

USDA November 2011 WASDE Report - Soybean Market Impacts

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Summary

The November 9th USDA reports projected a marginal decrease in 2011 U.S. soybean yields and production, rationing of U.S. soybean domestic and export usage, near record tight ending stocks, and record high soybean prices. Projected U.S. soybean supply-demand balances show evidence of strong export competition from South America in the MY 2011/12. But they also indicate a co-dependence of market prospects, with any weather threats to 2012 Brazilian, Argentine or U.S. soybean production impacting World soybean and broader oilseed markets.

2011 U.S. Soybean Production: In its November 9th Crop Production report, the USDA National Agricultural Statistical Service projected U.S. 2011 soybean yields to be 41.3 bushels per acre yield, the lowest yield level since 39.7 bushels in 2008. Soybean production was projected to be 3.046 billion bushels (bb), 283 and 313 million bushels (mb) less than in 2009 and 2010, respectively.

U.S. Soybean Supply-Demand Balances: In the November World Agricultural Supply and Demand Estimates (WASDE) report, marginally lower 2011 U.S. soybean production was more than offset by reduced export prospects for the 2011/12 marketing year. Exports of U.S. soybeans were projected to be 1.325 bb, down 12% from a record high of 1.501 bb in MY 2010/11 and 1.499 bb in MY 2009/10. Domestic crush of 1.635 bb in MY 2011/12 is projected to be down 0.8% from the previous year. United States soybean ending stocks for MY 2011/12 are projected to be 30 mb higher this month, up to 195 bb. Ending stocks-to-use for the U.S. in MY 2011/12 are projected to be 6.3% - above the historic low of 4.0% in MY 2003/04, but still low and vulnerable to unexpected increases in exports or domestic crush usage for the remainder of the 2011/12 marketing year.

U.S. Soybean Prices: The USDA projected that the average farm price for U.S. soybeans in MY 2011/12 would be record high, in the range of \$11.60 to \$13.30 per bushel, compared to \$11.30 in MY 2010/11, and \$9.59 to \$10.10 during the 2007/08 through 2009/10 marketing years.

World Soybean Supply-Demand Balances: Consistent growth in World soybean use combined with level or declining World soybean production has led to a projected year-to-year decline in World soybean ending stocks in MY 2011/12. Projected MY 2011/12 World soybean ending stocks of 63.6 mmt (24.3%) are down from 68.4 mmt (27.2% S/U) in MY 2010/11, but up from 59.4 mmt (24.9% S/U) in MY 2009/10.

Soybean Market Prospects: These reports point toward a continuation of tight supply-demand conditions and historically high soybean prices from fall 2011 through spring-summer 2012. There will likely be strong competitive pressure to at least maintain if not increase 2012 U.S. soybean and corn acreage in an attempt to rebuild or replenish U.S. supply-demand balances for both crops. Grain markets in 2012 will likely be extremely sensitive to any threats to U.S. or South American soybean and corn production, and also to U.S. and World wheat crops to a lesser degree. Record high soybean prices are having their intended impact, i.e., that of rationing limited supplies to highest value users to ensure that adequate U.S. and World soybean and oilseed supplies are available for the duration of the 2011/12 marketing year.

I. U.S. Soybean Market Situation and Outlook

- A. **Higher 2011 U.S. Soybean Production Prospects:** In its November Crop Production report, the USDA National Agricultural Statistical Service (NASS) lowered its projection of 2011 U.S. soybean production slightly (see Table 1).
- a. **U.S. 2011 Soybean Yields = 41.3 bu/acre:** USDA NASS projected 2011 U.S. soybean yields at 41.3 bu/acre, down from 41.5 bu in October, and below the previous two years. Soybean yield prospects in 2011 have been affected by the cumulative impact of a) difficult spring planting conditions in the eastern and northern Corn Belt, b) hot, dry July and August weather in parts of the central Corn Belt, and c) continuing drought in the southern and central Plains and the southeastern United States.
- i. Over the last 5 years, U.S. soybean yields have been 41.7 bu/ac in 2007, 39.7 bu/ac in 2008, 44.0 bu/ac in 2009, 43.5 bu/ac in 2010, and are now projected to be 41.3 bu/ac in 2011.
- ii. If the 2011 U.S. soybean yield projection of 41.3 bu/ac holds true, it will be the 6th highest U.S. soybean yield on record, with the highest being 44.0 bu/ac in 2009, followed by 2010 (43.5 bu), 2005 (43.1 bu), 2006 (42.9 bu), and 2004 (42.2 bu).

Commentary: During the 1970-1999 time period, U.S. soybean yields trended higher at rate of plus 0.43 bushels per acre annually, with a standard deviation of 2.58 bushels around the yield trend. However, since 2000 U.S. soybean yields are projected to have trended higher at a rate of 0.49 bushels per acre per year, with a standard deviation of 2.48. Taken together, the trend towards increasing yields for U.S. soybeans has been larger since 2000 than during the 1970-1999 time period, with statistical measures of yields varying around the trend by a slightly greater degree during the earlier period.

- b. **U.S. 2011 Soybean Production = 3.046 billion bushels:** USDA NASS projected 2011 U.S. soybean production to be 3.046 billion bushels (bb), down 14 million bu (mb) since October.
- i. Over the last 5 years, U.S. soybean production has been 2.677 bb in 2007, 2.967 bb in 2008, 3.359 bb in 2009, 3.329 bb in 2010, and is now projected to be 3.046 bb in 2011.
1. If the 2011 U.S. soybean production projection of 3.046 bb holds true, this will be the sixth largest U.S. soybean crop in history, trailing 2009 (3.359 bb), 2010 (3.329 bb), 2006 (3.197 bb), 2004 (3.124 bb), and 2005 (3.068 bb).

Commentary: Since 2004, U.S. soybean production has on average trended higher at a rate of 18 mb per year, but because of the large amount of variability around the upward trend, it was not statistically significant. During the same period, U.S. total soybean use trended higher at a statistically significant (7.6% level of significance) rate of 41 mb per year. The disparity between these trends is a primary cause for the tightening that has occurred in U.S. soybean ending stocks-to-use since MY 2007/08.

Given the ongoing growth in U.S. soybean export demand – primarily from China – and the competing demands for U.S. cropland to produce feedgrains, wheat and other crops, it seems likely that U.S. soybean supply-demand balances will remain historically tight for at least the next 1-2 years. Either a) a return to yearly trendline increases in U.S. soybean yields, b) a large increase

in U.S. soybean acreage in 2012, or c) a sizable reduction in U.S. soybean usage will be needed to rebuild U.S. soybean stocks in MY 2012/13 and later years.

B. **“New Crop” U.S. Soybean Supply-Demand for MY 2011/12:** In response to a small decrease in projected 2011 U.S. soybean production and declining U.S. soybean export prospects, the USDA increased projected ending stocks, and lowered its price estimates for MY 2011/12 in the November 9th World Supply and Demand Estimates (WASDE) report (**Table 1 & Figure 1**). There is some evidence of price rationing on a year-to-year basis in export usage.

a. **U.S. Soybean Total Supplies for MY 2011/12 = 3.325 bb:** With projected MY 2011/12 beginning stocks of 215 bb (up from 151 mb a year ago), 2011 U.S. production of 3.046 bb, and imports of 15 mb, U.S. soybean total supplies for MY 2011/12 are projected to be 3.275 bb (down 15 mb from October).

i. Projected U.S. soybean total supplies of 3.275 bb for MY 2011/12 are down from 3.495 bb in MY 2010/11 and from 3.512 bb in MY 2009/10, and are the lowest since 3.185 bb in MY 2008/09 and 3.261 bb in MY 2007/08 (**Table 1 & Figure 2**).

Commentary: The year-to-year increase in beginning stocks (up 64 mb) is less than the decline in projected 2011 U.S. soybean production (down 283 mb), causing the projected 220 mb decline in total supplies for MY 2011/12.

b. **U.S. Total Soybean Use Down for MY 2011/12 = 3.080 bb:** Strong competition from South American soybean exports leading to slower than expected U.S. soybean export activity to date caused the USDA to decrease projected U.S. soybean usage for the 2011/12 market year (**Table 1 & Figure 1**). Total soybean use for MY 2011/12 is projected to be 3.080 bb, down 50 mb from October, and down from 3.280 bb in MY 2010/11 and 3.361 bb in MY 2009/10.

Commentary: The U.S. soybean market is exhibiting inflexible, highly responsive price behavior. From MY 2009/10 to MY 2010/11, U.S. soybean use declined 2.4% while U.S. soybean prices increased 17.8%. Then again from MY 2010/11 to MY 2011/12, U.S. soybean use is projected to decline another 6.1% while U.S. soybean prices are projected to increase 11.5%. With U.S. soybean ending stocks-to-use at historically “tight” levels in recent years (i.e., ranging from 4.2% to 6.7% ending stocks-to-use since MY 2007/08), U.S. soybean prices are expected to be highly volatile and responsive to any weather threats or demand shocks through the spring and early summer of 2012.

i. Soybean crush of 1.635 bb for MY 2011/12 is down from 1.648 bb in MY 2010/11 and 1.752 bb in MY 2009/10. This marginal 0.6% projected decline from last year, and 6.6% decline from 2 years ago are indicators of both price rationing on the one hand and of a recovery in South American soybean production and exports since MY 2009/10 on the other. Domestic crush has trended lower since the highs of 1.808, 1.803, and 1.752 bb in MY 2006/07, MY 2007/08, and MY 2009/10, respectively (**Figure 1**).

ii. Soybean exports are projected to be 1.325 bb in MY 2011/12 – down 50 mb from October, and less than the record high of 1.501 bb in MY 2010/11 and the near record of 1.499 bb in MY 2009/10.

Exports have trended strongly higher from 940 mb in MY 2005/06 up to 1.499 bb and 1.501 bb in MY 2009/10 and MY 2010/11, respectively. The projected decline in MY 2011/12 to 1.325 bb in MY 2011/12 signals at least a temporary moderation in that trend (**Figure 1**).

Commentary: U.S. export prospects have diminished over the last two marketing years largely due to export competition from South America. Brazil soybean production was record large MY 2010/11 (75.5 mmt), and is projected to be 75.0 mmt (2nd largest on record) in MY 2011/12. Argentina soybean production in MY 2010/11 was the second largest crop on record (49 mmt) versus a record high 54.5 mmt in MY 2009/10, and is projected to be 52 mmt in MY 2011/12 (which would be the 2nd highest on record).

China imports of soybeans are projected to be 56.5 mmt in MY 2011/12, versus 52.34 in MY 2010/11 and 50.34 mmt in MY 2009/10. Chinese soybean and soybean product imports have helped to spur World soybean and soybean product market prices higher, and have directly led to increased South American soybean production (and also to higher U.S. soybean production in 2009-2010).

- C. **U.S. “New Crop” MY 2011/12 Ending Stocks (195 mb) & Ending Stocks-to-Use (6.3%)**: The USDA projects MY 2011/12 U.S. soybean ending stocks to be 195 mb, up 30 mb from October. This amount of MY 2011/12 ending stocks (195 mb) compares to 215 mb in MY 2010/11 and 151 mb in MY 2009/10 (**Table 1 & Figure 1**).

The MY 2011/12 supply-demand balance projection equals 6.3% ending stocks-to-use, up from 5.1% in October, and compares to 6.6% in MY 2010/11, and 4.5% in MY 2009/10 (**Table 1 & Figure 3**). Soybean ending stocks-to-use of 6.33% in MY 2011/12 would be the fifth tightest since MY 1973/74, being only slightly less than 6.40% S/U in MY 2002/03, but still larger than 5.50% in MY 1995/96, the historic low of 4.00% in MY 2003/04, 4.49% in MY 2009/10, and 4.53% in MY 2008/09.

Commentary: It is still possible that % ending stocks to use levels of 5.0% or less may occur in MY 2011/12 **if** either a) projected 2011 U.S. soybean production is reduced further in the USDA January 2012 final Crop Production report, or b) greater usage of soybean occurs in any of the major categories than is currently projected later in the marketing year.

Whereas uncertainty about estimates of U.S. soybean production typically are mostly resolved by the November or following January USDA Crop Production reports, questions about whether the rate of soybean usage will lead to reductions in ending stocks are “worked through” in the cash market throughout the remainder of the marketing year. If throughout the winter, spring and summer months soybean usage is on a more rapid pace than can be sustained to maintain a level of 4.5%-to-5.5% endings stocks-to-use for MY 2011/12, then it will likely be initially reflected in improved cash soybean basis bids, the pace of both U.S. domestic soybean crushings and soybean / soybean product exports, and in quarterly stocks reports for December 1st, 2011, and for March 1st, June 1st and finally on September 1st in 2012.

- D. **“New Crop” MY 2011/12 U.S. Soybean Prices = \$11.60-\$13.60 /bu.**: On a year-to-year basis, U.S. soybean prices have responded sharply higher in response to tightening of U.S. soybean ending stocks-to-use (**Table 1 & Figure 2**). The USDA projected MY 2011/12 U.S. average soybean prices to be record high in the range of **\$11.60 - \$13.60 per bushel**, down \$0.55 on each end of the range from October, but up from \$11.30 in MY 2010/11 and \$9.59 in MY 2009/10.

Inflexible Demand – Tight Stocks / High Prices: Record high prices in conjunction with historically tight U.S. soybean ending stocks-to-use projections (6.3%) support the idea that soybean supply-demand balances and associated prices are in an “inflexible box”. In other words, U.S. soybean markets are operating in supply-demand balance regions characterized by very inelastic, price responsive supply-demand interactions.

Commentary: Tight corn supplies and high corn prices have provided carryover support for wheat and soybean prices. Market arbitrage forces are likely to force new crop 2012 futures prices for corn and soybeans higher through the late winter/spring months in a competitive effort to convince U.S. farmers to plant adequate acreage of both crops. Market concerns about 2012 U.S. soybean plantings and production and uncertainty about 2012 South American soybean production are likely to provide continuing support for soybean markets for the remainder of 2011 through at least spring / early summer of 2012.

- E. **World Soybean Supply-Demand Trends:** Consistent growth in World soybean usage since MY 2008/09 has occurred in spite of intermittent periods of record high soybean prices from MY 2007/08 to projections for MY 2011/12 (**Figure 3**). In the November WASDE report, the USDA projected MY 2011/12 World soybean ending stocks to be 63.56 mmt (24.3% S/U), up 0.55 mmt from October. Projected MY 2011/12 World soybean ending stocks of 63.56 mmt are down from 68.37 mmt (27.2% S/U) in MY 2010/11, but up from 59.41 mmt (24.9% S/U) in MY 2009/10.
- Consistent growth in World soybean use combined with level or declining World soybean production has led to a projected year-to-year decline in World soybean ending stocks in MY 2011/12. World soybean usage has increased an average of 9.9 mmt (4.5%) annually since MY 2008/09. World soybean production has increased on annually by an average of 11.7 mmt (5.5%) over the same time period, but virtually all of that increase occurred by MY 2010/11 (from 212 up to 264 mmt in one year), with World soybean production level to declining over the last three marketing years. In MY 2011/12 World soybean use (261.0 mmt) is projected to be greater than World production (258.9 mmt).
 - Strength in Chinese soybean imports has been a staple demand component of the World soybean market, with China accounting for 58%, 59%, and 60% of total World soybean imports for MY 2009/10, MY 2010/11 and MY 2011/12, respectively.
 - Due to growth in World soybean usage, World % ending stocks-to-use have declined from 24.9% in MY 2009/10 and 27.2% in MY 2010/11 down to a projected level of 24.3% S/U in MY 2011/12. This trend toward tighter World soybean supply-demand balances will continue to provide support for soybean markets for the remainder of 2011 and on into 2012.

Commentary: A broader trend toward tighter World oilseed and coarse grain % ending stocks-to-use has also occurred since MY 2009/10. Recoveries / increases in U.S. and World oilseed and coarse grain production are needed in the coming year to begin to rebuild both U.S. and World supply-demand balances for these major crop categories.

- F. **Persistence of Tight Supply-Demand for U.S. / World Soybeans into MY 2012/13:** Given a) the likelihood of historically tight ending stocks for U.S. soybeans in MY 2011/12, b) competition for U.S. crop acres between soybeans, corn and other crops in spring 2012, and c) uncertainty about South American crop prospects for MY 2011/12 in light of recent long term weather forecasts (i.e., the reemergence of the La Nina weather pattern), it is likely that **concerns about the adequacy of U.S. and World soybean supplies and supply-demand balances are likely to persist through the summer of 2012 and possibly into the early part of MY 2012/13 which begins September 1, 2012**. These factors are likely to both support soybean market prices and to make them more volatile throughout the 2012 U.S. soybean growing season.
- G. **U.S. Soybean Oil Supply-Demand Balances:** The projected supply-demand balance sheet for U.S. soybean oil in MY 2011/12 reflects tightening stocks and likely record high prices. Low levels of beginning stocks (2.425 bp, down 29%), and production (18.670 bp, unchanged) more than offset

higher imports (185 million pounds or “mp”, up 16%). Projected U.S. total supplies of soybean oil of 21.280 bp are down 5% from October, to the lowest level of U.S. soybean supplies since at least MY 2007/08 (**Table 2**).

The USDA projected increases in domestic methyl ester (biodiesel) use (3.600 bp, up 41%), lower food, feed & industrial use (14.100 bp, down 1%) and lower exports (1.500 bp, down 54%). Total projected U.S. soybean oil usage of 19.200 bp in MY 2011/12 is down from 20.029 bp in MY 2010/11, but up 4% and 0.1% from MY 2008/09 and MY 2009/10, respectively. Projected U.S. soybean oil ending stocks of 2.080 billion pounds (bp) and % ending stocks-to-use of 10.8% are the lowest in at least 5 years.

Soybean oil average prices in the U.S. are projected to be in the range of \$53 to \$57 per cwt for MY 2011/12, compared to \$53.20 in MY 2010/11, \$35.95 in MY 2009/10, \$32.16 in MY 2008/09, and \$52.03 in MY 2007/08.

- H. **U.S. Soybean Meal Supply-Demand Balances:** Market price prospects relative to recent market highs for U.S. soybean meal in MY 2011/12 are not as strong price-wise in a relative sense as they are for U.S. soybean oil. High beginning stocks (350 thousand short tons or “k-st”, up 16%), lower production (38.835 k-st, down 1%) and lower imports (165 k-st, up 8%), combine for projected U.S. total supplies of soybean meal of 39,350 k-st (down 1%), the lowest amount since at least MY 2007/08 (**Table 3**).

Projections of level U.S. domestic use (30,250 k-st, down 0.1%) and lower U.S. exports (8,800 k-st, down 3.3%) combine for total U.S. soybean meal usage of 39.050 k-st in MY 2011/12. This amount of U.S. soybean meal usage in MY 2011/12 would be down from 39,050 k-st in MY 2010/11, and below the range of 39,249 – 42,474 k-st for MY 2007/08 through MY 2009/10. Projected U.S. soybean meal ending stocks of 300 k-st and % ending stocks-to-use of 0.7% reflect typically minimal U.S. soybean meal ending stocks – given the perishability of the product.

Soybean meal average prices in the U.S. are projected to be in the range of \$310 to \$340 per ton for MY 2011/12, compared to \$346 in MY 2010/11, \$311 in MY 2009/10, \$331 in MY 2008/09, and \$336 in MY 2007/08.

Table 1. U.S. Soybean Supply-Demand Balance Sheet: MY 2007/08 through MY 2011/12
(November 9, 2011 USDA WASDE Report)

Item	2007/08	2008/09	2009/10	2010/11	2011/12
Planted Area (million acres)	64.7	75.7	77.5	77.4	75.0
Harvested Area (million acres)	64.1	74.7	76.4	76.6	73.7
Yield per harvested acre (bushels/acre)	41.7	39.7	44.0	43.5	41.3
	million bushels				
Beginning Stocks	574	205	138	151	215
Production	2,677	2,967	3,359	3,329	3,046
Imports	10	13	15	15	15
Total Supply	3,261	3,185	3,512	3,495	3,275
Domestic Crushings	1,803	1,662	1,752	1,648	1,635
Exports	1,159	1,279	1,499	1,501	1,325
Seed	89	90	90	87	88
Residual	5	16	20	43	32
Total Use	3,056	3,047	3,361	3,280	3,080
Ending Stocks	205	138	151	215	195
% Ending Stocks-to-Total Use	6.7%	4.5%	4.5%	6.6%	5.1%
U.S. Average Farm Price (\$/bushel)	\$10.10	\$9.97	\$9.59	\$11.30	\$11.60-\$13.60 Midpoint = \$12.60

Figure 1. Trends in U.S. Soybean Use and Ending Stocks: MY 2004/05 through MY 2011/12
(November 9, 2011 USDA WASDE Report)

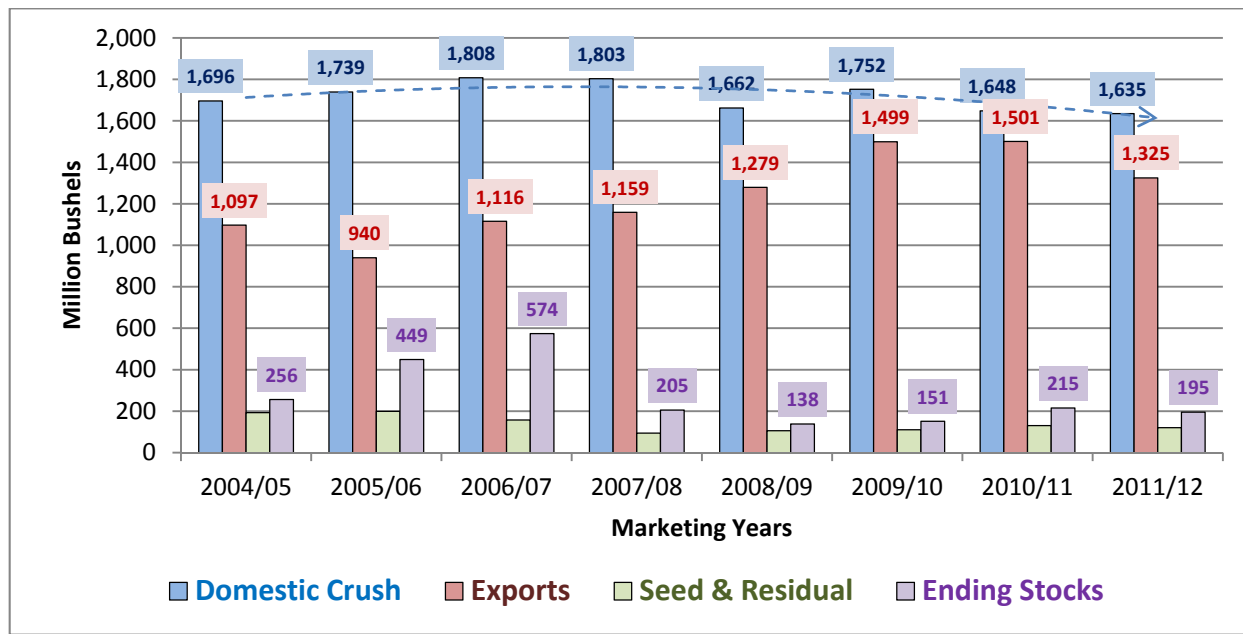


Figure 2. U.S. Soybean Ending Stocks vs U.S. Avg. Cash Prices: MY 1973/74 through MY 2011/12
 (November 9, 2011 USDA WASDE Report)

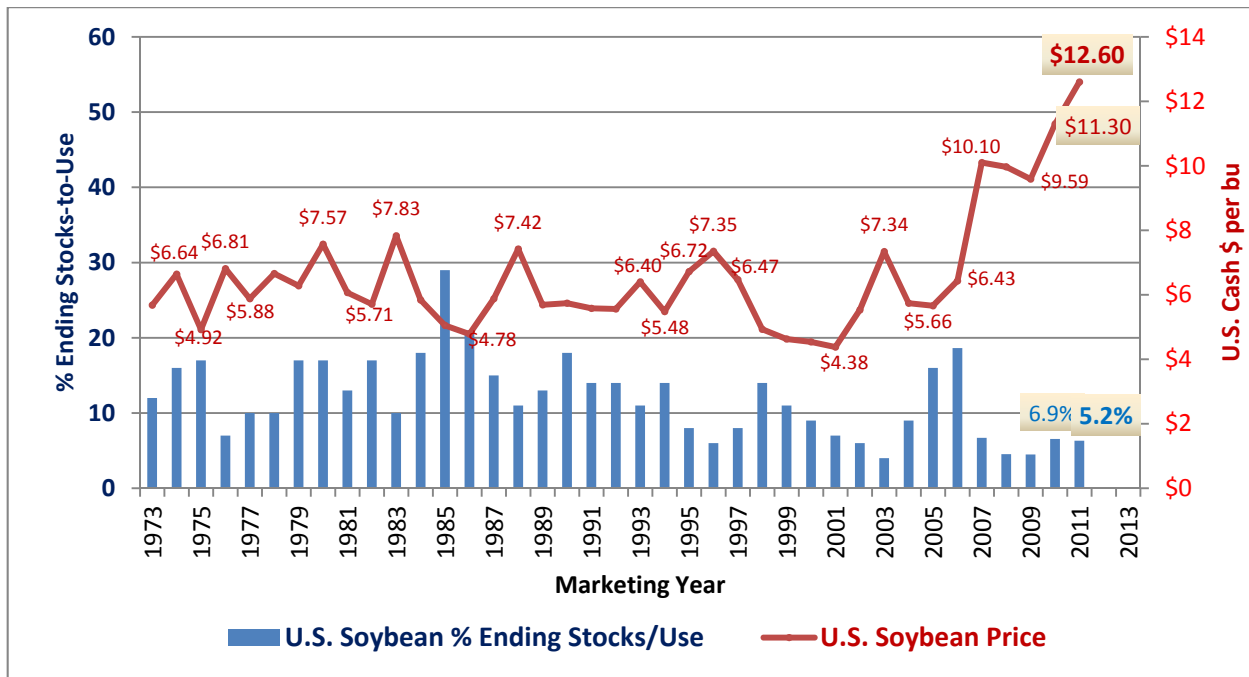


Figure 3. World Soybean Usage & Ending Stocks: MY 2007/08 thru MY 2011/12
 (November 9, 2011 USDA WASDE Report)

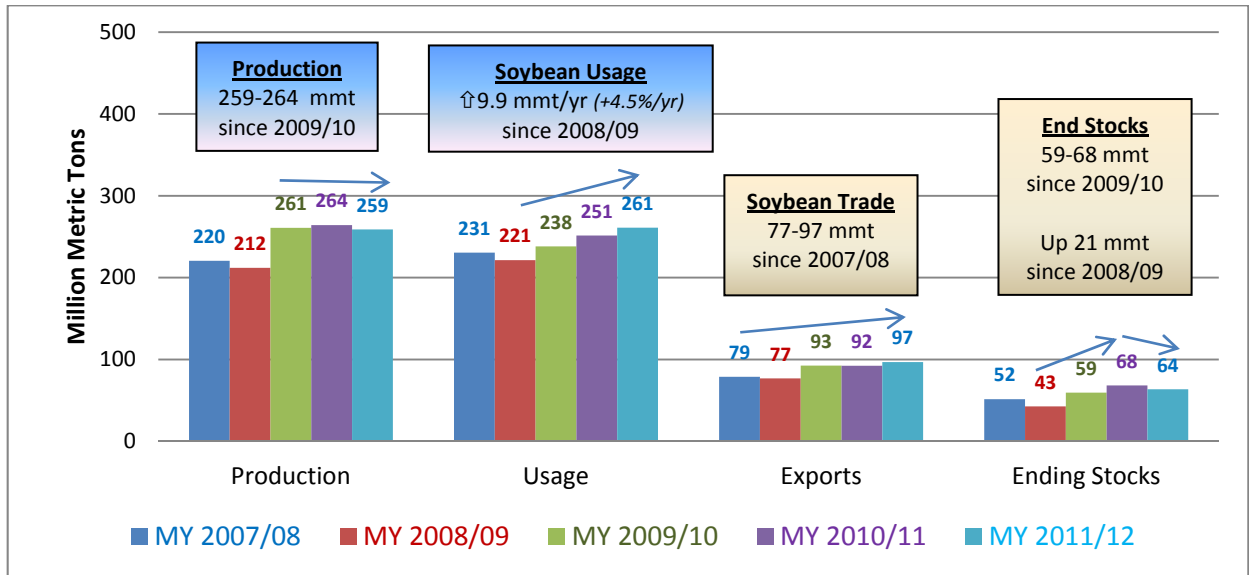


Table 2. U.S. Soybean Oil Supply-Demand Balance Sheet: MY 2007/08 through MY 2011/12
(November 9, 2011 USDA WASDE Report)

Item	2007/08	2008/09	2009/10	2010/11	2011/12
Million Pounds					
Beginning Stocks	3,085	2,485	2,861	3,406	2,425
Production	20,580	18,745	18,888	18,670	18,670
Imports	65	90	103	160	185
Total Supply	23,730	21,319	22,578	22,454	21,280
Domestic – Methyl Ester (Biodiesel)	3,245	2,069	1,680	2,550	3,600
Food, Feed & other Industrial	15,089	14,196	14,134	14,229	14,100
Exports	2,911	2,193	3,359	3,250	1,500
Total Use	21,246	18,459	19,173	20,029	19,200
Ending Stocks	2,485	2,861	3,406	2,425	2,080
% Ending Stocks-to-Total Use	11.7%	15.5%	17.8%	12.1%	10.8%
U.S. Average Price (\$/cwt)	\$52.03	\$32.16	\$35.95	\$53.20	\$53.00-\$57.00 Midpoint = \$55.00

Table 3. U.S. Soybean Meal Supply-Demand Balance Sheet: MY 2007/08 through MY 2011/12
(November 9, 2011 USDA WASDE Report)

Item	2007/08	2008/09	2009/10	2010/11	2011/12
Thousand Short Tons					
Beginning Stocks	343	294	235	302	350
Production	42,284	39,102	41,707	39,251	38,835
Imports	141	88	160	180	165
Total Supply	42,768	39,484	42,101	39,732	39,350
Domestic	33,232	30,752	30,640	30,282	30,250
Exports	9,242	8,497	11,160	9,100	8,800
Total Use	42,474	39,249	41,800	39,382	39,050
Ending Stocks	294	235	302	350	300
% Ending Stocks-to-Total Use	0.7%	0.6%	0.7%	0.9%	0.7%
48% Protein, Decatur Price (\$/ton)	\$335.94	\$331.17	\$311.27	\$345.52	\$310-\$340 Midpoint = \$325