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# Sugar and Sweeteners Outlook 

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## U.S. Sugar June 2011

On May 19, 2011, the U.S. Department of Agriculture (USDA) released the World Production, Supply and Distribution (PSD) for centrifugal sugar. World exports are projected to increase 3.1 million metric tons raw value (MTRV) to 55.7 million MTRV in 2011/12. Significant export growth is expected in Brazil, Thailand, and India. At the same time, imports are projected to decline by 3.05 million MTRV in 2011/12. The USDA projects a 2011/12 world sugar surplus (world production less consumption) of 6.480 million MTRV. This surplus builds on the estimated 2010/11 world sugar surplus of 1.626 million MTRV in 2010/11.

On June 9, 2011, the USDA released its latest U.S. and Mexico supply and use estimates for fiscal year (FY) 2011 and projections for FY 2012 in the World Agricultural Supply and Demand Estimates (WASDE) report. In the United States, cane sugar production for FY 2011 was reduced slightly to incorporate the final production estimate from Texas. Projected imports from Mexico for FY 2012 were increased 175,000 short tons, raw value (STRV) to 1.155 million STRV. With no other changes to production, deliveries, or other imports, projected U.S. ending stocks for FY 2012 were increased to 1.056 million STRV, implying an ending stocks-to-use ratio of 9.2 percent.

Imports in Mexico for FY 2011 were increased by 159,000 MTRV, or 150,000 metric tons, tel quel, to reflect the May 25 announcement of the tariff-rate quota by the Secretariat of the Economy (Economia). Ending year stocks for FY 2011 and beginning stocks for FY 2012 were increased by the 159,000 MTRV additional sugar supply. Sugar exports for FY 2012 are in turn projected to increase by 159,000 MTRV to 1.06 million MTRV. Ending stocks are unchanged at 981,000 MTRV, implying a stocks-to-human consumption ratio of 22 percent.

## World Sugar

On May 19, 2011, the U.S. Department of Agriculture (USDA) released the World Production, Supply and Distribution (PSD) for centrifugal sugar. Included in the May 2011 sugar PSD were new supply and use estimates for the 2010/11 marketing year, first projections of supply and use for 2011/12, and some revisions to older data. The USDA bases most of its estimates and projections on information contained in various Sugar Annuals published through Global Agricultural Information Network (GAIN) of USDA's Foreign Agricultural Service (FAS). ${ }^{1}$ These reports for major sugar producing and consuming countries were reviewed in last month's Sugar and Sweetener Outlook, and summaries are provided here in table 1 for major sugar exporters (Brazil, Thailand, Australia, Guatemala, and South Africa) and in table 2 for other major sugar producing and trading countries (India, China, European Union, and Russia).

Table 3 shows supply sources (beginning stocks, production, and imports) and use (exports, domestic consumption, and ending stocks) for major countries and aggregate regions. World exports are projected to increase 3.1 million metric tons raw value (MTRV) to 55.7 million MTRV in 2011/12. Exports from Brazil are expected to grow 1.65 million MTRV to 27.3 million MTRV. Although Brazil sugarcane production is expected to rise by only 2 percent, a greater proportion of WKHcrop - 46.6 percent compared with 45.95 percent in 2010/11 - is forecast to be used for producing sugar instead of ethanol due to better returns from exporting sugar. Resulting sugar production is projected at 3.8 percent higher than last year, up to 39.6 million MTRV.

Sugar production in India for 2011/12 is projected at 28.3 million MTRV. India is in the second year of recovery from the low point of the latest sugar cycle, where production was only 15.95 million MTRV in 2008/09. India is forecast to change from a major importer in 2010/11 (1.2 million MTRV) to a significant exporter of 1.8 million MTRV in 2011/12.

Strong sugar production in Thailand is expected to continue into 2011/12, with production projected at 9.7 million MTRV, up from 9.16 million MTRV in 2010/11 and 6.93 million in 2009/10. Exports are projected at 7.3 million MTRV, up 400,000 MTRV from 2010/11 and 2.370 million from 2009/10.

Other major sugar exporters are not expected to contribute to overall export supply expansion in 2011/12. Although sugar production in Guatemala is forecast 215,000 MTRV higher than last year, lower beginning stocks keep overall supply at only 2.567 million MTRV -- 74,000 MTRV lower than last year. Sugar production in Colombia is forecast at only about 50,000 MTRV higher than last year, at 2.25 million MTRV, as more sugarcane is diverted for ethanol production. Production in both Australia and South Africa continue to be affected by the extreme weather conditions experienced in 2010/11 - excessive rainfall and cyclone damage in Australia and extreme dryness in South Africa.

Imports are projected to decline by 3.05 million MTRV in 2011/12. As mentioned, the largest decrease is expected in India - down by 1.1 million MTRV to only 100,000 MTRV in 2011/12. Both Russia and Ukraine are expecting large production gains in 2011/12-1.2 million MTRV for Russia and 415,000 MTRV in Ukraine. In aggregate, imports to these countries are expected to fall 1.31 million MTRV to 2.0 million MTRV. Although hard to predict because of the role of policy, imports to the United States are projected to fall 895,000 MTRV in 2011/12 to 2.358 million MTRV. In contrast, imports to the European Union (EU-27) are expected to increase 600,000 MTRV to 3.7 million in order to build up low beginning stock levels to more normal levels. In 2010/11, imports into the EU-27 from low-income developing countries and former colonies with preferential access were unexpectedly low. (High world prices diverted exports away from the EU-27.) Duty-free import access from other countries in 2010/11 has been increased by 500,000 metric tons, and 500,000 metric tons of out-of-quota production has been released for food use.

[^0]
## Trends in World Sugar Supply and Use

Figure 1 shows world sugar production, consumption, and ending stocks since 1989/90. World sugar production and consumption have been increasing at about the same rate: 1.88 percent for production and 1.93 percent for consumption. Consumption growth has been fairly steady from year to year, whereas production growth has shown more variability. Since 1999/2000, world sugar production has increased on average 2.895 million MTRV per year. Corresponding growth in Brazil has been 1.638 million MTRV per year, or 57 percent of the total. Ending stocks have shown more cyclical activity - increases of 2 to 3 years' duration, followed by decreases of 1 to 3 years' duration. However, since 2008/09 ending stocks have been flat -- between 28.4 and 29.3 million MTRV.

Figure 2 shows the world sugar surplus/deficit, calculated as the difference between world sugar production and consumption, and the ending-year stocks-to-use ratio. In the 23 years since 1989/90, world sugar has been in surplus (that is, production exceeds consumption) 17 times. The largest deficit of 10.14 million MTRV occurred in 2008/09, when Indian production decreased 12.68 million MTRV from the previous year, or 44 percent. The USDA estimates 2010/11 world sugar in surplus at 1.626 million MTRV and projects a $2011 / 12$ surplus of 6.480 million MTRV. ${ }^{2}$

In the record world sugar deficit year of 2008/09, the world ending stocks-to-use ratio fell to 19.0 percent, which at the time was the lowest level since 1989/90. In spite of the growth of sugar world surplus, the projected ratio for 2011/12 is even lower, at 17.8 percent. This discordance is a sign of the difficulties in making forecasts. In the sugar PSD, projected exports exceed projected imports by 6.927 million MTRV. This is recorded as an "Unrecorded" total supply adjustment and is not reflected in ending stocks. ${ }^{3}$

Figure 3 uses two measures of sugar trade -- exports and imports -- in showing trade as a proportion of world sugar consumption. Both measures (each shown as a proportion of consumption) indicate the growing importance of trade in sugar since 1995/96: the two trend lines in the figure have a positive slope of about equal value, a growth of about 0.2 percent per year. However, recorded imports are usually less than recorded exports. Of the 17 years, the export share and the import share are simultaneously above or below respective trends in only 6 years. In only 5 years are the directions of year-to-year changes in the shares the same (that is, ratio changes both positive or both negative in both series at the same time going from 1 year to the next). ${ }^{4}$

## Importance of Brazil in the World Sugar Market

Figure 4 shows that Brazil continues to gain world export market share. Brazil's share of total world sugar exports is estimated at 48.8 percent in 2010/11 and projected at 49.0 percent in 2011/12. Brazil's share of the raw sugar exports is estimated at 62.7 percent in 2010/11 and projected at 63.7 percent in 2011/12. Because it is the dominant sugar exporter, events affecting sugar production in Brazil would be expected to be transmitted to the world market.

An article published in the March Sugar and Sweetener Outlook examined the relationship between costs of production in Brazil's main producing region -- Center/South -- and world sugar prices. Technically speaking,

[^1]Brazilian production costs measured in dollars and world sugar prices (the nearby no. 11 raw sugar futures price from the Intercontinental Exchange) were shown be cointegrated. This means that there is a medium- to long-run equilibrium relationship between Brazilian production costs and world prices. Changes in either series affect the other in the same direction over time.

The article also examined Brazilian Center/South production costs in Brazil's domestic currency - the real-and in U.S. dollars. Figure 5 shows that since 2004/05 to 2010/11, production costs in reals have increased 8.3 percent, but due to the appreciation of the real since then, costs in terms of U.S. dollars have increased 80.1 percent. The corresponding April/March price of raw sugar in 2004/05 averaged 8.11 cents per pound, and in 2010/11 it averaged 23.97 cents per pound. Although Brazil still has the lowest production costs among major producing countries, the effect of the rise in production costs has been to reduce Brazil's competitiveness with other exporters. The rise in Brazil's share of raw sugar exports, although still increasing, has leveled off since 2009/10. High world prices have also resulted in incentives for large importing producers such as Russia, China, and Ukraine to expand domestic production and reduce imports.

Some observers have noted that increased costs and lack of credit availability have affected expansion of sugarcane in Brazil's Center/South region. As noted in the FAS 2011 Brazil Sugar Annual, only five new sugarcane mills are expected to start producing in 2011 and lower plantings of new sugarcane have increased the average age of the crop from 3.7 years to 4.0 years. Areas where new sugarcane can be grown are typically farther inland where it is more costly to ship to ports for export. The observers suggest that world prices will have to remain at least in the mid- 20 cents per pound range and above to justify additional investment in expanding sugarcane area.

## Brazil

* Sugarcane production up 2\%
* Reduced investment in producing facilities - only 5 new units in 2011
* Dry weather in 2010 affected stock development for 2011/12
* Lower plantings of new cane: average age of crop increased to 4 yrs. from 3.7 yrs.
* Total Reducing Sugar (TRS): 46.6\% sugar (up 0.65\%) and 53.4\% ethanol
* Exports - 27.3 million MTRV, up 6.4\%


## Thailand

* Sugarcane in 2011/12 projected at 94.0 million tons ( 89.0 million in 2010/11, 69.0 million in 2009/10)
* Production forecast at 9.7 million MTRV, 7.3 million MTRV
for exports ( 6.9 million MTRV in 2010/11 and 4.93 million MTRV in 2009/10-48\% rise).
* Govt. policy - higher support prices starting in 2010/11; Govt. approval of increase in sugarcane mills: 47 -> 59 over 5-year period; Subsidized govt. loans for grower machinery purchases


## Australia

* 2010/11 season - worst production since 1991/92: excessive rainfall, plus large cyclone
* 2011/12 season - $7.6 \%$ harvested area expansion; sugar at 4.0 million MTRV, up from 3.8 million MTRV but 720,000 MTRV below 10-year average
* Exports forecast at 2.85 million MTRV, up 100,000 MTRV over 2010/11, down 750,000 MTRV from 2009/10


## Guatemala

* Area planted up 2\%, yields forecast at levels not seen since 2006/07: 93 tonnes/hectare
* Production forecast up $9.5 \%$ to 2.474 million MTRV
* Low beginning stocks limit total supply, so exports forecast at same level as last year -1.808 million MTRV


## Colombia

* Expansion of ethanol production affects sugar export potential - forecast at 800,000 MTRV
* Sugarcane area contained within Cauca River Valley -- 208,000 hectares. Production expansion dependent on yield increases


## South Africa

* Still suffering from 2010 drought in Kwa Zulu - Natal province, where $75 \%$ of cane is grown
* Significant sugarcane production only expected in second half of harvest season
* Sugar production projected at 1.84 million MTRV (down 7\%) and exports at 450,000 MTRV (down 10\%)

MTRV = metric tons, raw value.
Source: USDA, Foreign Agricultural Service, Global Agricultural Information Network, Sugar Annuals.

## India

* Production is in second year of recovery from low-point of the sugar cycle in 2008/09 and 2009/10
* Area is forecast at 5.1 million hectares, sugarcane at 350 million tonnes, and sugar at 28.3 million MTRV, up 1.65 million MTRV from 2010/11
* 2011/12 exports projected at 1.8 million MTRV and imports at 100,000 MTRV, down from 1.2 million MTRV in 2010/11 and 4.247 million MTRV in 2009/10
* $60 \%$ sugar import duties, along with required levy sugar and market quota requirements, reimposed as of 4/1/2011
* Expected lower sugar wholesale prices should limit consumer shift to gur


## China

* Strong prices have led to 5\% area expansion for sugarcane (to 1.87 million hectares) and $10 \%$ for sugarbeets (to 285,000 hectates)
* Cane sugar production forecast at 11.0 million MTRV and beet sugar at 1.0 million MTRV - total gain of 700,000 MTRV
* Consumption lower by 300,000 MTRV due to user shift to lower priced corn sweeteners
* Imports projected at 1.6 million MTRV, about the same as 2010/11


## European Union

* Low supply of sugar in 2009/10 and 2010/11 due to low level of imports from low-income developing countries and former colonies with preferential access to the EU market
* In March 2011, duty-free imports were increased by 300,000 tonnes and 500,000 tonnes of out-of-quota production were released for food use. Additional 200,000 tonnes of duty-free imports approved in May 2011
* EU sugar production forecast at 15.0 million MTRV beet sugar, plus 300,000 MTRV cane sugar
* Imports projected at 3.7 million MTRV in 2011/12 and exports at 1.010 million MTRV


## Russia

* Area forecast to expand $9.6 \%$ to 981,000 hectares. With return of normal weather (drought last year), sugarbeet production forecast to grow $35 \%$ to 30.0 million tonnes, and sugar to 4.175 million MTRV
* Imports expected to fall 950,000 MTRV to 2.0 million MTRV

MTRV = metric tons, raw value.
Source: USDA, Foreign Agricultural Service, Global Agricultural Information Network, Sugar Annuals.

Table 3--World production, supply, and distribution, centrifugal sugar

| Country | Beginning <br> stocks | Production | Imports | Total <br> supply | Exports | Domestic  <br> consumption  |
| :--- | ---: | :--- | :--- | :--- | :--- | :--- | | Ending |
| ---: | :--- |
| stocks |

SUG - North America:
Canada

| 2009/10 | 92 | 70 | 1,336 | 1,498 | 78 | 1,375 | 45 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2010/11 | 45 | 97 | 1,391 | 1,533 | 67 | 1,380 | 86 |
| 2011/12 | 86 | 95 | 1,400 | 1,581 | 60 | 1,385 | 136 |
| Mexico |  |  |  |  |  |  |  |
| 2009/10 | 624 | 5,115 | 861 | 6,600 | 773 | 4,854 | 973 |
| 2010/11 | 973 | 5,550 | 313 | 6,836 | 1,382 | 4,652 | 802 |
| 2011/12 | 802 | 5,650 | 190 | 6,642 | 901 | 4,760 | 981 |
| United States |  |  |  |  |  |  |  |
| 2009/10 | 1,392 | 7,234 | 3,010 | 11,636 | 191 | 10,075 | 1,370 |
| 2010/11 | 1,370 | 7,213 | 3,253 | 11,836 | 227 | 10,148 | 1,461 |
| 2011/12 | 1,461 | 7,430 | 2,358 | 11,249 | 181 | 10,265 | 803 |
| Total SUG - North America |  |  |  |  |  |  |  |
| 2009/10 | 2,108 | 12,419 | 5,207 | 19,734 | 1,042 | 16,304 | 2,388 |
| 2010/11 | 2,388 | 12,860 | 4,957 | 20,205 | 1,676 | 16,180 | 2,349 |
| 2011/12 | 2,349 | 13,175 | 3,948 | 19,472 | 1,142 | 16,410 | 1,920 |

SUG - Caribbean:
Cuba

| $2009 / 10$ | 45 | 1,250 | 20 | 1,315 | 565 | 675 | 75 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $2010 / 11$ | 75 | 1,100 | 75 | 1,250 | 500 | 675 | 75 |
| $2011 / 12$ | 75 | 1,050 | 125 | 1,250 | 500 | 675 | 75 |

Dominican Republic

| 2009/10 | 10 | 520 | 70 | 600 | 244 | 332 | 24 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2010/11 | 24 | 500 | 30 | 554 | 202 | 335 | 17 |
| 2011/12 | 17 | 515 | 30 | 562 | 187 | 332 | 43 |
| Other SUG - Caribbean |  |  |  |  |  |  |  |
| 2009/10 | 136 | 166 | 433 | 735 | 144 | 469 | 122 |
| 2010/11 | 122 | 197 | 443 | 762 | 173 | 467 | 122 |
| 2011/12 | 122 | 205 | 433 | 760 | 170 | 470 | 120 |
| Total SUG - Caribbean |  |  |  |  |  |  |  |
| 2009/10 | 191 | 1,936 | 523 | 2,650 | 953 | 1,476 | 221 |
| 2010/11 | 221 | 1,797 | 548 | 2,566 | 875 | 1,477 | 214 |
| 2011/12 | 214 | 1,770 | 588 | 2,572 | 857 | 1,477 | 238 |

Table 3--World production, supply, and distribution, centrifugal sugar (continued)

| Country | Beginning stocks | Production | Imports | Total supply | Exports | Domestic consumption | Ending stocks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |


| Guatemala |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2009/10 | 592 | 2,340 | 0 | 2,932 | 1,815 | 735 | 382 |
| 2010/11 | 382 | 2,259 | 0 | 2,641 | 1,808 | 740 | 93 |
| 2011/12 | 93 | 2,474 | 0 | 2,567 | 1,808 | 740 | 19 |
| Other SUG - Central America |  |  |  |  |  |  |  |
| 2009/10 | 404 | 2,185 | 140 | 2,729 | 1,026 | 1,148 | 555 |
| 2010/11 | 555 | 2,132 | 143 | 2,830 | 985 | 1,188 | 657 |
| 2011/12 | 657 | 2,259 | 147 | 3,063 | 1,038 | 1,215 | 810 |
| Total SUG - Central America |  |  |  |  |  |  |  |
| 2009/10 | 996 | 4,525 | 140 | 5,661 | 2,841 | 1,883 | 937 |
| 2010/11 | 937 | 4,391 | 143 | 5,471 | 2,793 | 1,928 | 750 |
| 2011/12 | 750 | 4,733 | 147 | 5,630 | 2,846 | 1,955 | 829 |
| SUG - South America: |  |  |  |  |  |  |  |
| Brazil |  |  |  |  |  |  |  |
| 2009/10 | -1,135 | 36,400 | 0 | 35,265 | 24,300 | 11,800 | -835 |
| 2010/11 | -835 | 38,150 | 0 | 37,315 | 25,650 | 12,000 | -335 |
| 2011/12 | -335 | 39,600 | 0 | 39,265 | 27,300 | 12,550 | -585 |
| Colombia |  |  |  |  |  |  |  |
| 2009/10 | 416 | 2,294 | 185 | 2,895 | 870 | 1,620 | 405 |
| 2010/11 | 405 | 2,200 | 160 | 2,765 | 790 | 1,625 | 350 |
| 2011/12 | 350 | 2,250 | 170 | 2,770 | 800 | 1,625 | 345 |
| Argentina |  |  |  |  |  |  |  |
| 2009/10 | 226 | 2,230 | 23 | 2,479 | 751 | 1,740 | -12 |
| 2010/11 | -12 | 2,010 | 52 | 2,050 | 205 | 1,800 | 45 |
| 2011/12 | 45 | 2,200 | 0 | 2,245 | 280 | 1,830 | 135 |
| Other SUG - South America |  |  |  |  |  |  |  |
| 2009/10 | 1,539 | 3,119 | 1,641 | 6,299 | 460 | 4,340 | 1,499 |
| 2010/11 | 1,499 | 3,178 | 1,704 | 6,381 | 464 | 4,354 | 1,563 |
| 2011/12 | 1,563 | 3,267 | 1,545 | 6,375 | 515 | 4,430 | 1,430 |
| Total SUG - South America |  |  |  |  |  |  |  |
| 2009/10 | 1,046 | 44,043 | 1,849 | 46,938 | 26,381 | 19,500 | 1,057 |
| 2010/11 | 1,057 | 45,538 | 1,916 | 48,511 | 27,109 | 19,779 | 1,623 |
| 2011/12 | 1,623 | 47,317 | 1,715 | 50,655 | 28,895 | 20,435 | 1,325 |

SUG - Western Europe:

| EU- |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2009/10 | 2,232 | 16,687 | 2,575 | 21,494 | 2,647 | 17,400 | 1,447 |
| 2010/11 | 1,447 | 15,091 | 3,100 | 19,638 | 1,010 | 17,500 | 1,128 |
| 2011/12 | 1,128 | 15,300 | 3,700 | 20,128 | 1,010 | 17,500 | 1,618 |
| Other SUG - Western Europe |  |  |  |  |  |  |  |
| 2009/10 | 309 | 305 | 395 | 1,009 | 4 | 651 | 354 |
| 2010/11 | 354 | 240 | 382 | 976 | 45 | 641 | 290 |
| 2011/12 | 290 | 250 | 382 | 922 | 50 | 641 | 231 |
| Total SUG - Western Europe |  |  |  |  |  |  |  |
| 2009/10 | 2,541 | 16,992 | 2,970 | 22,503 | 2,651 | 18,051 | 1,801 |
| 2010/11 | 1,801 | 15,331 | 3,482 | 20,614 | 1,055 | 18,141 | 1,418 |
| 2011/12 | 1,418 | 15,550 | 4,082 | 21,050 | 1,060 | 18,141 | 1,849 |

Table 3--World production, supply, and distribution, centrifugal sugar (continued)

| Country | Beginning stocks | Production | Imports | $\begin{array}{r} \text { Total } \\ \text { supply } \end{array}$ | Exports | Domestic consumption | Ending stocks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

SUG - Eastern Europe:

| Russia |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2009/10 | 481 | 3,444 | 2,223 | 6,148 | 34 | 5,715 | 399 |
| 2010/11 | 399 | 2,980 | 2,950 | 6,329 | 50 | 5,905 | 374 |
| 2011/12 | 374 | 4,175 | 2,000 | 6,549 | 100 | 6,025 | 424 |
| Ukraine |  |  |  |  |  |  |  |
| 2009/10 | 231 | 1,382 | 346 | 1,959 | 1 | 1,878 | 80 |
| 2010/11 | 80 | 1,685 | 360 | 2,125 | 109 | 1,900 | 116 |
| 2011/12 | 116 | 2,100 | 0 | 2,216 | 217 | 1,900 | 99 |
| Other SUG - Eastern Europe |  |  |  |  |  |  |  |
| 2009/10 | 601 | 1,441 | 1,127 | 3,169 | 750 | 1,786 | 633 |
| 2010/11 | 633 | 1,515 | 1,124 | 3,272 | 821 | 1,804 | 647 |
| 2011/12 | 647 | 1,435 | 1,146 | 3,228 | 768 | 1,809 | 651 |
| Total SUG - Eastern Europe |  |  |  |  |  |  |  |
| 2009/10 | 1,313 | 6,267 | 3,696 | 11,276 | 785 | 9,379 | 1,112 |
| 2010/11 | 1,112 | 6,180 | 4,434 | 11,726 | 980 | 9,609 | 1,137 |
| 2011/12 | 1,137 | 7,710 | 3,146 | 11,993 | 1,085 | 9,734 | 1,174 |

SUG - Africa:
South Africa

| 2009/10 | 30 | 2,265 | 200 | 2,495 | 830 | 1,595 | 70 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2010/11 | 70 | 1,975 | 220 | 2,265 | 500 | 1,625 | 140 |
| 2011/12 | 140 | 1,840 | 270 | 2,250 | 450 | 1,650 | 150 |
| Other SUG - Africa |  |  |  |  |  |  |  |
| 2009/10 | 2,484 | 5,893 | 7,278 | 15,655 | 2,522 | 10,851 | 2,282 |
| 2010/11 | 2,282 | 6,327 | 7,780 | 16,389 | 2,744 | 11,189 | 2,456 |
| 2011/12 | 2,456 | 6,411 | 7,615 | 16,482 | 2,626 | 11,365 | 2,491 |
| Total SUG - Africa |  |  |  |  |  |  |  |
| 2009/10 | 2,514 | 8,158 | 7,478 | 18,150 | 3,352 | 12,446 | 2,352 |
| 2010/11 | 2,352 | 8,302 | 8,000 | 18,654 | 3,244 | 12,814 | 2,596 |
| 2011/12 | 2,596 | 8,251 | 7,885 | 18,732 | 3,076 | 13,015 | 2,641 |

SUG - MiddleEast:

| Turkey |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2009/10 | 505 | 2,531 | 5 | 3,041 | 54 | 2,400 | 587 |
| 2010/11 | 587 | 2,275 | 5 | 2,867 | 45 | 2,400 | 422 |
| 2011/12 | 422 | 2,280 | 5 | 2,707 | 40 | 2,400 | 267 |
| Egypt |  |  |  |  |  |  |  |
| 2009/10 | 690 | 1,820 | 978 | 3,488 | 330 | 2,629 | 529 |
| 2010/11 | 529 | 1,830 | 1,120 | 3,479 | 550 | 2,800 | 129 |
| 2011/12 | 129 | 2,025 | 1,430 | 3,584 | 400 | 2,850 | 334 |
| Other SUG - MiddleEast |  |  |  |  |  |  |  |
| 2009/10 | 2,805 | 1,297 | 8,685 | 12,787 | 2,713 | 7,108 | 2,966 |
| 2010/11 | 2,966 | 1,081 | 9,590 | 13,637 | 3,217 | 7,331 | 3,089 |
| 2011/12 | 3,089 | 1,081 | 9,144 | 13,314 | 3,005 | 7,372 | 2,937 |
| Total SUG - MiddleEast |  |  |  |  |  |  |  |
| 2009/10 | 4,000 | 5,648 | 9,668 | 19,316 | 3,097 | 12,137 | 4,082 |
| 2010/11 | 4,082 | 5,186 | 10,715 | 19,983 | 3,812 | 12,531 | 3,640 |
| 2011/12 | 3,640 | 5,386 | 10,579 | 19,605 | 3,445 | 12,622 | 3,538 |

Table 3--World production, supply, and distribution, centrifugal sugar (continued)

| Country | Beginning <br> stocks | Production | Imports | Total <br> supply | Exports | Domestic <br> consumption |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |

SUG - Asia - Oceania:

| Japan |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2009/10 | 291 | 901 | 1,322 | 2,514 | 2 | 2,230 | 282 |
| 2010/11 | 282 | 703 | 1,559 | 2,544 | 2 | 2,242 | 300 |
| 2011/12 | 300 | 700 | 1,642 | 2,642 | 2 | 2,240 | 400 |
| India |  |  |  |  |  |  |  |
| 2009/10 | 3,510 | 20,637 | 4,247 | 28,394 | 230 | 23,500 | 4,664 |
| 2010/11 | 4,664 | 26,650 | 1,200 | 32,514 | 20 | 25,500 | 6,994 |
| 2011/12 | 6,994 | 28,300 | 100 | 35,394 | 1,800 | 26,500 | 7,094 |
| China |  |  |  |  |  |  |  |
| 2009/10 | 3,784 | 11,429 | 1,535 | 16,748 | 93 | 14,300 | 2,355 |
| 2010/11 | 2,355 | 11,303 | 1,820 | 15,478 | 64 | 13,900 | 1,514 |
| 2011/12 | 1,514 | 12,000 | 1,850 | 15,364 | 64 | 13,600 | 1,700 |
| Thailand |  |  |  |  |  |  |  |
| 2009/10 | 2,556 | 6,930 | 7 | 9,493 | 4,930 | 2,220 | 2,343 |
| 2010/11 | 2,343 | 9,160 | 0 | 11,503 | 6,900 | 2,500 | 2,103 |
| 2011/12 | 2,103 | 9,700 | 0 | 11,803 | 7,300 | 2,800 | 1,703 |
| Australia |  |  |  |  |  |  |  |
| 2009/10 | 487 | 4,700 | 76 | 5,263 | 3,600 | 1,250 | 413 |
| 2010/11 | 413 | 3,800 | 80 | 4,293 | 2,750 | 1,250 | 293 |
| 2011/12 | 293 | 4,000 | 80 | 4,373 | 2,850 | 1,250 | 273 |
| Pakistan |  |  |  |  |  |  |  |
| 2009/10 | 550 | 3,420 | 1,030 | 5,000 | 70 | 4,100 | 830 |
| 2010/11 | 830 | 3,920 | 250 | 5,000 | 70 | 4,250 | 680 |
| 2011/12 | 680 | 3,820 | 600 | 5,100 | 70 | 4,300 | 730 |
| Indonesia |  |  |  |  |  |  |  |
| 2009/10 | 340 | 1,910 | 3,200 | 5,450 | 0 | 4,700 | 750 |
| 2010/11 | 750 | 1,770 | 2,995 | 5,515 | 0 | 5,000 | 515 |
| 2011/12 | 515 | 2,088 | 3,010 | 5,613 | 0 | 5,200 | 413 |
| Philippines |  |  |  |  |  |  |  |
| 2009/10 | 322 | 2,000 | 250 | 2,572 | 178 | 2,000 | 394 |
| 2010/11 | 394 | 2,200 | 0 | 2,594 | 202 | 2,000 | 392 |
| 2011/12 | 392 | 2,100 | 0 | 2,492 | 142 | 2,000 | 350 |
| Other SUG - Asia - Oceania |  |  |  |  |  |  |  |
| 2009/10 | 2,691 | 1,763 | 9,167 | 13,621 | 1,023 | 10,166 | 2,432 |
| 2010/11 | 2,432 | 1,857 | 9,729 | 14,018 | 1,051 | 10,221 | 2,746 |
| 2011/12 | 2,746 | 1,882 | 9,405 | 14,033 | 1,070 | 10,323 | 2,640 |
| Total SUG - Asia - Oceania |  |  |  |  |  |  |  |
| 2009/10 | 14,531 | 53,690 | 20,834 | 89,055 | 10,126 | 64,466 | 14,463 |
| 2010/11 | 14,463 | 61,363 | 17,633 | 93,459 | 11,059 | 66,863 | 15,537 |
| 2011/12 | 15,537 | 64,590 | 16,687 | 96,814 | 13,298 | 68,213 | 15,303 |

World:

| World |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2009/10 |  | 29,240 |  | 153,678 |  | 52,365 | 235,283 | 51,228 | 155,642 |  | 28,413 |
| 2010/11 |  | 28,413 |  | 160,948 |  | 51,828 | 241,189 | 52,603 | 159,322 |  | 29,264 |
| 2011/12 |  | 29,264 |  | 168,482 |  | 48,777 | 246,523 | 55,704 | 162,002 |  | 28,817 |
| Unrecorded |  |  |  |  |  |  |  |  |  |  |  |
| 2009/10 | '' |  | ' |  | '' |  | -1,137 ' ' |  |  | '' |  |
| 2010/11 | '' |  | ' |  | ' |  | $775{ }^{\prime}$ ' |  |  | '' |  |
| 2011/12 | '' |  | '' |  | '' |  | 6,927 ' ' |  |  | '' |  |

Source: USDA, Foreign Agricultural Service, PSD database (http://www.fas.usda.gov/psdonline/psdQuery.aspx).

Figure 1
World sugar production, consumption, and ending stocks, 1989/90-2011/12


Source: USDA, ForeignAg ricultural Service, PSD database.

Figure 2

## World sugar surplus/deficit and ending year stocks-to-use ratio

Surplus/deficit: 1,000 MTRV


Source: USDA, ForeignAg ricultural Service, PSD database.

Figure 3
Sugar trade as a proportion of world sugar consumption


Source: USDA, ForeignAgricultural Service, PSD database.

Figure 4
Brazil share of world sugar exports, 1997/98-2011/12


Source: USDA, ForeignAgricultural Service, PSD database.

Figure 5
Cost of production in Center/South Brazil, in dollars and Brazilian reals,1997/98-2010/11


Source: LMC International.

## Sugar in the NAFTA Area

On June 9, 2011, the U.S. Department of Agriculture (USDA) released its latest U.S. and Mexico supply and use estimates for fiscal year (FY) 2011 and projections for FY 2012 in the World Agricultural Supply and Demand Estimates (WASDE) report. The FY 2011 production estimate for Texas was decreased to 143,405 short tons, raw value (STRV) to correspond to the estimate published in the latest version of the Sweetener Market Data of the Farm Service Agency. With the exception of residually calculated ending stocks, no other changes were made for FY 2011 for U.S. supply and use. The ending year stocks-to-use ratio rounds to 14.1 percent, the same as last month.

A preliminary 8-month USDA estimate of Mexican sugar exports to the United States is about 1.068 million metric tons, raw value (MTRV) (through the end of May). Although this is a strong pace-to-date (about 77 percent of projected exports), the total FY 2011 export estimate was kept the same ( 1.382 million MTRV) because the pace is expected to slow during the summer months.

Imports in Mexico for FY 2011 were increased by 159,000 MTRV, or 150,000 metric tons, tel quel, to reflect the May 25 announcement of the tariff-rate quota by the Secretariat of the Economy (Economia). The action was made in response to recent increases in Mexican sugar prices and will help bridge the gap for domestic consumption until the start of next year's harvest. Ending-year stocks were increased by the 159,000 MTRV addition to supply. Ending stocks are estimated at 961,000 MTRV, as are beginning stocks for FY 2012.

Projections in Mexico of FY 2012 production ( 5.65 million MTRV) and total deliveries ( 4.76 million MTRV) are unchanged from last month. Because FY 2012 ending stocks are projected at 22 percent of deliveries for human consumption, they did not change from last month's 981,000 MTRV. Therefore, the increase in FY 2012 beginning stocks implies an additional 159,000 MTRV available for export - the new projected export total is 1.060 million MTRV.

With the exception of imports from Mexico and the small increase to beginning stocks mentioned above, all other elements of U.S. supply and use are the same as last month. Imports from Mexico increase by 175,000 STRV (the equivalent of 159,000 MTRV) to 1.155 million STRV. Ending stocks for FY 2012 increase to 1.056 million STRV, implying an ending stocks-to-use ratio of 9.2 percent.

| Items | 2000/01 | 2001/02 | 2002/03 | 2003/04 | 2004/05 | 2005/06 | 2006/07 | 2007/08 | 2008/09 | 2009/10 | 2010/11 | 2011/12 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1,000 short tons, raw value |  |  |  |  |  |  |  |  |  |  |  |  |
| Beginning stocks $2 /$ | 2,216 | 2,180 | 1,528 | 1,670 | 1,897 | 1,332 | 1,698 | 1,799 | 1,664 | 1,534 | 1,510 | 1,607 |
| Total production 3/4/ | 8,769 | 7,900 | 8,426 | 8,649 | 7,876 | 7,399 | 8,445 | 8,152 | 7,531 | 7,975 | 7,946 | 8,190 |
| Beet sugar | 4,680 | 3,915 | 4,462 | 4,692 | 4,611 | 4,444 | 5,008 | 4,721 | 4,214 | 4,575 | 4,800 | 4,800 |
| Cane sugar | 4,089 | 3,985 | 3,964 | 3,957 | 3,265 | 2,955 | 3,438 | 3,431 | 3,317 | 3,400 | 3,146 | 3,390 |
| Florida | 2,057 | 1,980 | 2,129 | 2,154 | 1,693 | 1,367 | 1,719 | 1,645 | 1,577 | 1,646 | 1,433 | 1,630 |
| Louisiana | 1,585 | 1,580 | 1,367 | 1,377 | 1,157 | 1,190 | 1,320 | 1,446 | 1,397 | 1,481 | 1,400 | 1,440 |
| Texas | 206 | 174 | 191 | 175 | 158 | 175 | 177 | 158 | 152 | 112 | 143 | 150 |
| Hawaii | 241 | 251 | 276 | 251 | 258 | 223 | 222 | 182 | 192 | 161 | 170 | 170 |
| Puerto Rico | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |
| Total imports | 1,590 | 1,535 | 1,730 | 1,750 | 2,100 | 3,443 | 2,080 | 2,620 | 3,082 | 3,319 | 3,586 | 2,774 |
| Tariff-rate quota imports $5 /$ | 1,277 | 1,158 | 1,210 | 1,226 | 1,408 | 2,588 | 1,624 | 1,354 | 1,370 | 1,854 | 1,752 | 1,259 |
| Other program Imports | 238 | 296 | 488 | 464 | 500 | 349 | 390 | 565 | 308 | 450 | 300 | 350 |
| Non-program imports | 76 | 81 | 32 | 60 | 192 | 506 | 66 | 701 | 1,404 | 1,014 | 1,534 | 1,165 |
| Mexico 6/ |  |  |  |  |  |  | 60 | 694 | 1,402 | 807 | 1,514 | 1,155 |
| Total Supply | 12,575 | 11,615 | 11,684 | 12,070 | 11,873 | 12,174 | 12,223 | 12,571 | 12,277 | 12,828 | 13,042 | 12,571 |
| Total exports 3/ | 141 | 137 | 142 | 288 | 259 | 203 | 422 | 203 | 136 | 211 | 250 | 200 |
| Quota-exempt for reexport | 141 | 137 | 142 | 288 | 259 | 203 | 422 | 203 | 136 | 211 | 250 | 200 |
| Other exports | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |
| CCC disposal, for export | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |
| Miscellaneous | 123 | -24 | 161 | 23 | 94 | -67 | -132 | 0 | 0 | -45 | 0 | 0 |
| CCC disposal, for domestic non-food use | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Refining loss adjustment | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -45 | 0 | 0 |
| Statistical adjustment 7/ | 113 | -24 | 161 | 23 | 94 | -67 | -132 | 0 | 0 | 0 | 0 | 0 |
| Deliveries for domestic use | 10,132 | 9,974 | 9,711 | 9,862 | 10,188 | 10,340 | 10,135 | 10,704 | 10,607 | 11,152 | 11,185 | 11,315 |
| Transfer to sugar-cont. products for exports under reexport program | 98 | 156 | 183 | 142 | 121 | 106 | 169 | 141 | 120 | 201 | 145 | 150 |
| Transfer to polyhydric alcohol, feed | 33 | 33 | 24 | 41 | 48 | 51 | 53 | 61 | 46 | 35 | 40 | 40 |
| Deliveries for domestic food and beverage use 8/ | 10,000 | 9,785 | 9,504 | 9,678 | 10,019 | 10,184 | 9,913 | 10,501 | 10,441 | 10,917 | 11,000 | 11,125 |
| Total Use | 10,396 | 10,087 | 10,014 | 10,172 | 10,542 | 10,476 | 10,424 | 10,907 | 10,743 | 11,318 | 11,435 | 11,515 |
| Ending stocks $2 /$ | 2,180 | 1,528 | 1,670 | 1,897 | 1,332 | 1,698 | 1,799 | 1,664 | 1,534 | 1,510 | 1,607 | 1,056 |
| Privately owned | 1,395 | 1,316 |  |  |  |  |  |  |  |  |  |  |
| CCC | 784 | 212 |  |  |  |  |  |  |  |  |  |  |
| Percent |  |  |  |  |  |  |  |  |  |  |  |  |
| Stocks-to-use ratio | 20.97 | 15.15 | 16.68 | 18.65 | 12.63 | 16.21 | 17.25 | 15.26 | 14.28 | 13.35 | 14.06 | 9.17 |

NOTE: Numbers may not add due to rounding.
1/ Fiscal year beginning October 1. 2/ Stocks in hands of primary distributors and CCC. 3/ Historical data are from FSA (formerly ASCS), Sweetener
Market Data (SMD), and NASS, Sugar Market Statistics prior to 1992. 4/ Production reflects processors' projections compiled by the Farm Service Agency.
5/ Actual arrivals under the tariff-rate quota (TRQ) with late entries, early entries, and (TRQ) overfills assigned to the fiscal year in which they actually arrived.
The 2010/11 available TRQ assumes shortfall of 50,256 tons. 6/ Starting in 2007/08, total includes imports under Mexico's WTO TRQ allocation for raw and
refined sugar. $7 /$ Calculated as a residual. Largely consists of invisible stocks change.
8/ For FY 2008-09, combines SMD deliveries for domestic human use, SMD miscellaneous uses, and the difference between SMD imports and
World Supply and Demand Estimates imports.
Source: USDA, Foreign Agricultural Service, World Supply and Demand Estimates (WASDE).


NOTE: Numbers may not add due to rounding.
1/ Fiscal year beginning October 1. 2/ Stocks in hands of primary distributors and CCC. 3/ Historical data are from FSA (Farm Service Agency), Sweetener Market Data (SMD), and NASS, Sugar Market Statistics prior to 1992. 4/ Production reflects processors' projections compiled by the Farm Service Agency. 5/ Actual arrivals under the tariff-rate quota (TRQ) with late entries, early entries, and (TRQ) overfills assigned to the fiscal year in which they actually arrived. The 2010/11 available TRQ assumes shortfall of 45,592 tonnes. 6/ Starting in 2007/08, total includes imports under Mexico's WTO (World Trade Organization) TRQ allocation for raw and refined sugar. 7/ Calculated as a residual. Largely consists of invisible stocks change.
8/ For FY 2008-09, combines SMD deliveries for domestic human use, SMD miscellaneous uses, and the difference between SMD imports and World Agricultural Supply and Demand Estimates imports.
Source: USDA, Foreign Agricultural Service, World Supply and Demand Estimates (WASDE).

Table 6--Mexico: sugar production and supply, and sugar and HFCS utilization, 6/14/2011

| Fiscal Year (Oct/Sept) | $2000 / 01$ | $2001 / 02$ | $2002 / 03$ | $2003 / 04$ | $2004 / 05$ | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ | $2009 / 102010 / 11$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

1,000 Metric tons

| Beginning Stocks | 1,063 | 1,548 | 1,172 | 1,194 | 1,237 | 1,965 | 1,294 | 1,718 | 1,975 | 624 | 973 | 961 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Production | 5,220 | 5,169 | 5,229 | 5,330 | 6,149 | 5,604 | 5,633 | 5,852 | 5,260 | 5,115 | 5,550 | 5,650 |
| Imports | 43 | 52 | 63 | 327 | 268 | 240 | 474 | 226 | 160 | 861 | 472 | 190 |
| Supply | 6,326 | 6,769 | 6,464 | 6,851 | 7,654 | 7,809 | 7,401 | 7,796 | 7,395 | 6,600 | 6,995 | 6,801 |
| Disappearance |  |  |  |  |  |  |  |  |  |  |  |  |
| Human consumption | 4,481 | 5,004 | 5,097 | 5,380 | 5,279 | 5,326 | 5,133 | 5,090 | 5,065 | 4,615 | 4,329 | 4,460 |
| Other Cons. | 142 | 180 | 135 | 220 | 282 | 323 | 390 | 414 | 475 | 302 | 323 | 300 |
| Miscellaneous |  |  |  |  |  |  |  | -360 | -136 | -27 |  |  |
| Total | 4,623 | 5,184 | 5,232 | 5,600 | 5,561 | 5,649 | 5,523 | 5,144 | 5,404 | 4,890 | 4,652 | 4,760 |
| Exports | 155 | 413 | 38 | 14 | 128 | 866 | 160 | 677 | 1,367 | 737 | 1,382 | 1,060 |
| Total Use | 4,778 | 5,597 | 5,270 | 5,614 | 5,689 | 6,515 | 5,683 | 5,821 | 6,771 | 5,627 | 6,034 | 5,820 |
| Ending Stocks | 1,548 | 1,172 | 1,194 | 1,237 | 1,965 | 1,294 | 1,718 | 1,975 | 624 | 973 | 961 | 981 |
| Stocks-to-Human Cons. | 34.5 | 23.4 | 23.4 | 23.0 | 37.2 | 24.3 | 33.5 | 38.8 | 12.3 | 21.1 | 22.2 | 22.0 |
| Stocks-to-Use | 32.4 | 20.9 | 22.7 | 22.0 | 34.6 | 19.9 | 30.2 | 33.9 | 9.2 | 17.3 | 15.9 | 16.9 |
| HFCS Cons. (dry weight) | 600 | 263 | 130 | 135 | 355 | 667 | 698 | 782 | 653 | 1,418 | 1,750 | 1,750 |

1/ Forecast.
Source: USDA, FAS, PSD database (historical data); USDA, WASDE (forecast data).

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Tables from the Sugar and Sweeteners Yearbook are available in the Sugar and Sweeteners Briefing Room at http://www.ers.usda.gov/briefing/sugar/. They contain the latest data and historical information on the production, use, prices, imports, and exports of sugar and sweeteners.

## Related Websites

Sugar and Sweeteners Outlook http://www.ers.usda.gov/Publications/SSS/
WASDE http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documented=1194
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[^0]:    ${ }^{1} \mathrm{http}: / /$ gain.fas.usda.gov/Lists/Advanced\%20Search/AllItems.aspx.

[^1]:    ${ }^{2}$ As an example of how much can happen in world sugar between a first projection and later estimates, the 2010/11 surplus was originally projected at 6.162 million MTRV in May 2010. After difficult weather conditions in many large sugar producing countries, the surplus estimate dropped 4.536 million MTRV to the current estimate of 1.626 million MTRV.
    ${ }^{3}$ One possible partial explanation of the difference between export and import estimates involves the marketing year in which the exports and imports are recorded. Some of the largest sugar exporters are in the Southern Hemisphere and have marketing years that begin earlier in the calendar year than URRUHRI most significant importers. The marketing year in Brazil is May/April;凹South Africa, April/March; in Argentina and Mauritius, June/May; and in Australia, July/June. Most other countries have marketing years that begin in either September or October. The implication is that exports to these countries from the Southern Hemisphere enter in the overlapping portions of 2 marketing years.
    ${ }^{4}$ As discussed in the next section, Brazil is accounting for more of the share of the world sugar exports. World exports have averaged annual increases of 1.451 million MTRV since 1995/96, and exports from Brazil since 1995/96 have averaged 1.353 million MTRV. With overlapping marketing years (footnote 3), countries importing from Brazil on average would be showing lower import levels from Brazil than those shown as exports in Brazil, because a fraction of the importers' receipts are from Brazil's previous marketing year.

