USDA January Reports: Corn & Grain Sorghum Market Impacts

Daniel O'Brien – Extension Agricultural Economist, K-State Research and Extension

January 13, 2012

Summary

Although U.S. corn supply-demand balances are the second tightest since the early 1970s, corn and grain sorghum prices are still projected at record highs for the 2011/12 marketing year. This remains true although U.S. cash feedgrain prices have declined markedly since the 2011 harvest. Recently grain markets in general and feedgrain markets in particular have been negatively affected by a) worries about the U.S. and World economic and financial system, b) the availability of at least temporarily ample post-harvest corn supplies in many parts of the county, and c) increasing supplies and export competition from foreign feedgrain and feed-quality wheat supplies.

MY 2011/12 U.S. Corn Supply-Demand Balances: In its December WASDE report the USDA projected that significant price rationing will occur in the 2011/12 marketing year, with marked reductions in projected livestock feed use (4.6 billion bushels or bb, down 4.0%) and exports (1.6 bb, down 12.8%). However, corn ethanol usage (5.0 bb, down 0.4%) and non-ethanol food-seed-industrial use (1.405 bb) are projected to decline only marginally. The inflexible demand for corn ethanol usage is driven largely by existing U.S. government ethanol usage policies, parts of which are at risk in 2012.

U.S. corn ending stocks are projected to be 848 million bushels (mb) for MY 2011/12, with % ending stocks-to-use falling to 6.7%. Although November ending stocks and stocks-to-use are up markedly from USDA September projections (i.e., 672 mb and 5.3% S/U, respectively), they still represent the lowest stocks estimates since the record lows in MY 1995/96 (426 mb and 5.0% stocks-to-use). The USDA lowered its projection of U.S. average corn prices for the 2011/12 marketing year by $0.30 per bushel on each end of the range, down to $5.90-$6.90 per bushel. Even with recent feedgrain price declines, projected U.S. corn prices are still record high, being above the previous record of $5.18 /bu in MY 2010/11. USDA projections are down from the $6.50-$7.50 range in the September 2011.

MY 2011/12 U.S. Grain Sorghum Supply-Demand Balances: USDA projections of U.S. grain sorghum exports for MY 2011/12 of 70 mb decreased by 20 mb, but are offset by an equal increase in feed and residual usage (up to 85 mb). Ending stocks for MY 2011/12 are projected at minimal logistical levels (28 mb), with projected MY 2011/12 prices declining along with corn to $5.70-$6.70 per bushel.

Feedgrain Market Prospects for 2011/12: Broader economic and financial market trends are impacting all commodity markets at this time, and serve as a major threat to feedgrain markets should economic conditions worsen. In spite of seasonal harvest weakness that has occurred during October-November 2011, prospects are for tight supply-demand conditions and a continuation of historically high feedgrain prices from December 2011 through spring-summer 2012. Strong pressure will occur to at least maintain if not significantly increase 2012 U.S. corn acreage to attempt to replenish U.S. corn supply-demand balances in the 2012/13 marketing year. Because of this, 2012 grain markets are likely be extremely sensitive to any weather threats to 2012 U.S. corn crop. If per chance dry conditions were to continue in the U.S. in 2012 in key corn and grain sorghum production areas, high and volatile feedgrain prices would also occur, with the likelihood of major negative consequences occurring in domestic feedgrain using industries.

I. U.S. Corn Market Situation and Outlook

A. **No Changes in 2011 U.S. Corn Production Estimates**: In its January 12th Crop Production Summary report for 2011, the USDA National Agricultural Statistical Service (NASS) increased in its projection of 2011 U.S. corn production by 48 million bushels (mb) to 12.385 billion bushels (bb) (**see Table 1**).

a. **U.S. 2011 Corn Planted Acreage = 91.9 million acres**: USDA NASS has projected that farmers in the United States planted 91.921 million acres (ma) of corn in 2011, up 24 ma from the December Crop Production report, and up 4.2% from 88.192 ma in 2010. This is the largest amount of U.S. corn planted acreage since the 2007 record high of 93.5 ma.

b. **U.S. 2011 Corn Harvested Acreage = 83.9 ma**: USDA NASS has projected that the U.S. would harvest 83.981 ma of corn in 2011, up 45 ma from December, and up 3.1% from 81.446 ma in 2010. This is the largest amount of U.S. corn harvested acreage since the 2007 record high of 86.5 ma.

c. **U.S. 2011 Corn Yields = 147.2 bu/acre**: USDA NASS has projected 2011 U.S. corn yields at 147.2 bu/acre, up 0.5 bu. from 146.7 in December, and less than 152.8 bu/ac in 2010. This is the lowest average U.S. Corn yield since 147.9 bu/ac in 2005 and 142.2 bu/ac in 2003.

i. The 2011 U.S. corn yield of 147.2 bu/ac is 10.6% less than the record high yield of 164.7 bu/ac in 2009. That record high in 2009 is 7% higher than the next highest yield of 153.9 bu/ac (2008) during this period, and 8.9% higher than the average yield of 151.2 bu/ac for other year's yields since 2007.

Comments on lowering trend line yield "targets": Early season expectations of U.S. trendline yields of 165 bu/ac or more since 2009 have not been met in either 2010 or 2011, and will effectively lead to lower trendline corn yield projections for 2012 and succeeding years.

d. **U.S. 2011 Corn Production = 12.358 billion bushels**: USDA NASS has projected 2011 U.S. corn production to be 12.358 bb, up from the December estimate of 12.310 bb. Over the last 5 years, U.S. corn production has been 13.038 bb in 2007, 12.092 bb in 2008, 13.092 bb in 2009, 12.447 bb in 2010, and is now projected to be 12.358 bb in 2011.

i. At 12.358 bb, 2011 U.S. corn production is the fourth largest U.S. corn crop in history, trailing only 2007, 2009 and 2010.

Comments of "flatline" U.S. corn production in recent years: The inability since 2009 to meet U.S. trendline yields of 165 bu/ac or more has caused a dramatic tightening of U.S. corn ending stocks and % ending stocks-to-use in MY 2010/11 and again in MY 2011/12. Either a) a return to trendline U.S. corn yields, b) large increases in U.S. corn acreage, or c) sizable reductions in U.S. corn usage will be needed to rebuild U.S. corn stocks in MY 2012/13 and later years.

B. **"New Crop" U.S. Corn Supply-Demand for MY 2011/12**: The USDA World Agricultural Outlook Board made significant changes to U.S. corn supply-demand balances in its January 12th WASDE report (**Table 1 & Figure 1**). Although U.S. corn price prospects have declined since late summer 2011, the USDA's projections of U.S. corn supply-demand balances reflect the expected rationing influence of historically high U.S. corn prices on U.S. corn usage in MY 2011/12.

a. **U.S. Corn Total Supplies for MY 2011/12 = 13.501 bb**: With projected MY 2011/12 beginning stocks of 1.128 bb (the lowest since 958 mb in MY 2004/05), 2011 production of 12.358 bb, and imports of 15 mb, total supplies of U.S. corn for MY 2011/12 are projected to be 13.501 bb.

   i. Projected total U.S. corn supplies of 13.501 bb for MY 2011/12 is less than 14.182 bb in MY 2010/11 and 14.774 bb in MY 2009/10, and would be the lowest since 12.510 bb in MY 2006/07. Overall, U.S. corn total supplies for MY 2011/12 of 13.501 bb are 5.3% below the four year average of 14.262 bb U.S. total supplies for MY 2007/08 through MY 2010/11 (**Table 1 & Figure 2**).

      Comments on risky 2012 U.S. corn production prospects: The combination of moderately tight beginning stocks (following a shorter than expected corn crop in 2010) and lower than anticipated production has led to the current tight, "at risk" supply-demand balance situation for U.S. corn in MY 2011/12. Prospects for extremely tight beginning stocks for the next marketing year (i.e., MY 2012/13) are likely to cause anxious responses and price volatility in feedgrain markets in response to any weather threat to 2012 U.S. corn planting and production during spring – summer 2012.

b. **Total Corn Use Down to 12.655 bb in MY 2011/12**: The USDA projected higher U.S. corn exports than in previous reports and that price rationing would cause reductions in U.S. corn usage in order to maintain minimal required ending stocks levels during the coming summer months (July-August-September of 2012) (**Table 1 & Figure 1**).

   i. Ethanol Use = 5.000 bb: The USDA left unchanged its projection of U.S. corn usage for ethanol in MY 2011/12 at 5.00 bb. This projection is down marginally from 5.021 bb for MY 2010/11, but up from 4.591 bb in MY 2009/10. If this projection holds true, it would be the first year-to-year reduction in U.S. corn ethanol usage since the record tight ending stocks-to-use year of MY 1995/96.

      Comments on recent U.S. ethanol production trends: Ethanol production in the U.S. has been ranging from 930 to 962 thousand barrels or 39.060 to 40.404 million gallons per day since late November 2011. Assuming 2.8 gallons of ethanol per bushel of corn, this pace of ethanol production requires 13.95 to 14.43 million bushels of corn daily, which would be on pace for 5.078 to 5.267 bb of corn for ethanol use.

      Given that the pace of U.S. ethanol production was slower during September-mid November 2011 and the uncertainty of demand and production for the remainder of MY 2011/12 (i.e., through August 31st), the USDA's production of 5.00 bb ethanol use is likely judicious. But if the current strong pace of U.S. ethanol production continues it could positively affect corn ethanol usage and negatively affect U.S. corn ending stocks for MY 2011/12.

   ii. Non-ethanol FSI Use = 1.405 bb: The USDA maintained its projection of non-ethanol food, seed and industrial use of corn in MY 2011/12 at 1.405 bb. This amount of non-ethanol FSI use is marginally less than 1.407 bb of corn used for ethanol production in MY 2010/11, and just under the record large amounts of 1.416-1.422 bb during the MY 2005/06-MY 2006/07 period.

   iii. Export Use = 1.650 bb: The USDA raised its projection of U.S. corn exports in MY 2011/12 by 50 mb to 1.650 bb, which is still down from 1.835 bb in MY 2010/11 and 1.980 bb in MY 2009/10. If this projection holds true, it would be the 5th lowest amount of U.S. corn exports since MY 1987/88 – following 1.584 bb in MY 1991/92, 1.328 bb in MY 1993/93, 1.504 bb in MY 1997/98, and 1.588 bb in MY 2002/03.

Commentary on how South American drought may impact U.S. corn exports: Concerns about the impact of dry conditions in Argentina and Brazil upon feedgrain production and export prospects are pointing towards even larger increases in projected U.S. corn exports in future USDA WASDE reports. It is very possible that U.S. corn export projections in MY 2011/12 could increase by another 50 mb to 1.700 bb in MY 2011/12 in future USDA WASDE reports.

If this were to happen, then all else being equal, total use would increase to 12.705 bb, ending stocks would drop to 796 mb, and U.S. corn % ending stocks-to-use for MY 2011/12 would decline to 6.3%. Similarly, a 100 mb increase in U.S. corn exports would cut ending stocks to 746 mb, and % ending stocks-to-use to 5.8% at the end of the 2011/12 corn marketing year.

iv. Feed & Residual Use = 4.600 bb: The USDA projects MY 2011/12 U.S. corn feed and residual use to be 4.600 bb, down from 4.792 bb in MY 2010/11 and from 5.125 bb in MY 2009/10. If this projection holds true, it would be lowest amount of U.S. corn feed and residual use since 4.692 bb in MY 1995/96.

Comments on declining direct feed use of U.S. corn: This reduction in U.S. livestock direct feed usage of corn continues the year-to-year downward trend from the record high of 6.135 bb in MY 2004/05. The increased availability of distillers grains from ethanol production for domestic livestock feeding has to some degree offset this reduction in direct U.S. corn livestock feed use.

Although the results of the December 1st USDA Grain Stocks report indicate smaller U.S. corn usage during the September-November 2011 period than had been expected, no changes were made in projected MY 2011/12 U.S. corn usage of 4.6 billion bushels. For consistency, if coming USDA Grain Stocks reports for March 1st and June 1st continue to project lower than expected U.S. corn usage for feed, then the 4.6 bb projection for MY 2011/12 will need to be reduced.

v. Total Corn Use = 12.655 bb: For MY 2011/12, the USDA projects that total use of corn will be 12.655 bb, up 50 mb from December, and down from 13.055 bb in MY 2010/11 and 13.066 bb in MY 2009/10. This would be the smallest amount of U.S. total corn usage since 12.056 bb in MY 2008/09 and 12.737 bb in MY 2007/08.

Comments on USDA projections of price-induced rationing of U.S. corn use in MY 2011/12: As 2011 U.S. corn production prospects moderated over the summer months, the USDA proactively reduced or "rationed" its projected usage of U.S. corn for MY 2011/12. In doing so, it is likely that the USDA is anticipating that a number of factors will work together to bring about U.S. corn usage reductions. These include a) the inflexibility of demand and price responsiveness of U.S. gasoline demand, b) projected changes in livestock feeding inventories, livestock/meat prices and projections of livestock feeding profitability across various livestock species, c) continued strength of consumer demand for processed corn products, and d) the value of the U.S. dollar relative to the currencies of countries involved in World coarse grain export / import trade.

Compared to MY 2010/11, the USDA is projecting that U.S. corn exports while be rationed proportionally more than other categories of usage. Compared to MY 2010/11, total corn use in MY 2011/12 of 12.655 bb is projected to be down 3.1%. By category, U.S. corn exports of 1.650 bb are projected to be down 10.1%, while direct livestock feed use of 4.600 bb is projected to be down 4.0%. Ethanol use of corn of 5.000 bb is projected to decline only 0.4%, and non-ethanol food-seed-industrial use of corn of 1.405 bb is essentially equal to the previous marketing year.

These projections are consistent with the broader idea that higher corn prices will continue to ration usage to such a degree so as to ensure that adequate supplies of corn will exist in the summer of 2012 (the end of MY 2011/12). If such rationing of U.S. corn usage does **not** occur, it is possible that serious feedgrain supply shortages could occur in summer 2012 to the degree that domestic agricultural industries that rely on corn inputs would be temporarily disrupted or shut down for lack of available corn inputs at affordable prices.

c. **Recent Corn Use Trends**: Recent USDA projections of tighter livestock feeding of corn in MY 2011/12 are a continuation of a seven year downward trend (since MY 2004/05) in direct corn feed usage by the U.S. livestock industry (**Figure 1**). Exports of U.S. corn are projected to decline for the second consecutive year (since MY 2009/10). Year-to-year increases in corn ethanol usage are projected to moderate in response to high corn input prices, likely ethanol policy changes, and prospects for moderation in the growth of U.S. gasoline demand.

C. **"New Crop" Ending Stocks (846 mb) & Ending Stocks-to-Use (6.7%)**: The USDA projects MY 2011/12 ending stocks to be 846 mb, down just 2 mb from the December WASDE, and down from 1.128 bb in MY 2010/11 and from 1.708 bb in MY 2009/10. The MY 2011/12 projection equals 6.7% ending stocks-to-use, essentially unchanged from the December WASDE, but up from the USDA's August 2011 projection of 5.3%. Still, this projection of 6.7% ending stocks-to-use in MY 2011/12 is the second lowest on record since the early 1970s (i.e., compared to the record low of 5.0% in MY 1995/96), and is down from 8.6% in MY 2010/11, and from 13.1% in MY 2009/10 (**Figure 2**).

Comments on possibility of % stocks-to-use declining to historic lows in late MY 2011/12: It is still possible that % ending stocks to use levels of 5.0% or less may occur in MY 2011/12 for a number of plausible reasons. **If** greater actual usage of U.S. corn in any of the major categories than is currently projected, **then** there is a possibility of new record low U.S. corn % ending stocks-to-use occurring (i.e., below 5.0%) in MY 2011/12.

Whereas uncertainty about estimates of U.S. corn production typically are mostly resolved by the January crop production reports, questions about whether the rate of grain usage will lead to reductions in ending stocks are "worked through" in the cash market in the later part of the marketing year. If corn usage is on a more rapid pace than can be sustained to maintain a level of 6.7% endings stocks-to-use for MY 2011/12, then it will likely be reflected in cash corn basis bids, the pace of U.S. corn exports, and weekly U.S. ethanol production and inventory figures. Upcoming USDA quarterly stocks reports for March 1st, June 1st and September 1st of 2012 are likely to play an increasingly important role in determination of U.S. feedgrain supply-demand balances.

D. **"New Crop" MY 2011/12 U.S. Corn Prices = $5.70-$6.70 /bu.**: Although USDA projections of U.S. corn prices for MY 2011/12 have trended lower since earlier this summer, they continue to be at record highs – reflecting the recent two year trend toward tightening of U.S. corn ending stocks-to-use. The trend which began in MY 2010/11 has continued in MY 2011/12, and could possibly persist into MY 2012/13 (**Table 1 & Figure 2**).

a. The USDA projected MY 2011/12 U.S. average corn prices to in the range of **$5.70-$6.70 per bushel**, down $0.20 on each end of the range from December. Current projections of MY 2011/12 prices of $5.70-$6.70 per bushel are up from $3.55 in MY 2009/10 and $5.18 in MY 2010/11.

Comments on carryover support for wheat prices from the corn market: Tight corn supplies and high corn prices have provided carryover support for U.S. and World wheat market prices. However, current USDA projections of U.S. wheat feeding are markedly lower than in the September WASDE report in late summer – early fall 2011. As has been stated in earlier KSU grain market newsletters, by responding to high corn prices the wheat market appears to be tacitly acknowledging the possibility that large amounts of U.S. wheat feeding ***could*** be fed in the later part or summer months of MY 2011/12 to make up for the lower than expected 2011 U.S. corn crop and historically tight MY 2011/12 corn ending stocks.

E. **World Corn and Coarse Grain Supply-Demand Trends**: World and U.S. demand growth in the form of bioenergy use and livestock feeding is a key factor explaining continued record high U.S. corn prices – although corn prices have declined appreciably this fall. (**Figure 3**). This resilient growth trend has occurred even though historically high corn / coarse grain prices occurred in 2008 and again in 2010-11.

   a. **World Corn Supply-Demand Balances**: Projected World corn production (868 mmt) for MY 2011/12 is up 0.5 mmt from December, and also up markedly from 827 mmt from MY 2010/11 and 819 mmt from MY 2009/10. Projected World corn use of 868 mmt declined 0.6 mmt from December, but is up from 843 mmt in MY 2010/11 and 823 mmt in MY 2009/10. Projected World corn ending stocks of 128 mmt for MY 2011/12, are essentially unchanged from MY 2010/11, but down sharply from 144 mmt in MY 2009/10. Whereas ending stocks are unchanged over the last couple marketing years, due to growing usage World corn % ending stocks-to-use are project to decline to 14.8% in MY 2011/12, down from 15.2% in MY 2010/11 and from 17.5% in MY 2009/10.

   Comments on declining World corn ending stocks & future trends in corn prices: Persistent growth of 2.4% annually has occurred in World usage for corn since MY 2007/08 through periods of both high and low prices. In MY 2011/12 World corn production of 868.06 mmt is projected to be essentially equal to World corn usage of 867.98 mmt, resulting in essentially level ending stocks with the previous marketing year, but lower % ending stocks-to-use (due to the year over year growth in usage). Absent a broader slowdown in the World economy that could limit corn usage, it is likely that the developing situation of tight World corn supply-demand balances will persist for the foreseeable future – providing continued support for U.S. and World corn prices.

   b. **World Coarse Grain Supply-Demand Balances**: Projected World coarse grain production (1,146 mmt) and total supplies (1,311 mmt) for MY 2011/12 were up marginally from December. However, World coarse grain production of 1,146 mmt in MY 2011/12 is up from 1,097 mmt in MY 2010/11 and 1,116 mmt in MY 2009/10. World coarse grain supplies have not increased as much in a relative sense, as total supplies of 1,311 mmt in MY 2011/12 compare to 1,293 mmt in MY 2010/11 and 1,310 mmt in MY 2009/10. The category of "coarse grains" includes corn, grain sorghum, barley, oats, rye and mixed grains.

   Projected World coarse grain use decreased 1.1 mmt from December to 1,150 mmt in MY 2011/12, but is up from 1,129 in MY 2010/11 and 1,114 mmt in MY 2009/10. These changes leave projected World coarse grain ending stocks at 161.83 mmt in MY 2011/12, up 1.17 mmt from December, but down from 165.88 mmt in MY 2010/11 and from 195.33 mmt in MY 2009/10. World coarse grain % ending stocks-to-use is estimated at 14.1% in MY 2011/12, down from 14.7% in MY 2010/11 and from 17.5% in MY 2009/10.

   c. **Foreign Coarse Grain Supply-Demand Trends**: Larger foreign coarse grain production of 637 mmt in MY 2011/12 (up from 592 mmt last year) and total supplies of 810 mmt (up from 765 mmt a year ago), combined with a increase in foreign usage of 859 mmb (up from 829 mmt last year) lead to increased foreign coarse grain ending stocks of 186 mmt in MY 2011/12 (up from 176 mmt last year). Foreign coarse grain % ending stocks-to-use is steady to increasing over the last 3 marketing years, moving from 28.4% S/U in MY 2009/10 to 28.3% S/U in MY 2010/11 to 28.7% S/U in MY 2011/12.

Comments on the impact of increased foreign coarse grain production on World exports: Projections of foreign coarse grain production have increased markedly since early summer 2011 - from 795.4 mmt in June up to 821.9 mmt in December, and now down marginally to 821.87 mmt in January 2012.

Because of increasing foreign production, projected World exports of coarse grains for MY 2011/12 have increased from 114.3 mmt in June 2011 up to 118.6 in January 2012, at the same time that U.S. coarse grain export prospects had generally declined (until the January 2012 report) - down from a projection of 49.42 mmt in June to 42.69 mmt in December, but then back up to 43.70 mmt in January. Since MY 2010/11 increased foreign coarse grain production and total supplies have more than offset the decrease in combined U.S. corn, grain sorghum, barley and oat production and total supplies. Since the 2010/11 marketing year, increases in foreign coarse grain exports have more than offset decreases in U.S. feedgrain export trade (**Figure 3**).

C. **Persistence of Tight Supply-Demand for Corn into MY 2012/13**: Given a) the likelihood of the persistence of historically tight ending stocks for U.S. corn in MY 2011/12, b) competition for U.S. crop acres from soybeans and other crops in spring 2012, and c) the likelihood crop production risk concerns to occur sometime during the 2012 growing season, ***market concerns about the adequacy of U.S. corn supplies and supply-demand balances are likely to persist into MY 2012/13***, and continue to cause corn market price volatility throughout the 2012 U.S. corn planting and growing season.

****

Table 1. U.S. Corn Supply-Demand Balance Sheet: MY 2007/08 through MY 2011/12
(January 12, 2012 USDA WASDE Report)

Item	2007/08	2008/09	2009/10	2010/11	2011/12
Planted Area (million acres)	93.5	86.0	86.4	88.2	91.9
Harvested Area (million acres)	86.5	78.6	79.5	81.4	84.0
Yield per harvested acre (bushels/acre)	150.7	153.9	164.7	152.8	147.2
	million bushels				
Beginning Stocks	1,304	1,624	1,673	1,708	1,128
Production	13,038	12,092	13,092	12,447	12,358
Imports	20	14	8	27	15
Total Supply	14,362	13,729	14,774	14,182	13,501
Ethanol for fuel	3,049	3,709	4,591	5,021	5,000
Non-ethanol Food, Seed & Industrial	1,393	1,316	1,370	1,407	1,405
Exports	2,437	1,849	1,980	1,835	1,650
Feed & Residual	5,858	5,182	5,125	4,793	4,600
Total Use	12,737	12,056	13,066	13,055	12,655
Ending Stocks	1,624	1,673	1,708	1,128	846
% Ending Stocks-to-Total Use	12.8%	13.9%	13.1%	8.6%	6.7%
U.S. Average Farm Price ($/bushel)	$4.20	$4.06	$3.55	$5.18	$5.70-$6.70 *Midpoint =* *$6.20*

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

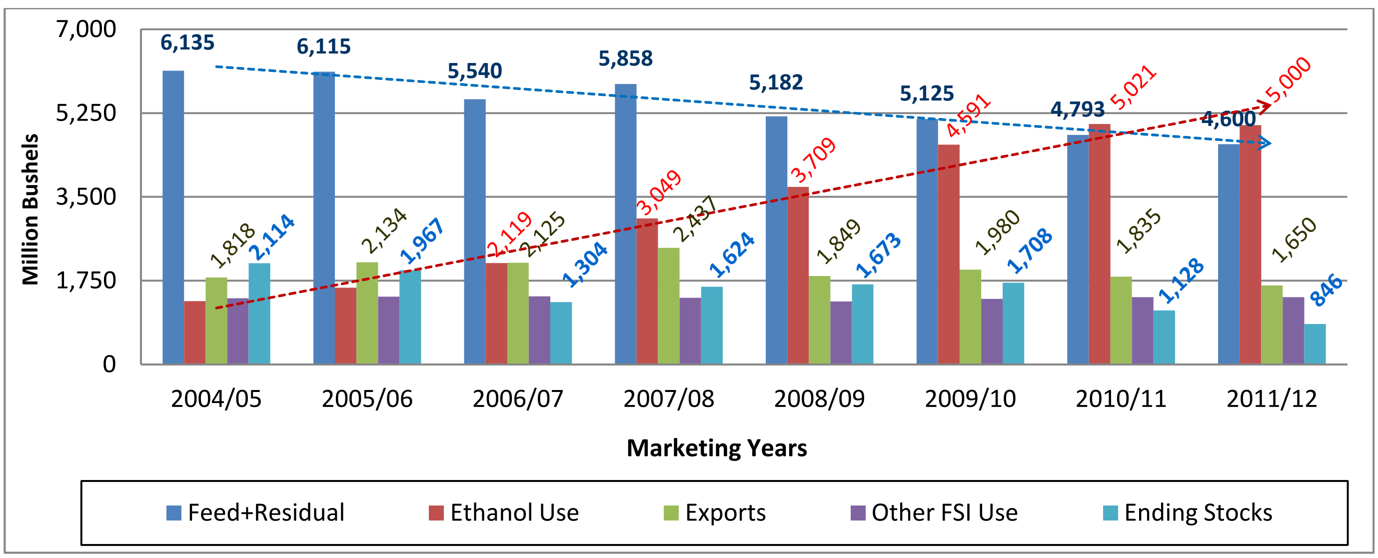


Figure 2. U.S. Corn Ending Stocks vs U.S. Avg. Cash Prices: MY 1973/74 through MY 2011/12
(January 12, 2012 USDA WASDE Report)

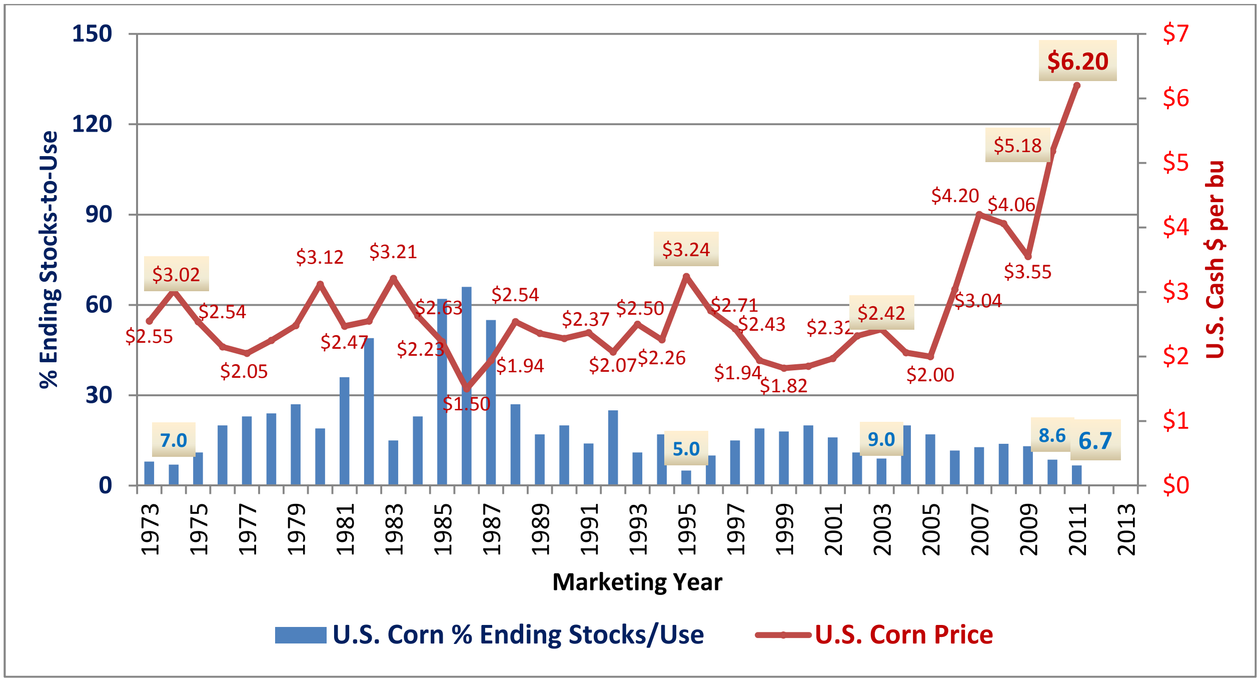
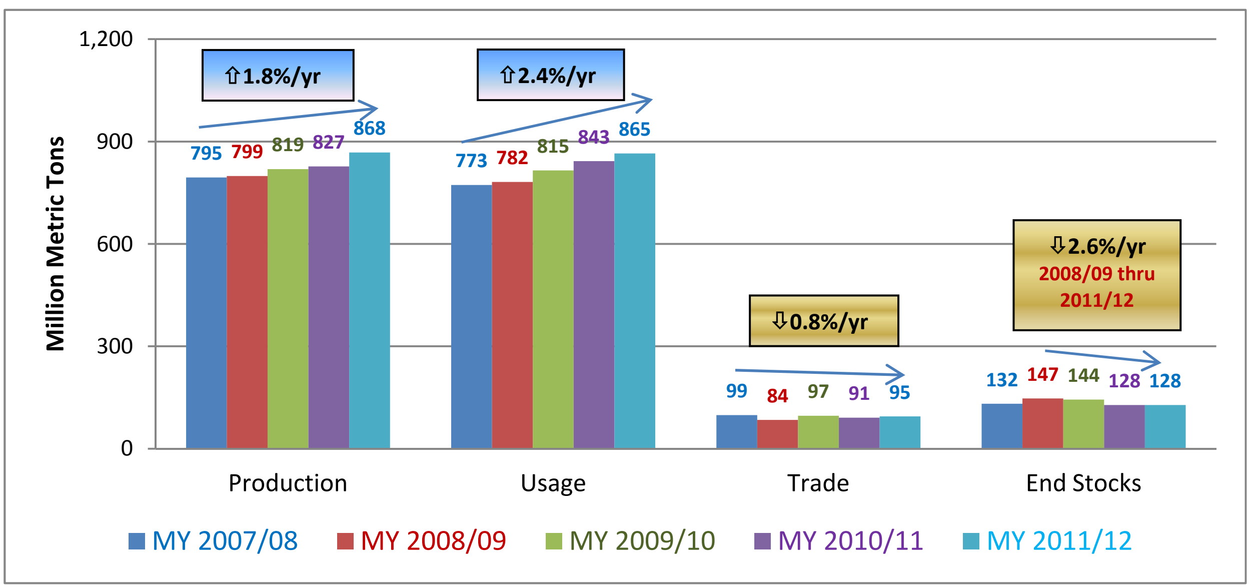


Figure 3. World Corn Usage & Ending Stocks: MY 2007/08 thru MY 2011/12
(January 12, 2012 USDA WASDE Report)



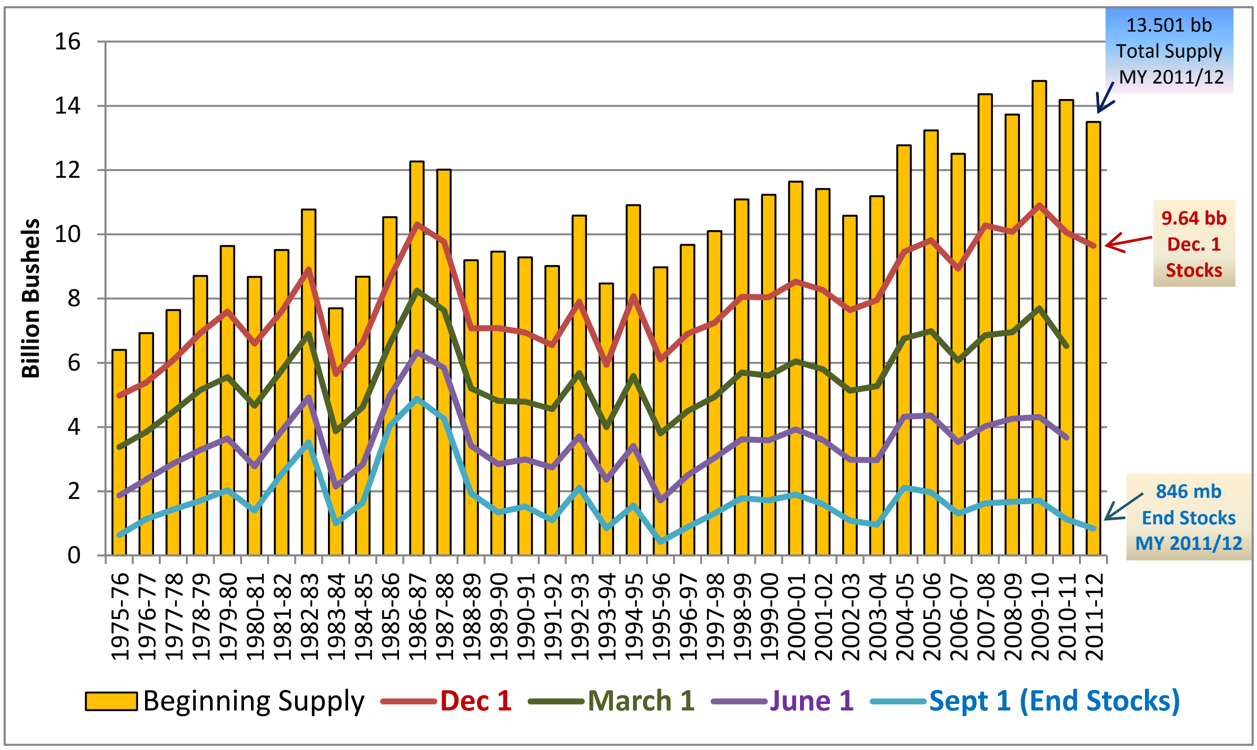
II. U.S. Corn Stocks on December 1st 2011

Corn Stocks In its January 12th Grain Stocks report, the USDA National Agricultural Statistical Service (NASS) estimated U.S. corn stocks in all positions on December 1, 2011 to be 9.642 (bb), down 4.1% from a year ago (Figure 1). The 9.642 bb December 1st corn stocks figure was 281 mb or 2.7% larger than average pre-report expectations of private analysts, but lower than the upper end of the prereport estimate range (i.e., from 9.200 to 9.700 bb). Of this total, 6.175 bb were stored on farms, with 3.467 bb stored off farms in commercial facilities. **Figure 4** shows generally increasing trends for U.S. total supplies and quarterly corn stocks on December 1st and March 1st since the mid-1990s, a slower rate of increase or "leveling off" of June 1st corn stocks, and steady to slightly lower September 1st corn stocks since MY 2004-05.

December 1st U.S. corn stocks of 9.642 bb was the smallest amount of U.S. December 1st corn stocks since 2006, being less than the average (9.981 bb) and median (10.064 bb) U.S. December 1st stocks estimates for MY 2006/07 through MY 2010/11 – which have ranged from 8.933 bb in MY 2006/07 to 10.902 bb in MY 2009/10.

Figure 4. U.S. Corn Total Supply & Quarterly Stocks: MY 1975/76 through MY 2011/12

(January 12, 2012 USDA NASS Quarterly Stocks & WASDE Reports)

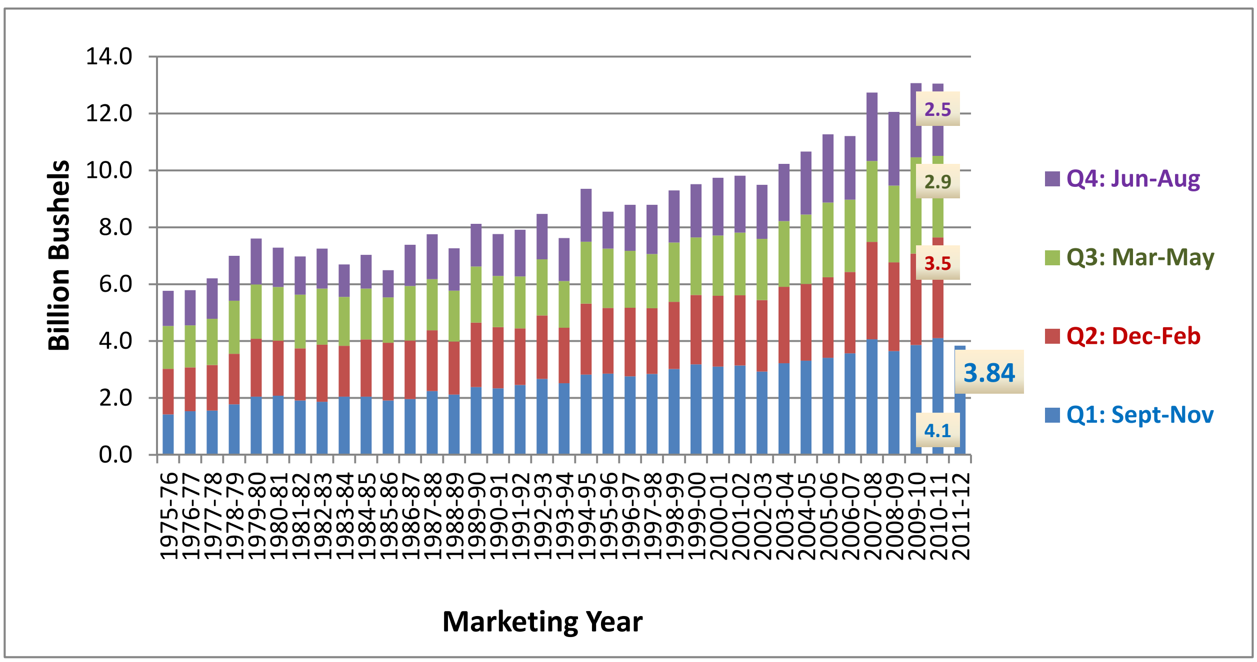


Corn Usage: A total of 3.840 bb of U.S. corn was used during the September-November 2011 period (**Figure 5**). September-November 2011 U.S. corn usage of 3.840 bb was essentially an average amount of usage for this period in recent years, compared to the average (3.848 bb) and median (3.852 bb) Sept-Nov usage estimates for MY 2006/07 through MY 2010/11. Sept-Nov usage has ranged from 3.567 bb in MY 2006/07 to 4.103 bb in MY 2010/11. However, given trends in ethanol usage and exports during the September-November 2011 period, market analysis were implicitly expecting usage closer to 4.12 bb, ranging from 3.784 to 4.282 bb.

Comments on differences between USDA and pre-report expectations of Sept-Nov 2011 corn use: A number of factors could account for the differential between private pre-report estimates and the actual public USDA December 1st 2011 corn stocks and implied usage estimates. First, it is possible that survey methods used by the USDA to estimate on-farm storage quantities have enough of a range in error that such differentials are inevitable. Second, it is also possible that differences in crop quality from year to year have caused estimation and results calibration problems for the USDA, especially when such years as 2009 produced large amounts of low test weight, poor quality corn to account for.

Third, it is also possible the expansion of ethanol since MY 2006/07 with the subsequent ready availability of distillers grains for livestock feed use are having a confounding affect on survey procedures and the ability of the USDA to accurately measure the "feed and residual" segment of U.S. corn usage. Finally, it could be that the USDA is just correct, and the private analysts need to figure out what systematic error(s) they/we are committing in developing pre-report estimates of corn feed and residual usage. Regardless of the reason, the consistent variance between private and public sources on quarterly stocks estimates that have been occurring in the last 1-2 marketing years seemingly is leading to a discounting of the relevance and credibility of USDA Quarterly Stocks reports findings by a number of private analysts.

Figure 5. U.S. Corn Quarterly Disappearance: MY 1975/76 through MY 2011/12
(January 12, 2012 USDA NASS Quarterly Stocks Report)



The 3.840 bb of U.S. corn usage during September-November 2011 represents 30.5% of projected total corn usage during MY 2011/12, down from 31.4% the previous year, and less than the average of 30.9% for the MY 2006/07 through MY 2010/11 period. Only in MY 2009/10 was the percent of total marketing year corn use in September – November lower (29.6%).

Market Impacts of the Corn Stocks Report: Although the USDA NASS U.S. December 1st corn stocks estimate of 9.642 bb was markedly above pre-report estimates, it was still below the average for since MY 2006/07. This larger than expected December 1st stocks estimate is was interpreted as bearish to price prospects by the corn market, which was reflected by the initial reaction on Thursday, January 12th in lead futures contracts (i.e., limit down moves on lead old crop contract months). However, other factors associated with 2012 corn crop prospects in South America and the United States appear to be positioned to become the focus of grain markets in coming months. In other words, although the December 1st stocks number indicates weaker livestock feed usage thatn many market watchers had expected, the negative price impact may be short lived as issues related to planted acreage and U.S. crop development prospects take central focus in the corn market for 2012.

III. U.S. Grain Sorghum Market Situation and Outlook

A. **2011 U.S. Grain Sorghum Production Prospects**: The USDA National Agricultural Statistics Service made no changes in its 2011 U.S. grain sorghum yield and production projections in the December Crop Production Report. However, it is still possible that such changes could be made in the The January 2012 USDA NASS Crop Production Summary report.

   a. **Lower Yields & Unchanged Production**: The USDA has projected 2011 U.S. grain sorghum planted acreage to be 5.467 million acres (ma), up from 5.404 ma in 2010 (**Table 2**). Grain sorghum harvested acreage in 2011 is estimated to be 4.432 ma, down from 4.808 ma in 2010. Average yield of grain sorghum in the U.S. in 2011 is projected to 55.5 bu/ac, down from 71.8 bu in 2010 and 69.4 bu in 2009. United States grain sorghum production in 2011 is projected to be 246 mb, which is down from 3454 mb in 2010 and 383 mb in 2009. Extreme drought in the central and southern plains of the U.S. as well as competition from other crops for planted acreage are primary factors leading to the decline in U.S. grain sorghum production in 2011.

B. **MY 2011/12 U.S. Grain Sorghum Supply-Demand Balances**: On a year-to-year basis, marginally larger grain sorghum production and total supplies have necessitated that reductions occur in U.S. grain sorghum exports, food-seed-industrial usage, and livestock feed use. Projected U.S. ending stocks of grain sorghum have been consistently in the 27-28 mb range, reflecting minimum pipeline supplies (**Table 2**).

   In the December WASDE report the USDA projected for MY 2011/12 reductions in grain sorghum exports would be offset wholly by increases in feed and residual usage. In the December report, the USDA projected feed and residual use of 85 mb, up 20 mb from November, but down from 124 mb in MY 2010/11 and 141 mb in MY 2009/10. United States grain sorghum exports for MY 2011/12 are projected to be 70 mb, down 20 mb from November, and less than 150 mb in MY 2010/11 and 166 mb in MY 2009/10. Food, seed and industrial use in the U.S. was projected to be 90 mb for MY 2011/12, which is comparable to 85 mb FSI use in MY 2010/11 and 90 mb FSI use in MY2009/10. Projected total U.S. grain sorghum use in MY 2011/12 of 245 mb is less than 359 mb in MY 2010/11 and 396 mb in MY 2009/10.

   a. Reduced Grain Sorghum Usage Trends: The declining availability of U.S. grain sorghum supplies is causing reductions in U.S. grain sorghum usage in several major industries. All types or categories of grain sorghum usage have declined substantially since at least MY 2009/10 (**Figure 4**).

C. **<u>Ending Stocks-to-Use & Grain Sorghum Prices</u>**: Projected MY 2011/12 U.S. grain sorghum prices have closely followed movements and trends in the U.S. corn markets – driven by tightening of U.S. feedgrain (corn, grain sorghum, barley and oats) ending stocks-to-use. The trend toward lower U.S. grain sorghum stocks which began in MY 2009/10 has continued in MY 2011/12, and is very likely to persist into MY 2012/13 (**Table 2**).

a. **Ending stocks** were projected at 28 mb (11.4% S/U) in MY 2011/12, compared to 27 mb (7.5% S/U) in MY 2010/11 and 41 mb (10.4% S/U) in MY 2009/10.

<u>Commentary</u>: The projected MY 2011/12 % ending stocks-to-use of 11.4% is higher than the current and historic minimum levels for corn (i.e., 6.7% and 5.0% S/U, respectively). That said, the current amount of U.S. grain sorghum ending stocks for MY 2011/12 is likely at minimum pipeline levels necessary for logistical needs.

b. The USDA projected <u>MY 2011/12 U.S. average grain sorghum prices</u> to be record high in the range of **$5.70-$6.70 per bushel**, down $0.30 on each end of the range from November, and up from $5.02 in MY 2010/11 and from $3.22 in MY 2009/10.

D. **<u>World Grain Sorghum Supply-Demand Trends</u>**: World grain sorghum usage and production have not been increasing since MY 2007/08, but rather appear to have been generally declining over the time period (**Figure 5**). It is noteworthy that World grain sorghum production has fallen at nearly twice as fast a rate as has World grain sorghum usage.

World grain sorghum trade and ending stocks have also been trending lower over the same period (since MY 2007/08) at somewhat larger rates percentage rates than have occurred for production and total usage. World grain sorghum exports have fallen nearly twice as rapidly as World grain sorghum ending stocks. Grain sorghum is competing with corn for acreage in the U.S. and in foreign countries, with corn gaining cropland area and subsequent productive capacity at the expense of grain sorghum and other crops.

Table 2. U.S. Grain Sorghum Supply-Demand Balance Sheet: MY 2007/08 through MY 2011/12
(January 12, 2012 USDA WASDE Report)

Item	2007/08	2008/09	2009/10	2010/11	2011/12
Planted Area (million acres)	7.7	8.3	6.6	5.4	5.5
Harvested Area (million acres)	6.8	7.3	5.5	4.8	3.9
Yield per harvested acre (bu./acre)	73.2	65.0	69.4	71.8	54.6
	million bushels				
Beginning Stocks	32	53	55	41	27
Production	497	472	383	346	214
Total Supply	530	525	438	387	242
Food, Seed & Industrial	35	95	90	85	90
Exports	277	143	166	150	60
Feed & Residual	165	233	141	124	65
Total Use	477	471	396	359	245
Ending Stocks	53	55	41	27	27
% Ending Stocks-to-Total Use	11.1%	11.7%	10.4%	7.5%	12.5%
U.S. Average Farm Price ($/bu.)	$4.08	$3.20	$3.22	$5.02	$5.60-$6.60 *Midpoint =* *$6.10*

Figure 4. Trends in U.S. Grain Sorghum Use & Ending Stocks During MY 2004/05 thru MY 2011/12
(January 12, 2012 USDA WASDE Report)

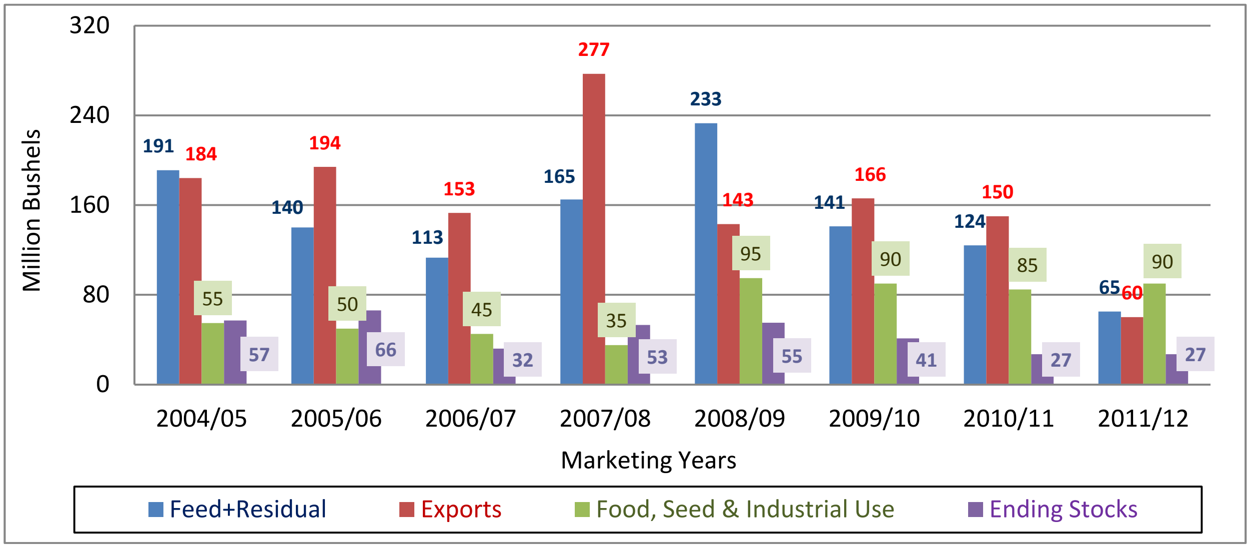


Figure 5. World Grain Sorghum Usage & Ending Stocks: MY 2007/08 thru MY 2011/12
(January 12, 2012 USDA WASDE Report)