

Missouri Soybean Resource Guide

Commissioned by the
Missouri Soybean Merchandising Council

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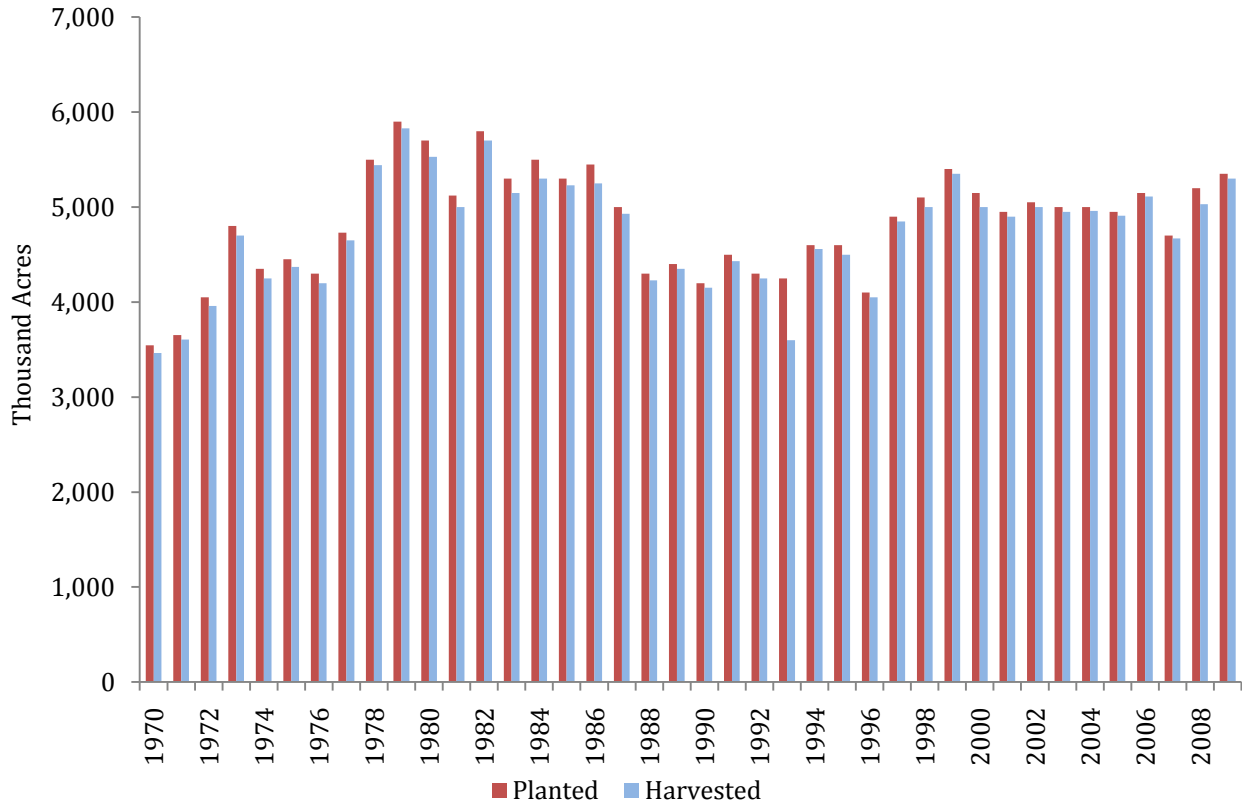
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Chapter 1: Soybean Production

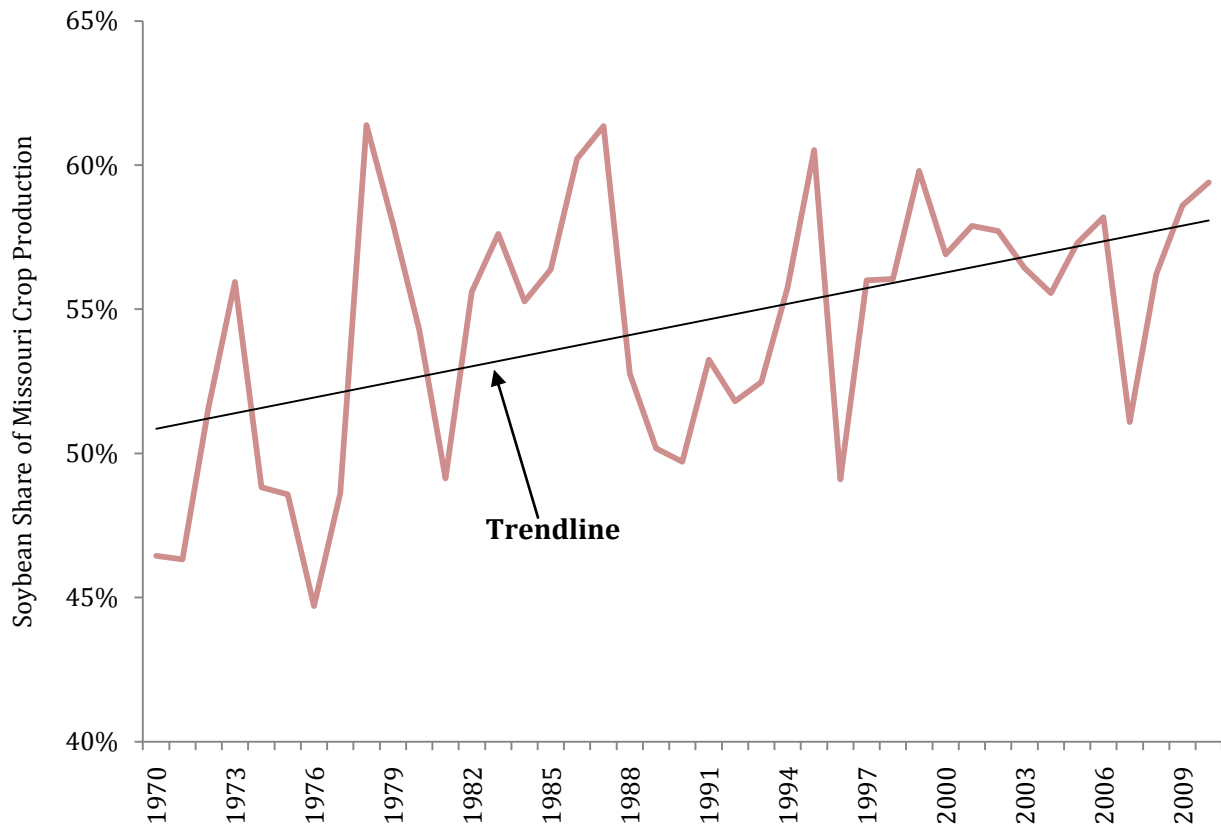
1.1 Acreage

Exhibit 1.1.1 – Missouri Planted and Harvested Soybean Acreage, 1970 to 2009



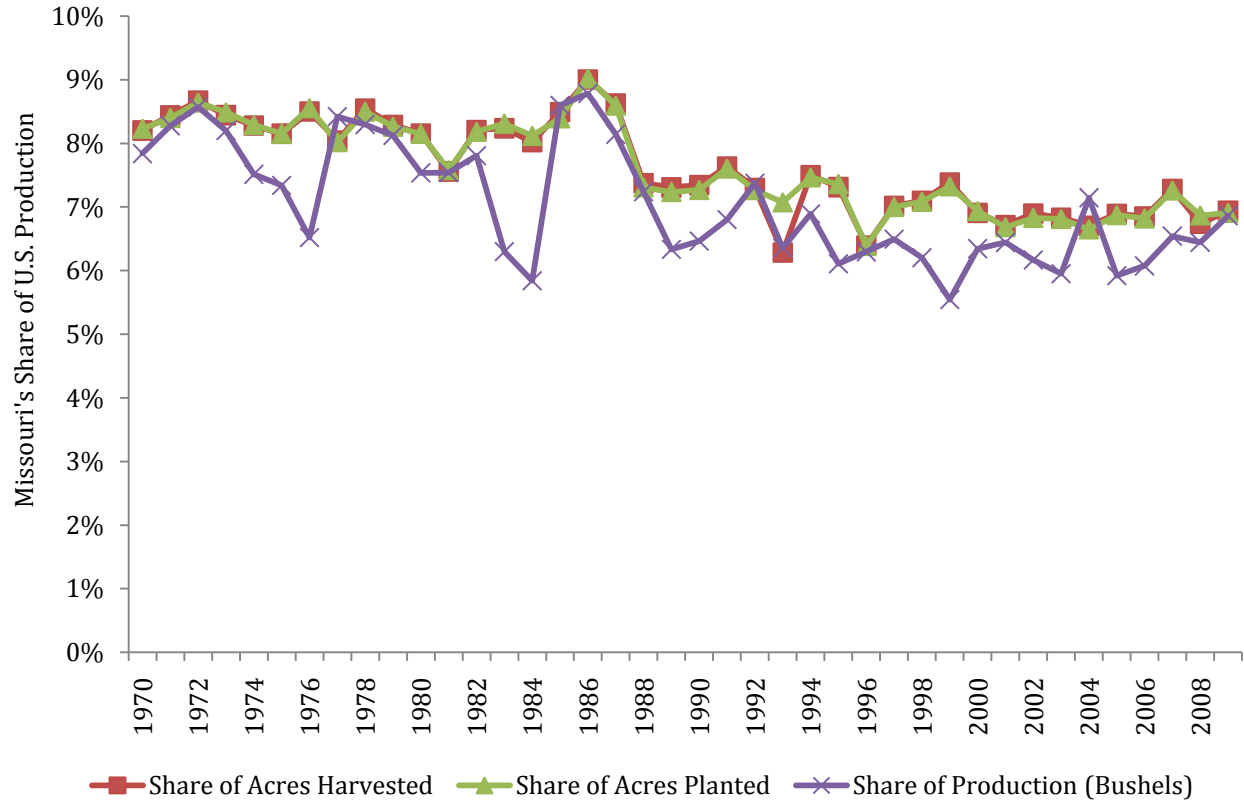
Source: USDA – National Agricultural Statistics Service

Exhibit 1.1.2 – Missouri Soybean Acres as a Percent of Total Missouri Crop Production Acreage, by Year



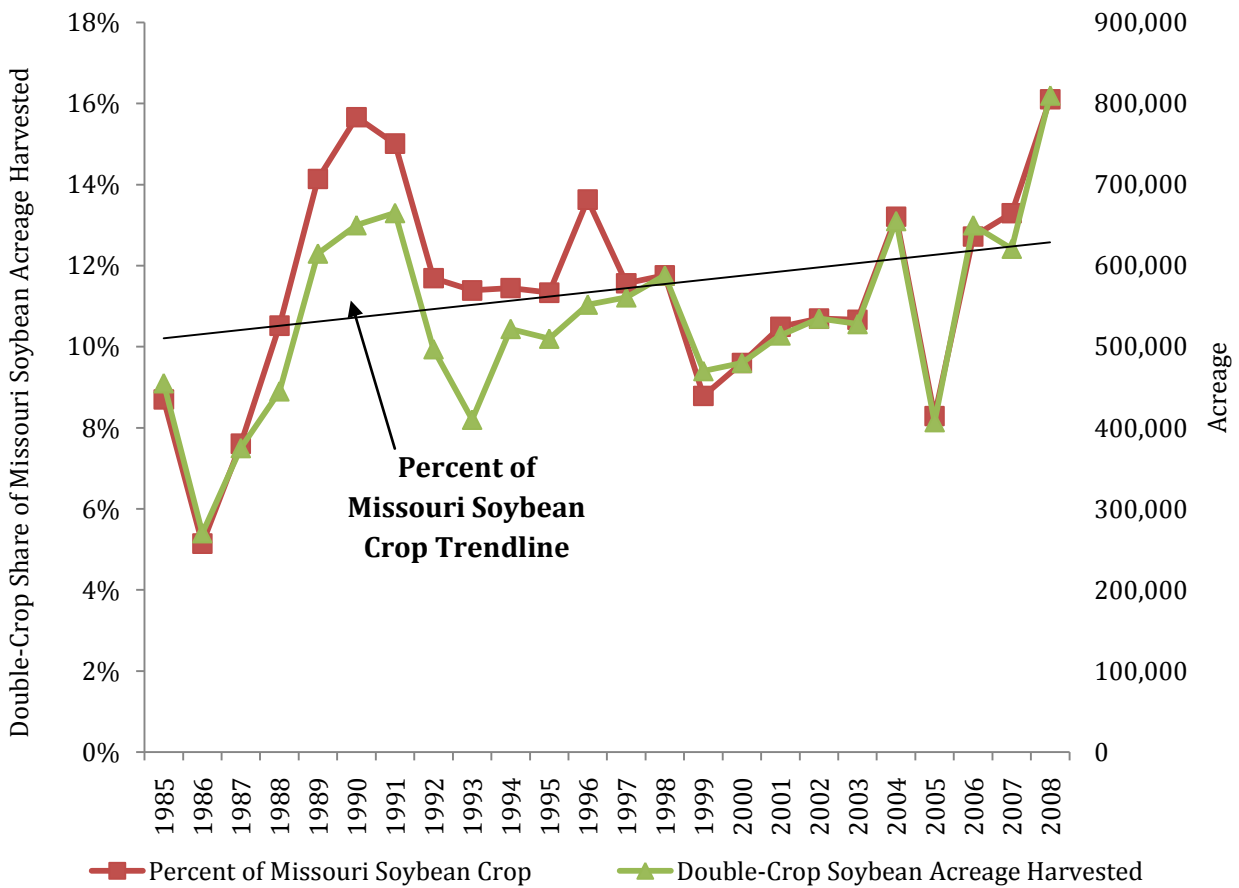
Source: USDA – National Agricultural Statistics Service

Exhibit 1.1.3 – Missouri’s Share of U.S. Soybean Production, 1970 to 2009



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 2008



Source: USDA – National Agricultural Statistics Service Acreage Report

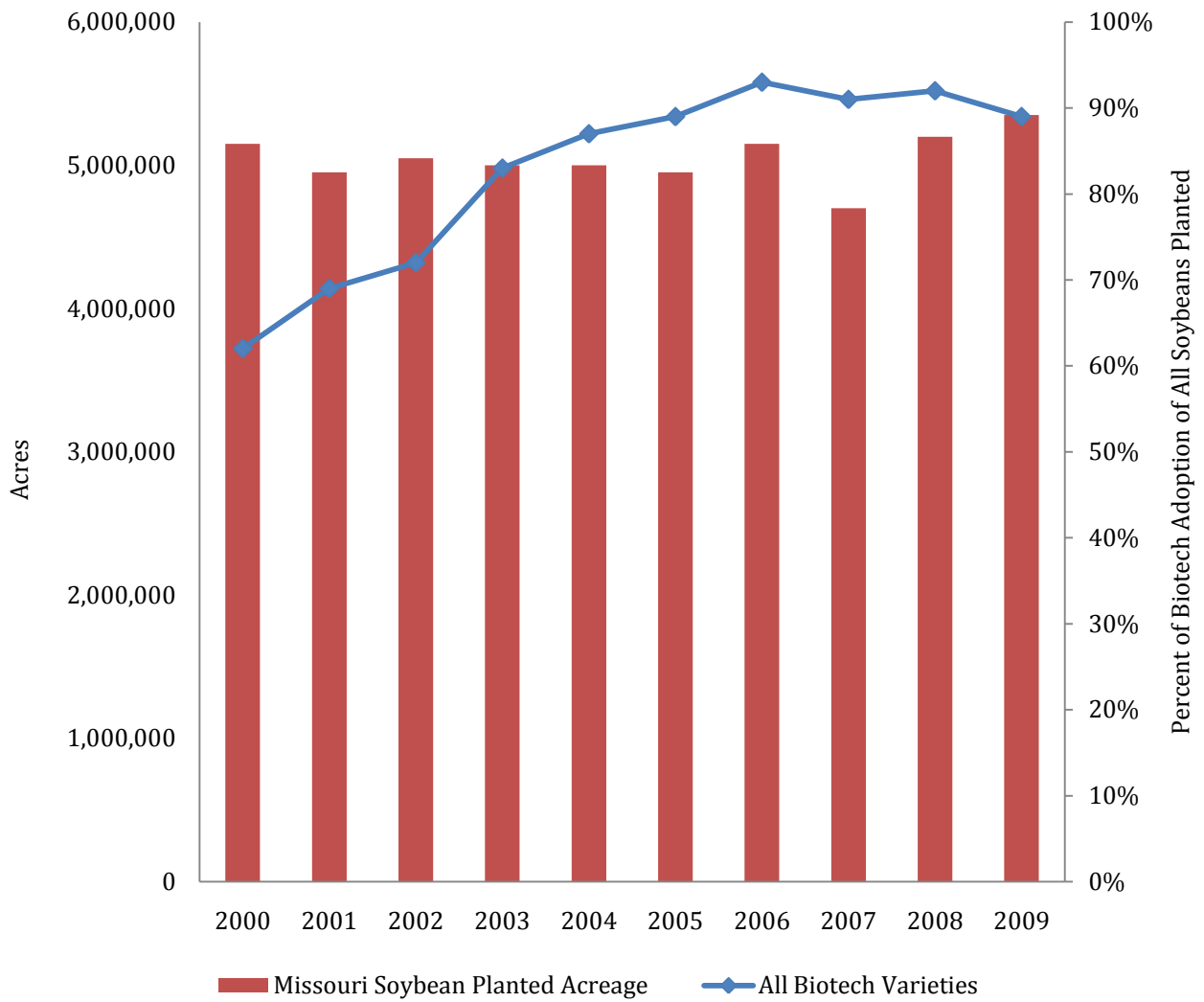
Exhibit 1.1.5 – Soybeans Irrigated and Nonirrigated in Missouri, 1992 to 2007

		1992	1992 % of Total	1997	1997 % of Total	2002	2002 % of Total	2007	2007 % of Total
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		37.5		35.8		40.3	
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		34.9		34.1		33.0	
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		35.2		32.8		35.9	

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

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

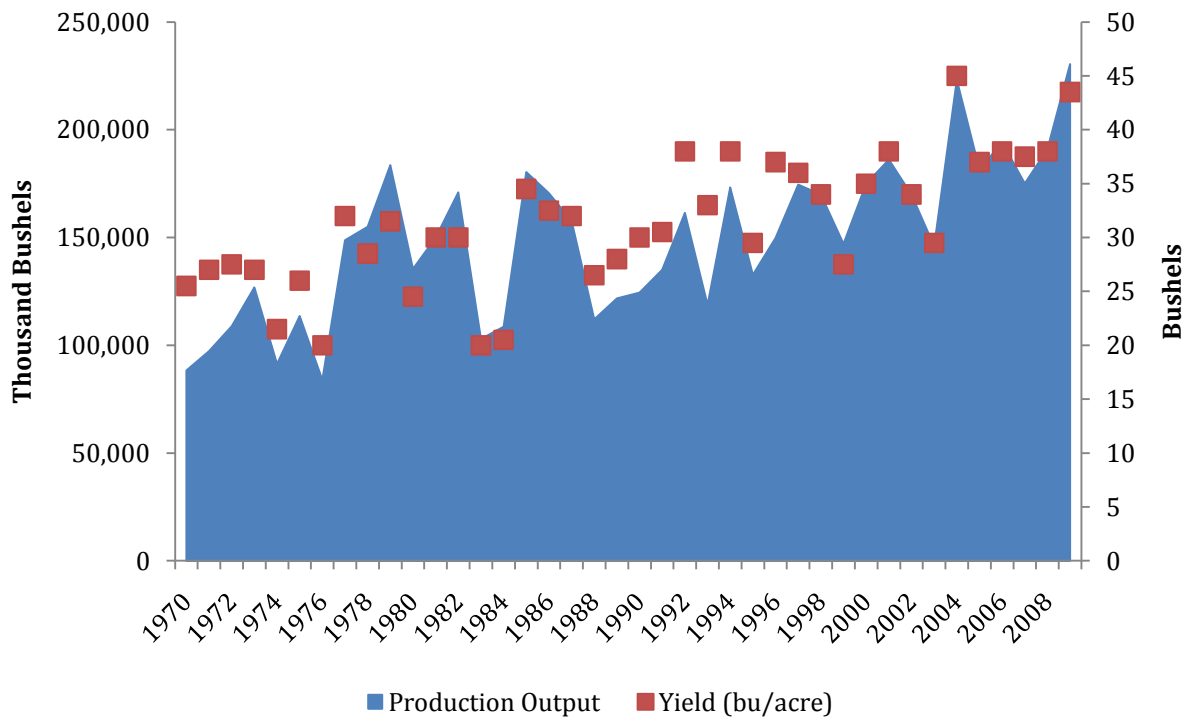
Exhibit 1.1.6 – Soybean and All Biotech Variety Adoption in Missouri



Source: USDA – National Agricultural Statistics Service

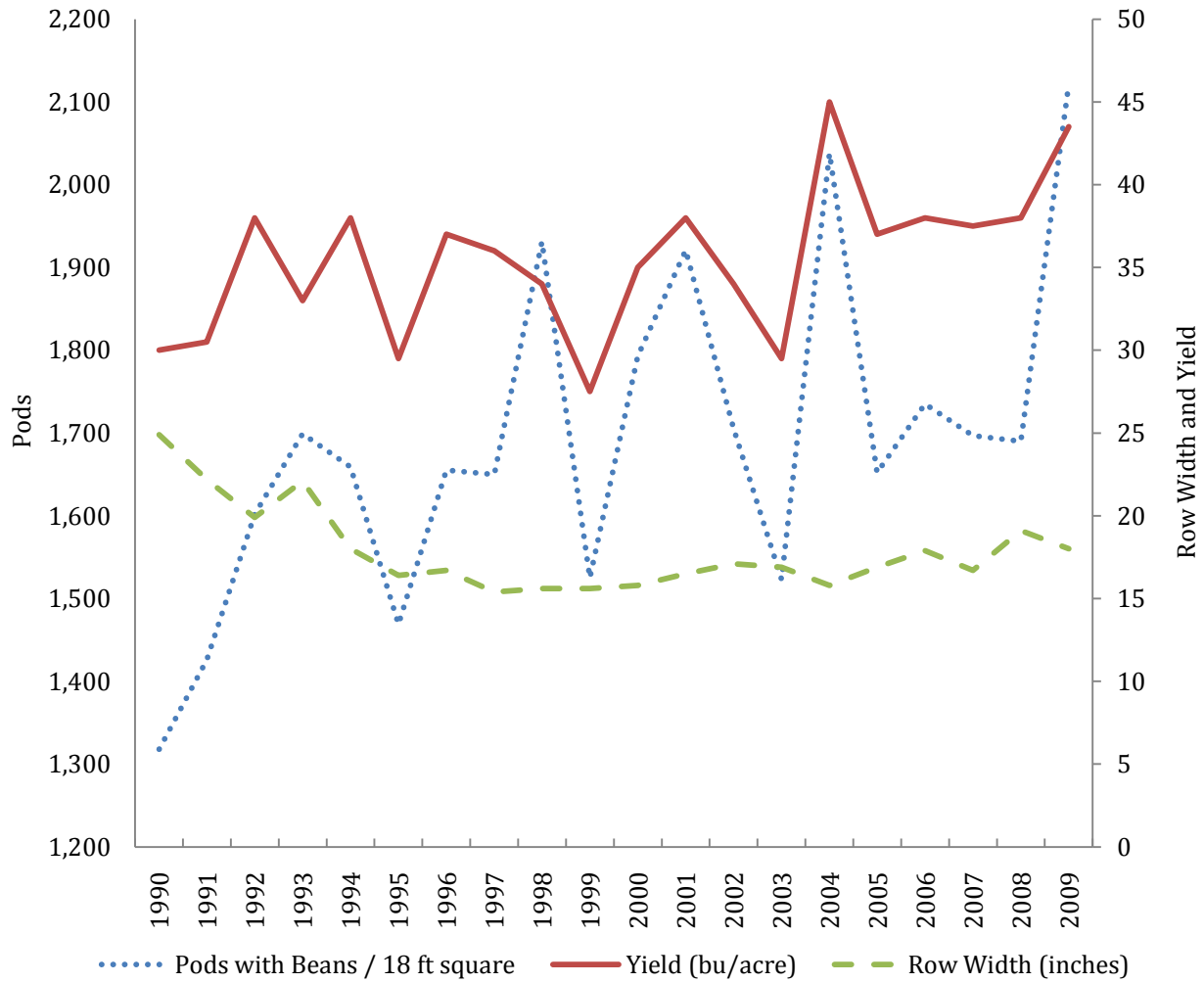
1.2 Production and Yield

Exhibit 1.2.1 – Missouri Soybean Production and Yield, 1970 to 2009



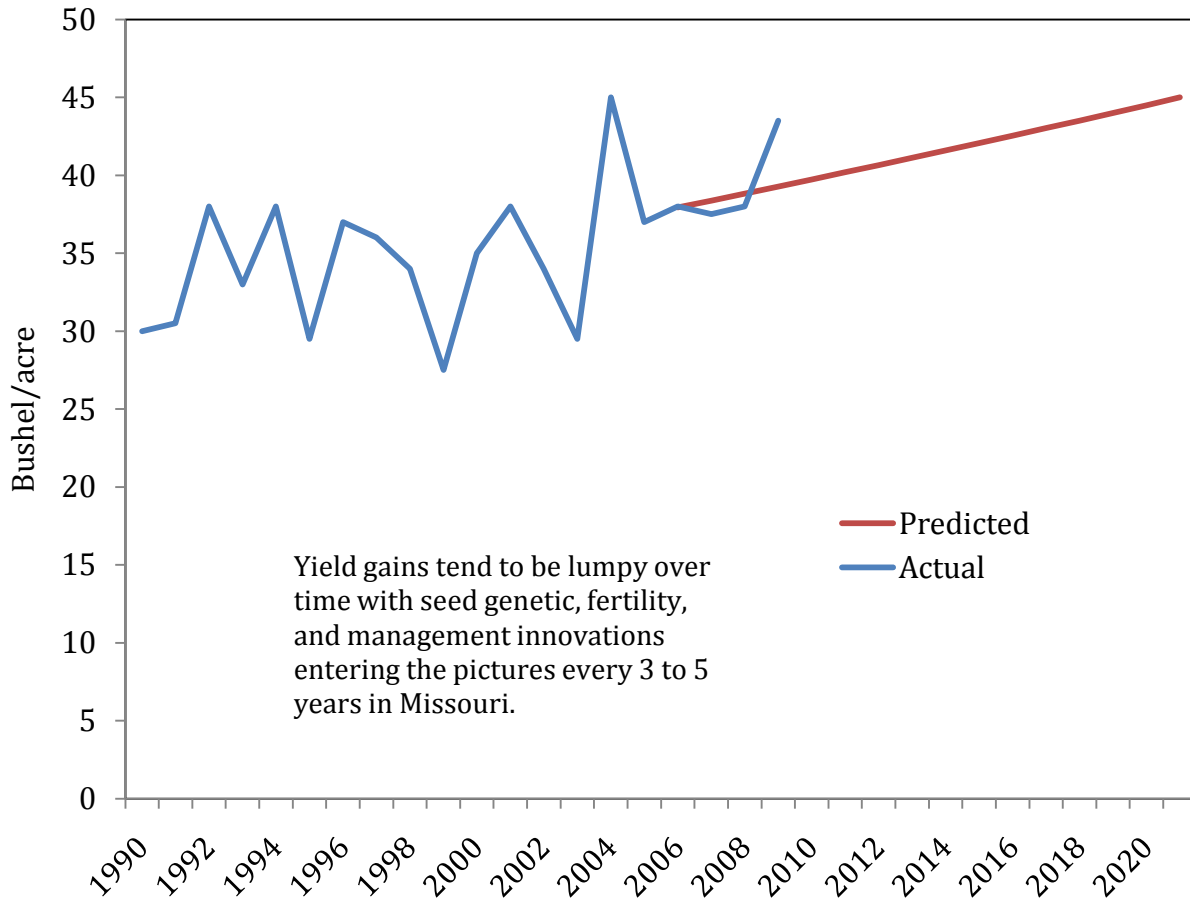
Source: USDA – National Agricultural Statistics Service

Exhibit 1.2.2 – Missouri Soybean Yield, Pod Count and Row Width, 1990 to 2009



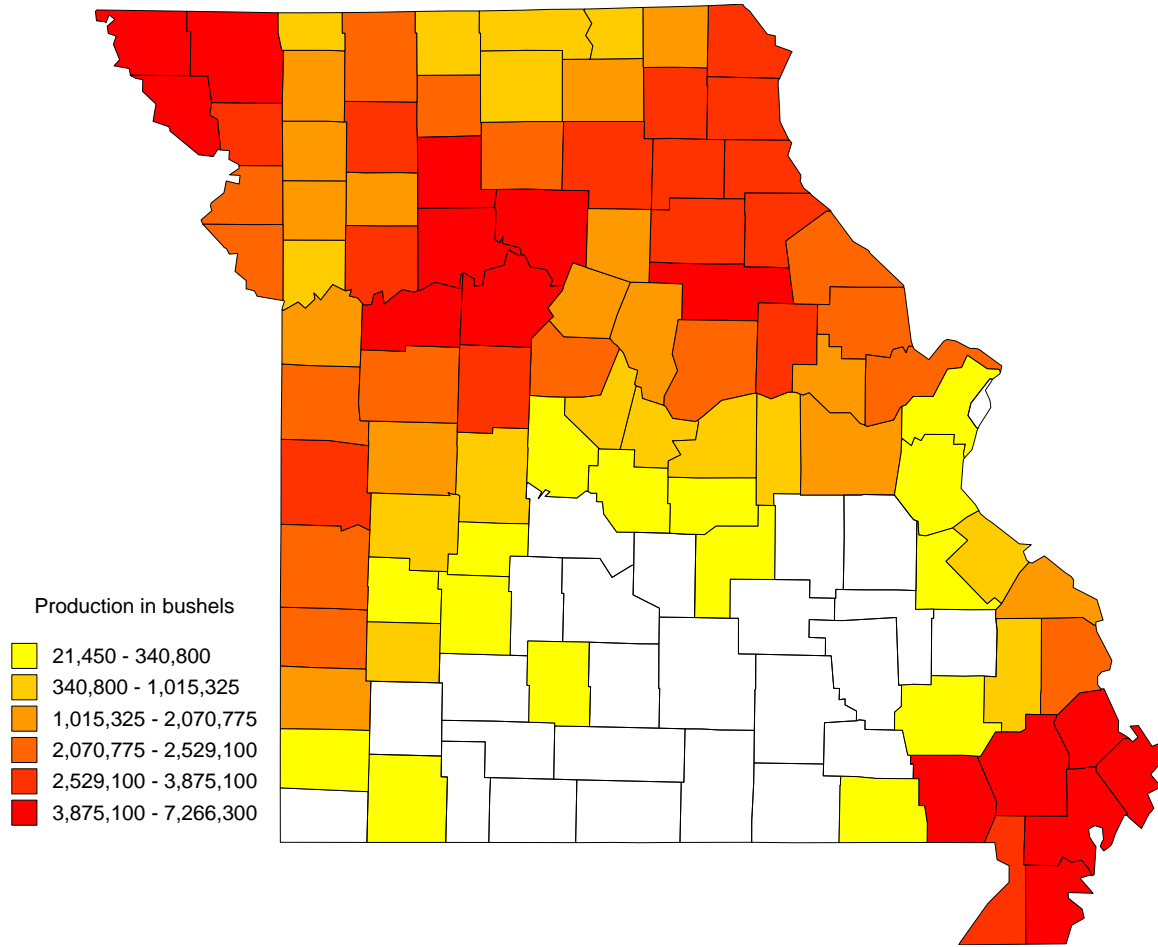
Source: USDA – National Agricultural Statistics Service

Exhibit 1.2.3 – Missouri Actual Soybean Yield and Predicted Yield, 1990 to 2021



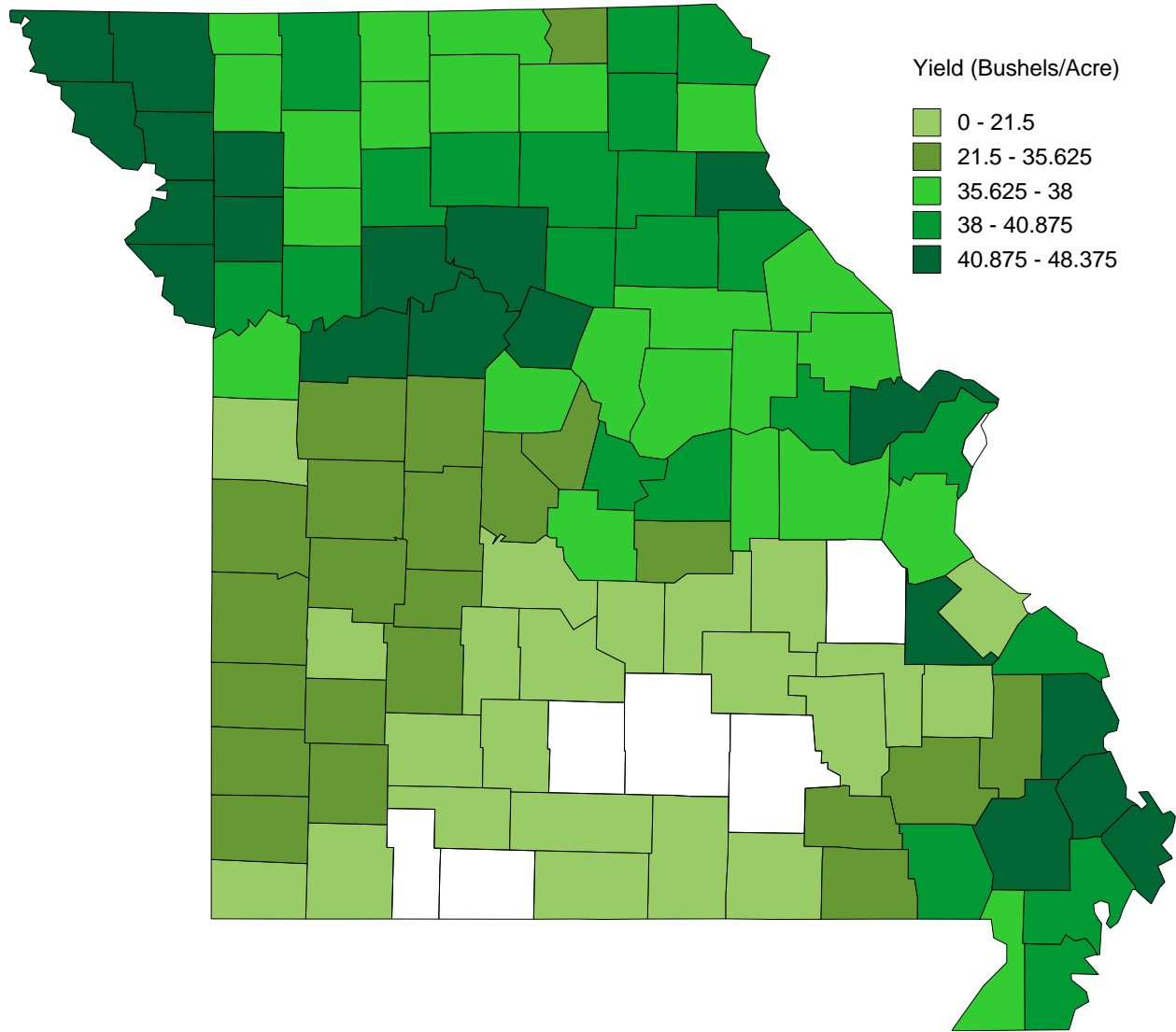
Source: USDA – National Agricultural Statistics Service

Exhibit 1.2.4 - Missouri Average Soybean Production, 2006 to 2009



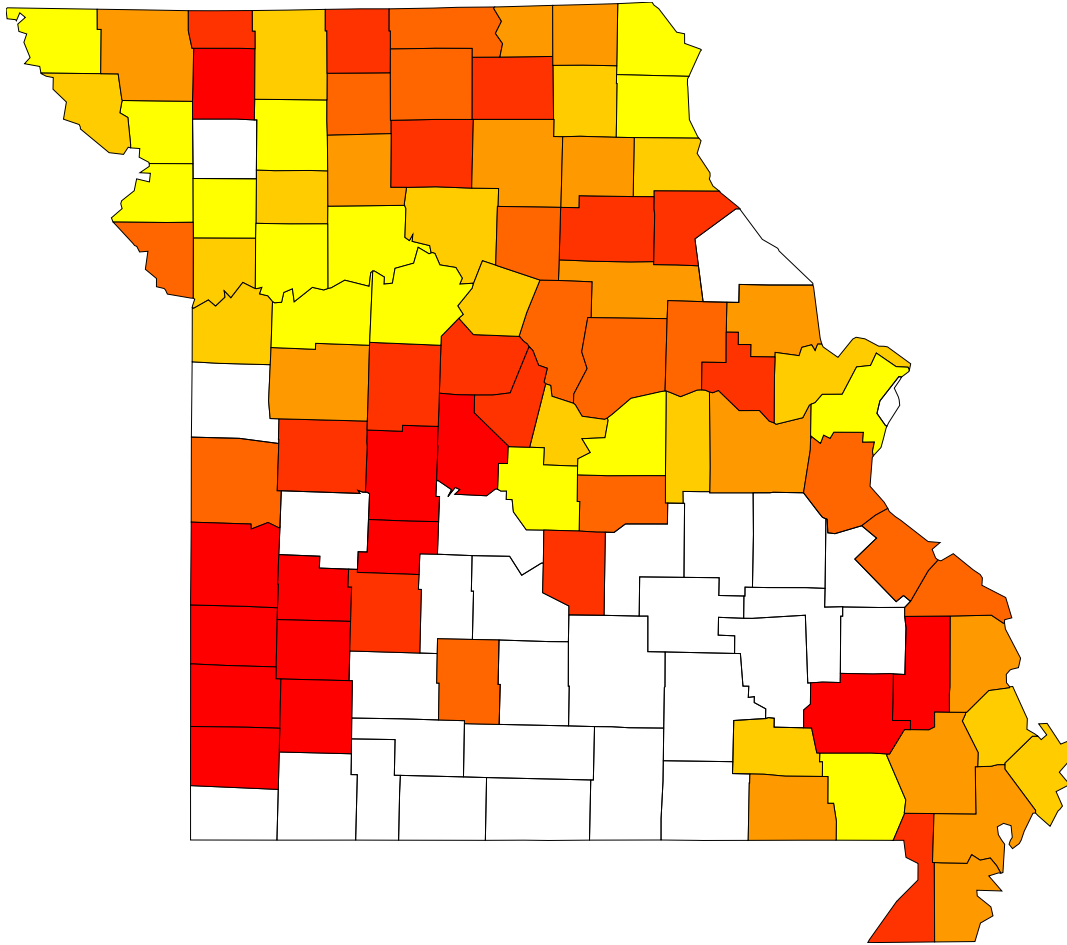
Source: USDA - National Agricultural Statistics Service

Exhibit 1.2.5 - Missouri Average Soybean Yields, 2006 to 2009



Source: USDA - National Agricultural Statistics Service

Exhibit 1.2.6 – Missouri Soybean Production Risk, 2005 to 2009



Source: Based on National Agricultural Statistics Service data

** Note: Lighter colors indicate low yield variability after accounting for yield level. No color indicates no data available.*

Exhibit 1.2.7 – Missouri Soybean Production Relative to Other States’ Production

State	Yield (Bushels/Acre)	Area Harvested (1,000 Acres)
Nebraska	48.29	4,627.0
Iowa	47	9,783.0
Indiana	46.71	5,373.0
Illinois	45.29	9,487.0
Ohio	44.14	4,436.0
Pennsylvania	41.86	421.0
New York	40	197.0
Kentucky	39.14	1,291.0
Minnesota	38.86	6,971.4
Missouri	38	4,990.0
Michigan	38	1,945.7
Wisconsin	37.29	1,576.0
Arkansas	36.71	3,064.0
Mississippi	36.29	1,677.0
South Dakota	36.14	3,930.0
Tennessee	35.86	1,219.0
Maryland	35.14	459.0
Louisiana	35	844.0
Kansas	34.86	2,928.0
New Jersey	34.29	89.0
Delaware	33.43	182.0
Virginia	32.57	524.0
North Dakota	30.71	3,440.0
Alabama	30.14	230.0
Georgia	30	272.0
North Carolina	29.86	1,502.9
Texas	27.86	190.0
Oklahoma	27	284.0
South Carolina	25	475.0

Source: American Soybean Association

* Note: Yield and area harvested data are simple averages of data from 2003 to 2009.

1.3 Soybean Quality

Exhibit 1.3.1 – U.S. Soybean Production Quality

State	Weighted Average Percent Protein	Weighted Average Percent Oil	Weighted Average FM
Alabama	35.77%	19.60%	0.57%
Arkansas	35.58%	19.42%	0.47%
Delaware	35.55%	19.04%	0.33%
Florida	35.05%***	20.5%****	
Georgia	36.01%	19.32%**	0.30%
Illinois	35.12%	18.85%	0.32%
Indiana	35.63%	18.65%	0.26%
Iowa	34.69%	18.94%	0.24%
Kansas	34.97%	18.83%	0.46%
Kentucky	35.03%	19.23%	0.37%
Louisiana	36.28%	19.83%	0.41%
Maryland	35.79%	18.85%	0.22%
Michigan	35.50%	18.53%	0.18%
Minnesota	34.06%	18.98%	0.24%
Mississippi	35.81%	19.53%	1.04%
Missouri	35.14%	18.94%	0.39%
Nebraska	34.42%	18.99%	0.22%
New Jersey	37.08%	18.40%	1.25%
New York	36.45%	17.74%	0.15%
North Carolina	35.30%	19.29%	0.40%
North Dakota	33.99%	18.54%	0.17%
Ohio	35.50%	18.79%	0.26%
Oklahoma	35.55%	18.79%	0.34%*
Pennsylvania	35.64%	18.47%	0.18%
South Carolina	35.90%	19.05%	0.38%*
South Dakota	34.11%	18.67%	0.38%
Tennessee	35.17%	19.77%	0.42%
Texas	34.96%	19.57%	0.26%
Virginia	35.02%	19.10%	0.68%
Wisconsin	34.64%	18.70%	0.29%
<i>Unless noted, percent protein and percent oil averages are weighted based on samples taken from 2003 to 2009. Unless noted, percent foreign material and percent seed weight averages are weighted based on samples taken from 2007 to 2009.</i>			
<i>* Averages computed with data from 2008 to 2009.</i>			
<i>** Averages computed with data from 2003 to 2006 and 2008 and 2009.</i>			
<i>*** Averages computed with data from 2005 and 2009.</i>			
<i>**** Data are from 2009.</i>			

Source: American Soybean Association

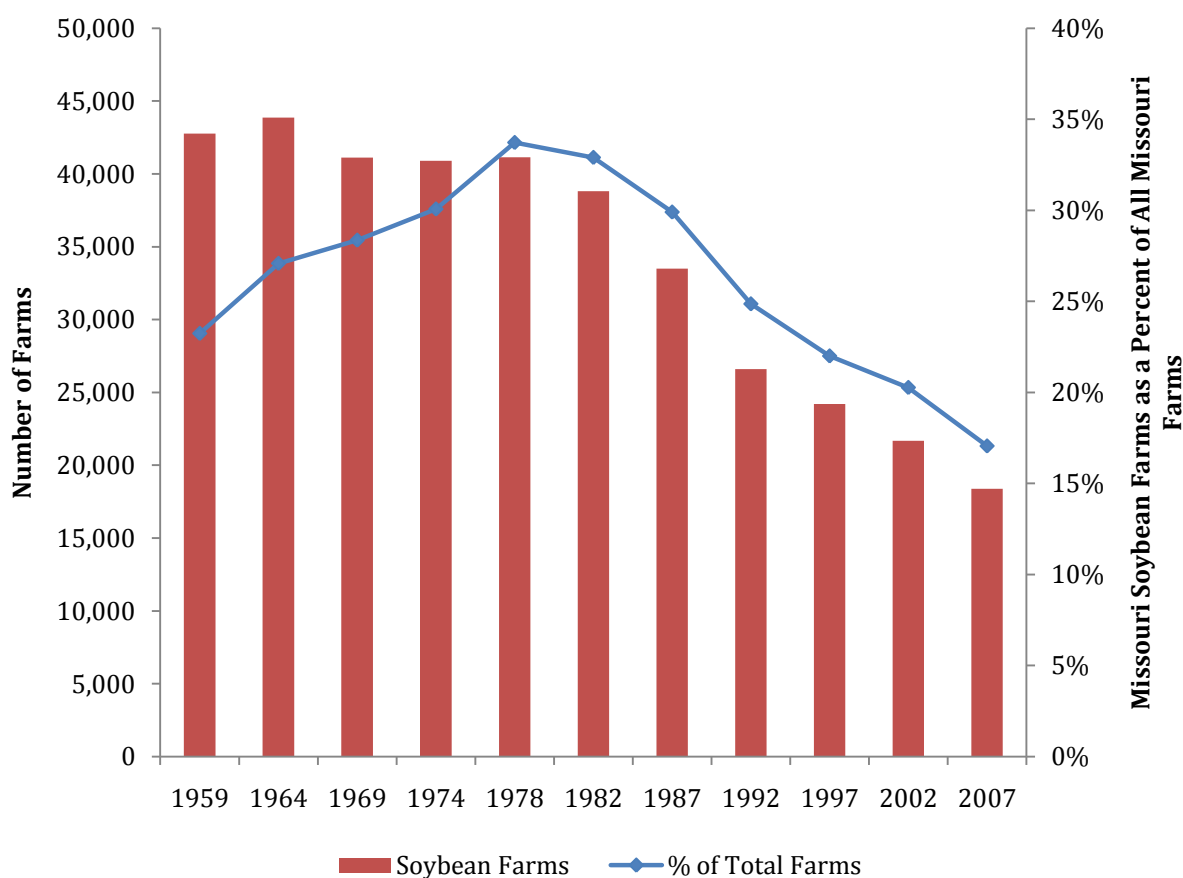
1.4 Soybean Farms and Soybean Farm Characteristics

Exhibit 1.4.1 – Missouri Soybean Farms, 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	8,893	48%	383,377	8%	12,848,065	8%
100 to 249 acres	4,101	22%	646,740	14%	22,523,116	14%
250 to 499 acres	2,644	14%	931,486	20%	32,907,994	20%
500 to 999 acres	1,831	10%	1,260,332	27%	45,272,383	27%
1,000 to 1,999 acres	744	4%	972,353	21%	34,791,735	21%
2,000 or More acres	175	1%	478,450	10%	17,604,030	11%
Total	18,388	100%	4,672,738	100%	165,947,323	100%

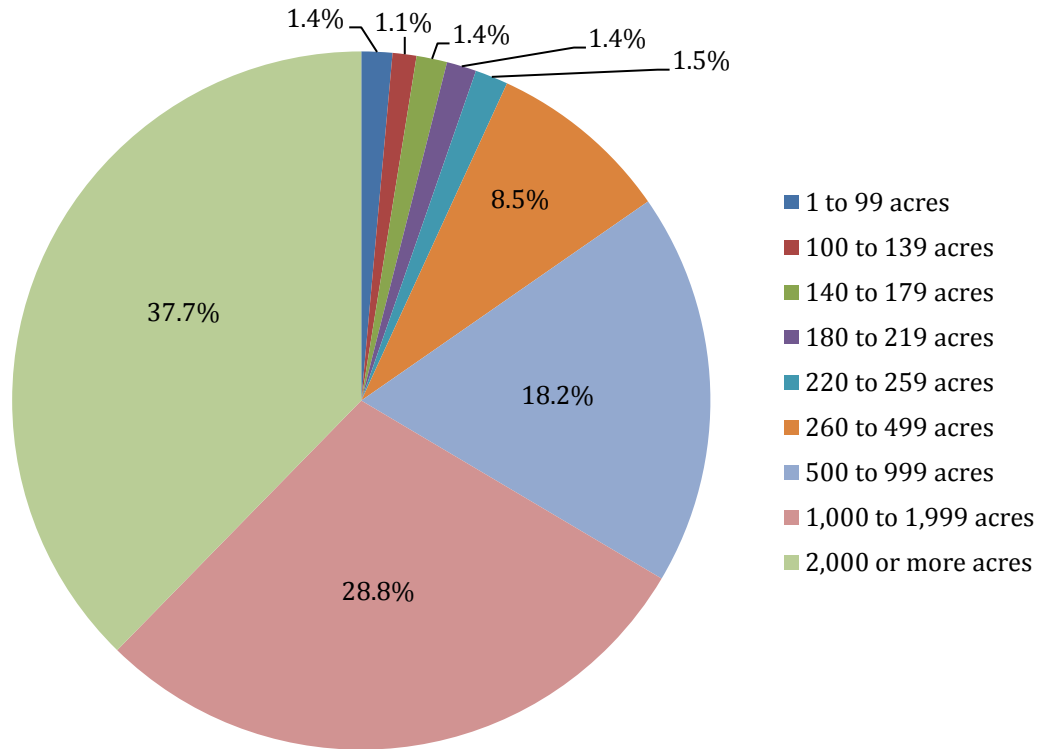
Source: USDA – National Agricultural Statistics Service, Census of Agriculture, 2007

Exhibit 1.4.2 – Missouri Soybean Farms, 1959 to 2007



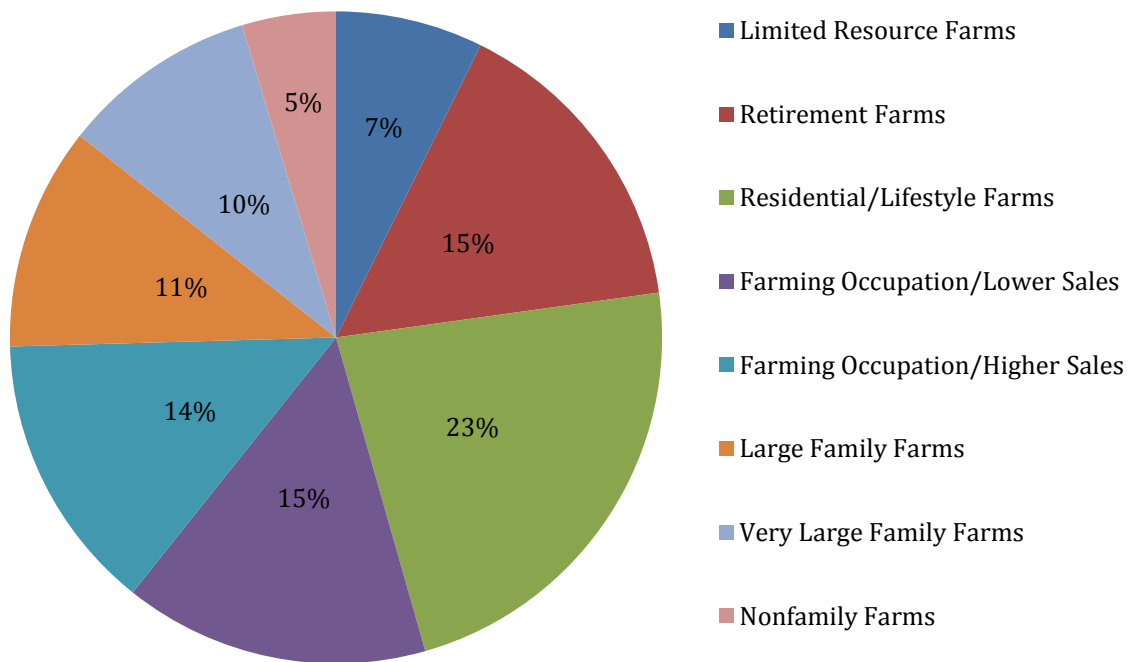
Source: USDA – National Agricultural Statistics Service, Census of Agriculture

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

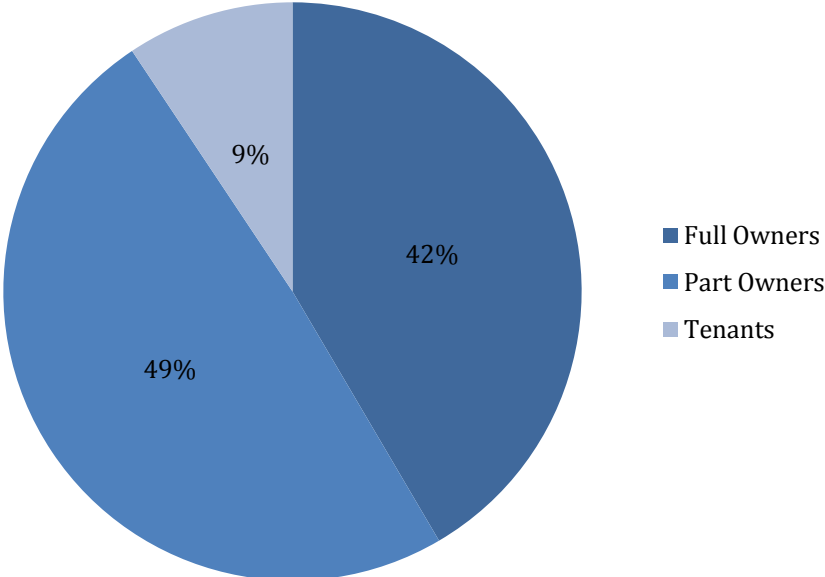
Exhibit 1.4.4 – Missouri Soybean Farms by Typology, 2007



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*

	2006 (\$ Per Acre)	2007 (\$ Per Acre)	2008 (\$ Per Acre)	Three-Year Average (\$ Per Acre)
Operating Costs				
Seed	\$32.01	\$38.54	\$42.98	\$37.84
Fertilizer **	\$12.73	\$14.21	\$23.42	\$16.79
Chemicals	\$14.38	\$14.61	\$15.29	\$14.76
Custom operations	\$5.27	\$5.54	\$5.54	\$5.45
Fuel, lube and electricity	\$10.99	\$12.14	\$15.82	\$12.98
Repairs	\$10.59	\$10.88	\$11.25	\$10.91
Interest on operating capital	\$2.04	\$2.15	\$2.56	\$2.25
Total, nonland labor and management operating costs	\$88.01	\$98.07	\$116.86	\$100.98
Allocated Overhead Costs				
Hired labor	\$1.15	\$1.19	\$1.23	\$1.19
Opportunity cost of unpaid labor	\$14.33	\$14.83	\$15.34	\$14.83
Capital recovery of machinery and equipment	\$58.48	\$61.37	\$67.16	\$62.34
Opportunity cost of land (rental rate)	\$101.33	\$102.77	\$110.67	\$104.92
Taxes and insurance	\$7.94	\$8.57	\$9.51	\$8.67
General farm overhead	\$13.50	\$13.87	\$14.34	\$13.90
Total, allocated overhead	\$196.73	\$202.60	\$218.25	\$205.86

Source: USDA – Economic Research Service

* Denotes data developed from survey base year, 2006.

** Represents commercial fertilizer, soil conditioners and manure.

Exhibit 1.5.2 – Soybean Seed Cost Comparison, Per Acre, for All Missouri Farmers

Year	University of Missouri Budget Seed Cost (\$ Per Acre)	Total Cost	Inflation- Adjusted
1975	\$8.00	\$35,600,000	\$142,468,156
1980	\$7.50	\$32,250,000	\$84,266,041
1985	\$10.25	\$48,482,500	\$97,011,410
1990	\$11.09	\$60,995,000	\$100,477,479
1995	\$12.81	\$75,579,000	\$106,774,183
2000	\$20.00	\$114,000,000	\$142,535,087
2005	\$30.60	\$156,672,000	\$172,718,646
2008	\$36.27	\$210,366,000	\$210,366,000

Sources: USDA and University of Missouri Farm Management Budgets

Exhibit 1.5.3 – Missouri Soybean Herbicide Cost Comparison, Per Acre

Year	University of Missouri Budget Herbicide Cost (\$ Per Acre)	Total Cost	Inflation- Adjusted
1975	\$9.50	\$42,275,000	\$169,180,935
1980	\$15.50	\$88,350,000	\$174,149,817
1985	\$19.00	\$100,700,000	\$179,826,028
1990	\$21.39	\$89,838,000	\$193,797,410
1995	\$29.95	\$137,770,000	\$249,639,873
2000	\$25.00	\$128,750,000	\$178,168,859
2005	\$10.29	\$50,936,000	\$58,080,878
2008	\$6.07	\$31,564,000	\$35,206,000

Sources: USDA and University of Missouri Farm Management Budgets

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: 2006 was the most recent year of published information.

Exhibit 1.5.5 – Missouri Soybean Production Budgets, Revenues and Costs

	1975	1980	1985	1990	1995	2000	2005	2007	2008	2009	2010
Yield/acre	29.50	36.30	31.30	30.95	35.00	45.00	50.00	50.00	50.00	50.00	50.00
Market price/bushel	-	-	-	-	-	5.36	6.00	7.90	8.00	9.00	9.00
<i>Estimated Income/acre</i>											
Crop income (yield x price)	-	-	-	-	-	-	241.20	300.00	395.00	400.00	450.00
Net payments (fixed)	-	-	-	-	-	-	14.15	14.15	14.15	14.15	14.15
Estimated Total Income/Acre	-	-	-	-	-	-	255.35	314.15	409.15	414.15	464.15
<i>Estimated Operating Costs/Acre</i>											
Seed	8.00	7.50	10.25	11.09	12.81	20.00	30.60	34.00	36.27	43.07	47.60
Fertilizer and soil amendments	3.50	10.00	4.25	5.45	5.12	7.75	28.55	28.00	37.80	95.20	47.70
Crop protection chemicals	9.50	15.50	19.00	21.39	29.95	25.00	10.29	6.07	6.07	12.90	8.40
Crop supplies, storage, marketing	-	-	-	-	-	-	-	1.00	1.00	1.00	1.00
Crop insurance and consulting	-	-	2.25	1.62	1.99	-	-	5.27	9.35	18.00	16.00
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	9.98	12.87	13.71	11.60
Machinery repairs and maintenance	12.50	22.58	22.25	26.09	22.99	-	-	10.27	11.25	10.96	11.79
Operator and hired labor	14.00	18.00	19.00	22.69	20.12	23.50	20.44	9.71	10.58	11.02	11.32
Operating interest @ 7% x 1/2 year	5.50	9.00	6.50	9.50	9.16	5.12	3.92	4.56	5.01	8.75	5.44
Miscellaneous*	4.00	6.50	6.50	7.52	8.29	13.00	15.36	-	-	-	-
Total Operating Costs/Acre	59.50	92.58	95.50	110.06	114.57	118.87	134.44	108.86	130.20	214.61	160.85
<i>Estimated Ownership Costs/Acre</i>											
Farm business overhead	-	-	-	-	-	-	-	4.08	4.20	4.32	4.32
Machinery overhead	-	-	-	-	-	-	-	16.62	17.48	18.69	19.08
Machinery depreciation	15.50	26.50	27.00	17.35	21.69	28.00	31.36	20.95	22.09	24.65	23.98
Real estate charge	43.00	79.50	78.00	68.71	76.93	83.00	89.76	93.00	107.50	121.50	112.60
Total Ownership Costs/Acre	58.50	106.00	105.00	86.06	98.62	111.00	121.12	134.65	151.27	169.16	159.98

Estimated Total Costs/Acre	118.00	198.58	200.50	196.12	213.19	229.87	255.56	243.51	281.47	383.77	320.83	
Income over Operating Costs/Acre	-	-	-	-	-	-	118.87	120.91	205.29	278.95	199.54	303.30
Income over Total Costs/Acre	-	-	-	-	-	-	-	-0.21	70.64	127.68	30.38	143.32
Operating Costs/bushel	2.02	1.79	2.31	2.42	3.25	3.40	2.99	2.18	2.60	4.29	3.22	
Total Costs/Bushel	4.00	6.97	5.52	6.27	6.89	6.57	5.68	4.87	5.63	7.68	6.42	

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

	1975	1975 Adjusted	1980	1980 Adjusted	1985	1985 Adjusted	1990	1990 Adjusted
<i>Estimated Operating Costs</i>								
Seed	\$35,600,000	\$144,008,620	\$42,750,000	\$112,909,290	\$52,480,000	\$106,145,680	\$46,578,000	\$77,557,890
Fertilizer and soil amendments	\$15,575,000	\$63,003,771	\$57,000,000	\$150,545,720	\$21,760,000	\$44,011,623	\$22,890,000	\$38,114,563
Crop protection chemicals	\$42,275,000	\$171,010,236	\$88,350,000	\$233,345,866	\$97,280,000	\$196,757,846	\$89,838,000	\$149,590,917
Crop supplies, storage, marketing	-	-	-	-	-	-	-	-
Crop insurance and consulting	-	-	-	-	\$11,520,000	\$23,300,271	\$6,804,000	\$11,329,466
Custom hire and rental	\$11,125,000	\$45,002,694	\$19,950,000	\$52,691,002	\$28,160,000	\$56,956,219	\$19,782,000	\$32,939,374
Machinery fuel, drying and irrigation energy	-	-	-	-	-	-	-	-
Machinery repairs and maintenance	\$55,625,000	\$225,013,469	\$128,706,000	\$339,932,236	\$113,920,000	\$230,413,793	\$109,578,000	\$182,460,356
Operator and hired labor	\$62,300,000	\$252,015,085	\$102,600,000	\$270,982,296	\$97,280,000	\$196,757,846	\$95,298,000	\$158,682,464
Operating interest @ 7% x 1/2 year	\$24,475,000	\$99,005,926	\$51,300,000	\$135,491,148	\$33,280,000	\$67,311,895	\$39,900,000	\$66,438,229
Miscellaneous*	\$17,800,000	\$72,004,310	\$37,050,000	\$97,854,718	\$33,280,000	\$67,311,895	\$31,584,000	\$52,591,103
Total Operating Costs	\$264,775,000	\$1,071,064,111	\$527,706,000	\$1,393,752,276	\$488,960,000	\$988,967,067	\$462,252,000	\$769,704,362
<i>Estimated Ownership Costs</i>								
Farm business overhead	-	-	-	-	-	-	-	-
Machinery overhead	-	-	-	-	-	-	-	-
Machinery depreciation	\$68,975,000	\$279,016,701	\$151,050,000	\$398,946,158	\$138,240,000	\$279,603,255	\$72,870,000	\$121,337,186
Real estate charge	\$191,350,000	\$774,046,333	\$453,150,000	\$1,196,838,474	\$399,360,000	\$807,742,736	\$288,582,000	\$480,523,230
Total Ownership Costs	\$260,325,000	\$1,053,063,034	\$604,200,000	\$1,595,784,632	\$537,600,000	\$1,087,345,990	\$361,452,000	\$601,860,416
Estimated Total Costs	\$525,100,000	\$2,124,127,145	\$1,131,906,000	\$2,989,536,908	\$1,026,560,000	\$2,076,313,058	\$823,704,000	\$1,371,564,778

	1995	1995 Adjusted	2000	2000 Adjusted	2005	2005 Adjusted
<i>Estimated Operating Costs</i>						
Seed	\$58,926,000	\$84,147,800	\$103,000,000	\$130,174,175	\$151,470,000	\$168,789,388
Fertilizer and soil amendments	\$23,552,000	\$33,632,844	\$39,912,500	\$50,442,493	\$141,322,500	\$157,481,603
Crop protection chemicals	\$137,770,000	\$196,739,002	\$128,750,000	\$162,717,719	\$50,935,500	\$56,759,569
Crop supplies, storage, marketing	-	-	-	-	-	-
Crop insurance and consulting	\$9,154,000	\$13,072,141	-	-	-	-
Custom hire and rental	-	-	\$23,175,000	\$29,289,189	\$33,412,500	\$37,232,953
Machinery fuel, drying and irrigation energy	\$19,044,000	\$27,195,308	\$103,000,000	\$130,174,175	\$91,723,500	\$102,211,352
Machinery repairs and maintenance	\$105,754,000	\$151,019,354	-	-	-	-
Operator and hired labor	\$92,552,000	\$132,166,568	\$121,025,000	\$152,954,656	\$101,178,000	\$112,746,899
Operating interest @ 7% x 1/2 year	\$42,136,000	\$60,171,261	\$26,368,000	\$33,324,589	\$19,404,000	\$21,622,693
Miscellaneous*	\$38,134,000	\$54,456,305	\$66,950,000	\$84,613,214	\$76,032,000	\$84,725,654
Total Operating Costs	\$527,022,000	\$752,600,581	\$612,180,500	\$773,690,211	\$665,478,000	\$741,570,111
<i>Estimated Ownership Costs</i>						
Farm business overhead	-	-	-	-	-	-
Machinery overhead	-	-	-	-	-	-
Machinery depreciation	\$99,774,000	\$142,479,764	\$144,200,000	\$182,243,846	\$155,232,000	\$172,981,543
Real estate charge	\$353,878,000	\$505,346,624	\$427,450,000	\$540,222,828	\$444,312,000	\$495,115,540
Total Ownership Costs	\$453,652,000	\$647,826,388	\$571,650,000	\$722,466,673	\$599,544,000	\$668,097,083
Estimated Total Costs	\$980,674,000	\$1,400,426,970	\$1,183,830,500	\$1,496,156,885	\$1,265,022,000	\$1,409,667,193

	2007	2007 Adjusted	2008	2008 Adjusted	2009	2009 Adjusted	2010 Adjusted
Estimated Operating Costs							
Seed	\$159,800,000	\$167,729,808	\$188,604,000	\$190,643,313	\$230,424,500	\$233,747,626	\$257,040,000
Fertilizer and soil amendments	\$131,600,000	\$138,130,430	\$196,560,000	\$198,685,338	\$509,320,000	\$516,665,288	\$257,580,000
Crop protection chemicals	\$28,529,000	\$29,944,704	\$31,564,000	\$31,905,291	\$69,015,000	\$70,010,317	\$45,360,000
Crop supplies, storage, marketing	\$4,700,000	\$4,933,230	\$5,200,000	\$5,256,226	\$5,350,000	\$5,427,156	\$5,400,000
Crop insurance and consulting	\$24,769,000	\$25,998,120	\$48,620,000	\$49,145,712	\$96,300,000	\$97,688,815	\$86,400,000
Custom hire and rental	-	-	-	-	-	-	-
Machinery fuel, drying and irrigation energy	\$46,906,000	\$49,233,632	\$66,924,000	\$67,647,627	\$73,348,500	\$74,406,314	\$62,640,000
Machinery repairs and maintenance	\$48,269,000	\$50,664,268	\$58,500,000	\$59,132,541	\$58,636,000	\$59,481,634	\$63,666,000
Operator and hired labor	\$45,637,000	\$47,901,660	\$55,016,000	\$55,610,870	\$58,957,000	\$59,807,263	\$61,128,000
Operating interest @ 7% x 1/2 year	\$21,432,000	\$22,495,527	\$26,052,000	\$26,333,692	\$46,812,500	\$47,487,618	\$29,376,000
Miscellaneous*	-	-	-	-	-	-	-
Total Operating Costs	\$511,642,000	\$537,031,379	\$677,040,000	\$684,360,609	\$1,148,163,500	\$1,164,722,032	\$868,590,000
Estimated Ownership Costs							
Farm business overhead	\$19,176,000	\$20,127,577	\$21,840,000	\$22,076,149	\$23,112,000	\$23,445,316	\$23,328,000
Machinery overhead	\$78,114,000	\$81,990,277	\$90,896,000	\$91,878,828	\$99,991,500	\$101,433,553	\$103,032,000
Machinery depreciation	\$98,465,000	\$103,351,161	\$114,868,000	\$116,110,030	\$131,877,500	\$133,779,405	\$129,492,000
Real estate charge	\$437,100,000	\$458,790,357	\$559,000,000	\$565,044,282	\$650,025,000	\$659,399,501	\$608,040,000
Total Ownership Costs	\$632,855,000	\$664,259,371	\$786,604,000	\$795,109,288	\$905,006,000	\$918,057,775	\$863,892,000
Estimated Total Costs	\$1,144,497,000	\$1,201,290,750	\$1,463,644,000	\$1,479,469,898	\$2,053,169,500	\$2,082,779,807	\$1,732,482,000

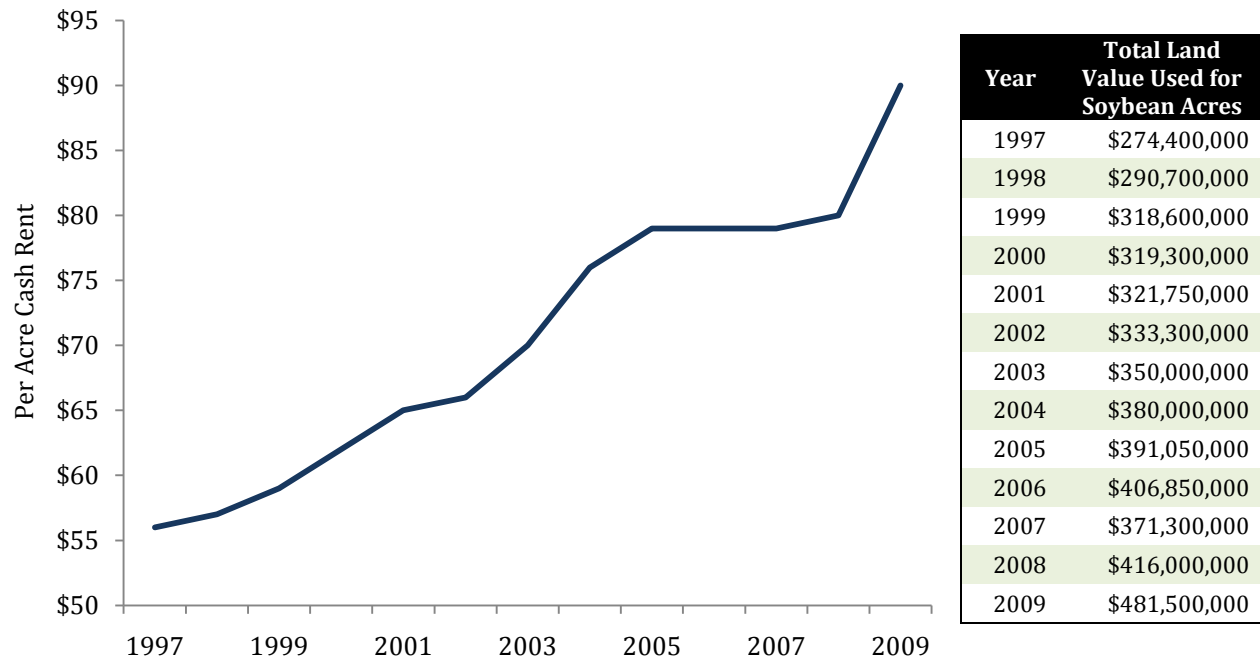
Source: USDA – National Agricultural Statistics Service

Exhibit 1.5.7 – Missouri Farmland Prices and Appreciation, 1919 to 2009

Look-Back Period	Period in Time	Starting Value Land Price: \$/Acre	Ending Value Land Price: \$/Acre	Compound Annual % Appreciation
10 years	1998 to 2009	\$1,130	\$2,220	6.9%
20 years	1988 to 2009	\$684	\$2,220	6.0%
30 years	1978 to 2009	\$628	\$2,220	4.3%
40 years	1968 to 2009	\$217	\$2,220	6.0%
50 years	1958 to 2009	\$110	\$2,220	6.2%
60 years	1948 to 2009	\$64	\$2,220	6.1%
70 years	1938 to 2009	\$31	\$2,220	6.3%
80 years	1928 to 2009	\$54	\$2,220	4.7%
90 years	1918 to 2009	\$72	\$2,220	3.9%

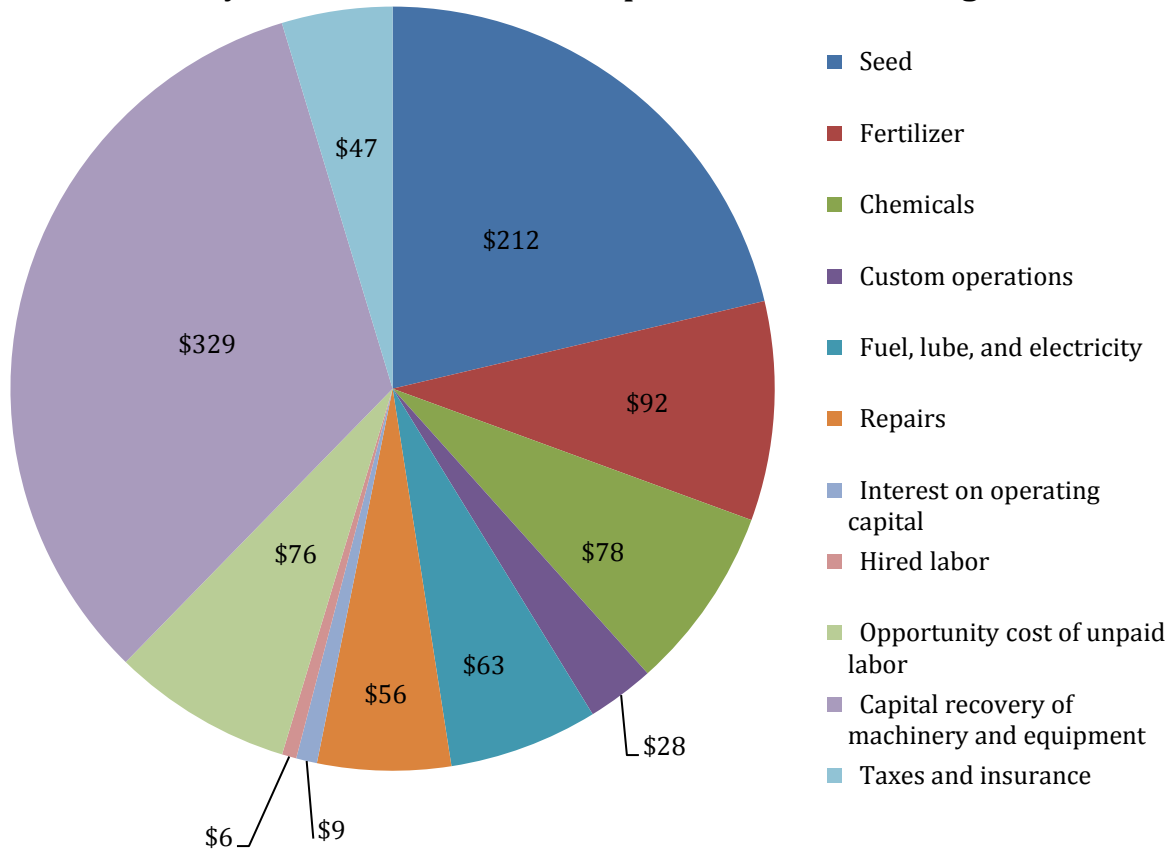
Source: USDA – National Agricultural Statistics Service

Exhibit 1.5.8 – Missouri Cropland Cash Rents, Per Acre, 1997 to 2009



Source: USDA – National Agricultural Statistics Service

Exhibit 1.5.9 – Soybean Production Dollars Spent, 2006-2008 Average, Millions



Source: Based on University of Missouri Budgets

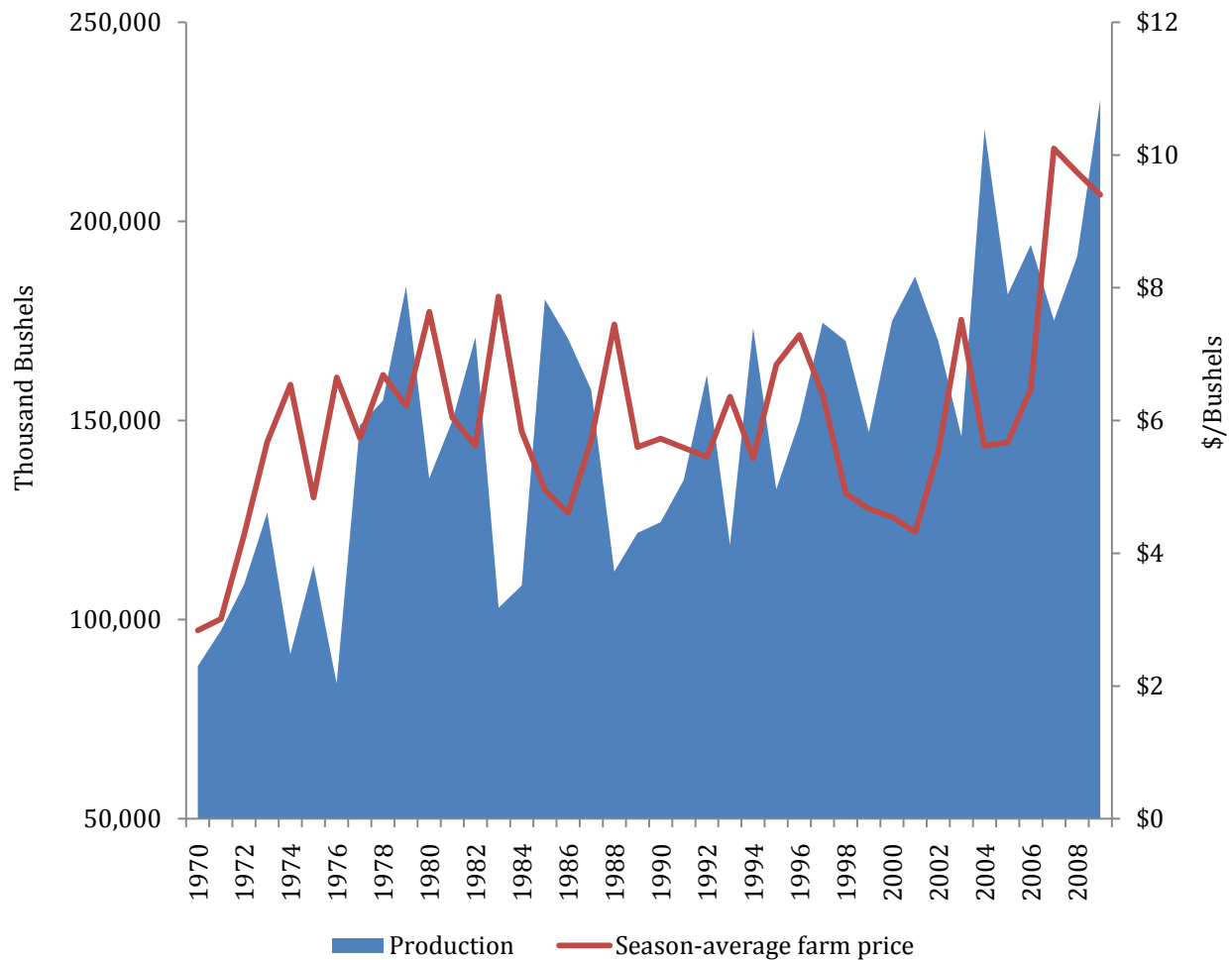
Exhibit 1.5.10 – Missouri Total State Herbicide Costs Paid Out by Soybean Farmers

	2,4-D	Chlorimuron-ethyl	Glyphosate	Trifluralin	Pendimethalin
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	-	-

Source: USDA/NASS and estimated.

1.6. Farm Revenue and Profits

Exhibit 1.6.1 – Missouri Season Average Farm Price and Production, 1970 to 2009



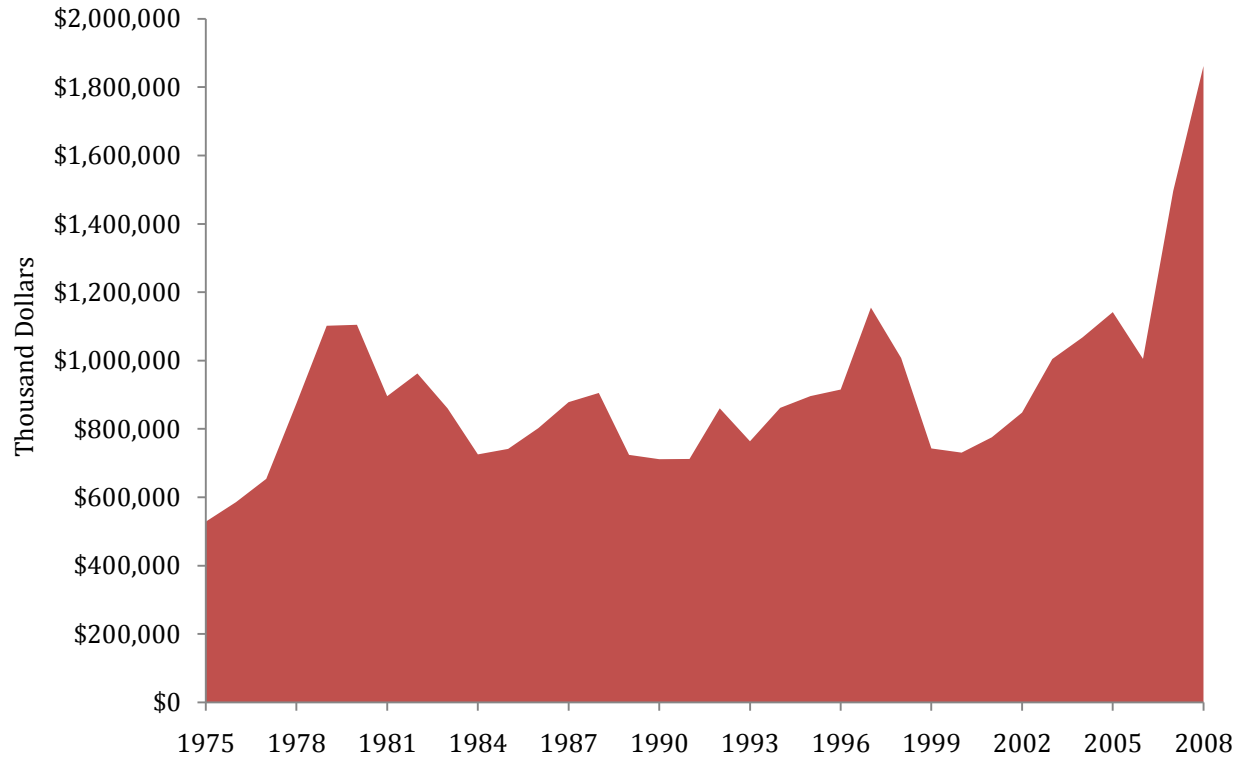
Source: USDA – National Agricultural Statistics Service

Exhibit 1.6.2 – Missouri Leading Commodities for Cash Receipts, 2008

Commodity	Value of Receipts	Percent of State Total Farm Receipts	Percent of U.S. Value
1. Soybeans	\$1,862,017,000	22.10%	6.40%
2. Corn	\$1,751,430,000	20.80%	3.40%
3. Cattle and calves	\$1,216,820,000	14.40%	2.50%
4. Hogs	\$876,503,000	10.40%	5.50%
5. Turkeys	\$371,070,000	4.40%	8.30%
All commodities	\$8,436,100,000		2.60%

Source: USDA – Economic Research Service

Exhibit 1.6.3 – Missouri Cash Receipts for Soybeans, 1975 to 2008

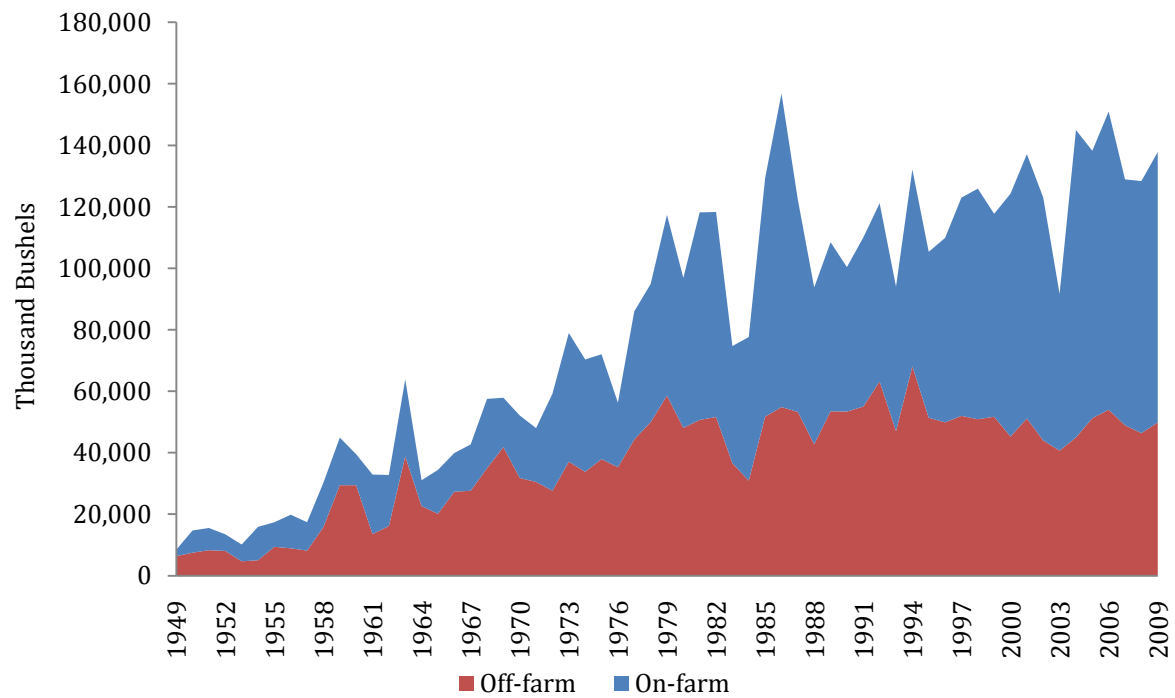


Source: USDA – Economic Research Service

Chapter 2: Beyond the Farm

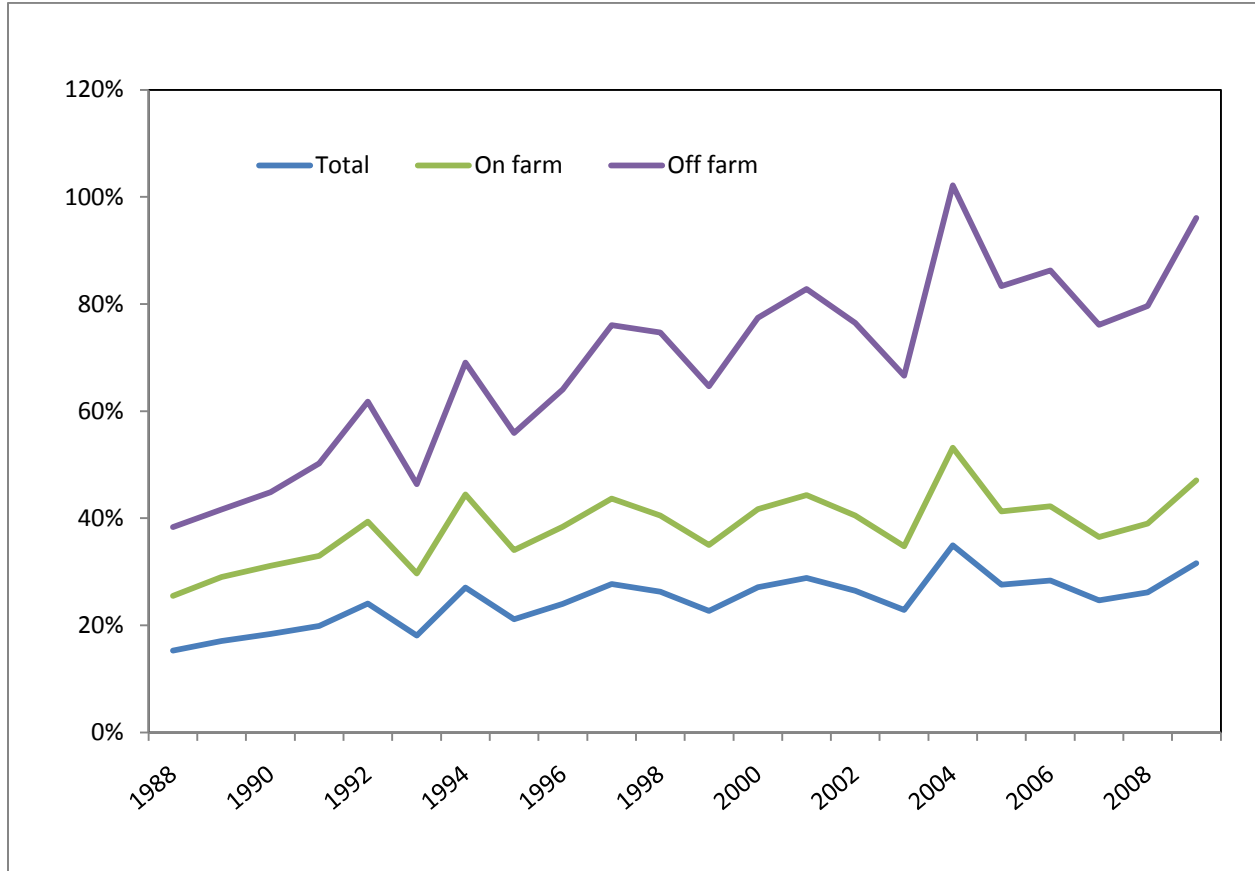
2.1 Storage

Exhibit 2.1.1 – Missouri Soybean Stocks on Dec. 1, 1949 to Dec. 1, 2009



Source: USDA – National Agricultural Statistics Service

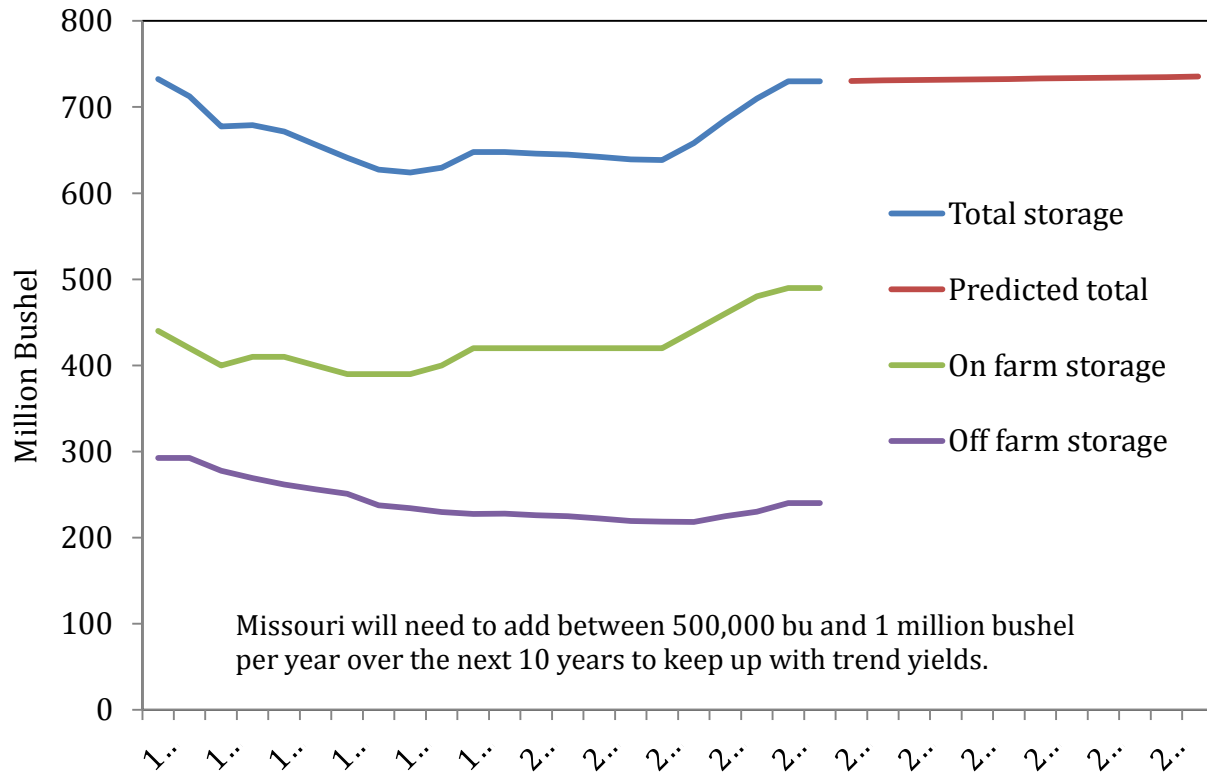
Exhibit 2.1.2 – Percent of Missouri Soybean Crop Relative to Given Categories of Storage Capacity



Source: USDA – Economic Research Service

* Note: “Total” line represents the percentage of total storage soybean crop accounts for a given year. The other lines represent percentages produced from dividing production values by storage values for each type of storage category.

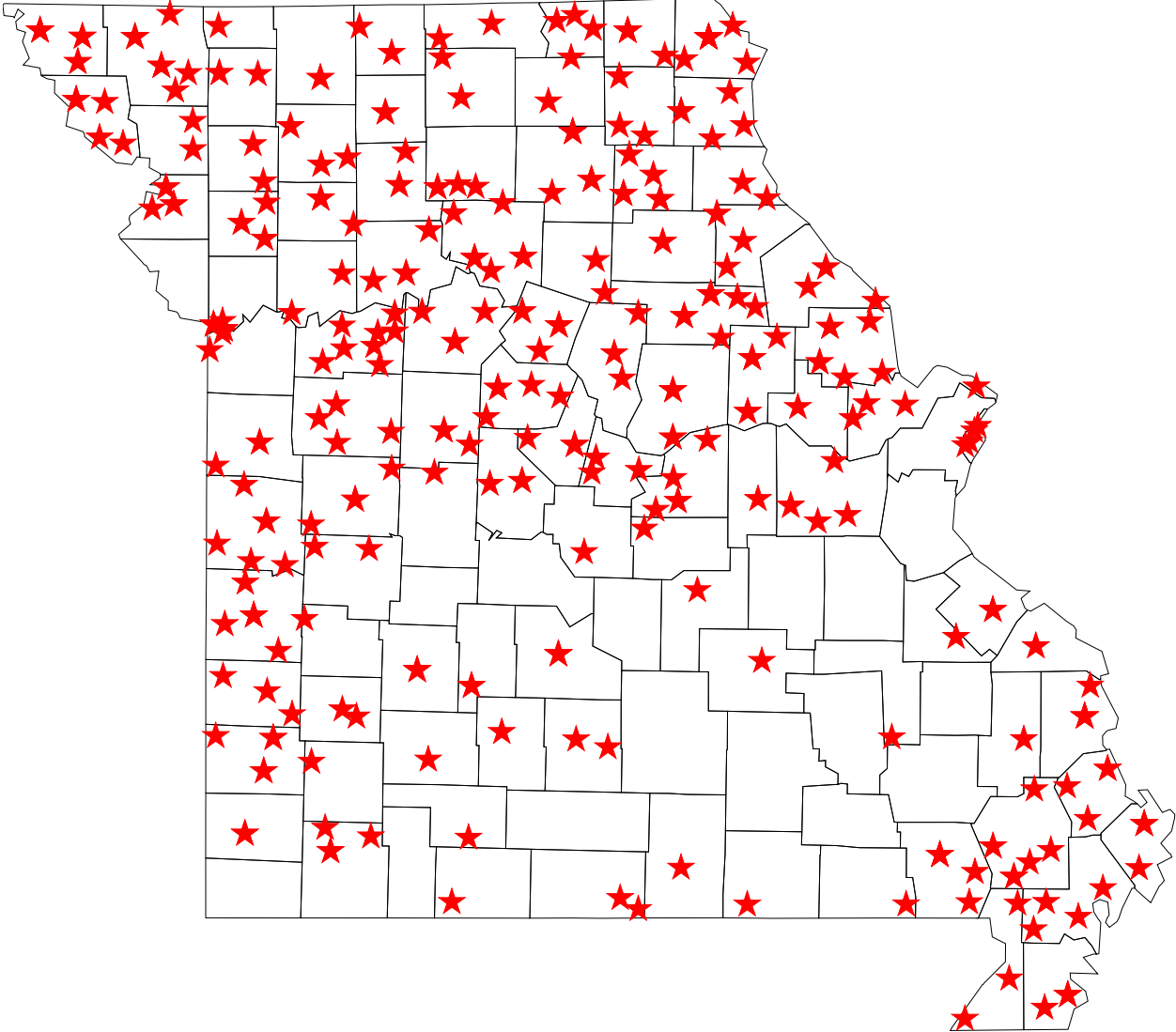
Exhibit 2.1.3 – Missouri On-Farm, Off-Farm and Total Storage Capacity and Predicted Capacity



Source: USDA – Economic Research Service

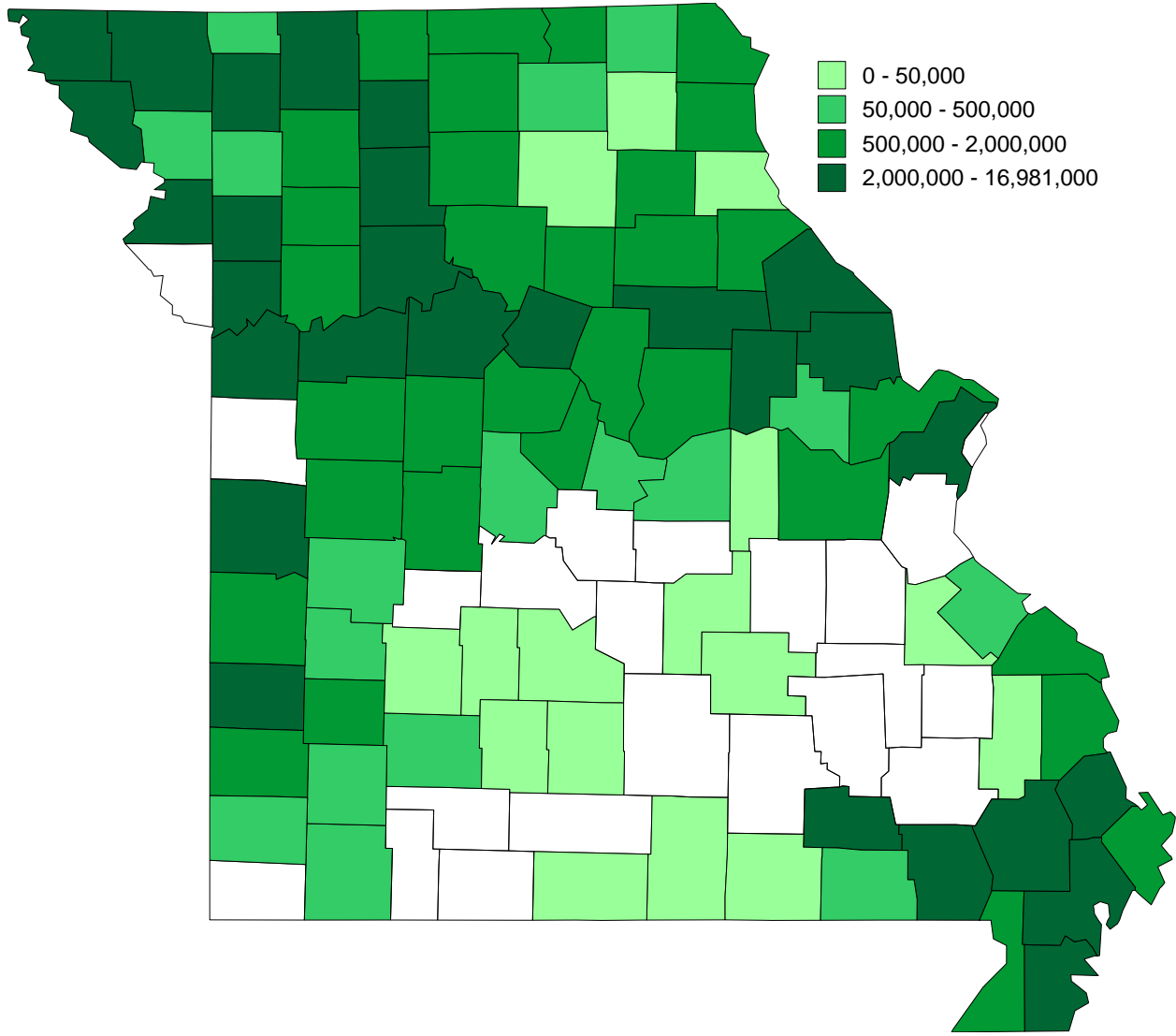
2.2 Commercial Storage

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%

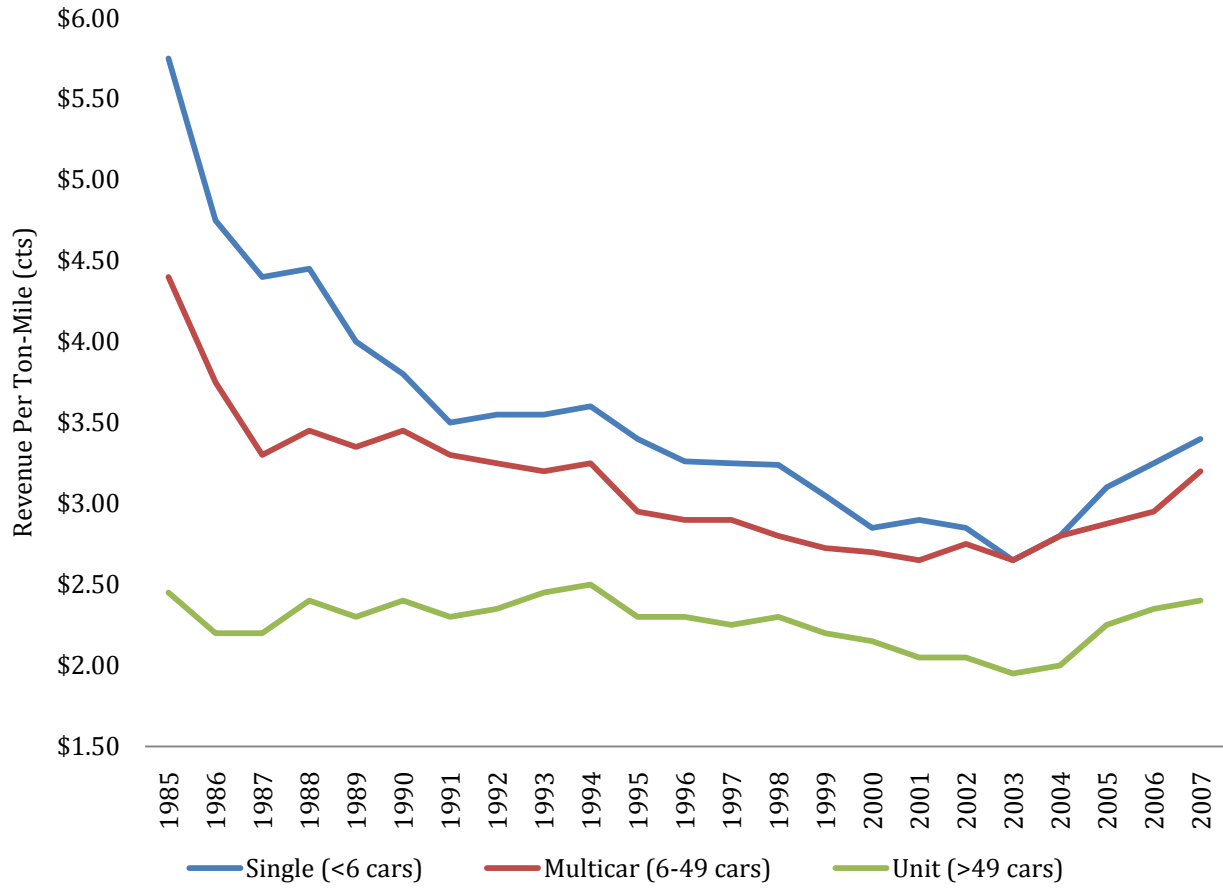
Source: Iowa Transportation Study

Exhibit 2.3.2 – Modes of Missouri Transportation from Elevators

MISSOURI TRANSPORTATION FROM ELEVATORS				
	Value (Million Dollars)	2007 Nominal Value	Tons (Thousands)	
2002	\$185,392	\$213,671	254,827	
2007	\$225,954		305,184	
2002 CEREAL GRAINS MODE OF TRANSPORTATION				
	Value (Million Dollars)	Percent of Total Value	Tons (Thousands)	Percent of Total Tons
Total	\$2,150	100%	22,548	100%
Truck Total	\$980	45%	10,318	45%
For-Hire Truck	\$885	41%	S	S
Rail	\$756	35%	7,473	33%
Water	\$370	17%	4,311	19%
Shallow Draft	\$370	17%	4,311	19%
2002 ANIMAL FEED AND PRODUCTS OF ANIMAL ORIGIN				
	Value (Million Dollars)	Percent of Total Value	Tons (Thousands)	Percent of Total Tons
Total	\$1,839	100%	S	S
Truck Total	\$1,674	91%	S	S
For-Hire Truck	\$736	40%	S	S
Rail	\$129	7%	790	5%
2002 OTHER PREPARED FOODSTUFFS AND FATS AND OIL				
	Value (Million Dollars)	Percent of Total Value	Tons (Thousands)	Percent of Total Tons
Total	\$8,545	100%	12,232	100%
Truck Total	\$7,801	91%	10,117	82%
For-Hire Truck	\$4,211	49%	4,589	37%
Private Truck	\$3,590	42%	S	S
Rail	\$472	5%	1,617	13%

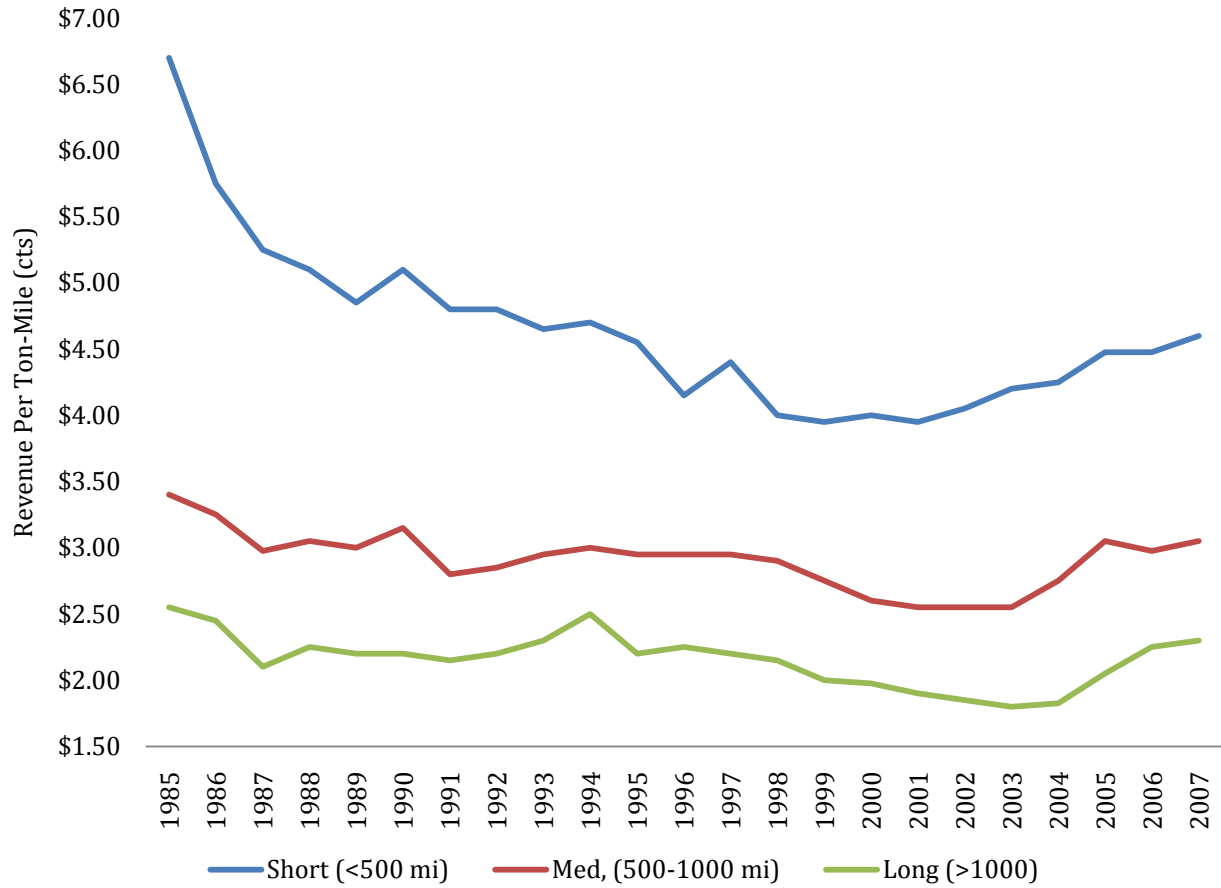
Source: Department of Transportation estimates

Exhibit 2.3.3 – Grain Rates and Train Type



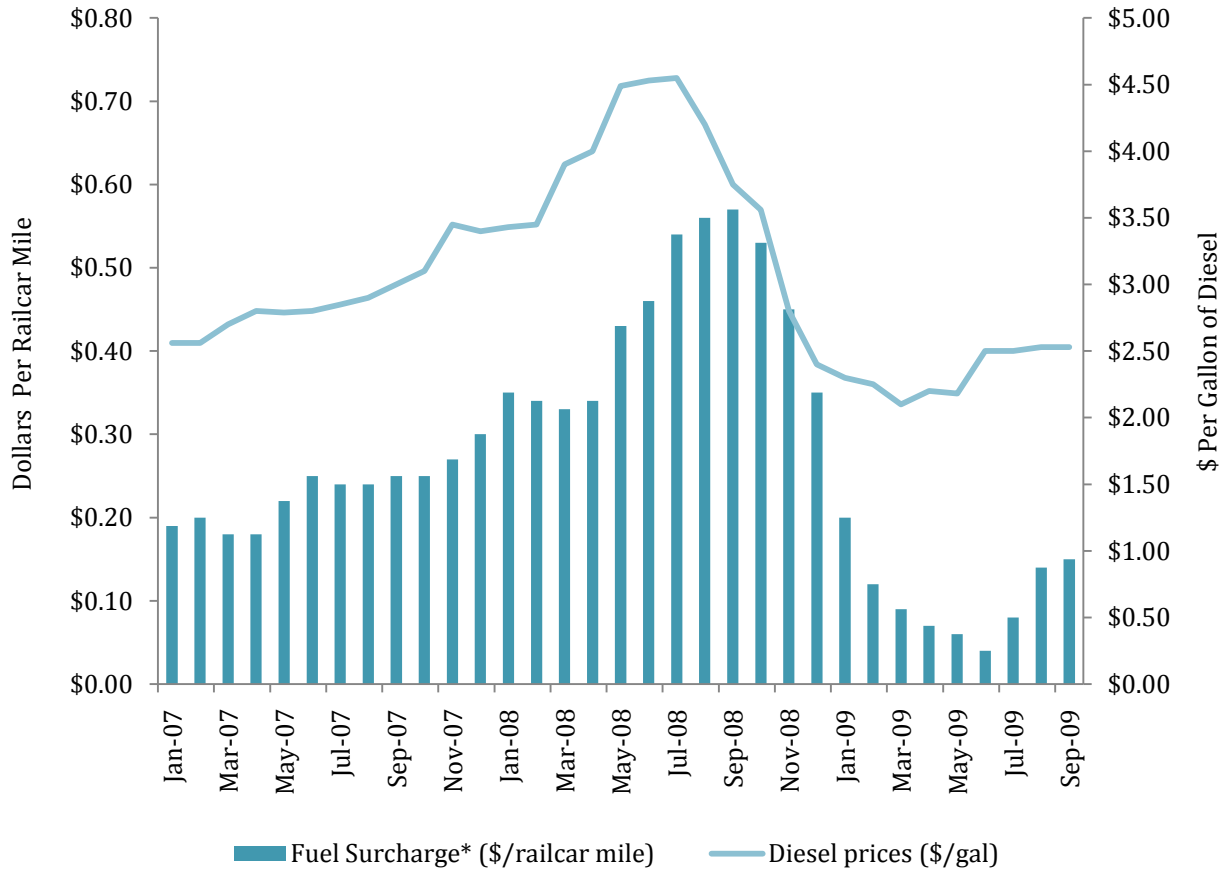
Source: Surface Transportation Board, 2009

Exhibit 2.3.4 – Grain Rates and Shipment Distance



Source: Surface Transportation Board, 2009

Exhibit 2.3.5 – Railroad Fuel Surcharges

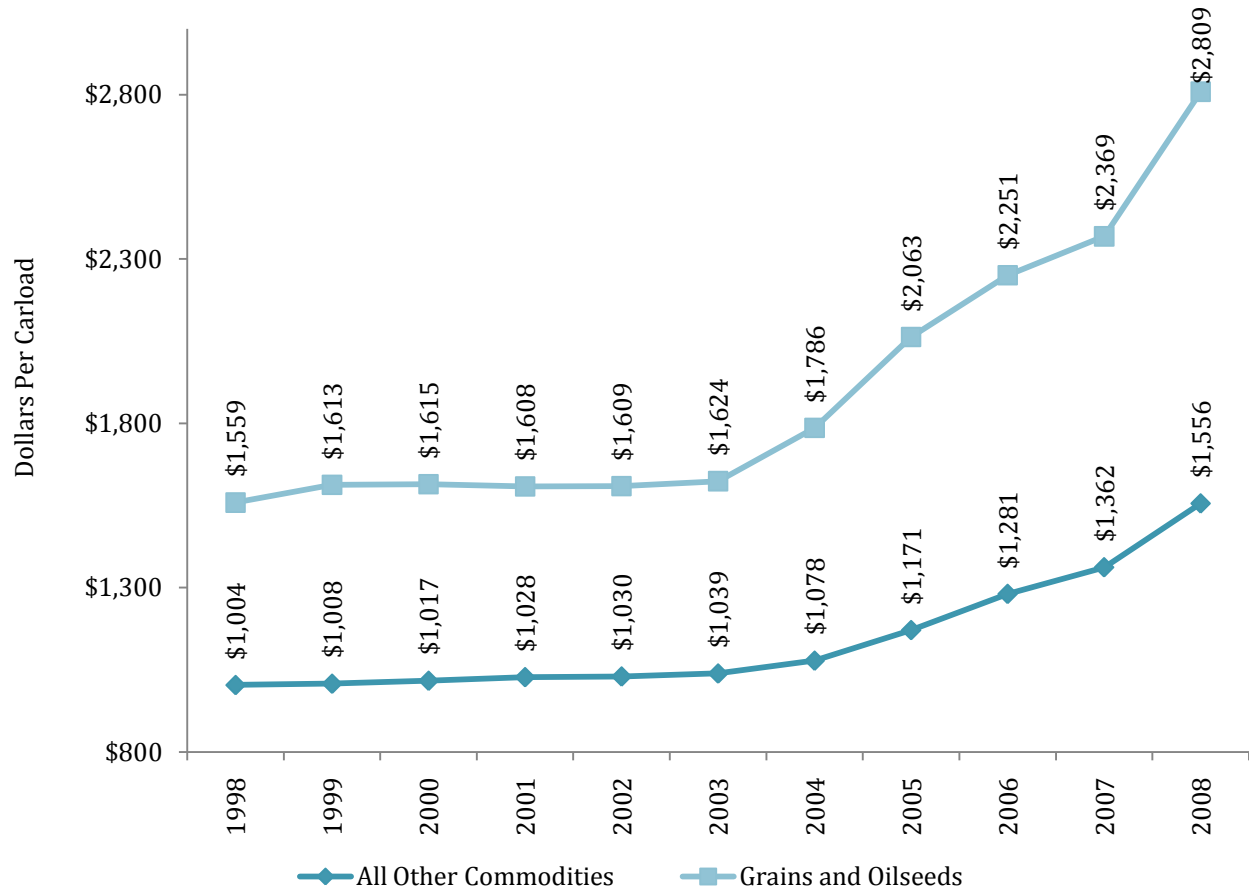


Sources: Data collected from the websites of the Class I railroads and www.eia.doe.gov

† Weighted by each Class I railroad's proportion of grain traffic for the prior year.

* Mileage-based fuel surcharges for March and April 2007 are estimated. Beginning January 2009, the Canadian Pacific fuel surcharge is computed by a monthly average of the bi-weekly fuel surcharge.

Exhibit 2.3.6 – Average Freight Revenue Per Grains and Oilseeds Carload



Source: Association of American Railroads, Freight Commodity Statistics

Chapter 3: Soybean Processing and Use

3.1 Soybean Industry

Exhibit 3.1.1 – Missouri Soybean Processing Industry, CPI-Adjusted, 2009

	Missouri	U.S.	MO as a % of U.S.
Establishments (#) 2002	6	117	5.1%
Number of employees (#) 2002	372	8932	4.7%
Annual payroll (\$)	\$15,129,868	\$354,978,535	4.3%
Value added (\$)	\$265,099,375	\$3,715,945,227	7.1%
Total cost of materials (\$)	\$520,983,317	\$12,025,062,731	4.3%
Total value of shipments (\$)	\$785,696,782	\$15,611,702,479	5.0%

Sources: U.S. Census Bureau, 2002 Economic Census, Minneapolis Fed, and Soybean Meal Information Center,
<http://www.census.gov/econ/industry/ec02/e311222.htm>

3.2 Whole Soybeans

Exhibit 3.2.1 – Top Missouri Soybean Global Trading Partners

Rank	Partner	2004 Value # Bushels	2005 Value # Bushels	2006 Value # Bushels	2007 Value # Bushels	2008 Value # Bushels	2009 Value # Bushels	Average Value Average # Bushels
1	Mexico	\$74,109,000	\$115,443,000	\$85,909,000	\$99,710,000	\$114,610,000	\$55,510,000	\$90,882,000
	Amount	12,936,259	20,478,453	13,417,234	9,895,874	12,257,754	5,886,532	12,478,685
2	China	\$0	\$0	\$0	\$107,434,000	\$48,833,000	\$981,000	\$26,208,000
	Amount	0	0	0	10,662,455	5,222,781	104,030	2,664,878
3	Japan	\$2,289,000	\$3,980,000	\$24,964,000	\$7,035,000	\$28,117,000	\$13,086,000	\$13,245,000
	Amount	399,561	706,013	3,898,868	698,200	3,007,166	1,387,699	1,682,918
4	Taiwan	\$363,000	\$2,302,000	\$4,899,000	\$5,279,000	\$8,437,000	\$6,617,000	\$4,649,000
	Amount	63,364	408,352	765,124	523,923	902,353	\$701,697	560,802
5	Cuba	\$0	\$21,010,000	\$0	\$0	\$6,112,000	\$0	\$4,520,000
	Amount	0	3,726,967	0	0	653,690	0	730,110
6	Colombia	\$0	\$0	\$0	\$4,232,000	\$21,194,000	\$0	\$4,238,000
	Amount	0	0	0	420,011	2,266,738	0	447,792
7	Canada	\$12,000	\$65,000	\$683,000	\$383,000	\$74,000	\$14,024,000	\$2,540,000
	Amount	2,095	11,530	106,671	38,011	7,914	\$0	27,704
8	Indonesia	\$515,000	\$181,000	\$7,000	\$1,543,000	\$3,564,000	\$8,777,000	\$2,431,000
	Amount	89,897	32,108	1,093	153,137	381,176	930,753	264,694
9	Singapore	\$35,000	\$13,929,000	\$0	\$0	\$0	\$59,000	\$2,337,000
	Amount	6,110	2,470,868	0	0	0	6,257	413,872
10	Netherlands	\$0	\$0	\$0	\$11,939,000	\$0	\$0	\$1,990
	Amount	0	0	0	1,184,905	0	0	197,484

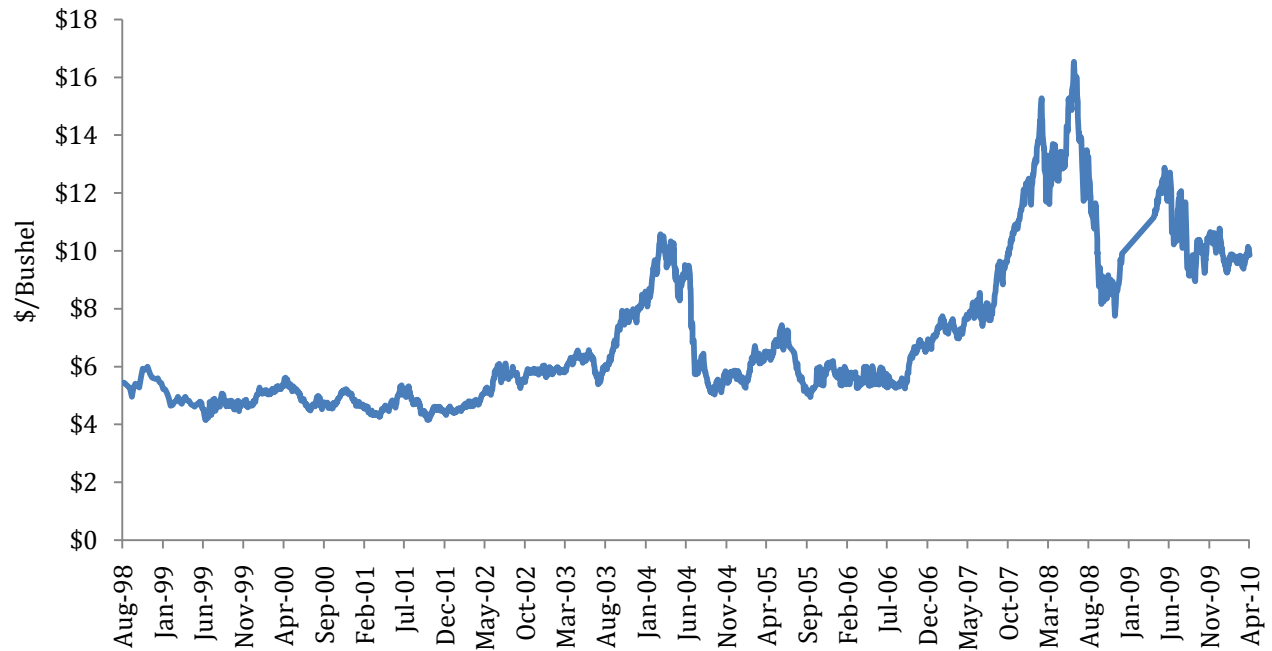
Source: FAS, USDA

Exhibit 3.2.2 – Crushing Stocks of Soybeans at Oil Mills

Month and Year	Crushed or Used (Short Tons)
December-07	196,535
January-08	200,206
February-08	180,405
March-08	192,809
April-08	182,706
May-08	196,875
June-08	183,092
July-08	120,086
August-08	107,252
September-08	189,374
October-08	237,108
November-08	254,650
December-08	251,902
January-09	243,789
February-09	219,825
March-09	226,749
April-09	248,769
May-09	232,545
June-09	227,070
July-09	220,314
August-09	194,936
September-09	93,687
October-09	274,044
November-09	350,237
December-09	365,568
January-10	349,956
February-10	313,610
March-10	293,123

Source: U.S. Census

Exhibit 3.2.3 – Historical St. Louis Soybean Prices



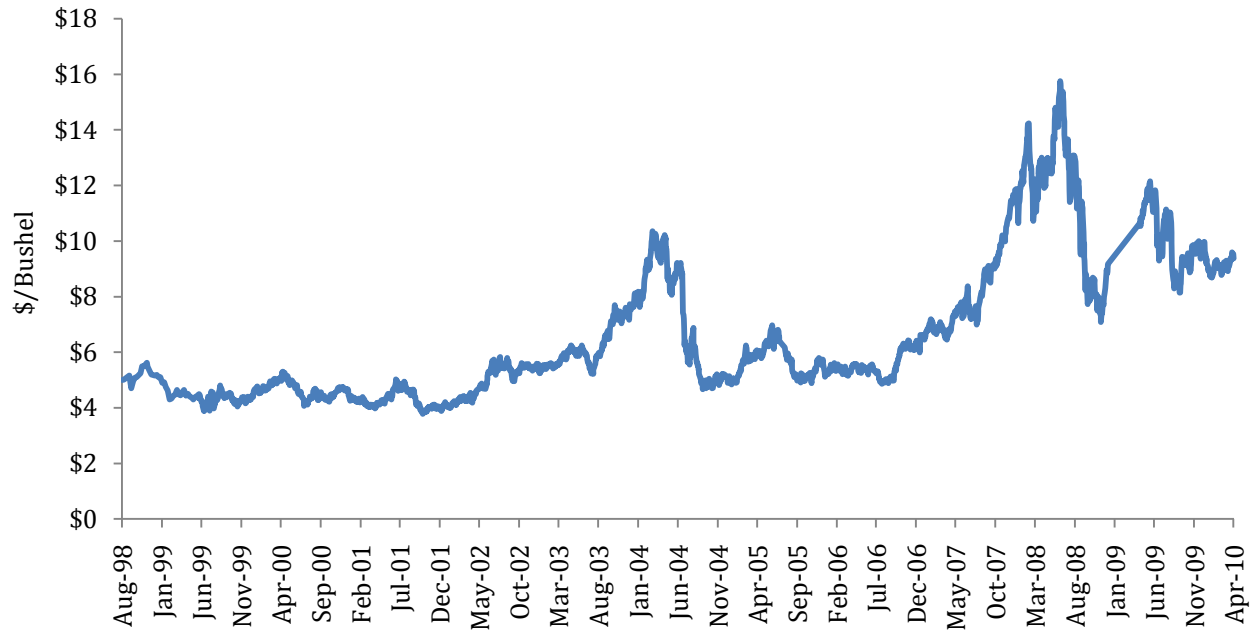
Source: CashGrainBids.com

Exhibit 3.2.4 – Historical Kansas City Soybean Prices



Source: CashGrainBids.com

Exhibit 3.2.5 – Historical Lamar Soybean Prices



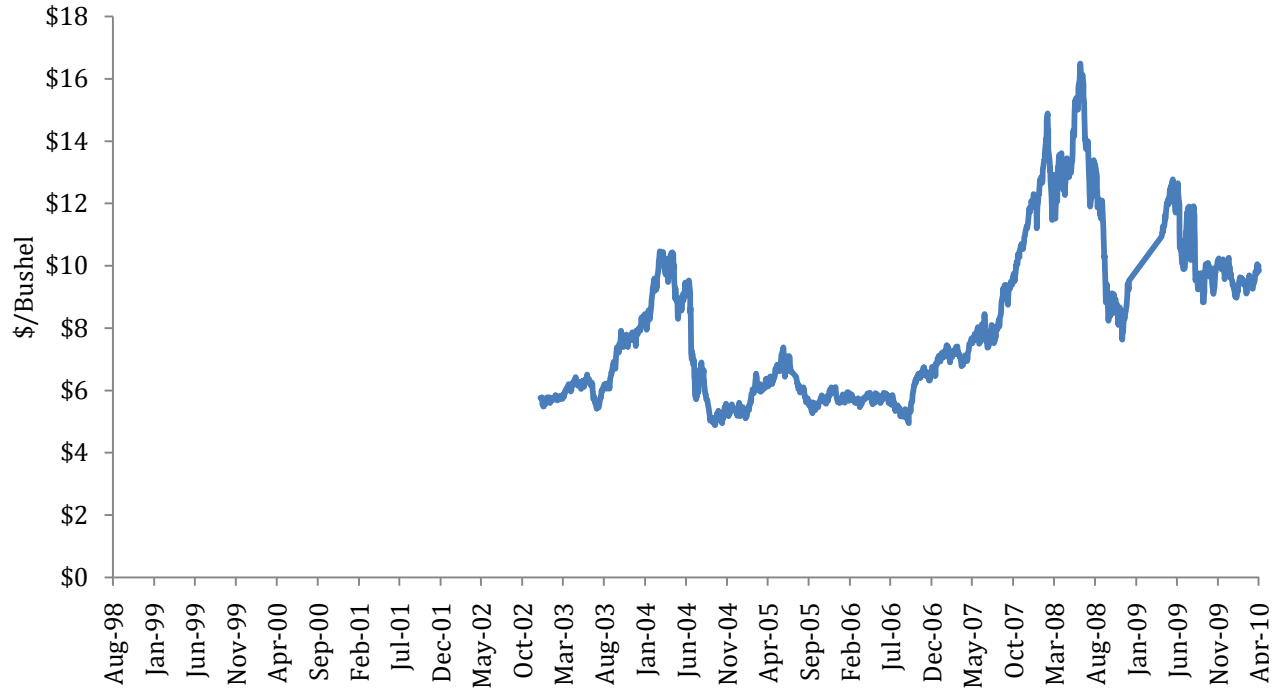
Source: CashGrainBids.com

Exhibit 3.2.6 – Historical Mexico, Mo., MFA, Soybean Prices



Source: CashGrainBids.com

Exhibit 3.2.7 – Historical Mexico, Mo., ADM Soybean Prices (No data prior to 2002)



Source: *CashGrainBids.com*

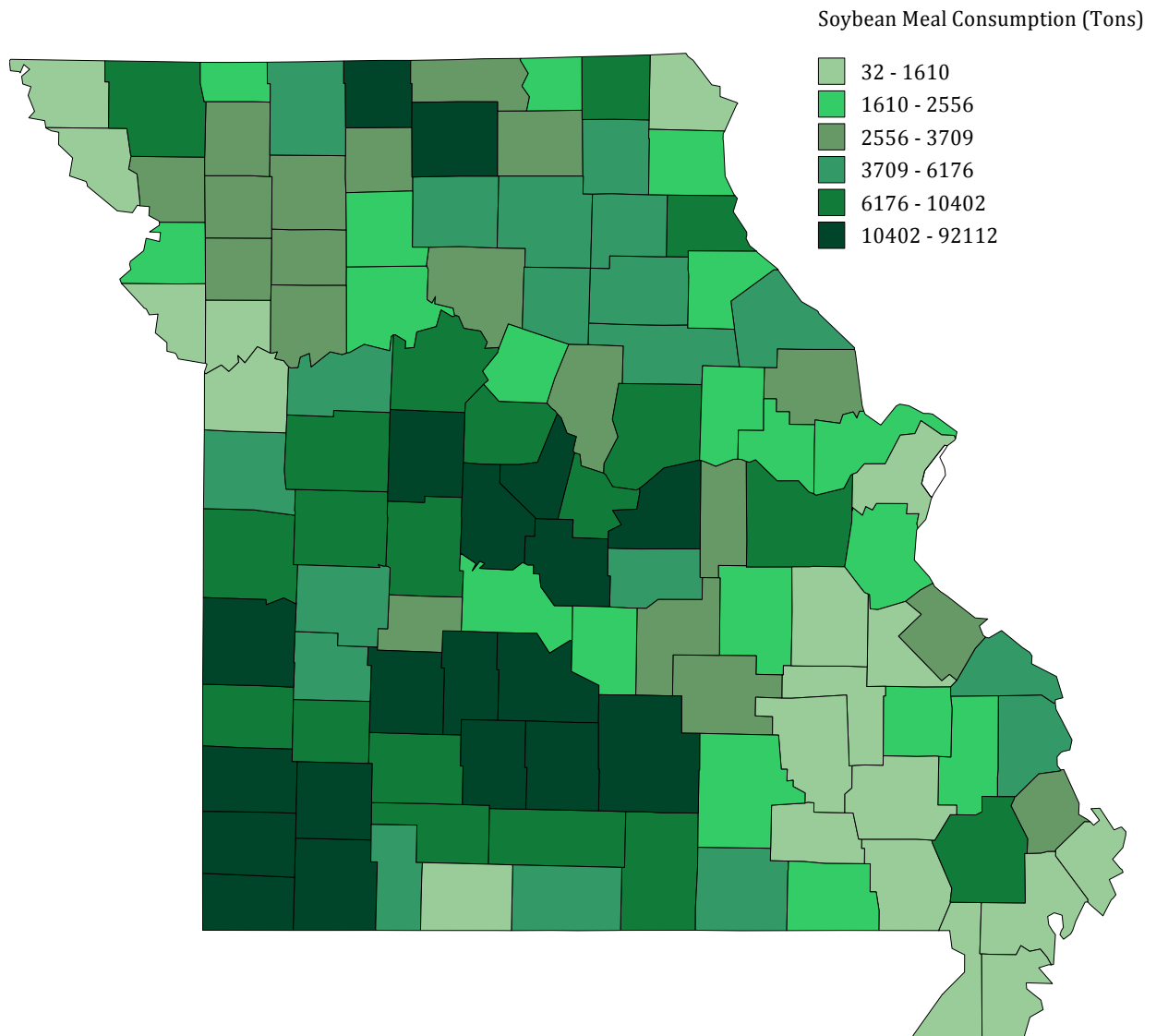
3.3 Soybean Meal

Exhibit 3.3.1 - Missouri Soybean Meal Consumption

	2007 Total Soybean Meal Consumption (Pounds)	2007 Total Soybean Meal Consumption (Tons)
Cattle	893,172,864	446,586
Poultry	351,040,283	175,520
Hogs	344,961,016	172,481
Aquaculture	1,841,875	921
Total Demand Potential	1,591,016,037	795,508

Source: NASS

Exhibit 3.3.2 – 2007 Missouri Cattle, Hog, Poultry and Aquaculture Soybean Meal Consumption by County



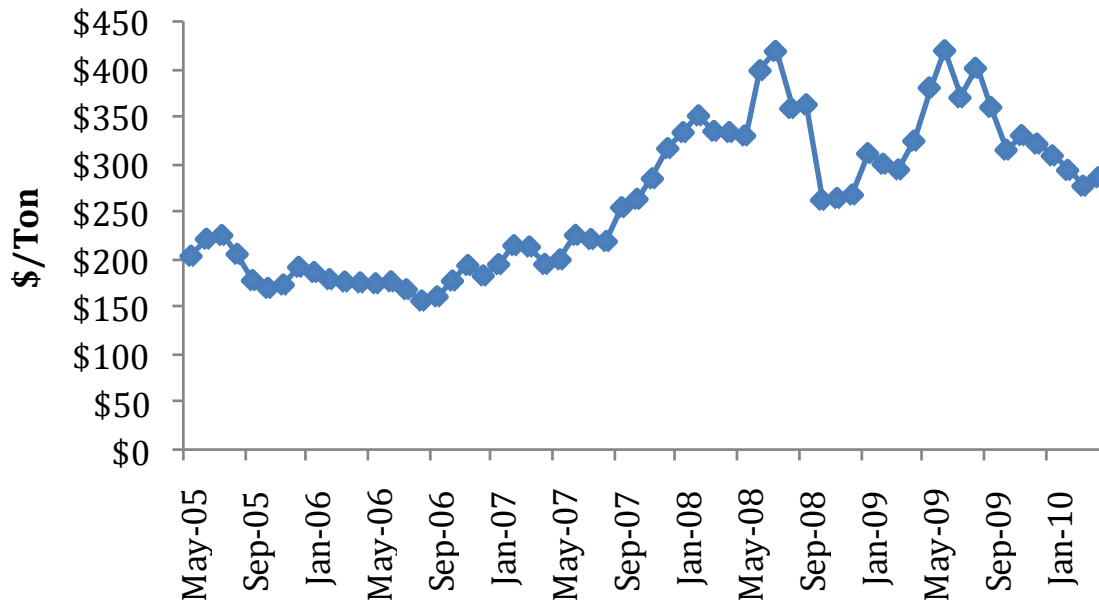
Source: NASS

Exhibit 3.3.3 – Estimated Soybean Meal Consumption by County

<i>County</i>	Total SBM Consumption	<i>County</i>	Total SBM Consumption	<i>County</i>	Total SBM Consumption
Adair	2,679	Harrison	4,251	Phelps	2,783
Andrew	3,036	Henry	7,631	Pike	4,230
Atchison	926	Hickory	3,373	Platte	1,133
Audrain	5,503	Holt	1,298	Polk	17,746
Barry	44,020	Howard	2,014	Pulaski	1,611
Barton	9,371	Howell	10,078	Putnam	3,164
Bates	7,362	Iron	689	Ralls	2,439
Benton	8,607	Jackson	904	Randolph	3,898
Bollinger	2,546	Jasper	14,981	Ray	2,763
Boone	3,562	Jefferson	1,880	Reynolds	796
Buchanan	1,902	Johnson	7,097	Ripley	1,610
Butler	636	Knox	3,709	Saline	6,615
Caldwell	2,556	Laclede	10,648	Schuyler	2,233
Callaway	6,883	Lafayette	4,892	Scotland	6,641
Camden	2,350	Lawrence	28,239	Scott	3,451
Cape Girardeau	5,690	Lewis	1,764	Shannon	1,652
Carroll	2,497	Lincoln	2,810	Shelby	4,559
Carter	717	Linn	4,506	St. Charles	2,338
Cass	5,487	Livingston	2,014	St. Clair	4,098
Cedar	5,215	Macon	4,770	St. Francois	1,486
Chariton	3,558	Madison	1,814	St. Louis	346
Christian	6,725	Maries	5,152	Ste. Genevieve	2,574
Clark	1,593	Marion	6,968	Stoddard	7,530
Clay	1,330	McDonald	14,953	Stone	5,787
Clinton	2,874	Mercer	92,112	Sullivan	23,038
Cole	6,176	Miller	23,572	Taney	1,519
Cooper	6,365	Mississippi	164	Texas	12,775
Crawford	2,145	Moniteau	15,705	Vernon	16,321
Dade	8,027	Monroe	6,031	Warren	2,052
Dallas	10,402	Montgomery	2,248	Washington	1,246
Daviess	2,764	Morgan	26,177	Wayne	1,047
De Kalb	2,850	New Madrid	45	Webster	15,829
Dent	2,641	Newton	29,134	Worth	1,741
Douglas	8,365	Nodaway	6,338	Wright	19,554
Dunklin	148	Oregon	4,059		
Franklin	8,785	Osage	14,775		
Gasconade	3,275	Ozark	4,622		
Gentry	2,769	Pemiscot	32		
Greene	8,216	Perry	4,187		
Grundy	2,898	Pettis	17,109		

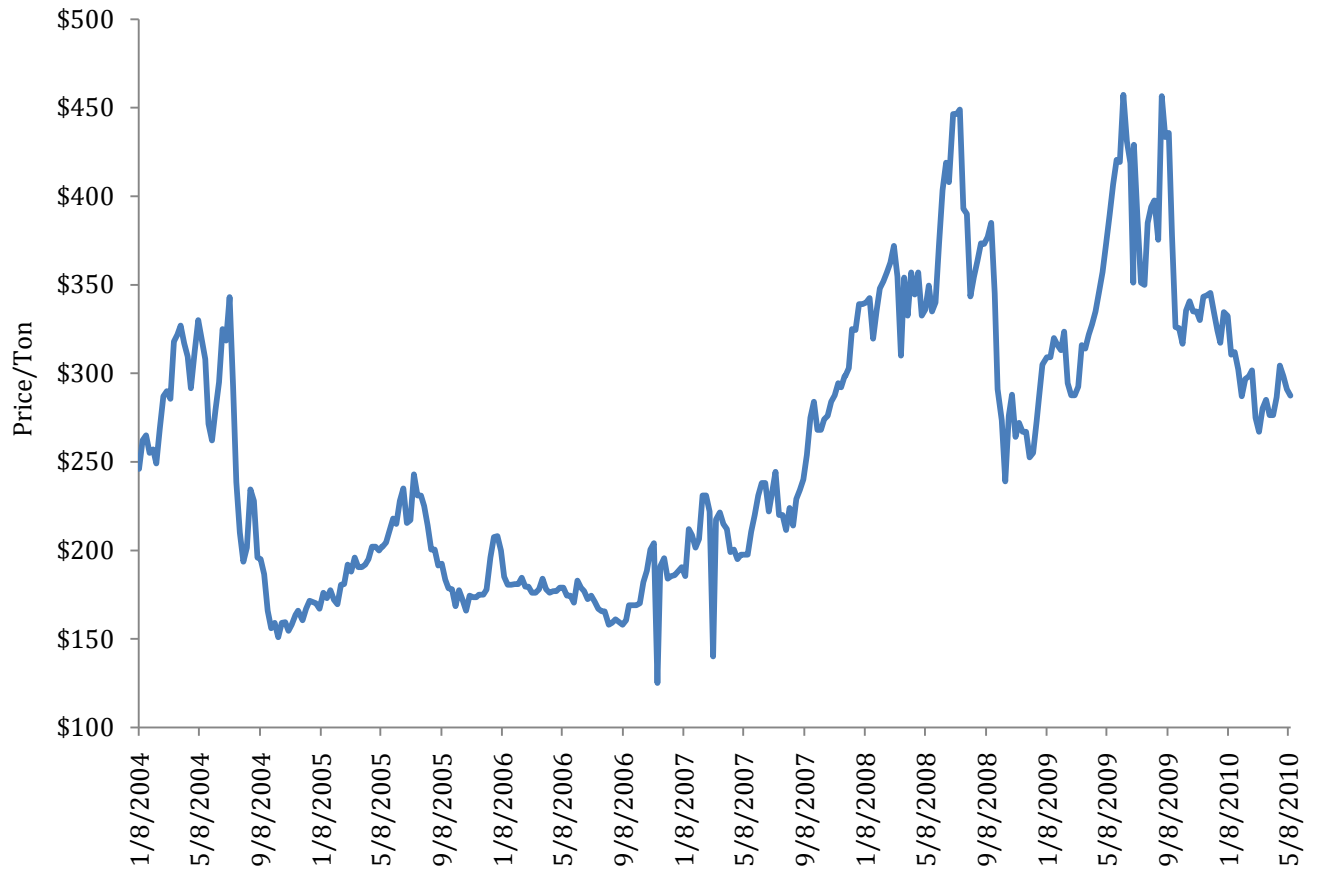
Source: USDA – National Agricultural Statistics Service

Exhibit 3.3.4 - Kansas City Soybean Meal Price



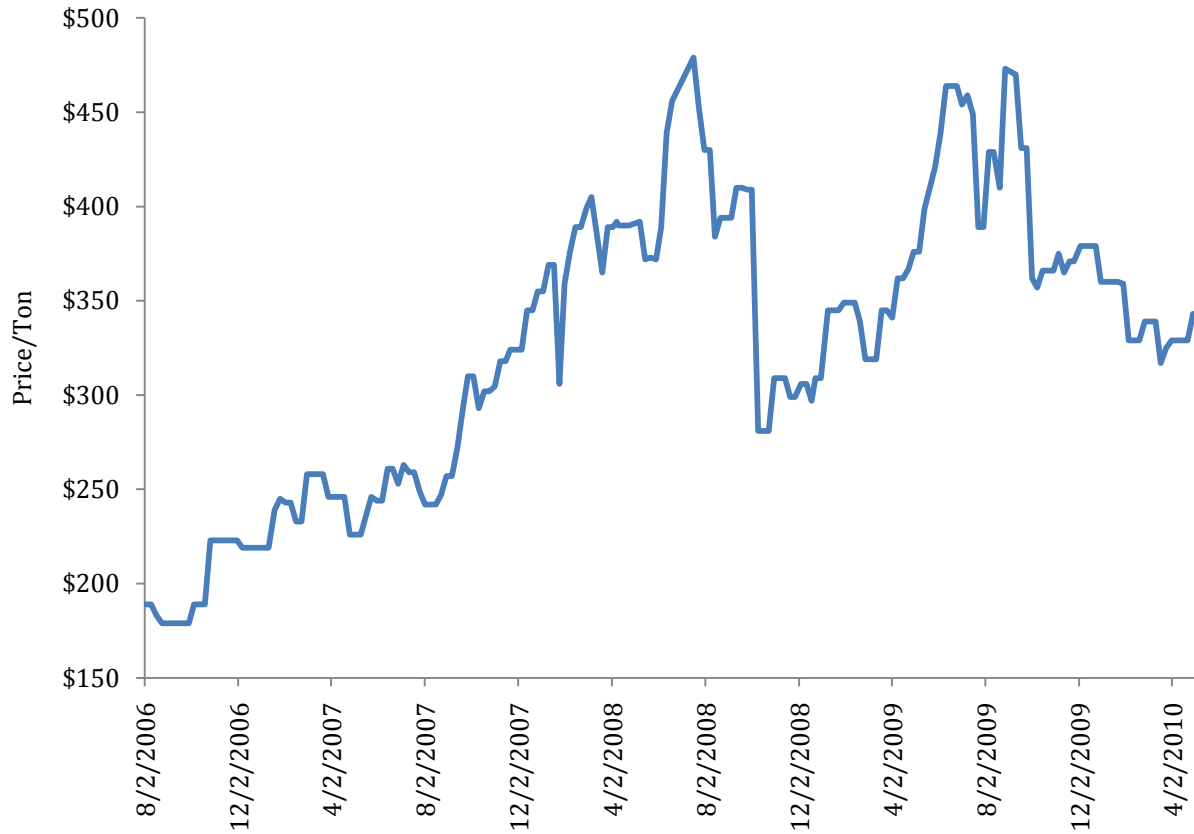
Source: USDA

Exhibit 3.3.5 - Price Per Ton of 48% Soybean Meal, Mexico, Mo., ADM



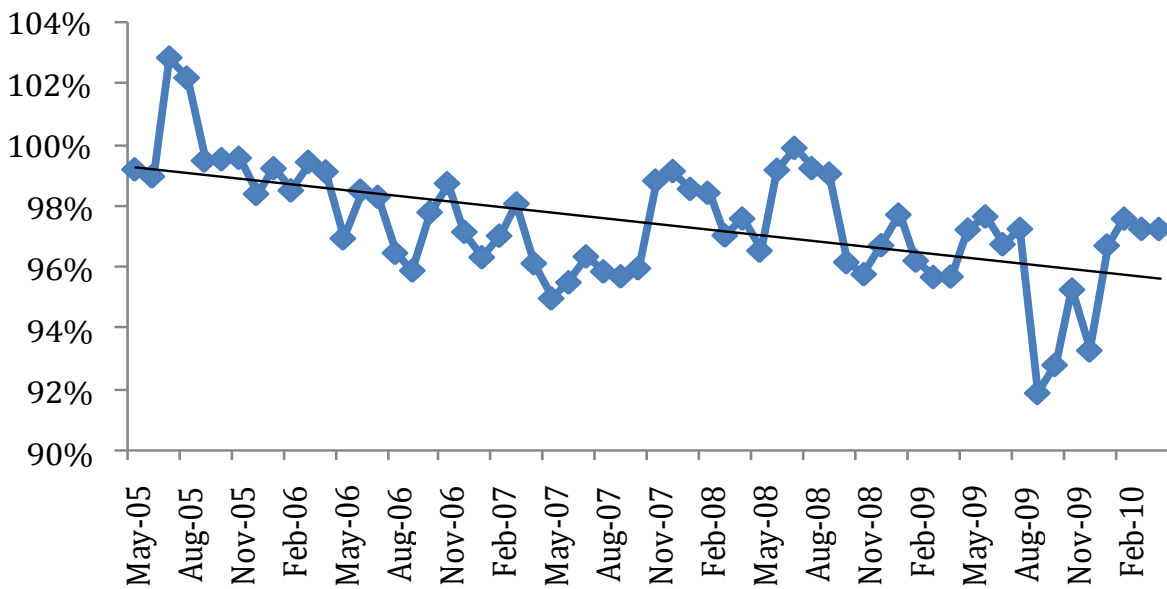
Source: AgEbb

Exhibit 3.3.6 – Price Per Ton of 48% Soybean Meal, NutraAg



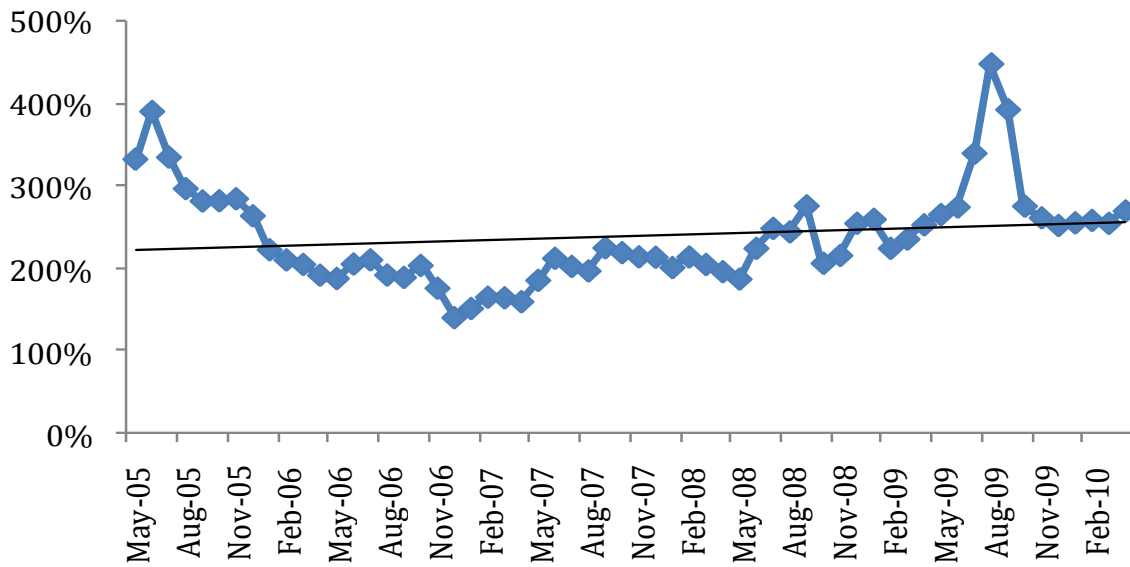
Source: AgEbb

Exhibit 3.3.7 – Kansas City SBM Price as a Percent of Central Illinois DDG Price



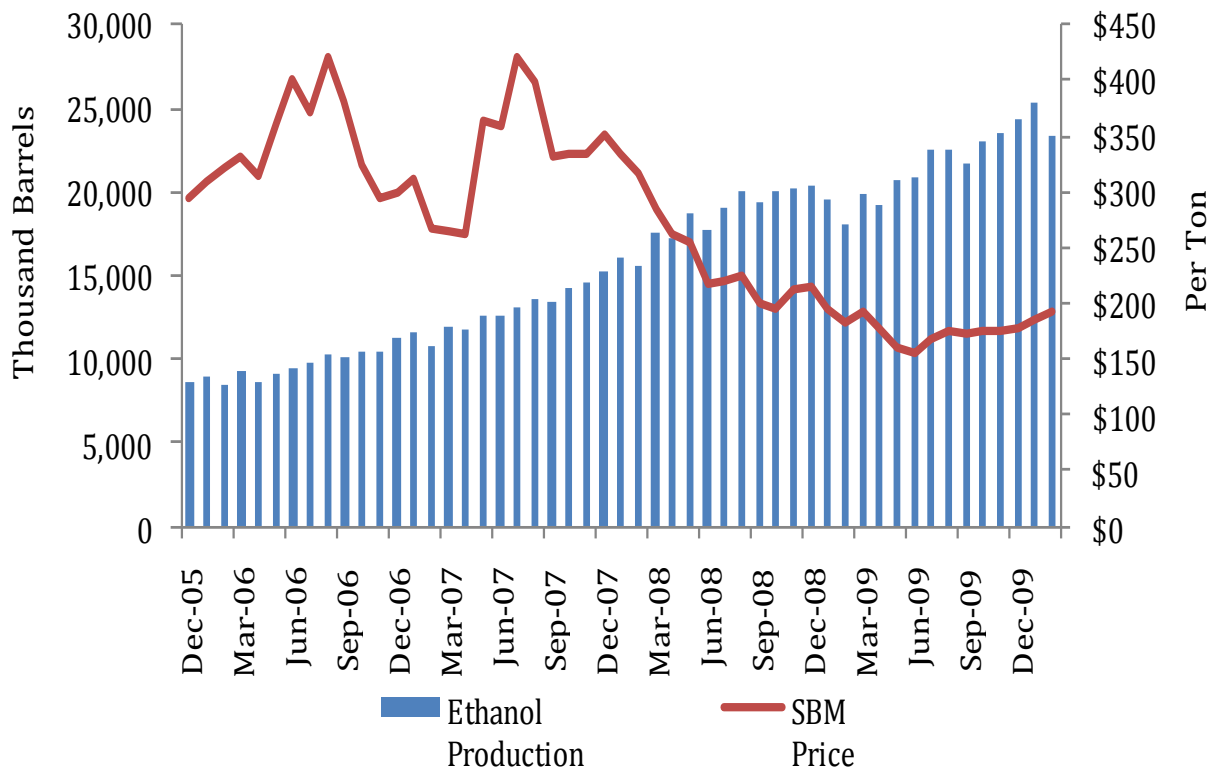
Source: USDA

Exhibit 3.3.8 – Kansas City SBM Price Relative to DDG Price



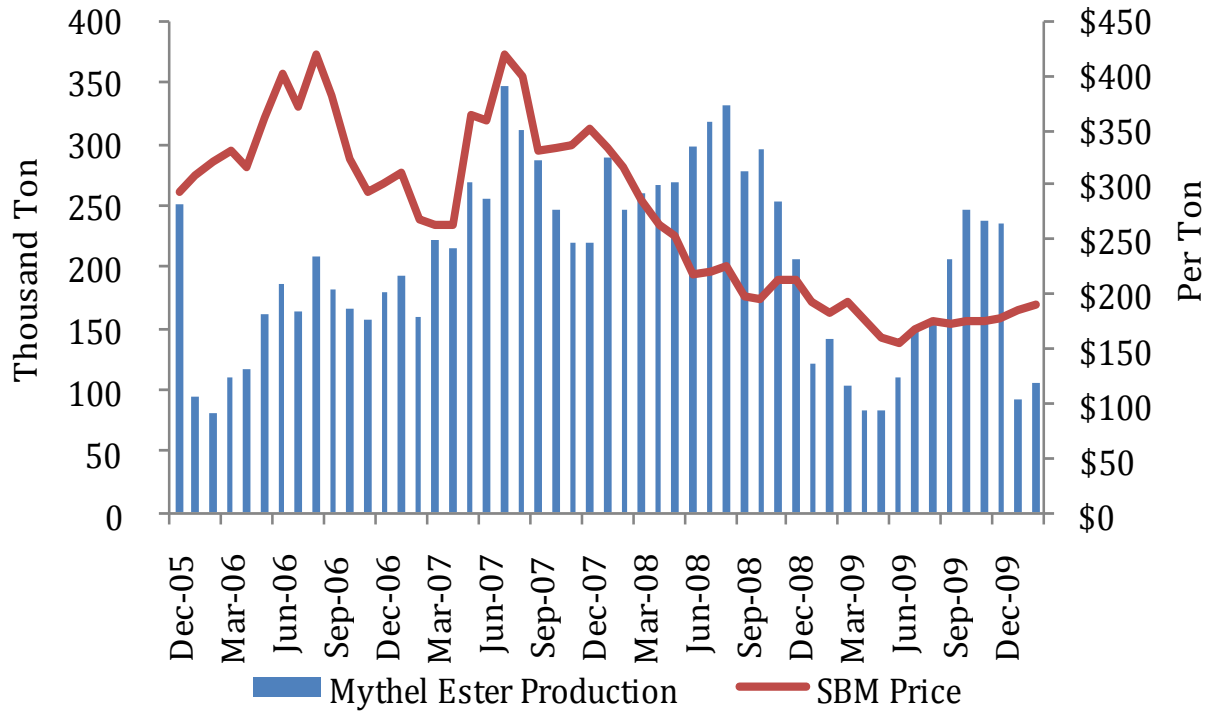
Source: USDA

Exhibit 3.3.9 – SBM Price vs. Ethanol Production



Source: USDA

Exhibit 3.3.10 – SBM Price vs. Methyl Ester Production



Source: USDA

Exhibit 3.3.11 – Cake and Meal in Tons for Missouri Mills, 2008 to 2009

Two-Year Monthly Average	
January	176,047
February	159,911
March	166,398
April	170,978
May	171,434
June	163,607
July	136,844
August	120,911
September	112,921
October	200,814
November	239,733
December	245,290

Source: U.S. Census

Exhibit 3.3.12 – Production and Stocks of Soybean Meal at Missouri Mills

Month and Year	Cake and Meal (Short Tons)
December-07	158,330
January-08	161,329
February-08	145,946
March-08	153,604
April-08	145,920
May-08	159,184
June-08	147,105
July-08	98,605
August-08	86,236
September-08	150,820
October-08	185,995
November-08	202,897
December-08	199,898
January-09	190,765
February-09	173,875
March-09	179,191
April-09	196,036
May-09	183,684
June-09	180,109
July-09	175,083
August-09	155,586
September-09	75,021
October-09	215,632
November-09	276,568
December-09	290,682
January-10	278,162
February-10	251,724
March-10	234,646

Source: U.S. Census

Exhibit 3.3.13 – Top Missouri Soybean Meal International Trading Partners

Rank	Partner	2004 Value # Tons	2005 Value # Tons	2006 Value # Tons	2007 Value # Tons	2008 Value # Tons	2009 Value # Tons	Average Value Average # Tons
1	Mexico	\$6,722,000	\$6,322,000	\$2,010,000	\$2,546,000	\$12,966,000	\$45,514,000	\$12,680,000
	Amount	36,752	36,298	9,784	7,579	45,495	155,471	48,563
2	Japan	\$0	\$13,534,000	\$7,080,000	\$17,429,000	\$2,952,000	\$10,585,000	\$8,597,000
	Amount	0	77,706	34,463	51,881	10,358	36,157	35,094
3	Ireland	\$0	\$0	\$0	\$5,359,000	\$9,671,000	\$0	\$2,505,000
	Amount	0	0	0	15,952	33,933	0	8,314
4	Turkey	\$0	\$0	\$0	\$0	\$0	\$12,053,000	\$2,009,000
	Amount	0	0	0	0	0	41,172	6,862
5	Chile	\$36,000	\$0	\$0	\$6,266,000	\$0	\$0	\$1,050,000
	Amount	197	0	0	18,652	0	0	3,141
6	Philippines	\$0	\$0	\$53,000	\$363,000	\$0	\$5,244,000	\$943,000
	Amount	0	0	257.98	1,080.55	0	17,913	3,208.57
7	Peru	\$0	\$0	\$3,457,000	\$0	\$0	\$0	\$576,000
	Amount	0	0	16,827	0	0	0	2804.55
8	Colombia	\$3,000	\$0	\$42,000	\$0	\$2,346,000	\$0	\$398,000
	Amount	16	0	204	0	8,232	0	1,409
9	Guatemala	\$0	\$10,000	\$0	\$0	\$0	\$2,334,000	\$391,000
	Amount	0	57	0	0	0	7,973	1,338
10	Taiwan	\$8,000	\$210,000	\$676,000	\$558,000	\$0	\$0	\$242,000
	Amount	44	1,206	3,290	1,661	0	0	1,033

Source: FAS, USDA

3.4 Soybean Oil

Exhibit 3.4.1 – Production and Stocks of Soybean Oil at Missouri Mills

Month and Year	Crude Oil (Thousand Pounds)
December-07	73,038
January-08	75,385
February-08	65,128
March-08	73,034
April-08	68,615
May-08	74,283
June-08	68,078
July-08	45,968
August-08	40,890
September-08	72,798
October-08	89,170
November-08	92,801
December-08	90,960
January-09	88,201
February-09	80,582
March-09	84,359
April-09	93,240
May-09	84,847
June-09	84,085
July-09	83,193
August-09	73,466
September-09	34,776
October-09	99,557
November-09	126,205
December-09	128,401
January-10	126,413

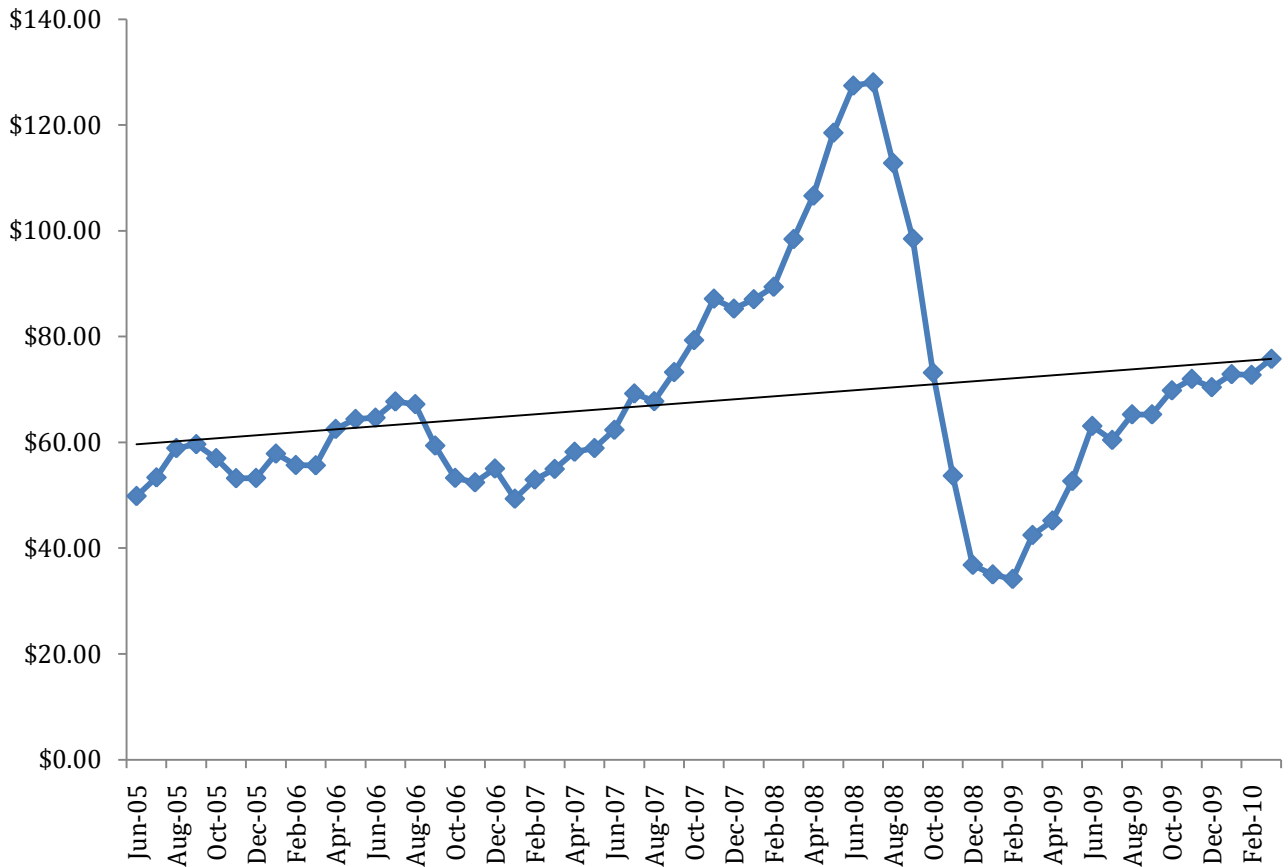
Source: U.S. Census

Exhibit 3.4.2 – Crude Oil in Pounds for Missouri Mills, 2008 to 2009

Two-Year Monthly Average	
January	81,793
February	72,855
March	78,697
April	80,928
May	79,565
June	76,082
July	64,581
August	57,178
September	53,787
October	94,364
November	109,503
December	109,681

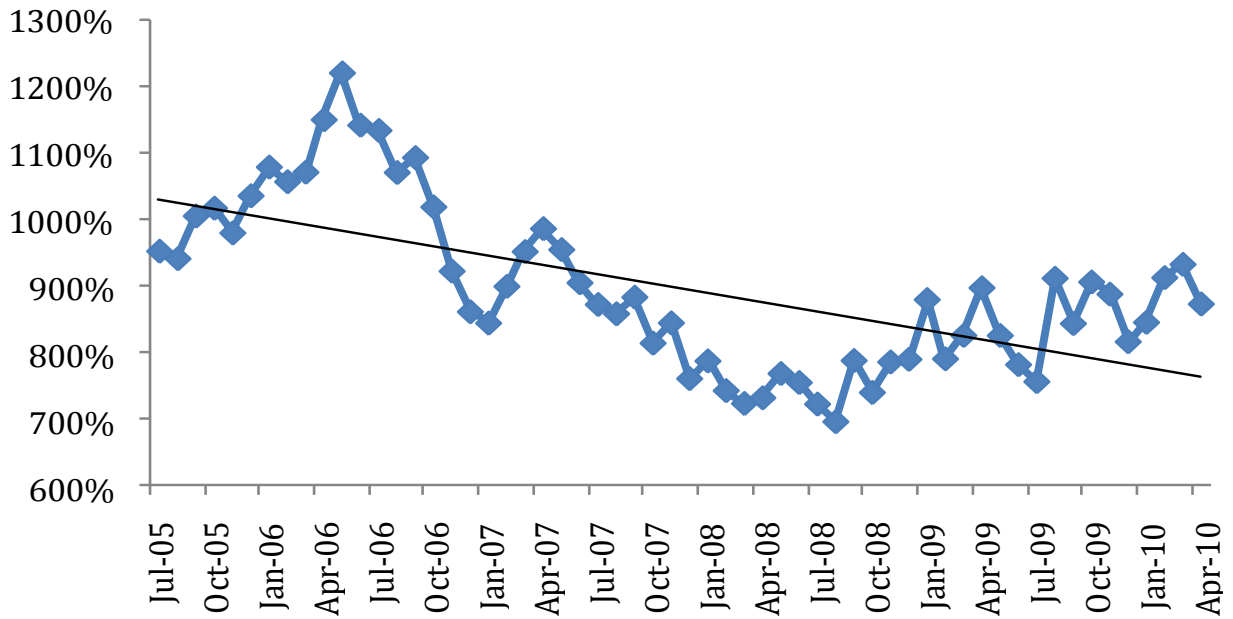
Source: U.S. Census

Exhibit 3.4.3 – Crude Oil Price (\$/barrel)



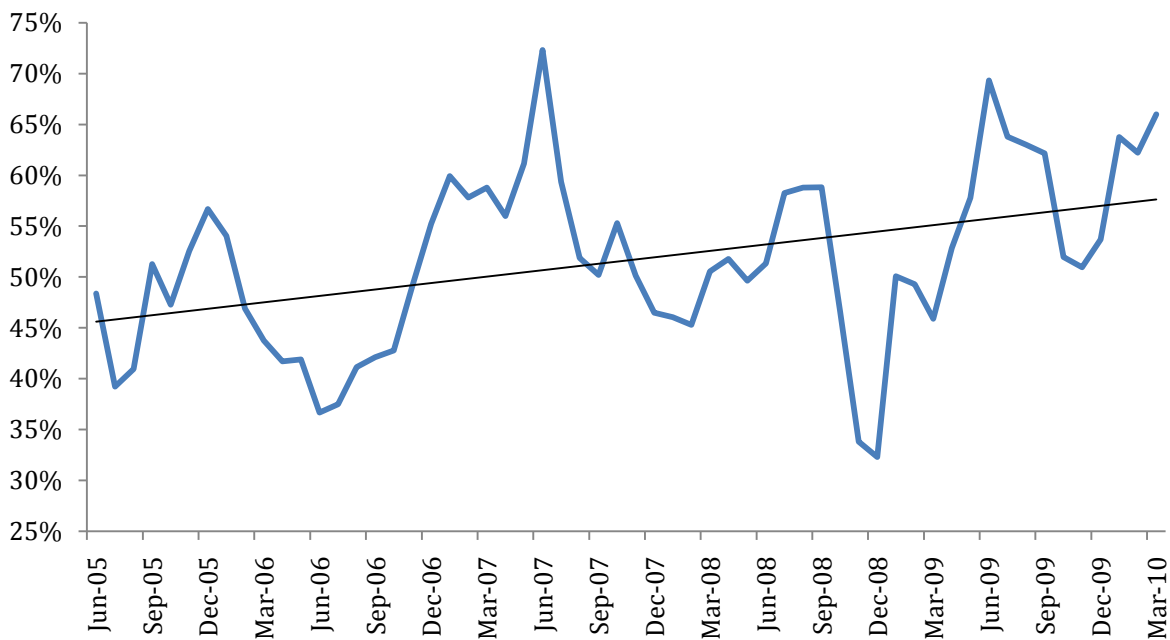
Source: U.S. Energy Information Administration

Exhibit 3.4.4 - Biodiesel Price to Soybean Oil Price



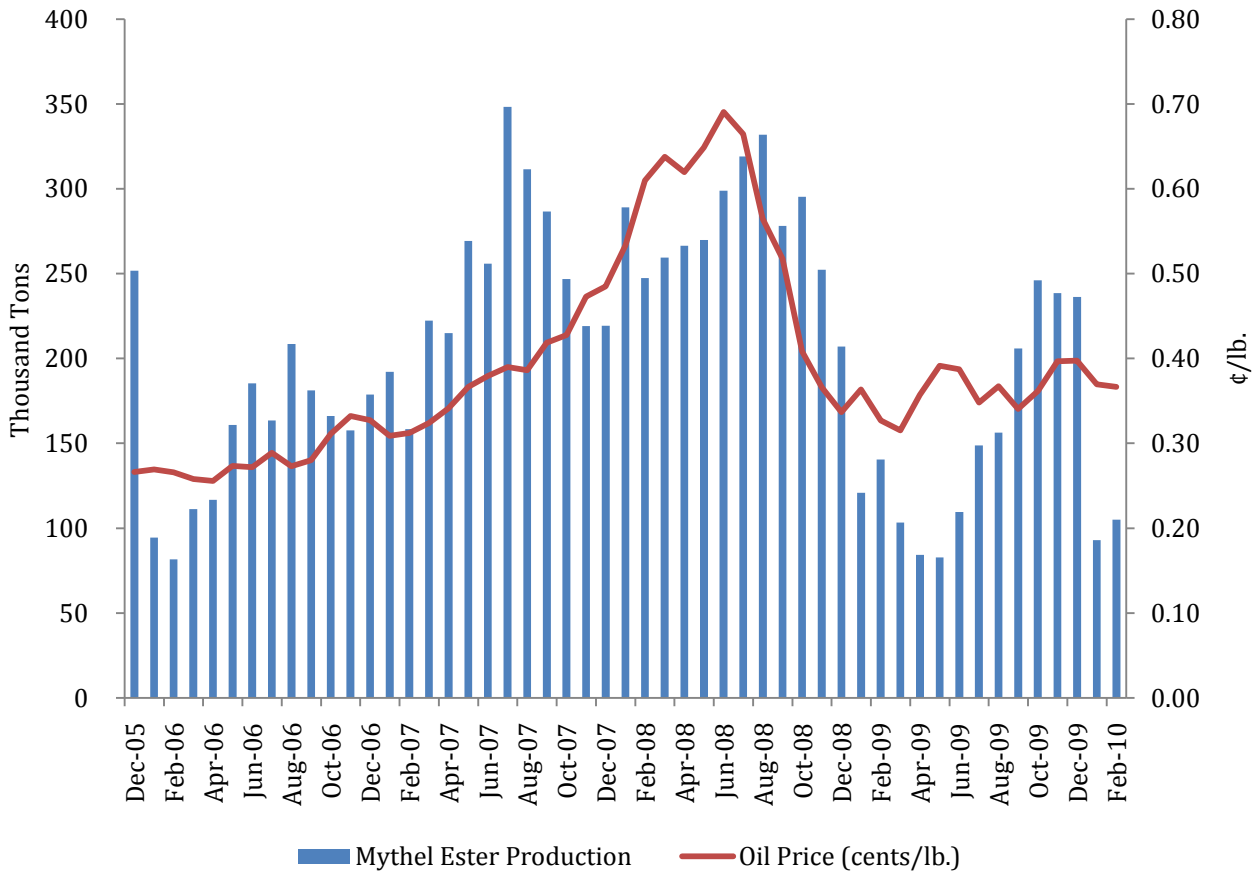
Source: USDA

Exhibit 3.4.5 - Yellow Grease (Missouri River) as Percent of Central Illinois Crude Soybean Oil Price



Source: USDA

Exhibit 3.4.6 – Soybean Oil Price vs. Methyl Ester Production



Source: USDA

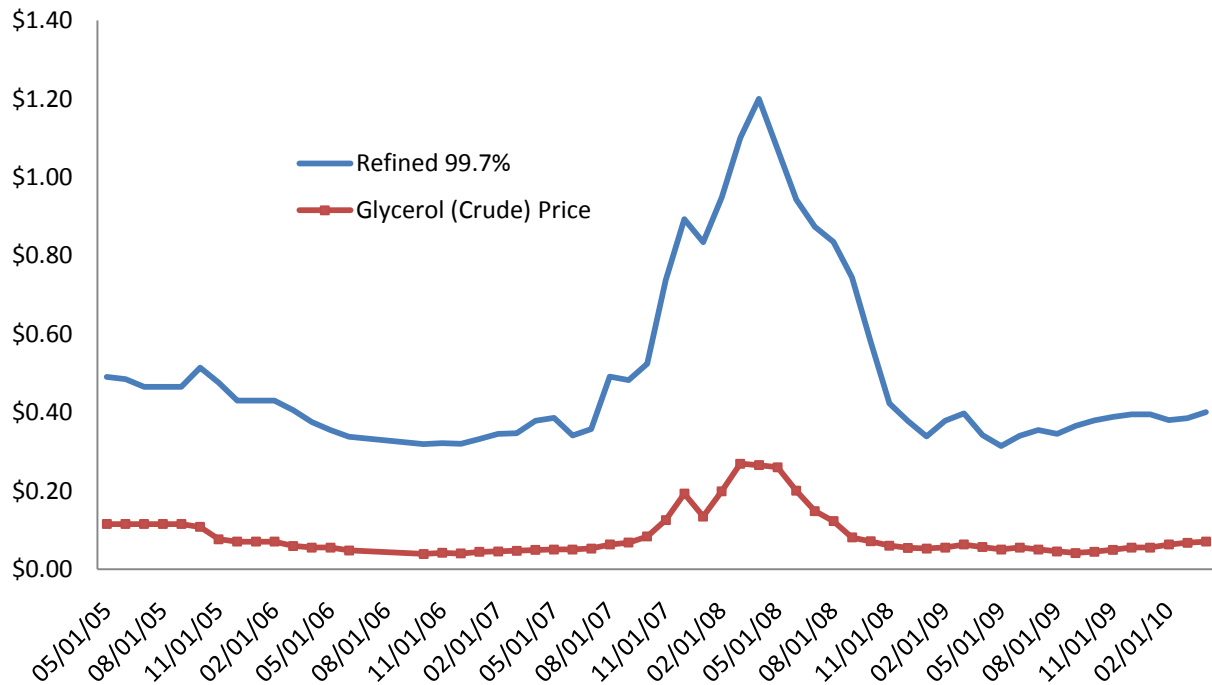
Exhibit 3.4.7 – Top Missouri Soybean Oil International Trading Partners

Rank	Partner	2004 Value #Lbs	2005 Value #Lbs	2006 Value #Lbs	2007 Value #Lbs	2008 Value #Lbs	2009 Value #Lbs	Average Value Average #Lbs
1	Mexico	\$0	\$0	\$412,000	\$11,857,000	\$31,613,000	\$40,309,000	\$14,032,000
Amount		0	0	1,328,175	22,788,776	105,376,667	109,475,828	39,828,241
2	Guatemala	\$2,710,000	\$4,695,000	\$0	\$0	\$0	\$0	\$1,234,000
Amount		11,777,488	20,055,532	0	0	0	0	5,305,503
3	Canada	\$3,000	\$145,000	\$29,000	\$234,000	\$4,579,000	\$77,000	\$844,000
Amount		13,038	619,393	93,488	449,741	15,263,333	209,125	2,774,686
4	Malaysia	\$0	\$51,000	\$23,000	\$0	\$0	\$18,000	\$15,000
Amount		0	217,856	74,146	0	0	48,886	56,815
5	Bahamas, The	\$0	\$0	\$0	\$0	\$63,000	\$0	\$11,000
Amount		0	0	0	0	210,000	0	35,000
6	India	\$0	\$58,000	\$0	\$0	\$0	\$0	\$10,000
Amount		0	247,757	0	0	0	0	41,293
7	Philippines	\$0	\$0	\$5,000	\$0	\$0	\$0	\$1,000
Amount		0	0	16,119	0	0	0	2,686
8	China	\$0	\$0	\$6,000	\$0	\$0	\$0	\$1,000
Amount		0	0	19,342	0	0	0	3,224
9	Singapore	\$0	\$0	\$0	\$0	\$6,000	\$0	\$1,000
Amount		0	0	0	0	20,000	0	3,333

Source: FAS, USDA

3.5 Glycerol

Exhibit 3.5.1 – Crude and Refined Glycerol Price (Cents/lb.)



Source: The Jacobson

Exhibit 3.5.2 – Spread between Crude Prices and Refined Glycerol Prices

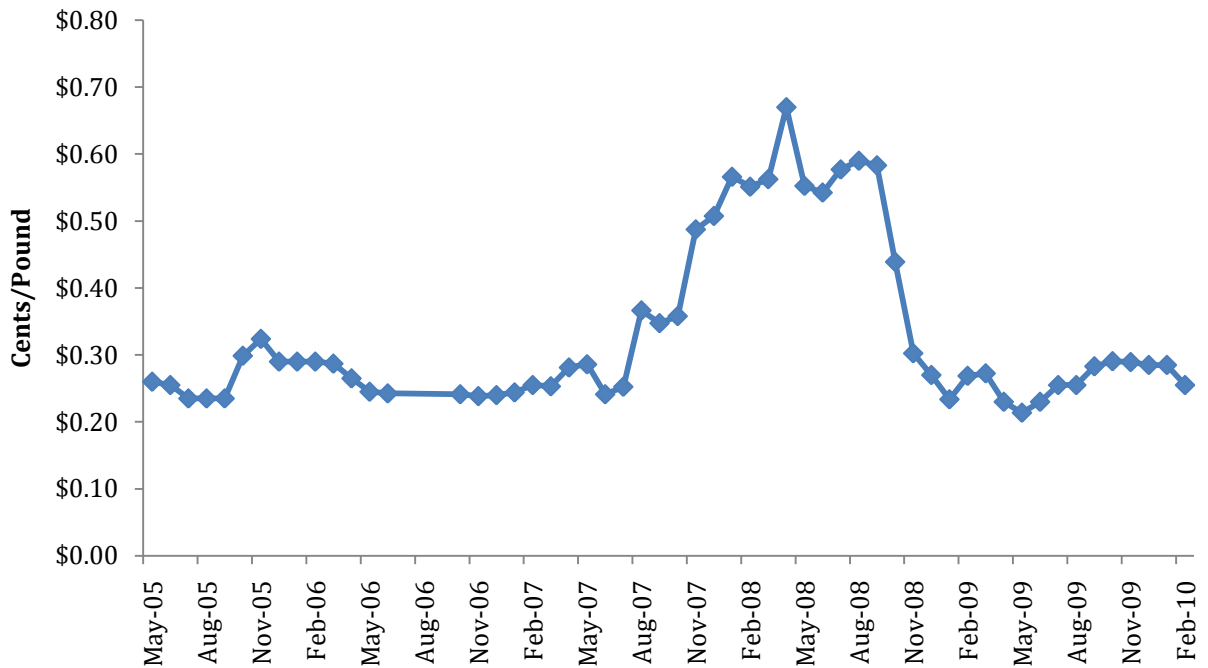
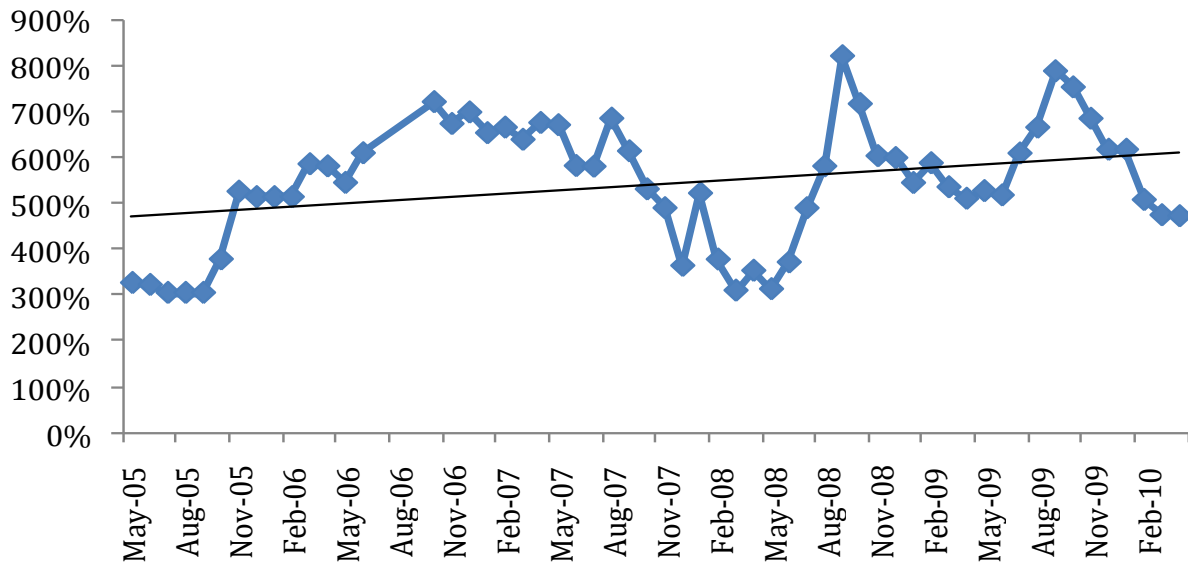
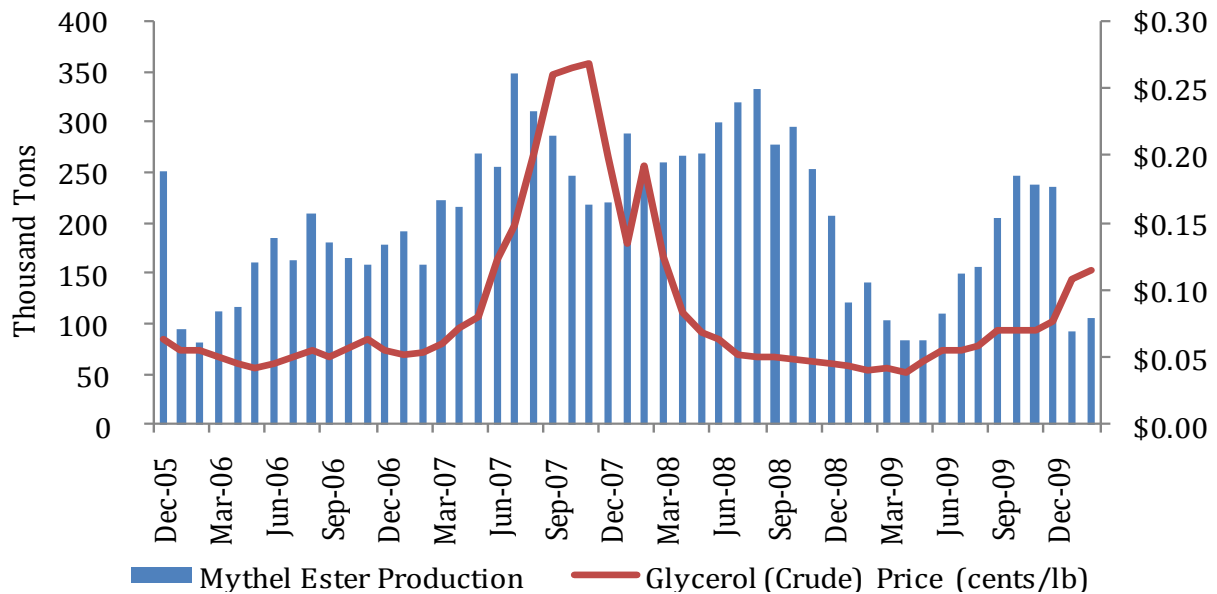


Exhibit 3.5.3 – Crude Glycerol Price as a Percentage of Refined Glycerol Price



Source: The Jacobson

Exhibit 3.5.4 – Glycerol Price vs. Methyl Ester Production



Source: The Jacobson, U.S. Department of Energy

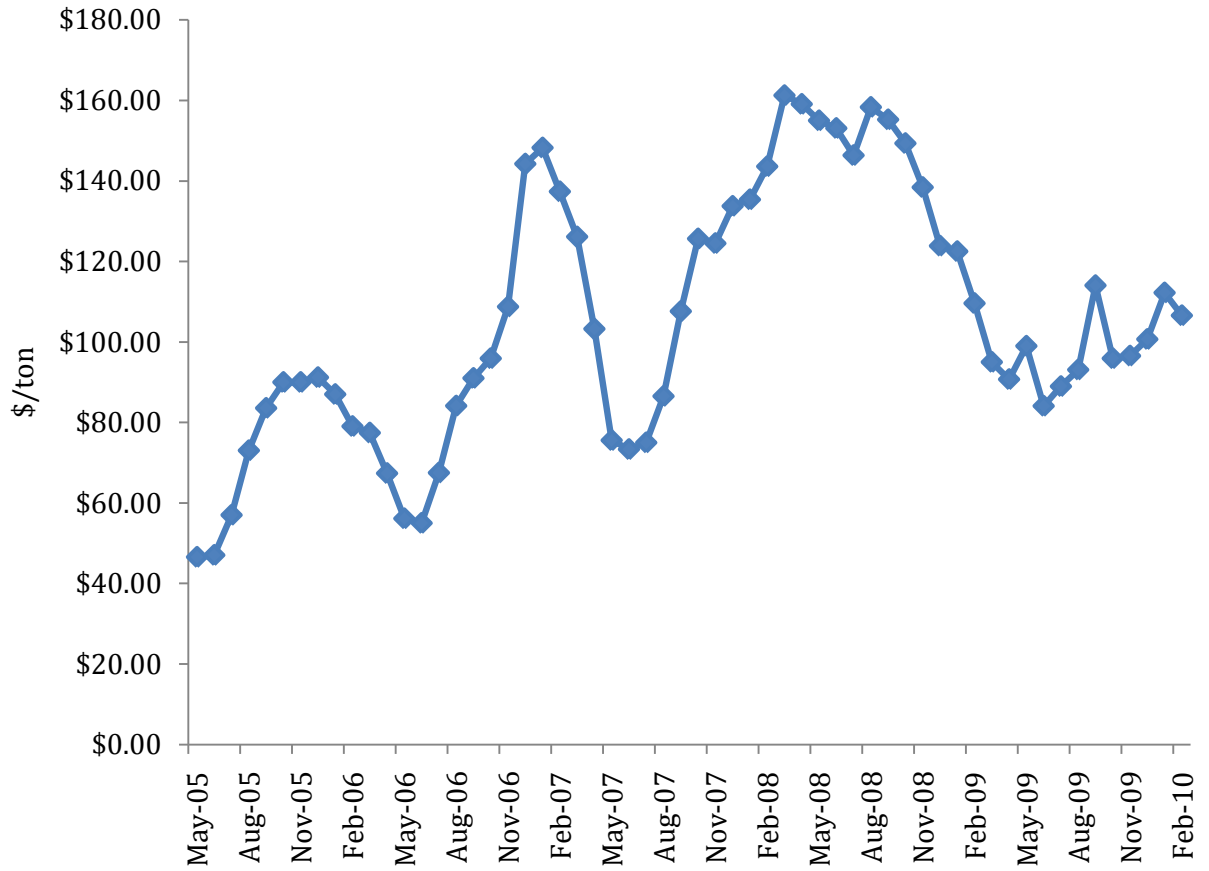
3.6 Soybean Hulls

Exhibit 3.6.1 – Soybean Hulls Produced at Missouri Mills (tons)

Month and Year	Soybean Hulls
December-07	7,917
January-08	8,066
February-08	7,297
March-08	7,680
April-08	7,296
May-08	7,959
June-08	7,355
July-08	4,930
August-08	4,312
September-08	7,541
October-08	9,300
November-08	10,145
December-08	9,995
January-09	9,538
February-09	8,694
March-09	8,960
April-09	9,802
May-09	9,184
June-09	9,005
July-09	8,754
August-09	7,779
September-09	3,751
October-09	10,782
November-09	13,828
December-09	14,534
January-10	13,908
February-10	12,586

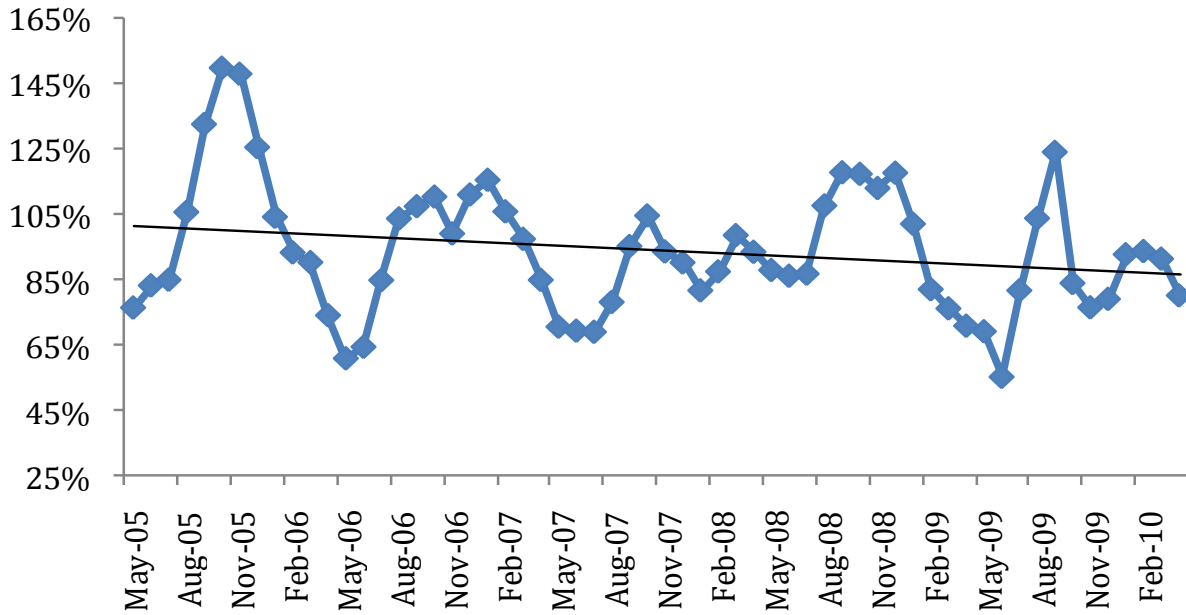
Source: U.S. Census

Exhibit 3.6.2 - Kansas City Soybean Hull Price



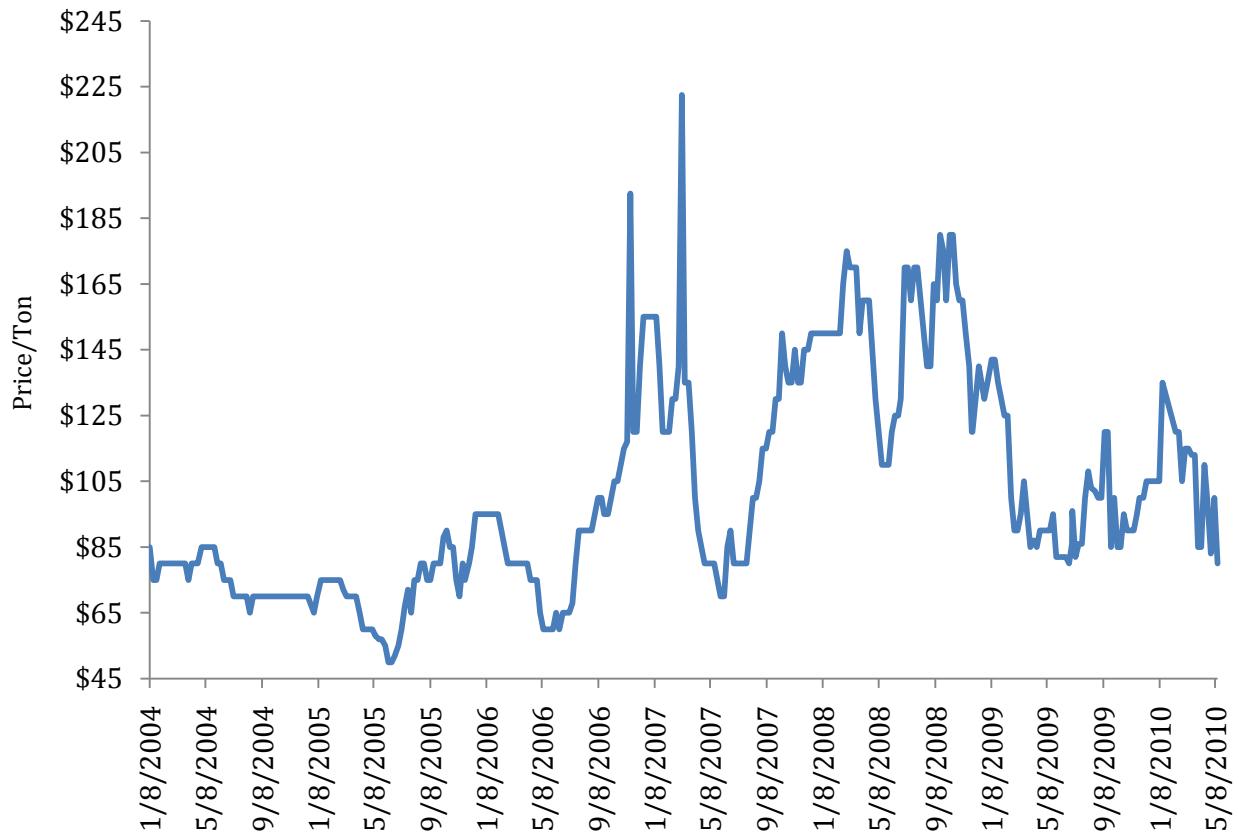
Source: AgEbb

Exhibit 3.6.3 – Kansas City Hull Price Relative to Central Illinois Hull Price



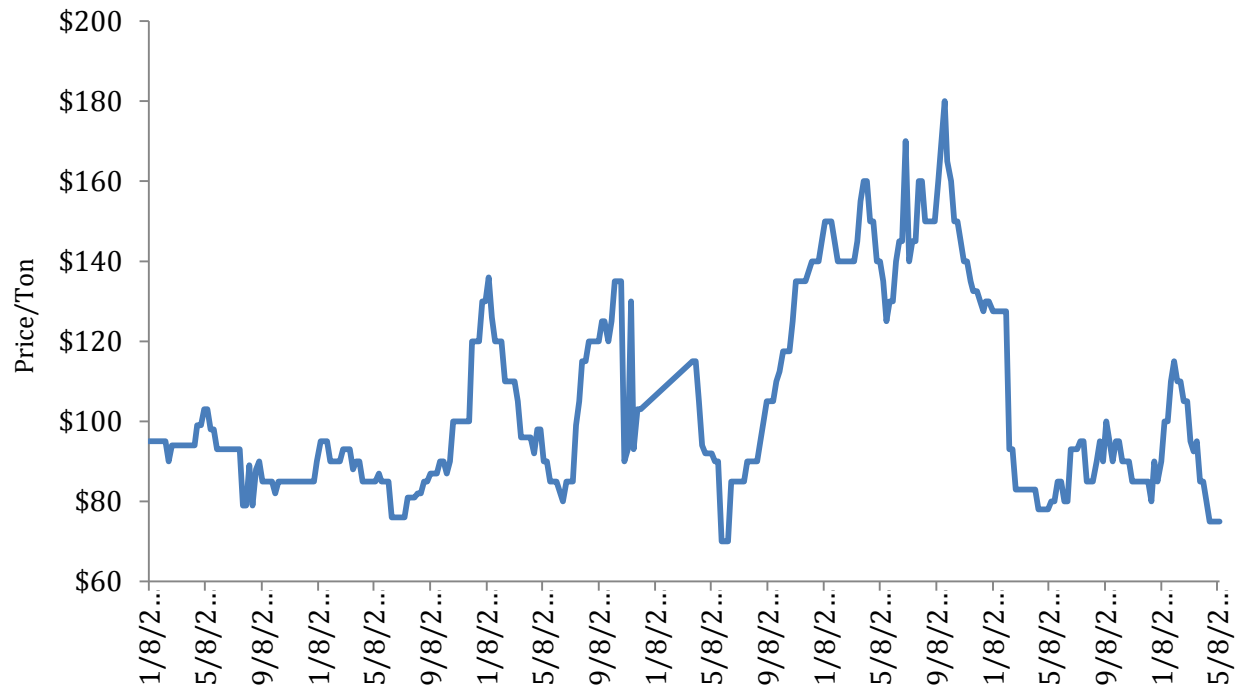
Source: USDA and AgEbb

Exhibit 3.6.4 – Soy Hull Prices, Mexico, Mo., ADM



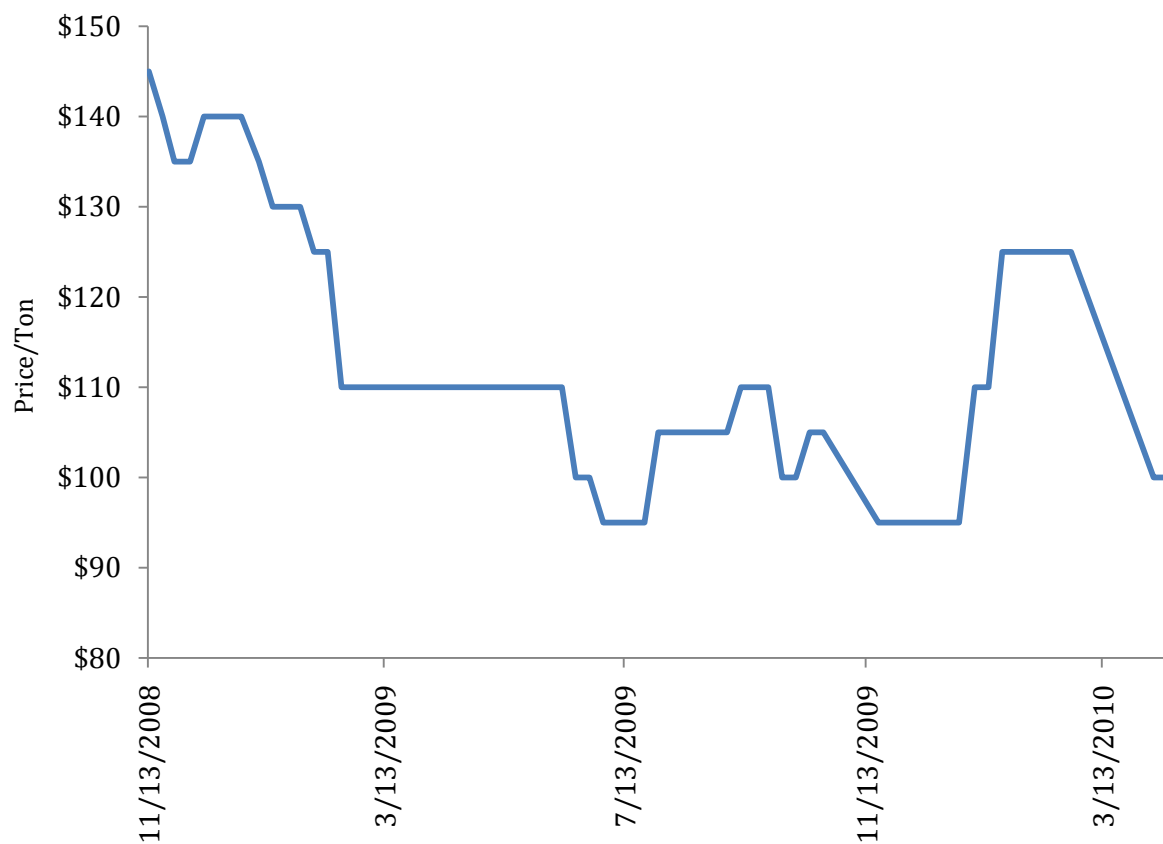
Source: AgEbb

Exhibit 3.6.5 – Pelleted Soy Hull Prices, Cyber Ag



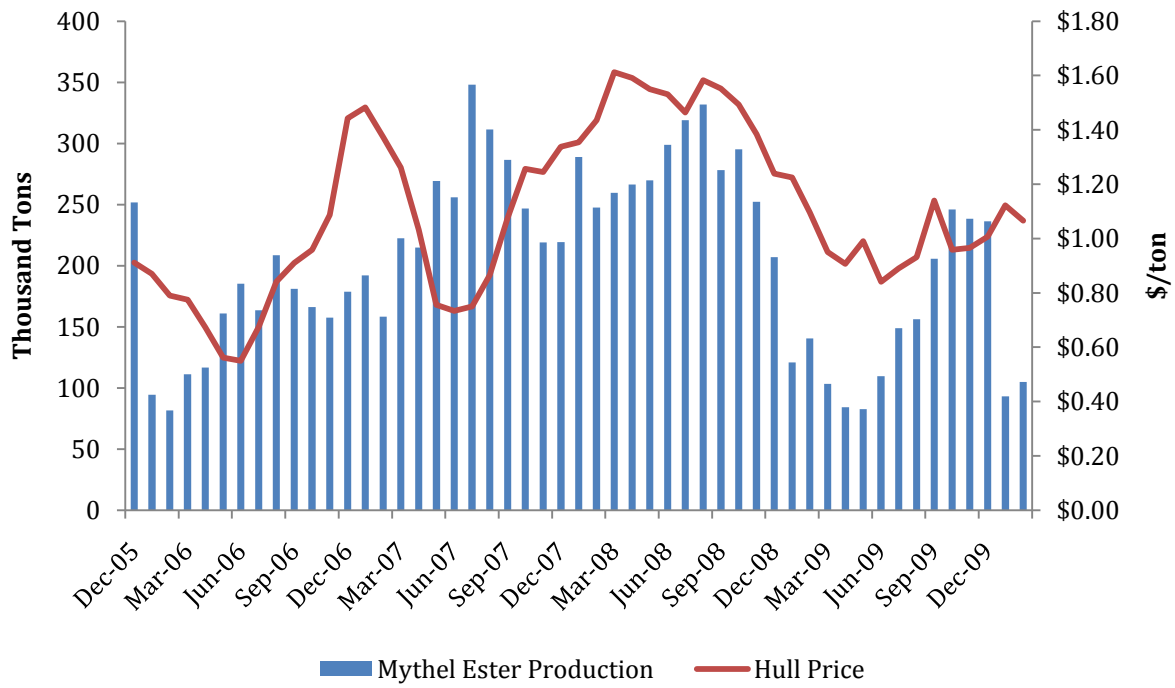
Source: AgEbb

Exhibit 3.6.6 – Pelleted Soy Hull Prices, High Plains



Source: AgEbb

Exhibit 3.6.7 – Hull Price vs. Methyl Ester Production

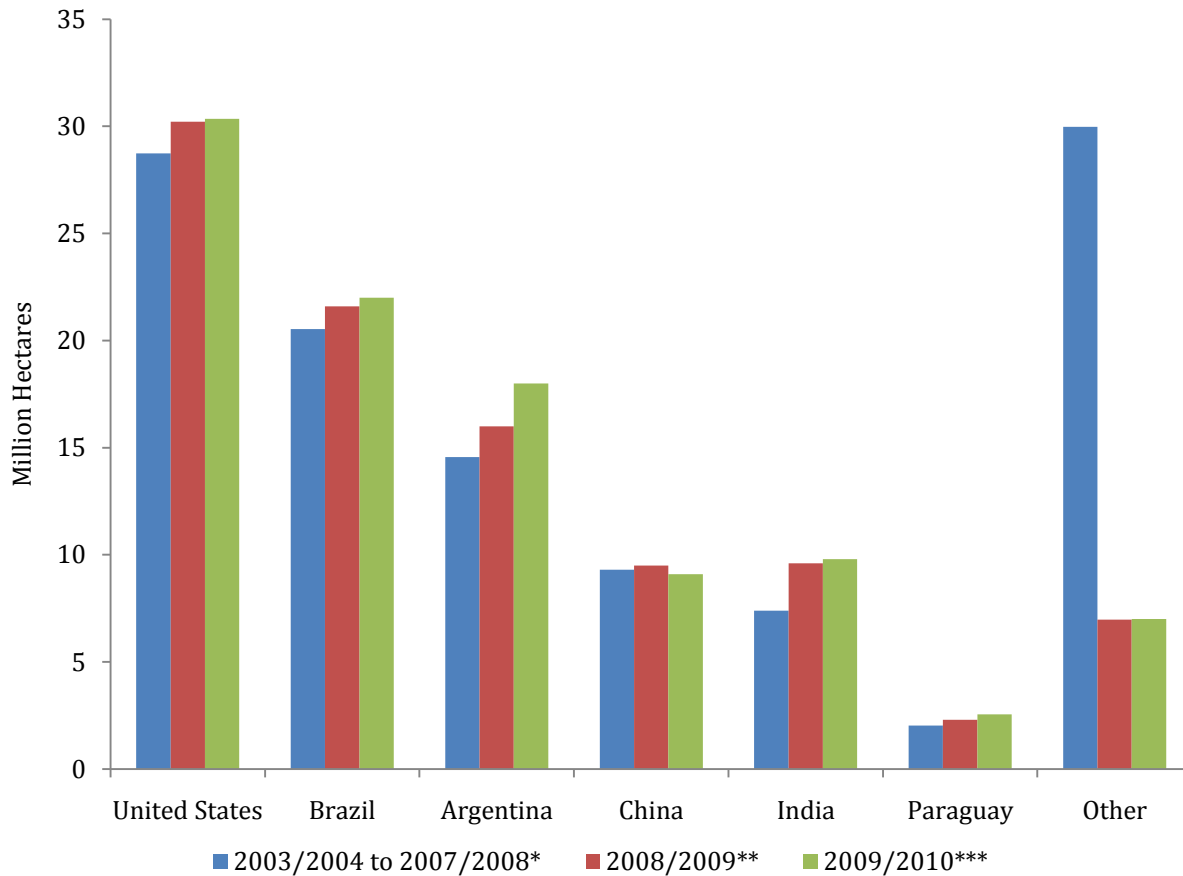


Source: AgEbb and The Jacobson

Chapter 4: International Soybean Production and Trade

4.1 Worldwide Soybean Production

Exhibit 4.1.1 – Worldwide Area Dedicated to Soybean Production



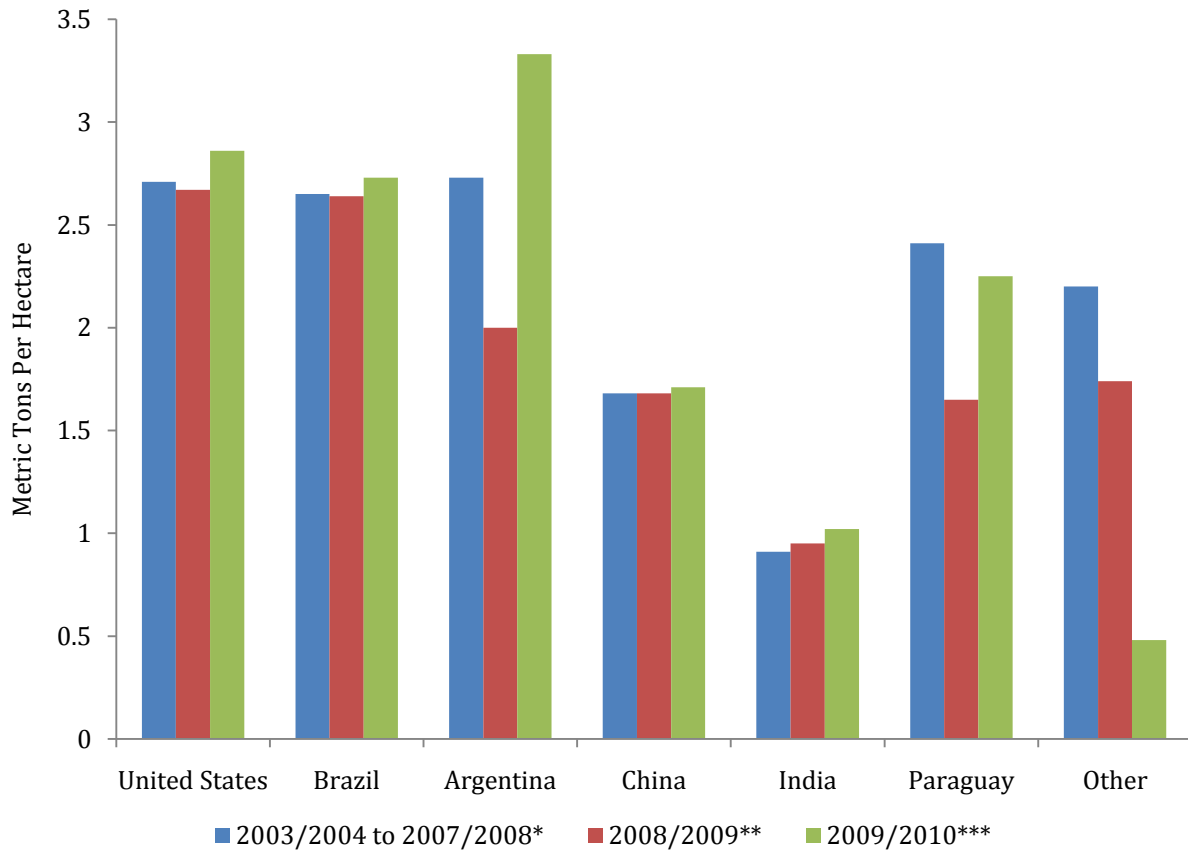
Source: SoyaTech

* Denotes annual averages.

** Denotes preliminary data.

*** Denotes forecasts.

Exhibit 4.1.2 – Worldwide Soybean Yields



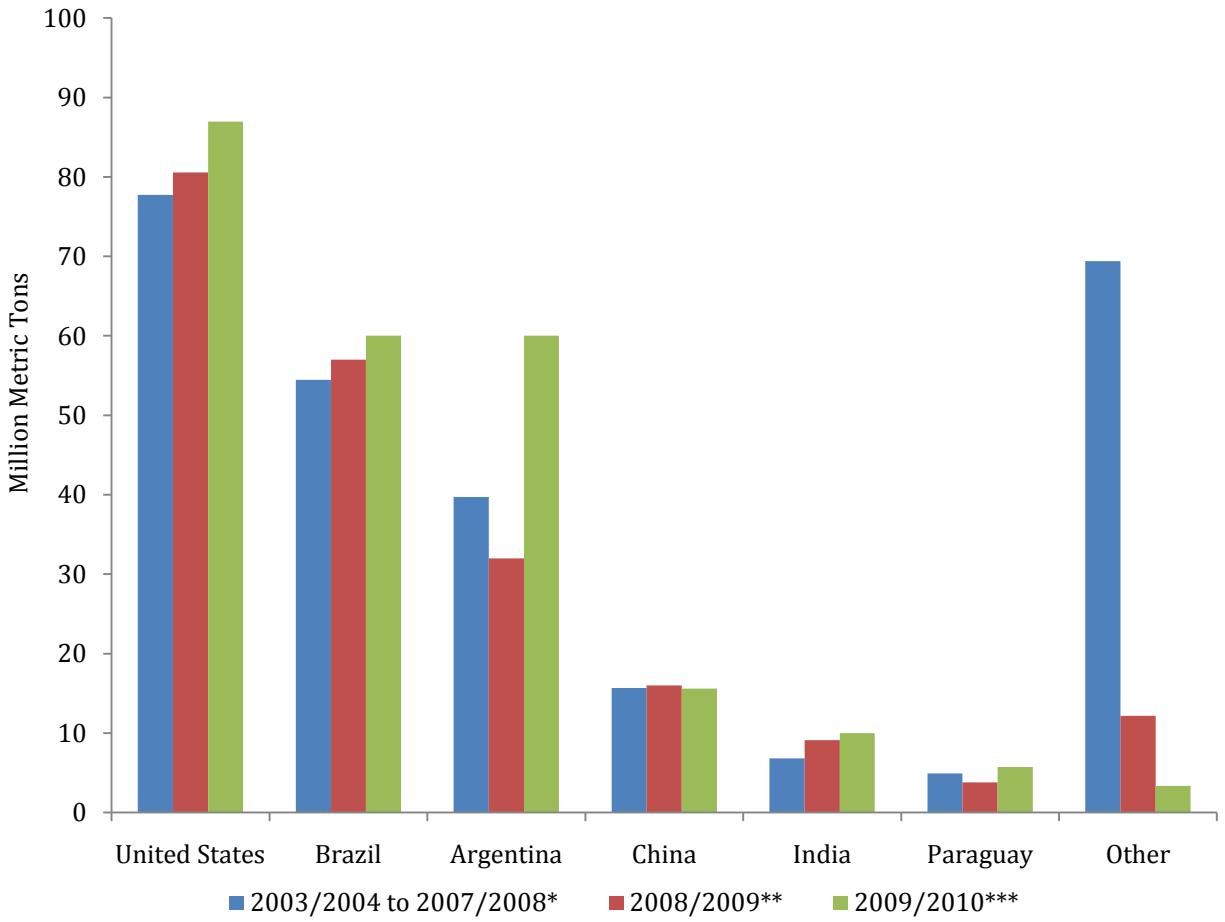
Source: SoyaTech

* Denotes annual averages.

** Denotes preliminary data.

*** Denotes forecasts.

Exhibit 4.1.3 – Worldwide Soybean Production



Source: SoyaTech

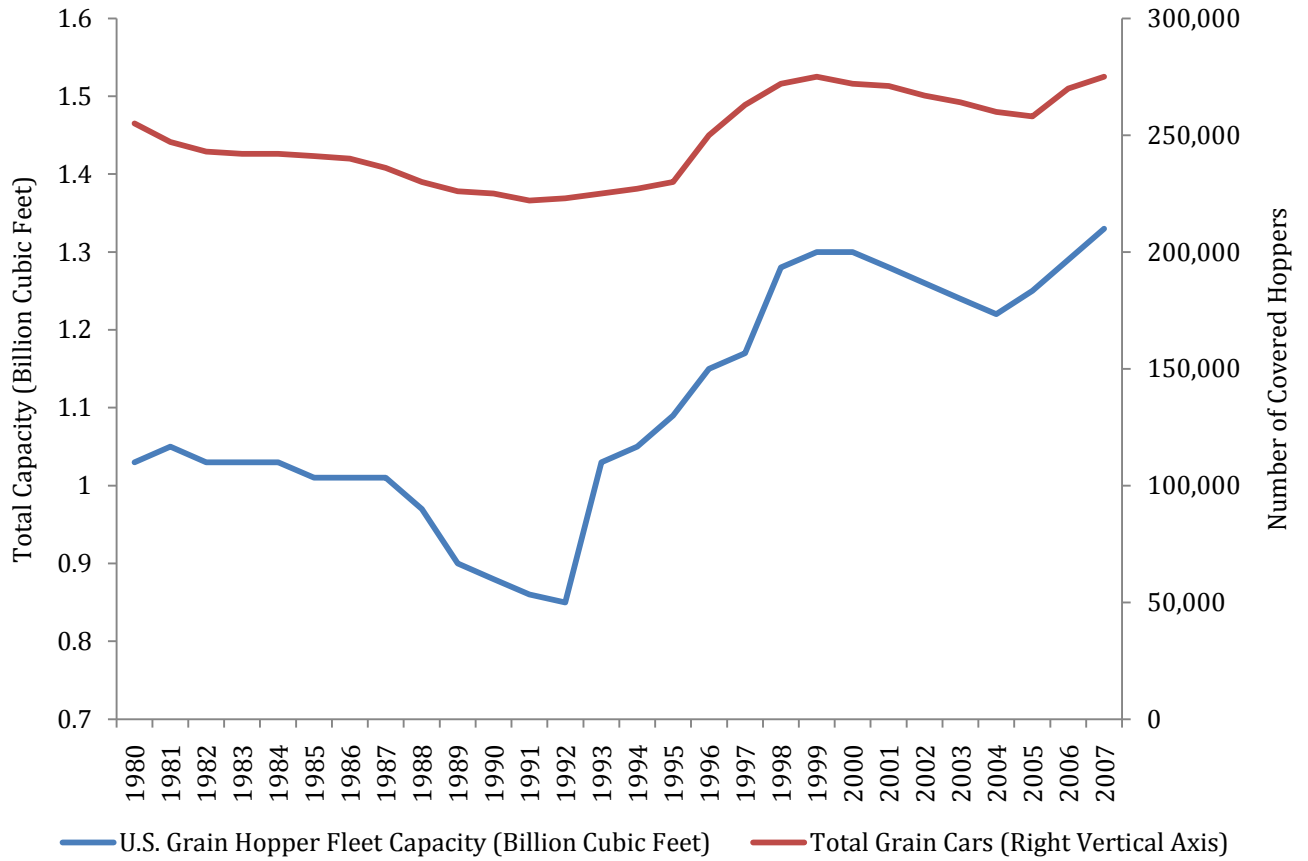
* Denotes annual averages.

** Denotes preliminary data.

*** Denotes forecasts.

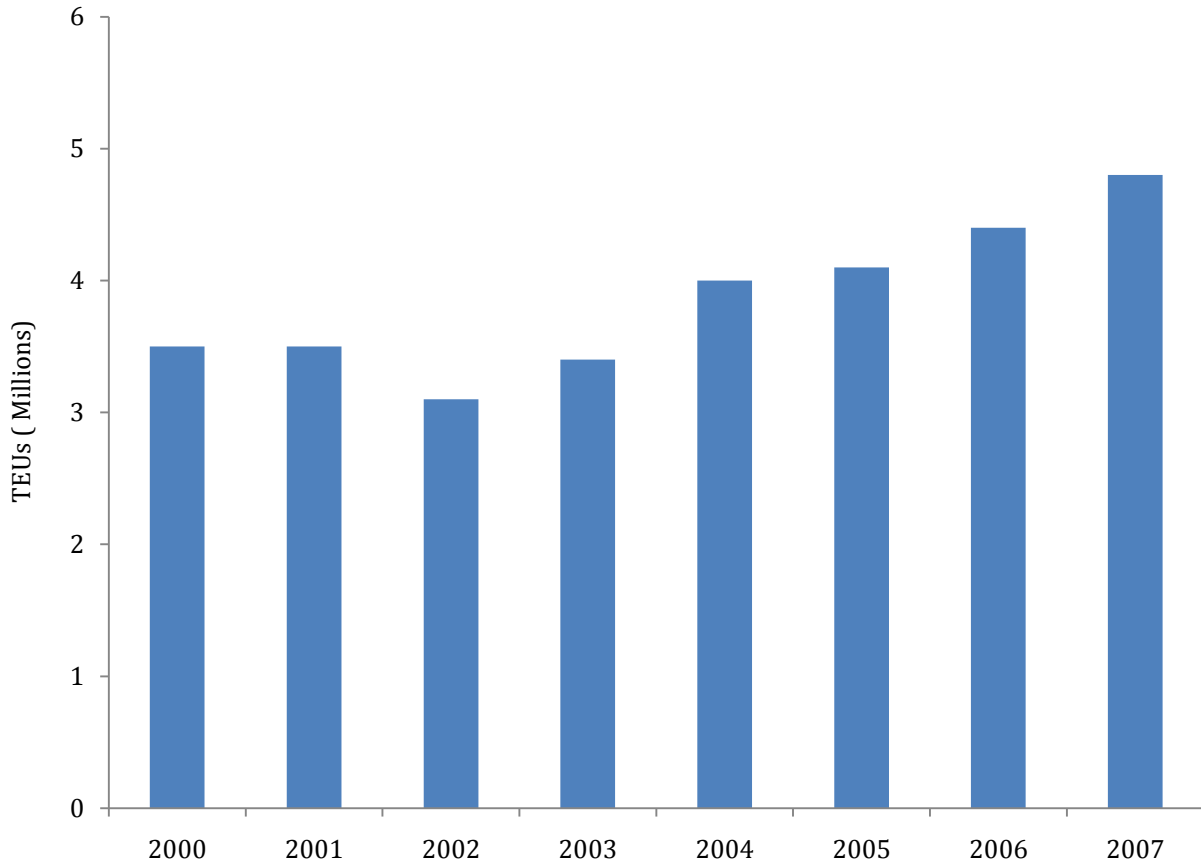
4.2 Agricultural Trade

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



Source: AAR, Rail Transportation of Grain

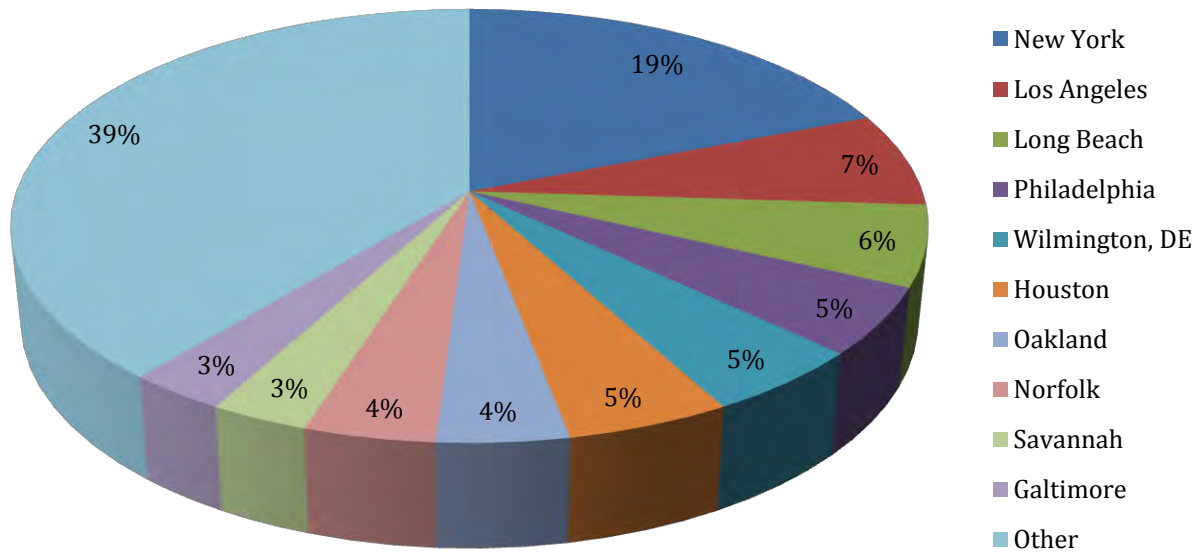
Exhibit 4.2.2 - Total Waterborne Agricultural Container Trade (Imports and Exports)



Source: Port Import Export Reporting Service (PIERS)

* TEU is a 20-foot equivalent container.

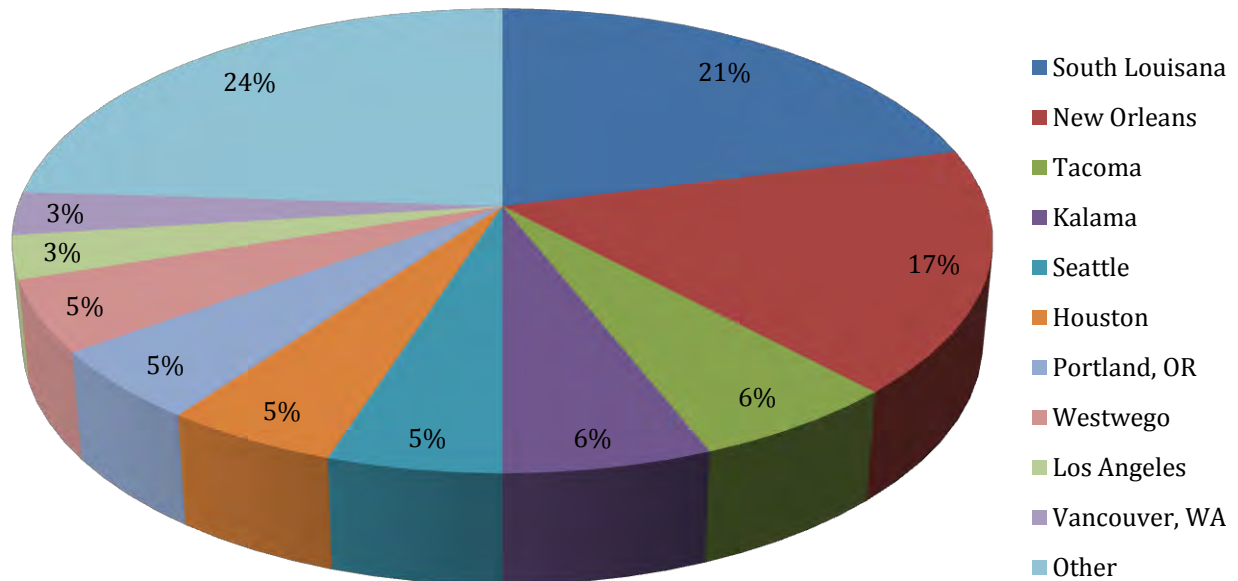
Exhibit 4.2.3 – Top 10 U.S. Ports Moving Agricultural Imports, 2007



Source: Port Import Export Reporting Service (PIERS)

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

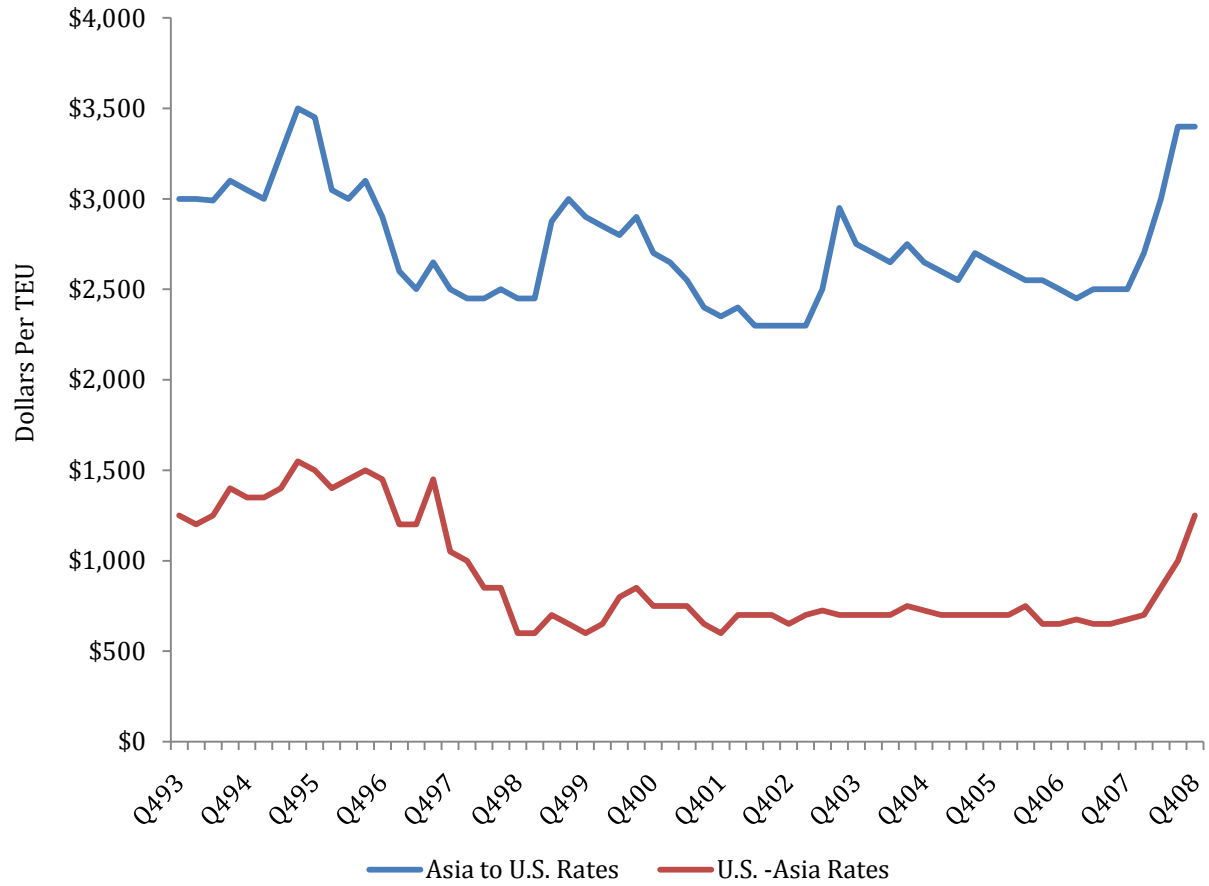
Exhibit 4.2.4 – Top 10 U.S. Ports Moving Agricultural Exports, 2007



Source: Port Import Export Reporting Service (PIERS)

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

Exhibit 4.2.5 – Container Rates for Trans-Pacific Trade Lanes



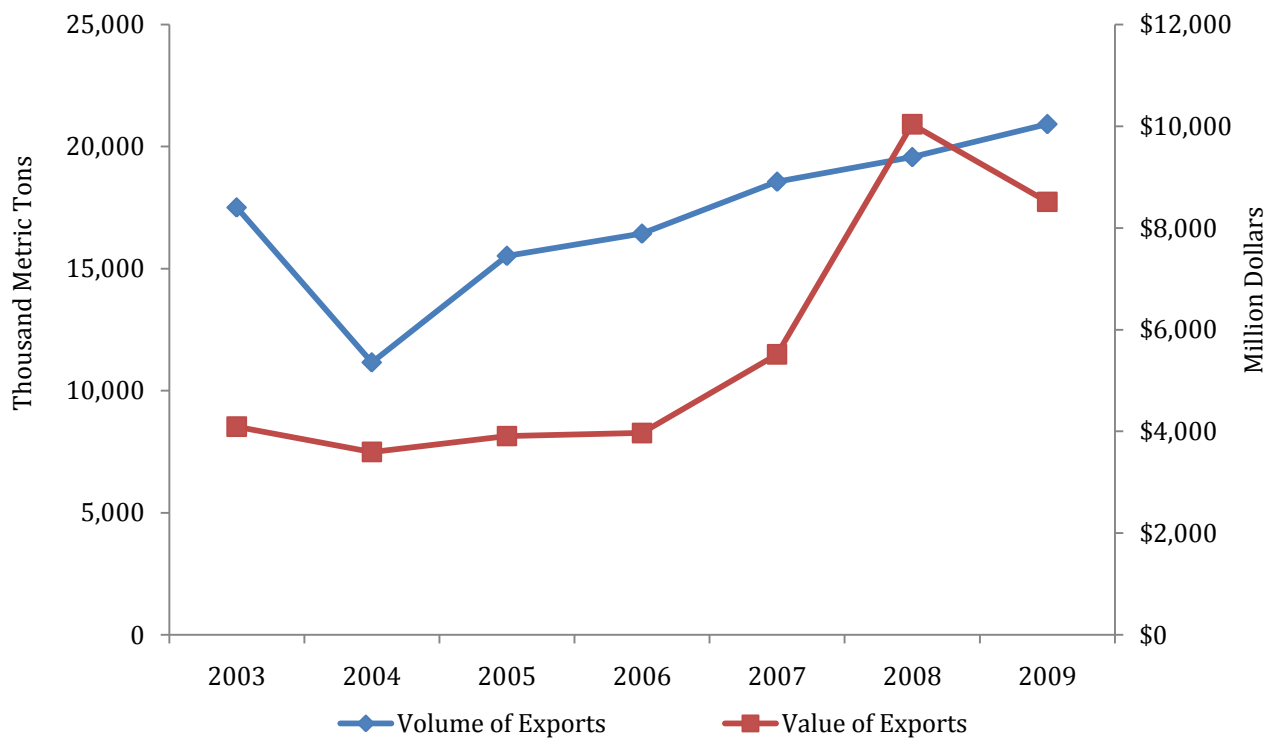
Source: Containerization International

Exhibit 4.2.6 – U.S. Intermodal Facilities, 2002



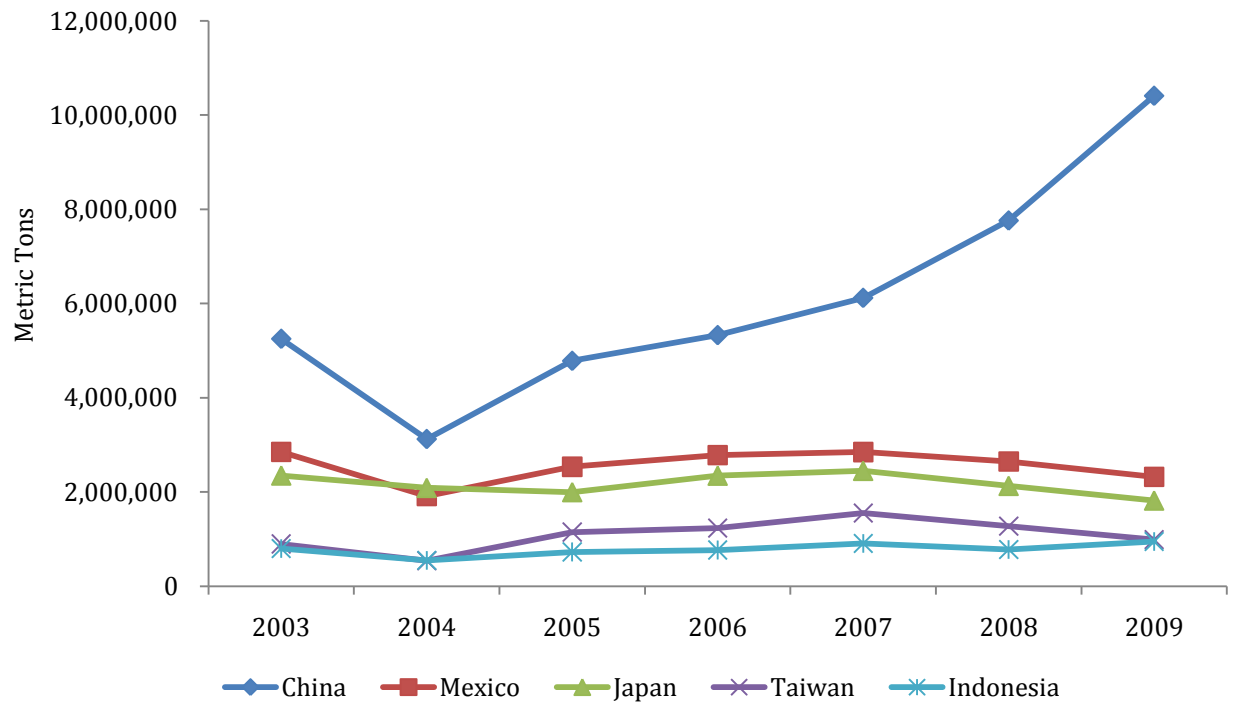
Source: U.S. Bureau of Transportation Statistics

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



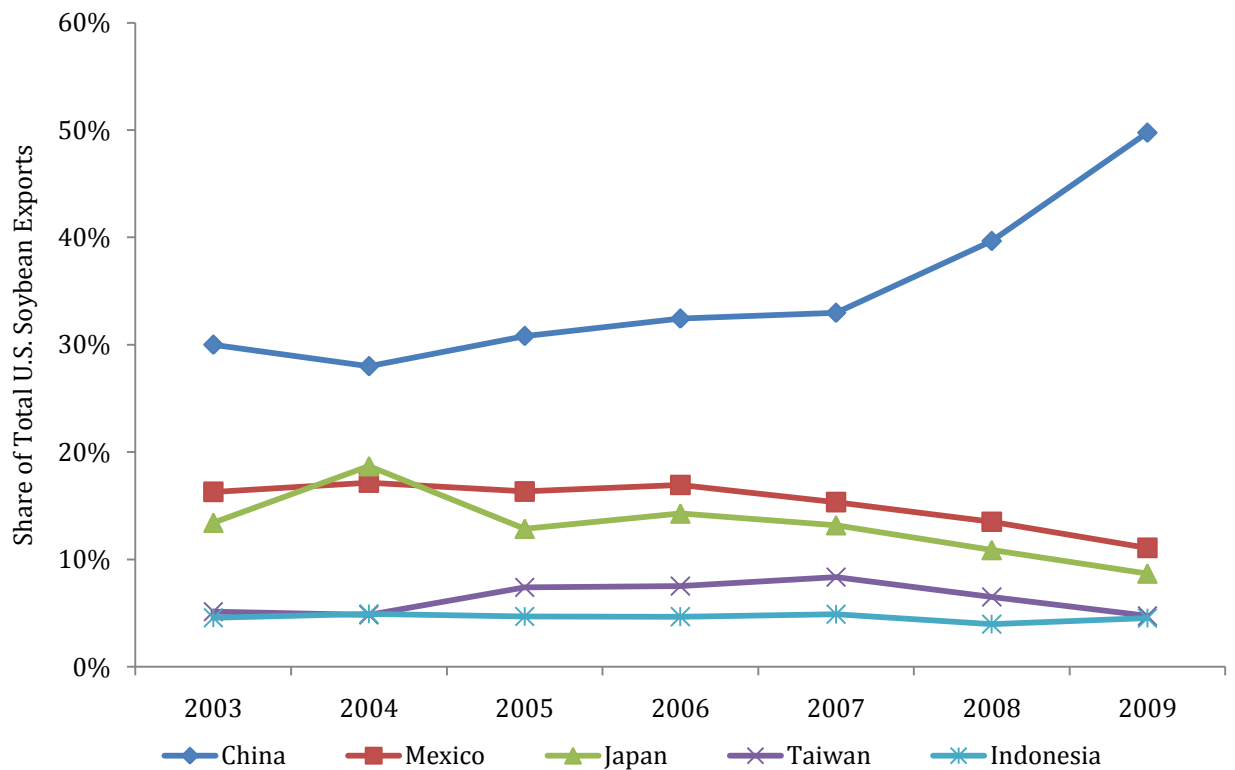
Source: SoyaTech

Exhibit 4.2.8 – Volume of U.S. Soybean Exports to Top Receiving Markets



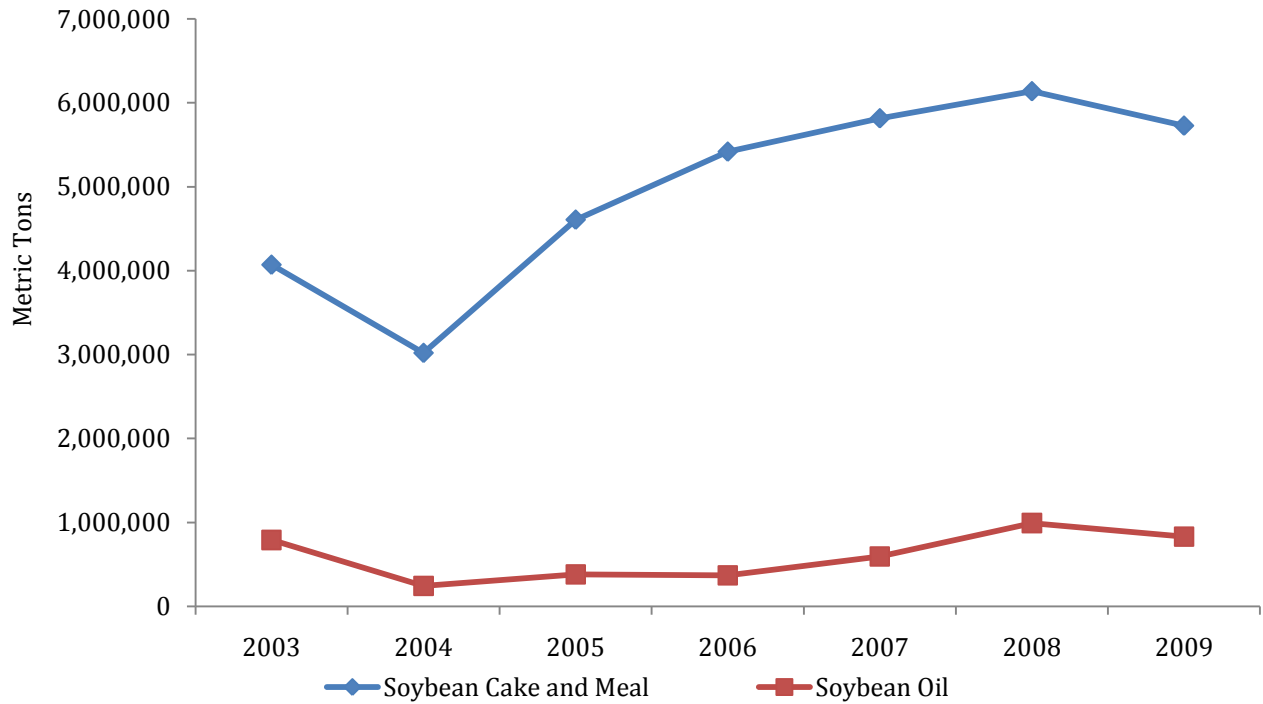
Source: SoyaTech

Exhibit 4.2.9 – Share of Total U.S. Soybean Exports Directed Toward Top Five Markets That Import U.S. Soybeans



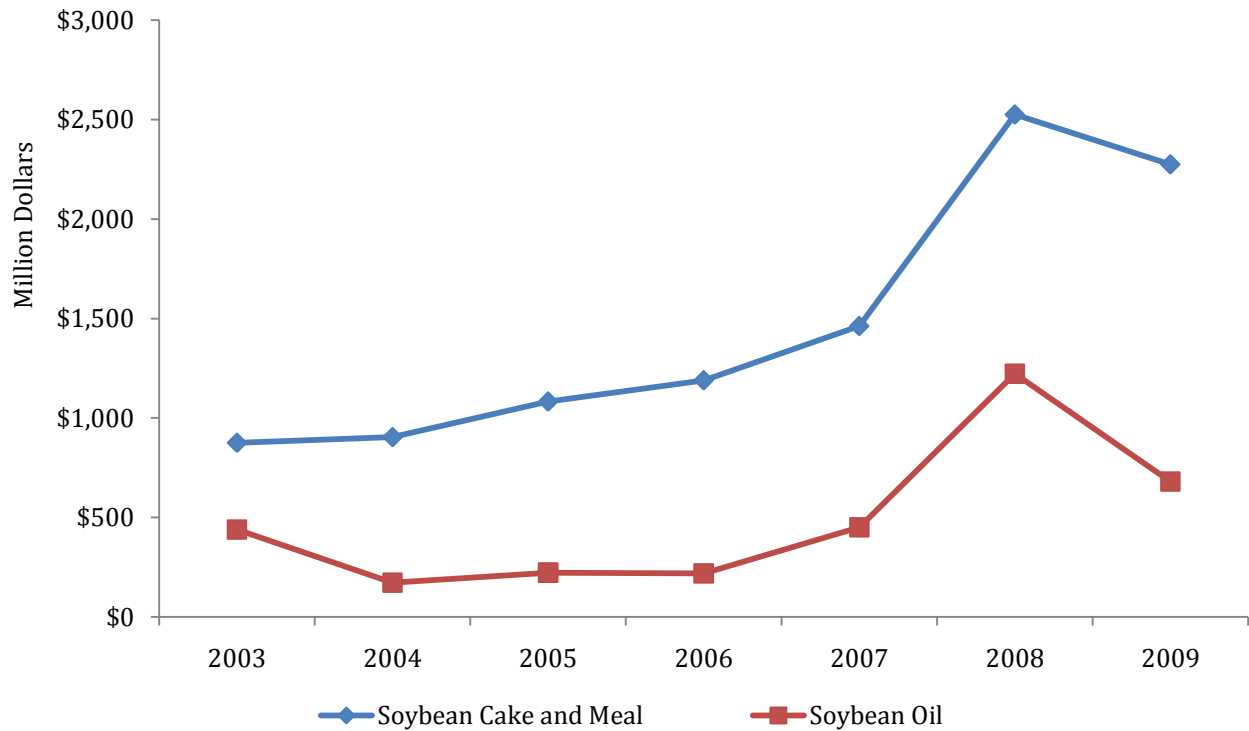
Source: SoyaTech

Exhibit 4.2.10 – Volume of U.S. Soybean Cake, Meal and Oil Exports



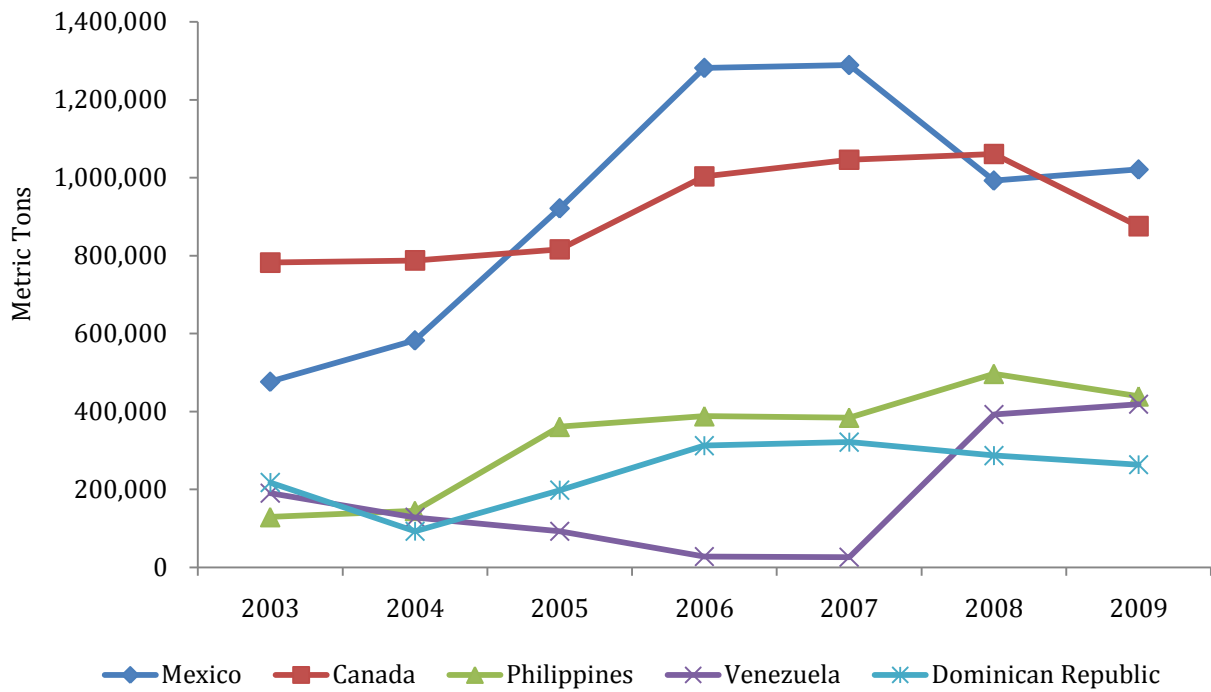
Source: SoyaTech

Exhibit 4.2.11 – Value of U.S. Soybean Cake, Meal and Oil Exports



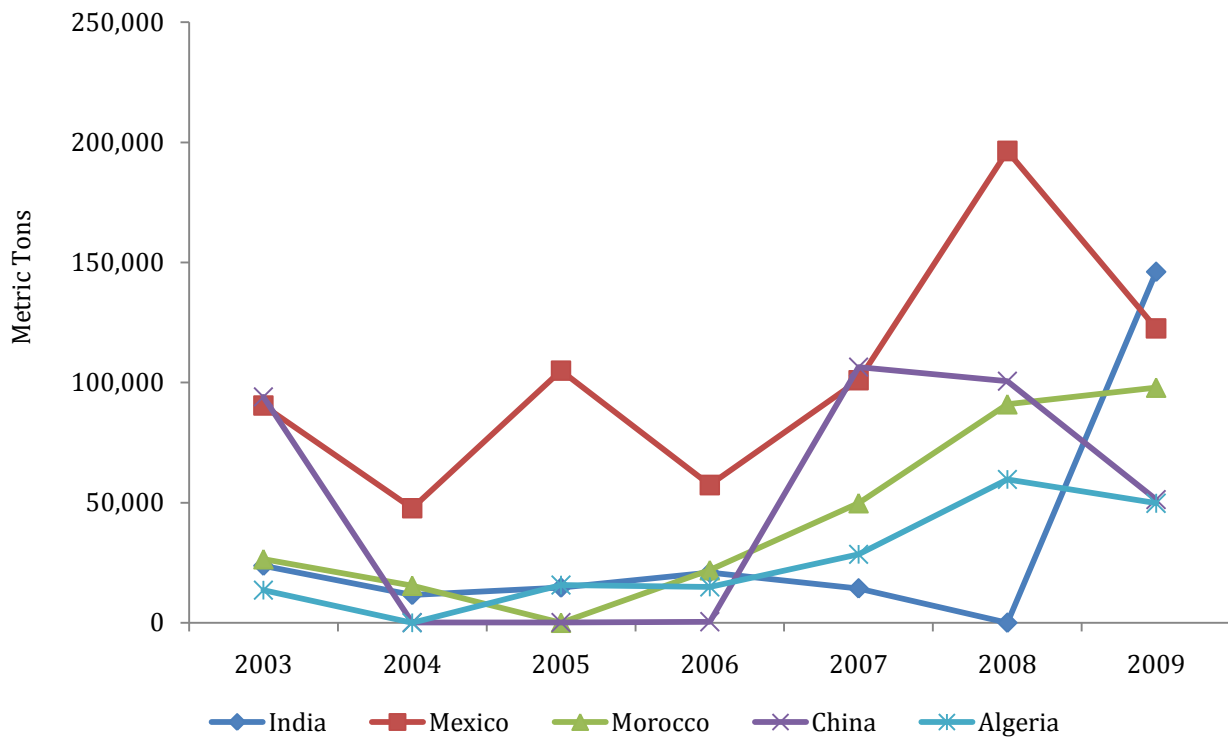
Source: SoyaTech

Exhibit 4.2.12 – Volume of U.S. Soybean Cake and Meal Exports to Top Receiving Markets



Source: SoyaTech

Exhibit 4.2.13 – Volume of U.S. Soybean Oil Exports to Top Receiving Markets



Source: SoyaTech