

Soybean Market Situation & Outlook

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I. U.S. Soybean Market Situation and Outlook

A. **2011 U.S. Soybean Production Prospects:** In its August Crop Production report the USDA lowered its projection of 2011 U.S. soybean harvested acreage, yields and production. Continued less than ideal weather conditions in parts of the Corn Belt during August raises the possibility of further declines in projected 2011 yields and production in the USDA September Crop Production report.

a. **Lower Acreage, Higher Yields & Lower Production**

i. **Lower Acreage:** Because of early season soybean planting and establishment problems in the eastern Corn Belt and northern Plains states, as well as extensive spring flooding along the Missouri, Ohio and Mississippi rivers and their tributaries, the USDA lowered its projections of 2011 U.S. planted and harvested soybean acreage (**see Table 1**).

In the August Crop Production report, the USDA projected U.S. soybean planted area at 75.0 million acres, down 200,000 from July, and down from 77.4 million in 2010 and 77.5 million in 2009. Projected harvested area of 73.8 million acres is down 500,000 acres from July, and compares to 76.6 million in 2010 and 76.4 million in 2009.

ii. **Lower Yields:** With an accumulation of spring late planting problems and July weather stress issues, the USDA lowered its projection of 2011 U.S. soybean yields (**Table 1**). The USDA projected 2011 U.S. soybean yields at 41.4 bushels per acre, down 2.0 bushels from July, and down from 43.5 bushels in 2010 and 44.0 bushels in 2009.

Since the early August crop report survey U.S. soybean crop condition ratings have declined at least moderately, indicating the possibility of lower projected yields in future USDA reports. That said, if late planted soybeans in some areas of the eastern and northern U.S. Corn Belt are able to reach maturity this fall before either a killing frost or the cessation of development processes, it is possible for soybean yields

iii. **Lower Production:** Accounting for these acreage and yield issues, the USDA projected 2011 U.S. soybean production to be 3.056 billion bushels (bb), down 169 million bushels (mb) from July, and down from 3.329 bb in 2010 and from 3.359 bb in 2009 (**Table 1**). As discussed above, it is possible that further declines in projected 2011 U.S. soybean production prospects could occur in the USDA September and October crop reports.

b. **Variability of August-to-November Soybean Production Forecasts:** USDA August projections of U.S. soybean production have at least a moderate degree of variability relative to final soybean crop size, with sizable forecast errors occurring in recent years.

i. Since 1979 USDA August projections of U.S. soybean production have been too high 44% of the time, too low 56% of the time (**Figure 1**).

- ii. When August forecasts have been **too high**, they have averaged 5.5% higher than November estimates, with a 7.3% forecast standard error.
- iii. When August forecasts have been **too low**, they have averaged 4.9% lower than November estimates, with a 5.8% forecast standard error.
- iv. Since 1979, the years with the largest decline in U.S. soybean production forecasts by the USDA from August to the determination of November production numbers have been 1983 (16.7% decline), 2003 (14.3% decline), 2000 (7.1% decline), 1999 (6.9% decline), 1984 (6.5% decline), and 1980 (5.6% decline). In 2010, USDA U.S. soybean production projections declined 1.7% from August to November (**Figure 2**).

B. **MY 2011/12 U.S. Soybean Supply-Demand Balances:** For MY 2011/12, reduced U.S. soybean production and total supplies and reductions in projected U.S. soybean crush and exports combine to tighten U.S. soybean supply-demand balances (**Table 1**).

a. **Soybean Usage Declines**

- i. Soybean crush of 1.635 bb for MY 2011/12 is down 20 mb from July, and down from 1.645 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 from MY 2009/10 on the other.
- ii. Soybean exports are projected to be 1.400 bb in MY 2011/12 – down 95 mb from July, and less than the near record high of 1.495 bb in MY 2010/11 and the record high of 1.499 bb in MY 2009/10. U.S. export prospects have diminished largely due to export completion from South America following large 2011 South American soybean production.
- iii. Total soybean use for MY 2011/12 is projected to be 3.146 bb, down 118 mb from July, and down from 3.265 bb in MY 2010/11 and 3.361 bb in MY 2009/10.

As evidence of inflexible, highly responsive soybean market supply-demand relationships, from MY 2009/10 to MY 2010/11 U.S. soybean use declined 2.9% while U.S. soybean prices increased 18.4%. Then again from MY 2010/11 to MY 2011/12 U.S. soybean use is projected to decline another 3.6% while U.S. soybean prices are projected to increase 18.9%.

If further declines in U.S. soybean supplies and use occur for MY 2011/12 in the September or October crop reports, they would be expected to result in yet higher soybean prices and highly volatile soybean market conditions.

- b. **Recent U.S. Soybean Use Trends:** 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, down to a projection of 1.635 bb in MY 2011/12 (**Figure 3**). Exports trended strongly higher from 940 mb in MY 2005/06 up to 1.499 bb and 1.495 bb in MY 2009/10 and MY 2010/11, respectively. A decline to 1.400 bb in MY 2011/12 would signal at least a temporary moderation in that trend.
- c. **Ending Stocks-to-Use & Soybean Prices:** Projected MY 2011/12 U.S. soybean prices increased sharply due in part to moderately tighter U.S. soybean ending stocks-to-use. Soybean ending

stocks-to-use of 4.9% in MY 2011/12 would be the fourth tightest since MY 1973/74, behind 4.00% in MY 2003/04, 4.49% in MY 2009/10, and 4.53% in MY 2008/09 (**Figure 4**).

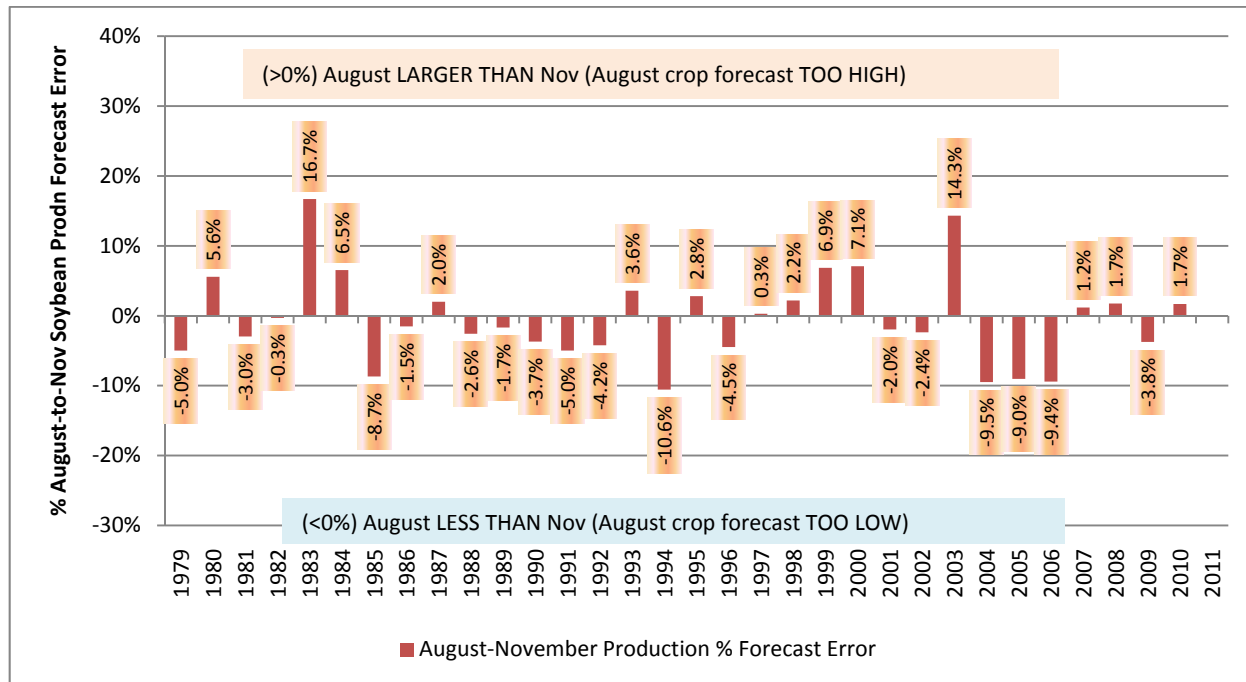
If projected 2011 U.S. soybean production declines of 50-100 mb in the USDA September or October Crop Production reports, it is likely that MY 2011/12 ending stocks and % stocks-to-use would decline to near historic lows of 115-135 mb (4.0%-4.25% S/U). In MY 2003/04, U.S. soybean stocks declined to 112 mb (4.0% S/U).

- i. **Soybean Prices:** The projected record high MY 2011/12 U.S. soybean price range is \$12.50-\$14.50 (\$13.50 midpoint).
 - ii. **Inflexible Demand – Tight Stocks / High Prices:** Record high prices in conjunction with only an extremely tight U.S. soybean ending stocks-to-use projection (4.9%) supports the idea that soybean supply-demand balances and associated prices are in an “inflexible box”, i.e., in very inelastic, price responsive regions of the U.S. soybean supply-demand relationships.
- d. **World Soybean Supply-Demand Trends:** Consistent growth in World soybean usage since MY 2008/09 has occurred in spite of periods of record high prices from MY 2007/08 to MY 2011/12 (projected) (**Figure 5**).
- i. 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.
 - ii. Strength in Chinese soybean imports has been a staple demand (usage) component of the World soybean market, with China accounting for 58%, 58%, and 59% of total World soybean imports for MY 2009/10, MY 2010/11 and MY 2011/12, respectively.
- C. **Persistence of High Soybean Prices into 2012:** Given a) the likelihood of historically tight ending stocks for U.S. soybeans in MY 2011/12, b) competition for U.S. crop acres from corn, spring and other crops in spring 2012, and c) uncertainty about South American crop prospects for 2011-2012 in light of recent long term weather forecasts (i.e., the reemergence of the La Nina weather pattern), *it seems likely that historically high and volatile soybean prices* will persist throughout the remainder of 2011 and on into at least the spring of 2012.

Table 1. U.S. Soybean Supply-Demand Balance Sheet: MY 2007/08 through MY 2011/12
(August 11, 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	73.8
Yield per harvested acre (bushels/acre)	41.7	39.7	44.0	43.5	41.4
	million bushels				
Beginning Stocks	574	205	138	151	230
Production	2,677	2,967	3,359	3,225	3,056
Imports	10	13	15	15	15
Total Supply	3,261	3,185	3,512	3,495	3,301
Domestic Crushings	1,803	1,662	1,752	1,645	1,635
Exports	1,159	1,279	1,499	1,495	1,400
Seed	89	90	90	87	90
Residual	5	16	20	38	21
Total Use	3,056	3,047	3,361	3,265	3,146
Ending Stocks	205	138	151	230	155
% Ending Stocks-to-Total Use	6.7%	4.5%	4.5%	7.0%	4.9%
U.S. Average Farm Price (\$/bushel)	\$10.10	\$9.97	\$9.59	\$11.35	\$12.50-\$14.50 Midpoint = \$13.50

Figure 1. U.S. Soybean Production August-to-November % Forecast Accuracy (1979-2010)*



* Since 1979, USDA August soybean production forecasts have been too high 44% of the time (14/32 years), and too low 56% of the time (18/32 years). The average % forecast error for when August forecasts have been too high (i.e., ProdnAug – ProdnNov > 0%) is 5.5%, with a standard deviation of the forecast error of 7.3% in these situations. The average % forecast error for when August forecasts have been too low (i.e., ProdnAug – ProdnFinal < 0%) is -4.9%, with a standard deviation of the forecast error of 5.8% in these cases.

Figure 2. U.S. Soybean Production August-to-November % Forecast Accuracy (1979-2010) – Arranged from TOO LOW to TOO HIGH.

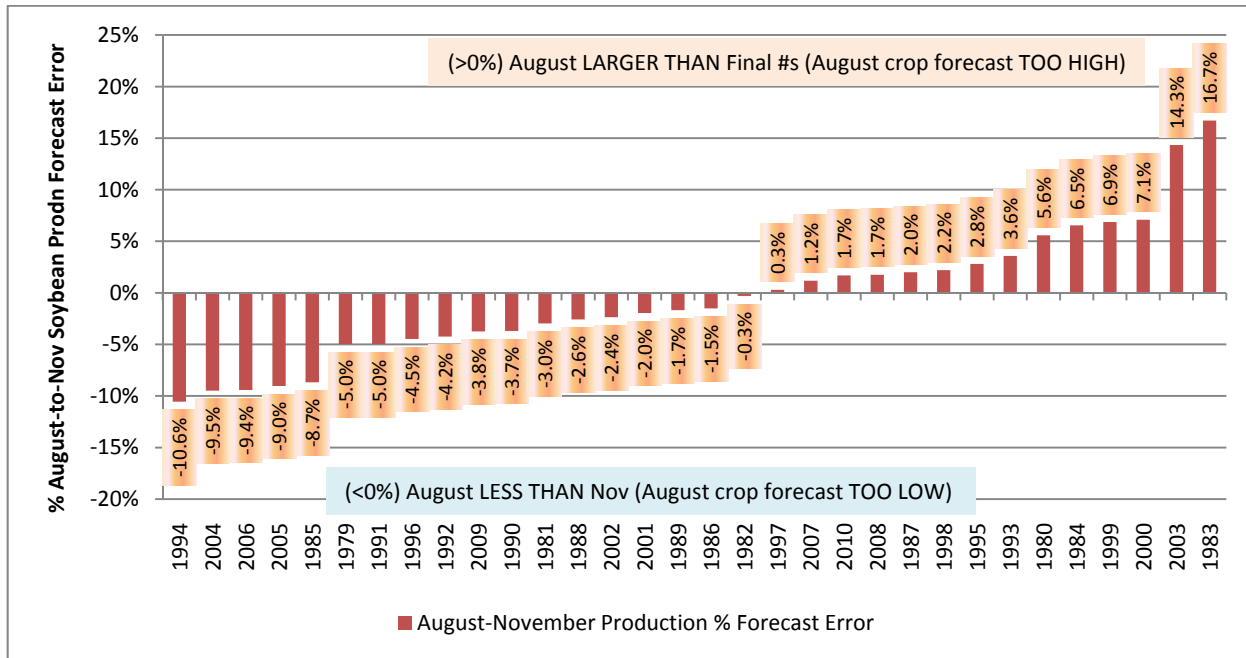


Figure 3. Trends in U.S. Soybean Use and Ending Stocks: MY 2004/05 through MY 2011/12 (August 11, 2011 USDA WASDE Report)

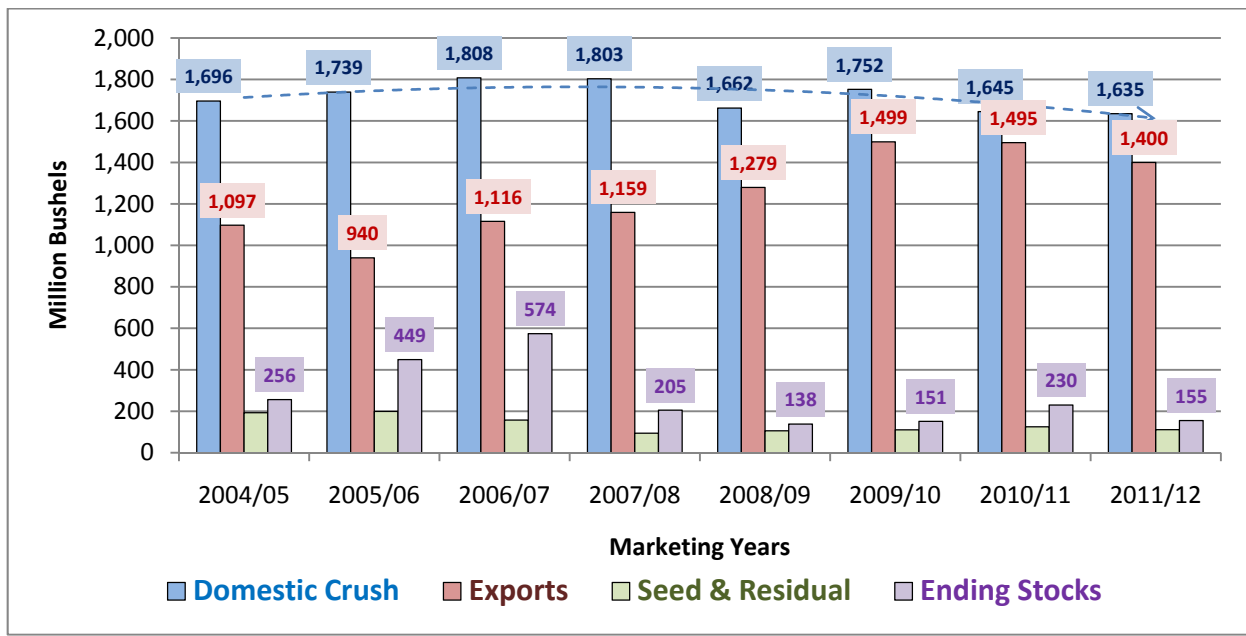


Figure 4. U.S. Soybean Ending Stocks vs U.S. Avg. Cash Prices: MY 1973/74 through MY 2011/12
(August 11, 2011 USDA WASDE Report)

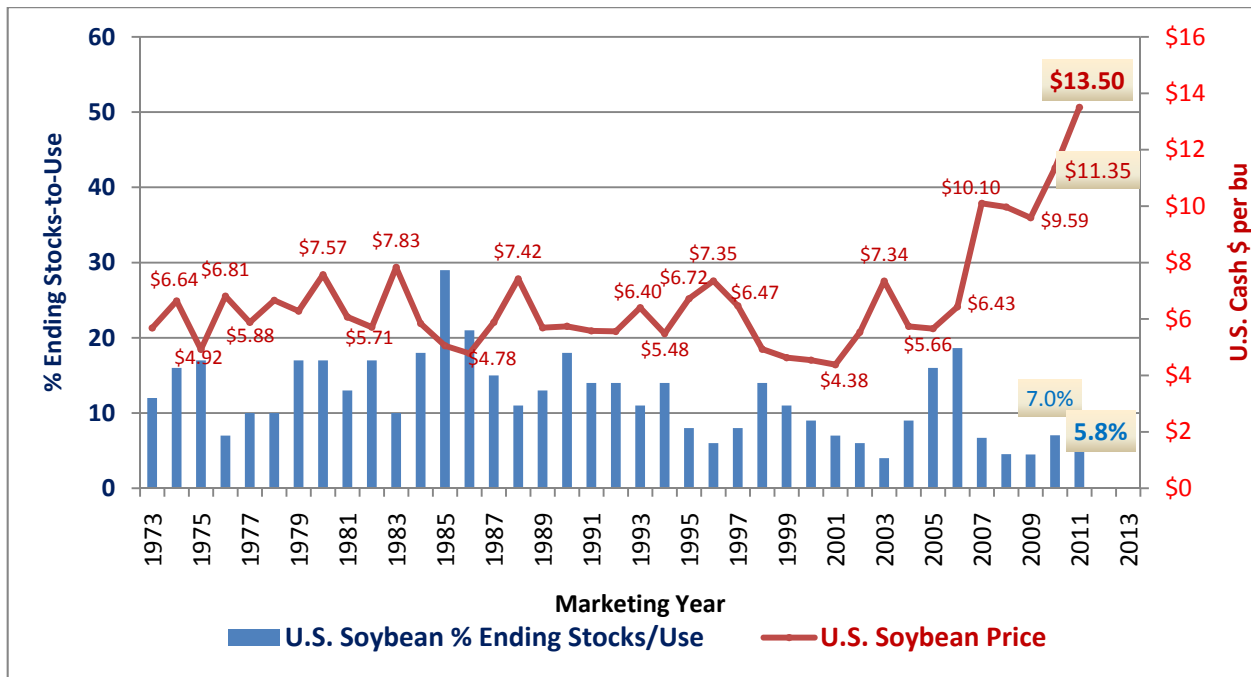


Figure 5. World Soybean Usage & Ending Stocks: MY 2007/08 thru MY 2011/12
(August 11, 2011 USDA WASDE Report)

