21	5,359	476,526	\$1,738	\$19.55
	Soybeans	11,775	1,107,035	\$1,516	\$16.13	8,802	873,290	\$1,683	\$16.97	5,054	450,728	\$1,723	\$19.32
Kansas City Southern	Field crops	14,180	1,447,372	\$2,807	\$27.50	18,078	1,834,043	\$2,659	\$26.21	12,611	1,286,543	\$2,067	\$20.26
	Oilseeds and nuts	2,602	262,533	\$2,110	\$20.91	1,203	121,992	\$2,817	\$27.78	317	28,908	\$2,144	\$23.51
	Soybeans	2,402	244,888	\$2,104	\$20.63	1,010	104,846	\$2,911	\$28.05	167	16,109	\$2,213	\$22.95
Northfolk and Southern Combined Railroad Subsidiaries	Field crops	53,915	5,399,305	\$2,094	\$20.91	54,274	5,495,602	\$2,232	\$22.04	45,974	4,636,479	\$2,216	\$21.97
	Oilseeds and nuts	11,326	1,115,737	\$1,667	\$16.93	9,676	958,011	\$1,882	\$19.01	6,678	668,749	\$2,005	\$20.03
	Soybeans	9,947	1,000,903	\$1,597	\$15.87	8,120	831,475	\$1,800	\$17.58	5,377	553,258	\$1,861	\$18.09
Canadian Pacific	Field crops	39,265	3,856,167	\$1,825	\$18.58	42,659	4,209,957	\$1,728	\$17.51	40,669	3,981,239	\$2,054	\$20.98
	Oilseeds and nuts	9,465	918,374	\$1,273	\$13.12	5,857	554,993	\$1,715	\$18.10	5,593	532,890	\$1,672	\$17.55
	Soybeans	7,485	753,061	\$1,154	\$11.47	3,668	369,324	\$1,847	\$18.34	3,703	372,323	\$1,578	\$15.70
Union Pacific Railway	Field crops	99,045	10,154,314	\$3,462	\$33.77	93,587	9,602,513	\$3,670	\$35.77	81,815	8,346,083	\$3,720	\$36.46
	Oilseeds and nuts	18,009	1,841,868	\$3,118	\$30.49	5,649	567,895	\$3,487	\$34.69	3,812	368,096	\$2,744	\$28.42
	Soybeans	16,724	1,737,328	\$3,064	\$29.50	4,434	465,775	\$3,337	\$31.77	2,669	266,791	\$2,052	\$20.53
Averages	Field Crops	70,112	6,665,497	\$2,386	\$24.48	68,471	6,447,448	\$2,432	\$25.14	61,045	5,686,832	\$2,374	\$24.59
	Oilseeds and nuts	14,046	1,406,564	\$2,299	\$22.92	6,641	659,080	\$2,474	\$24.78	5,721	543,724	\$2,284	\$24.14
	Soybeans	12,909	1,310,877	\$2,260	\$22.23	5,499	562,561	\$2,464	\$23.90	3,070	300,300	\$2,222	\$23.38

Source: Surface Transportation Board

**Exhibit 2.3.9 – Railroad Fuel Surcharges**



Source: USDA Agricultural Marketing Service Grain Transportation Datasets

## Chapter 3: Soybean Processing and Use

### 3.1 Soybean Industry

**Exhibit 3.1.1 – Missouri and U.S. Soybean Processing Industry, 2007**

	Missouri	U.S.	MO as a % of U.S.
Establishments (#)	2	120	1.67%
Number of employees (#)	100 to 249	6,019	~ 2.48%
Annual payroll (\$)	(D)	\$300,388,000	(D)
Value added (\$)	(D)	\$4,988,749,000	(D)
Total cost of materials (\$)	(D)	\$14,686,121,000	(D)
Total value of shipments (\$)	(D)	\$19,283,042,000	(D)

*(D) = data withheld to avoid disclosing individual firm data*

*Sources: U.S. Census Bureau, 2002 Economic Census; Minneapolis Fed; and Soybean Meal Information Center*

## 3.2 Whole Soybeans

Exhibit 3.2.1 – Soybeans Crushed or Used at Missouri Oil Mills

2008		2009	
Month and Year	Crushed or Used (Short Tons)	Month and Year	Crushed or Used (Short Tons)
Jan-08	200,206	Jan-09	243,789
Feb-08	180,405	Feb-09	219,825
Mar-08	192,809	Mar-09	226,749
Apr-08	182,706	Apr-09	248,769
May-08	196,875	May-09	232,545
Jun-08	183,092	Jun-09	227,070
Jul-08	120,086	Jul-09	220,314
Aug-08	107,252	Aug-09	194,936
Sep-08	189,374	Sep-09	93,687
Oct-08	237,108	Oct-09	274,044
Nov-08	254,650	Nov-09	350,237
Dec-08	251,902	Dec-09	365,568

2010		2011	
Month and Year	Crushed or Used (Short Tons)	Month and Year	Crushed or Used (Short Tons)
Jan-10	349,956	Jan-11	284,691
Feb-10	313,610	Feb-11	243,203
Mar-10	293,123	Mar-11	262,242
Apr-10	226,887	Apr-11	212,921
May-10	229,012	May-11	196,782
Jun-10	173,527	Jun-11	217,096
Jul-10	237,014	Jul-11	(D)
Aug-10	(D)		
Sep-10	146,992		
Oct-10	301,780		
Nov-10	296,154		
Dec-10	291,527		

(D) = data withheld to avoid disclosing individual firm data  
 Source: U.S. Census Bureau

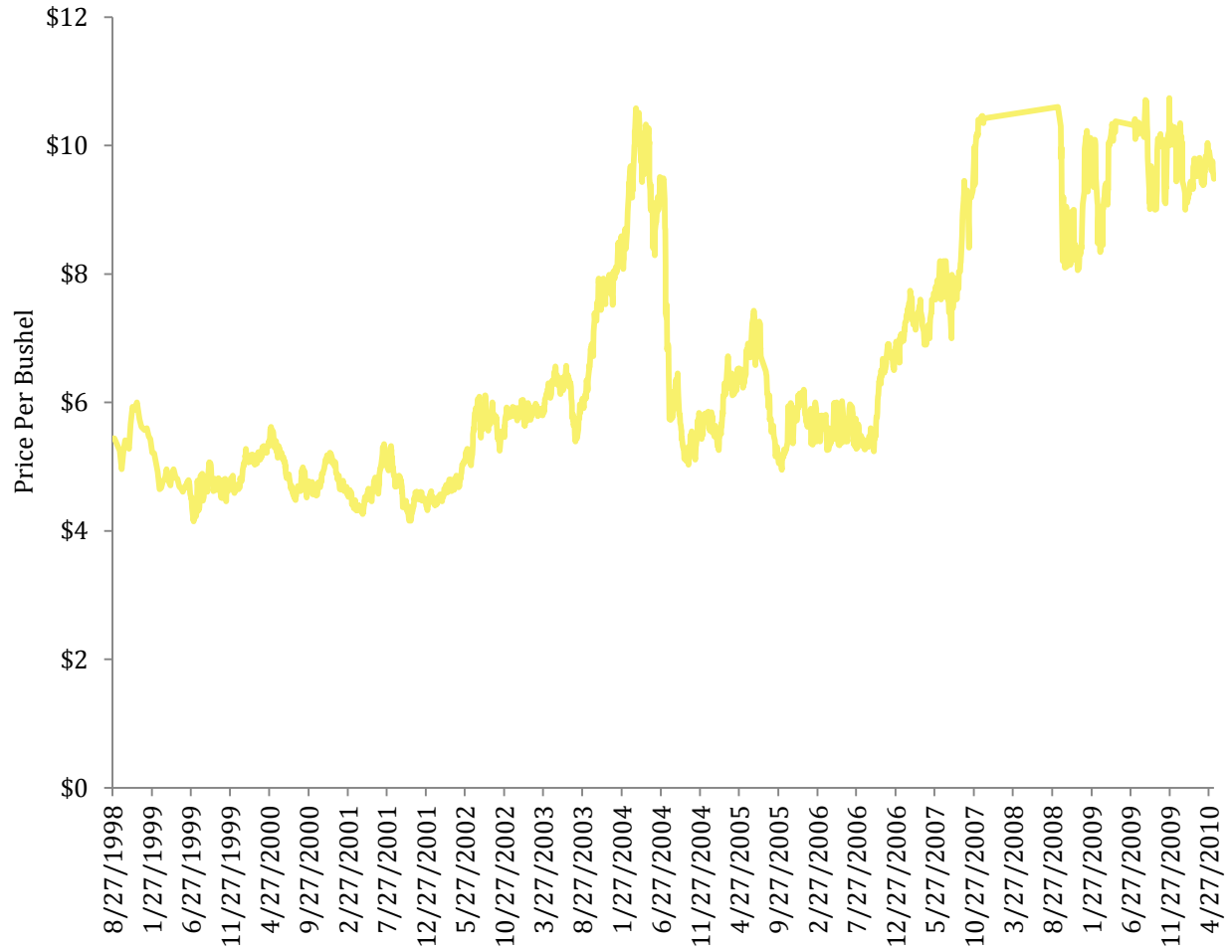
**Exhibit 3.2.2 – 2008-to-2010 Average Crushed or Used Soybeans at Missouri Oil Mills**

<b>Month</b>	<b>Crushed or Used (Short Tons)</b>
January	264,650
February	237,947
March	237,560
April	219,454
May	219,477
June	194,563
July	192,471
August*	151,094
September	143,351
October	270,977
November	300,347
December	302,999

*Source: U.S. Census Bureau*

*\* August computed as a 2008-to-2009 average because data weren't disclosed in August 2010.*

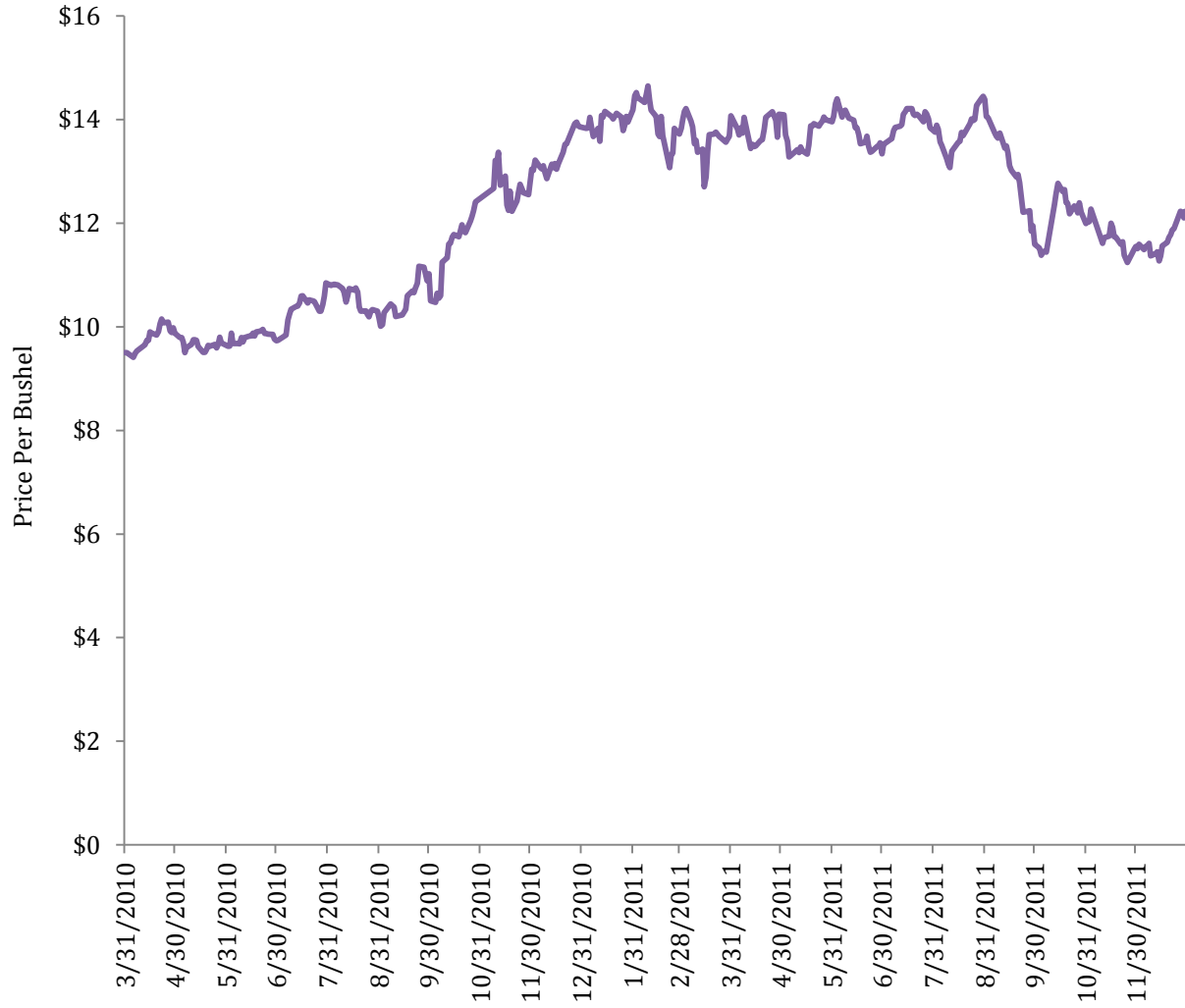
**Exhibit 3.2.3 –St. Louis USDA AMS Soybean Prices**



Source: [CashGrainBids.com](http://CashGrainBids.com)



### Exhibit 3.2.4 -St. Louis CHS Soybean Prices



Source: CashGrainBids.com

**Exhibit 3.2.5 –St. Louis ADM Soybean Prices**



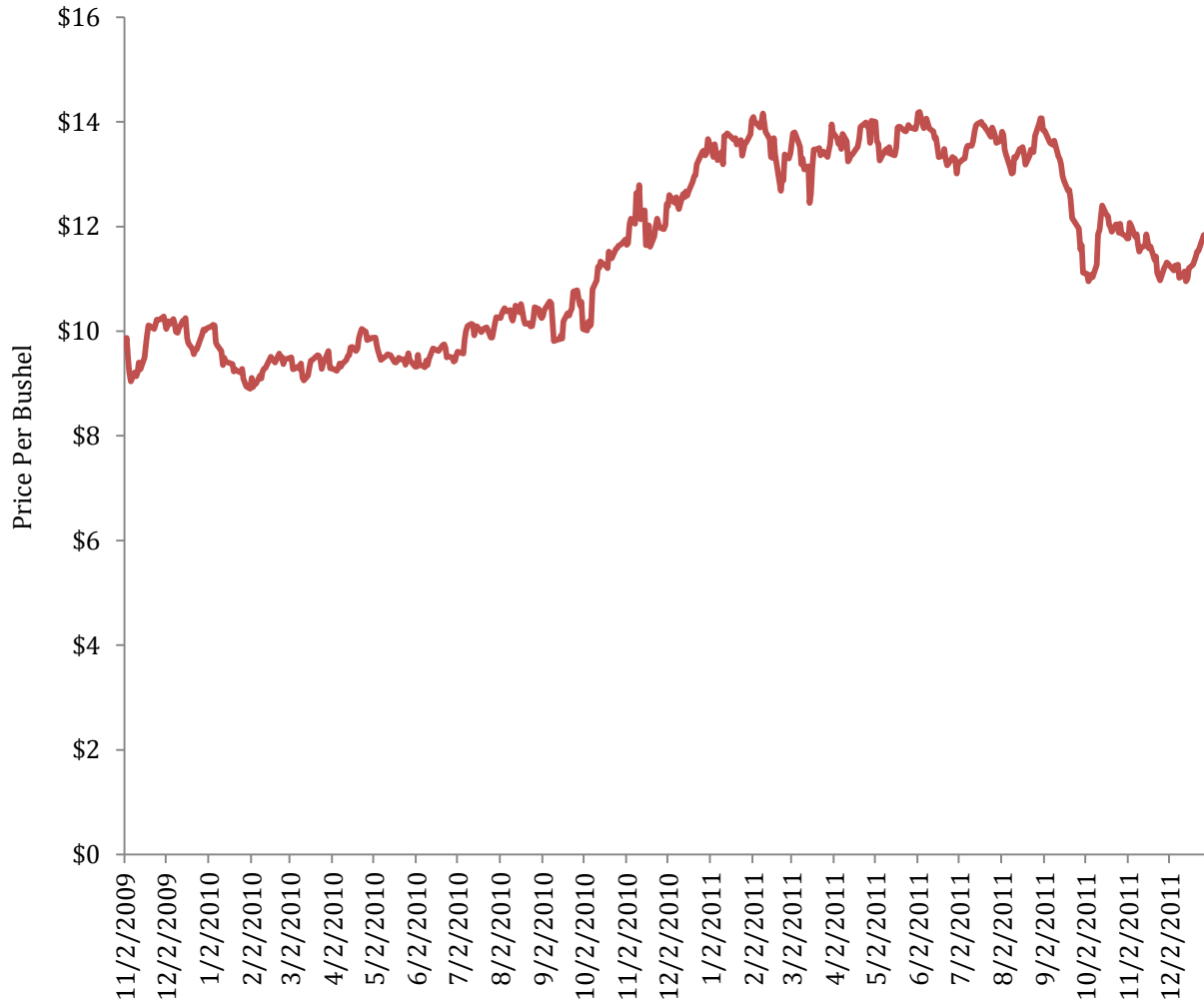
Source: CashGrainBids.com

**Exhibit 3.2.6 –Kansas City USDA AMS Soybean Prices**



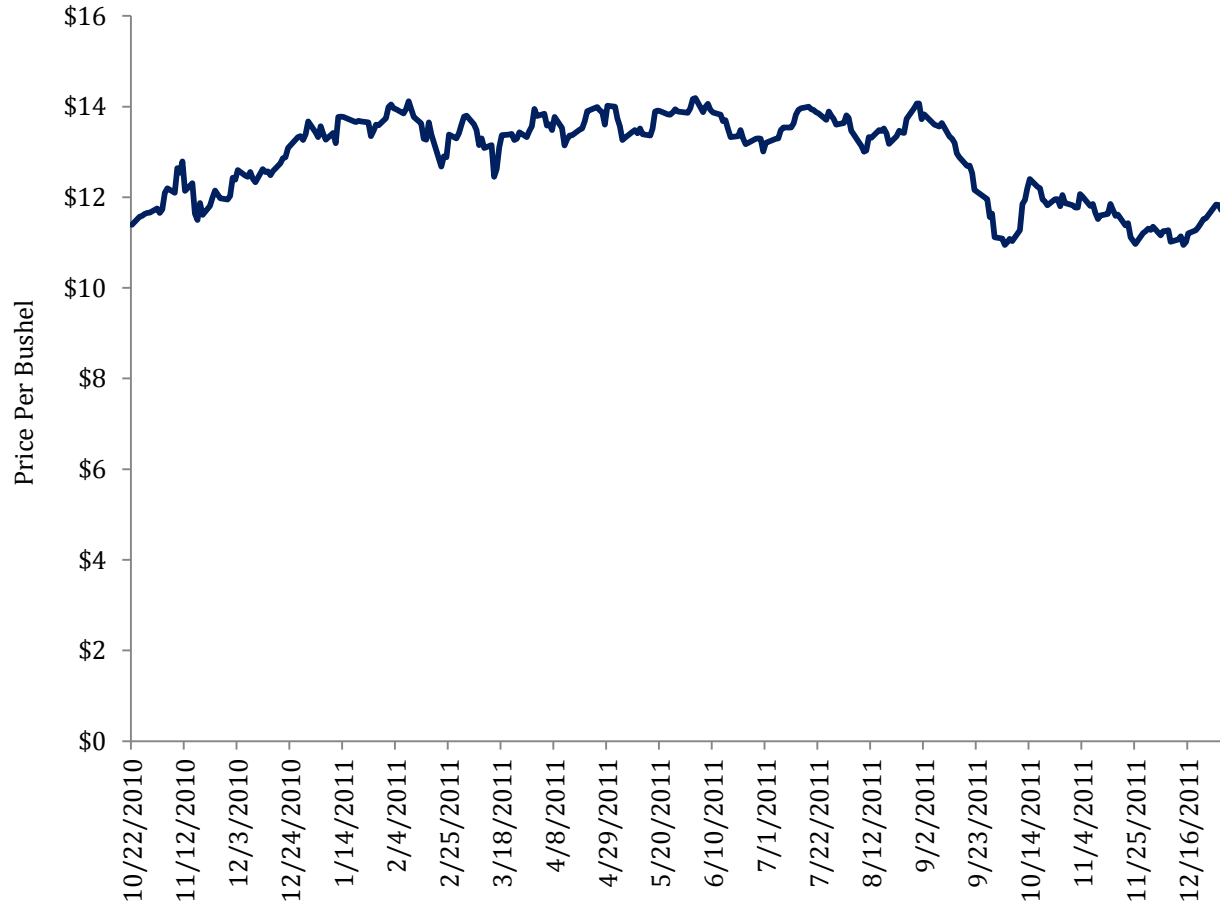
Source: CashGrainBids.com

**Exhibit 3.2.7 –Kansas City Cargill, Chouteau Location, Soybean Prices**



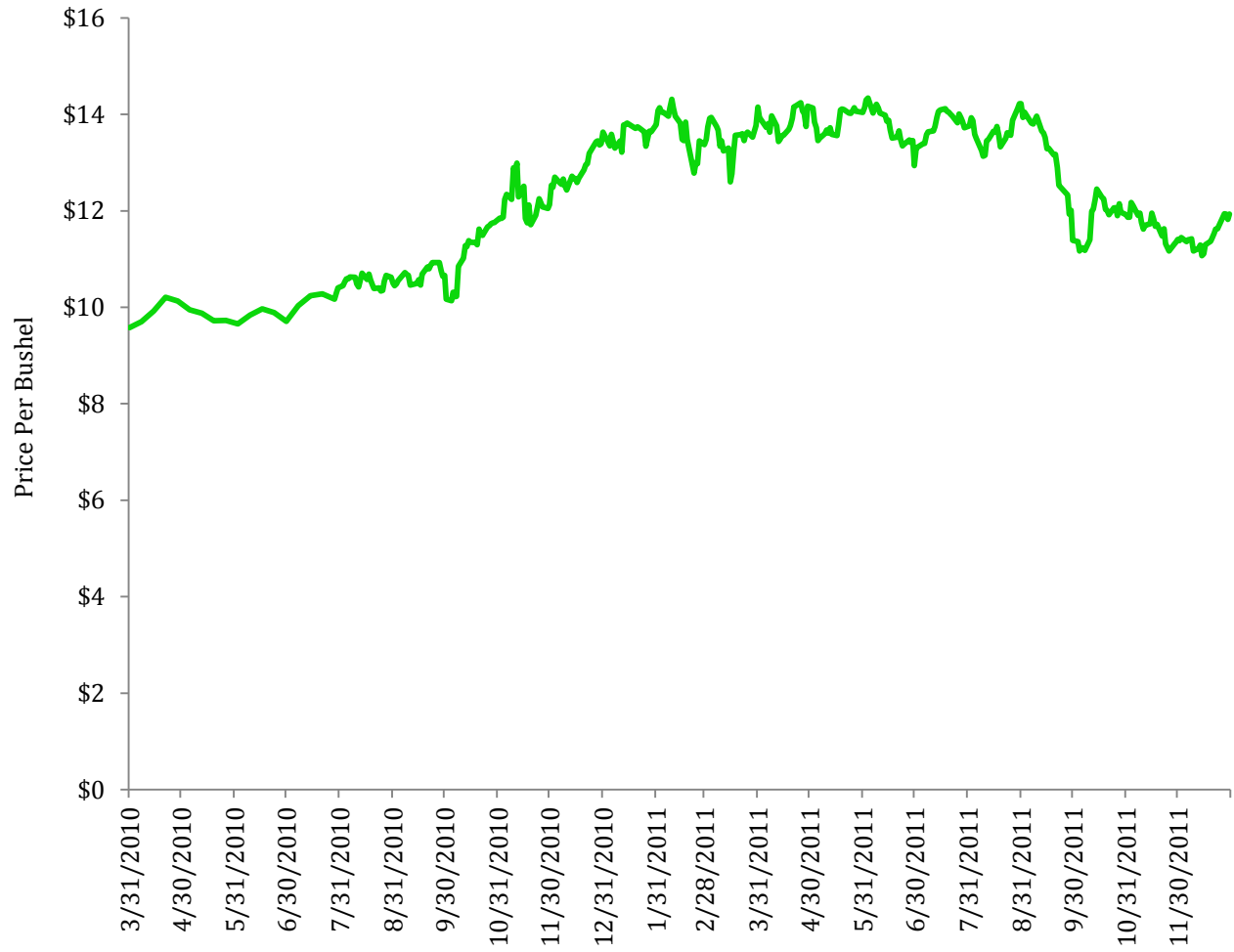
Source: CashGrainBids.com

**Exhibit 3.2.8 –Kansas City Cargill, Katy Location, Soybean Prices**



Source: CashGrainBids.com

**Exhibit 3.2.9 –Kansas City Cargill, GOS Location, Soybean Prices**



Source: CashGrainBids.com

**Exhibit 3.2.10 -Lamar MFA Soybean Prices**



Source: *CashGrainBids.com*

**Exhibit 3.2.11 -Mexico, Mo., MFA Soybean Prices**



Source: CashGrainBids.com



**Exhibit 3.2.12 -Mexico, Mo., ADM Soybean Prices**



Source: *CashGrainBids.com*

**Exhibit 3.2.13 – Higginsville MFA Soybean Prices**



Source: CashGrainBids.com

### 3.3 Soybean Meal

**Exhibit 3.3.1 – Missouri Soybean Meal Consumption by Animal Agriculture**

<b>Species</b>	<b>Projected Consumption (tons)</b>
Beef calves*	169,200
Beef on feed**	29,700
Dairy cattle***	69,750
Market hogs^	204,355
Feeder pigs^^	77,914
Broilers/layers +	704,773
Turkeys ++	236,700
<b>Total</b>	<b>1,492,391</b>

Equivalent soybean bushels	66,328,495
Typical Missouri production (2008 to 2010 average bushels)	210,698,333
Share of typical Missouri production	31%

\*Based on Jan. 1, 2012, calves inventory.

\*\* Based on Jan. 1, 2012, on-feed cattle inventory.

\*\*\* Based on Jan. 1, 2012, milk cows that have calved.

^ Based on 2011 pig crop; 45% assumed to be finished hogs.

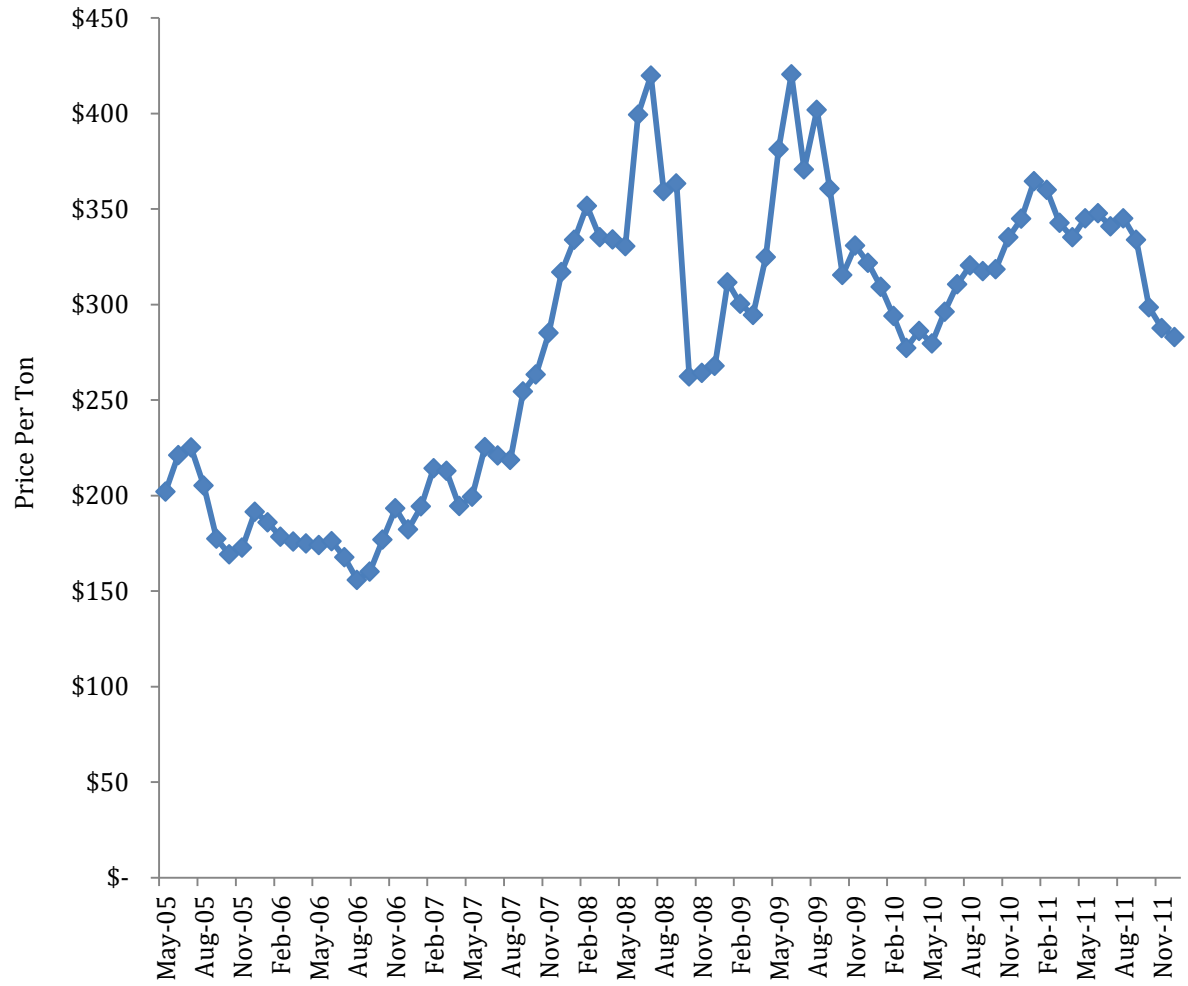
^^ Based on 2011 pig crop; 55% assumed to be feeder pigs.

+ Based on 2011 total young chickens slaughtered.

++ Based on 2011 number of head produced.

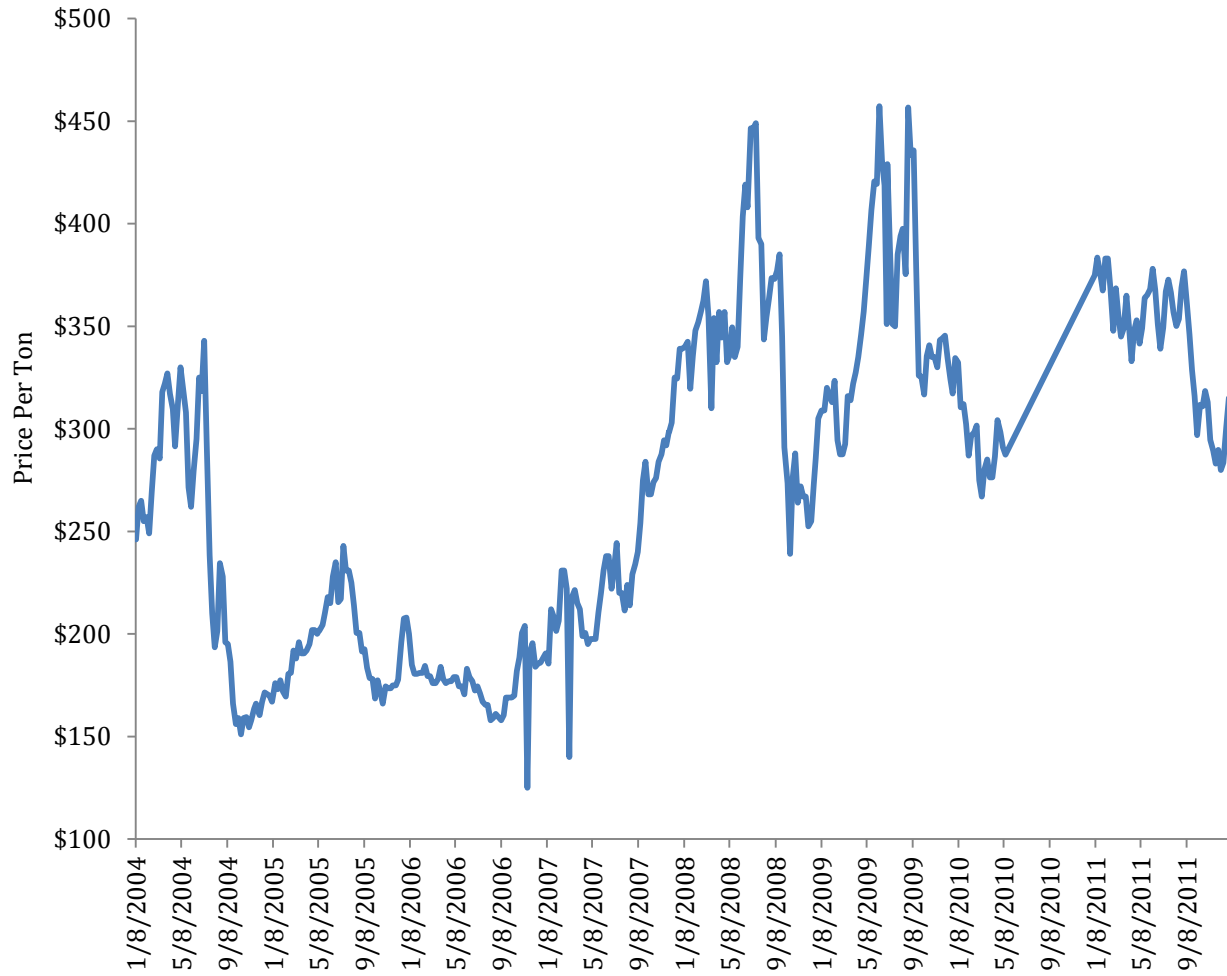
Source: USDA National Agricultural Statistics Service, Iowa State University, Indiana Soybean Alliance and Value Ag, LLC

**Exhibit 3.3.2 – Kansas City High-Protein Soybean Meal Price**



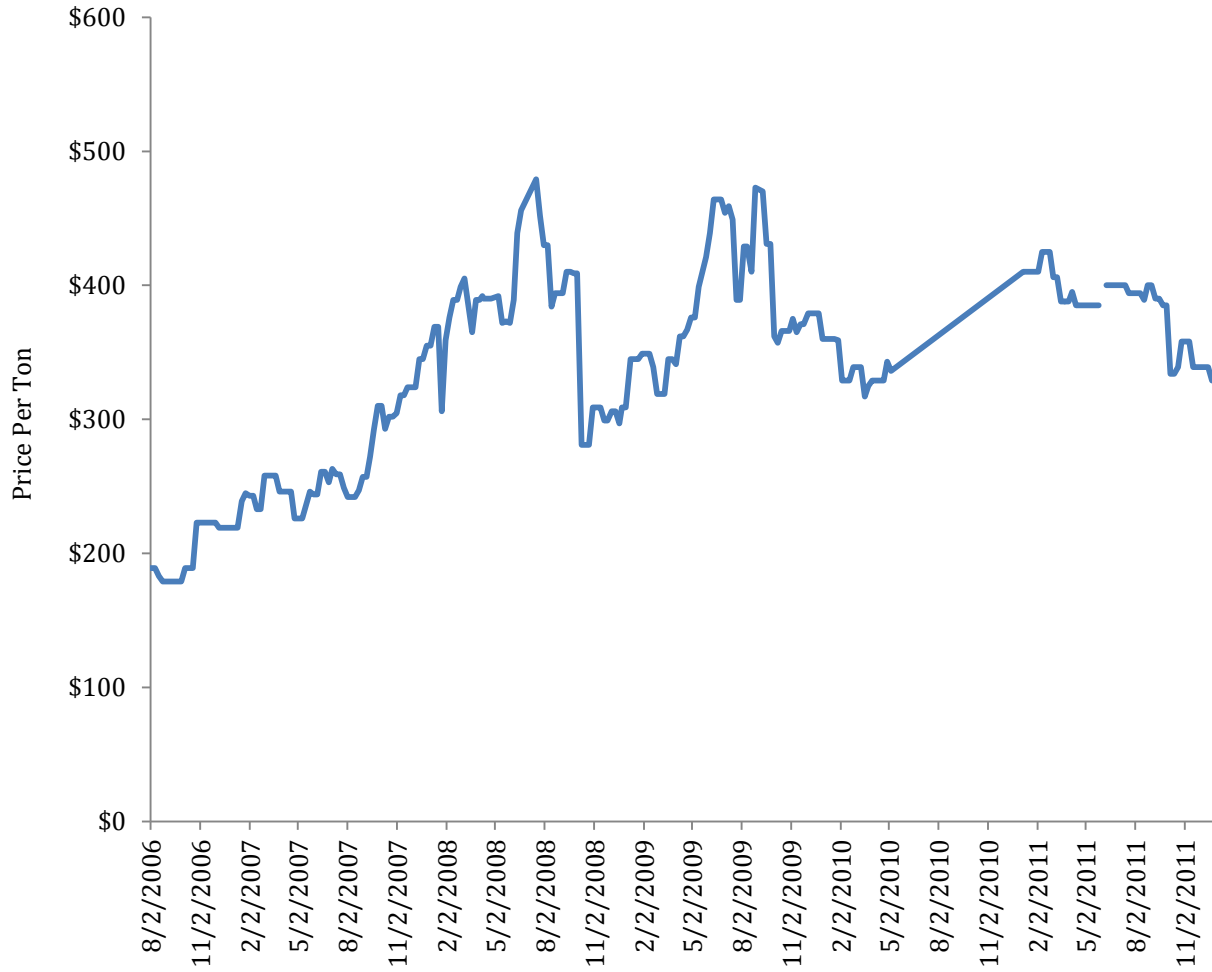
Source: The Jacobsen

**Exhibit 3.3.3 – Price of 48% Soybean Meal, Mexico, Mo., ADM**



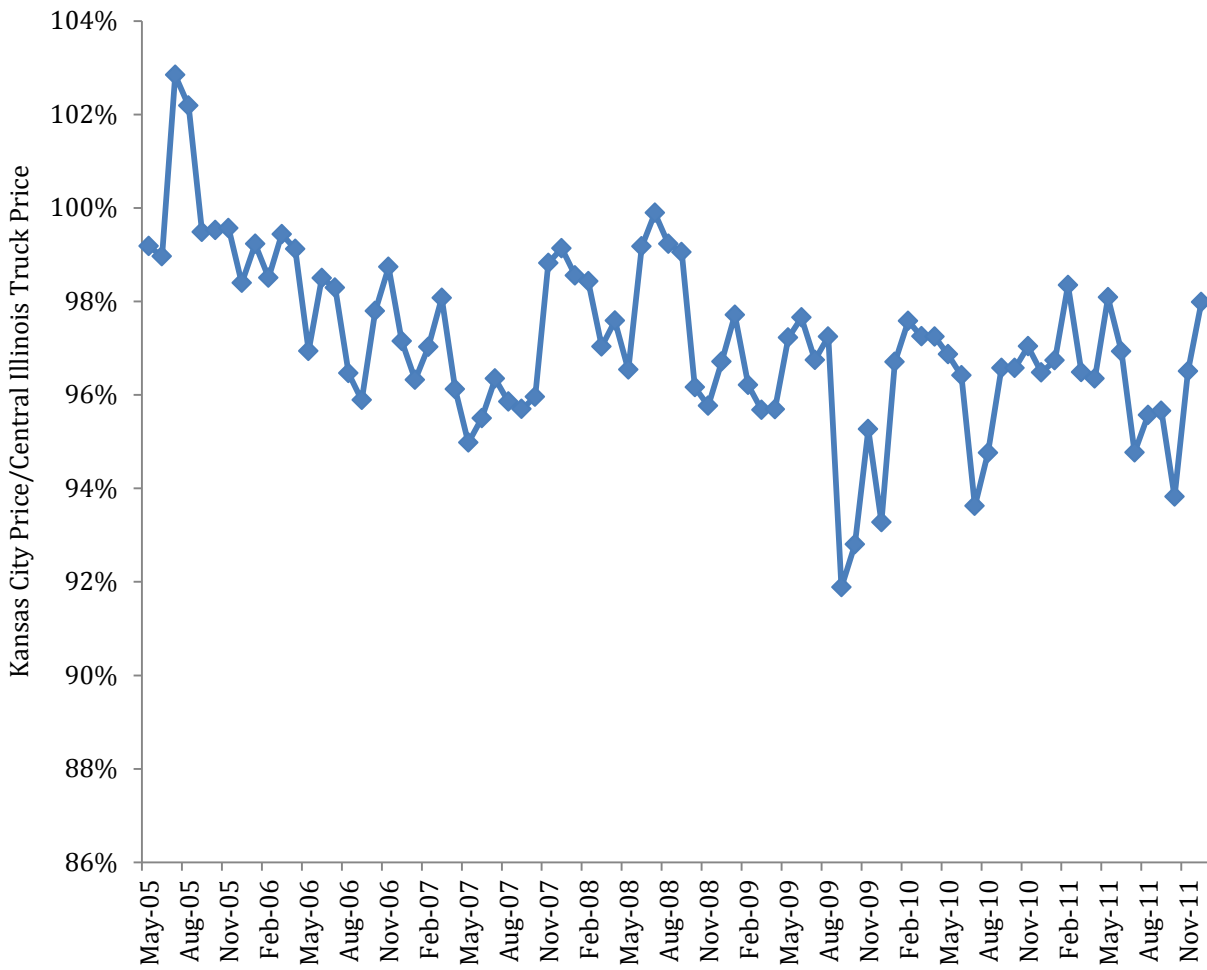
Source: AgEbb

**Exhibit 3.3.4 – Price of 48% Soybean Meal, Versailles, NutraAg, LLC**



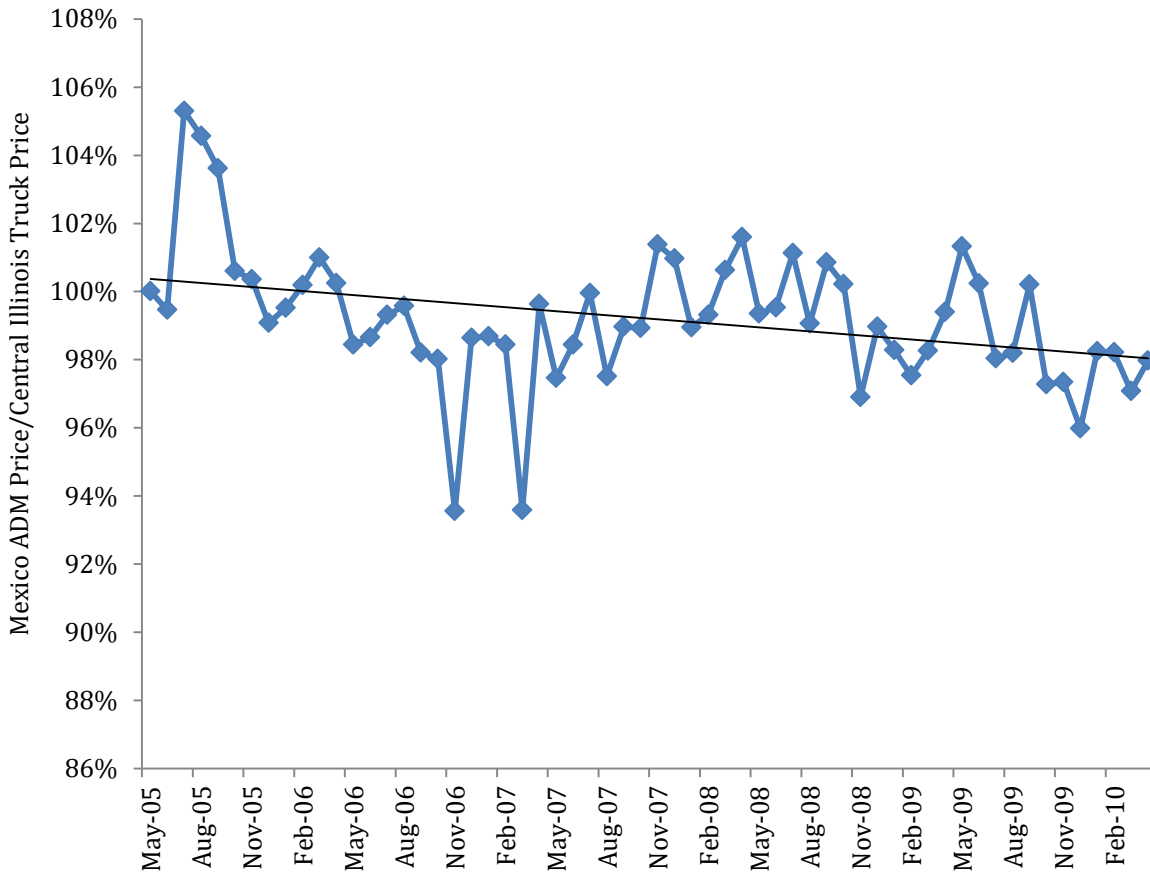
Source: AgEbb

**Exhibit 3.3.5 – Kansas City Soybean Meal Price as a Percentage of Central Illinois Truck Soybean Meal Price**



Source: The Jacobsen

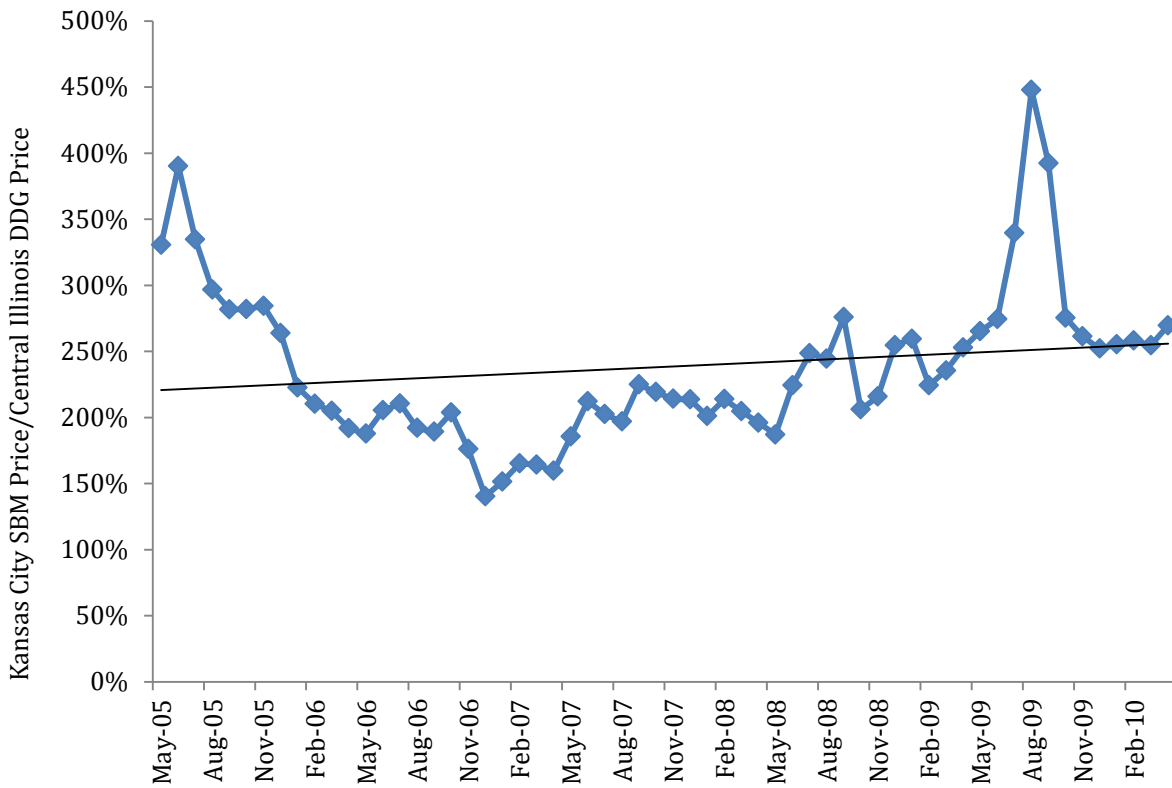
**Exhibit 3.3.6 – Mexico, Mo., ADM Soybean Meal Price as a Percentage of Central Illinois Truck Soybean Meal Price**



Source: AgEbb and The Jacobsen

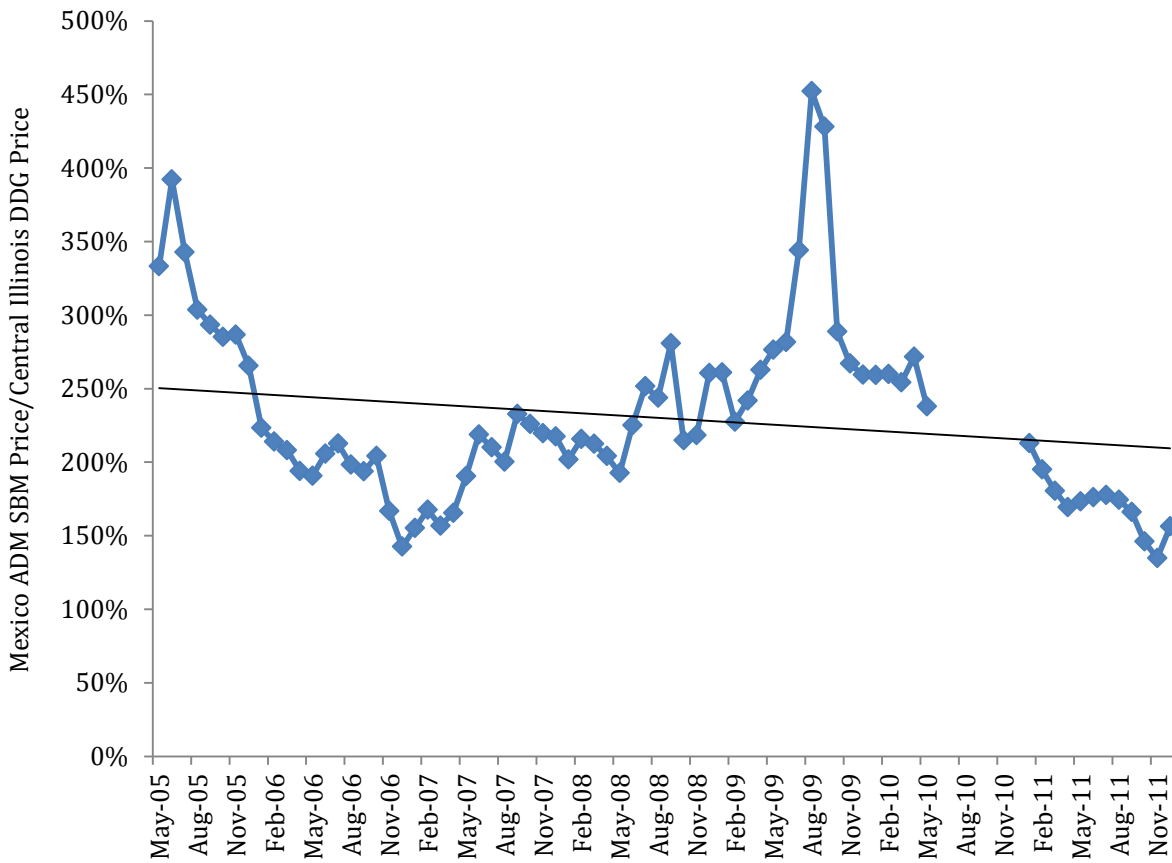


**Exhibit 3.3.7 – Kansas City Soybean Meal Price as a Percentage of Central Illinois DDG Price**



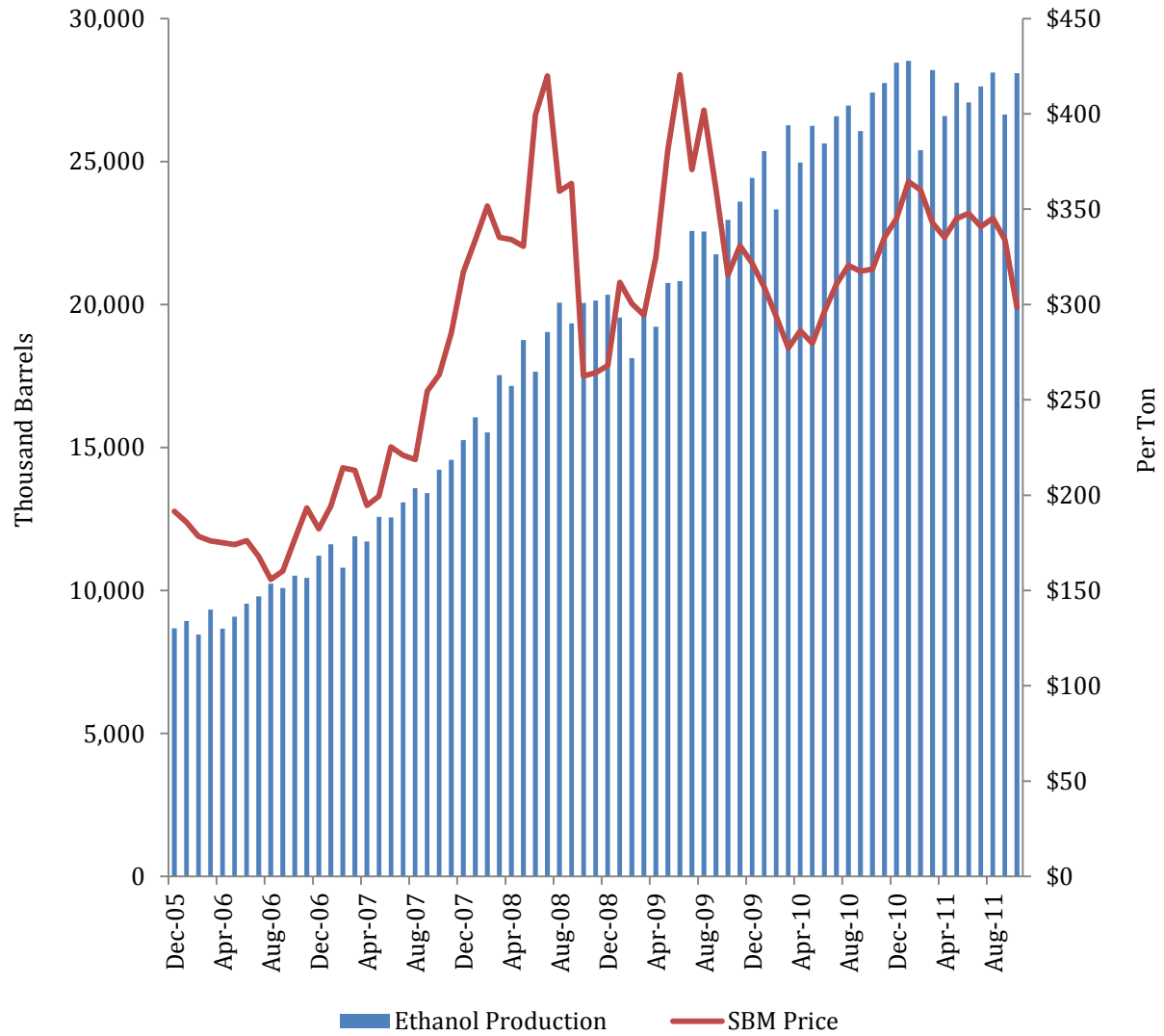
Source: The Jacobsen

**Exhibit 3.3.8 – Mexico, Mo., ADM Soybean Meal Price as a Percentage of Central Illinois DDG Price**



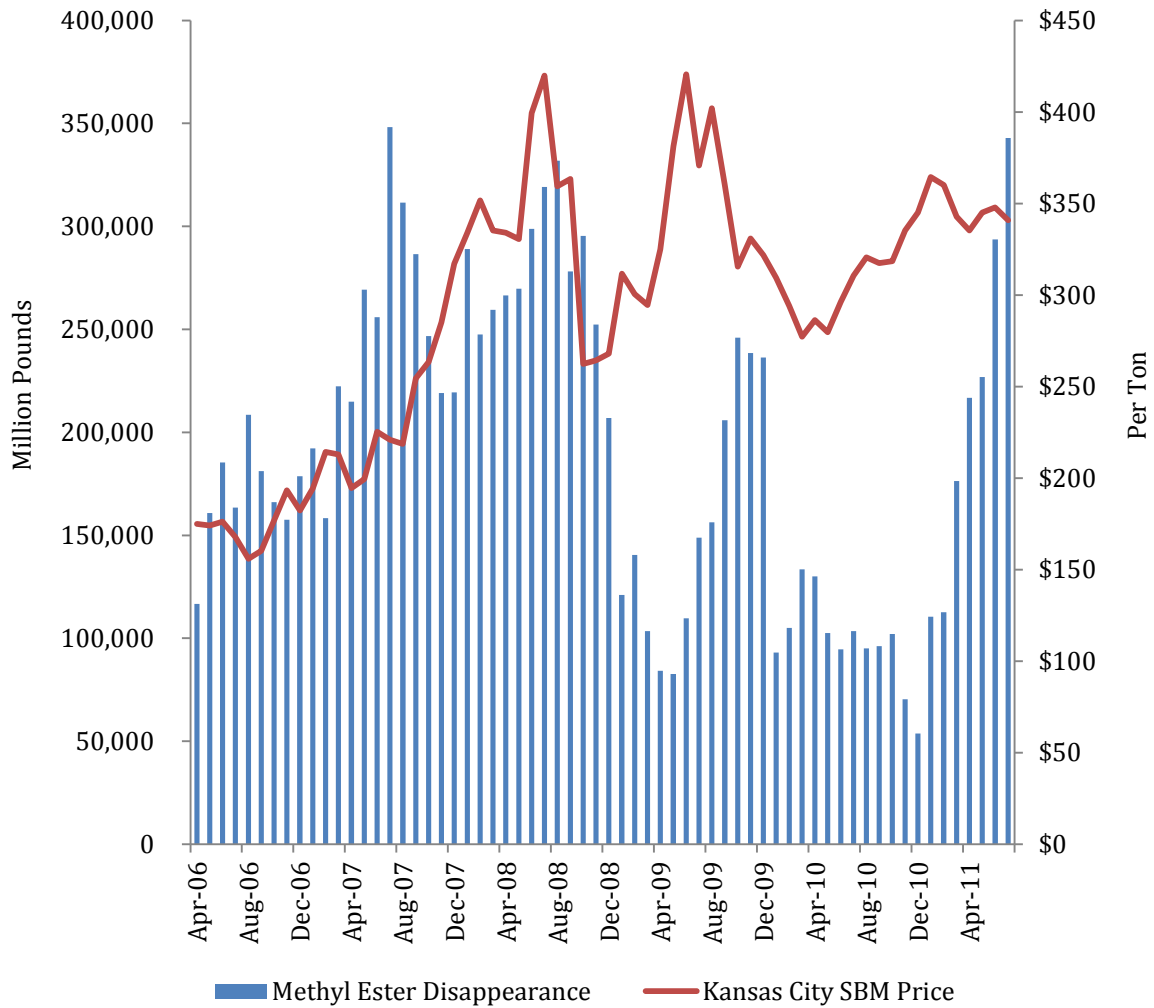
Source: The Jacobsen

**Exhibit 3.3.9 – Kansas City Soybean Meal Price and U.S. Ethanol Production**



Source: The Jacobsen and Renewable Fuels Association

**Exhibit 3.3.10 –Kansas City Soybean Meal Price and U.S. Methyl Ester Disappearance**



Source: The Jacobsen and USDA Economic Research Service

**Exhibit 3.3.11 – Cake and Meal Production at Missouri Oil Mills**

<b>2008</b>	
<b>Month and Year</b>	<b>Cake or Meal (Short Tons)</b>
Jan-08	161,329
Feb-08	145,946
Mar-08	153,604
Apr-08	145,920
May-08	159,184
Jun-08	147,105
Jul-08	98,605
Aug-08	86,236
Sep-08	150,820
Oct-08	185,995
Nov-08	202,897
Dec-08	199,898

<b>2009</b>	
<b>Month and Year</b>	<b>Cake or Meal (Short Tons)</b>
Jan-09	190,765
Feb-09	173,875
Mar-09	179,191
Apr-09	196,036
May-09	183,684
Jun-09	180,109
Jul-09	175,083
Aug-09	155,586
Sep-09	75,021
Oct-09	215,632
Nov-09	276,568
Dec-09	290,682

<b>2010</b>	
<b>Month and Year</b>	<b>Cake or Meal (Short Tons)</b>
Jan-10	278,162
Feb-10	251,724
Mar-10	234,646
Apr-10	180,913
May-10	183,854
Jun-10	137,598
Jul-10	188,548
Aug-10	(D)
Sep-10	117,139
Oct-10	240,396
Nov-10	240,408
Dec-10	236,157

<b>2011</b>	
<b>Month and Year</b>	<b>Cake or Meal (Short Tons)</b>
Jan-11	230,048
Feb-11	196,801
Mar-11	211,963
Apr-11	172,138
May-11	159,256
Jun-11	175,125
Jul-11	(D)

Source: U.S. Census

\* Includes millfeed and lecithin

**Exhibit 3.3.12 -2008-to-2010 Average Cake or Meal Production at Missouri Oil Mills**

<b>Month</b>	<b>Cake or Meal (Short Tons)</b>
January	210,085
February	190,515
March	189,147
April	174,290
May	175,574
June	154,937
July	154,079
August*	120,911
September	114,327
October	214,008
November	239,958
December	242,246

*Source: U.S. Census Bureau*

*\* August computed as a 2008-to-2009 average because data weren't disclosed in August 2010.*

### 3.4 Soybean Oil

**Exhibit 3.4.1 – Crude Soybean Oil Production at Missouri Oil Mills**

<b>2008</b>	
<b>Month and Year</b>	<b>Crude Oil (Thousand Pounds)</b>
Jan-08	75,385
Feb-08	65,128
Mar-08	73,034
Apr-08	68,615
May-08	74,283
Jun-08	68,078
Jul-08	45,968
Aug-08	40,890
Sep-08	72,798
Oct-08	89,170
Nov-08	92,801
Dec-08	90,960

<b>2009</b>	
<b>Month and Year</b>	<b>Crude Oil (Thousand Pounds)</b>
Jan-09	88,201
Feb-09	80,582
Mar-09	84,359
Apr-09	93,240
May-09	84,847
Jun-09	84,085
Jul-09	83,193
Aug-09	73,466
Sep-09	34,776
Oct-09	99,557
Nov-09	126,205
Dec-09	128,401

<b>2010</b>	
<b>Month and Year</b>	<b>Crude Oil (Thousand Pounds)</b>
Jan-10	126,413
Feb-10	111,717
Mar-10	105,778
Apr-10	83,332
May-10	84,885
Jun-10	63,403
Jul-10	86,245
Aug-10	(D)
Sep-10	53,074
Oct-10	115,385
Nov-10	110,796
Dec-10	110,694

<b>2011</b>	
<b>Month and Year</b>	<b>Crude Oil (Thousand Pounds)</b>
Jan-11	108,637
Feb-11	92,930
Mar-11	100,304
Apr-11	82,458
May-11	75,293
Jun-11	82,705
Jul-11	(D)

Source: U.S. Census

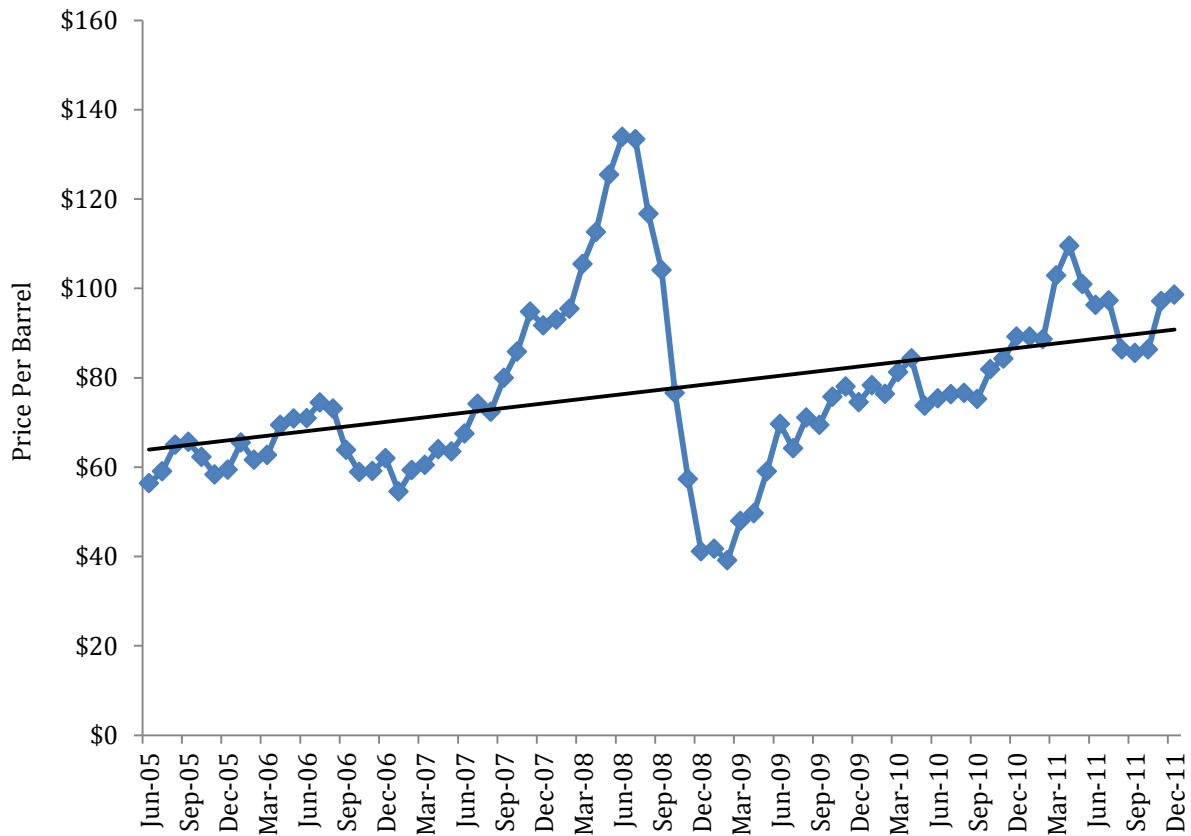
### Exhibit 3.4.2 –2008-to-2010 Average Crude Soybean Oil Production in Missouri

Month	Crude Oil (Thousand Pounds)
January	96,666
February	85,809
March	87,724
April	81,729
May	81,338
June	71,855
July	71,802
August*	57,178
September	53,549
October	101,371
November	109,934
December	110,018

Source: U.S. Census Bureau

\* August computed as a 2008-to-2009 average because data weren't disclosed in August 2010.

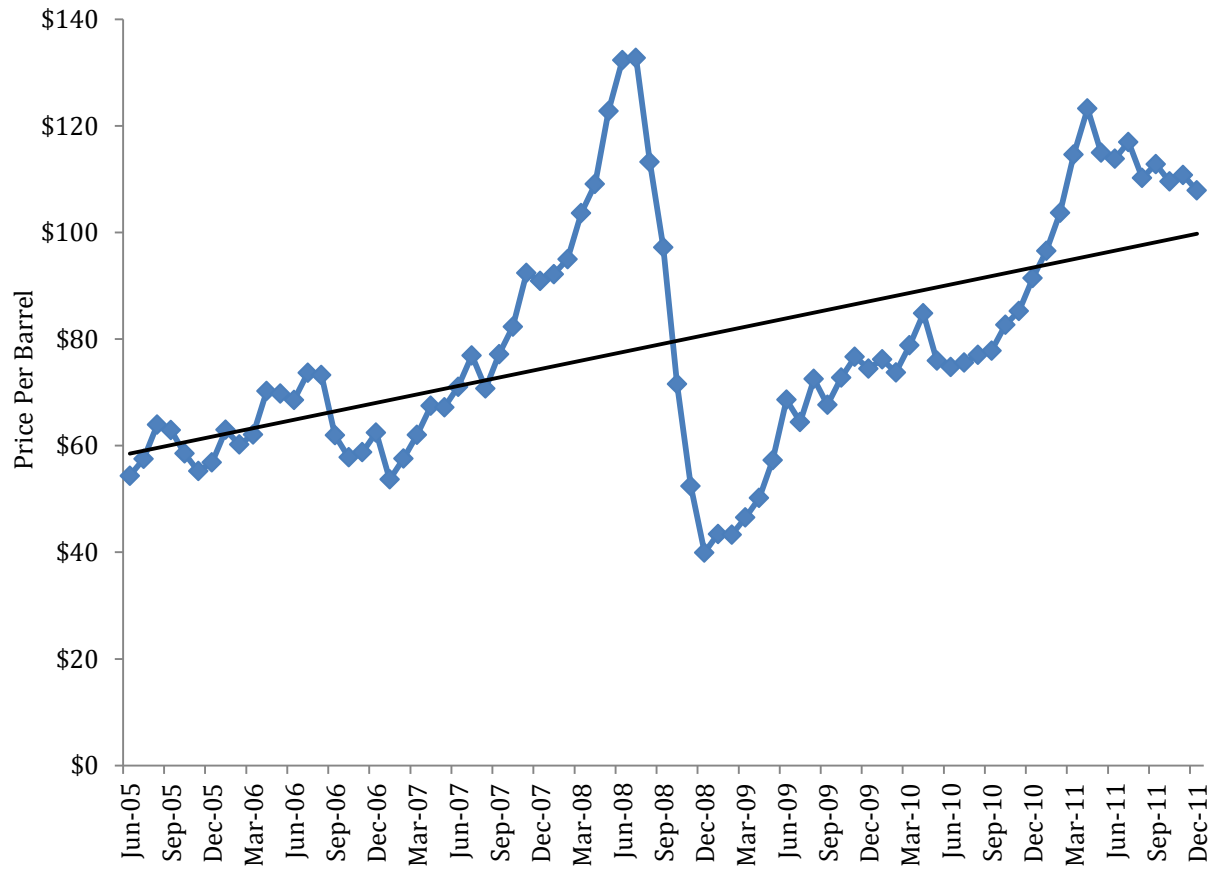
### Exhibit 3.4.3 –Crude Oil WTI Spot Price, FOB, at Cushing, Okla.



Source: U.S. Energy Information Administration

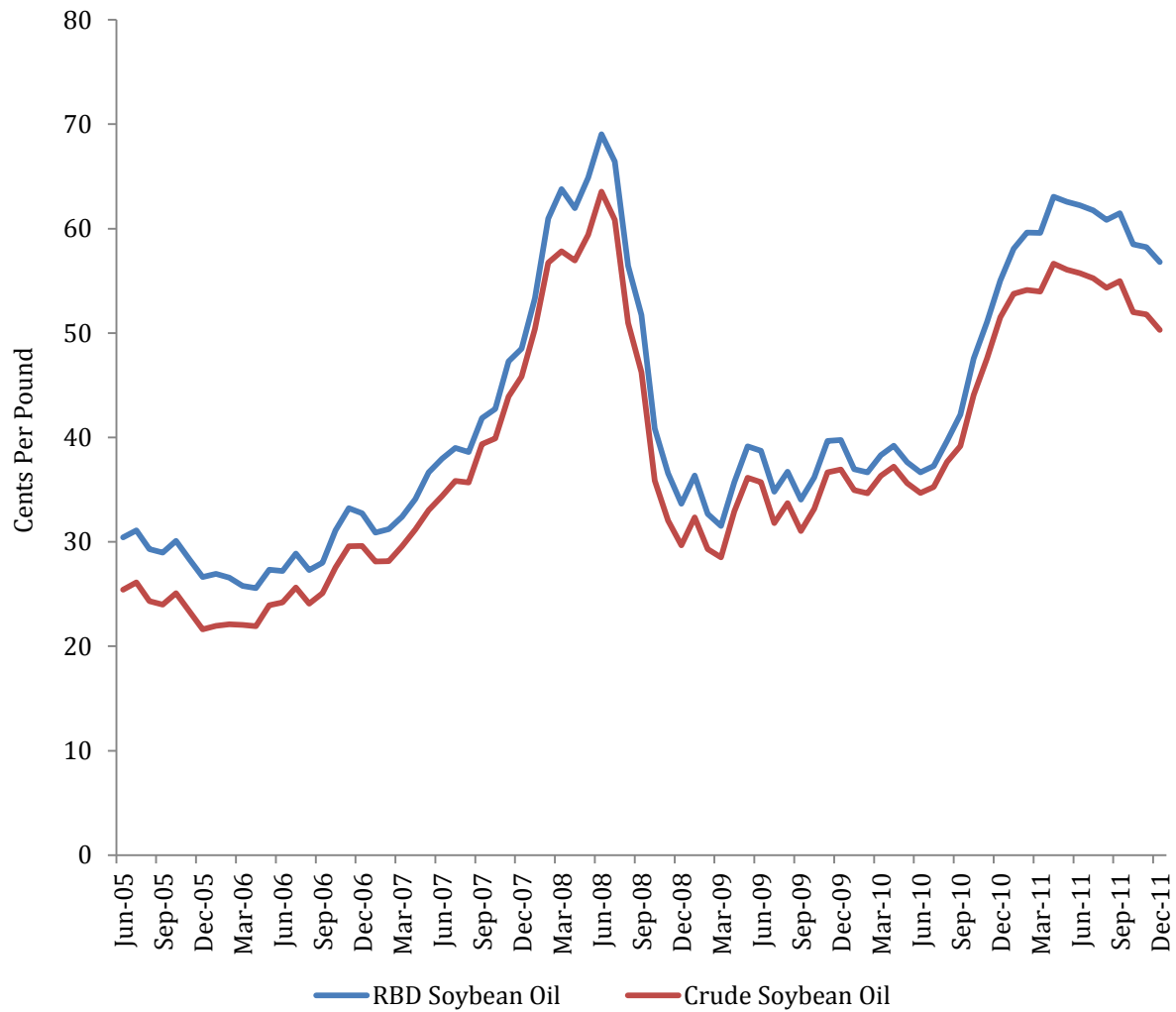


**Exhibit 3.4.4 –Crude Oil Spot Price, FOB, at Europe Brent**



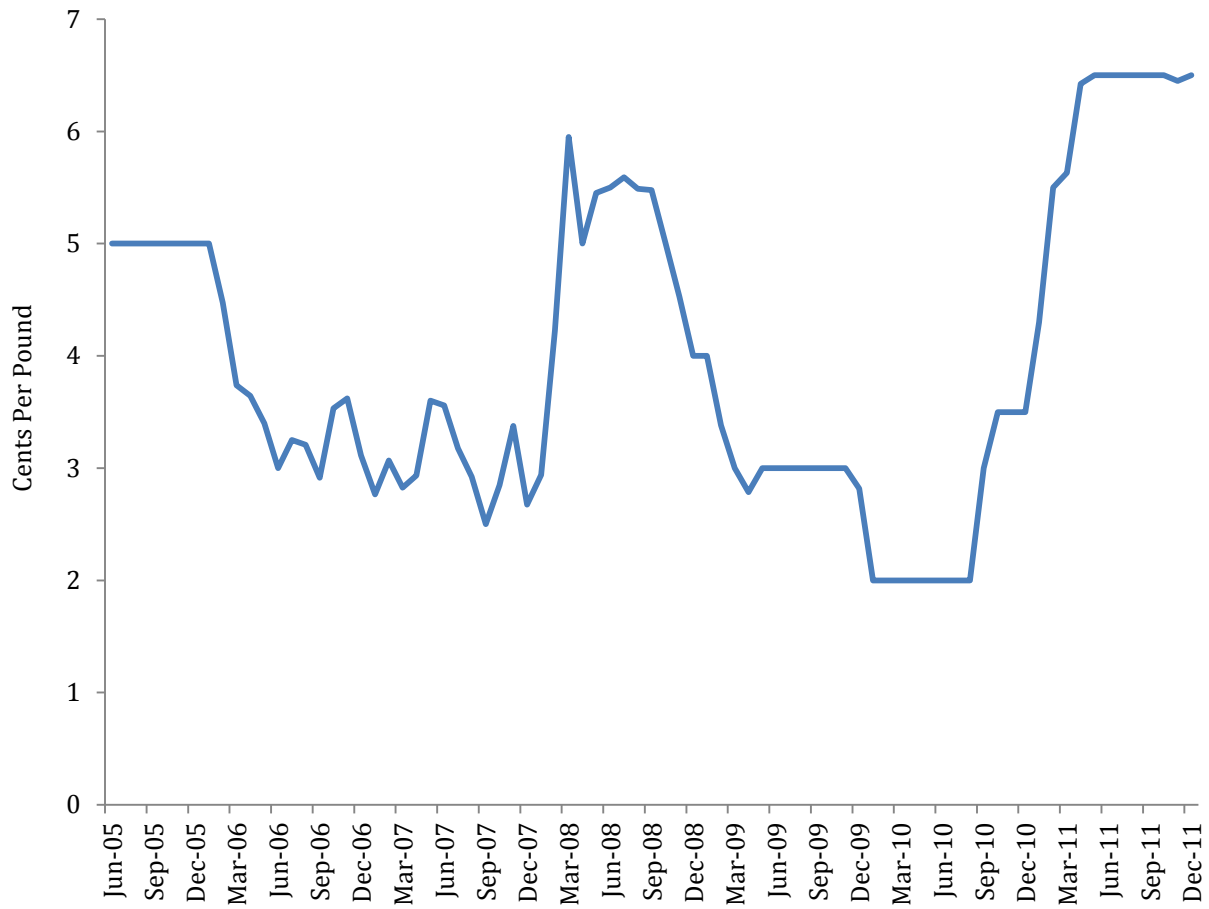
Source: U.S. Energy Information Administration

**Exhibit 3.4.5 –Central Illinois Crude Soybean Oil and RBD Soybean Oil Price**



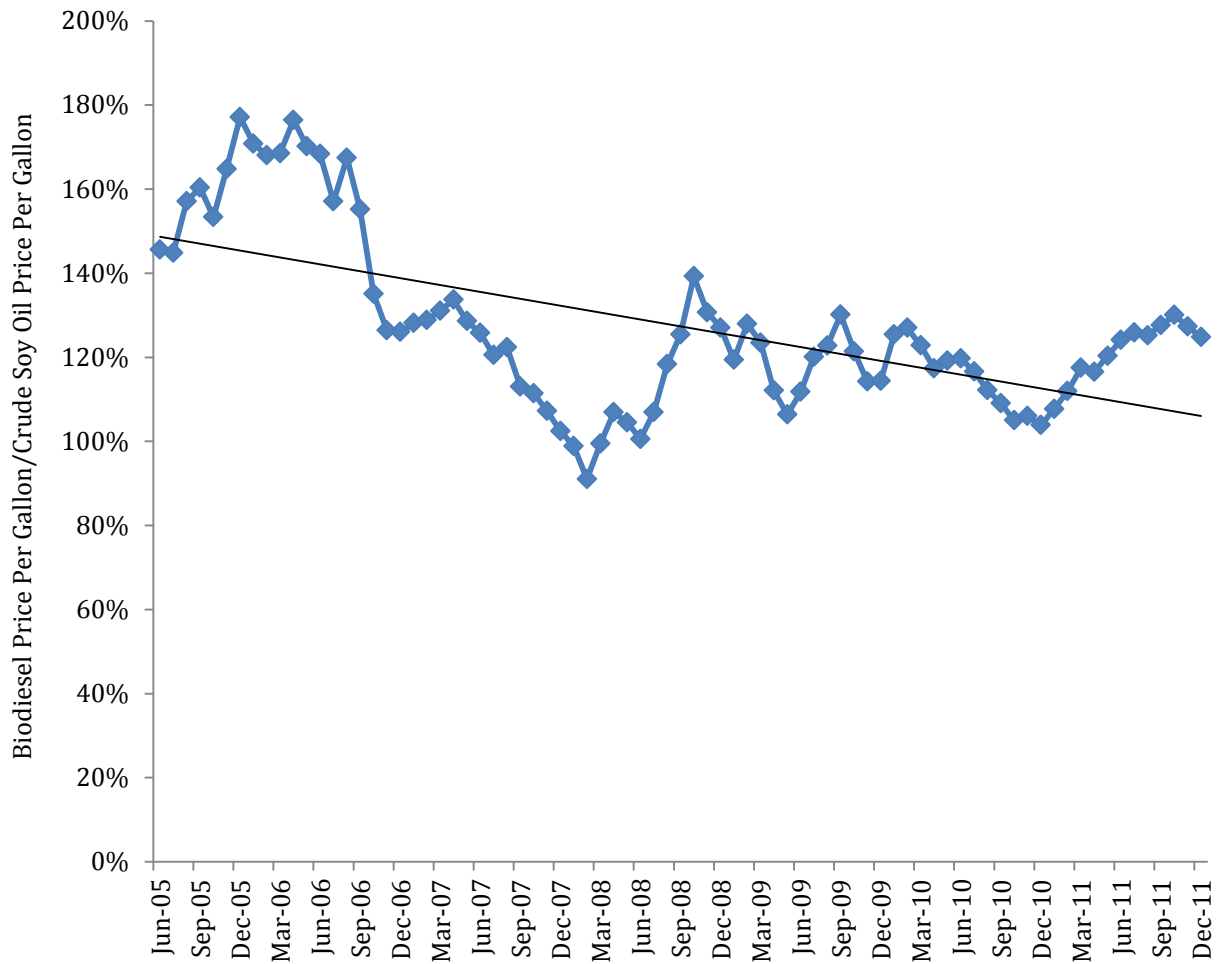
Source: The Jacobsen

**Exhibit 3.4.6 – Spread between Central Illinois Crude Soybean Oil Price and Central Illinois RBD Soybean Oil Price**



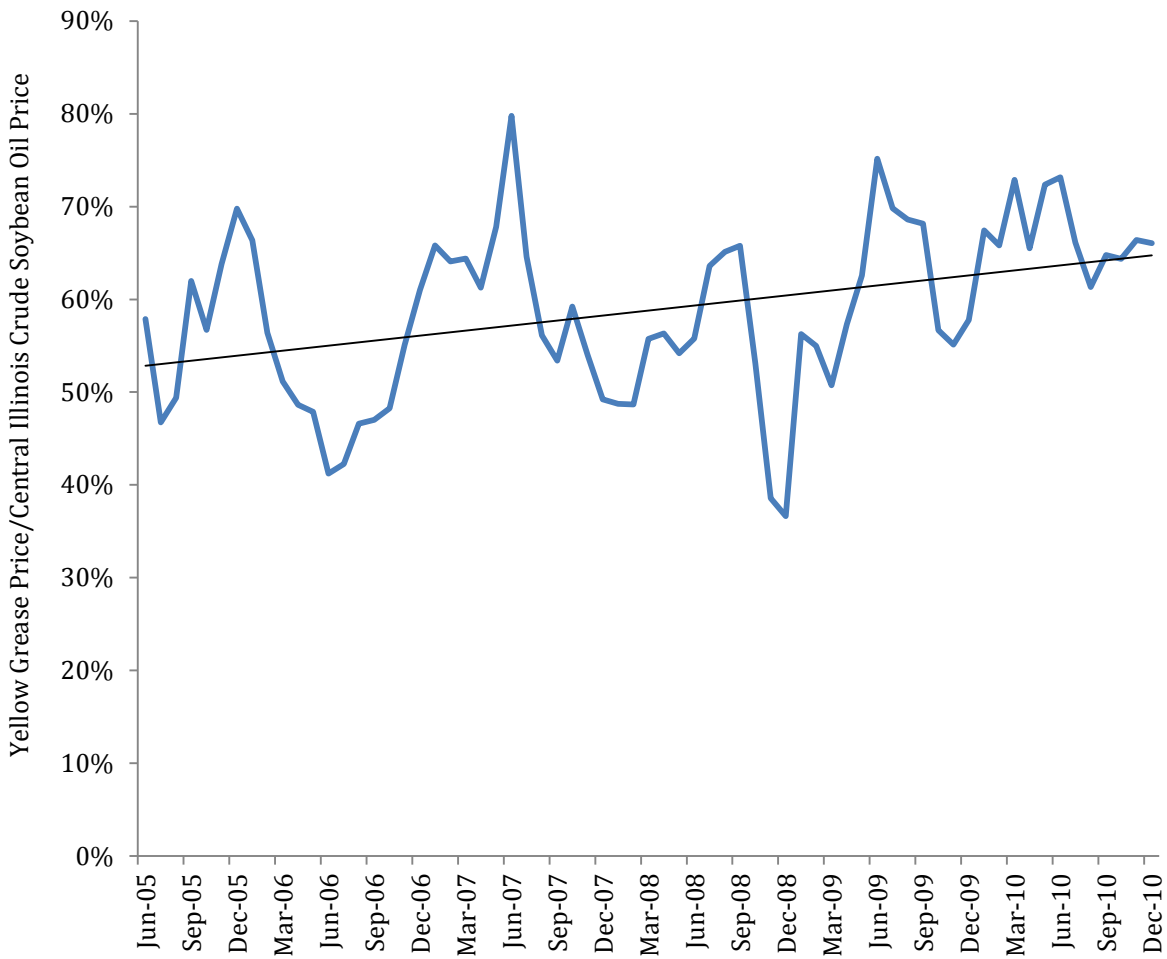
Source: The Jacobsen

**Exhibit 3.4.7 –Lower Midwest B100 Biodiesel Price to Central Illinois Crude Soybean Oil Price**



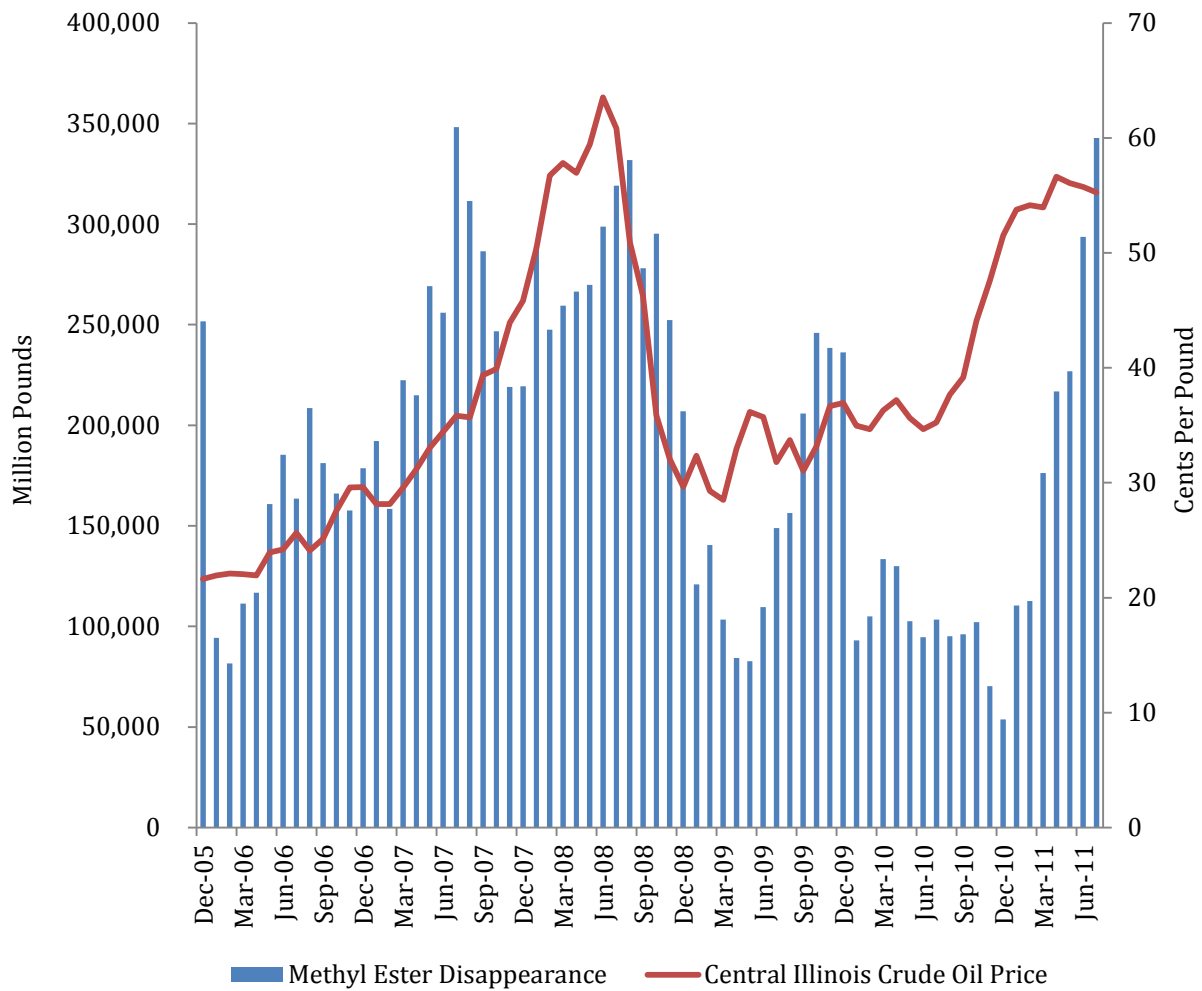
Source: The Jacobsen

**Exhibit 3.4.8 – Yellow Grease (Missouri River) as a Percent of Central Illinois Crude Soybean Oil Price**



Source: The Jacobsen

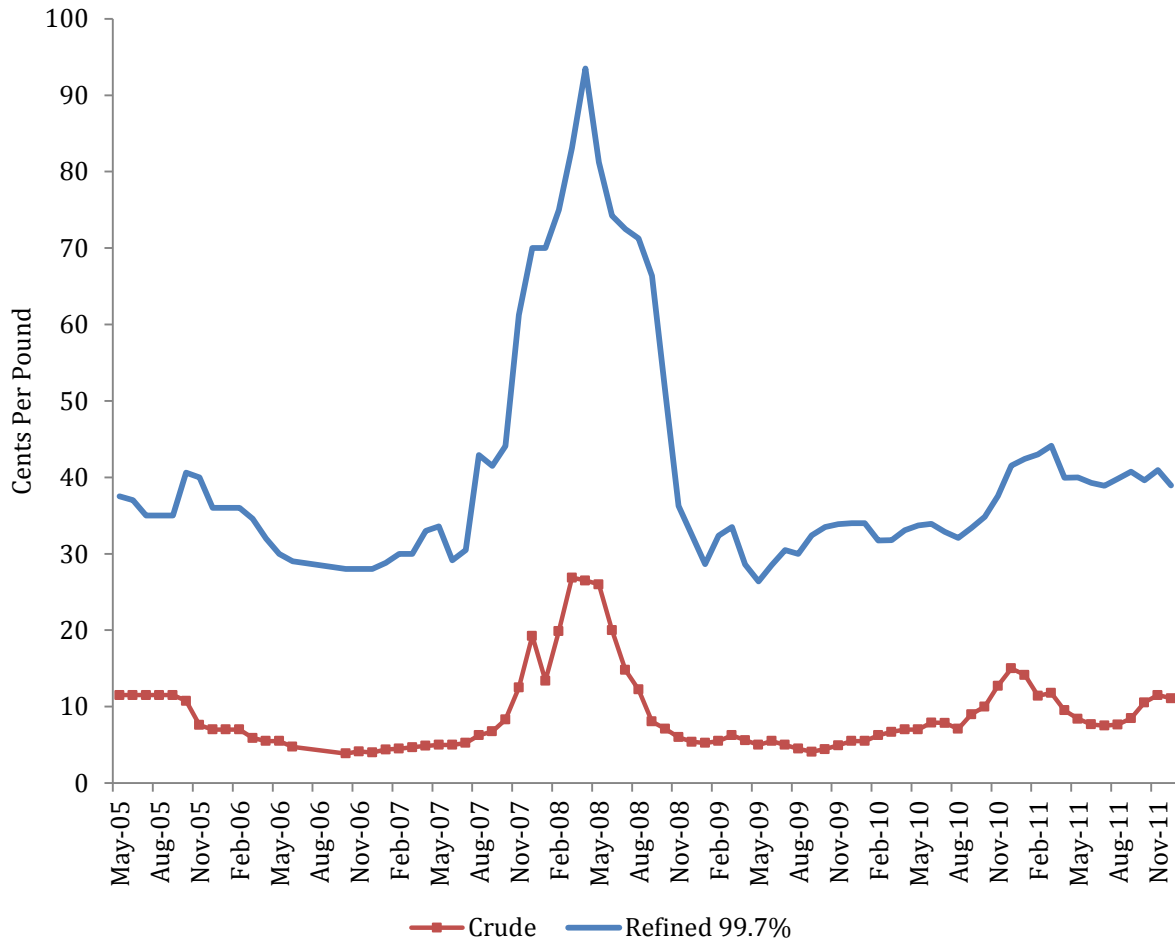
**Exhibit 3.4.9 – Central Illinois Crude Soybean Oil Price and U.S. Methyl Ester Disappearance**



Source: The Jacobsen and USDA Economic Research Service

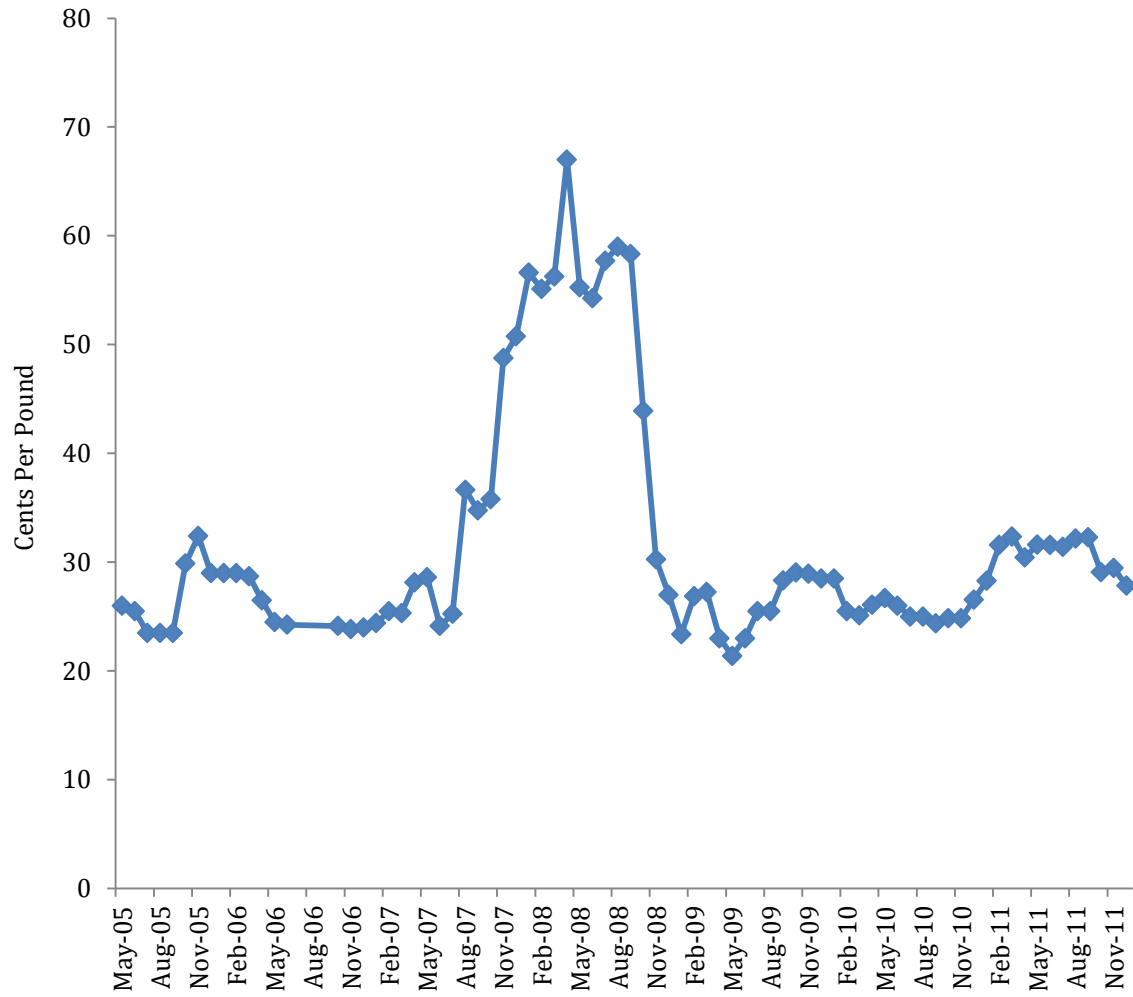
### 3.5 Glycerol

Exhibit 3.5.1 –Crude and Refined Glycerol Prices



Source: The Jacobsen

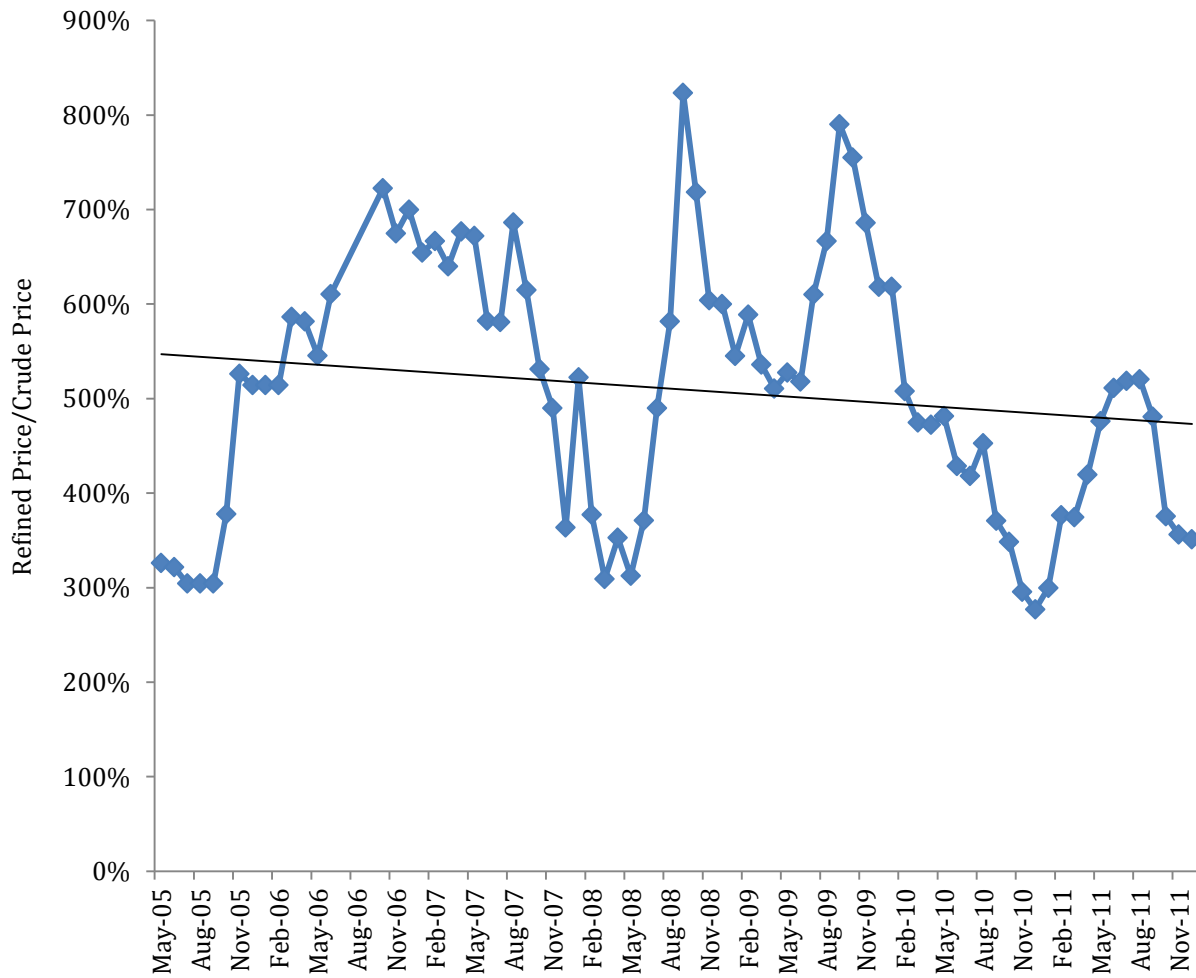
**Exhibit 3.5.2 – Spread between Crude and Refined Glycerol Prices**



Source: The Jacobsen

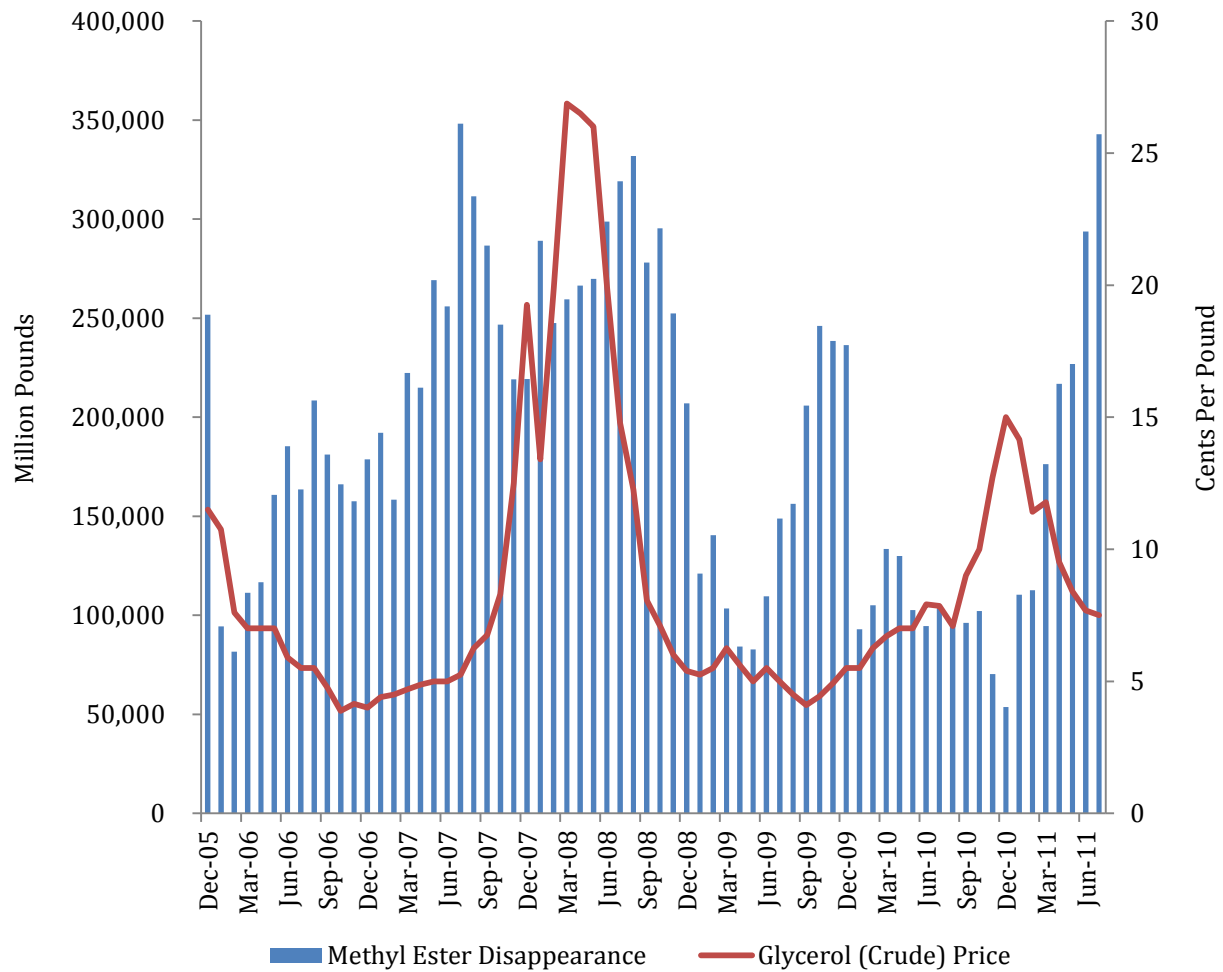


**Exhibit 3.5.3 –Crude Glycerol Price as a Percentage of Refined Glycerol**



Source: The Jacobsen

**Exhibit 3.5.4 – Glycerol Price and U.S. Methyl Ester Disappearance**



Source: The Jacobsen and USDA Economic Research Service

### 3.6 Soybean Hulls

**Exhibit 3.6.1 – Estimated Soybean Hulls Produced at Missouri Mills**

<b>2008</b>	
<b>Month and Year</b>	<b>Soybean Hulls (Tons)</b>
Jan-08	8,066
Feb-08	7,297
Mar-08	7,680
Apr-08	7,296
May-08	7,959
Jun-08	7,355
Jul-08	4,930
Aug-08	4,312
Sep-08	7,541
Oct-08	9,300
Nov-08	10,145
Dec-08	9,995

<b>2009</b>	
<b>Month and Year</b>	<b>Soybean Hulls (Tons)</b>
Jan-09	9,538
Feb-09	8,694
Mar-09	8,960
Apr-09	9,802
May-09	9,184
Jun-09	9,005
Jul-09	8,754
Aug-09	7,779
Sep-09	3,751
Oct-09	10,782
Nov-09	13,828
Dec-09	14,534

<b>2010</b>	
<b>Month and Year</b>	<b>Soybean Hulls (Tons)</b>
Jan-10	13,908
Feb-10	12,586
Mar-10	11,732
Apr-10	9,046
May-10	9,193
Jun-10	6,880
Jul-10	9,427
Aug-10	(D)
Sep-10	5,857
Oct-10	12,020
Nov-10	12,020
Dec-10	11,808

<b>2011</b>	
<b>Month and Year</b>	<b>Soybean Hulls (Tons)</b>
Jan-11	11,502
Feb-11	9,840
Mar-11	10,598
Apr-11	8,607
May-11	7,963
Jun-11	8,756
Jul-11	(D)

*Source: Estimated using U.S. Census Bureau data*

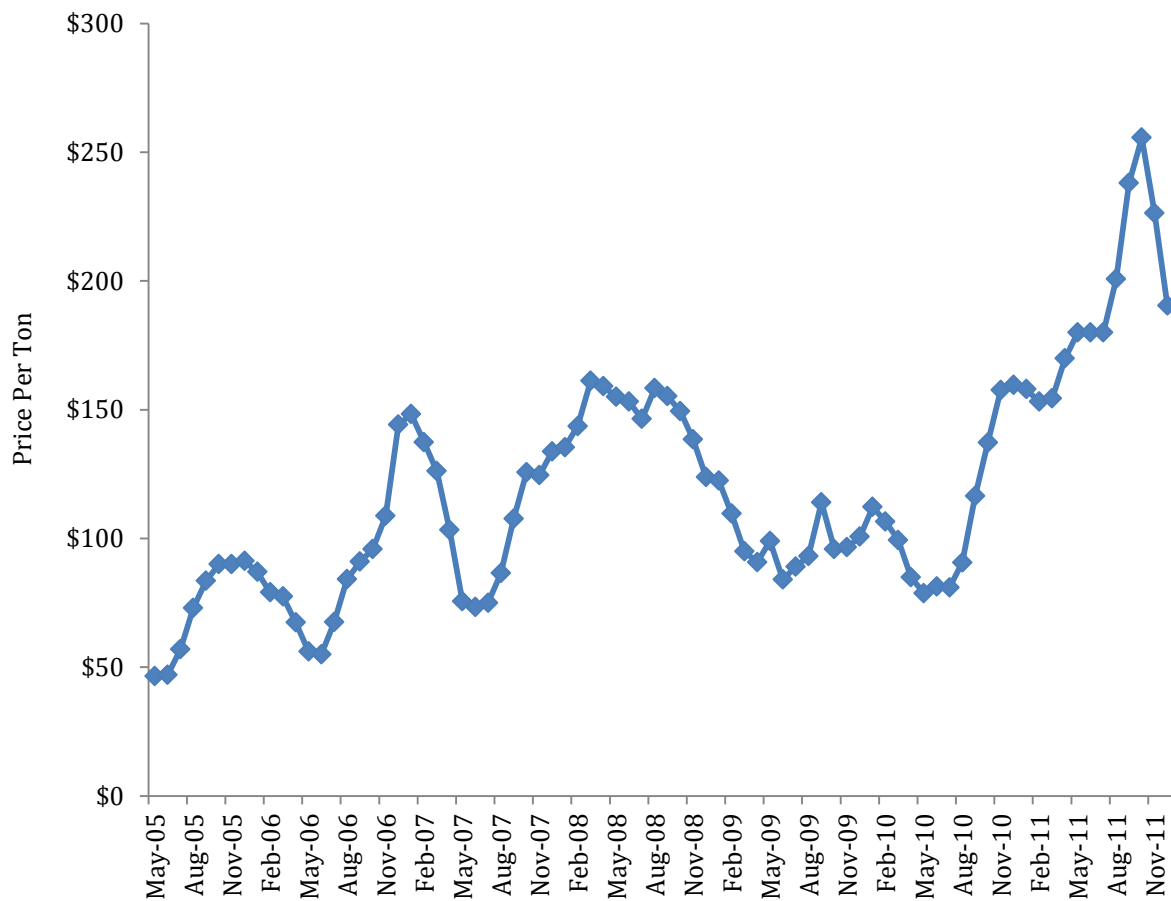
**Exhibit 3.6.2 – 2008-to-2010 Average Estimated Soybean Hulls Produced in Missouri**

Month	Soybean Hulls (Tons)
January	2,432
February	2,560
March	2,432
April	2,653
May	2,452
June	1,643
July	1,437
August*	3,771
September	3,100
October	3,382
November	3,332
December	3,179

Source: Estimated using U.S. Census Bureau data

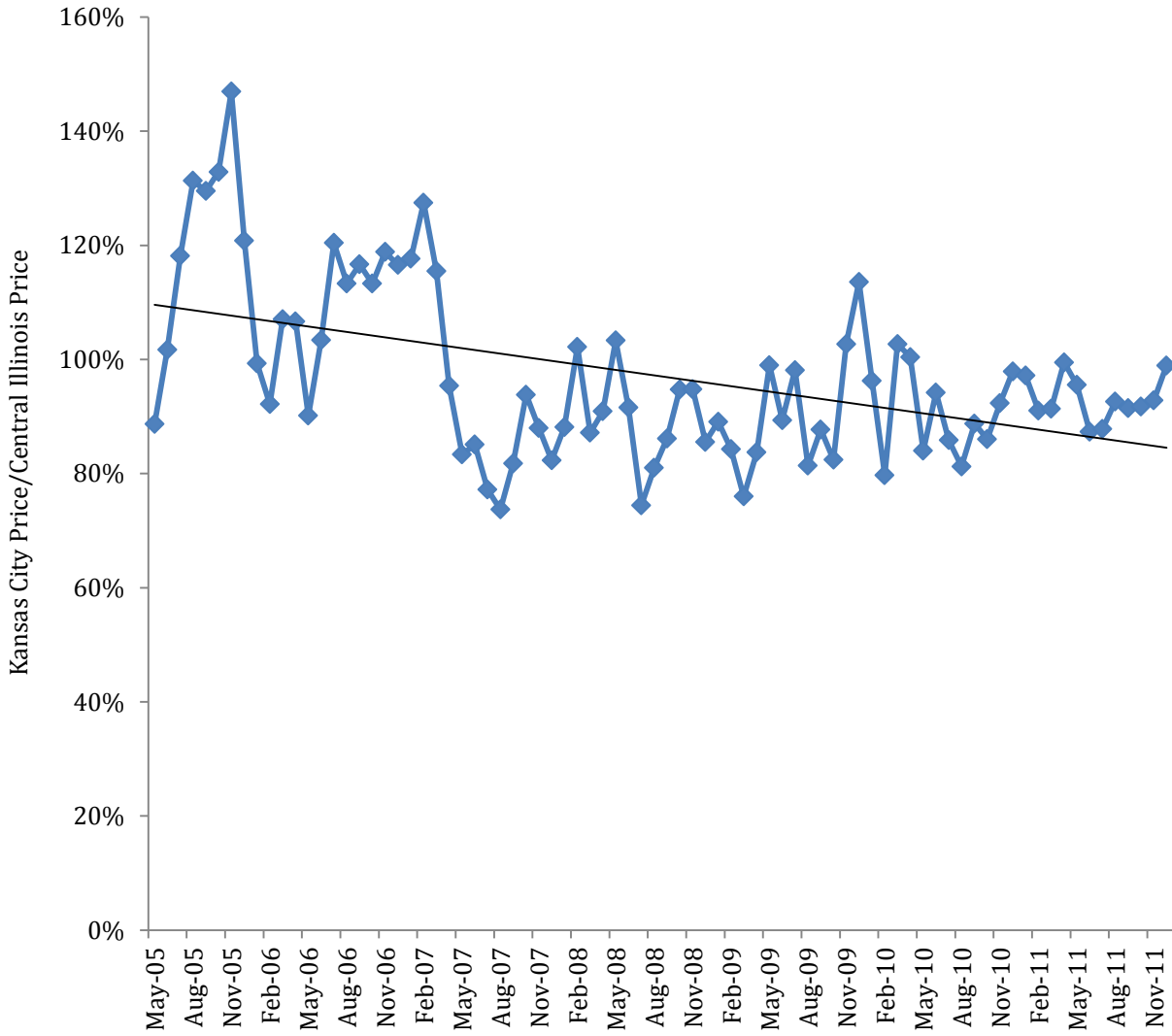
\* August computed as a 2008-to-2009 average because data weren't disclosed in August 2010.

**Exhibit 3.6.3 – Kansas City Soybean Hull Price**



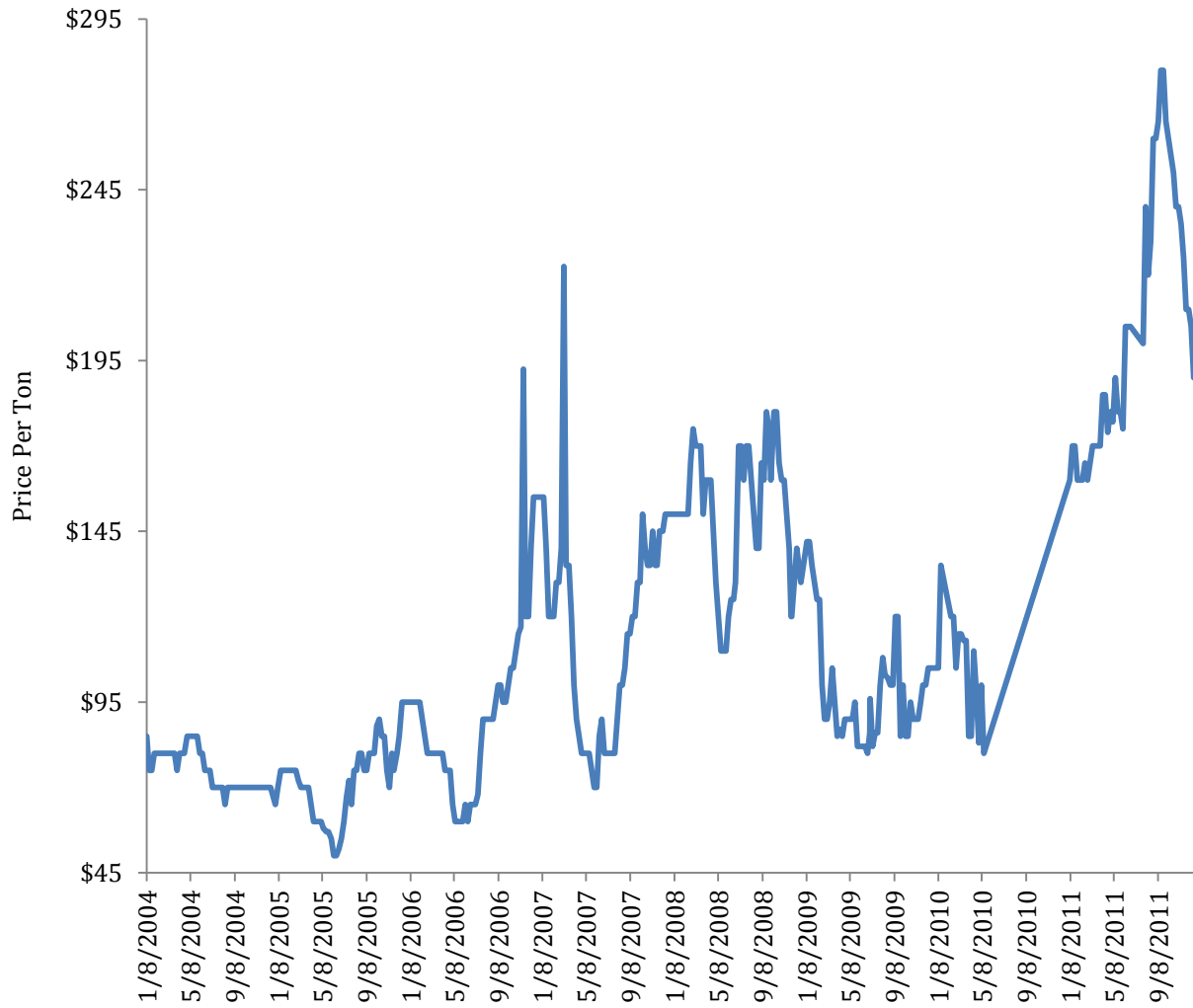
Source: The Jacobsen

**Exhibit 3.6.4 – Kansas City Hull Price Relative to Central Illinois Hull Price**



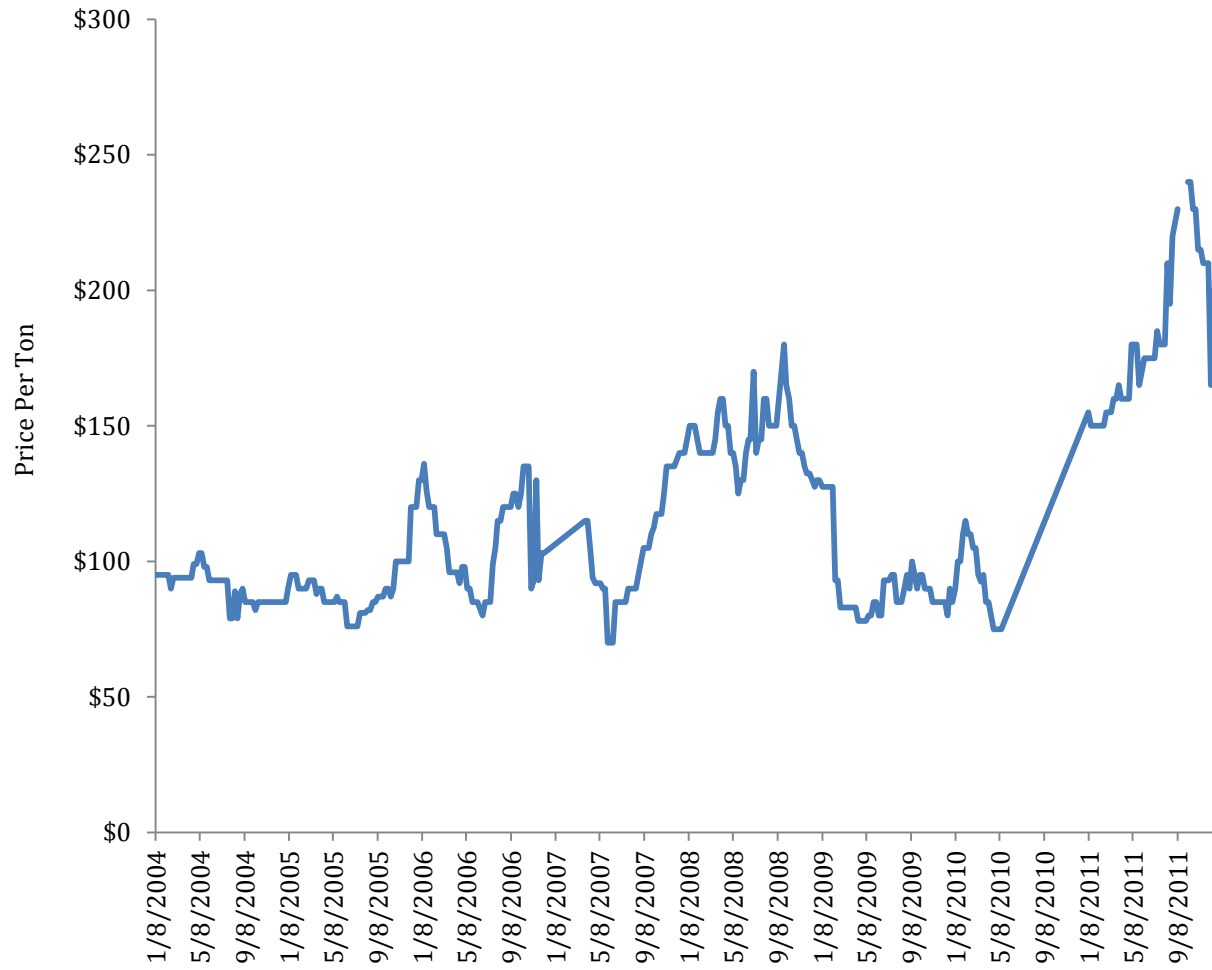
Source: The Jacobsen

**Exhibit 3.6.5 – Soy Hull Price, Mexico, Mo., ADM**



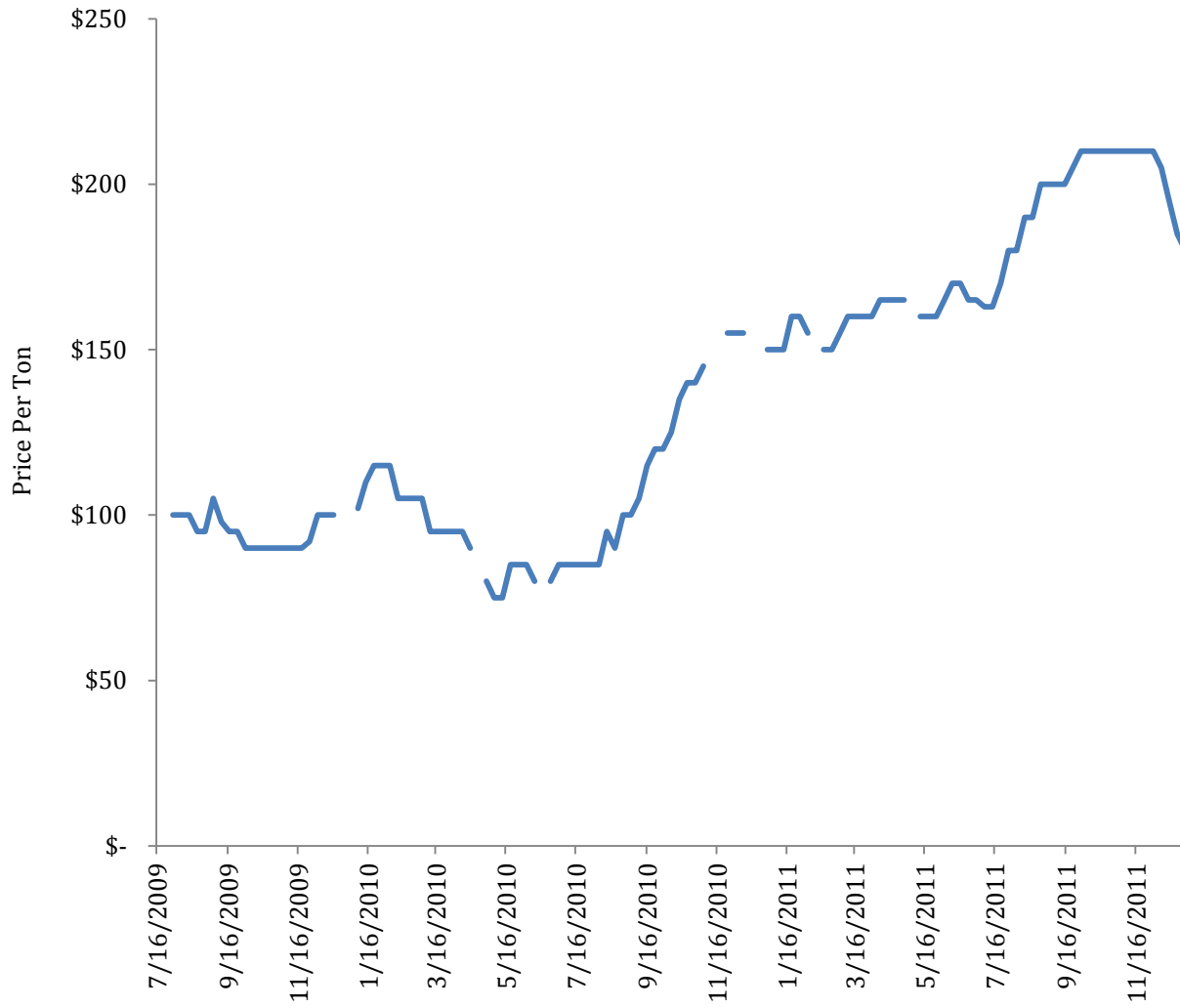
Source: AgEbb

**Exhibit 3.6.6 –Pelleted Soy Hull Prices, North Kansas City, CyberAg**



Source: AgEbb

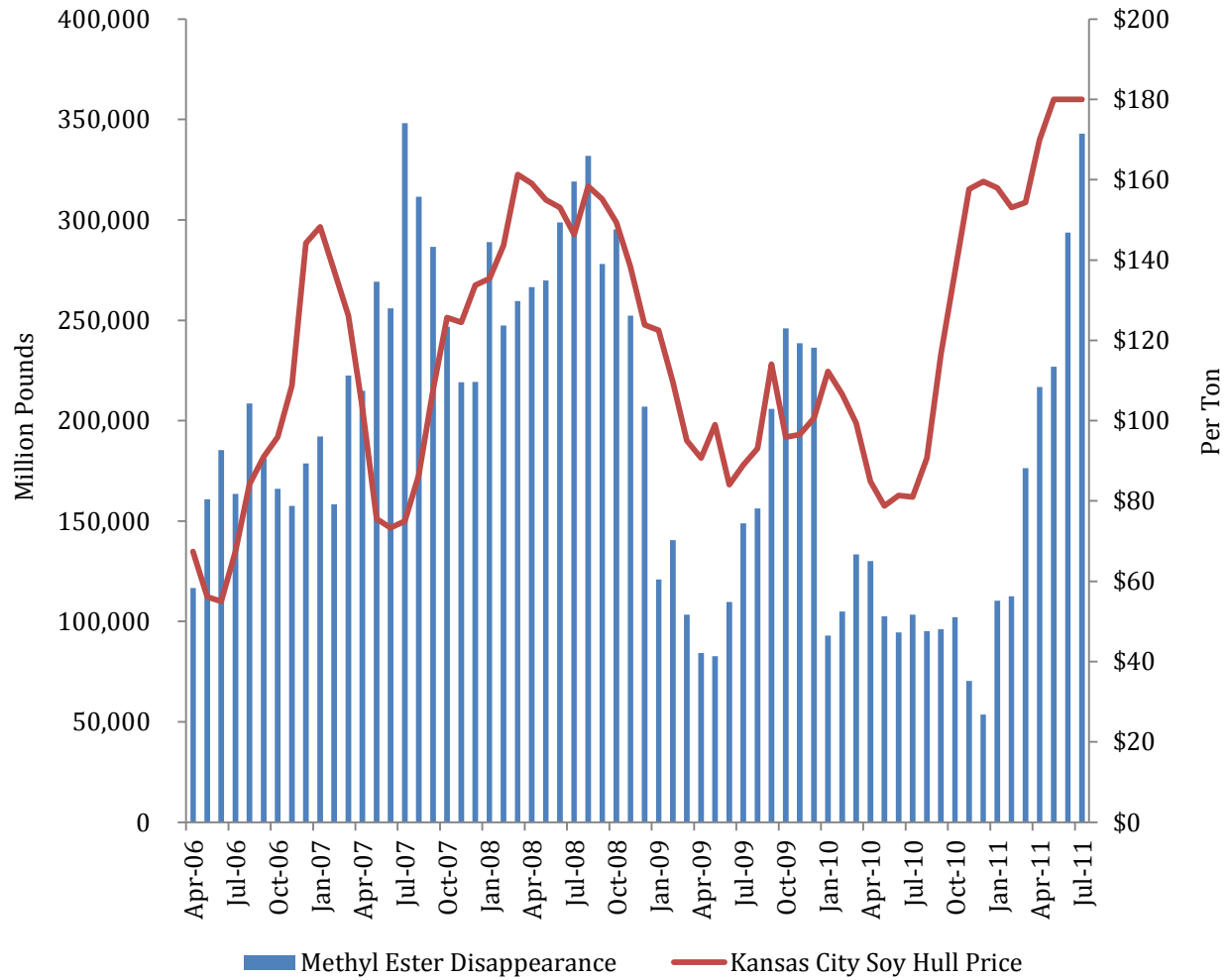
**Exhibit 3.6.7 – Pelleted Soy Hull Prices, Cairo, Ill., Bunge**



Source: AgEbb



**Exhibit 3.6.8 – Kansas City Soybean Hull Price and U.S. Methyl Ester Disappearance**

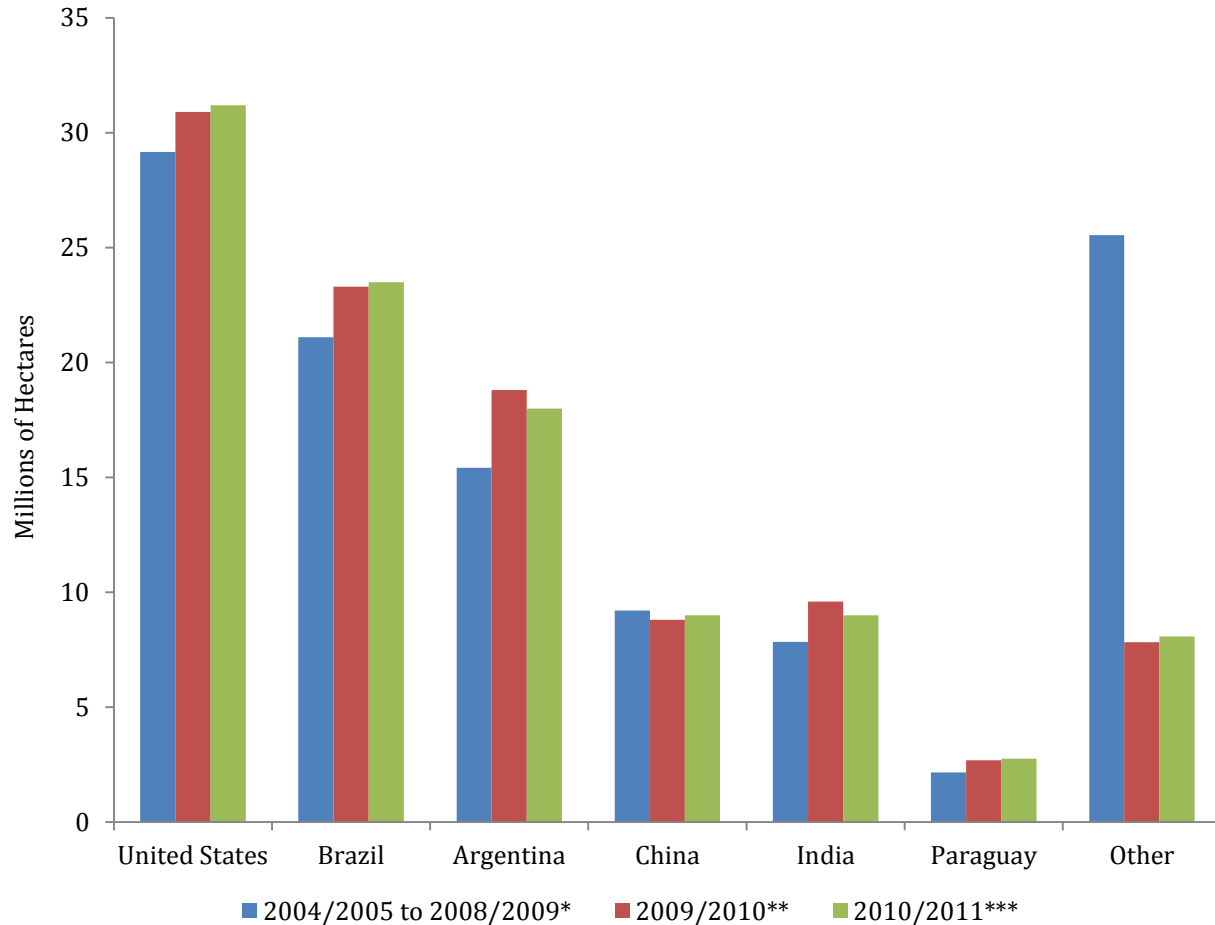


Source: The Jacobsen and USDA Economic Research Service

## Chapter 4: International Soybean Production and Trade

### 4.1 Worldwide Soybean Production

Exhibit 4.1.1 – Worldwide Area Dedicated to Soybean Production



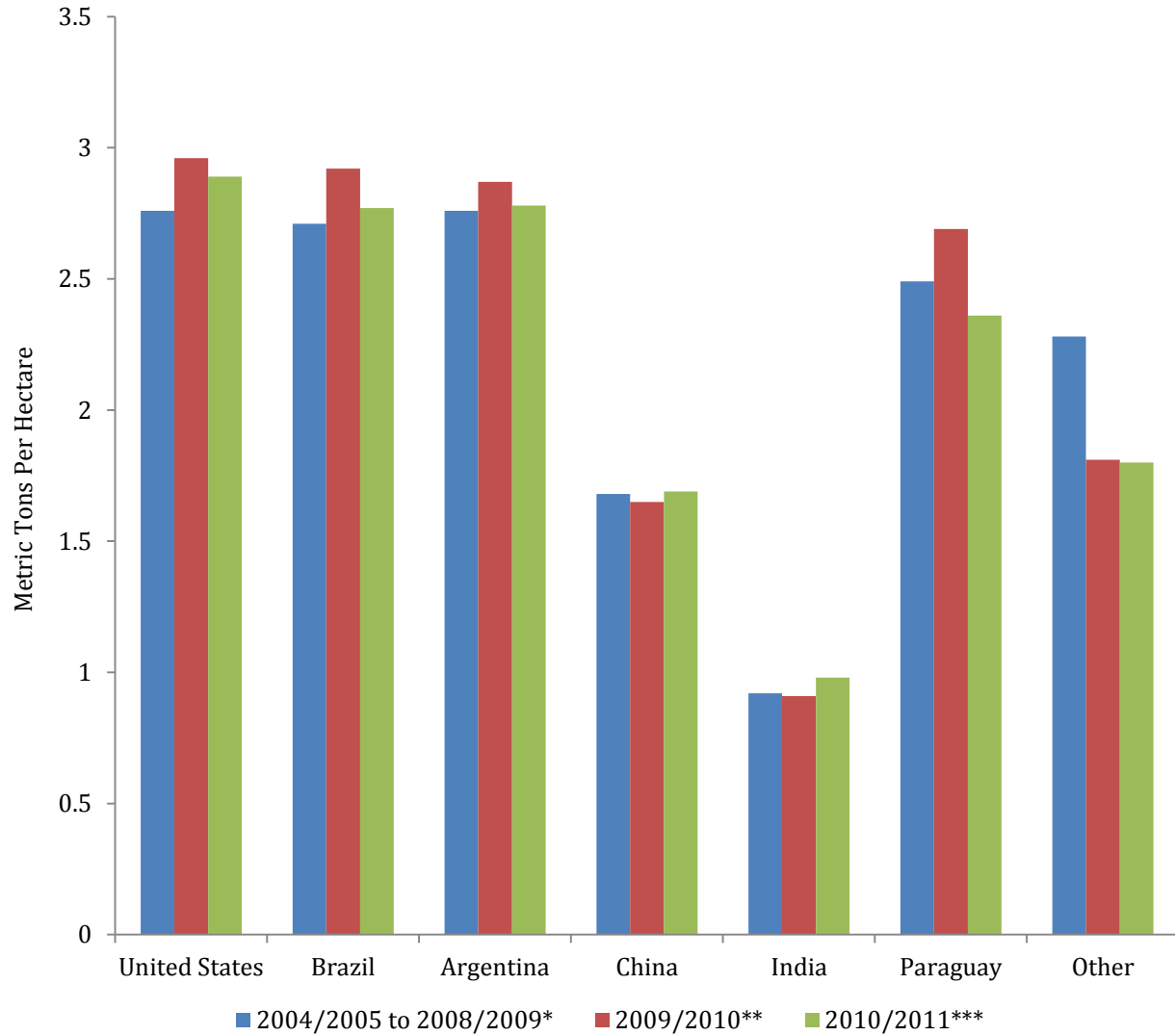
\* Annual average

\*\* Preliminary

\*\*\* Forecast

Source: Soyatech and USDA Foreign Agricultural Service

### Exhibit 4.1.2 – Worldwide Soybean Yields



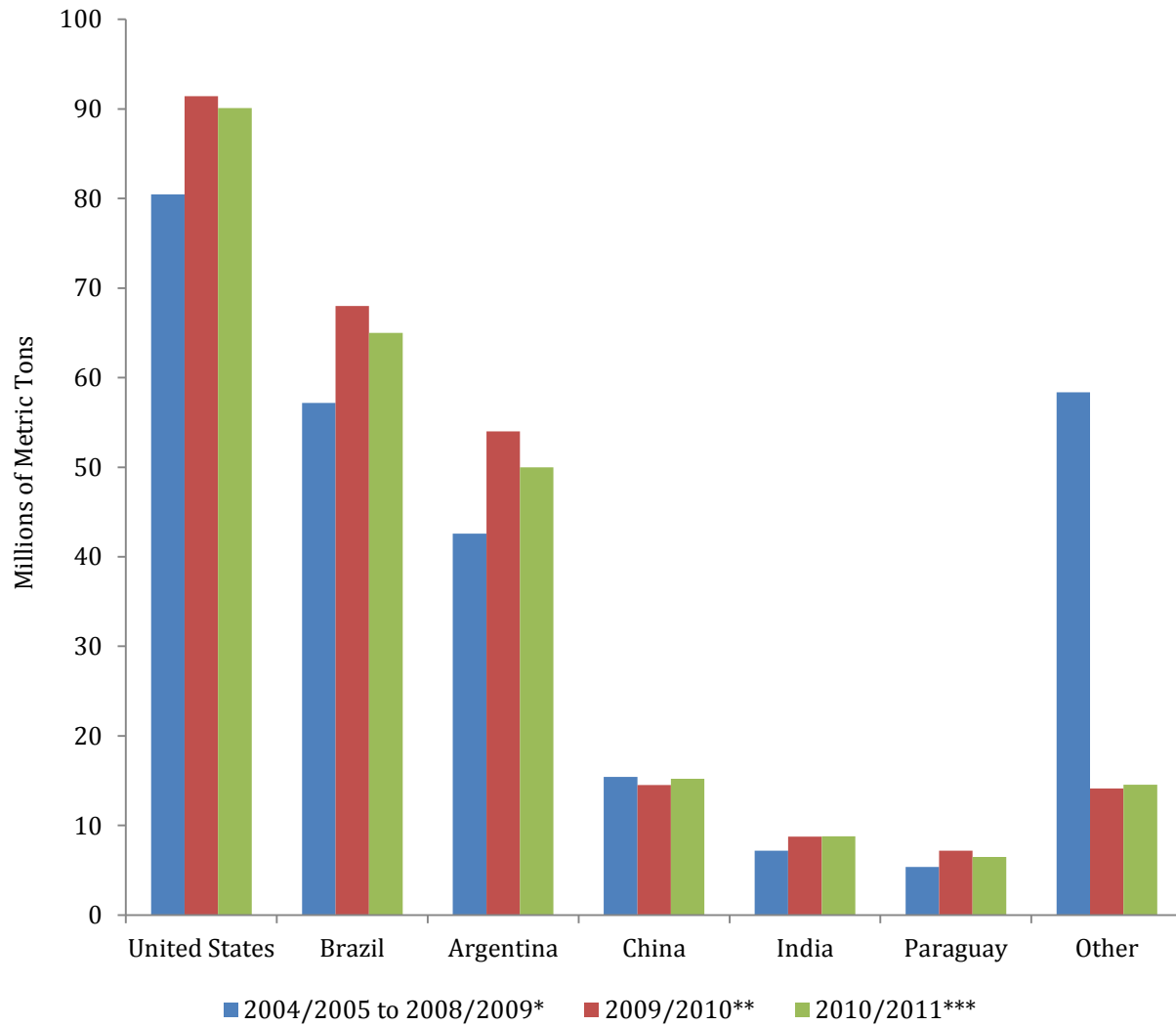
\* Annual average

\*\* Preliminary

\*\*\* Forecast

Source: Soyatech and USDA Foreign Agricultural Service

### Exhibit 4.1.3 – Worldwide Soybean Production



\* Annual average

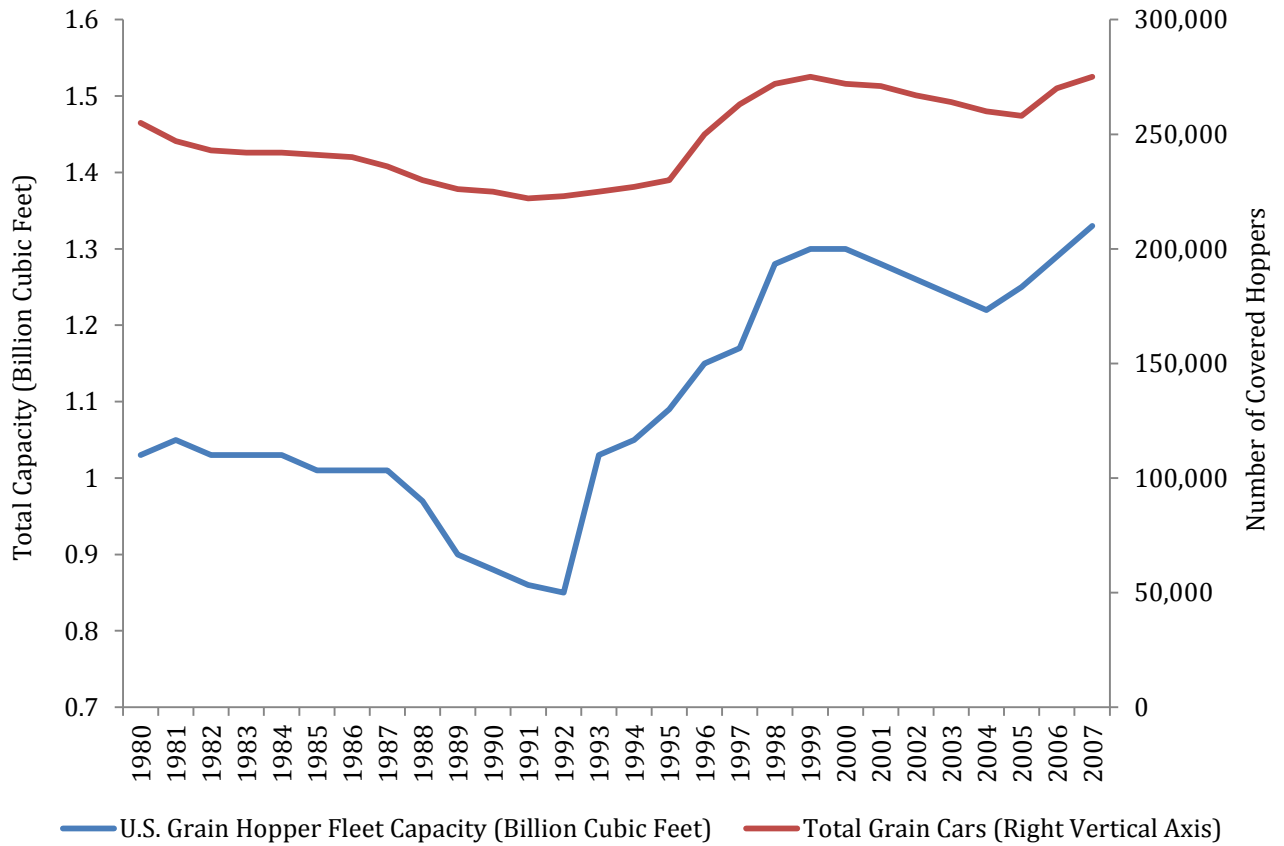
\*\* Preliminary

\*\*\* Forecast

Source: Soyatech and USDA Foreign Agricultural Service

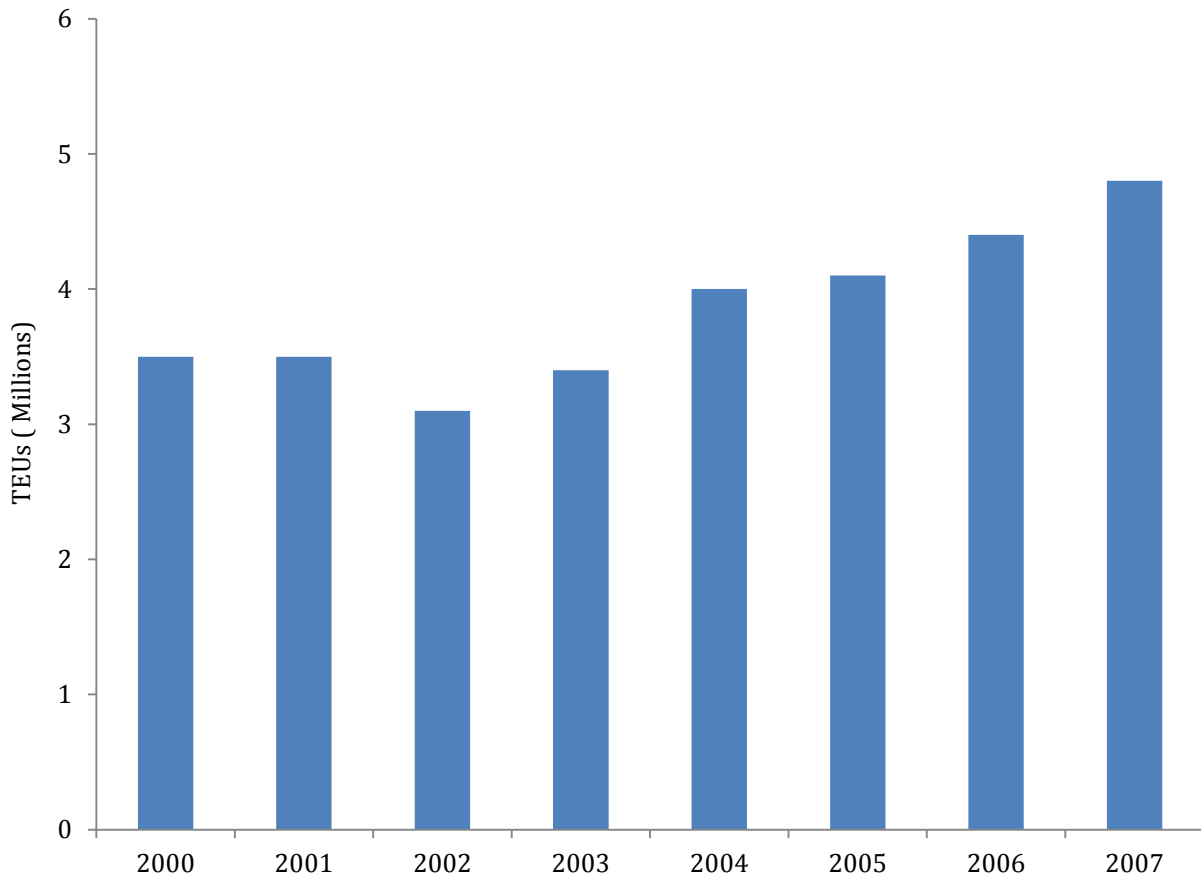
## 4.2 Agricultural Trade

**Exhibit 4.2.1 - U.S. Grain Hopper Fleet Capacity (Billion Cubic Feet), 1980 to 2007**



Source: AAR, Rail Transportation of Grain

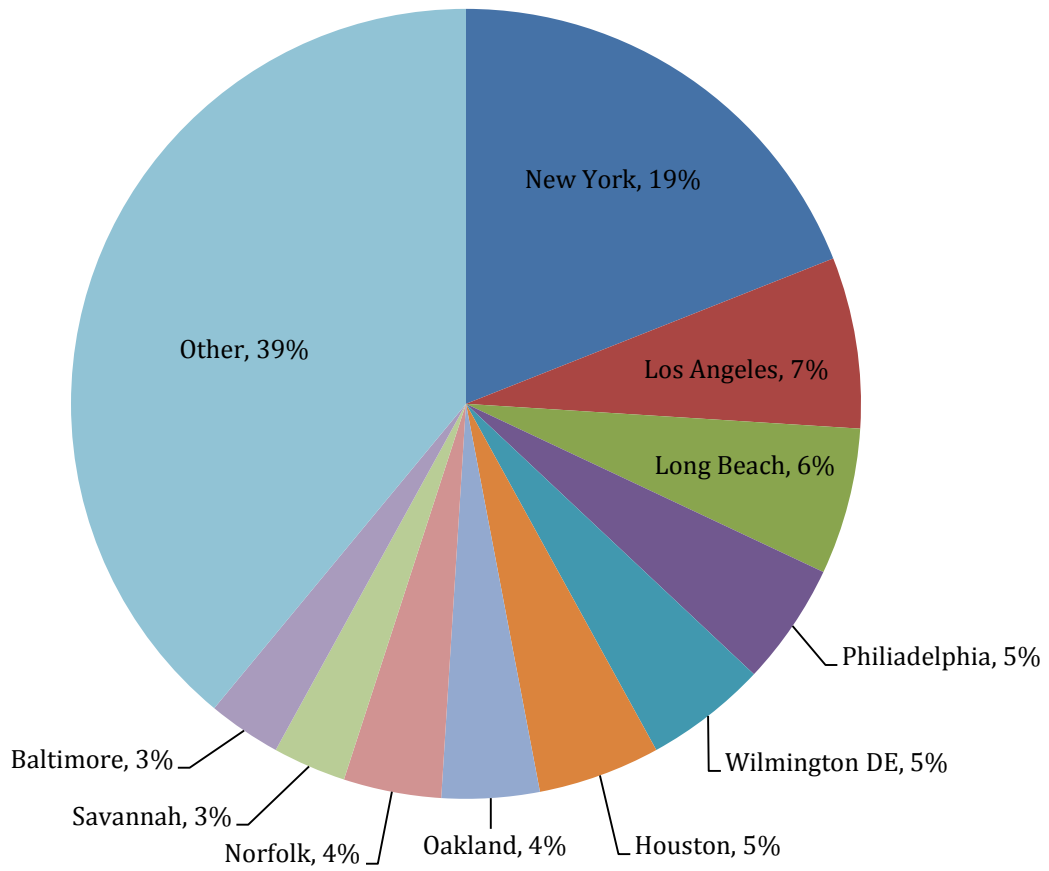
**Exhibit 4.2.2 – Total Waterborne Agricultural Container Trade (Imports and Exports)**



Source: Port Import Export Reporting Service (PIERS)

\* TEU is a 20-foot equivalent container.

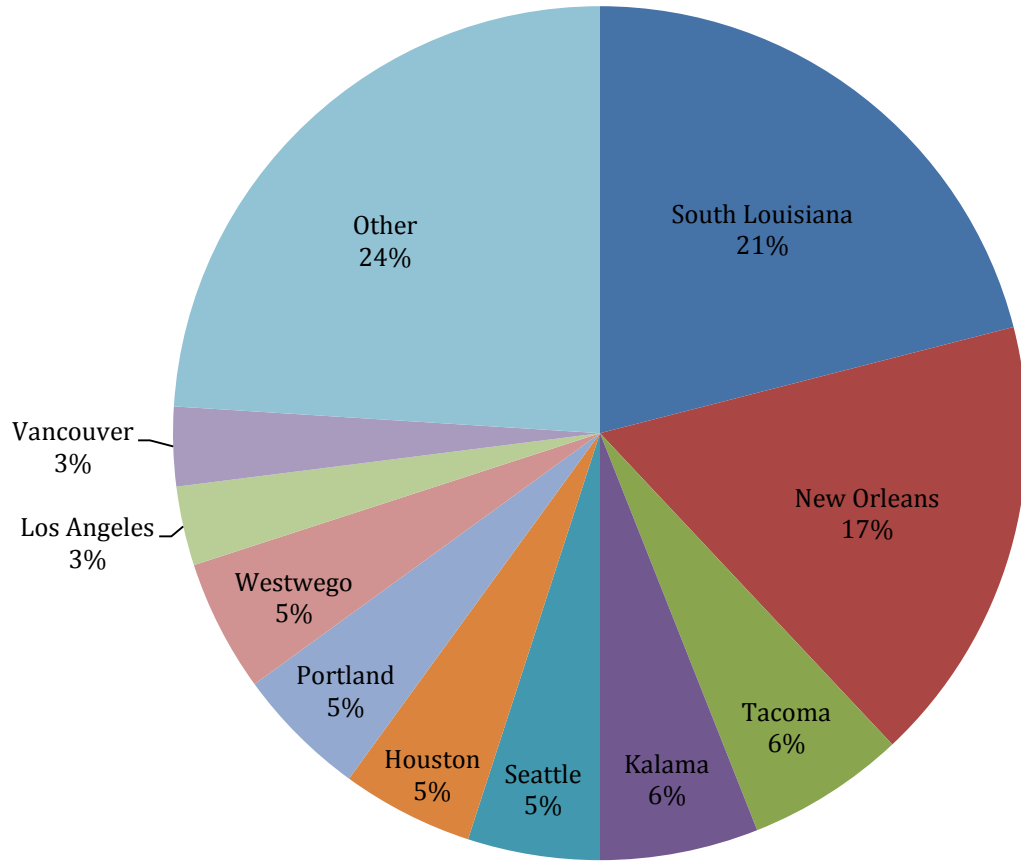
**Exhibit 4.2.3 – Top 10 U.S. Ports Moving Agricultural Imports, 2007**



Source: Port Import Export Reporting Service (PIERS)

\* Note: Chart depicts all waterborne agricultural imports, bulk and container combined, based on tonnage moved.

**Exhibit 4.2.4 - Top 10 U.S. Ports Moving Agricultural Exports, 2007**

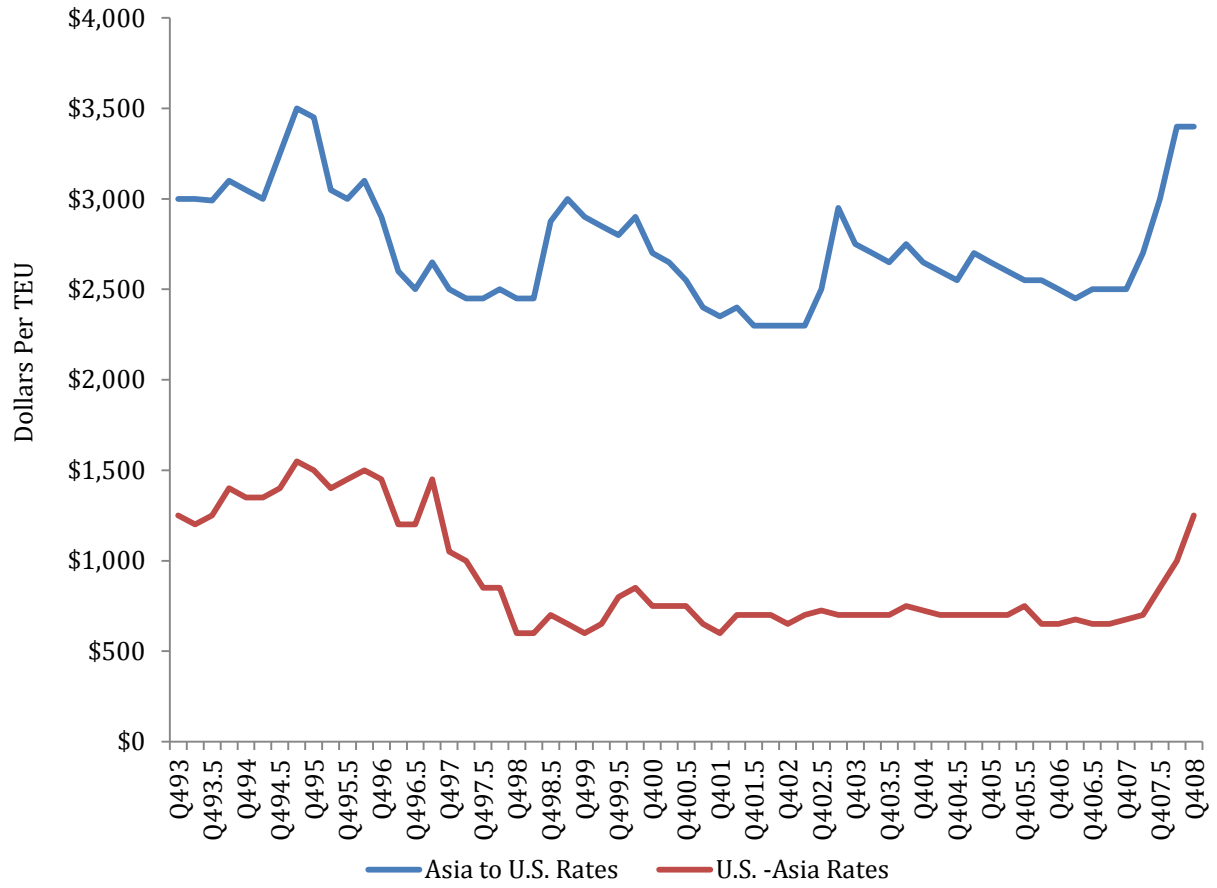


Source: Port Import Export Reporting Service (PIERS)

\* Note: Chart depicts all waterborne agricultural imports, bulk and container combined, based on tonnage moved.

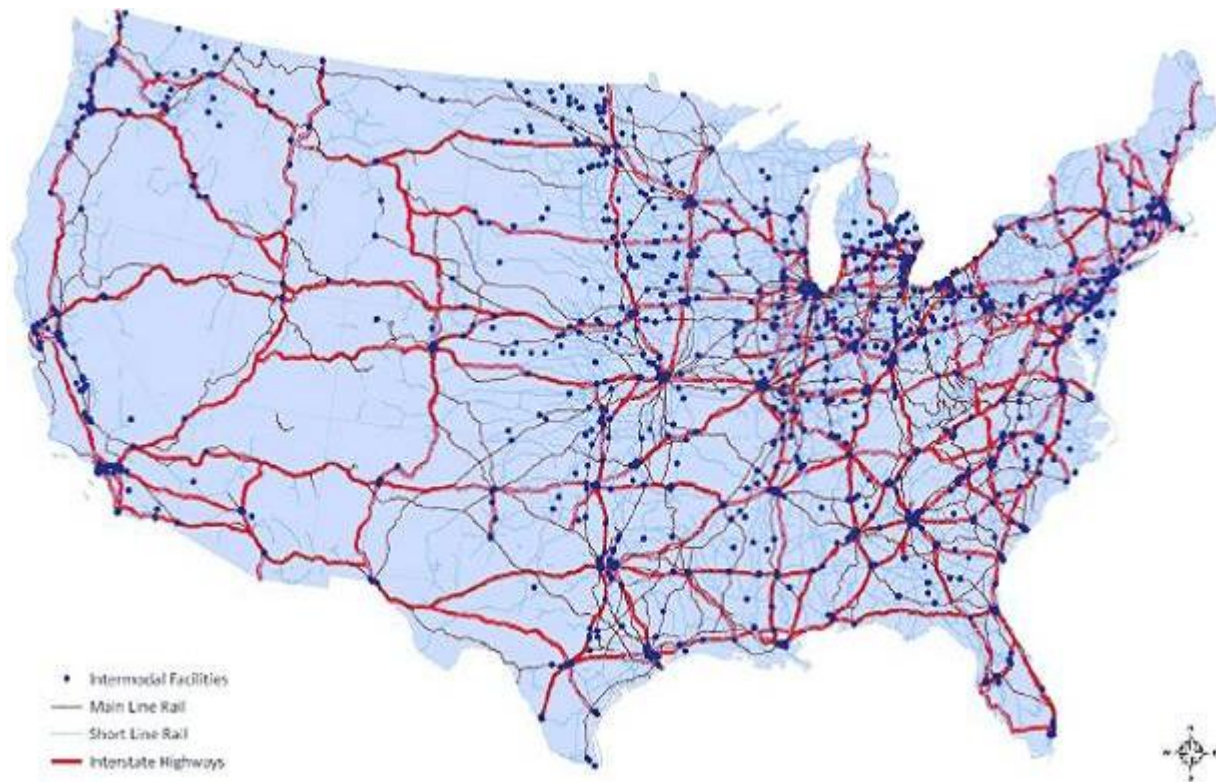


**Exhibit 4.2.5 – Container Rates for Trans-Pacific Trade Lanes**



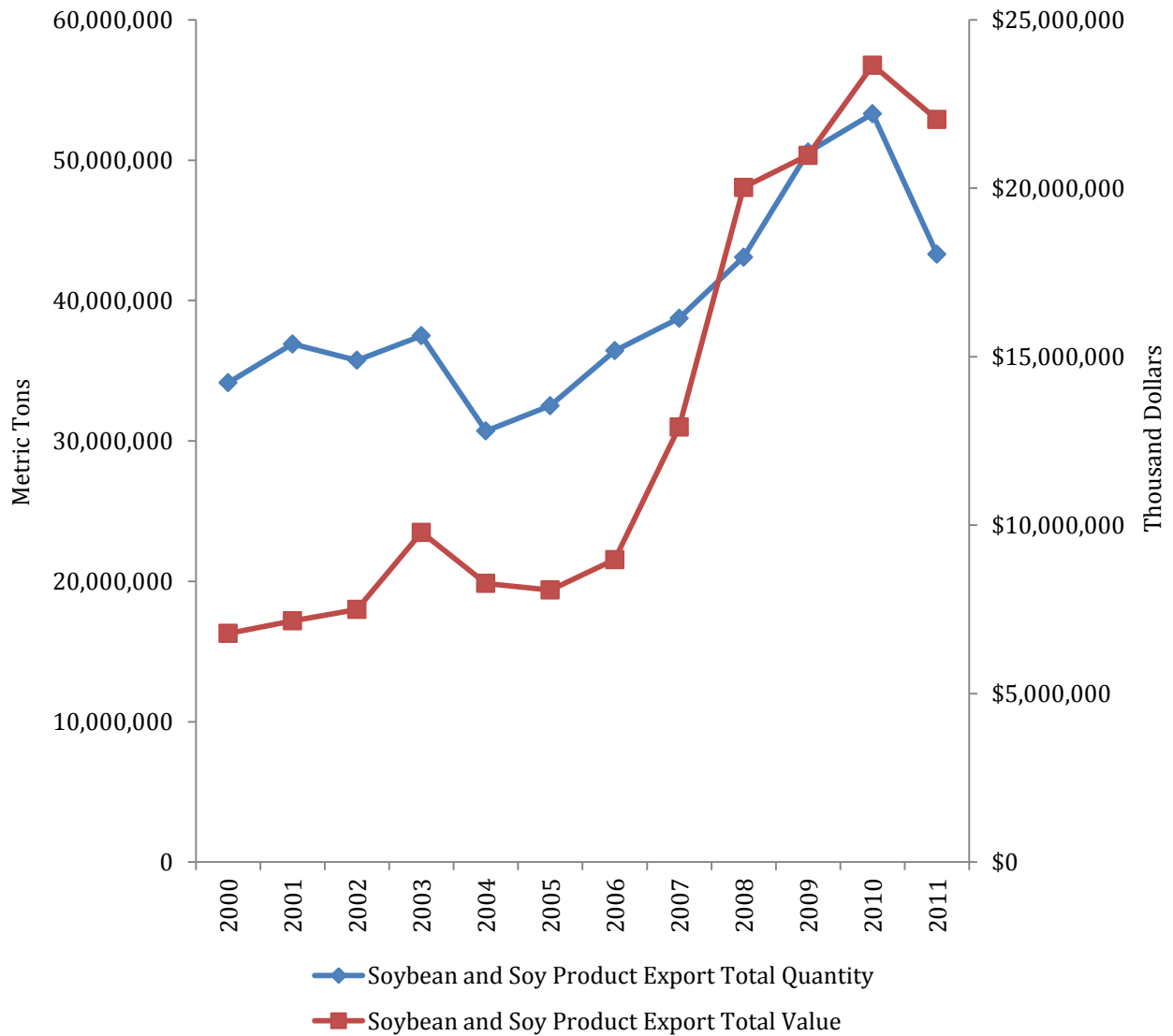
Source: Containerization International

**Exhibit 4.2.6 – U.S. Intermodal Facilities, 2002**



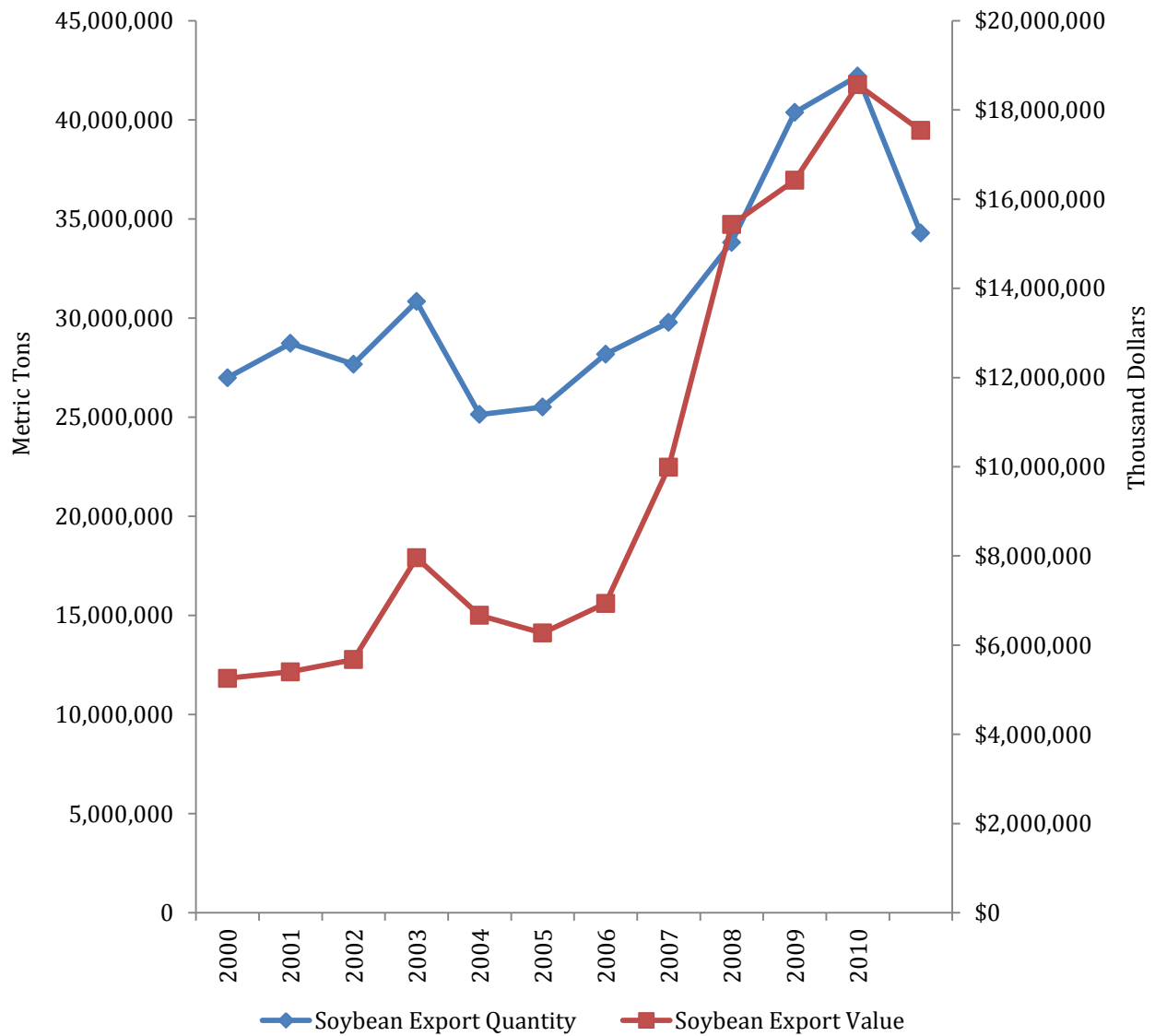
*Source: U.S. Bureau of Transportation Statistics*

**Exhibit 4.2.7 – Total Value and Volume of U.S. Soybean and Soybean Product Exports**



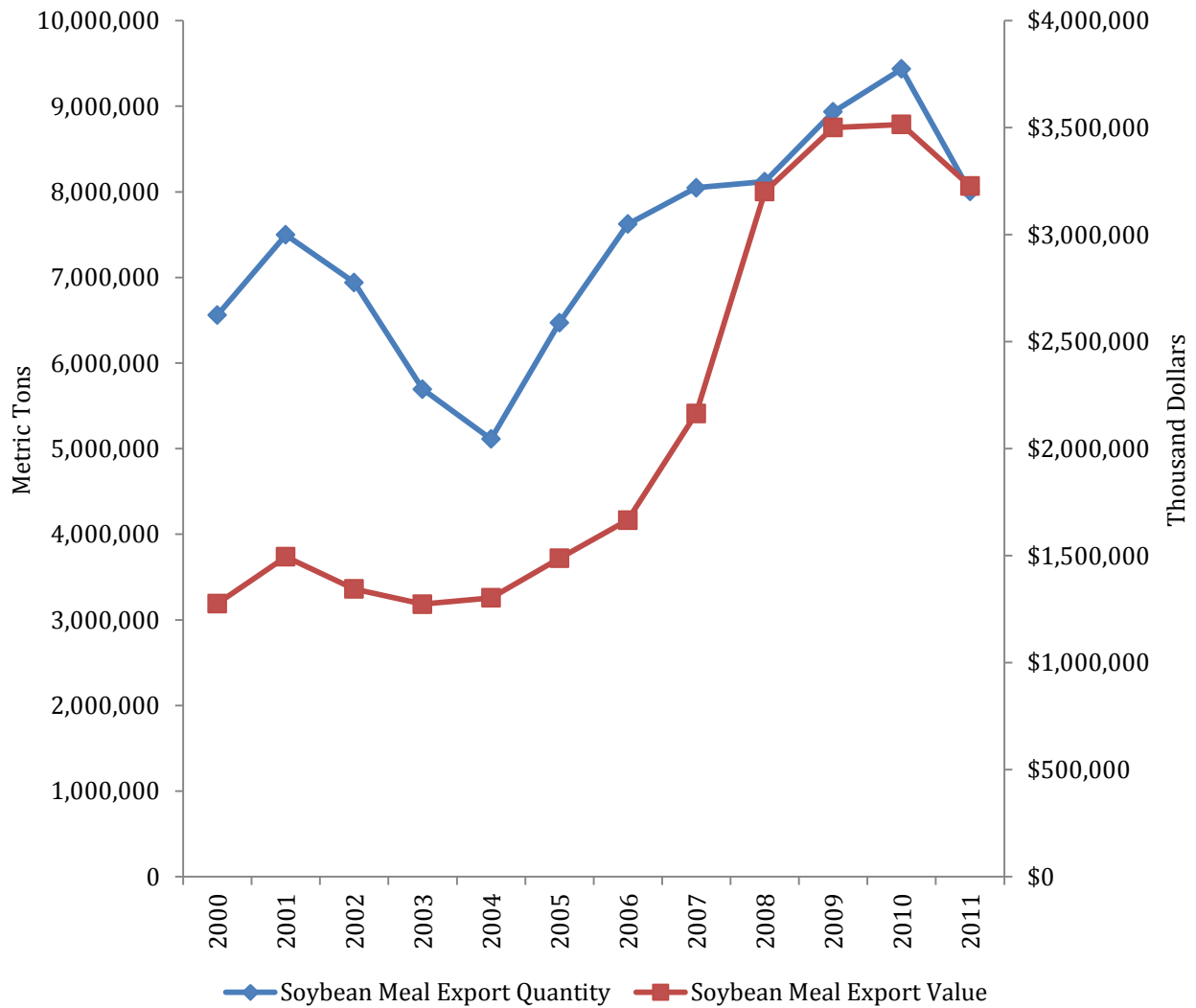
Source: USDA Foreign Agricultural Service Global Agricultural Trade System

**Exhibit 4.2.8 – Value and Volume of U.S. Soybean Exports**



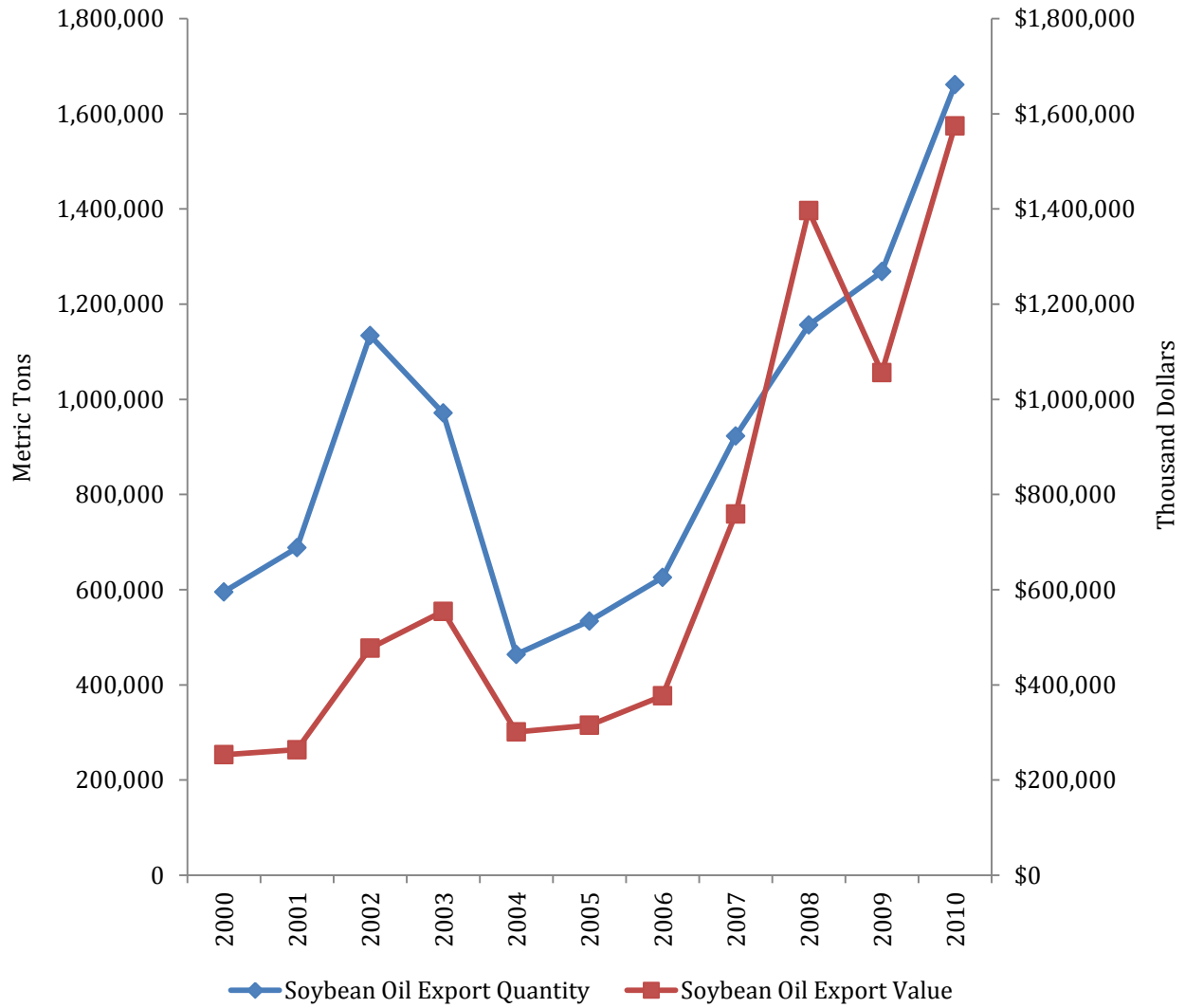
Source: USDA Foreign Agricultural Service Global Agricultural Trade System

**Exhibit 4.2.9 – Value and Volume of U.S. Soybean Meal Exports**



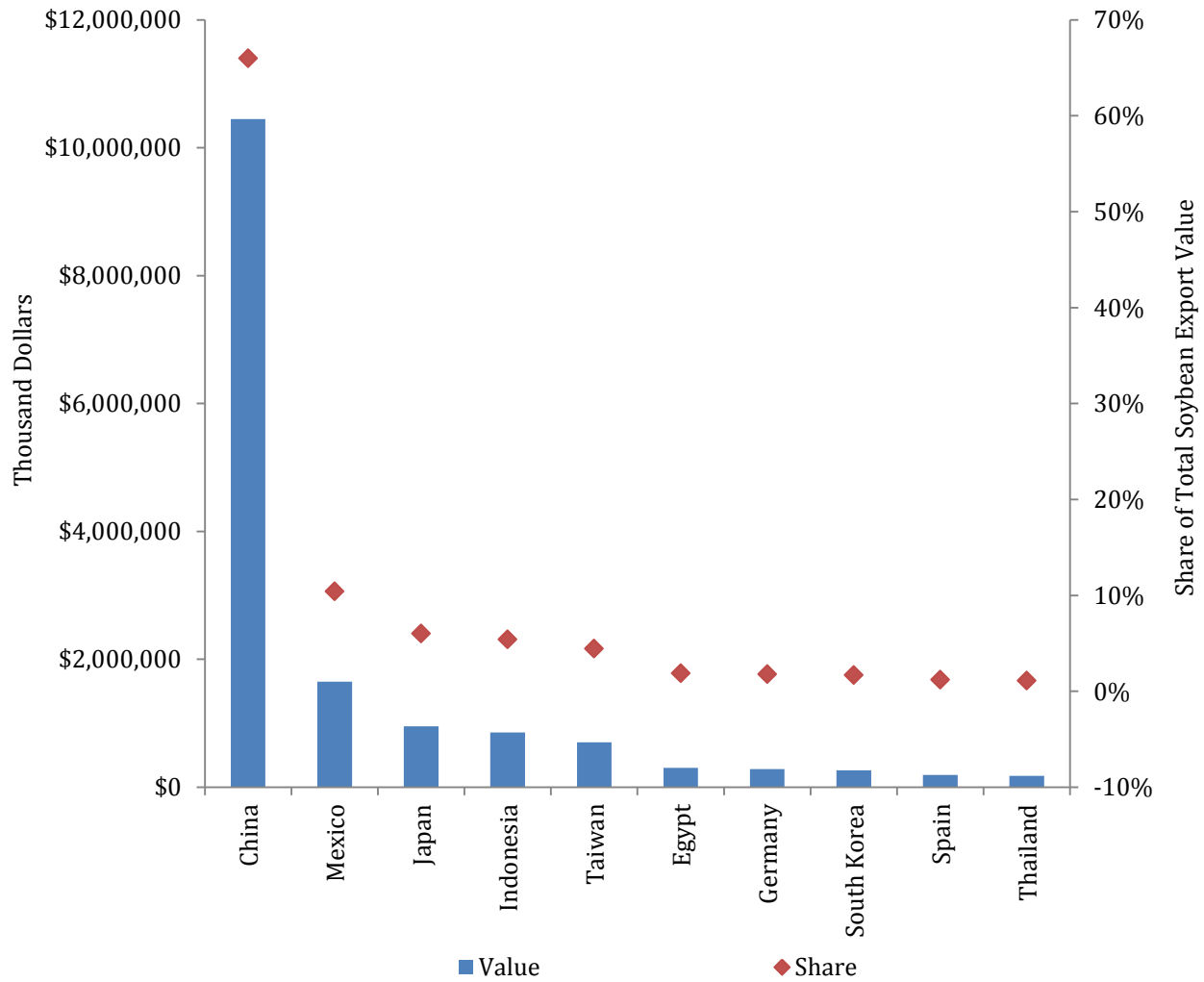
Source: USDA Foreign Agricultural Service Global Agricultural Trade System

**Exhibit 4.2.10 – Value and Volume of U.S. Soybean Oil Exports**



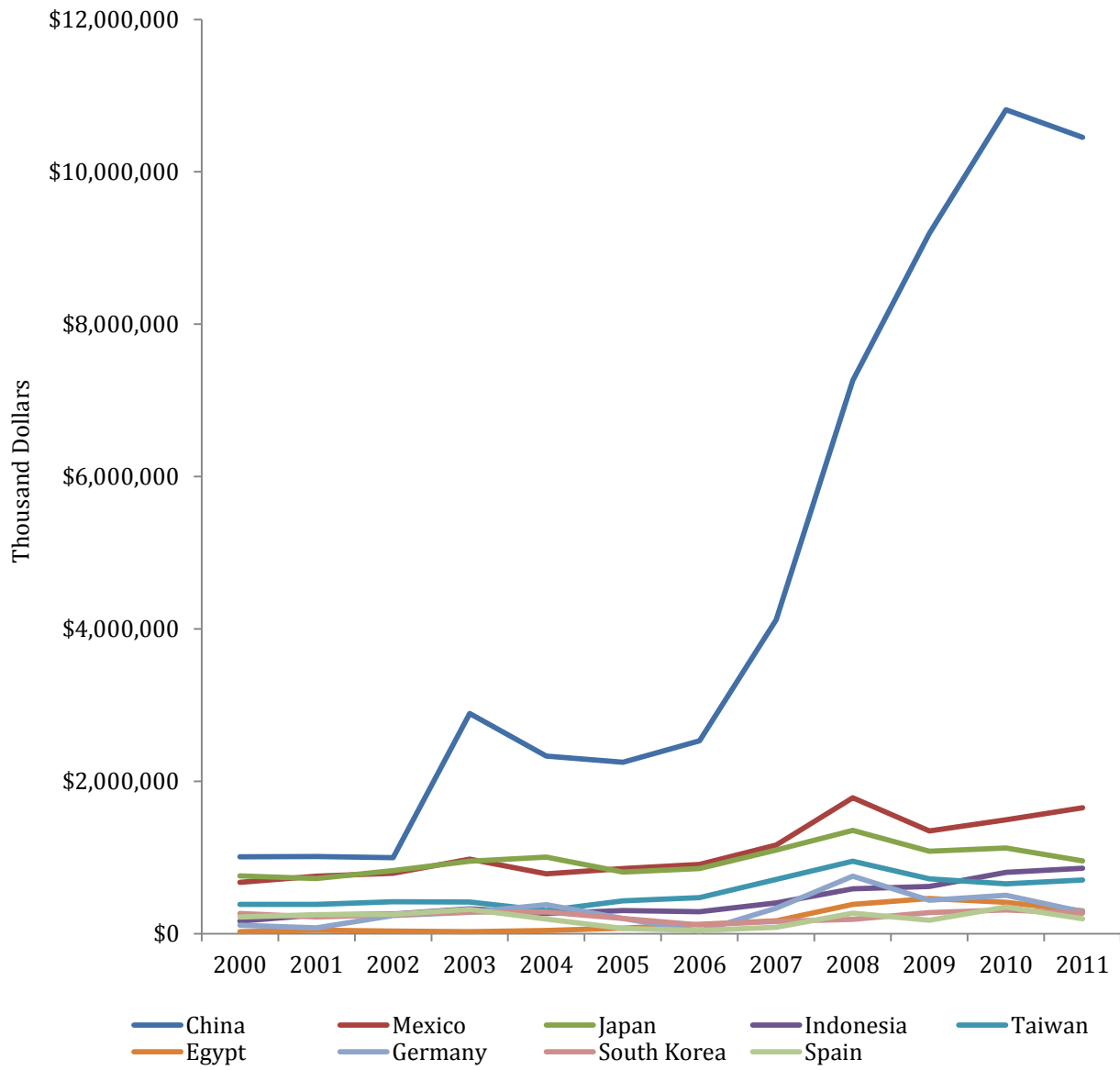
Source: USDA Foreign Agricultural Service Global Agricultural Trade System

**Exhibit 4.2.11 – Top 10 U.S. Soybean Export Markets by Value, 2011**



Source: USDA Foreign Agricultural Service Global Agricultural Trade System

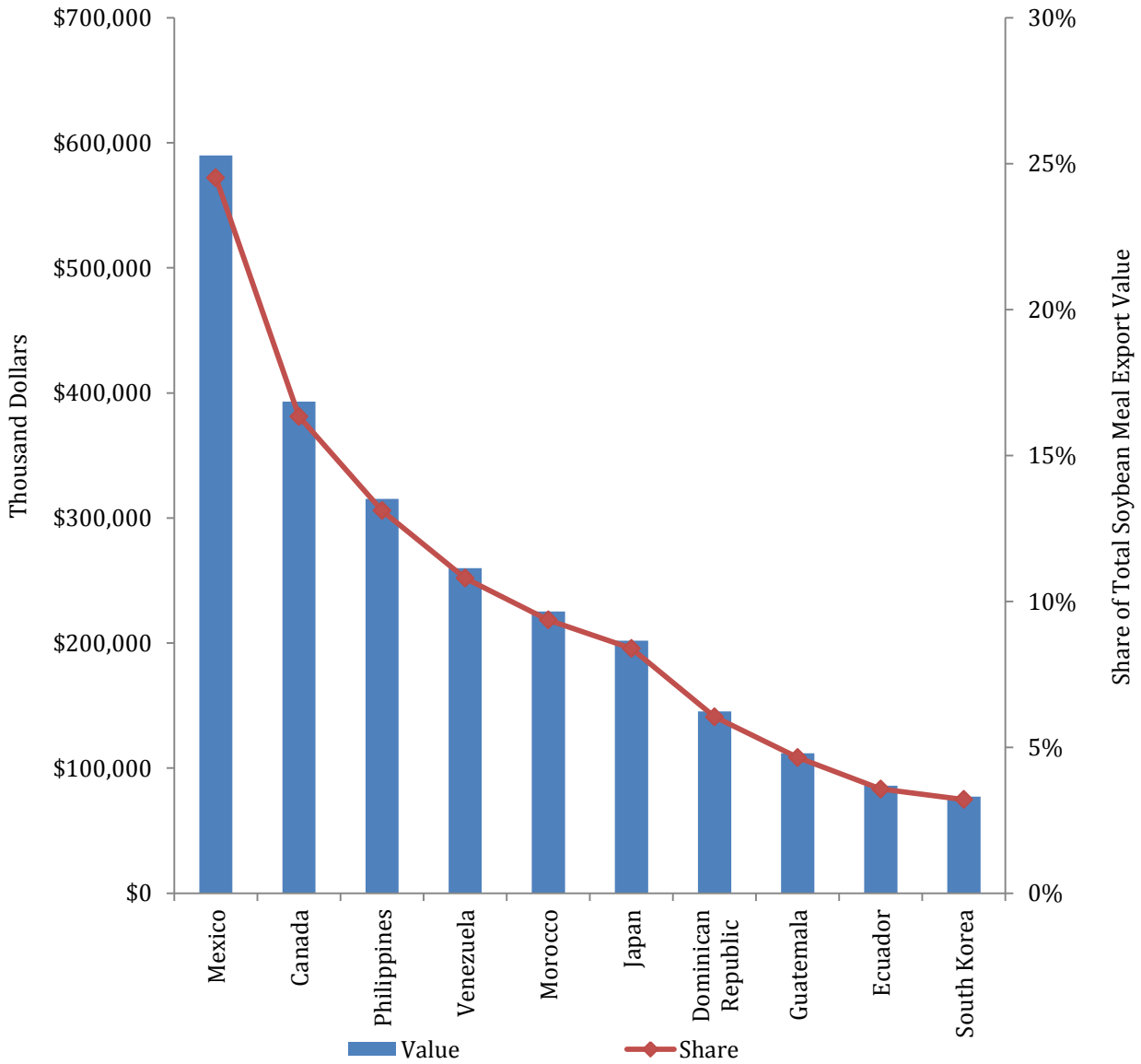
**Exhibit 4.2.12 – 2011 Top U.S. Soybean Export Markets’ Change in Export Value**



Source: USDA Foreign Agricultural Service Global Agricultural Trade System

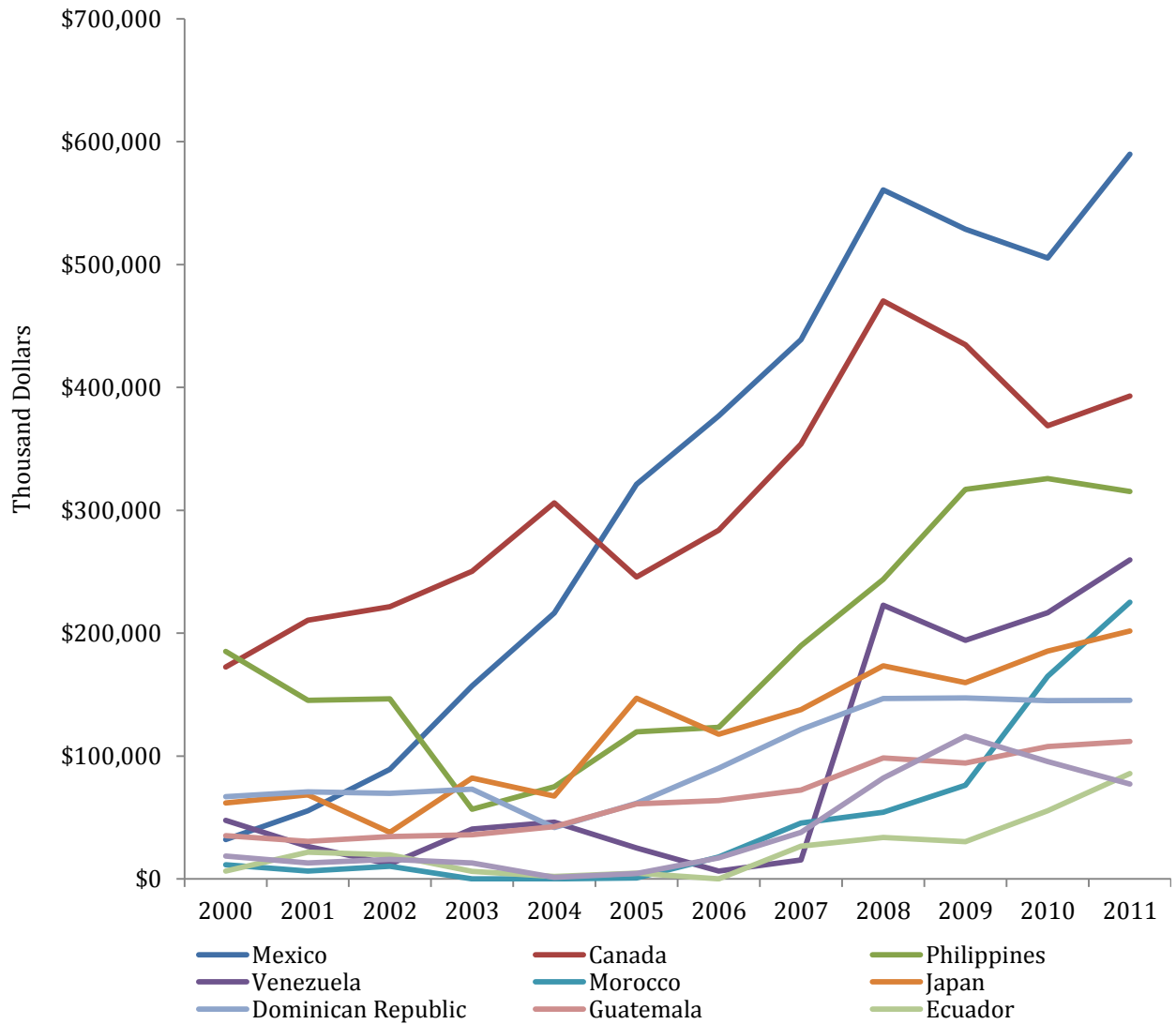


**Exhibit 4.2.13 – Top 10 U.S. Soybean Meal Export Markets by Value, 2011**



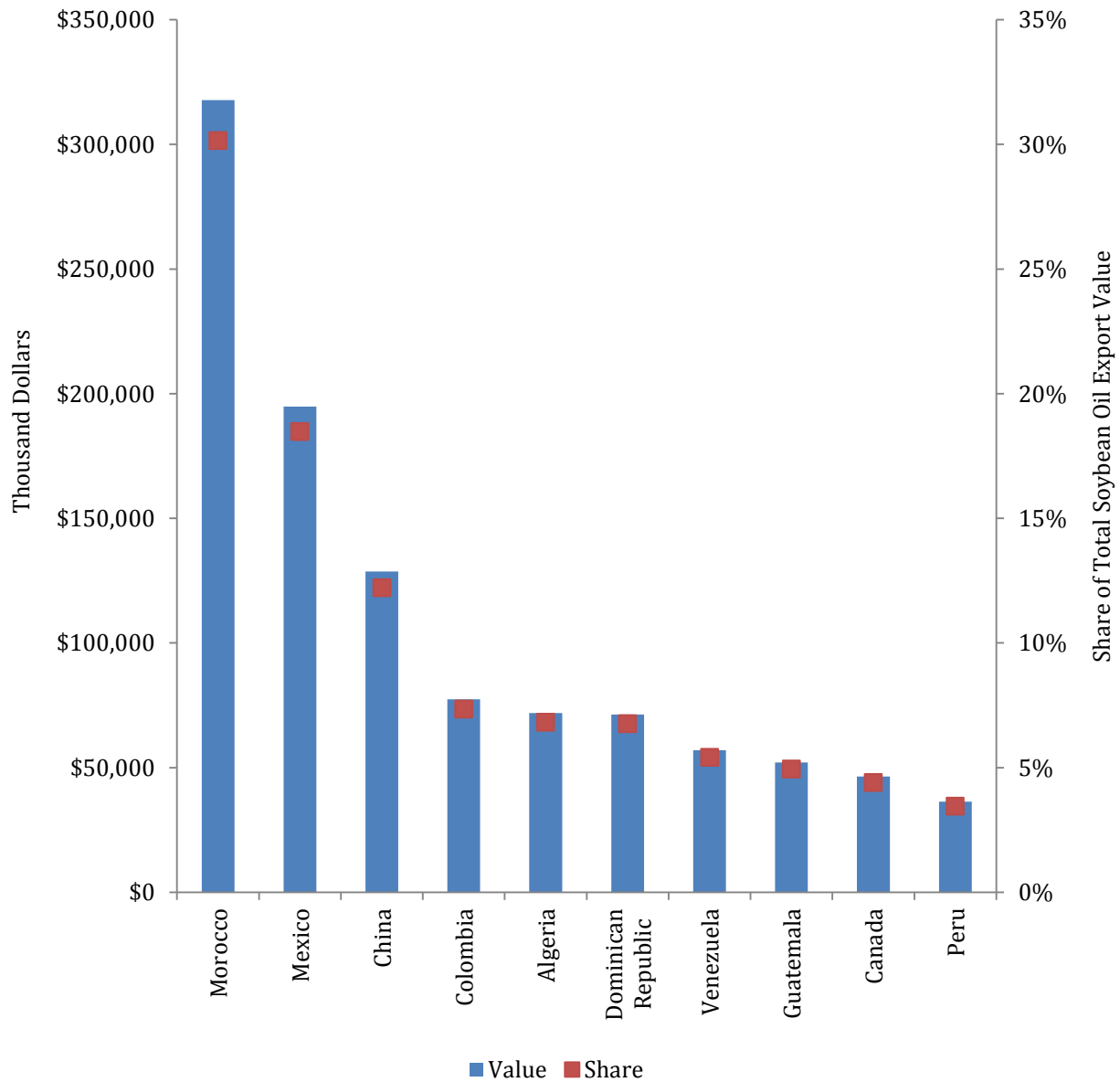
Source: USDA Foreign Agricultural Service Global Agricultural Trade System

**Exhibit 4.2.14 - 2011 Top U.S. Soybean Meal Export Markets' Change in Export Value**



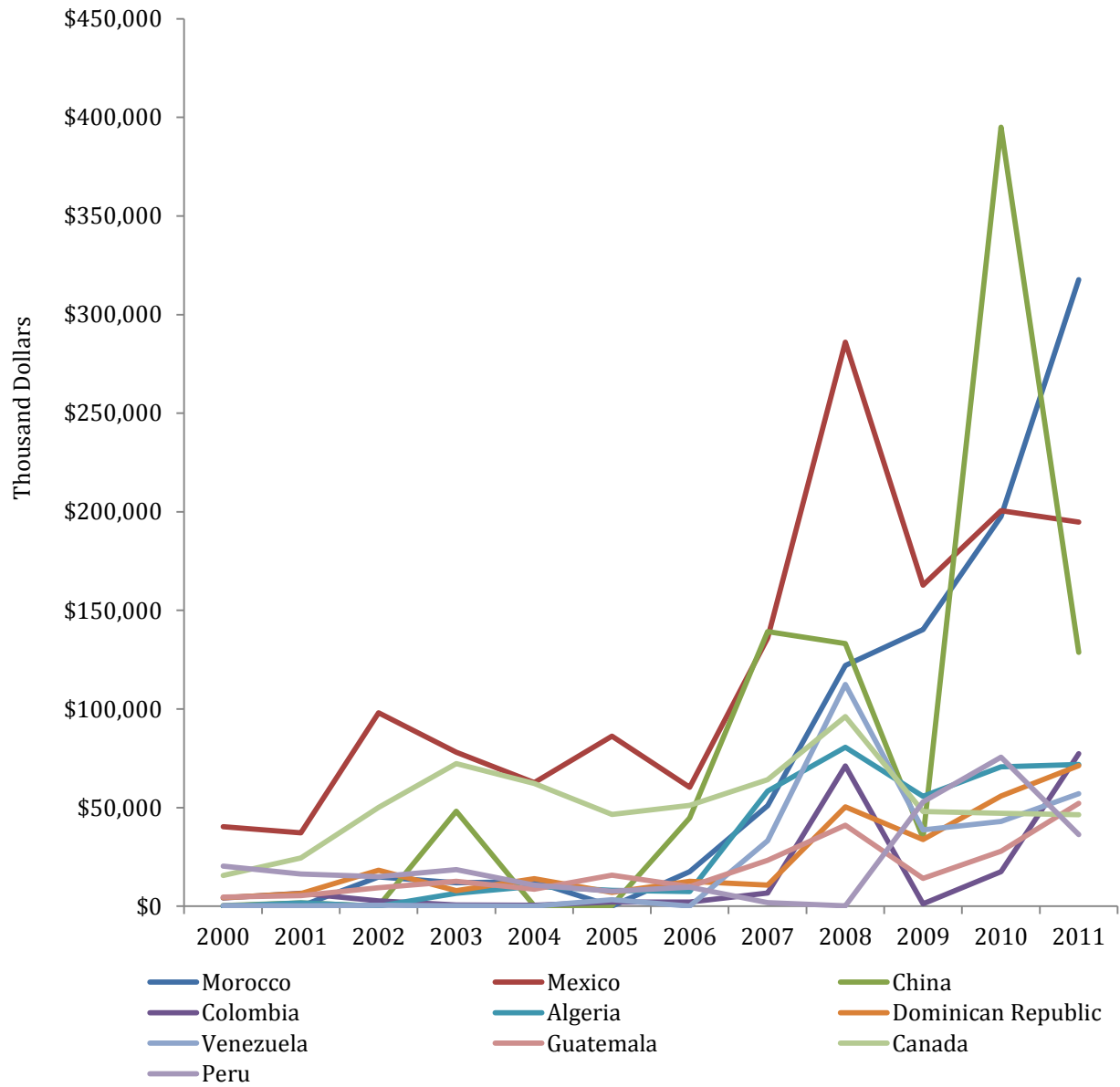
Source: USDA Foreign Agricultural Service Global Agricultural Trade System

**Exhibit 4.2.15 - Top 10 U.S. Soybean Oil Export Markets by Value, 2011**



Source: USDA Foreign Agricultural Service Global Agricultural Trade System

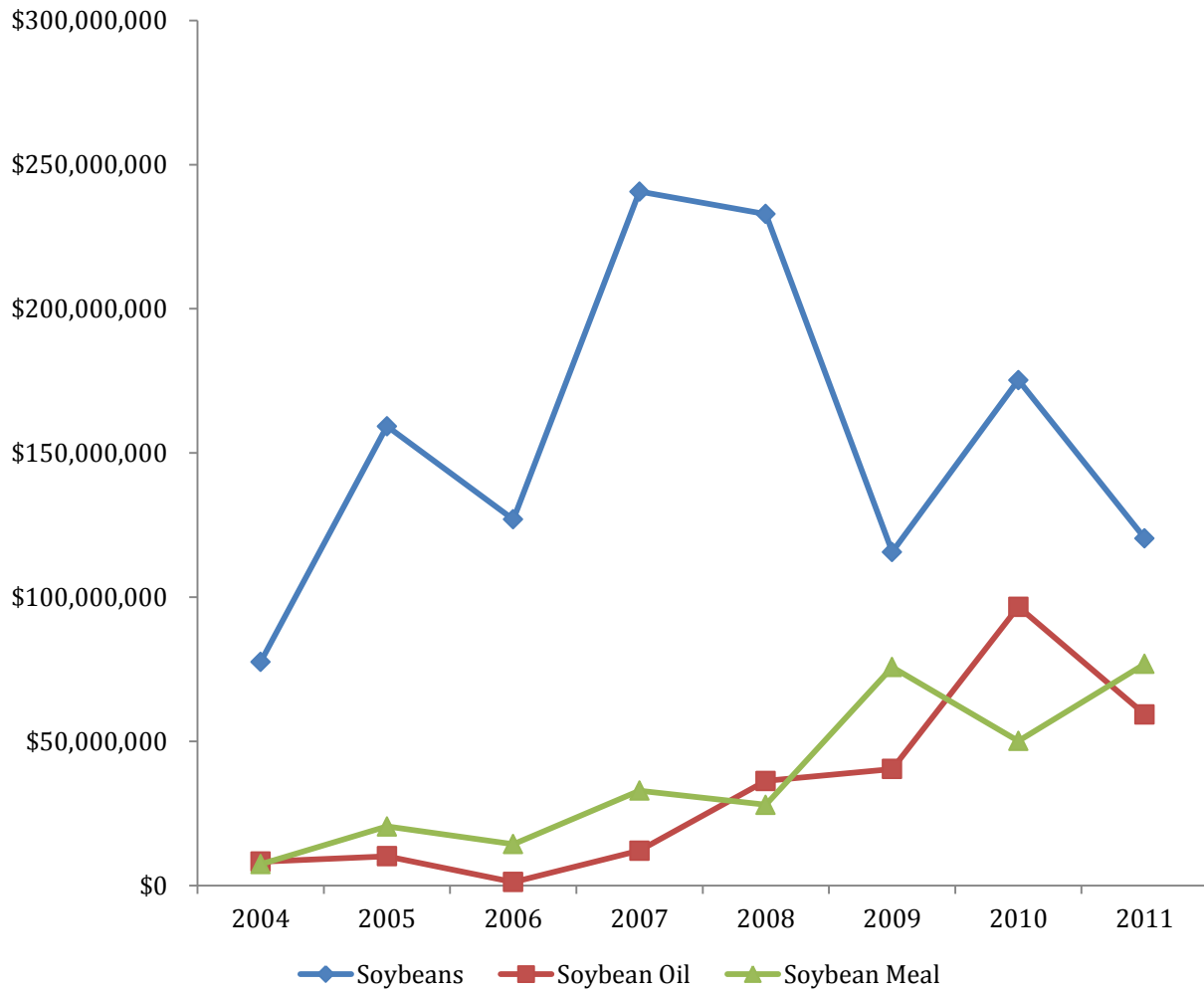
**Exhibit 4.2.16 – 2011 Top U.S. Soybean Oil Export Markets’ Change in Export Value**



Source: USDA Foreign Agricultural Service Global Agricultural Trade System

### 4.3 Missouri Agricultural Trade

Exhibit 4.3.1 – Value of Missouri Soybean Exports



Source: USDA Foreign Agricultural Service

**Exhibit 4.3.2 – Missouri Soybean Export Trading Partners, Thousand Dollars**

<b>2011 Rank</b>	<b>Country</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
1	Mexico	\$74,109	\$115,443	\$85,909	\$99,710	\$114,610	\$55,510	\$98,381	\$44,081
2	Taiwan	\$363	\$2,302	\$4,899	\$5,279	\$8,437	\$6,617	\$3,738	\$33,968
3	China	\$0	\$0	\$0	\$107,434	\$48,833	\$981	\$26,141	\$23,788
4	Indonesia	\$515	\$181	\$7	\$1,543	\$3,564	\$8,777	\$23,025	\$14,793
5	Japan	\$2,289	\$3,980	\$24,964	\$7,035	\$28,117	\$13,086	\$18,366	\$2,237
6	Vietnam	\$0	\$161	\$15	\$413	\$498	\$579	\$3,239	\$567
7	Malaysia	\$20	\$20	\$0	\$184	\$23	\$3,963	\$706	\$399
8	Afghanistan	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$315
9	Philippines	\$0	\$163	\$338	\$97	\$24	\$742	\$450	\$107
10	Canada	\$12	\$65	\$683	\$383	\$74	\$14,024	\$1,123	\$80
11	Argentina	\$0	\$3	\$0	\$0	\$0	\$0	\$0	\$17
12	Singapore	\$35	\$13,929	\$0	\$0	\$0	\$59	\$45	\$15
13	Uruguay	\$0	\$0	\$0	\$0	\$0	\$0	\$10	\$12
14	Bangladesh	\$0	\$1,937	\$0	\$0	\$0	\$0	\$0	\$0
15	Chile	\$0	\$0	\$0	\$2,273	\$0	\$0	\$0	\$0
16	Colombia	\$0	\$0	\$0	\$4,232	\$21,194	\$0	\$0	\$0
17	Cuba	\$0	\$21,010	\$0	\$0	\$6,112	\$0	\$0	\$0
18	Ireland	\$0	\$0	\$0	\$0	\$1,323	\$0	\$0	\$0
19	Guatemala	\$34	\$25	\$20	\$22	\$0	\$0	\$0	\$0
20	Hong Kong	\$0	\$0	\$229	\$0	\$50	\$0	\$29	\$0
21	Korea, South	\$0	\$0	\$368	\$105	\$0	\$0	\$0	\$0
22	Netherlands	\$0	\$0	\$0	\$11,939	\$0	\$0	\$0	\$0
23	Paraguay	\$0	\$0	\$3	\$0	\$0	\$0	\$0	\$0
24	Saudi Arabia	\$0	\$0	\$7	\$0	\$0	\$0	\$0	\$0
25	Spain	\$0	\$0	\$0	\$0	\$0	\$6,909	\$0	\$0
26	Thailand	\$139	\$62	\$171	\$0	\$0	\$4,422	\$0	\$0
27	Turkey	\$0	\$0	\$9,384	\$0	\$0	\$0	\$0	\$0
<b>Total</b>		<b>\$77,516</b>	<b>\$159,281</b>	<b>\$126,996</b>	<b>\$240,647</b>	<b>\$232,860</b>	<b>\$115,670</b>	<b>\$175,254</b>	<b>\$120,379</b>

Source: USDA Foreign Agricultural Service

**Exhibit 4.3.3 – Missouri Soybean Meal Export Trading Partners, Thousand Dollars**

<b>2011 Rank</b>	<b>Country</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
1	Mexico	\$6,722	\$6,322	\$2,010	\$2,546	\$12,966	\$45,514	\$39,923	\$66,159
2	Morocco	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,537
3	Ecuador	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,408
4	United Arab Emirates	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$756
5	Brazil	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10
6	Australia	\$0	\$13	\$15	\$0	\$0	\$0	\$0	\$0
7	Argentina	\$0	\$0	\$0	\$0	\$17	\$0	\$0	\$0
8	Belgium-Luxembourg	\$201	\$283	\$439	\$0	\$0	\$0	\$0	\$0
9	Canada	\$0	\$15	\$0	\$255	\$26	\$4	\$5	\$0
10	China	\$0	\$0	\$3	\$0	\$0	\$8	\$0	\$0
11	Chile	\$36	\$0	\$0	\$6,266	\$0	\$0	\$0	\$0
12	Colombia	\$3	\$0	\$42	\$0	\$2,346	\$0	\$0	\$0
13	Egypt	\$0	\$0	\$0	\$0	\$0	\$0	\$3	\$0
14	Ireland	\$0	\$0	\$0	\$5,359	\$9,671	\$0	\$0	\$0
15	Finland	\$253	\$0	\$0	\$0	\$0	\$0	\$0	\$0
16	Guatemala	\$0	\$10	\$0	\$0	\$0	\$2,334	\$0	\$0
17	Hong Kong	\$0	\$0	\$39	\$0	\$0	\$0	\$0	\$0
18	India	\$0	\$21	\$14	\$0	\$0	\$0	\$0	\$0
19	Japan	\$0	\$13,534	\$7,080	\$17,429	\$2,952	\$10,585	\$10,065	\$0
20	Korea, South	\$16	\$39	\$501	\$130	\$0	\$0	\$0	\$0
21	New Zealand	\$0	\$7	\$0	\$0	\$0	\$0	\$14	\$0
22	Peru	\$0	\$0	\$3,457	\$0	\$0	\$0	\$0	\$0
23	Philippines	\$0	\$0	\$53	\$363	\$0	\$5,244	\$126	\$0
24	Thailand	\$146	\$0	\$0	\$0	\$0	\$0	\$0	\$0
25	Turkey	\$0	\$0	\$0	\$0	\$0	\$12,053	\$0	\$0
26	Taiwan	\$8	\$210	\$676	\$558	\$0	\$0	\$0	\$0
<b>Total</b>		<b>\$7,587</b>	<b>\$20,759</b>	<b>\$14,783</b>	<b>\$32,905</b>	<b>\$27,978</b>	<b>\$75,742</b>	<b>\$50,149</b>	<b>\$76,870</b>

Source: USDA Foreign Agricultural Service

**Exhibit 4.3.4 – Missouri Soybean Oil Export Trading Partners, Thousand Dollars**

<b>2011 Rank</b>	<b>Country</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
1	Mexico	\$0	\$0	\$412	\$11,857	\$31,613	\$40,309	\$96,355	\$59,136
2	Colombia	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$73
3	Saudi Arabia	\$0	\$0	\$0	\$0	\$0	\$0	\$27	\$65
4	Lebanon	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$51
5	Canada	\$3	\$145	\$29	\$234	\$4,579	\$77	\$99	\$38
6	Bahamas, The	\$0	\$0	\$0	\$0	\$63	\$0	\$0	\$0
7	China	\$0	\$0	\$6	\$0	\$0	\$0	\$0	\$0
8	Guatemala	\$2,710	\$4,695	\$0	\$0	\$0	\$0	\$0	\$0
9	India	\$0	\$58	\$0	\$0	\$0	\$0	\$0	\$0
10	Madagascar	\$4,203	\$3,631	\$0	\$0	\$0	\$0	\$0	\$0
11	Malawi	\$1,334	\$1,552	\$721	\$0	\$0	\$0	\$0	\$0
12	Malaysia	\$0	\$51	\$23	\$0	\$0	\$18	\$0	\$0
13	New Zealand	\$0	\$0	\$0	\$0	\$0	\$0	\$41	\$0
14	Philippines	\$0	\$0	\$5	\$0	\$0	\$0	\$0	\$0
15	Singapore	\$0	\$0	\$0	\$0	\$6	\$0	\$0	\$0
16	Trinidad and Tobago	\$0	\$0	\$0	\$0	\$0	\$0	\$121	\$0
<b>Total</b>		<b>\$8,250</b>	<b>\$10,133</b>	<b>\$1,196</b>	<b>\$12,091</b>	<b>\$36,261</b>	<b>\$40,403</b>	<b>\$96,683</b>	<b>\$59,363</b>

Source: USDA Foreign Agricultural Service



**Exhibit 4.3.5 – State-by-State Value of Soybean Exports, Ranked by 2011 Value,  
Thousand Dollars**

<b>2011 Rank</b>	<b>State</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
1	Louisiana	\$5,016,975	\$7,038,352	\$7,807,467	\$8,764,338	\$8,299,074
2	Washington	\$2,305,308	\$4,469,013	\$3,716,877	\$4,136,463	\$3,685,577
3	Illinois	\$698,199	\$1,099,670	\$1,047,038	\$814,243	\$1,623,107
4	Nebraska	\$331,768	\$579,917	\$342,372	\$359,488	\$560,408
5	Ohio	\$179,237	\$207,956	\$306,771	\$341,799	\$530,729
6	Texas	\$69,332	\$126,119	\$741,119	\$864,505	\$501,906
7	Virginia	\$91,300	\$156,655	\$327,957	\$427,598	\$327,399
8	Iowa	\$158,700	\$317,392	\$351,749	\$540,984	\$320,913
9	Alabama	\$108,937	\$108,492	\$219,524	\$428,913	\$210,783
10	Minnesota	\$228,156	\$202,990	\$136,982	\$262,183	\$209,513
11	Oregon	\$60,047	\$2,409	\$142,197	\$388,110	\$182,637
12	Connecticut	\$3,095	\$95,084	\$392,833	\$244,937	\$132,411
13	Missouri	\$240,647	\$232,860	\$115,670	\$175,254	\$120,379
14	Michigan	\$47,295	\$121,916	\$108,058	\$78,736	\$113,660
15	Kansas	\$204,512	\$266,069	\$192,846	\$129,479	\$109,465
16	Wisconsin	\$48,527	\$68,967	\$60,890	\$73,071	\$105,012
17	New Jersey	\$2,513	\$9,757	\$34,845	\$74,844	\$77,470
18	Mississippi	\$0	\$23,499	\$817	\$69,378	\$76,124
19	New York	\$44,533	\$72,873	\$61,458	\$51,340	\$62,239
20	Oklahoma	\$0	\$0	\$0	\$11,093	\$62,187
21	Arkansas	\$3,737	\$32,542	\$24,948	\$38,577	\$58,469
22	North Dakota	\$26,300	\$31,872	\$24,744	\$31,813	\$53,579
23	North Carolina	\$16,871	\$42,133	\$43,655	\$78,470	\$33,453
24	Indiana	\$29,308	\$46,084	\$21,049	\$14,686	\$28,700
25	Tennessee	\$5,017	\$51,296	\$87,428	\$41,219	\$24,745
26	Georgia	\$66,315	\$68,712	\$82,751	\$39,444	\$16,296
27	Pennsylvania	\$9,017	\$7,424	\$14,235	\$11,151	\$11,134
28	South Carolina	\$216	\$358	\$153	\$4,412	\$10,267
29	California	\$10,141	\$50,815	\$12,633	\$17,730	\$6,350
30	Kentucky	\$41	\$165	\$46,687	\$2,080	\$5,008
31	Maryland	\$1,646	\$2,961	\$9	\$4,843	\$2,869
32	Vermont	\$318	\$637	\$1,012	\$1,404	\$998
33	Idaho	\$735	\$496	\$802	\$227	\$541
34	South Dakota	\$6,624	\$417	\$1,305	\$4,526	\$139
35	Maine	\$105	\$337	\$170	\$110	\$121
36	Florida	\$431	\$6	\$2,908	\$287	\$17
37	Arizona	\$22	\$0	\$0	\$0	\$6
38	Alaska	\$0	\$0	\$0	\$0	\$0
39	Colorado	\$8	\$0	\$0	\$0	\$0
40	District of Columbia	\$0	\$0	\$0	\$58,193	\$0
41	Hawaii	\$0	\$0	\$3,599	\$0	\$0
42	Massachusetts	\$53	\$0	\$0	\$0	\$0
43	Montana	\$12	\$51	\$9	\$175	\$0
44	New Hampshire	\$0	\$256	\$0	\$0	\$0
45	Nevada	\$30	\$362	\$79	\$8	\$0
46	Rhode Island	\$0	\$0	\$0	\$0	\$0
47	Utah	\$0	\$55	\$0	\$0	\$0
48	West Virginia	\$14	\$0	\$48	\$0	\$0
49	Wyoming	\$0	\$12	\$0	\$0	\$0
<b>Total</b>		<b>\$10,016,041</b>	<b>\$15,536,979</b>	<b>\$16,475,693</b>	<b>\$18,586,111</b>	<b>\$17,563,685</b>

Source: USDA Foreign Agricultural Service

**Exhibit 4.3.6 – State-by-State Value of Soybean Meal Exports, Ranked by 2011 Value, Thousand Dollars**

2011 Rank	State	2007	2008	2009	2010	2011
1	Louisiana	\$804,145	\$1,138,039	\$1,257,175	\$1,267,066	\$1,221,427
2	Iowa	\$281,281	\$259,881	\$252,701	\$312,907	\$263,819
3	Virginia	\$100,102	\$210,893	\$257,966	\$235,923	\$249,152
4	Washington	\$66,461	\$240,248	\$317,441	\$485,453	\$217,171
5	Minnesota	\$154,610	\$183,944	\$144,031	\$114,965	\$157,114
6	Arizona	\$93,645	\$133,097	\$133,709	\$118,765	\$121,715
7	Nebraska	\$33,015	\$47,509	\$72,354	\$64,355	\$100,761
8	Illinois	\$42,665	\$130,183	\$134,382	\$91,233	\$80,695
9	Missouri	\$32,905	\$27,978	\$75,742	\$50,136	\$76,870
10	Georgia	\$21,197	\$111,109	\$157,586	\$173,240	\$76,435
11	South Dakota	\$35,495	\$58,100	\$43,404	\$49,731	\$67,226
12	Michigan	\$252	\$1,115	\$1,009	\$495	\$16,324
13	Kansas	\$3,253	\$4,882	\$13,024	\$9,132	\$13,373
14	Kentucky	\$7	\$109	\$48	\$10	\$7,109
15	West Virginia	\$0	\$0	\$0	\$8,250	\$6,000
16	Maryland	\$145	\$366	\$217	\$6,376	\$5,610
17	North Dakota	\$3,843	\$1,973	\$1,355	\$1,046	\$5,457
18	Oklahoma	\$2,975	\$2,827	\$4,121	\$4,222	\$4,237
19	Montana	\$1,755	\$2,271	\$1,957	\$2,368	\$3,126
20	Oregon	\$50	\$6	\$4,289	\$1,193	\$1,732
21	Florida	\$24	\$17	\$51	\$62	\$1,379
22	Ohio	\$1,075	\$8,151	\$14,590	\$2,098	\$1,136
23	Texas	\$764	\$683	\$178	\$524	\$890
24	California	\$1,650	\$8,736	\$4,859	\$3,182	\$886
25	Tennessee	\$630	\$762	\$882	\$695	\$599
26	New York	\$2,366	\$9,830	\$28,168	\$4,271	\$379
27	Utah	\$0	\$0	\$48	\$0	\$356
28	Arkansas	\$420	\$0	\$116	\$0	\$226
29	North Carolina	\$0	\$180	\$1,452	\$566	\$189
30	Wisconsin	\$0	\$17	\$46	\$39	\$95
31	New Jersey	\$0	\$0	\$261	\$394	\$52
32	South Carolina	\$7	\$8	\$0	\$263	\$50
33	Indiana	\$205	\$9,270	\$14,074	\$5,366	\$30
34	Nevada	\$3	\$0	\$0	\$0	\$20
35	Connecticut	\$0	\$5,000	\$65,740	\$82,437	\$10
36	Alabama	\$0	\$173	\$0	\$0	\$0
37	Delaware	\$0	\$28	\$20	\$48	\$0
38	Hawaii	\$0	\$109	\$0	\$0	\$0
39	Idaho	\$14	\$189	\$154	\$67	\$0
40	Massachusetts	\$0	\$15	\$0	\$440	\$0
41	Maine	\$0	\$0	\$0	\$0	\$0
42	Mississippi	\$0	\$0	\$0	\$154	\$0
43	New Mexico	\$0	\$0	\$38	\$9	\$0
44	Pennsylvania	\$104	\$83	\$0	\$0	\$0
<b>Total</b>		<b>\$1,685,062</b>	<b>\$2,597,780</b>	<b>\$3,003,189</b>	<b>\$3,097,481</b>	<b>\$2,701,652</b>

Source: USDA Foreign Agricultural Service

**Exhibit 4.3.7 – State-by-State Value of Soybean Oil Exports, Ranked by 2011 Value, Thousand Dollars**

2011 Rank	State	2007	2008	2009	2010	2011
1	Louisiana	\$452,113	\$850,196	\$689,754	\$1,127,036	\$764,426
2	Virginia	\$61,546	\$143,199	\$73,437	\$106,280	\$185,141
3	Iowa	\$50,952	\$82,259	\$44,527	\$41,529	\$68,017
4	Missouri	\$12,091	\$36,261	\$40,403	\$96,642	\$59,363
5	Minnesota	\$43,340	\$92,865	\$45,106	\$41,380	\$41,295
6	Texas	\$9,173	\$6,886	\$3,472	\$10,878	\$31,076
7	Kansas	\$11,719	\$19,268	\$28,598	\$50,337	\$25,501
8	Georgia	\$1,156	\$8,063	\$17,896	\$7,993	\$20,882
9	Illinois	\$38,861	\$69,981	\$23,619	\$21,459	\$19,638
10	Florida	\$6,249	\$6,509	\$7,479	\$8,936	\$10,641
11	Tennessee	\$7,787	\$11,556	\$8,822	\$14,865	\$8,516
12	Nebraska	\$7,436	\$15,324	\$24,760	\$3,162	\$8,194
13	Ohio	\$6,202	\$2,906	\$3,830	\$4,712	\$5,369
14	New Jersey	\$109	\$1,037	\$2,744	\$4,988	\$4,086
15	Connecticut	\$7	\$30	\$5,311	\$12,953	\$3,787
16	California	\$7,906	\$8,861	\$7,206	\$3,519	\$3,731
17	Wisconsin	\$3,113	\$3,639	\$4,020	\$1,770	\$2,963
18	Oregon	\$3,335	\$718	\$406	\$511	\$805
19	Pennsylvania	\$54	\$150	\$202	\$274	\$611
20	Michigan	\$936	\$1,461	\$1,112	\$747	\$589
21	Indiana	\$1,123	\$1,656	\$231	\$730	\$508
22	New York	\$285	\$388	\$328	\$229	\$479
23	North Carolina	\$110	\$124	\$650	\$79	\$415
24	South Dakota	\$322	\$423	\$10	\$294	\$339
25	North Dakota	\$0	\$0	\$1,521	\$299	\$275
26	Massachusetts	\$311	\$203	\$219	\$27	\$149
27	Oklahoma	\$47	\$0	\$0	\$0	\$149
28	Montana	\$0	\$0	\$0	\$0	\$114
29	Arizona	\$259	\$97	\$71	\$168	\$99
30	Kentucky	\$16	\$0	\$24	\$28	\$65
31	Arkansas	\$0	\$4,107	\$0	\$3	\$43
32	Nevada	\$0	\$0	\$0	\$34	\$33
33	South Carolina	\$0	\$23	\$0	\$0	\$30
34	Colorado	\$22	\$0	\$0	\$0	\$29
35	Washington	\$0	\$152	\$13	\$3	\$11
36	Alabama	\$50	\$371	\$107	\$38	\$0
37	District of Columbia	\$0	\$0	\$0	\$0	\$0
38	Delaware	\$0	\$0	\$0	\$0	\$0
39	Idaho	\$0	\$3	\$0	\$18	\$0
40	Maryland	\$19	\$0	\$20	\$6,745	\$0
41	Maine	\$0	\$0	\$0	\$0	\$0
42	Mississippi	\$65	\$0	\$0	\$0	\$0
43	Utah	\$3	\$0	\$24	\$0	\$0
<b>Total</b>		<b>\$726,719</b>	<b>\$1,368,717</b>	<b>\$1,035,921</b>	<b>\$1,568,667</b>	<b>\$1,267,368</b>

Source: USDA Foreign Agricultural Service