

Soybean Market Situation & 2012/13 Outlook

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Summary

In its February 9th World Agricultural Supply and Demand Estimates (WASDE) report, the USDA made only minimal changes in its projected U.S. soybean supply-demand balance sheet, but substantial changes projected South American/World supply-demand estimates. These changes reflect drought damage to Argentina, Brazil and Paraguay soybean production prospects. Future WASDE reports may show increased U.S. soybean exports and tighter ending stocks for the 2011/12 marketing year **IF** reduced South American soybean production prospects persist.

MY 2011/12 U.S. & World Soybean Market Prospects: For MY 2011/12 the USDA made no changes in its projection of U.S. soybean exports of 1.275 billion bushels (bb) – even with South American production concerns. U.S. soybean ending stocks are projected at 275 million bu. (mb), with 9.1% ending stocks-to-use. Projected U.S. average soybean price is \$11.10-\$12.30 /bu for MY 2011/12 – narrowed by \$0.15 on each end. The midpoint of \$11.70 is record high compared to the previous top of \$11.30 /bu in MY 2010/11.

Projected MY 2011/12 World soybean supply-demand balances declined, falling to 60.3 mmt ending stocks and 23.4% ending stocks-to-use (S/U). This compares to 68.9 mmt (27.4% S/U) in MY 2010/11 and 59.6 mmt (25.0% S/U) in MY 2009/10. Supply-demand (S-D) balances for the World oilseed market (soybeans, palm oil, sunflower, cottonseed, etc.) are also projected to be “tighter”, with 18.2% S/U projected for MY 2011/12 compared to 21.1% in MY 2010/11 and 20.1% in MY 2009/10.

Early Projections of MY 2012/13 U.S. Soybean Market Scenarios: An “expected production” 2012 U.S. soybean S-D scenario assumes 74.5 million acres (ma) planted and 73.4 ma harvested, with trend line yields of 43.8 bu/ac., and total U.S. soybean production of 3.215 bb. Projected U.S. soybean ending stocks of 296 mb, 9.2% S/U, and a U.S. average farm price of \$11.75 /bu are associated with this scenario, with a 65% probability of occurring. A “low production” 2012 scenario is assigned a 20% probability, with U.S. yields of 40 bu/ac, production of 2.936 bb, ending stocks of 196 mb, 6.5% S/U, and \$11.75 /bu average prices. A “high production” 2012 scenario is also assigned a 15% probability of occurring, with U.S. corn yields of 44.5 bu/ac, production of 3.266 bb, ending stocks of 311 bb, 9.6% S/U, and \$10.35 /bu average prices. Taken together, these scenarios indicate an 80% probability of MY 2012/13 U.S. soybean ending stocks-to-use of 9.2-9.6% S/U, and marketing year average U.S. farm prices of \$11.35-11.75 /bu. They also indicate a 20% prob. of “low production” with prices similar to MY 2011/12, i.e., \$11.70 /bu.

Likely Soybean Price Trends in 2012: Given uncertain MY 2012/13 South American soybean production and exports and expected moderate strength in export demand (from China), strong support for NOV 2012 soybean futures is likely through 2012 spring planting to at least limit reductions in 2012 U.S. soybean acreage. World soybean markets will be sensitive to any further weather threats to 2012 U.S. and World soybean production. But, sharp declines could occur in new crop NOV 2012 soybean futures this summer **IF / WHEN** 2012 U.S. soybean production concerns begin to be discounted by markets, and trend line or better U.S. soybean yields become more likely.

I. U.S. Soybean Market Situation and Outlook

The USDA National Agricultural Statistical Service (NASS) made a no supply-demand balance changes in its February 9, 2012 Crop Production and World Agricultural Supply and Demand Estimates (WASDE) reports. For the 2011/12 marketing year the USDA left its projections of beginning stocks, production, imports, supply, usage by category, ending stocks and % ending stocks-to-use unchanged. However the USDA did narrow its forecast range of U.S. average farm prices for MY 2011/12 around the same midpoint price projection as previously (see **Table 1**).

- A. **Total Supplies of U.S. Soybeans for MY 2011/12 = 3.286 bb**: With projected MY 2011/12 beginning stocks of 215 bb (up from 151 mb a year ago), 2011 U.S. production of 3.056 bb, and imports of 15 mb, U.S. soybean total supplies for MY 2011/12 are projected to be 3.286 bb.
- a. Projected U.S. soybean total supplies in MY 2011/12 of 3.286 bb are down from 3.495 bb in MY 2010/11 and from 3.512 bb in MY 2009/10 (**Table 1**). This amount of U.S. total soybean supplies is the lowest since 3.185 bb in MY 2008/09 and 3.261 bb in MY 2007/08.
- B. **Total Use of U.S. Soybeans for MY 2011/12 = 3.011 bb**: The USDA declined to make changes in its February 9th WASDE report projections of U.S. soybean exports and U.S. domestic crush in response to South American soybean production problems. However, if South American crop problems are verifiable in coming weeks, increases in U.S. soybean exports and possibly crush could occur in either the March, April or May 2012 WASDE reports (**Table 1 & Figure 1**).
- a. Soybean crush of 1.615 bb for MY 2011/12 is down from 1.648 bb in MY 2010/11 and 1.752 bb in MY 2009/10. 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**).

Comments on how South American soybean production issues could impact U.S. soybean crush: If substantial soybean production losses become more likely to occur in South America in 2012, USDA projections of U.S. exports of soybean oil and/or soybean meal could be increased in future USDA WASDE reports to compensate for the shortfall in exportable World soyoil and soybean meal supplies. To accomplish this, U.S. soybean crush would need to increase from current levels.

Comments on the impact South American drought in 2012: If current drought conditions or past drought damage in key Argentina, Brazil and Paraguay soybean production areas in 2012 eventually do result in marked reductions in production and potential exportable South American soybean supplies, then World soybean and soybean product export business will likely shift to a greater degree to the United States. To the degree that occurs – say by 25-100 million bushels - U.S. soybean export projections for MY 2011/12 may trend higher in upcoming USDA WASDE reports.

Comments on trends in U.S. exports: Exports had been trending 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 exports to 1.275 bb signals at least a temporary moderation in that trend. However, it is possible that MY 2011/12 U.S. soybean export projections will be increased in upcoming USDA WASDE reports – see preceding comment (**Figure 1**).

- c. Total soybean use for MY 2011/12 is projected to be 3.045 bb, down from 3.280 bb in MY 2010/11 and 3.361 bb in MY 2009/10.

Comments on how U.S. and South American soybean Supply-Demand are “inter-dependent”: The U.S. soybean market does not operate “independently” or “in a vacuum”. Rather, U.S. and South American soybean supply-demand and price prospects are “inter-dependent”, i.e., with supply-demand prospects for one affecting market prices and farmers’ acreage responses in the other, and vice-versa (see the discussion of World soybean supply-demand below).

C. U.S. “Old Crop” MY 2011/12 Ending Stocks & Ending Stocks-to-Use:

- a. **U.S. Soybean Ending Stocks in MY 2011/12 = 275 mb**: The USDA projects MY 2011/12 U.S. soybean ending stocks to be 275 mb, up from 215 mb in MY 2010/11 and 151 mb in MY 2009/10 (**Table 1 & Figure 1**).
- b. **U.S. Soybean % Ending Stocks-to-Use in MY 2011/12 = 9.1%**: The MY 2011/12 supply-demand balance projection equals 9.1% ending stocks-to-use, up from 7.6% in December and from 6.3% in November. This projected level of U.S. soybean % ending stocks to use for MY2011/12 is up from 6.6% in MY 2010/11, and from 4.5% in MY 2009/10 (**Table 1 & Figure 3**).

Comments on possibility of increasing U.S. soybean exports and diminishing ending stocks: Projected U.S. soybean % S/U of 9.1% is larger than the average and median U.S. soybean % ending stocks-to-use of 8.6% and 7.6%, respectively, since MY 1995/96. Soybean % ending stocks-to-use in the U.S. have been at historically “tight” levels in recent years – ranging from 4.2% to 6.6% ending stocks-to-use from MY 2007/08 through MY 2010/11. That said, it is still possible that lower % ending stocks to use levels approaching 5.6%-7.4% may occur in MY 2011/12 if greater usage of U.S. soybeans occur in any of the major usage categories than is currently projected in coming USDA WASDE reports.

IF in response to shortfalls in South American production and exportable supplies MY 2011/12 U.S. soybean exports increase 50 mb to 1.325 bb, with a corresponding increase in total use to 3.061 bb and a decrease in ending stocks to 225 mb, then all else being equal, U.S. % ending stocks-to-use would fall to 7.4% for the current marketing year. Going further, if MY 2011/12 U.S. soybean exports increase 100 mb to 1.375 bb, with a corresponding increase in total use to 3.111 bb and a decrease in ending stocks to 175 mb, then ceteris paribus, U.S. % ending stocks-to-use would fall to 5.6% for the current marketing year.

With these types of impacts on U.S. soybean supply-demand balances possible, soybean prices are expected to continue to be highly volatile and responsive to any U.S. or South American weather threats or demand shocks through the late winter, spring and early summer of 2012.

- D. **“Old Crop” MY 2011/12 U.S. Soybean Prices = \$11.10-\$12.30 /bu.**: The USDA projected MY 2011/12 U.S. average soybean prices to be record high in the range of **\$11.10 - \$12.30 per bushel**, tightening \$0.15 on each end of the range from January. The midpoint of the projected price range is \$11.70 /bu. This compares with U.S. average prices of \$11.30 in MY 2010/11 and \$9.59 in MY 2009/10 (**Table 1 & Figure 2**).

Comments on competitive new crop 2012 Corn and Soybean futures price bids: Tight corn supplies and high corn prices have provided carryover support for wheat and soybean prices in recent marketing years. Market arbitrage forces on new crop 2012 corn and soybean futures prices are likely to provide support to

each other through the late winter/spring months. This anticipated “bidding war” for new crop 2012 through NOV 2012 soybean and DEC 2012 corn futures bids will constitute competitive corn and soybean futures market’s attempt to convince U.S. farmers to plant adequate acreage of either or both crops to assure adequate grain and oilseed supplies in fall 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 during the time period (**Figure 3**). The upward trend in World soybean use combined with level or declining World soybean production has led to a projected year-to-year decline or “tightening” in World soybean ending stocks in MY 2011/12.
- a. **World Soybean Production and Usage**: World soybean usage has increased an average of 9.2 mmt (+4.1%) annually since MY 2008/09. World soybean production has also increased over the same time period, but virtually all of that increase occurred from MY 2008/09 to MY 2009/10 (from 212 up to 261 mmt in one year), with production trends being level to declining over the last three marketing years. In MY 2011/12 World soybean use (258.1 mmt) is projected to be greater than World production (251.4 mmt).
- i. **Production of South American Soybeans in MY 2011/12**:
- Brazil soybean production is projected to be 72.0 mmt in MY 2011/12 – down 2.0 mmt from January due to hot-dry production conditions. This projection of 72.0 mmt follows the record high of 75.5 mmt in MY 2010/11.

Comment on 2012 Brazilian soybean crop projections: Conab, the Brazilian government's crop-forecasting agency, recently reduced its estimate for Brazilian soybean production for 2012 down to 69.2 mmt due to drought in the southern of the country. If realized, the likelihood of higher U.S. soybean exports would markedly increases.
 - Argentina soybean production is projected to be 48.0 mmt in MY 2011/12 – down 2.5 mmt from January and 4.0 mmt from December due to weather / production problems. Argentina produced 49.0 mmt of soybeans in MY 2010/11 and a record high of 54.5 mmt in MY 2009/10.
 - Paraguay soybean production has also been damaged by drought in recent months, and is projected to be 6.4 mmt in MY 2011/12 – down from the record high of 8.3 mmt in MY 2010/11 and from 7.2 mmt in MY 2009/10.
- ii. **Exports of South American Soybeans in MY 2011/12**:
- Brazil soybean exports are projected to be record high at 37.8 mmt in MY 2011/12 – down 1.2 mmt from January. This follows 29.95 mmt of Brazilian soybean exports in MY 2010/11, 28.58 mmt in MY 2009/10, 29.99 in MY 2008/09 (record), 25.36 mmt in MY 2007/08, 23.49 In MY 2006/07, and 25.91 in MY 2005/06.
 - Argentina soybean exports are projected to be 8.90 mmt in MY 2011/12 – down 0.9 mmt from January and 1.9 mmt from December. This follows 9.21 mmt of Argentina soybean exports in MY 2010/11, 13.09 mmt in MY 2009/10, 5.59 in MY 2008/09, and 13.84 mmt in MY 2007/08 (record high).

- Paraguay soybean exports are projected to be 5.00 mmt in MY 2011/12 – following 6.00 mmt of Paraguay soybean exports in MY 2010/11, 5.35 mmt in MY 2009/10, 2.23 in MY 2008/09, and 4.59 mmt in MY 2007/08.

iii. Major Importers of Soybeans in MY 2011/12

- China soybean imports are projected to be 55.50 mmt in MY 2011/12, versus 52.34 in MY 2010/11 and 50.34 mmt in MY 2009/10. Strength in Chinese soybean imports has been a predominant, staple demand component of the World soybean market in recent years, with China accounting for 61%, 59%, and 61% of total World soybean imports for MY 2009/10, MY 2010/11 and MY 2011/12, respectively.

Comments on the impact of Chinese soybean imports on World soybean production: Chinese soybean and soybean product imports have been identified as one of at least two major market factors helping to spur World soybean and soybean product market prices higher since year 2000. In recent years Chinese soybean import demand has directly led to increased South American soybean production (and also to higher U.S. soybean production in 2009-2010).

- Other major soybean importers: The European Union (EU-27) is projected to import 11.50 mmt of soybeans in MY 2011/12 – down 0.50 mmt from January, and down from 12.47 mmt in MY 2010/11 and from 12.68 mmt in MY 2009/10. Mexico is projected to import 3.50 mmt of soybeans in MY 2011/12, equal to MY 2010/11 and down marginally from 3.52 mmt in MY 2009/10. Japan is projected to import 2.85 mmt of soybeans in MY 2011/12, down from 2.92 mmt in MY 2010/11 and down from 3.4 mmt in MY 2009/10.

b. World Soybean Ending Stocks & % Stocks-to-Use for MY 2011/12

- Ending Stocks of World Soybeans = 63.4 mmt: The USDA projected MY 2011/12 World soybean ending stocks to be 60.28 mmt, down 3.15 mmt from January and down 4.26 mmt from December. This total is down from 68.90 mmt in MY 2010/11, but up from 59.60 mmt in MY 2009/10.
- % Ending Stocks-to-Use of World Soybeans = 23.4%: Due to varying annual World soybean production and to steady growth in World soybean usage, World soybean % ending stocks-to-use has varied from 25.0% in MY 2009/10 to 27.3% in MY 2010/11, and is now down to a projected level of 23.4% S/U in MY 2011/12.

Comment on Market Impact of World Soybean % S/U trends: Tighter World soybean supply-demand balances in MY 2011/12 are likely to provide support for soybean markets during the spring and early summer of 2012 in conjunction with U.S. crop acreage trends and yield results in critical South America growing areas.

- Percent (%) Ending Stocks-to-Use for the World, U.S., China and Other Countries: Changes in World soybean % ending stocks-to-use since the early 1970s has been driven largely by the United States, South America (i.e., Brazil and Argentina), and China (**Figure 4**). Record high U.S. soybean ending stocks-to-use in the mid-1980s were the major factor driving larger World % S/U at that time. By the late 1980s, declines in U.S. % S/U were offset by increases in South America, with World % S/U holding steady. Both U.S. and South American % S/U declined in MY 1996/97 to bring World % S/U lower. From MY 1997/98 through MY 2006/07 World % S/U increased following South American increases, with help from the U.S.

in MY 2005/06-MY 2006/07. Since then, U.S. soybean % S/U has been at relatively low levels, while China dramatically increased its soybean % S/U levels.

Since the mid-1980s U.S. soybean % S/U levels have generally trended lower. During this time South American (Argentina + Brazil) soybean % S/U has been variable, but at generally higher levels. The buildup of Chinese soybean % S/U – first in MY 1997/98, then in MY 2000/01, and then again during the MY 2008/09 through MY 2011/12 period – has been a major influence on World soybean % S/U levels.

- F. **U.S. Soybean Oil Supply-Demand Balances in MY 2011/12**: The projected supply-demand balance sheet for U.S. soybean oil in MY 2011/12 reflects tightening stocks and record high prices. Lower levels of beginning stocks (2.425 billion pounds (bp), down 29% from last year), and production (18.605 bp, down 1.5% from last year) more than offset higher imports (185 million pounds or “mp”, up 16%). Projected U.S. total supplies of soybean oil of 21.215 bp are down from 22.453 bp in MY 2010/11, and are at the lowest level of U.S. soybean oil supplies since at least MY 2008/09 (i.e., 21,319 bp) (**Table 2**).

Projected domestic methyl ester (biodiesel) use (3.600 bp, up 41% vs a year ago), food, feed & industrial use (14.100 bp, down 1% vs a year ago) and exports (1.200 bp, down 63% versus a year ago) combine to give total projected U.S. soybean oil usage of 18.900 bp for MY 2011/12. Projected total U.S. soybean oil use of 18.900 bp is less than 20.028 bp in MY 2010/11, and less than 19.173 bp in MY 2009/10.

United States soybean oil ending stocks are projected to be 2.315 bp in MY 2011/12, with % ending stocks-to-use of 12.2% nearly equal to 12.1% in MY 2010/11 – both being above the 5 marketing year low of 11.7% in MY 2007/08.

Soybean oil average prices in the U.S. are projected to be in the range of \$50.50 to \$54.50 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.

- G. **U.S. Soybean Meal Supply-Demand Balances**: Market price prospects for MY 2011/12 for U.S. soybean meal are not as strong relative to recent years as for U.S. soybean oil. High beginning stocks (350 thousand short tons or “k-st”, up 16% versus last year), lower production (38.685 k-st, down 1.4% compared to a year ago) and lower imports (165 k-st, down 7.8% versus last year), combine for projected U.S. total supplies of soybean meal of 39,200 k-st in MY 2011/12 (down 1.3%), the lowest amount since 36,820 k-st in MY 2003/04 (**Table 3**).

Projections of U.S. domestic use (30,100 k-st, up 0.6% vs last year) and U.S. exports (8,800 k-st, down 3.3%) combine for total U.S. soybean meal usage of 38,900 k-st in MY 2011/12. This amount of U.S. soybean meal usage in MY 2011/12 would be down 1.2% from 39,381 k-st in MY 2010/11, and below the range of 39,249 – 42,474 k-st for the MY 2007/08 through MY 2009/10 period. Projected U.S. soybean meal ending stocks of 300 k-st and % ending stocks-to-use of 0.8% 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 \$290 to \$320 per ton for MY 2011/12, compared to \$345.52 in MY 2010/11, \$311.27 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
(February 9, 2012 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 | 73.6 |
| Yield per harvested acre (bushels/acre) | 41.7 | 39.7 | 44.0 | 43.5 | 41.5 |
| | million bushels | | | | |
| Beginning Stocks | 574 | 205 | 138 | 151 | 215 |
| Production | 2,677 | 2,967 | 3,359 | 3,329 | 3,056 |
| Imports | 10 | 13 | 15 | 14 | 15 |
| Total Supply | 3,261 | 3,185 | 3,512 | 3,495 | 3,286 |
| Domestic Crashings | 1,803 | 1,662 | 1,752 | 1,648 | 1,615 |
| Exports | 1,159 | 1,279 | 1,499 | 1,501 | 1,275 |
| Seed | 89 | 90 | 90 | 87 | 88 |
| Residual | 5 | 16 | 20 | 43 | 32 |
| Total Use | 3,056 | 3,047 | 3,361 | 3,280 | 3,011 |
| Ending Stocks | 205 | 138 | 151 | 215 | 275 |
| % Ending Stocks-to-Total Use | 6.7% | 4.5% | 4.5% | 6.6% | 9.1% |
| U.S. Average Farm Price (\$/bushel) | \$10.10 | \$9.97 | \$9.59 | \$11.30 | \$11.10-\$12.30 Midpoint = \$11.70 |

Figure 1. Trends in U.S. Soybean Use and Ending Stocks: MY 2004/05 through MY 2011/12
(February 9, 2012 USDA WASDE Report)

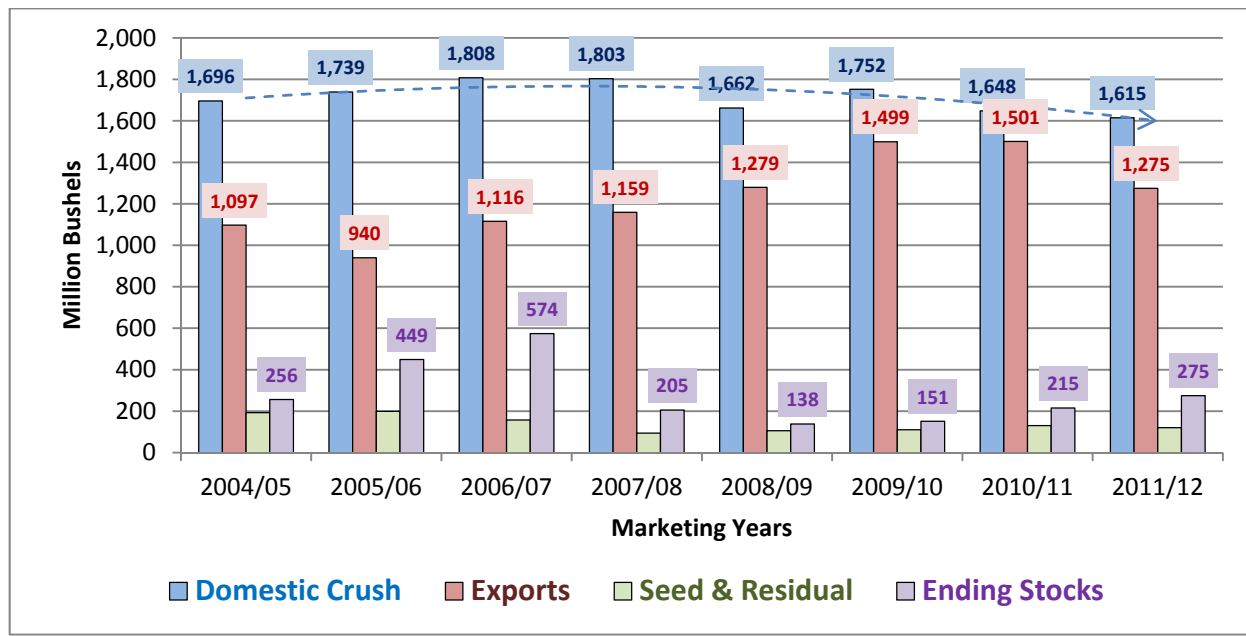


Figure 2. U.S. Soybean Ending Stocks vs U.S. Avg. Cash Prices: MY 1973/74 through MY 2011/12
(February 9, 2012 USDA WASDE Report)

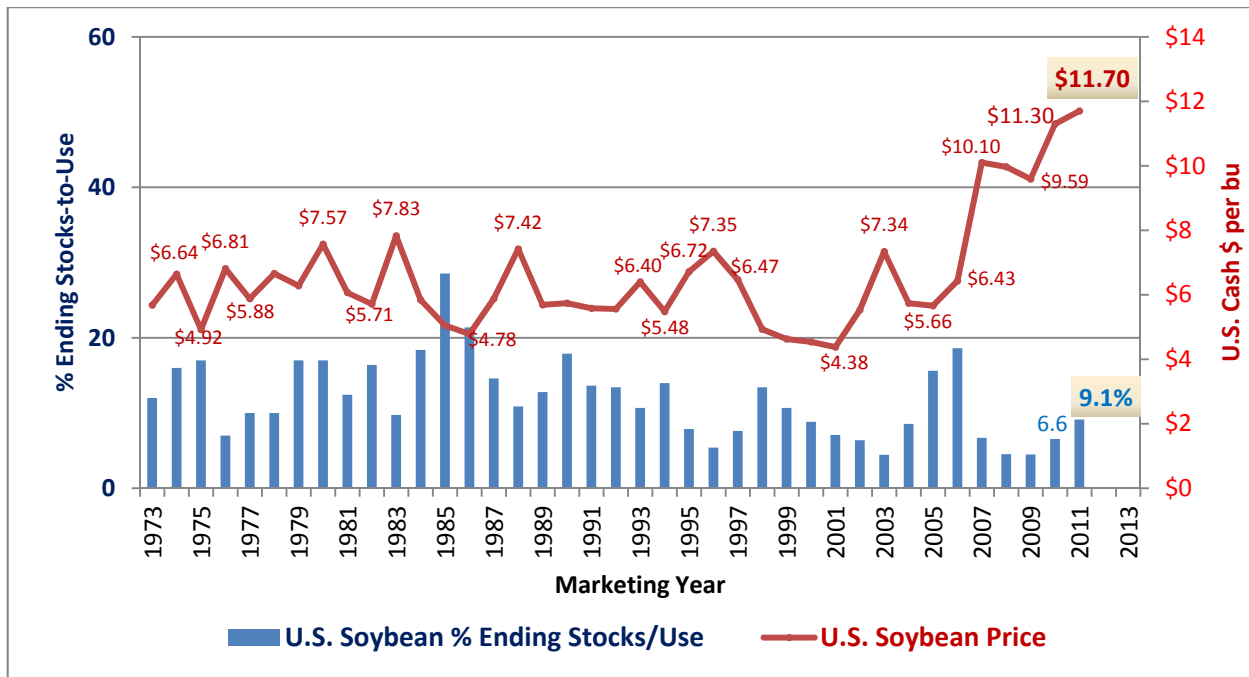


Figure 3. World Soybean Usage & Ending Stocks: MY 2007/08 thru MY 2011/12
(February 9, 2012 USDA WASDE Report)

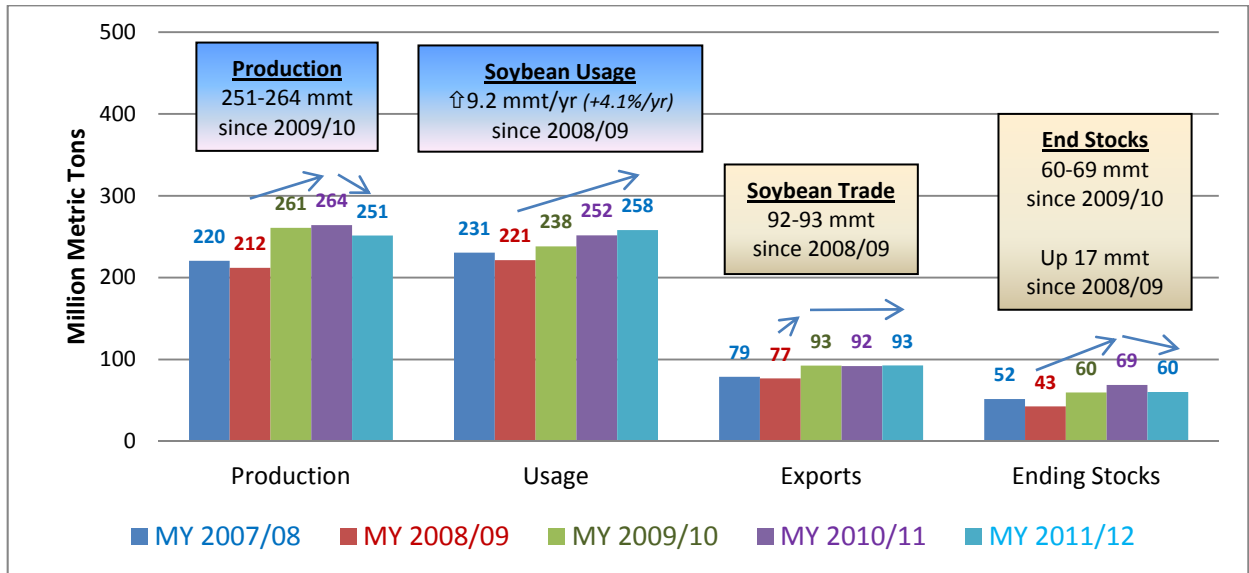


Figure 4. Soybean % Ending Stocks-to-Use for the World, U.S., Argentina+Brazil, China & Rest of World: MY 1973/74 through MY 2011/12 (February 9, 2012 USDA WASDE Report)

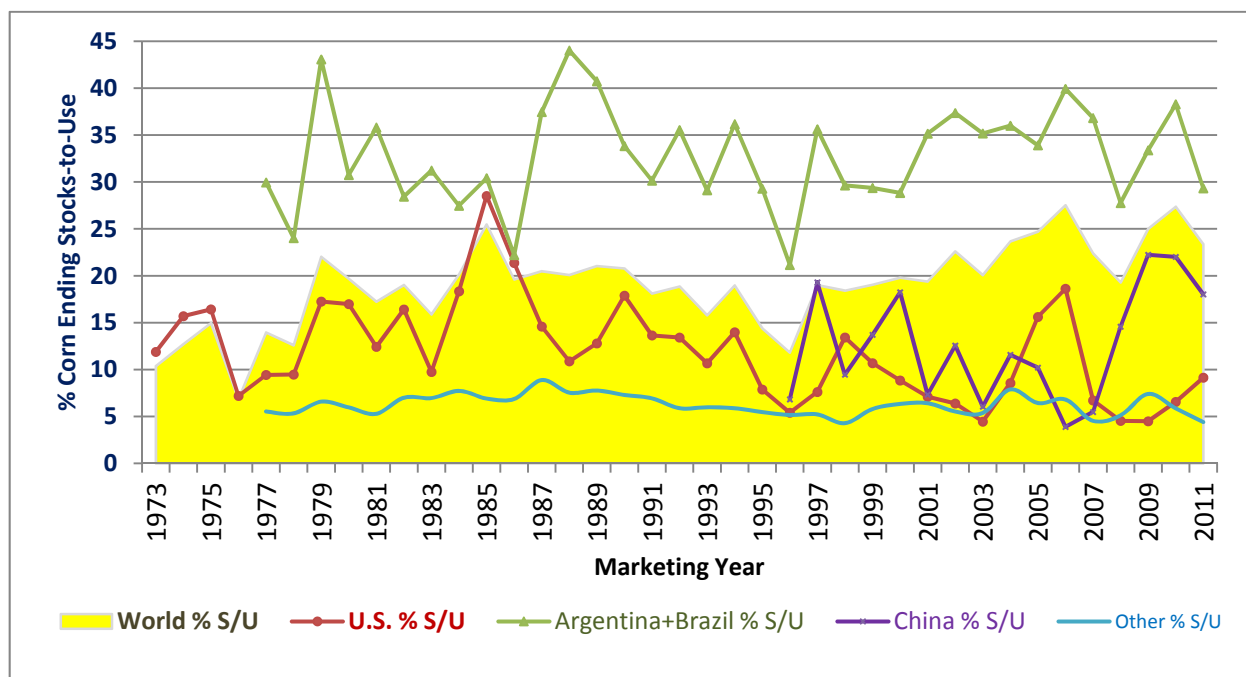


Table 2. U.S. Soybean Oil Supply-Demand Balance Sheet: MY 2007/08 through MY 2011/12 (February 9, 2012 USDA WASDE Report)

| 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 | 19,615 | 18,888 | 18,605 |
| Imports | 65 | 90 | 103 | 159 | 185 |
| Total Supply | 23,730 | 21,319 | 22,578 | 22,453 | 21,215 |
| Methyl Ester (Biodiesel) | 3,245 | 2,069 | 1,680 | 2,550 | 3,600 |
| Food, Feed & other Industrial | 15,089 | 14,196 | 14,134 | 14,245 | 14,100 |
| Exports | 2,911 | 2,193 | 3,359 | 3,233 | 1,200 |
| Total Use | 21,246 | 18,459 | 19,173 | 20,028 | 18,900 |
| Ending Stocks | 2,485 | 2,861 | 3,406 | 2,425 | 2,315 |
| % Ending Stocks-to-Total Use | 11.7% | 15.5% | 17.8% | 12.1% | 12.2% |
| U.S. Average Price (\$/cwt) | \$52.03 | \$32.16 | \$35.95 | \$53.20 | \$50.50-\$54.50 Midpoint = \$52.50 |

Table 3. U.S. Soybean Meal Supply-Demand Balance Sheet: MY 2007/08 through MY 2011/12
(February 9, 2012 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 | 38,685 |
| Imports | 141 | 88 | 160 | 179 | 165 |
| Total Supply | 42,768 | 39,484 | 42,101 | 39,731 | 39,200 |
| Domestic | 33,232 | 30,752 | 30,640 | 30,277 | 30,100 |
| Exports | 9,242 | 8,497 | 11,160 | 9,104 | 8,800 |
| Total Use | 42,474 | 39,249 | 41,800 | 39,381 | 38,900 |
| Ending Stocks | 294 | 235 | 302 | 350 | 300 |
| % Ending Stocks-to-Total Use | 0.7% | 0.6% | 0.7% | 0.9% | 0.8% |
| 48% Protein, Decatur Price (\$/ton) | \$335.94 | \$331.17 | \$311.27 | \$345.52 | \$290-\$320 <i>Midpoint = \$305</i> |

II. U.S. Soybean Supply-Demand & Price Projections for MY 2012/13

The outlook for the coming 2012/13 marketing year for U.S. soybean supply-demand balances and prices is driven by a number of key market factors. Based on current expectations for 2012 U.S. soybean acreage, projected market outcomes for low, expected, and high U.S. corn production are presented below.

- A. **U.S. Soybean Planted Acreage in 2012 = 74.5 million acres:** Current grain market consensus is that marginally lower U.S. soybean acreage will be planted in 2012 – based on higher expected profitability for U.S. corn and in comparison to soybeans. This analysis proceeds on the assumption that 74.5 million acres (ma) of soybeans will be planted in the U.S. in 2012, 0.5 million acres less than in 2011 (75.0 ma) and essentially 2.0 million acres less than 77.4 ma in 2010 and 77.5 ma in 2009 (**Figure 5**).
- B. **U.S. Soybean Harvested Acreage in 2012 = 73.4 ma:** Based on average historic planted-to-harvested U.S. soybean acreage relationships since year 2000, it is projected that if 74.5 ma of soybeans are planted in the U.S. in 2012, **then** 73.4 ma will be harvested. This amount of soybean harvested acres would be marginally lower than 73.6 ma in 2011, and would be the lowest U.S. soybean harvested acreage figure since 64.1 ma in 2007 (**Figure 5**).
- C. **U.S. Soybean Yields in 2012 – 65% probability of 43.8 bu/acre (trend line):** Based on U.S. average soybean yields over the 1973-2011 period, a linear trend line yield projection for 2012 would be approximately 43.8 bushels per acre (**Figure 6**). The most recent five year average U.S. soybean yield (2007-2011) is 42.4 bushels per acre.
- a. **Likelihood of Low Yields in 2012 – 20% probability of 40 bu/acre:** It is assumed in this analysis that given information available in early February 2012, there is approximately a 2/10 (i.e.,

20%) likelihood of U.S. soybean yields being 3.8-4.0 bushels below trend line for 2012, i.e., 40 bushels per acre (**Figure 6**).

- b. Likelihood of High Yields in 2012 – 15% probability of 44.5 bu/acre: It is also assumed in this analysis that given current market information there is approximately a 1.5/10 (i.e., 15%) likelihood of U.S. soybean yields setting a new record by being 0.7 bushels above trend line for 2012 at 44.5 bu/ac, which would be 0.5 bu above the current record high of 44.0 bu/ac in 2009 (**Figure 6**).

D. **U.S. 2012 Soybean Production – 65% probability of 3.215 billion bushels**: Based on the preceding U.S. soybean acreage and yield projections, it is estimated that there is a 65% probability of 2012 U.S. soybean production being approximately 3.215 bb (**Table 2**). This compares with 3.056 bb in 2011, 3.329 bb in 2010, and 3.359 bb in 2009.

- a. Likelihood of Low Production in 2012 – 20% probability of 2.936 billion bushels: Given information available in early February, 2012, there is approximately a 2/10 (i.e., 20%) likelihood of U.S. soybean production being 2.936 bb in 2012 (**Table 2**). Given assumptions about smaller U.S. soybean planted acreage in 2012, this low production scenario would result in the lowest U.S. soybean production since 2.677 bb in 2007, being just lower than 2.967 bb in 2008.
- b. Likelihood of High Production in 2012 – 15% probability of 3.266 billion bushels: In this analysis, there is approximately a 1.5/10 (i.e., 15%) likelihood of U.S. soybean production being 3.266 bb in 2012, up from 3.026 bb in 2011, but still less than either 3.329 bb in 2010 or 3.359 bb in 2009 (**Table 2**).

Comment on factors driving 2012 U.S. soybean production prospects: These results are driven by the projection of the lowest 2012 U.S. soybean planted and harvested acreage since 2009. With higher U.S. acreage – say near 77.5 ma planted / 76.5 harvested as in 2009 and 2010 – this analysis would show an additional 130-140 million bushels produced in the U.S. in 2012. Projected MY 2012/13 U.S. soybean ending stocks would be markedly higher and U.S. soybean price projections for MY 2012/13 would likely be closer to \$10.00 per bushel.

E. **U.S. Soybean Supply-Demand & Price Scenarios for MY 2012/13**

Based on probability-based 2012 U.S. soybean production projections above, adjustments were made to U.S. soybean usage categories that are intended to reflect how adjustments in supply-demand balances and prices – and in some cases, price rationing – may impact soybean usage (**Table 2**). Projected adjustments to the usage of soybeans for either U.S. domestic crush, exports, seed and/or residual usage, generally reflect *more inelastic* or limited proportional usage adjustments or decreases for lower production scenarios as opposed to *more elastic* or more expansive usage adjustments or increases for larger production scenarios.

Given these projections of soybean usage for the “low”, “expected” and “large” production scenarios, projections of U.S. soybean ending stocks and % ending stocks-to-use were then derived for each. Projected U.S. farm average soybean prices were projected based on the evolving relationship between historic U.S. soybean price and % ending stocks-to-use since MY 1973/74 (**Figure 7**).

- a. **“Expected Production” Market Scenario:** 65% prob. of 9.2% S/U & \$10.75 /bu U.S. Farm \$: Based on the U.S. soybean acreage and yield projections, and supply-demand the adjustments just alluded to, there is approximately a 65% probability of 2012 U.S. soybean ending stocks being near 295 mb, with ending stocks-to-use rising to 9.2%, and U.S. average soybean prices falling to \$10.75 /bu (**Table 2**).
- b. **“Low Production” Market Scenario:** 20% prob. of 6.5% S/U & \$11.75 /bu U.S. Farm \$: Based on the previous analysis, there is approximately a 20% probability of 2012 U.S. soybean ending stocks being near 196 mb, with ending stocks-to-use staying nearly steady with current projections for MY 2011/12 of 6.5%, with U.S. average soybean prices averaging \$11.75 /bu (**Table 2**).
- c. **“High Production” Market Scenario:** 15% prob. of 9.6% S/U & \$11.35 /bu U.S. Farm \$: There is approximately a 15% probability of 2012 U.S. soybean ending stocks being near 311 mb, with ending stocks-to-use increasing to 9.6%, and with U.S. average soybean prices averaging \$11.35 /bu (**Table 2**).

Comment on the projected probabilities of alternative U.S. soybean S/D & \$ scenarios for MY 2012/13: Combining the “expected” and “large” U.S. soybean production scenarios together, these projections indicate that there is an 80% probability (65% + 15%) of U.S. soybean prices being near \$11.35-\$11.75 per bushel. In other words, expected trend line yields on lower U.S. soybean acres in 2012 are expected to lead to larger projected total U.S. soybean ending stocks and % stocks-to-use in MY 2012/13 than in MY 2011/12. This in turn would pressure prices to be lower for MY 2012/13 than they have been in either MY 2010/11 (\$11.30 / bu average) or MY 2011/12 (\$11.70 /bu midpoint of price range).

That said, there is still a 1 in 5 or 20% probability that U.S. soybean yields will again be substandard or at least below early growing season expectations for a second consecutive year. In that event, there would be a moderate tightening of U.S. soybean % ending stocks-to-use levels to 6.5%, with U.S. farm average corn prices projected to be similar to the current marketing year – a \$11.75 /bu average farm price for MY 2012/13 compared to \$11.70 /bu as the midpoint of the MY 2011/12 price range of \$11.10 to \$12.30.

Figure 5. U.S. Soybean Planted Acreage (1973-2011) and Projections for 2012

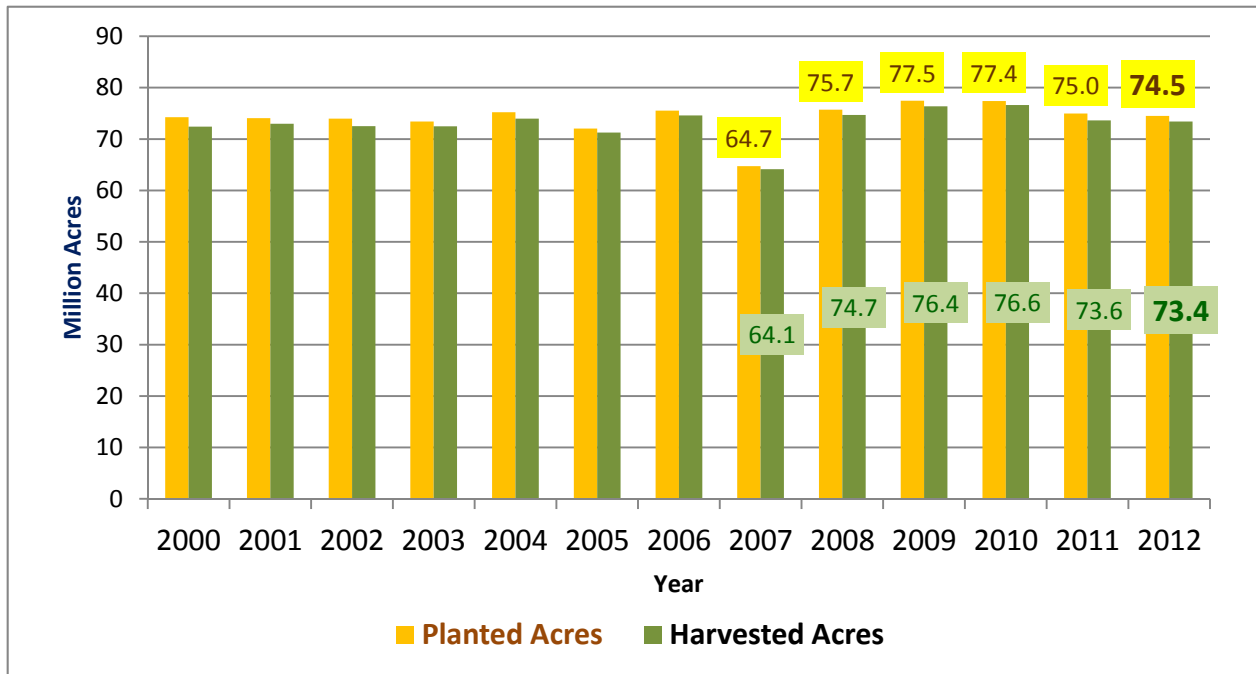


Figure 6. U.S. Soybean Yield Trend (1973-2011) and Projections for 2012

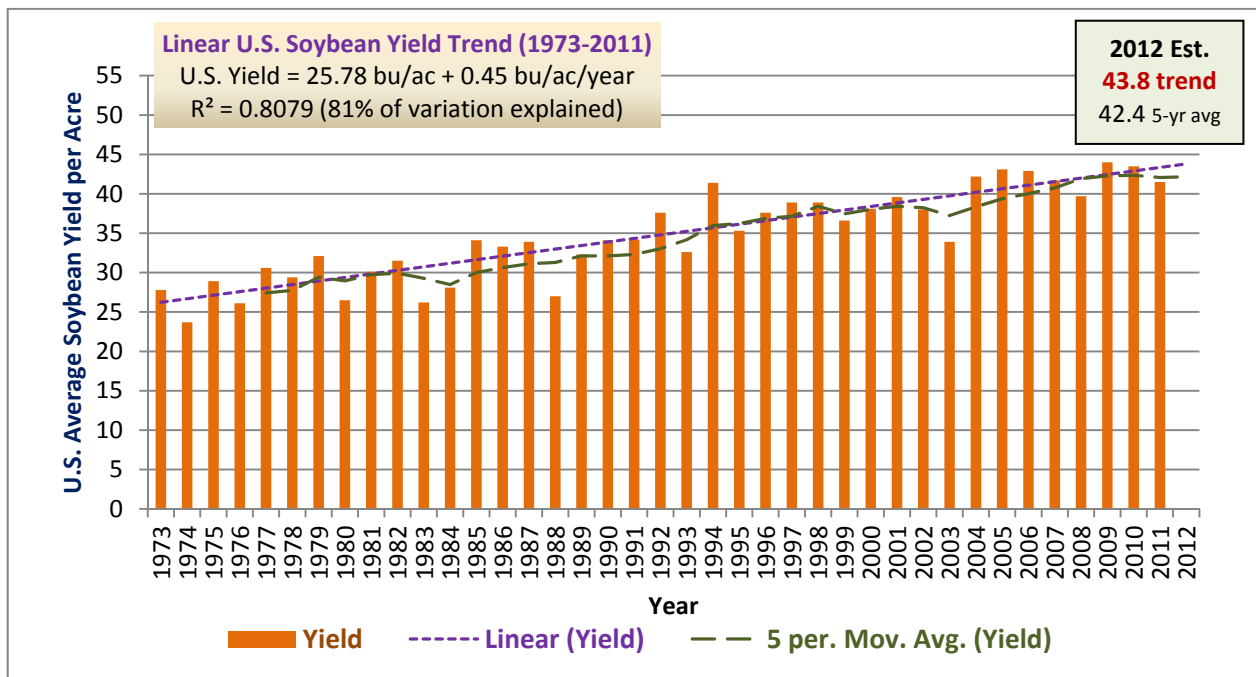


Table 2. U.S. Soybean Supply-Demand Balance Sheet: MY 2010/11 through Projected MY 2012/13
 (February 9, 2012 USDA WASDE Report & KSU Projections)

| Item | 2010/11 | 2011/12 | 2012/13 Low Production | 2012/13 Expected Production | 2012/13 High Production |
|---|-----------------|--------------|------------------------------|-----------------------------------|-------------------------------|
| % Probability of Occurance | | | 20% | 65% | 15% |
| Planted Area (million acres) | 77.4 | 75.0 | 74.5 | 74.5 | 74.5 |
| Harvested Area (million acres) | 76.6 | 73.6 | 73.4 | 73.4 | 73.4 |
| Yield per harvested acre (bushels/acre) | 43.5 | 41.5 | 40.0 | 43.8 | 44.5 |
| | million bushels | | | | |
| Beginning Stocks | 151 | 215 | 275 | 275 | 275 |
| Production | 3,329 | 3,056 | 2,936 | 3,215 | 3,266 |
| Imports | 14 | 15 | 20 | 15 | 10 |
| Total Supply | 3,495 | 3,286 | 3,231 | 3,505 | 3,551 |
| Crushings | 1,648 | 1,615 | 1,615 | 1,640 | 1,645 |
| Exports | 1,501 | 1,275 | 1,300 | 1,450 | 1,475 |
| Seed | 90 | 87 | 90 | 90 | 90 |
| Residual | 43 | 32 | 30 | 30 | 30 |
| Total Use | 3,280 | 3,011 | 3,035 | 3,210 | 3,240 |
| Ending Stocks | 215 | 275 | 196 | 295 | 311 |
| % Ending Stocks-to-Total Use | 6.6% | 9.1% | 6.5% | 9.2% | 9.6% |
| U.S. Average Farm Price (\$/bushel) | \$11.30 | \$11.70 | \$11.75 | \$10.75 | \$10.35 |

Figure 7. U.S. Soybean Price vs % Stocks-to-Use (MY 1973/74 through Projected MY 2012/13)

