



# Sugar and Sweeteners Outlook

**Stephen Haley, coordinator**  
[shaley@ers.usda.gov](mailto:shaley@ers.usda.gov)

## U.S. Sugar June 2012

U.S. deliveries of total sweeteners for human food and beverage use for 2011 are estimated at 20.381 million tons, almost the same as the deliveries in 2010 of 20.387 million tons. Refined sugar deliveries increased by 1.6 percent, while corn sweetener deliveries fell by 1.7 percent. Within the corn sweetener category, high fructose corn syrup (HFCS) deliveries fell by 1.6 percent. Since 2002, HFCS deliveries have fallen by 1.613 million tons, dry weight, or 17.8 percent. Honey deliveries increased by 5.6 percent, and other edible syrups stayed the same. On a per capita basis, U.S. sweetener deliveries for 2011 were 130.2 pounds, down slightly from 2010 but down 18.8 pounds from the 149.0 pounds in 2000. Per capita sugar deliveries for human consumption in 2011 were 66.2 pounds, the highest level since 1999, while corn sweetener deliveries for human consumption, at 62.5 pounds, were at their lowest level since 1985.

The Economic Research Services (ERS) has made major revisions to its Loss-Adjusted Food Availability data. These data adjust the Food Availability data to account for losses from farm to retail, at retail, and at the consumer level. The loss estimate for refined sugar and corn sweeteners (including high fructose corn syrup) increased substantially from 20 percent to 34 percent, while the estimates for honey and edible syrups decreased from the 20 percent formerly used by ERS to 15 percent.

After adjusting for sweetener food and beverage losses prior to consumer intake, per capita sweetener intake for 2011 is at 79.1 pounds, down 0.8 pounds from 2010 and 9.9 pounds from 2000. In terms of daily calories, the 2011 intake level is 375 calories—a reduction in sweetener intake of about 11 percent compared with the 422 calories estimated for 2000. The 375 daily calories consumed in 2011 are far less than the 453 calories that would have been calculated from the previous set of loss coefficients. These new estimates will likely have implications for the debate on factors behind the average weight gain of Americans and the obesity “crisis.”

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The next release is  
July 16, 2012.  
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Approved by the World  
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On June 12, 2012, the U.S. Department of Agriculture (USDA) released its latest U.S. and Mexico sugar supply and use estimates for fiscal year (FY) 2012 and projections for FY 2013 in the *World Agricultural Supply and Demand Estimates* (WASDE) report. The USDA increased its estimate of 2011/12 Mexico sugar production to 5.025 million metric tons (mt), an increase of 125,000 mt. The USDA also increased its estimate of 2012/13 Mexico sugar production to 5.300 million metric tons (mt). The USDA did not change its 2011/12 estimates or 2012/13 projections of imports, deliveries, or ending-stock levels. The increases in production, therefore, result in larger expected sugar exports in both years. The export estimate for 2011/12 is 984,000 mt, and the export projection for 2012/13 is 1.126 million mt. Almost all of this sugar is expected to go to the U.S. market. The USDA revised U.S. sugar imports from Mexico accordingly.

## World Sugar

On May 24, 2012, the U.S. Department of Agriculture (USDA) released the World Production, Supply, and Distribution (PSD) for centrifugal sugar. Included in the May 2012 sugar PSD were new supply and use estimates for the 2011/12 marketing year, first projections of supply and use for 2012/13, 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). 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 in 2012/13 to increase 507,000 metric tons raw value (MTRV) to 58.326 million MTRV. Exports from Brazil are expected to grow 600,000 MTRV to 25.25 million MTRV. Brazil sugarcane production is expected to rise by 4 percent, and a greater proportion of the crop—48.63 percent compared with 48.07 percent in 2011/12—is forecast to be used for producing sugar instead of ethanol due to better returns from exporting sugar. Resulting sugar production is projected 4.6 percent higher than last year, up to 37.8 million MTRV.

Sugar production in India for 2012/13 is projected at 29.0 million MTRV. India is in the third year of recovery from the low point of the latest sugar cycle, when production was only 15.95 million MTRV in 2008/09. India is forecast to be a significant exporter of 2.5 million MTRV in 2012/13. Export growth is constrained somewhat by an expected rebuilding of sugar stocks by 750,000 MTRV to 7.28 million MTRV. This ending-year stock level corresponds to about 3 months of domestic consumption. No imports are forecast in 2012/13.

Strong sugar production in Thailand is expected to continue into 2012/13, projected at 10.85 million MTRV, up from 10.415 million MTRV in 2011/12 and 9.663 million in 2010/11. Exports are projected at 9.3 million MTRV, up 300,000 MTRV from 2011/12 and up 2.7 million MTRV from 2010/11.

Other major sugar exporters are expected to contribute to overall export supply expansion in 2012/13. Production in both Australia and South Africa is recovering from the extreme weather conditions experienced in 2010/11—excessive rainfall and cyclone damage in Australia and extreme dryness in South Africa. Australian exports are expected to rise 150,000 MTRV to 3.0 million MTRV, and South African exports are expected to rise to 600,000 MTRV, up dramatically from last year's 330,000 MTRV. Guatemala is expected to export 1.725 million MTRV, up 50,000 MTRV, and Colombia is expected to export 880,000 MTRV, up 20,000 MTRV. Colombian sugar production and exports are constrained by increasing use of sugarcane for ethanol production.

Russia is expected to increase sugar imports by 310,000 MTRV to partially offset an expected decline in production of 450,000 MTRV. However, forecast Russian imports of 1.2 million MTRV in 2012/13 are only about 50 percent of the average import level over the period 2008/09 through 2010/11. China is forecast to import 2.5 million MTRV in 2012/13—additional import growth is limited by increased use of high fructose syrup.

The European Union (EU) is forecast to import 3.3 million MTRV in 2012/13, about 100,000 MTRV less than estimated for 2011/12. Most imports come from traditional developing-country suppliers covered under European Partnership Agreements and under the Everything-But-Arms agreement. Significant imports totaling about 1.1 million MTRV enter under the CXL and Balkan tariff-rate quotas. Although important in 2011/12, additional import tenders are not expected at high levels in 2012/13. Regulated EU beet sugar production for 2012/13 is forecast at 15.5 million MTRV. This consists of 14.2 million MTRV of EU quota sugar and 1.3 million MTRV for beet

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<sup>1</sup> <http://gain.fas.usda.gov/Lists/Advanced%20Search/AllItems.aspx>.

Table 1 -- Summary of sugar outlook in major producing and trading countries for 2012/13-exporters

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### **Brazil**

- \* Sugarcane production up 4% to 565 million metric tons (mt)
- \* Reduced investment in producing facilities - only 2 new units in 2012 and area expands only 1%
- \* Dry weather in January-March 2012 affected stock development for 2012/13.
- \* Lower than average plantings of new cane increase the age profile of 2012/13 crop, affecting yield potential.
- \* Total Reducing Sugar (TRS) is forecast at 139.07 kilograms per mt of sugarcane, have 2.48 kg above last year.
- \* TRS ratio for sugar is projected at 48.63% due to strong demand in international market.
- \* Exports are projected at 25.25 million metric tons, raw value (MTRV), up 2.4%.

### **Thailand**

- \* Sugarcane in 2012/13 projected at 105 million tons (100.5 million in 2011/12, 95.7 million in 2010/11, 69.0 million in 2009/10).
- \* Sugar production forecast at 10.85 million MTRV, 9.3 million MTRV for exports (9.0 million MTRV in 2011/12 and 6.642 million MTRV in 2010/11).
- \* Gov't policy - higher support prices started in 2010/11 and soft-loan programs finance increased mechanization.
- \* Four new mills expected to start producing in 2012/13 - daily gringing capacity will increase to 1 million mt/day, up from 0.9 million mt/dat.

### **Australia**

- \* Industry continues its recovery from severe weather events of last few years.
- \* 2012/13 season - more land is being returned to sugarcane production, forecast at 380,000 hectares.
- \* Sugar production is forecast at 4.5 million MTRV, up 15% over 2011/12.
- \* Exports forecast at 3.0 million MTRV, up 200,000 MTRV over 2011/12.

### **Guatemala**

- \* Sugarcane area up 2,000 hectares to 247,000 hectares, and yield is projected at 90 mt/hectares, better than in recent years.
- \* Sugar production for 2012/13 projected at 2.474 million mt, a record if realized.
- \* Exports forecast at 1.725 million mt, about 43% of which is expected to be refined sugar.

### **Colombia**

- \* Expansion of ethanol production affects sugar export potential - forecast at 890,000 MTRV in 2012/13.
- \* Sugarcane area contained within Cauca River Valley -- 215,000 hectares. Production expansion dependent on yield increases. About 18% of sugarcane crop is used for ethanol production.

### **South Africa**

- \* Seasonal rainfall has aided recovery from 2 years of drought in Kwa Zulu - Natal province, where 75% of cane is grown.
- \* Sugar production projected at 2.2 million MTRV (up 15%) and exports at 600,000 MTRV (up 80%).

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MTRV = metric tons, raw value.

Source: USDA, FAS, Global Agricultural Information Network, Sugar Annuals.

Table 2 -- Summary of sugar outlook in major producing and trading countries for 2012/13--other countries

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### **India**

- \* Production is in third year of recovery from low-point of the sugar cycle in 2008/09 and 2009/10.
- \* Area is forecast at 5.25 million hectares (up 3%), sugarcane at 365 million tonnes (up 5%), and sugar at 29.75 million MTRV, up 3.2%.
- \* 2012/13 exports projected at 2.5 million MTRV, down from last year; and imports at zero.
- \* Sugar import duties eliminated to guard against food-price inflation, probably through 2012/13.
- \* Sugar stocks are expected to rise to 7.28 million MTRV, a rise of 750,000 MTRV.

### **China**

- \* Strong prices have led to 50,000 hectare, area expansion for sugarcane to 1.79 million hectares an increase of 38,000 hectares for sugarbeets to 300,000 hectares.
- \* Cane sugar production forecast at 11.8 million MTRV and beet sugar at 1.265 million MTRV, a total gain of 741,000 MTRV.
- \* Consumption forecast at 14.7 million MTRV, a 3% increase. Lower priced corn sweeteners continue to substitute for higher-price sugar; high fructose syrup was estimated at 640,000 mt in 2010/11.
- \* Imports projected at 2.1 million MTRV, and ending stocks should rise to 2.302 million MTRV, up 22%.

### **European Union**

- \* Regulated EU beet sugar production for 2012/13 is forecast at 15.5 million MTRV.
- \* Additional EU beet sugar production beyond the regulated market is expected to total 3.5 million MTRV; this sugar is used for non-food industrial uses or for carryover to the next crop year.
- \* Imports are forecast at 3.3 million MTRV in 2012/13, about 100,000 MTRV less than estimated for 2011/12.

### **Russia**

- \* Area forecast to decrease 7.0% to 1.12 million hectares. Sugarbeet production forecast at 44.5 million mt, down 6.5%. Beet sugar production forecast at 5.05 million MTRV. Although lower than last year, sugarbeet and sugar production are much higher than in previous years.
- \* Consumption in 2012/13 at 6.015 million MTRV is limited by high prices created by the Government to increase the market share of domestically produced beet sugar.
- \* Imports expected to grow by 310,000 MTRV to 1.2 million MTRV, partially offsetting the production decline of 450,000 mt.

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MTRV = metric tons, raw value.

Source: USDA, FAS, Global Agricultural Information Network, Sugar Annuals.

Table 3 - World sugar production, supply, and distribution

Country/Mktg year	Beginning stocks	Total sugar production	Total imports	Total supply	Total exports	Total use	Ending stocks
SUG - North America							
Canada							
2008/09	206	61	962	1,229	58	966	205
2009/10	205	70	1,169	1,444	84	1,155	205
2010/11	205	94	1,242	1,541	49	1,252	240
2011/12	240	130	1,324	1,694	65	1,369	260
2012/13	260	135	1,350	1,745	70	1,400	275
Mexico							
2008/09	1,975	5,260	160	7,395	1,378	5,394	623
2009/10	623	5,115	861	6,599	751	4,875	973
2010/11	973	5,495	307	6,775	1,558	4,411	806
2011/12	806	5,194	405	6,405	911	4,646	848
2012/13	848	5,448	192	6,488	1,024	4,621	843
United States							
2008/09	1,510	6,833	2,796	11,139	123	9,624	1,392
2009/10	1,392	7,224	3,010	11,626	192	10,075	1,359
2010/11	1,359	7,104	3,391	11,854	225	10,294	1,335
2011/12	1,335	7,521	3,328	12,184	227	10,442	1,515
2012/13	1,515	7,779	2,595	11,889	227	10,555	1,107
Total SUG - North America							
2008/09	3,691	12,154	3,918	19,763	1,559	15,984	2,220
2009/10	2,220	12,409	5,040	19,669	1,027	16,105	2,537
2010/11	2,537	12,693	4,940	20,170	1,832	15,957	2,381
2011/12	2,381	12,845	5,057	20,283	1,203	16,457	2,623
2012/13	2,623	13,362	4,137	20,122	1,321	16,576	2,225
SUG - Caribbean							
Cuba							
2008/09	135	1,340	24	1,499	727	670	102
2009/10	102	1,250	0	1,352	563	675	114
2010/11	114	1,100	0	1,214	530	675	9
2011/12	9	1,400	0	1,409	650	680	79
2012/13	79	1,420	0	1,499	700	680	119
Dominican Republic							
2008/09	35	510	12	557	217	330	10
2009/10	10	520	70	600	250	332	18
2010/11	18	510	30	558	212	335	11
2011/12	11	548	49	608	221	337	50
2012/13	50	540	20	610	217	337	56

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

Country/Mktg year	Beginning stocks	Total sugar production	Total imports	Total supply	Total exports	Total use	Ending stocks
Other SUG - Caribbean							
2008/09	132	233	452	817	203	478	136
2009/10	136	166	453	755	143	471	141
2010/11	141	186	423	750	151	471	128
2011/12	128	200	435	763	160	480	123
2012/13	123	200	446	769	160	481	128
Total SUG - Caribbean							
2008/09	302	2,083	488	2,873	1,147	1,478	248
2009/10	248	1,936	523	2,707	956	1,478	273
2010/11	273	1,796	453	2,522	893	1,481	148
2011/12	148	2,148	484	2,780	1,031	1,497	252
2012/13	252	2,160	466	2,878	1,077	1,498	303
SUG - Central America							
Guatemala							
2008/09	609	2,381	0	2,990	1,654	744	592
2009/10	592	2,340	0	2,932	1,815	735	382
2010/11	382	2,048	0	2,430	1,544	759	127
2011/12	127	2,402	0	2,529	1,675	759	95
2012/13	95	2,474	0	2,569	1,725	750	94
Other SUG - Central America							
2008/09	436	2,024	0	2,460	939	1,100	421
2009/10	421	2,185	138	2,744	1,027	1,148	569
2010/11	569	2,120	0	2,689	976	1,146	567
2011/12	567	2,386	0	2,953	1,164	1,229	560
2012/13	560	2,432	0	2,992	1,168	1,262	562
Total SUG - Central America							
2008/09	1,045	4,405	0	5,450	2,593	1,844	1,013
2009/10	1,013	4,525	138	5,676	2,842	1,883	951
2010/11	951	4,168	0	5,119	2,520	1,905	694
2011/12	694	4,788	0	5,482	2,839	1,988	655
2012/13	655	4,906	0	5,561	2,893	2,012	656
SUG - South America							
Brazil							
2008/09	215	31,850	0	32,065	21,550	11,650	-1,135
2009/10	-1,135	36,400	0	35,265	24,300	11,800	-835
2010/11	-835	38,350	0	37,515	25,800	12,000	-285
2011/12	-285	36,150	0	35,865	24,650	11,500	-285
2012/13	-285	37,800	0	37,515	25,250	11,700	565
Colombia							
2008/09	170	2,277	139	2,586	585	1,585	416
2009/10	416	2,294	185	2,895	870	1,620	405
2010/11	405	2,280	160	2,845	830	1,625	390
2011/12	390	2,310	170	2,870	860	1,635	375
2012/13	375	2,310	180	2,865	880	1,650	335
Argentina							
2008/09	105	2,420	21	2,546	581	1,739	226
2009/10	226	2,230	23	2,479	751	1,740	-12
2010/11	-12	2,030	52	2,070	196	1,790	84
2011/12	84	2,150	3	2,237	145	1,830	262
2012/13	262	2,040	2	2,304	260	1,874	170

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

Country/Mktg year	Beginning stocks	Total sugar production	Total imports	Total supply	Total exports	Total use	Ending stocks
Other SUG - South America							
2008/09	1,231	3,315	1,511	6,057	523	4,014	1,520
2009/10	1,520	2,984	1,721	6,225	494	4,355	1,376
2010/11	1,376	3,214	1,845	6,435	509	4,414	1,512
2011/12	1,512	3,360	1,746	6,618	487	4,529	1,602
2012/13	1,602	3,444	1,669	6,715	509	4,553	1,653
Total SUG - South America							
2008/09	1,721	39,862	1,671	43,254	23,239	18,988	1,027
2009/10	1,027	43,908	1,929	46,864	26,415	19,515	934
2010/11	934	45,874	2,057	48,865	27,335	19,829	1,701
2011/12	1,701	43,970	1,919	47,590	26,142	19,494	1,954
2012/13	1,954	45,594	1,851	49,399	26,899	19,777	2,723
SUG - Western Europe							
EU-27							
2008/09	3,130	14,014	3,180	20,324	1,332	16,760	2,232
2009/10	2,232	16,687	2,561	21,480	2,647	17,400	1,433
2010/11	1,433	15,667	3,752	20,852	1,113	17,800	1,939
2011/12	1,939	17,461	3,400	22,800	2,505	17,800	2,495
2012/13	2,495	15,790	3,300	21,585	1,500	17,800	2,285
Other SUG - Western Europe							
2008/09	335	275	377	987	45	626	316
2009/10	316	305	378	999	4	633	362
2010/11	362	240	357	959	45	618	296
2011/12	296	250	367	913	50	628	235
2012/13	235	275	388	898	50	633	215
Total SUG - Western Europe							
2008/09	3,465	14,289	3,557	21,311	1,377	17,386	2,548
2009/10	2,548	16,992	2,939	22,479	2,651	18,033	1,795
2010/11	1,795	15,907	4,109	21,811	1,158	18,418	2,235
2011/12	2,235	17,711	3,767	23,713	2,555	18,428	2,730
2012/13	2,730	16,065	3,688	22,483	1,550	18,433	2,500
SUG - Eastern Europe							
Russia							
2008/09	550	3,481	2,150	6,181	200	5,500	481
2009/10	481	3,444	2,223	6,148	34	5,715	399
2010/11	399	2,996	2,510	5,905	17	5,538	350
2011/12	350	5,500	890	6,740	275	6,010	455
2012/13	455	5,050	1,200	6,705	275	6,030	400
Ukraine							
2008/09	580	1,710	78	2,368	37	2,100	231
2009/10	231	1,382	346	1,959	1	1,878	80
2010/11	80	1,540	293	1,913	1	1,860	52
2011/12	52	2,300	48	2,400	33	2,000	367
2012/13	367	2,360	15	2,742	35	2,000	707
Other SUG - Eastern Europe							
2008/09	756	1,425	1,210	3,391	829	1,857	705
2009/10	705	1,501	1,413	3,619	990	1,894	735
2010/11	735	1,505	1,302	3,542	917	1,905	720
2011/12	720	1,575	1,176	3,471	880	1,913	678
2012/13	678	1,547	1,237	3,462	897	1,934	631

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

Country/Mktg year	Beginning stocks	Total sugar production	Total imports	Total supply	Total exports	Total use	Ending stocks
Total SUG - Eastern Europe							
2008/09	1,886	6,616	3,438	11,940	1,066	9,457	1,417
2009/10	1,417	6,327	3,982	11,726	1,025	9,487	1,214
2010/11	1,214	6,041	4,105	11,360	935	9,303	1,122
2011/12	1,122	9,375	2,114	12,611	1,188	9,923	1,500
2012/13	1,500	8,957	2,452	12,909	1,207	9,964	1,738
SUG - Africa							
South Africa							
2008/09	227	2,350	168	2,745	1,185	1,530	30
2009/10	30	2,265	200	2,495	830	1,595	70
2010/11	70	1,985	200	2,255	415	1,665	175
2011/12	175	1,885	220	2,280	330	1,705	245
2012/13	245	2,175	120	2,540	600	1,745	195
Other SUG - Africa							
2008/09	2,517	5,932	6,944	15,393	2,643	10,407	2,343
2009/10	2,343	5,893	7,574	15,810	2,670	10,869	2,271
2010/11	2,271	6,215	7,727	16,213	2,983	10,924	2,306
2011/12	2,306	6,291	7,920	16,517	3,018	11,175	2,324
2012/13	2,324	6,374	8,288	16,986	3,276	11,220	2,490
Total SUG - Africa							
2008/09	2,744	8,282	7,112	18,138	3,828	11,937	2,373
2009/10	2,373	8,158	7,774	18,305	3,500	12,464	2,341
2010/11	2,341	8,200	7,927	18,468	3,398	12,589	2,481
2011/12	2,481	8,176	8,140	18,797	3,348	12,880	2,569
2012/13	2,569	8,549	8,408	19,526	3,876	12,965	2,685
SUG - MiddleEast							
Turkey							
2008/09	405	2,100	5	2,510	5	2,000	505
2009/10	505	2,530	5	3,040	41	2,450	549
2010/11	549	2,274	5	2,828	66	2,300	462
2011/12	462	2,262	5	2,729	50	2,300	379
2012/13	379	2,300	5	2,684	50	2,300	334
Egypt							
2008/09	544	1,612	1,382	3,538	100	2,748	690
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	1,980	1,480	3,589	389	2,850	350
2012/13	350	2,010	1,150	3,510	400	2,950	160
Other SUG - MiddleEast							
2008/09	3,104	714	8,115	11,933	2,491	7,007	2,435
2009/10	2,435	1,232	8,849	12,516	2,976	7,006	2,534
2010/11	2,534	1,081	9,006	12,621	2,633	7,172	2,816
2011/12	2,816	1,156	8,969	12,941	2,833	7,278	2,830
2012/13	2,830	1,160	9,325	13,315	2,640	7,353	3,322
Total SUG - MiddleEast							
2008/09	4,053	4,426	9,502	17,981	2,596	11,755	3,630
2009/10	3,630	5,582	9,832	19,044	3,347	12,085	3,612
2010/11	3,612	5,185	10,131	18,928	3,249	12,272	3,407
2011/12	3,407	5,398	10,454	19,259	3,272	12,428	3,559
2012/13	3,559	5,470	10,480	19,509	3,090	12,603	3,816
SUG - Asia - Oceania							
Japan							
2008/09	454	927	1,279	2,660	1	2,100	559
2009/10	559	901	1,199	2,659	1	2,090	568
2010/11	568	700	1,332	2,600	1	2,070	529
2011/12	529	740	1,365	2,634	1	2,090	543
2012/13	543	770	1,385	2,698	1	2,100	597

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

Country/Mktg year	Beginning stocks	Total sugar production	Total imports	Total supply	Total exports	Total use	Ending stocks
India							
2008/09	12,296	15,950	1,358	29,604	224	23,500	5,880
2009/10	5,880	20,637	2,430	28,947	225	22,500	6,222
2010/11	6,222	26,574	405	33,201	3,903	23,500	5,798
2011/12	5,798	28,830	0	34,628	2,600	25,500	6,528
2012/13	6,528	29,750	0	36,278	2,500	26,500	7,278
China							
2008/09	3,965	13,317	1,077	18,359	75	14,500	3,784
2009/10	3,784	11,429	1,535	16,748	93	14,300	2,355
2010/11	2,355	11,199	2,143	15,697	76	14,000	1,621
2011/12	1,621	12,324	2,400	16,345	54	14,400	1,891
2012/13	1,891	13,065	2,500	17,456	54	14,900	2,502
Thailand							
2008/09	2,651	7,200	0	9,851	5,295	2,000	2,556
2009/10	2,556	6,930	7	9,493	4,930	2,220	2,343
2010/11	2,343	9,663	19	12,025	6,642	2,400	2,983
2011/12	2,983	10,415	10	13,408	9,000	2,600	1,808
2012/13	1,808	10,850	10	12,668	9,300	2,800	568
Australia							
2008/09	400	4,814	41	5,255	3,522	1,246	487
2009/10	487	4,700	78	5,265	3,600	1,252	413
2010/11	413	3,700	163	4,276	2,750	1,333	193
2011/12	193	3,900	180	4,273	2,850	1,350	73
2012/13	73	4,500	165	4,738	3,000	1,375	363
Pakistan							
2008/09	1,163	3,512	125	4,800	75	4,175	550
2009/10	550	3,420	1,030	5,000	70	4,100	830
2010/11	830	3,920	1,040	5,790	70	4,250	1,470
2011/12	1,470	4,320	0	5,790	150	4,300	1,340
2012/13	1,340	4,120	200	5,660	100	4,400	1,160
Indonesia							
2008/09	590	2,053	2,197	4,840	0	4,500	340
2009/10	340	1,910	3,200	5,450	0	4,700	750
2010/11	750	1,770	3,026	5,546	0	5,000	546
2011/12	546	1,830	2,975	5,351	0	5,050	301
2012/13	301	2,040	3,200	5,541	0	5,162	379
Philippines							
2008/09	547	2,100	0	2,647	225	2,100	322
2009/10	322	2,000	250	2,572	178	2,000	394
2010/11	394	2,400	0	2,794	202	2,000	592
2011/12	592	2,240	0	2,832	445	2,000	387
2012/13	387	2,400	0	2,787	300	2,000	487
Other SUG - Asia - Oceania							
2008/09	2,677	1,898	9,096	13,671	1,059	10,005	2,607
2009/10	2,607	1,753	9,308	13,668	1,042	10,309	2,317
2010/11	2,317	1,852	10,071	14,240	1,124	10,459	2,657
2011/12	2,657	1,957	10,005	14,619	1,141	10,580	2,898
2012/13	2,898	1,895	10,163	14,956	1,158	10,696	3,102
Total SUG - Asia - Oceania							
2008/09	24,743	51,771	15,173	91,687	10,476	64,126	17,085
2009/10	17,085	53,680	19,037	89,802	10,139	63,471	16,192
2010/11	16,192	61,778	18,199	96,169	14,768	65,012	16,389
2011/12	16,389	66,556	16,935	99,880	16,241	67,870	15,769
2012/13	15,769	69,390	17,623	102,782	16,413	69,933	16,436

----- Continued

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

Country/Mktg year	Beginning stocks	Total sugar production	Total imports	Total supply	Total exports	Total use	Ending stocks
World							
2008/09	43,650	143,888	44,859	232,397	47,881	152,955	31,561
2009/10	31,561	153,517	51,194	236,272	51,902	154,521	29,849
2010/11	29,849	161,642	51,921	243,412	56,088	156,766	30,558
2011/12	30,558	170,967	48,870	250,395	57,819	160,965	31,611
2012/13	31,611	174,453	49,105	255,169	58,326	163,761	33,082
Unrecorded							
2008/09	''	''	''	3,022	''	''	''
2009/10	''	''	''	708	''	''	''
2010/11	''	''	''	4,167	''	''	''
2011/12	''	''	''	8,949	''	''	''
2012/13	''	''	''	9,221	''	''	''

Source: USDA, FAS, PSD online.

sugar exports. Beet sugar exports are lower than the 2.3 million authorized for 2011/12. Approval of out-of-quota sugar for the domestic food market in 2012/13, which was granted in 2011/12 when 700,000 MTRV was approved for food use, is not expected. Additional EU beet sugar production beyond the regulated market is expected to total 3.5 million MTRV. This sugar is used for nonfood industrial uses, including the biochemical and bio-ethanol industries. Sugar imports for industrial uses will likely be limited due to the high level of unregulated over-quota sugar in the EU.

U.S. sugar imports are difficult to predict because of the role of policy. Imports for 2012/13 are projected at 2.595 million MTRV. All other factors constant, this level of imports produces an ending stocks-to-use ratio of 10.3 percent. If policymakers were to decide to target the ending stocks ratio at 14.5 percent, imports could increase by 456,000 MTRV to a total of 3.051 million MTRV. This would be about 277,000 MTRV less than estimated imports for 2011/12.

### ***Trends in World Sugar Supply and Use***

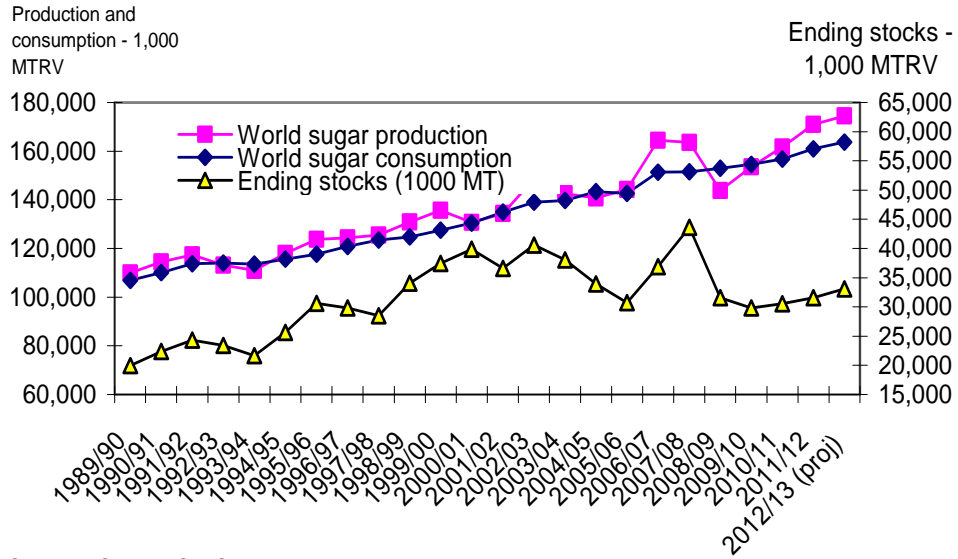
Figure 1 shows world sugar production, consumption, and ending stocks from 1989/90 through 2012/13. World sugar production and consumption have been increasing at about the same rate: 2.03 percent for production and 1.88 percent for consumption. Consumption growth has been fairly steady from year to year, whereas production growth has shown more variability. Since 1999/2000, world sugar production has increased, on average, 2.715 million MTRV per year. Corresponding growth in Brazil has been 1.672 million MTRV per year, or 62 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, at between 29.849 and 31.611 million MTRV. Ending stocks for 2012/13 are projected at 33.082 million MTRV, still low, but higher than the last few years.

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 exceeded consumption) 17 times. The largest deficit of 9.67 million MTRV occurred in 2008/09, when Indian production decreased 12.68 million MTRV from the previous year, or 44 percent. The USDA estimates 2011/12 world sugar in surplus at 10.002 million MTRV and projects a 2012/13 surplus of 10.692 million MTRV.

In the record world sugar deficit year of 2008/09, the world ending-stocks-to-use ratio fell to 20.6 percent, which at the time was the lowest level since 1993/94. In spite of the growth of sugar world surplus, the estimated ratio for 2011/12 is only 19.6 percent and the projected ratio for 2012/13 is 20.2 percent.

Figure 1

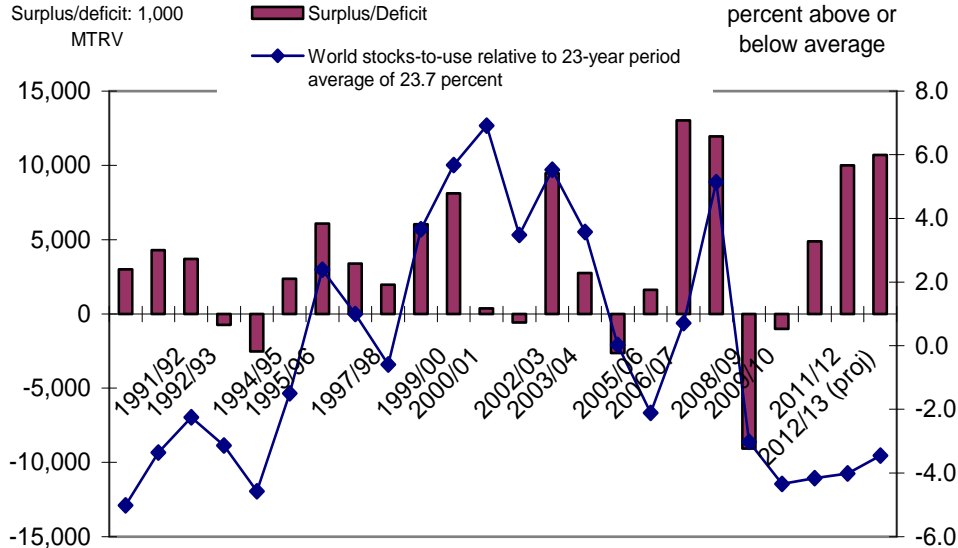
**World production, consumption, and ending stocks, 1989/90-2012/13**



Source: USDA, FAS, PSD database.

Figure 2

**World sugar surplus/deficit and stocks-to-use ratio**



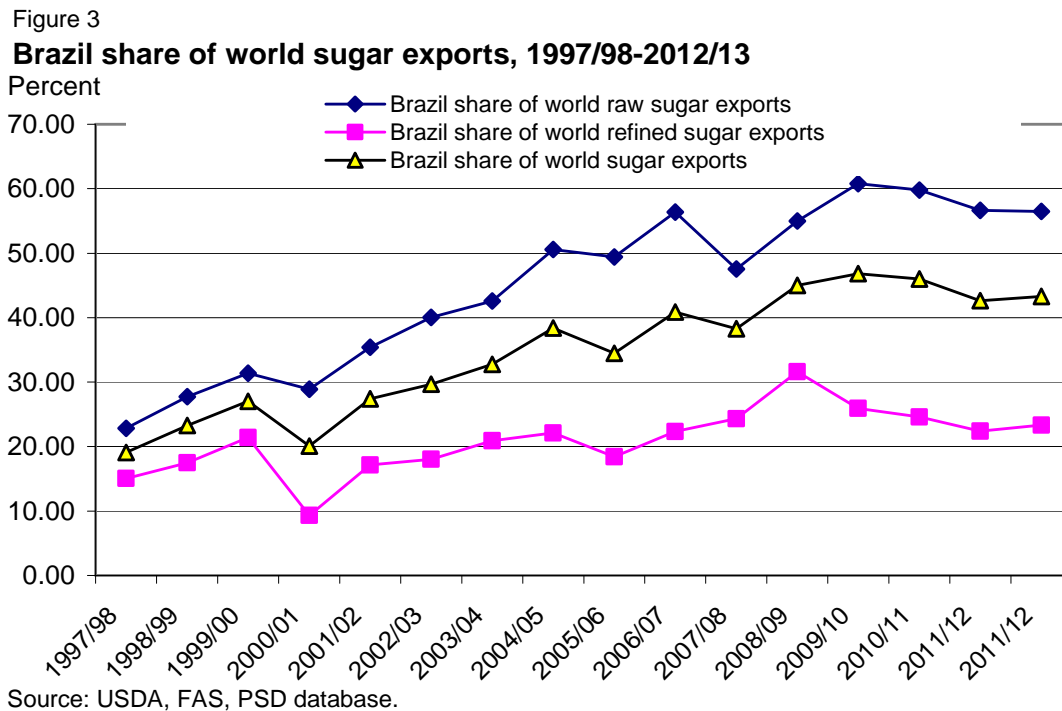
Source: USDA, FAS, PSD database.

## Brazil and the World Sugar Export Market

Figure 3 shows Brazil's share of the world export market for raw, refined, and total sugar since 1997/98. Brazil gained in its world export market share fairly consistently through 2009/10, when its share of world raw sugar exports was 60.8 percent and of world total sugar exports was 46.8 percent. Brazil's share has since fallen to 56.6 percent for raw sugar in 2011/12, and its total sugar share has fallen to 42.6 percent. The USDA projects 2012/13 shares for Brazil close to those of 2011/12.

LMC International reports that Brazilian Center/South sugar production costs, especially in dollar terms, have increased significantly the last couple of years. Various factors are responsible: Strong Brazilian economic growth has added to rising labor costs; higher input prices; the poor technical performance of the sugar industry over the last 2 years; and the fact that the Brazilian *real* has retained its high value relative to the U.S. dollar.

Figure 4 shows the evolution of these costs in both dollars and Brazilian *reals*. Brazilian *real* sugar production costs have been increasing consistently, though modestly, since 1997/98. Production costs were only 17.4 percent higher in 2010/11 than in 2004/05 but are projected to be 43.6 percent higher in 2011/12. Dollar production costs showed declines through 2002/03 when the *real* was depreciating against the dollar. Since then, the *real* has appreciated significantly and has caused dollar production costs to rise. The dollar production cost in 2010/11 was estimated 95.1 percent higher than in 2004/05, and the cost in 2011/12 is projected to be 142.4 percent higher.



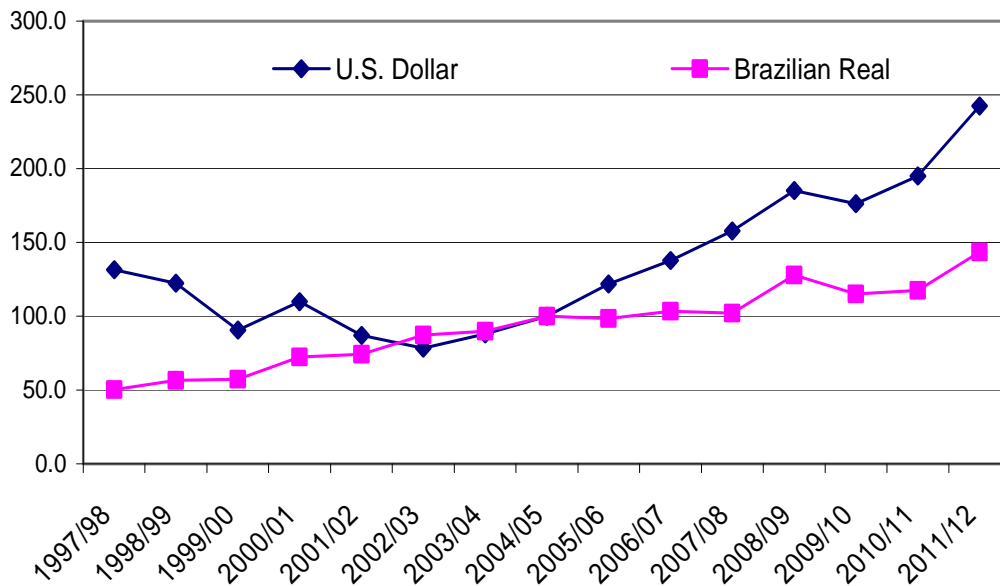
<sup>2</sup>

The real has, however, depreciated about 11 percent against the dollar from the beginning of 2012 through May.

Figure 4

**Cost of production in Center/South Brazil, in dollars and Brazilian reais, 1997/98-2011/12**

index: 2004/05 = 100

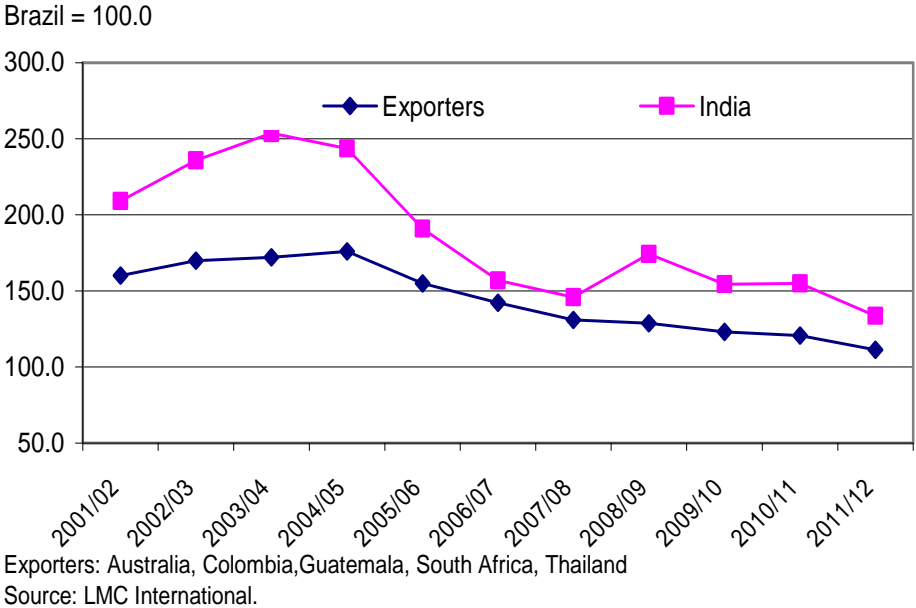


Source: LMC International.

Brazil’s Center/South region is still a low-cost production area, but producers elsewhere have become much more competitive. Figure 5 shows an index of the production-weighted costs of major export competitors to Brazil (Australia, Colombia, Guatemala, South Africa, and Thailand) and also India (forecast to be a major exporter in 2012/13) relative to Center/South production costs. In 2004/05, the exporters’ costs were about 76.1 percent higher than in Brazil, while in India, the costs were 143.7 percent higher. By 2010/11, the exporters’ costs were estimated only 20.5 percent higher. The projection for 2011/12 is for these costs to be only 11.3 percent higher. Even projected Indian production costs in 2011/12 are only 33.6 percent higher than those in Brazil’s Center/South.

An article published in the March 2011 *Sugar and Sweetener Outlook* examined the relationship between Center/South production costs and world sugar prices. Technically speaking, Brazilian production costs measured in dollars and world sugar prices (the nearby no. 11 raw sugar futures price from the Intercontinental Exchange) were shown to be cointegrated. This means that there is a medium- to long-run equilibrium relationship between Brazilian production costs and world prices. Because of Brazil’s large share of the world sugar market, its costs measured in dollars push prices in the same direction over time. With the prediction of large world sugar surpluses this year, the extent to which world sugar prices can fall will be limited because of this Brazilian “large-country effect.” Beside sugar market fundamentals, important variables to focus on include *real*-dollar exchange rate movements, aggregate economic activity in Brazil, world oil prices, any change to the policy-determined price of gasoline in Brazil, and other systematic commodity price trends affecting investors’ decisionmaking.

Figure 5  
**Sugar production costs of major sugar exporters and India relative to Brazil, 2001/02-2011/12**



## U.S. Sweetener Demand

Each year the Sugar and Sweetener Outlook of the Economic Research Service (ERS) makes calendar year estimates of total sweetener deliveries that are available for food and beverage consumption by U.S. consumers. These sweeteners include refined sugar; the corn sweeteners of high fructose corn syrup (HFCS), glucose syrup, and dextrose; honey; and other edible syrups, including maple syrup and maple sugar. Table 4 shows the new preliminary estimates for 2011, along with some revisions for prior years.

U.S. deliveries of total sweeteners for human food and beverage use for 2011 are estimated at 20.381 million tons, almost the same as the deliveries in 2010 of 20.387 million tons. Refined sugar deliveries increased by 1.6 percent, while corn sweetener deliveries fell by 1.7 percent. Within the corn sweetener category, HFCS deliveries fell by 1.6 percent. Since 2002, HFCS deliveries have fallen by 1.613 million tons, dry weight, or 17.8 percent. Honey deliveries increased by 5.6 percent, and other edible syrups stayed the same.

On a per capita basis, U.S. sweetener deliveries for 2011 were 130.2 pounds, down slightly from 2010 but down 18.8 pounds from the 149.0 pounds in 2000. Per capita sugar deliveries for human consumption in 2011 were 66.2 pounds, the highest level since 1999, while corn sweetener deliveries for human consumption at 62.5 pounds were at their lowest level since 1985.

Sugar contained in net imported products is usually excluded in estimating U.S. per capita sweetener deliveries. Before 1995, sugar contained in imports was offset by sugar contained in U.S. food exports, indicating only a minor positive adjustment to total deliveries. Beginning in 1995-96, U.S. imports of sugar-containing products started increasing at a faster rate than exports of the products. This trend continued until 2006 but has since been reversed. For 2011, trade in sugar-containing products contributed an estimated 627,897 tons to sweeteners available for consumption, or 4.0 pounds per capita. This is down from the high of 5.4 pounds in 2006.

Table 4 --U.S. caloric and noncaloric sweeteners estimated deliveries for domestic food and beverage use, total and per capita, by calendar year 1/ 2/

Calendar year	U.S. population 3/ (July 1) Millions	Refined sugar 4/	Corn sweeteners				Pure honey	Edible syrups	Total caloric sweeteners	Sugar in sugar-containing products (SCP)	Total caloric sweeteners incl.SCP	High-Intensity sweeteners 5/ (sucrose equivalence)	Total sweeteners, including high-intensity swt.
			HFCS	Glucose syrup	Dextrose	Total							
													1,000 short tons, dry basis
2000	282.2	9,252	8,845	2,230	476	11,551	157	60	21,020	304	21,325	-	-
2001	285.1	9,195	8,920	2,205	469	11,595	134	61	20,985	388	21,373	-	-
2002	287.8	9,105	9,045	2,224	473	11,741	153	62	21,061	529	21,590	3,079	24,669
2003	290.3	8,848	8,849	2,209	449	11,507	146	63	20,564	621	21,185	3,138	24,323
2004	293.0	9,029	8,779	2,292	487	11,558	130	64	20,781	656	21,437	3,197	24,634
2005	295.8	9,324	8,756	2,261	481	11,497	156	66	21,043	669	21,712	3,256	24,968
2006	299.1	9,286	8,702	2,053	463	11,218	174	66	20,745	812	21,557	3,314	24,871
2007	302.0	9,230	8,479	2,067	448	10,994	141	67	20,432	777	21,209	3,452	24,662
2008	304.8	9,911	8,080	2,036	419	10,535	151	69	20,666	603	21,269	3,587	24,857
2009	307.5	9,740	7,698	1,991	417	10,105	141	70	20,056	521	20,577	3,933	24,510
2010	310.2	10,193	7,555	1,956	450	9,961	160	73	20,387	643	21,030	4,022	25,053
2011 6/	313.0	10,352	7,432	1,908	447	9,787	169	73	20,381	628	21,008	4,112	25,120
													Pounds, dry basis
2000	282.2	65.6	62.7	15.8	3.4	81.9	1.1	0.4	149.0	2.2	151.1	-	-
2001	285.1	64.5	62.6	15.5	3.3	81.3	0.9	0.4	147.2	2.7	149.9	-	-
2002	287.8	63.3	62.9	15.5	3.3	81.6	1.1	0.4	146.4	3.7	150.0	21.4	171.4
2003	290.3	61.0	61.0	15.2	3.1	79.3	1.0	0.4	141.7	4.3	145.9	21.6	167.6
2004	293.0	61.6	59.9	15.6	3.3	78.9	0.9	0.4	141.8	4.5	146.3	21.8	168.1
2005	295.8	63.1	59.2	15.3	3.3	77.7	1.1	0.4	142.3	4.5	146.8	22.0	168.8
2006	299.1	62.1	58.2	13.7	3.1	75.0	1.2	0.4	138.7	5.4	144.2	22.2	166.3
2007	302.0	61.1	56.1	13.7	3.0	72.8	0.9	0.4	135.3	5.1	140.4	22.9	163.3
2008	304.8	65.0	53.0	13.4	2.8	69.1	1.0	0.5	135.6	4.0	139.5	23.5	163.1
2009	307.5	63.4	50.1	12.9	2.7	65.7	0.9	0.5	130.5	3.4	133.8	25.6	159.4
2010	310.2	65.7	48.7	12.6	2.9	64.2	1.0	0.5	131.4	4.1	135.6	25.9	161.5
2011 6/	313.0	66.2	47.5	12.2	2.9	62.5	1.1	0.5	130.2	4.0	134.3	26.3	160.5

\* - not applicable/available.

1/ Per capita deliveries of sweeteners by U.S. processors and refiners and direct-consumption imports to food manufacturers, retailers, and other end users represent the per capita supply of caloric sweeteners. The data exclude deliveries to manufacturers of alcoholic beverages. Actual human intake of caloric sweeteners is lower because of uneaten food, spoilage, and other losses. See Tables 51- 53 of the *Sugar and Sweeteners Yearbook* series for estimated intake of added sugar.

2/ Totals may not add due to rounding.

3/ Source: U.S. Census Bureau.

4/ Based on U.S. sugar deliveries for domestic food and beverage use.

5/ SRI Consulting, Chemical Economics Handbook, High-Intensity Sweeteners Market Research Report, May 2010.

6/ Preliminary.

Source: USDA, ERS, *Sugar and Sweetener Outlook*.



Table 5 -- Estimated sugar in U.S. product imports and exports, 1995-2011

Year	Sugar confectionery	Cocoa and cocoa preparations	Cereal and bakers preparations	Bread, pastry, cakes, etc.	Misc. edible preparations	Carbonated soft drinks	Total sugar in imported products	Total sugar in exported products	Sugar in exported products less USDA product re-export program sugar	Domestic consumption of sugar in imported products
					1,000 short tons					
1995	137,760	66,285	6,286	43,705	69,945	26,405	349,365	317,809	228,286	121,079
1996	149,383	75,911	8,580	49,882	60,729	32,456	375,940	356,966	259,704	116,236
1997	161,894	92,664	14,273	64,812	68,172	39,403	441,218	390,159	244,221	196,997
1998	186,572	97,616	19,110	74,726	91,119	39,811	508,954	371,414	234,786	274,168
1999	223,421	111,807	20,116	87,875	118,876	48,165	610,261	392,208	256,467	353,794
2000	239,914	130,407	19,548	99,740	120,366	58,745	668,719	442,596	364,435	304,284
2001	259,975	160,350	18,097	115,917	127,331	64,961	746,630	470,991	358,723	387,907
2002	299,003	193,608	19,419	117,838	140,369	70,852	841,090	459,931	311,921	529,169
2003	362,786	208,260	25,139	134,500	150,859	83,440	964,985	507,950	344,232	620,753
2004	400,819	220,067	25,082	138,898	186,328	97,731	1,068,925	539,237	413,071	655,854
2005	456,969	231,322	26,012	143,742	187,838	109,747	1,155,630	596,960	486,288	669,342
2006	499,547	275,449	24,732	148,595	193,692	126,714	1,268,728	560,835	456,902	811,826
2007	433,062	276,990	25,081	150,538	189,345	128,811	1,260,363	588,293	426,578	833,785
2008	408,183	271,271	23,698	154,799	186,760	123,355	1,168,066	680,094	564,567	603,499
2009	381,207	256,855	16,335	157,347	169,954	112,489	1,094,186	696,963	573,504	520,682
2010	404,539	289,914	16,878	174,031	182,468	125,217	1,193,046	741,699	550,111	642,935
2011	400,861	315,158	16,664	184,368	188,206	135,068	1,240,324	817,599	612,427	627,897

Source: USDA, ERS, *Sugar and Sweetener Outlook*.

Table 5 provides more detail about sugar in imported and exported products. Sugar in imported products in 2011 is estimated at 1.240 million tons, a 4-percent increase over 2010. Sugar imported in cocoa and cocoa products showed the largest year-over-year increase, at 25,244 tons, followed by sugar in imported bread, pastries, and cakes of 10,337 tons and sugar in beverages of 9,851 tons. Sugar in sugar confectionery fell by 3,678 tons. Sugar in exported products, adjusted for sugar imported under USDA re-export-import programs, is estimated at 627,897 tons in 2011, up about 11.3 percent over 2010.

Data in the next-to-last column of table 4, estimated by SRI Consulting and published in their *Chemical Economics Handbook* (CEH), show the sucrose equivalent availability for human consumption of high-intensity sweeteners (HIS) saccharin, aspartame, acesulfame K, sucralose, stevia-products, and cyclamate.<sup>1</sup> The supply of these sweeteners for food consumption has been growing over time, from 3.079 million tons in 2002 to 4.112 million tons in 2011. On a per capita basis, the growth has been from 21.4 pounds in 2002 to 26.3 pounds in 2011.

Aspartame has the largest market share of all these sweeteners, but its share has been declining as the consumption of diet carbonate beverages has declined. Also, aspartame's share of the tabletop-use category has fallen significantly, due primarily to competition from sucralose. The aspartame market share is now estimated at less than 50 percent. Saccharin's share of the market is about 18 percent and is on a slow decline. Sucralose use is over 20 percent of the market; its share grew rapidly over a short period. Its forecast share growth is positive but has settled down to about one-half of a percentage-point in market share growth each year through 2014. Consumption of rebaudioside A, though growing steadily, is still less important than consumption of the other sweeteners.

### ***Calculating Per Capita Consumption: New Loss Coefficients for Added Sugars***

The Food Availability (per capita) Data System developed by USDA's Economic Research Service (ERS) tracks annual food and nutrient availability in the United States, beginning with 1909 data, for several hundred commodities, including sugar and other added sweeteners (as discussed above). Because the core Food Availability data series in the system overstates actual consumption, ERS added another series to the system—the Loss-Adjusted Food Availability data—which adjusts the Food Availability data to account for nonedible food parts and food

<sup>1</sup> See: <http://www.ers.usda.gov/Publications/SSS/2012/03Mar/SSSM283.pdf>.

losses, including losses from farm to retail, at retail, and at the consumer level. This second data series more closely estimates per capita food intake.<sup>2</sup>

Under an agreement with ERS, RTI International has proposed new estimates for the data series on loss of the edible share of food at the consumer level.<sup>3</sup> These proposed estimates cover food loss both at home and away from home for most of the commodities included in the series, including losses during cooking and preparation, discards due to preparation of too much food, disposal of food packages with expired use-by dates, spoilage, and plate waste.

RTI conducted the first of two phases of this study by comparing estimates of total U.S. retail household purchases with total U.S. at-home consumption for each food in ERS’s Loss-Adjusted Food Availability series. The main data sources included The Nielsen Company’s Homescan® data for 2004 (food purchases from retail outlets) and the National Health and Nutrition Examination Survey (NHANES) for 2003-04 (food consumption). RTI also calculated alternative estimates of food loss by comparing the total quantity available at the consumer level in the Loss-Adjusted Food Availability series with total reported consumption in NHANES. RTI relied on several supplemental data sources to adjust the purchase data to facilitate comparisons with the consumption data. In addition, RTI took direct measurements of count data (e.g., produce sold by count rather than weight), inedible percentages of food, and moisture gains for foods when data were not available from one of the data sources.

RTI derived loss estimates for refined sugar and for honey using the available data series. Results are shown in table 6. The loss estimate for refined sugar increased substantially from 20 percent to 34 percent, while the estimate for honey decreased from the 20 percent used by ERS to 15 percent. RTI did not estimate loss coefficients for the corn sweeteners—high-fructose corn syrup, glucose syrup, and dextrose—because these sweeteners are used only as ingredients in other products. Although RTI proposed using the same estimate as that calculated for honey, ERS, in consultation with representatives of the sweetener industry, determined that corn sweetener losses much more closely resemble losses from refined sugar. The corn sweetener loss coefficient was set at 34 percent. The loss coefficient for edible syrups was set to 15 percent, the same as for honey.

Table 6 -- Consumer loss estimates for added sugars and sweeteners

Food	Previous ERS consumer food loss estimate	New ERS consumer food loss estimate	Basis for new estimate
<i>Percent</i>			
Refined sugar	20	34	Estimated from available data
High fructose corn syrup	20	34	Used same value as refined sugar
Glucose	20	34	Used same value as refined sugar
Dextrose	20	34	Used same value as refined sugar
Honey	20	15	Estimated from available data
Edible syrups	20	15	Used same value as honey

Source: Economic Research Service, based on estimates by RTI International for refined sugar and honey.

<sup>2</sup> See tables 51-53 at the Briefing Room site, as follows: Table 51 – Refined sugar; Table 52 – High fructose corn syrup; Table 53 – All other added sugars.  
<sup>3</sup> Mary K. Muth, Shawn A. Kams, Samara Joy Nielsen, Jean C. Buzby, and Hodan Farah Wells. *Consumer-Level Food Loss Estimates and Their Use in the ERS Loss-Adjusted Food Availability Data*, USDA, ERS, Technical Bulletin Number 1927, January 2011, <http://www.ers.usda.gov/Publications/TB1927/>.

## *Implications for Consumer Per Capita Sweetener Intake*

Table 7 shows the derivation of intake consumption for refined sugar, high fructose corn syrup, and the other added sugars. The primary weight (first data column) is taken from the sweetener availabilities seen in the bottom panel of table 4. Although there are four loss categories, only two of these are relevant for added sugars: loss from retail to consumer level and the loss at the consumer level for uneaten portions, spoilage, etc. The retail-to-consumer loss is estimated at 11 percent for all sweeteners. Because this loss category was not analyzed in the RTI study, its value has not changed. New loss-at-the-consumer-level coefficients (table 6) are used in adjusting weight at the consumer level (fifth data column) to per capita consumption, adjusted for loss (eighth data column). The next two columns translate the annual consumption (pounds) into daily levels, i.e., ounces and grams per day. The last two columns show the implied daily calorie consumption and the corresponding number of equivalent teaspoons of sugar consumed daily.

Per capita sugar consumption for 2011 is estimated at 41.2 pounds. This amount is up slightly from last year and about 3.5 percent higher than in 2000. Per capita HFCS consumption has been decreasing steadily since 2000. Its value in 2011 is estimated at 27.9 pounds, down 0.7 pounds from 2010 and down 8.9 pounds, or 24 percent, since 2000. Consumption of other added sugars has decreased as well. Overall, per capita sweetener consumption intake for 2011 is at 79.1 pounds, down 0.8 pounds from 2010 and 9.9 pounds from 2000. In terms of daily calories, the 2011 intake level is 375 calories—a reduction in sweetener intake of about 11 percent compared with the 422 calories estimated for 2000.

Table 8 shows how the adoption of new consumer loss estimates have affected the calculation of intake for sugar, HFCS, other added sugars, and the total. Per capita intake is now estimated at about 17 percent less than formerly. The 375 daily calories consumed in 2011 calories are far less than the 453 calories calculated from the previous set of loss coefficients. These new estimates will likely have implications for the debate on factors behind the average weight gain of Americans and the obesity “crisis.”

Table 7 -- Added sugar: estimated number of per capita calories consumed daily, by calendar year 1/

Sweetener/ Year	Primary weight (market level) 2/	Loss from primary to retail weight	Weight at retail level	Loss from retail/institutional to consumer level	Weight at consumer level	Loss at consumer level Nonedible share	Other (uneaten food, spoilage, etc.)	Per capita consumption, adjusted for loss			Calories per serving (teaspoon)	Serving weight	Calories consumed daily 3/	Servings (teaspoons) consumed daily 4/
	lb/yr	percent	lb/yr	percent	lb/yr	percent	percent	lb/yr	oz/day	g/day	number	grams	number	teaspoons
<b>Refined sugar</b>														
2000	67.7	0.0	67.7	11.0	60.3	0.0	34.0	39.8	1.7	49.4	16.0	4.2	188	11.8
2001	67.2	0.0	67.2	11.0	59.8	0.0	34.0	39.5	1.7	49.1	16.0	4.2	187	11.7
2002	66.9	0.0	66.9	11.0	59.6	0.0	34.0	39.3	1.7	48.9	16.0	4.2	186	11.6
2003	65.2	0.0	65.2	11.0	58.1	0.0	34.0	38.3	1.7	47.6	16.0	4.2	181	11.3
2004	66.1	0.0	66.1	11.0	58.8	0.0	34.0	38.8	1.7	48.2	16.0	4.2	184	11.5
2005	67.6	0.0	67.6	11.0	60.1	0.0	34.0	39.7	1.7	49.3	16.0	4.2	188	11.7
2006	67.5	0.0	67.5	11.0	60.1	0.0	34.0	39.7	1.7	49.3	16.0	4.2	188	11.7
2007	66.3	0.0	66.3	11.0	59.0	0.0	34.0	38.9	1.7	48.4	16.0	4.2	184	11.5
2008	69.0	0.0	69.0	11.0	61.4	0.0	34.0	40.5	1.8	50.4	16.0	4.2	192	12.0
2009	66.7	0.0	66.7	11.0	59.4	0.0	34.0	39.2	1.7	48.7	16.0	4.2	186	11.6
2010	69.9	0.0	69.9	11.0	62.2	0.0	34.0	41.0	1.8	51.0	16.0	4.2	194	12.1
2011 5/	70.2	0.0	70.2	11.0	62.5	0.0	34.0	41.2	1.8	51.2	16.0	4.2	195	12.2
<b>High Fructose Corn Syrup (HFCS)</b>														
2000	62.7	0.0	62.7	11.0	55.8	0.0	34.0	36.8	1.6	45.8	16.0	4.2	174	10.9
2001	62.6	0.0	62.6	11.0	55.7	0.0	34.0	36.8	1.6	45.7	16.0	4.2	174	10.9
2002	62.9	0.0	62.9	11.0	55.9	0.0	34.0	36.9	1.6	45.9	16.0	4.2	175	10.9
2003	61.0	0.0	61.0	11.0	54.3	0.0	34.0	35.8	1.6	44.5	16.0	4.2	170	10.6
2004	59.9	0.0	59.9	11.0	53.3	0.0	34.0	35.2	1.5	43.7	16.0	4.2	167	10.4
2005	59.2	0.0	59.2	11.0	52.7	0.0	34.0	34.8	1.5	43.2	16.0	4.2	165	10.3
2006	58.2	0.0	58.2	11.0	51.8	0.0	34.0	34.2	1.5	42.5	16.0	4.2	162	10.1
2007	56.1	0.0	56.1	11.0	50.0	0.0	34.0	33.0	1.4	41.0	16.0	4.2	156	9.8
2008	53.0	0.0	53.0	11.0	47.2	0.0	34.0	31.1	1.4	38.7	16.0	4.2	147	9.2
2009	50.1	0.0	50.1	11.0	44.6	0.0	34.0	29.4	1.3	36.5	16.0	4.2	139	8.7
2010	48.7	0.0	48.7	11.0	43.4	0.0	34.0	28.6	1.3	35.6	16.0	4.2	135	8.5
2011 5/	47.5	0.0	47.5	11.0	42.3	0.0	34.0	27.9	1.2	34.7	16.0	4.2	132	8.3
<b>Other added sweeteners, including glucose syrup, dextrose, honey, and edible syrups</b>														
2000	20.7	0.0	20.7	11.0	18.4	0.0	32.6	12.4	0.5	15.4	16.0	4.2	59	3.7
2001	20.1	0.0	20.1	11.0	17.9	0.0	32.7	12.1	0.5	15.0	16.0	4.2	57	3.6
2002	20.2	0.0	20.2	11.0	18.0	0.0	32.6	12.1	0.5	15.1	16.0	4.2	57	3.6
2003	19.8	0.0	19.8	11.0	17.6	0.0	32.6	11.8	0.5	14.7	16.0	4.2	56	3.5
2004	20.3	0.0	20.3	11.0	18.1	0.0	32.8	12.1	0.5	15.1	16.0	4.2	57	3.6
2005	20.0	0.0	20.0	11.0	17.8	0.0	32.6	12.0	0.5	14.9	16.0	4.2	57	3.6
2006	18.4	0.0	18.4	11.0	16.4	0.0	32.3	11.1	0.5	13.8	16.0	4.2	53	3.3
2007	18.0	0.0	18.0	11.0	16.1	0.0	32.5	10.8	0.5	13.5	16.0	4.2	51	3.2
2008	17.5	0.0	17.5	11.0	15.6	0.0	32.4	10.6	0.5	13.1	16.0	4.2	50	3.1
2009	17.0	0.0	17.0	11.0	15.2	0.0	32.5	10.2	0.4	12.7	16.0	4.2	48	3.0
2010	17.0	0.0	17.0	11.0	15.1	0.0	32.3	10.2	0.4	12.7	16.0	4.2	49	3.0
2011 5/	16.6	0.0	16.6	11.0	14.8	0.0	32.2	10.0	0.4	12.4	16.0	4.2	47	3.0
<b>Total added sweeteners</b>														
2000	151.1	0.0	151.1	11.0	134.5	0.0	33.8	89.0	3.9	110.7	16.0	4.2	422	26.3
2001	149.9	0.0	149.9	11.0	133.4	0.0	33.8	88.3	3.9	109.7	16.0	4.2	418	26.1
2002	150.0	0.0	150.0	11.0	133.5	0.0	33.8	88.4	3.9	109.8	16.0	4.2	418	26.2
2003	145.9	0.0	145.9	11.0	129.9	0.0	33.8	86.0	3.8	106.8	16.0	4.2	407	25.4
2004	146.3	0.0	146.3	11.0	130.2	0.0	33.8	86.2	3.8	107.1	16.0	4.2	408	25.5
2005	146.8	0.0	146.8	11.0	130.7	0.0	33.8	86.5	3.8	107.5	16.0	4.2	409	25.6
2006	144.2	0.0	144.2	11.0	128.3	0.0	33.8	85.0	3.7	105.6	16.0	4.2	402	25.1
2007	140.4	0.0	140.4	11.0	125.0	0.0	33.8	82.7	3.6	102.8	16.0	4.2	392	24.5
2008	139.5	0.0	139.5	11.0	124.2	0.0	33.8	82.2	3.6	102.2	16.0	4.2	389	24.3
2009	133.8	0.0	133.8	11.0	119.1	0.0	33.8	78.8	3.5	98.0	16.0	4.2	373	23.3
2010	135.6	0.0	135.6	11.0	120.7	0.0	33.8	79.9	3.5	99.3	16.0	4.2	378	23.6
2011 5/	134.3	0.0	134.3	11.0	119.5	0.0	33.8	79.1	3.5	98.3	16.0	4.2	375	23.4

1/ Estimated number of daily per capita calories calculated by adjusting sweetener deliveries for domestic food and beverage use for food losses, including sugar in imported products.

2/ U.S. per capita cane and beet sugar estimated deliveries for domestic food and beverage use, calendar year. See Table 50 of *Sugar and Sweetener Yearbook* series.

3/ Number of daily teaspoons multiplied by calories per serving.

4/ Grams per day divided by serving weight.

5/ Preliminary.

Source: USDA, ERS, *Sugar and Sweeteners Outlook*.

Table 8 -- Per capita added sweetener consumption intake, comparison of estimates based on former and current ERS sweetener loss estimates, 2000-11

Year	Refined sugar 1/		High fructose corn syrup		Other added sugars		Total added sweeteners	
	Former estimate	Current estimate	Former estimate	Current estimate	Former estimate	Current estimate	Former estimate	Current estimate
Sucrose-equivalent pounds per capita								
2000	48.22	39.79	44.64	36.83	14.75	12.43	107.62	89.04
2001	47.87	39.49	44.56	36.76	14.33	12.06	106.76	88.31
2002	47.67	39.33	44.75	36.92	14.41	12.14	106.82	88.38
2003	46.44	38.32	43.40	35.81	14.06	11.85	103.91	85.97
2004	47.06	38.83	42.66	35.19	14.45	12.14	104.17	86.16
2005	48.12	39.70	42.16	34.78	14.27	12.02	104.54	86.50
2006	48.08	39.67	41.44	34.18	13.13	11.10	102.65	84.96
2007	47.18	38.92	39.98	32.98	12.84	10.83	100.00	82.73
2008	49.12	40.52	37.75	31.14	12.49	10.55	99.36	82.21
2009	47.52	39.20	35.65	29.41	12.13	10.23	95.29	78.85
2010	49.74	41.04	34.68	28.61	12.11	10.25	96.54	79.90
2011 2/	49.96	41.22	33.82	27.90	11.81	10.01	95.59	79.13
Calories consumed daily								
2000	228	188	211	174	70	59	509	422
2001	227	187	211	174	68	57	505	418
2002	226	186	212	175	68	57	506	418
2003	220	181	205	170	67	56	492	407
2004	223	184	202	167	68	57	493	408
2005	228	188	200	165	68	57	495	409
2006	228	188	196	162	62	53	486	402
2007	223	184	189	156	61	51	473	392
2008	233	192	179	147	59	50	470	389
2009	225	186	169	139	57	48	451	373
2010	235	194	164	135	57	49	457	378
2011 2/	237	195	160	132	56	47	453	375

1/ Includes sugar in imported products. 2/ Preliminary.

Source: ERS, *Sugar and Sweetener Outlook*.

## ***Sugar and High Fructose Corn Syrup in the North American Free Trade Area (NAFTA)***

On June 12, 2012, the U.S. Department of Agriculture (USDA) released its latest U.S. and Mexico sugar supply and use estimates for fiscal year (FY) 2012 and projections for FY 2013 in the *World Agricultural Supply and Demand Estimates* (WASDE) report.

### ***Mexico Sugar and High Fructose Corn Syrup***

The USDA increased its estimate of 2011/12 Mexico sugar production to 5.025 million metric tons (mt), an increase of 125,000 mt. Production through June 9, 2012 has amounted to 5.017 million mt. During the week of June 3-9, there were 11 factories reporting production. Three of these factories completed their production season during the week, leaving eight still producing. Although the pace of sugarcane production at 45.980 million mt is 4.5 percent ahead of the corresponding period last year, low sucrose recovery of 10.91 percent places 2011/12 sugar production at 2.93 percent less than in 2010/11.

The USDA increased its projection of 2012/13 production by 160,000 mt to 5.3 million mt. The Foreign Agricultural Service (FAS) post in Mexico City reports that growers are optimistic about next year's crop because of better weather that is expected to continue through the current growing season. Frost-damaged sugarcane is not the problem that it was for the 2011/12 crop in certain producing areas. Harvested area is expected to be at the same level or slightly higher than in 2011/12. Even if sugarcane yield ends up at this year's 65.8 tons per hectare, a sucrose recovery of about 11.5 percent would produce the expected 2012/13 total. Sucrose recovery for the 4 years preceding the 2011/12 season averaged 11.49 percent.

The USDA did not change its 2011/12 estimates or 2012/13 projections of imports, deliveries, or ending-stock levels. The increases in production, therefore, result in larger expected sugar exports in both years. The export estimate for 2011/12 is 984,000 mt, and the export projection for 2012/13 is 1.126 million mt. Almost all of this sugar is expected to go to the U.S. market. (The USDA assumes about 10,000 mt going to other destinations in both years).

The USDA estimates 2011/12 sugar deliveries for human consumption at 4.1 million mt. This level is close to the forecast of 4.083 million mt by the *Comite Nacional Para El Desarrollo Sustentable de la Cana de Azucar* (CNDSCA) but is higher than the recent forecast of 3.955 million mt made by the *Camara Nacional de las Industrias Azucarera y Alcohólica* (Sugar Chamber). The delivery pace through April 2012 is only 0.3 percent higher than 2010/11, at 2.447 million mt.<sup>1</sup> If this pace continues, 2011/12 deliveries would be close to the level forecast by the Sugar Chamber.

The USDA decided not to change the delivery estimate for the June 2012 WASDE. Since the beginning of May, the standar sugar price in Mexico City has fallen 15.6 percent from 595 pesos for a 50-kilogram bag to 502 pesos in the first week of June. The corresponding price for refinado sugar has fallen 12.4 percent from 688.33 pesos per 50-kilogram bag to 603 pesos. Market observers have suggested that these price reductions were due to processors selling inventory to raise funds with which to pay growers after the recent setting of the payment price due to sugarcane growers.

The CNDSCA reports deliveries of high fructose corn syrup (HFCS) through the end of April at 977,314 mt, dry basis. This cumulative amount is 9.33 percent more than in the corresponding period a year earlier. HFCS is capturing about 28.5 percent of the combined sugar-HFCS market. About 74 percent of the HFCS is imported,

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<sup>1</sup> A preliminary CNDSCA 7-month estimate of deliveries had indicated about 3 percent more deliveries in 2011/12 compared with 2010/11. The final estimate corrected for an initial underreporting of sugar stocks at the end of April of about 66,000 mt. This resulted in the lowering of the delivery estimate to about the same level as in 2010/11.

mostly from the United States. The USDA estimate of 2011/12 HFCS deliveries is 1.72 million mt. The USDA estimate is higher than the CNDSCA estimate of 1.636 million mt (about the same as in 2010/11) but lower than the Sugar Chamber estimate of 1.763 million.

### ***U.S. Sugar and High Fructose Corn Syrup***

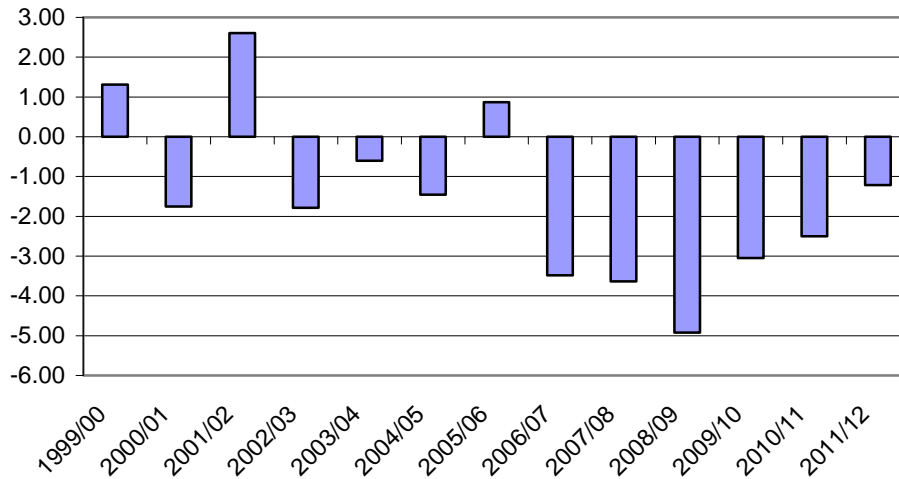
The USDA increased its FY 2012 estimate of imports from Mexico by 147,000 short tons, raw value (STRV), to 1.139 million STRV. The USDA also increased its FY 2013 projection of imports from Mexico by 187,000 STRV to 1.304 million STRV. Both of these increases were the result of expected increases in sugar production in Mexico. The only other changes were upward adjustments to cane sugar production in Florida and Texas to reflect final season production. FY 2012 production in Florida is estimated at 1,827,770 STRV and 149,818 STRV in Texas. Ending stocks for FY 2012 are estimated at 1.825 million STRV, implying a stocks-to-use ratio of 15.5 percent. Ending stocks for FY 2013 are projected at 1.561 million STRV, implying a stocks-to-use ratio of 13.1 percent. If the additional specialty sugar portion of the refined sugar tariff-rate quota were set in FY 2013 as in FY 2012, FY 2013 ending stocks would be projected 100,000 STRV higher than they currently are. This would result in a stocks-to-use ratio of 14.0 percent, close to the level that the USDA considers reasonable, that is, 14.5 percent.

The decline in deliveries of HFCS has been slowing. If trends since the beginning of 2012 continue, FY 2012 deliveries of HFCS42 could be forecast at 2.799 million tons, only 0.76 percent less than in FY 2011, and HFCS55 deliveries would be forecast 4.439 million tons, down 1.5 percent. Figure 6 shows the overall FY 2012 decline of slightly over 1 percent to be the lowest since FY 2004. Several U.S. companies have announced intentions to switch from using sugar to HFCS. These include ConAgra (*Hunt's Ketchup*) and Kraft (*Capri Sun, Miracle Whip*).

As detailed in the April 2012 *Sugar and Sweetener Outlook*, there have been recent large differences between estimates of U.S. HFCS going to Mexico. Estimates provided by Mexico's Secretariat of the Economy (*Economia*) and used by CNDSCA in estimating Mexican sweetener consumption are higher than U.S. exports to Mexico reported by the U.S. Census Bureau. The *Economia* total for FY 2010 was 4.4 percent higher and 14.1 percent higher in FY 2011. For the first 6 months of FY 2012, *Economia* reports HFCS imports from the United States at 576,173 mt, dry basis, while the U.S. Census Bureau reports exports to Mexico only at 410,269 mt, dry basis. The difference is a very high 40.4 percent.

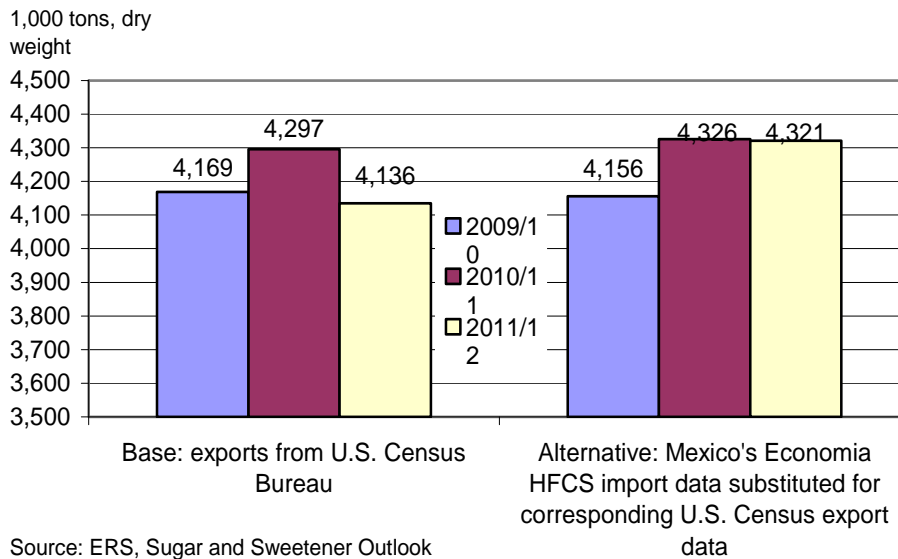
Figure 7 shows the implications of the differing estimates for measuring U.S. HFCS production. If U.S. export data is used, FY 2012 production for the first half of the year is estimated at 4.136 million tons, dry basis. This is 3.7 percent less than what was produced during the corresponding period in FY 2011 and 0.8 percent less than in FY 2010. Using the Mexico import data as the measure of U.S. HFCS in Mexico implies 6-month FY 2012 production at 4.321 million tons, dry basis. This would be about the same level last year and 4.0 percent higher than in FY 2010. FY 2012 production through March (6-months) using the Mexican data is 4.5 percent higher than implied by use of the U.S. Census Bureau export data.

Figure 6  
**Annual changes in U.S. high fructose corn syrup consumption**  
 Percent



Source: ERS, *Sugar and Sweetener Outlook*

Figure 7  
**Alternative estimates of U.S. high fructose corn syrup (HFCS) production for first half of fiscal years 2010 - 2012, as implied by differing data sources for measuring consumption of U.S.-produced HFCS in Mexico**



Source: ERS, *Sugar and Sweetener Outlook*



Table 9 -- U.S. sugar: supply and use, by fiscal year (Oct./Sept.)

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	2012/13
	1,000 short tons, raw value												
Beginning stocks	2,216	2,180	1,528	1,670	1,897	1,332	1,698	1,799	1,664	1,534	1,498	1,472	1,825
Total production	8,769	7,900	8,426	8,649	7,876	7,399	8,445	8,152	7,531	7,963	7,831	8,298	8,575
Beet sugar	4,680	3,915	4,462	4,692	4,611	4,444	5,008	4,721	4,214	4,575	4,659	4,750	5,045
Cane sugar	4,089	3,985	3,964	3,957	3,265	2,955	3,438	3,431	3,317	3,387	3,172	3,548	3,530
Florida	2,057	1,980	2,129	2,154	1,693	1,367	1,719	1,645	1,577	1,646	1,433	1,828	1,800
Louisiana	1,585	1,580	1,367	1,377	1,157	1,190	1,320	1,446	1,397	1,469	1,411	1,400	1,400
Texas	206	174	191	175	158	175	177	158	152	112	146	150	150
Hawaii	241	251	276	251	258	223	222	182	192	161	182	170	180
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	3,320	3,738	3,815	3,047
Tariff-rate quota imports	1,277	1,158	1,210	1,226	1,408	2,588	1,624	1,354	1,370	1,854	1,721	2,116	1,283
Other program Imports	238	296	488	464	500	349	390	565	308	448	291	550	450
nonprogram imports	76	81	32	60	192	506	66	701	1,404	1,017	1,726	1,149	1,314
Mexico							60	694	1,402	807	1,708	1,139	1,304
Total Supply	12,575	11,615	11,684	12,070	11,873	12,174	12,223	12,571	12,277	12,817	13,067	13,585	13,447
Total exports	141	137	142	288	259	203	422	203	136	211	248	250	250
Miscellaneous	123	-24	161	23	94	-67	-132	0	0	-45	-22	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	11,368	11,510	11,635
Transfer to sugar-containing products for exports under reexport program	98	156	183	142	121	106	169	141	120	201	196	180	180
Transfer to polyhydric alcohol, feed	33	33	24	41	48	51	53	61	46	35	33	30	30
Deliveries for domestic food and beverage use 1/	10,000	9,785	9,504	9,678	10,019	10,184	9,913	10,501	10,441	10,917	11,139	11,300	11,425
Total Use	10,395	10,087	10,014	10,172	10,542	10,476	10,424	10,907	10,743	11,319	11,595	11,760	11,885
Ending stocks	2,180	1,528	1,670	1,897	1,332	1,698	1,799	1,664	1,534	1,498	1,472	1,825	1,562
Privately owned	1,395	1,316											
CCC	784	212											
Stocks-to-use ratio	20.97	15.15	16.68	18.65	12.63	16.21	17.25	15.26	14.28	13.24	12.70	15.52	13.14

1/ For FY 2008-09, combines SMD deliveries for domestic human use, SMD miscellaneous uses, and the difference between SMD imports and WASDE imports.

Source: USDA, WASDE.

NOTE: Numbers may not add due to rounding.

Table 10 -- U.S. sugar: supply and use (including Puerto Rico), fiscal years (Oct./Sept.)

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	2012/13
1,000 metric tons, raw value													
Beginning stocks	2,010	1,977	1,386	1,515	1,721	1,208	1,540	1,632	1,510	1,392	1,359	1,336	1,655
Total production	7,955	7,167	7,644	7,846	7,145	6,712	7,662	7,396	6,832	7,224	7,104	7,527	7,779
Beet sugar	4,245	3,552	4,048	4,257	4,183	4,032	4,543	4,283	3,822	4,151	4,227	4,309	4,577
Cane sugar	3,710	3,615	3,596	3,590	2,962	2,681	3,119	3,113	3,009	3,073	2,877	3,218	3,202
Florida	1,866	1,796	1,932	1,954	1,536	1,240	1,559	1,492	1,431	1,493	1,300	1,658	1,633
Louisiana	1,438	1,433	1,240	1,249	1,049	1,079	1,198	1,312	1,267	1,332	1,280	1,270	1,270
Texas	187	158	173	159	143	159	161	143	138	101	132	136	136
Hawaii	219	227	251	228	234	202	201	165	174	146	165	154	163
Puerto Rico	0	0	0	0	0	0	0	0	0	0	0	0	0
Total imports	1,443	1,393	1,570	1,588	1,905	3,124	1,887	2,377	2,796	3,012	3,391	3,461	2,764
Tariff-rate quota imports	1,158	1,051	1,098	1,113	1,277	2,348	1,473	1,228	1,243	1,682	1,561	1,920	1,164
Other Program Imports	216	269	443	421	454	317	354	513	279	407	264	499	408
nonprogram imports	69	73	29	54	174	459	60	636	1,274	923	1,566	1,042	1,192
Mexico	0	0	0	0	0	0	54	630	1,272	732	1,549	1,033	1,183
Total Supply	11,408	10,537	10,599	10,949	10,771	11,044	11,088	11,404	11,138	11,627	11,854	12,324	12,199
Total exports	128	125	129	261	235	184	383	184	123	191	225	227	227
Miscellaneous	112	-22	146	20	85	-61	-120	0	0	-41	-20	0	0
Deliveries for domestic use	9,191	9,048	8,810	8,946	9,243	9,381	9,194	9,710	9,623	10,117	10,313	10,442	10,555
Transfer to sugar-containing products for exports under reexport program	89	141	166	129	110	96	153	128	109	183	178	163	163
Transfer to polyhydric alcohol, feed	30	30	22	38	44	46	48	56	42	31	30	27	27
Deliveries for domestic food and beverage use 1/	9,072	8,877	8,622	8,780	9,089	9,239	8,993	9,527	9,472	9,903	10,105	10,251	10,365
Total Use	9,431	9,151	9,084	9,228	9,563	9,504	9,457	9,895	9,746	10,268	10,519	10,668	10,782
Ending stocks	1,977	1,386	1,515	1,721	1,208	1,540	1,632	1,510	1,392	1,359	1,336	1,655	1,417
Privately owned	1,266	1,194	0	0	0	0	0	0	0	0	0	0	0
CCC	711	192	0	0	0	0	0	0	0	0	0	0	0
Stocks-to-use ratio	20.97	15.15	16.68	18.65	12.63	16.21	17.25	15.26	14.28	13.24	12.70	15.52	13.14

1/ For FY 2008-09, combines SMD deliveries for domestic human use, SMD miscellaneous uses, and the difference between SMD imports and WASDE imports.

Source: USDA, WASDE.

NOTE: Numbers may not add due to rounding.

Table 11 -- Mexico: sugar production and supply, and sugar and HFCS utilization

Fiscal Year (Oct/Sept)	2010/11	2011/12 1/	2012/13 1/
	1,000 metric tons, raw value		
Beginning stocks	973	806	847
Production	5,495	5,327	5,618
Imports	307	405	192
Imports for consumption	114	224	0
Imports for other uses (includes IMMEX)	193	181	192
Total supply	6,774	6,537	6,658
Disappearance			
Human consumption	4,187	4,346	4,322
Other deliveries (IMMEX)	310	300	300
Miscellaneous	-86		
Total	4,411	4,646	4,622
Exports	1,558	1,043	1,193
Exports to the United States & Puerto Rico	1,518	1,032	1,183
Exports to other countries	40	11	11
Total use	5,969	5,689	5,815
Ending stocks	806	847	843
	1,000 metric tons, actual weight		
Beginning stocks	918	760	800
Production	5,184	5,025	5,300
Imports	289	383	181
Imports for consumption	107	211	0
Imports for other uses (includes IMMEX)	182	171	181
Total supply	6,391	6,167	6,281
Disappearance			
Human consumption	3,950	4,100	4,077
Other deliveries (IMMEX)	293	283	283
Miscellaneous	-81		
Total	4,161	4,383	4,360
Exports	1,469	984	1,126
Exports to the United States & Puerto Rico	1,432	974	1,116
Exports to other countries	38	10	10
Total Use	5,631	5,368	5,486
Ending stocks	760	800	795
Stocks-to-human consumption (percent)	19.2	19.5	19.5
Stocks-to-Use (percent)	13.5	14.9	14.5
HFCS Consumption (dry weight)	1,635	1,720	1,806

1/ Forecast.

Source: USDA, WASDE and ERS, MTED, *Sugar and Sweeteners Outlook*.

## Contacts and Links

### Contact Information

Stephen Haley, (202) 694-5247, [shaley@ers.usda.gov](mailto:shaley@ers.usda.gov) (coordinator)  
Erma J. McCray, (202) 694-5306, [ejmccray@ers.usda.gov](mailto:ejmccray@ers.usda.gov) (web publishing)

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### Data

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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