



Economic  
Research  
Service

Situation and  
Outlook

SSS-M-308

Apr. 15, 2014

# Sugar and Sweeteners Outlook

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

## NAFTA Sugar April 2014

The next release is  
May 15, 2014

-----  
Approved by the  
World Agricultural  
Outlook Board.

The U.S. Department of Agriculture (USDA) changed its projection of 2013/14 cane sugar production in two States based on revised forecasts made by sugarcane millers: for Florida—a decrease of 25,000 short tons, raw value (STRV) to 1.740 million STRV; and for Texas—a decrease of 5,000 STRV to 130,000 STRV. Based on processors' forecasts, the USDA reduced beet sugar production by 41,000 STRV to 4.984 million STRV. Beginning stocks were revised down slightly based on industry-supplied data. The USDA made no other changes. Ending stocks are projected at 1.610 million STRV—73,000 STRV below last month's projection. The stocks-to-use ratio is projected at 13.0 percent, reduced from last month's 13.6 percent.

The USDA made no changes to Mexico 2013/14 sugar supply and use but did reduce its forecast of high fructose corn syrup consumption by 131,000 metric tons (mt) to 1.360 million mt, dry weight.

### **Recent *Sugar and Sweeteners Outlook* Special Articles**

“Long-term Projection of U.S. and Mexico Sugar Supply and Use through 2024/25,” pdf pages 3-17 of the *Sugar and Sweetener* report (<http://www.ers.usda.gov/publications/sssm-sugar-and-sweeteners-outlook/sssm306.aspx>)

“The Road to Forfeitures,” pdf pages 12-17 of the *Sugar and Sweetener* report (<http://www.ers.usda.gov/publications/sssm-sugar-and-sweeteners-outlook/sssm303.aspx>)

## **Sugar and Sweeteners in the North American Free Trade Agreement (NAFTA) Area**

On April 9, 2014, the U.S. Department of Agriculture (USDA) published in the *World Agricultural Supply and Demand Estimates* (WASDE) its latest sugar supply and use projections for the United States and Mexico for fiscal year 2012/13 and projections for 2013/14. Table 1 shows the latest estimates and projections for the United States, and table 2 reports comparable data for Mexico.

### ***U.S. Sugar***

The Farm Service Agency (FSA) made one small revision to *Sweetener Market Data* (SMD) for 2012/13 based on corrected data. Ending stocks were decreased by 1,220 short tons, raw value (STRV) to 2.158 million STRV. Beginning stocks for 2013/14 are the same as ending stocks for 2012/13.

The USDA changed its projection of 2013/14 cane sugar production in two States based on revised forecasts made by sugarcane millers: in Florida, a decrease of 25,000 STRV to 1.740 million STRV; and in Texas, a decrease of 5,000 STRV to 130,000 STRV. As reported 2 months ago, the Florida crop had been hurt by rain and freezing temperatures in January. This month's decrease is the third reduction made this year as processors have a clearer view of the final production total. Texas continues to struggle with diminished prospects this year.

The USDA changed its projection of 2013/14 beet sugar production based on revised beet sugar processors' forecasts. The new total is 4.984 million STRV, a reduction of 41,000 STRV from last month and only 1.8 percent lower than last year's fiscal year total. In spite of a reduction in prospective plantings of 3.8 percent, beet processors expect August-September production to be over 500,000 STRV, about the same huge total realized 2 years ago. According to sources, processors expect excellent yields to compensate for reduced plantings, especially in the Red River Valley.

The USDA made no changes to imports. The Foreign Agricultural Service (FAS) estimates that sugar imports from Mexico have totaled 1.044 million metric tons, raw value (MTRV), or 1.151 million STRV, through the end of March. This amounts to about 66 percent of projected total-year imports from Mexico. For the 6 months remaining in the fiscal year, the average level of imports would have to equal 99,036 STRV per month to reach but not exceed the full-year forecast. This monthly average would be about 48 percent lower than the average for the first 6 months.

Sugar imports entering under the 2013/14 raw sugar tariff-rate quota (TRQ) have summed to 419,490 MTRV (or 462,408 STRV) through the end of March, or only about 35 percent of the 2013/14 forecast. The Sugar and Sweetener Outlook estimates that, similar to last year, most sugar from Mexico—about 70 percent through the end of March—has been imported by cane sugar refiners. This is in stark contrast to the 42 percent estimated for the first 5 years following the implementation of the North American Free Trade Agreement (NAFTA) sweetener provisions. With the expected decrease in imports from Mexico for the rest of the year, the pace of raw sugar TRQ imports should pick up. There was no change to the raw sugar TRQ shortfall forecast, which is still at 250,000 STRV.

The USDA made no changes to 2013/14 sugar exports (325,000 STRV) or sugar deliveries made under the sugar-containing products component of the re-export imports program (100,000 STRV).

Sugar deliveries for human consumption continue their strong pace in 2013/14. Deliveries for the first 5 months total 4.694 million STRV, about 1.3 percent greater than the total for the corresponding period last year.

Table 1 -- U.S. sugar: supply and use, by fiscal year (Oct./Sept.), April 2014.

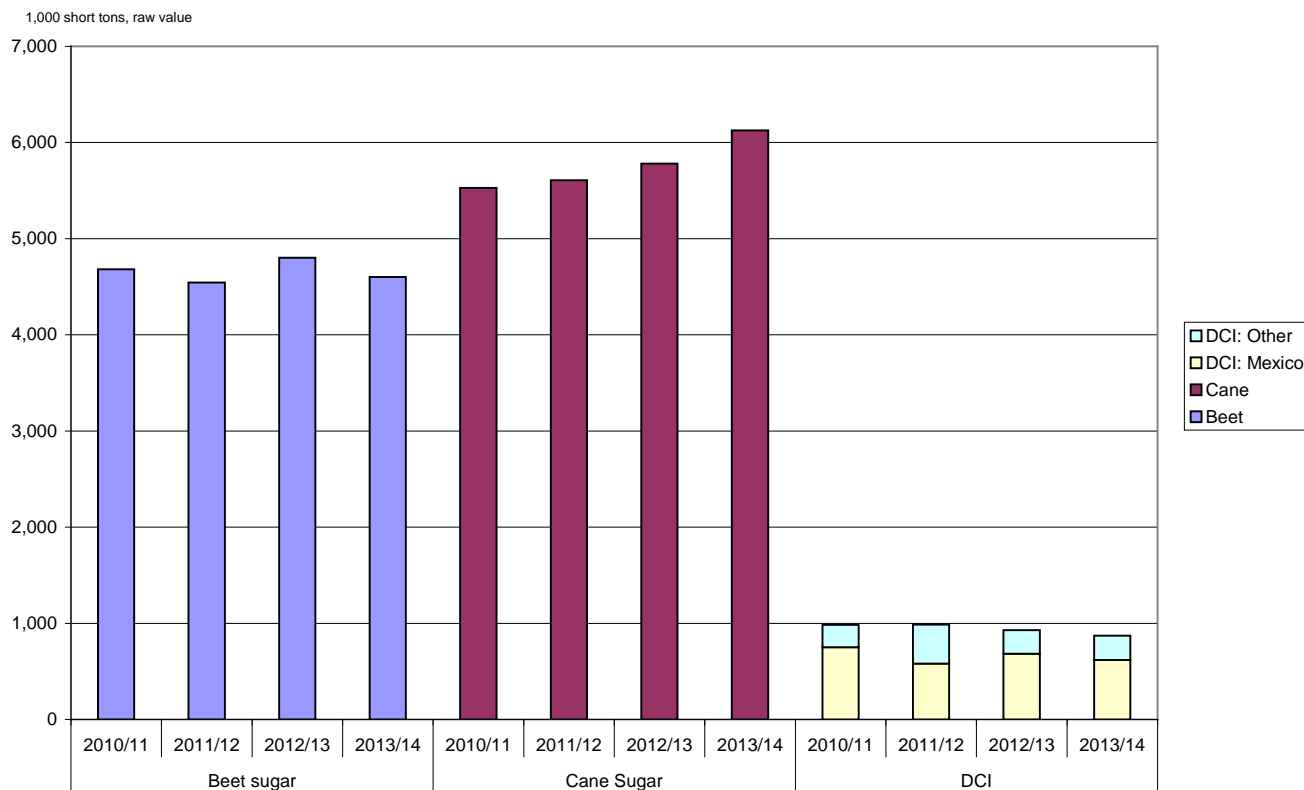
Items	2011/12	2012/13	2013/14	2011/12	2012/13	2013/14
	1,000 short tons, raw value			1,000 metric tons, raw value		
Beginning stocks	1,378	1,979	2,158	1,250	1,796	1,958
Total production	8,488	8,981	8,644	7,700	8,148	7,841
Beet sugar	4,900	5,076	4,984	4,446	4,605	4,521
Cane sugar	3,588	3,905	3,660	3,255	3,543	3,320
Florida	1,828	1,867	1,740	1,658	1,694	1,579
Louisiana	1,438	1,686	1,600	1,305	1,530	1,451
Texas	150	173	130	136	157	118
Hawaii	172	179	190	156	163	172
Total imports	3,632	3,224	3,184	3,295	2,925	2,888
Tariff-rate quota imports	1,883	957	1,319	1,709	868	1,197
Other program Imports	664	136	110	602	124	100
Non-program imports	1,085	2,131	1,755	984	1,933	1,592
Mexico	1,071	2,124	1,745	972	1,927	1,583
Total supply	13,498	14,185	13,986	12,245	12,868	12,688
Total exports	269	274	325	244	249	295
Miscellaneous	-64	-24	0	-58	-22	0
Deliveries for domestic use	11,313	11,776	12,051	10,263	10,683	10,933
Transfer to sugar-containing products for exports under reexport program	140	80	100	127	73	91
Transfer to polyhydric alcohol, feed, other alcohol	33	32	35	30	29	32
Commodity Credit Corporation (CCC) sale for ethanol	0	153	316	0	139	287
Deliveries for domestic food and beverage use	11,141	11,511	11,600	10,107	10,442	10,523
Total use	11,519	12,025	12,376	10,450	10,909	11,227
Ending stocks	1,979	2,160	1,610	1,796	1,959	1,461
Private	1,979	1,844	1,610	1,796	1,672	1,461
Commodity Credit Corporation (CCC)	0	316	0	0	287	0
Stocks-to-use ratio	17.18	17.96	13.01	17.18	17.96	13.01

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

Cane sugar deliveries continue their strong performance at 2.5 million STRV, up 7 percent compared with last year and a full percentage point above the current *Sugar and Sweetener Outlook* forecast of a 6-percent increase year-over-year. Beet sugar deliveries are 3.1 percent below last year's pace but above the 4.2 percent reduction forecast by the *Sugar and Sweetener Outlook*. In spite of concerns over a railcar shortage in the upper Midwest, February beet sugar deliveries were at about the same level as last year. Although direct consumption imports (DCI) by nonreporters to USDA's *Sweetener Market Data* (SMD) are down 11.6 percent compared with last year, these deliveries display considerable month-to-month volatility.

Figure 1 shows recent changes in sugar deliveries for human consumption by source. The most notable trend is increased deliveries by cane sugar refiners/processors. The year-over-year increase was 1.5 percent for 2011/12 and 3.1 percent for 2013/14. The forecast for 2013/14 is 6.0 percent. Beet sugar deliveries have displayed little growth, being more influenced by year-to-year variations in domestic production. Although DCI deliveries have increased substantially compared with the period prior to the implementation of NAFTA, these deliveries have leveled off to between 875,000 – 1,000,000 STRV per year. DCI from Mexico have been stable over the period.

**Figure 1**  
**U.S. sugar deliveries for human consumption, by source: beet processors, cane refiners, and direct consumption imports (DCI)**



Source: USDA, FSA, Sweetener Market Data; ERS, Sugar and Sweetener Outlook.

Their share of total deliveries reached a high of 6.72 percent in 2010/11 and has been below 6 percent since then, with the 2013/14 forecast at 5.34 percent. The average for 2012/13 was 5.95 percent.<sup>1</sup>

Figure 2 shows sugar sourcing for cane refiners. The growth in available sugar supply has come from domestic production and not from raw sugar TRQs or Mexican imports. In 2011/12, domestic production increased 415,000 STRV and imports decreased by 110,000 STRV. In the troubled 2012/13 period, domestic raw sugar production increased 317,000 STRV and imports by refiners decreased by 349,000 STRV.

Ending stocks are projected as the difference between total supply (13.986 million STRV) and total use (12.376 million STRV), or 1.610 million STRV. This projection is 73,000 STRV below last month's projection. The stocks-to-use ratio is projected at 13.0 percent, reduced from last month's 13.6 percent.

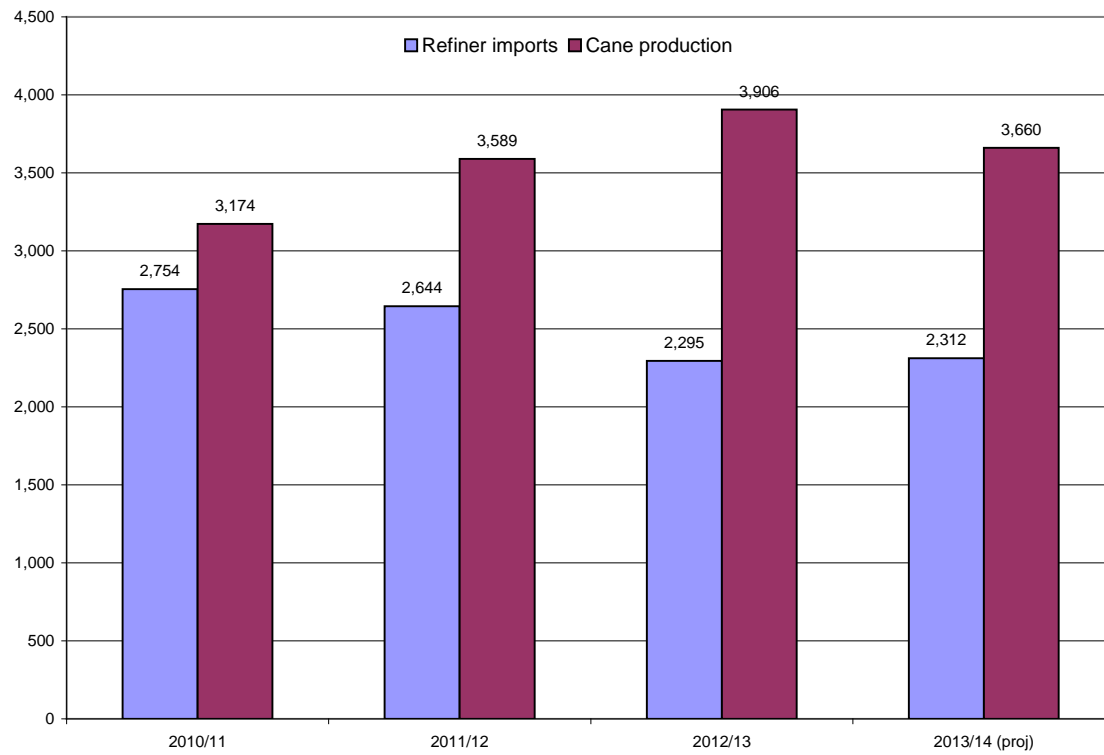
### ***Mexico Sugar and High Fructose Corn Syrup***

The USDA made no changes to 2013/14 Mexico sugar supply and use (table 2).

<sup>1</sup> *Sugar and Sweetener Outlook* analysis suggests that DCI from Mexico has had its largest effect on domestic consumption of high fructose corn syrup (HFCS), with relatively minor effects on beet sugar deliveries and no effect on cane sugar deliveries.

**Figure 2**  
**Raw cane sugar production and cane refiner imports, 2009/10-2013/14**

1,000 short tons, raw value



Source: USDA, FSA, SMD; ERS, Sugar and Sweetener Outlook (projection).

Table 2 -- Mexico sugar supply and use, 2012/13 and projected 2013/14, April 2014

Items		2012/13	2013/14
		1,000 metric tons, actual weight	
Beginning Stocks	760	966	1,460
Production	5,048	6,975	6,350
Imports	476	217	226
Imports for consumption	235	9	10
Imports for sugar-containing product exports (IMMEX) 1/	242	207	216
Total Supply	6,285	8,157	8,036
Disappearance			
Human consumption	4,138	4,287	4,306
For sugar-containing product exports (IMMEX)	344	384	384
Statistical adjustment	-92	53	0
Total	4,390	4,724	4,690
Exports	929	1,973	2,399
Exports to the United States & Puerto Rico	919	1,818	1,494
Exports to other countries	10	155	905
Total Use	5,319	6,697	7,089
Ending stocks	966	1,460	947
		1,000 metric tons, raw value	
Beginning stocks	806	1,024	1,548
Production	5,351	7,393	6,731
Imports	505	230	240
Imports for consumption	249	10	11
Imports for sugar-containing product exports (IMMEX)	256	220	229
Total supply	6,662	8,646	8,519
Disappearance			
Human consumption	4,386	4,544	4,564
For sugar-containing product exports (IMMEX)	365	407	
Statistical adjustment	-98	56	0
Total	4,653	5,007	4,971
Exports	985	2,091	2,543
Exports to the United States & Puerto Rico	974	1,927	1,584
Exports to other countries	11	164	960
Total use	5,638	7,099	7,515
Ending stocks	1,024	1,548	1,004
Stocks-to-human consumption (percent)	23.3	34.1	22.0
Stocks-to-use (percent)	18.2	21.8	13.4
High Fructose Corn Syrup (HFCS) consumption (dry weight)	1,721	1,567	1,360

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

1/ IMMEX = Industria Manufacturera, Maquiladora y de Servicios de Exportación.

On March 31, 2014, Mexico's *Comite Nacional Para El Desarrollo Sustentable de la Caña de Azucar* (Conadesuca) released a revision to its estimate of sugarcane and sugar production for 2013/14. Table 3 shows the revised and original estimates side-by-side. While both estimates have sugarcane production at just over 58.0 million mt, the revision has sugar production reduced by 208,375 mt to 6.487 million mt. This reduction is a result of decreased sucrose recovery, now estimated at 11.18 percent, compared with the earlier estimate of 11.54 percent.

Figure 3 shows regional production estimates, along with production through week 26 (March 29). The largest reductions are centered in the Northeast (-8.7 percent) and South (-9.4 percent). Both areas have experienced difficult weather conditions. Somewhat of a surprise is the increase in area harvested from 819,065 hectares to 836,199 hectares. Almost all the increase is centered in the Gulf region, comprised mostly of factories located in Veracruz (fig. 4). In the region, 15 of the 20 factories operating this year

Table 3 -- Conadesuca 2013/14 estimates of sugarcane and sugar production

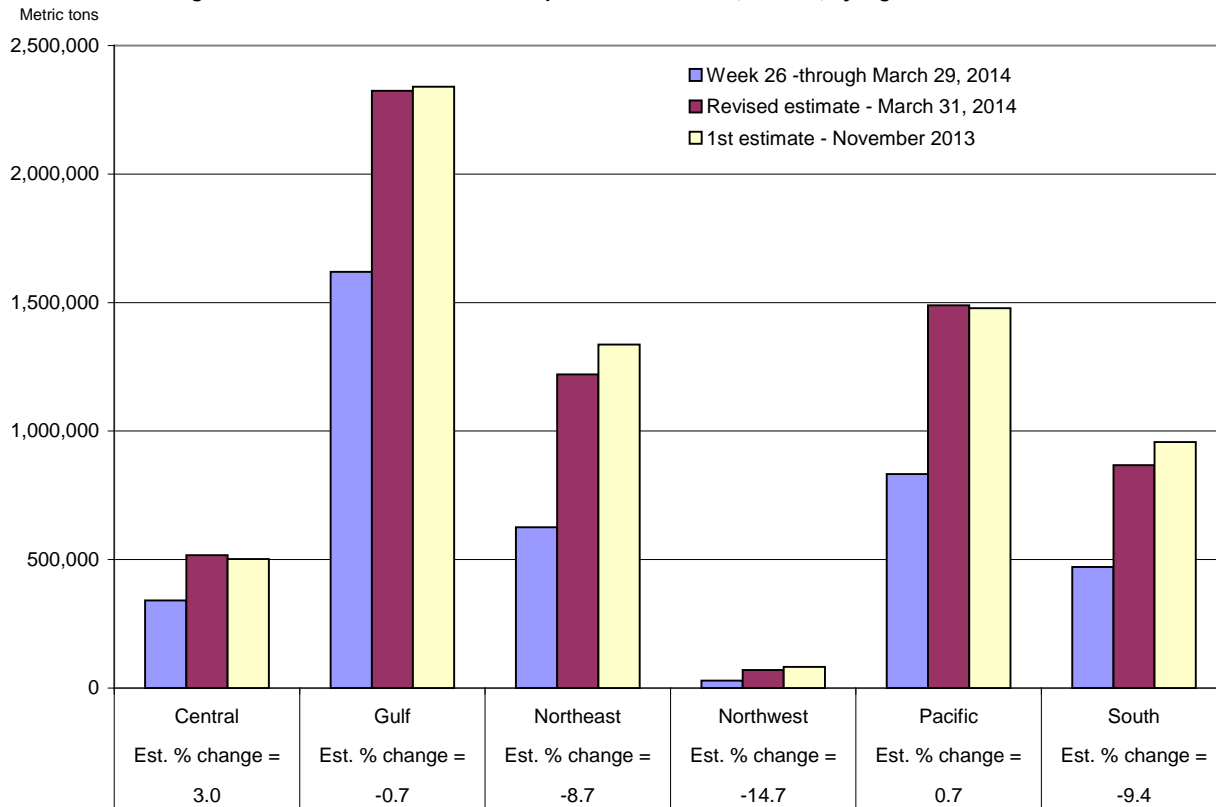
		Revised estimate - March 31, 2014					1st estimate - November 2013				
		Area (hectares)	Sugarcane (metric tons)	Yield (metric ton/hectare)	Sugar (metric tons)	Recovery (percent)	Area (hectares)	Sugarcane (metric tons)	Yield (metric ton/hectare)	Sugar (metric tons)	Recovery (percent)
<b>Mexico</b>		836,199	58,001,625	69.36	6,486,935	11.18	819,065	58,037,815	70.86	6,695,310	11.54
<b>Central</b>		35,387	3,961,193	111.94	517,091	13.05	34,456	3,841,062	111.48	501,891	13.07
ATENCINGO	FEESA	16,103	1,892,817	117.54	244,552	12.92	15,960	1,850,280	115.93	238,834	12.91
CALIPAM	GARCIA GONZALEZ	2,362	190,997	80.85	16,226	8.50	1,754	159,183	90.76	15,809	9.93
CASASANO (LA ABEJA)	FEESA	5,474	641,667	117.23	88,935	13.86	5,424	612,679	112.95	84,096	13.73
EMILIANO ZAPATA	FEESA	11,448	1,235,712	107.94	167,378	13.55	11,318	1,218,920	107.70	163,152	13.39
<b>Gulf</b>		334,670	21,074,354	62.97	2,323,437	11.02	319,251	20,969,352	65.68	2,339,730	11.16
A. LÓPEZ MATEOS	PIASA	27,022	1,630,839	60.35	183,788	11.27	21,895	1,300,000	59.38	143,000	11.00
CENTRAL MOTZORONGO	MOTZORONGO	22,397	1,370,000	61.17	144,183	10.52	21,367	1,449,547	67.84	160,189	11.05
CENTRAL PROGRESO	LA MARGARITA	14,195	818,000	57.63	101,002	12.35	14,174	780,000	55.03	97,523	12.50
CONSTANCIA	BETA SAN MIGUEL	16,781	865,764	51.59	87,466	10.10	15,771	940,814	59.65	99,303	10.56
EL CARMEN	GARCIA GONZALEZ	11,598	700,000	60.35	70,277	10.04	11,098	650,000	58.57	65,680	10.11
EL MODELO	FEESA	13,506	1,095,000	81.07	125,553	11.47	11,626	1,115,000	95.91	128,236	11.50
EL POTRERO	FEESA	24,751	1,669,780	67.46	200,374	12.00	23,797	1,602,124	67.33	197,990	12.36
EL REFUGIO	MOTZORONGO	6,865	412,336	60.07	43,305	10.50	7,665	471,420	61.51	52,508	11.14
INDEPENDENCIA		0	0	0.00	0	0.00	0	0	0.00	0	0.00
LA CONCEPCION		0	0	0.00	0	0.00	0	0	0.00	0	0.00
LA GLORIA	GRUPO AZUCARERO DEL TROPICO	17,689	1,510,000	85.36	177,501	11.76	17,689	1,600,000	90.45	188,096	11.76
LA MARGARITA	LA MARGARITA	18,041	1,006,102	55.77	115,012	11.43	16,625	992,753	59.72	117,840	11.87
LA PROVIDENCIA	FEESA	14,389	880,000	61.16	99,440	11.30	13,136	770,000	58.62	88,550	11.50
MAHUIXTLÁN	ZUCARMEX	5,470	464,919	85.00	51,141	11.00	5,173	462,921	89.49	53,263	11.51
NUevo SAN FRANCISCO	GARCIA GONZALEZ	5,476	407,272	74.37	31,209	7.66	6,610	467,272	70.69	35,807	7.66
SAN CRISTÓBAL	FEESA	45,907	2,541,633	55.37	271,446	10.68	43,938	2,520,000	57.35	267,397	10.61
SAN GABRIEL **		2,521	127,043	50.39	12,702	10.00	4,316	250,043	57.94	25,000	10.00
SAN JOSÉ DE ABAJO	PERNO	9,665	600,000	62.08	64,823	10.80	8,359	555,000	66.40	63,729	11.48
SAN MIGUELITO	FEESA	6,919	544,344	78.67	60,264	11.07	6,356	500,000	78.67	55,355	11.07
SAN NICOLÁS	AMERICAN SUGAR REFINING	15,574	1,000,000	64.21	109,619	10.96	14,659	1,054,000	71.90	116,109	11.02
SAN PEDRO	PORRES	19,310	1,278,061	66.19	131,014	10.25	18,403	1,335,197	72.55	140,837	10.55
TRES VALLES	PIASA	36,594	2,153,261	58.84	243,318	11.30	36,594	2,153,261	58.84	243,318	11.30
<b>Northeast</b>		175,358	10,947,996	62.43	1,220,037	11.14	178,227	11,260,188	63.18	1,336,367	11.87
A. SÁENZ GARZA	SAENZ	21,976	1,400,000	63.71	146,300	10.45	27,022	1,652,934	61.17	186,787	11.30
ALIANZA POPULAR	SANTOS	21,710	1,200,000	55.28	144,601	12.05	21,488	1,200,000	55.85	145,200	12.10
EL HIGO	ZUCARMEX	23,364	1,795,000	76.83	195,655	10.90	23,364	1,746,454	74.75	209,574	12.00
EL MANTE	SAENZ	16,869	1,008,711	59.80	101,880	10.10	15,315	900,000	58.77	97,200	10.80
PÁNUCO (ZAPOAPITA)	LA MARGARITA	18,964	1,563,752	82.46	164,038	10.49	20,414	1,650,000	80.83	192,000	11.64
PLAN DE AYALA	SANTOS	21,887	1,162,159	53.10	125,874	10.83	20,342	1,234,000	60.66	143,759	11.65
PLAN DE SAN LUIS	FEESA	19,368	1,118,374	57.74	139,797	12.50	19,062	1,066,800	55.96	136,230	12.77
SAN MIGUEL DEL NARANJO	BETA SAN MIGUEL	31,220	1,700,000	54.45	201,892	11.88	31,220	1,810,000	57.98	225,617	12.47
<b>Northwest</b>		12,755	755,846	59.26	70,062	9.27	12,902	847,602	65.70	82,154	9.69
ELDORADO	GPO. AZUC. MEX.	5,465	400,000	73.19	36,612	9.15	5,465	400,002	73.19	40,080	10.02
LA PRIMAVERA	ZUCARMEX	0	0	0.00	0	0.00	0	0	0.00	0	0.00
LOS MOCHIS	AGA	7,290	355,846	48.81	33,450	9.40	7,437	447,600	60.19	42,074	9.40
<b>Pacific</b>		148,997	12,719,170	85.37	1,489,121	11.71	147,478	12,474,820	84.59	1,478,063	11.85
BELLAVISTA	SANTOS	7,775	681,049	87.60	81,053	11.90	7,398	641,000	86.64	76,587	11.95
EL MOLINO *	MENCHACA	11,111	821,843	73.97	105,163	12.80	11,151	758,863	68.06	97,151	12.80
JOSÉ MA. MORELOS	FEESA	10,084	701,975	69.61	65,018	9.26	10,084	749,338	74.31	81,678	10.90
LÁZARO CÁRDENAS	GPO. AZUC. MEX.	4,526	394,685	87.20	48,356	12.25	4,497	383,809	85.35	47,024	12.25
MELCHOR OCAMPO	ZUCARMEX	10,120	1,101,350	108.83	128,432	11.66	10,120	1,103,500	109.05	133,088	12.06
PEDERNALES	SANTOS	4,376	425,062	97.14	52,930	12.45	4,392	435,302	99.11	51,148	11.75
PUGA	AGA	20,833	1,533,200	73.60	184,000	12.00	20,821	1,533,200	73.64	184,000	12.00
QUESERÍA	BETA SAN MIGUEL	19,603	1,566,828	79.93	172,946	11.04	19,277	1,489,474	77.27	164,408	11.04
SAN FRANCISCO AMECA	BETA SAN MIGUEL	14,083	1,200,000	85.21	144,289	12.02	14,083	1,200,000	85.21	144,289	12.02
SANTA CLARA	PORRES	7,428	650,000	87.51	75,225	11.57	7,428	650,000	87.51	75,225	11.57
TALA (JOSE MA. MTZ.)	GPO. AZUC. MEX.	24,393	2,118,178	86.83	248,612	11.74	23,562	1,980,285	84.05	232,748	11.75
TAMAZULA	SAENZ	14,665	1,525,000	103.99	183,097	12.01	14,665	1,550,049	105.70	190,717	12.30
<b>South</b>		129,032	8,543,065	66.21	867,188	10.15	126,751	8,644,791	68.20	957,105	11.07
AZSUREMEX - TENOSIQUE	JIMENEZ SAINZ	3,910	160,338	41.01	15,555	9.70	3,910	199,802	51.10	19,771	9.90
CUATOTOLAPAM	SANTOS	14,798	850,000	57.44	87,571	10.30	14,798	895,000	60.48	95,010	10.62
HUIXTLA	PORRES	13,902	1,200,000	86.32	118,190	9.85	13,902	1,230,008	88.48	127,945	10.40
LA JOYA	GRUPO AZUCARERO DEL TROPICO	12,400	740,000	59.68	69,783	9.43	11,060	700,000	63.29	77,525	11.08
PDTE. BENITO JUÁREZ **	GPO. AZUC. MEX.	23,528	1,300,727	55.29	132,189	10.16	22,890	1,250,028	54.61	140,764	11.26
PUJILITIC (LA FE)	ZUCARMEX	16,674	1,700,000	101.96	206,652	12.16	16,674	1,730,953	103.81	221,562	12.80
SANTA ROSALÍA	BETA SAN MIGUEL	13,475	796,000	59.07	86,384	10.85	13,434	796,000	59.25	90,228	11.34
SN. RAFAEL DE PUCTÉ	BETA SAN MIGUEL	30,345	1,796,000	59.19	150,864	8.40	30,083	1,843,000	61.26	184,300	10.00

Source: Conadesuca.

reported expected expanded area, a fairly convincing total. This regional area expansion largely offsets the effect of lower sugarcane yields and recovery in the Gulf region.

Even with the reduction in Conadesuca's production estimate, the pace of the harvest remains lackluster. Figure 5 shows that the difficult conditions experienced during early winter have not yet been offset by stronger production. In the coming weeks, the production line should remain horizontal, similar to that of last year, for the reduction to be offset. Figure 6 shows the percentage of area harvested relative to the final total, assuming Conadesuca's revised estimate for 2013/14. As can be seen, this year's percentages have consistently lagged last year's pace and the average pace of the last 5 years.

**Figure 3**  
**Production through week 26 and revised Conadesuca production estimate, 2013/14, by region**





**Figure 4**  
**Area harvested through week 26 and revised Conadesuca area estimates, 2013/14, by region**

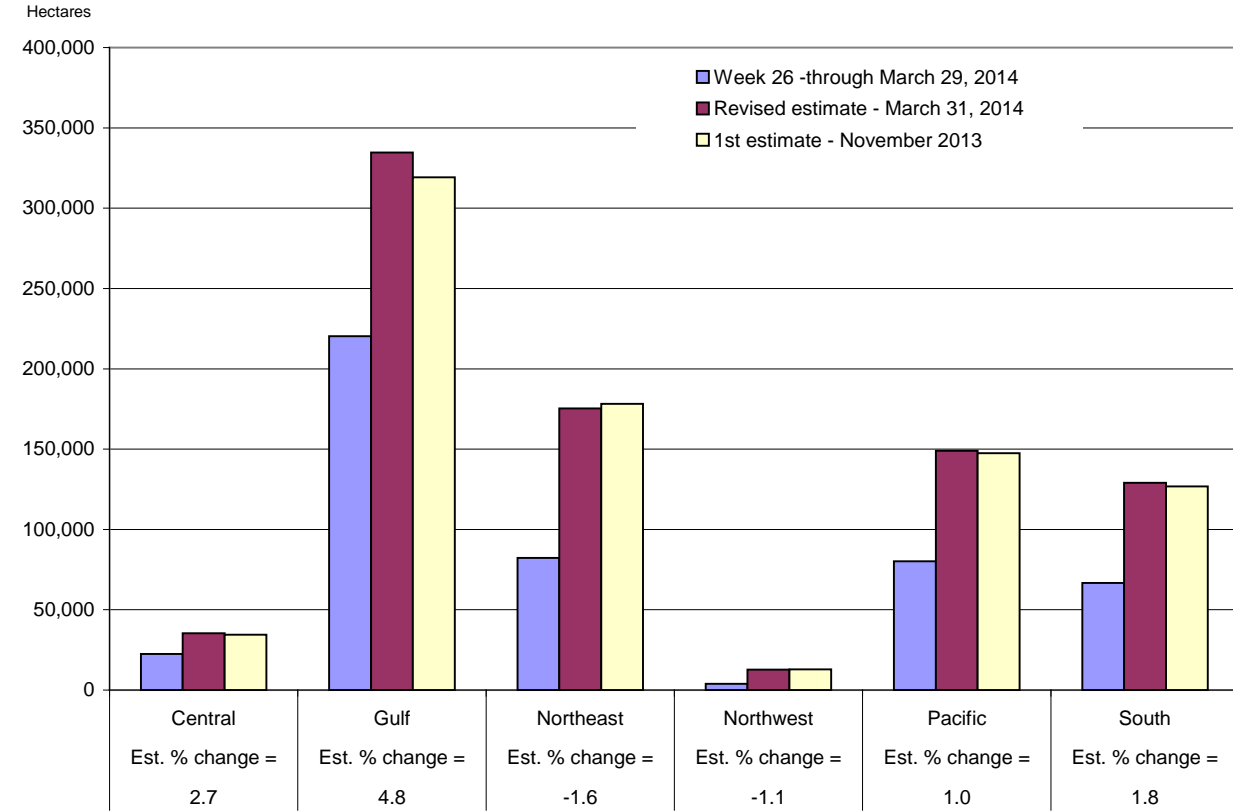
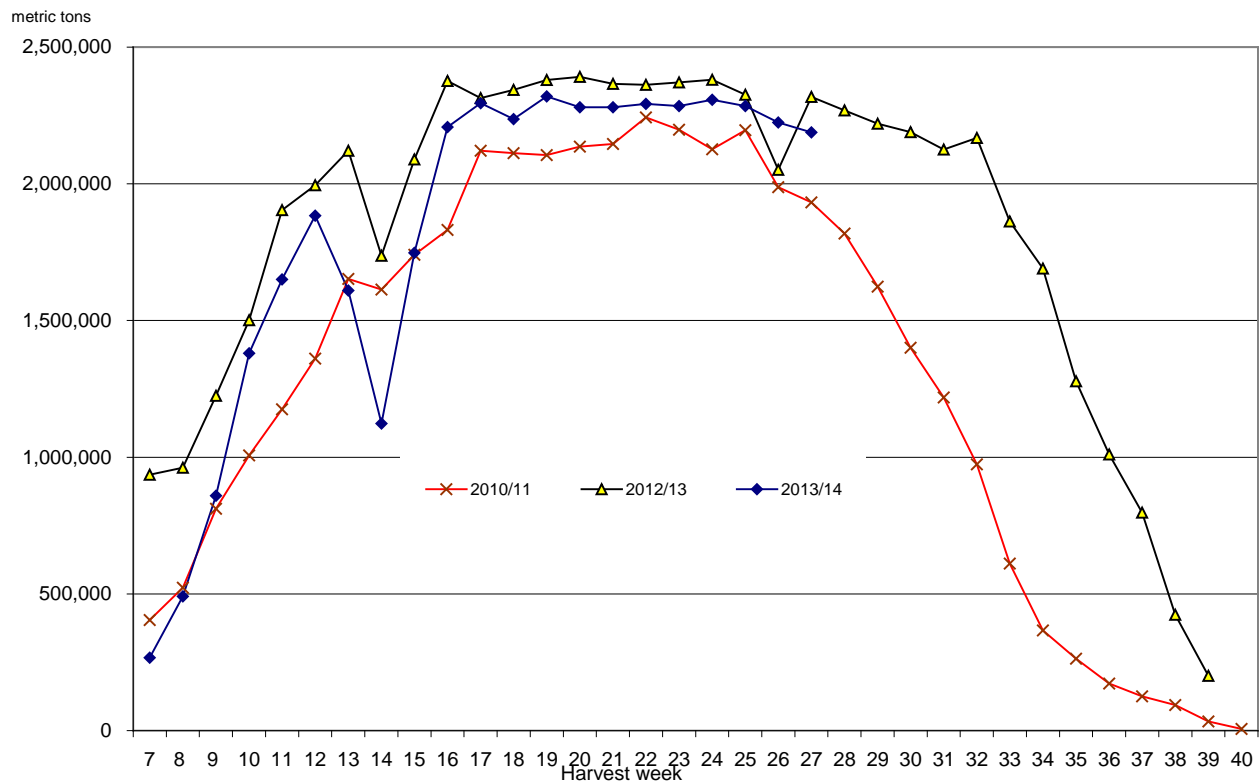
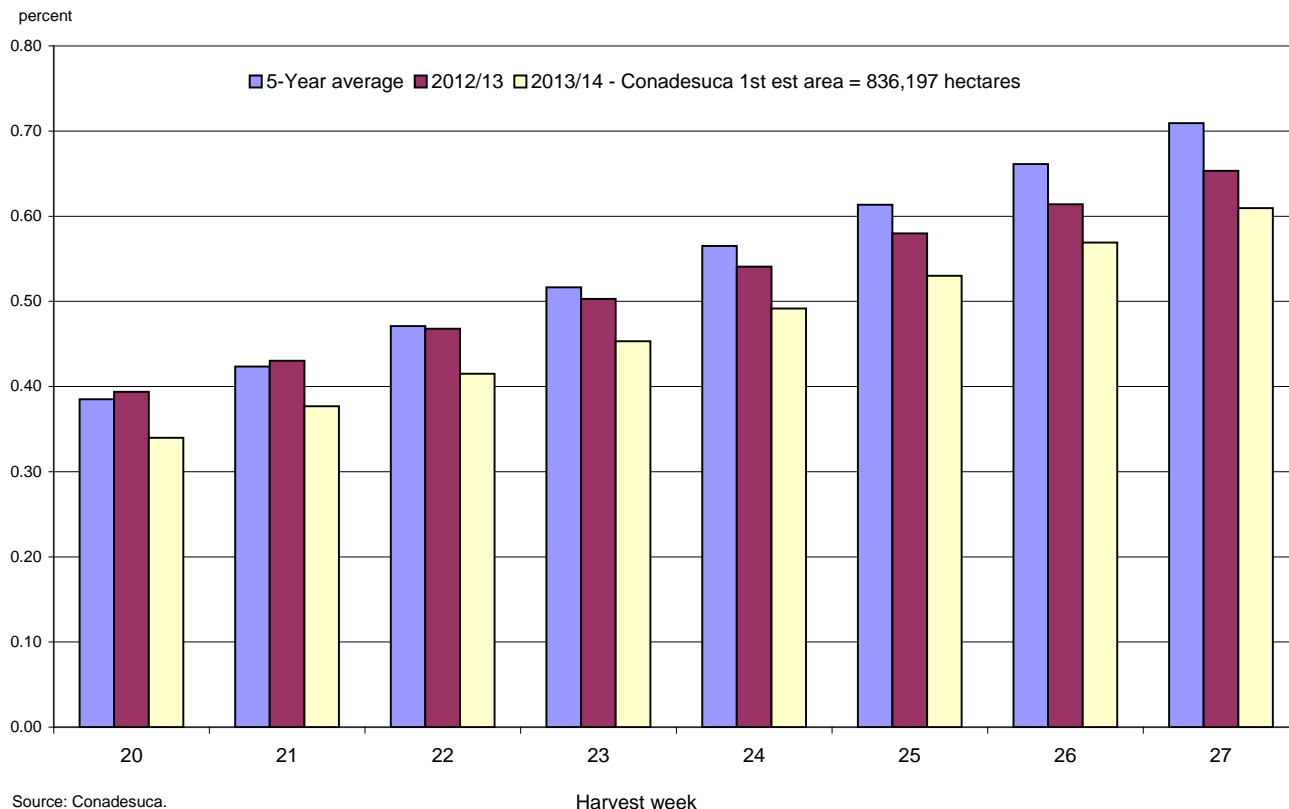


Figure 5  
**Sugarcane production, by week of harvest, 2010/11-2013/14**



Source: Conadesuca.

**Figure 6**  
**Mexico sugarcane: percent of crop harvested, weeks 20-27**



Although there is time for the remaining area to be harvested, there may be an element of doubt as to whether it can be achieved, especially with the advent of the rainy season in June.

Table 4 shows the two Conadesuca estimates paired with two estimates made by the *Sugar and Sweetener Outlook*. The first Sugar and Sweetener forecast (case 1) assumes area at the revised Conadesuca estimate of 836,197 hectares. The resulting production estimate is very close to the revised Conadesuca forecast. The second estimate assumes that the 836,197 hectare estimate is the most likely outcome but allows for reduced area in line with the slower to-date harvest pace seen in figure 6. Accordingly, area is forecast at 794,722 hectares (with a standard deviation of 28,021 hectares), about 5 percent lower than case 1. Forecast production is 6.150 million mt. With a high standard deviation of 222,335 mt, the confidence interval around this estimate is fairly high, encompassing the revised Conadesuca estimate (1.5 standard deviations) but not the original (2.5 standard deviations). Because of these statistical properties, the USDA did not revise its forecast of 6.350 million mt.

Figure 7 shows Conadesuca's estimate of sugar and high fructose corn syrup (HFCS) consumption through February. Sugar consumption this year (1.654 million mt) is close to last year's corresponding total (1.681 million mt). HFCS consumption at 546,958 mt, on the other hand, is down from last year by 16.7 percent. While the *Sugar and Sweetener Outlook* has been expecting an increase in monthly HFCS deliveries in the second half of the year due to lower relative HFCS prices, the increase is likely to be mitigated by lower demand for carbonated beverages. There is now a consumption tax of a peso per liter levied on these and other sugar/HFCS-containing beverages. That, along with daily Government-sourced admonitions against sweetened beverage and food products, has diminished HFCS consumption prospects, at least for a while. Figure 8 shows monthly HFCS deliveries, estimated through February 2014 and projected through

Table 4 -- Mexico 2013/14 sugar production forecasts

		Conadesuca		Sugar and Sweetener Outlook (SSO)			
		1st estimate (11/13)	Revised (3/14)	Case 1 -accept new area forecast	std. deviation	Case 2 - SSO area forecast	std. deviation
Area	hectares (ha)	819,065	836,197	836,197	0	794,722	28,021
Yield	ha/metric ton (mt)	70.86	69.36	69.83	0.407	69.83	0.407
Sugarcane	mt	58,037,815	58,001,625	58,394,014	340,563	55,497,753	1,985,742
Recovery	percent	11.54	11.18	11.08	0.059	11.08	0.059
Sugar	mt	6,695,310	6,486,935	6,471,470	51,022	6,150,488	222,335

Source: Conadesuca; ERS, Sugar and Sweetener Outlook.

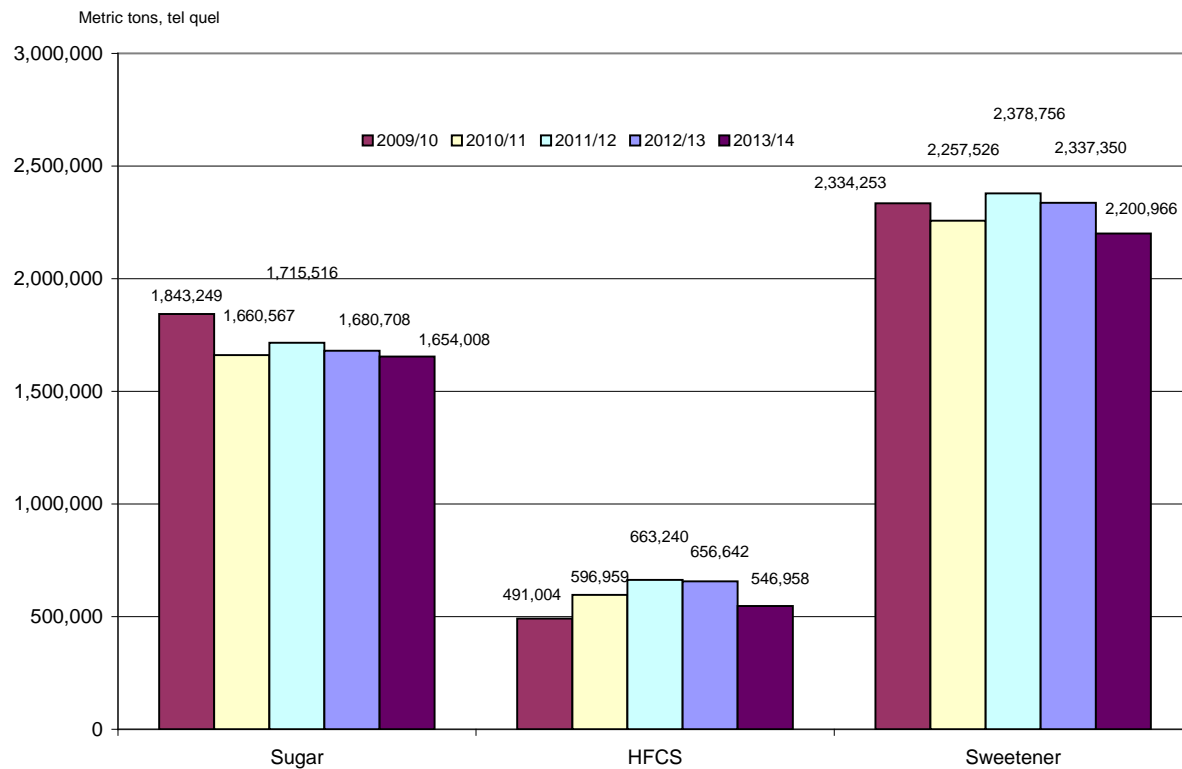
September 2014. HFCS consumption had been trending upward till July 2012 but has been declining since then. 2013/14 consumption is now forecast at 1.360 million mt.

It is believed that balanced sugar market conditions in the United States (stocks-to-use at 13.0 percent) imply a corresponding balance in Mexico. For this reason, the ending stocks-to-sugar consumption ratio is forecast at 22 percent, implying stocks at 947,000 mt, the same as last month. Exports are forecast residually at 2.399 million mt. There is no indication that the split between exports going to the United States and to other countries is different than last month. Exports to the United States, therefore, are forecast at 1.494 million mt, or 1.745 million STRV.

Sugar prices in Mexico have fallen to levels not seen since the early NAFTA sweetener implementation period and before (table 5). Figure 9 shows refinado sugar prices, along with U.S. refined beet sugar prices and unit values of Mexican refined sugar imported by the United States. U.S. refined prices had been generally above refinado prices up until mid-2012. The high point for all three price series occurred in early 2011/12, but the declines that started with U.S. beet sugar prices were soon matched by declines in refinado prices and unit import values. All refined and refinado prices have been close to each other since mid-2012.

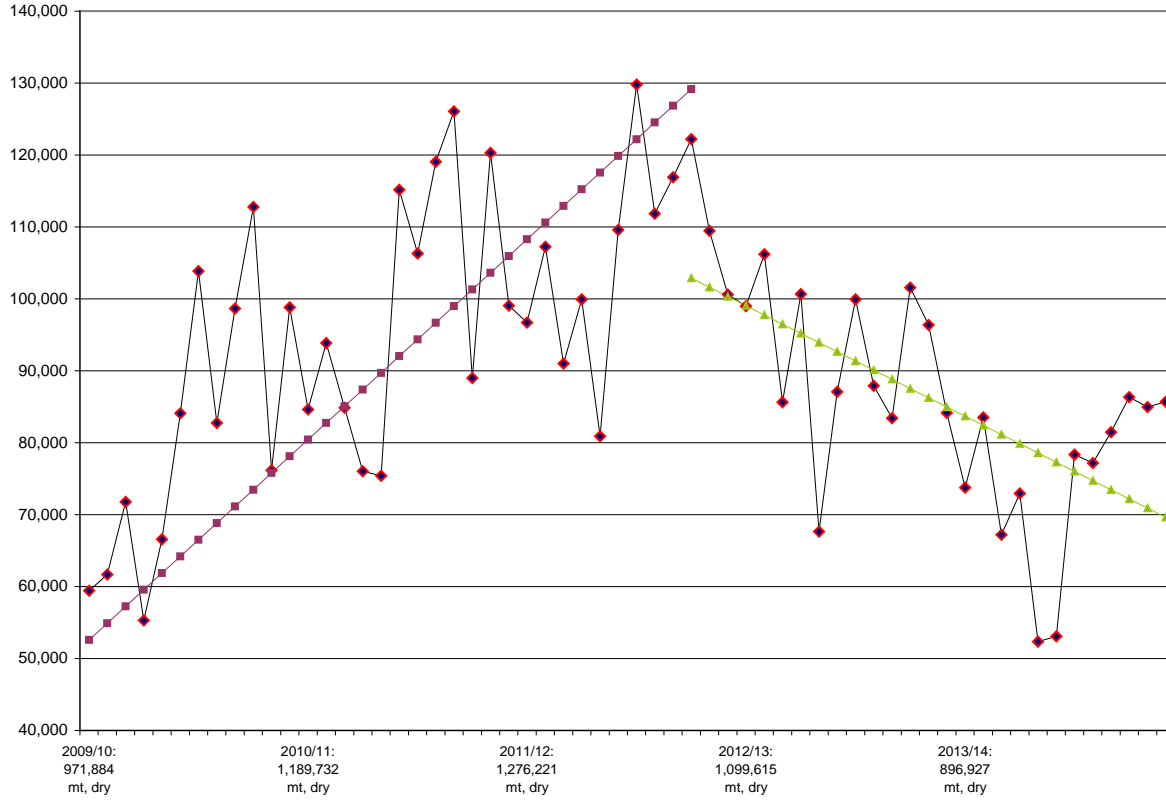
There exists a close equilibrium between Mexico City estandar sugar prices and unit values of all Mexican sugar imported by the United States since January 2009. Technically speaking, these two price series are cointegrated, meaning that movements in the series work to keep both price series in a medium-to-long term balanced state. Figure 10 shows deviations from this balance. In the early part of the period, unit import values were undervalued relative to Mexico City estandar prices and overvalued for much of 2012. During the period corresponding to the 2012/13 marketing year, the two price series have been close to their equilibrated balance. This is the period when Mexico sugar exports reached their highest levels in the U.S. market.

**Figure 7**  
**Sweetener consumption in Mexico, 5-months into marketing year, 2009/10 -- 2013/14**



Source: Conadesuca.

**Figure 8**  
**Mexico imports of high fructose corn syrup and crystalline fructose from all sources, 2009/10-2012/13 and projected 2013/14**  
 Metric tons, dry weight



Source: Economia.

Table 5 --Bulk sugar prices in Mexico City, estandar (standard) and refinado sugar

	Estandar -- US cents per pound													
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar	Fiscal
1994	26.52	26.40	24.96	24.61	24.85	24.48	24.22	24.37	24.23	24.09	23.96	20.93	24.47	24.66
1995	14.75	15.87	14.18	15.49	16.84	17.07	17.37	17.44	19.21	18.87	17.09	17.65	16.82	18.10
1996	18.00	18.43	19.16	19.54	19.79	20.01	20.04	20.74	21.20	20.23	18.45	17.86	19.45	19.21
1997	20.07	22.90	21.36	20.56	19.86	20.47	20.29	20.24	20.61	19.55	17.83	18.19	20.16	20.24
1998	19.64	18.78	16.49	17.41	19.02	19.27	19.03	20.37	19.07	19.20	20.34	20.83	19.12	18.72
1999	19.94	19.44	18.19	17.72	17.82	21.31	21.33	20.00	20.55	21.29	23.41	22.04	20.25	19.72
2000	21.08	20.01	20.29	19.44	20.92	20.00	22.36	22.72	22.35	21.36	23.21	25.28	21.58	21.32
2001	23.11	21.88	19.72	18.43	18.39	21.80	21.97	21.76	24.02	24.22	23.62	23.14	21.84	21.74
2002	24.33	24.36	24.37	23.97	22.97	22.21	22.72	22.88	22.83	23.58	23.69	23.81	23.48	23.47
2003	22.93	22.09	22.05	23.14	24.17	24.06	24.73	24.20	24.49	24.54	24.72	25.73	23.90	23.58
2004	25.73	24.36	23.98	24.01	23.41	24.12	25.14	25.97	26.14	26.22	26.01	26.72	25.15	24.82
2005	25.99	25.41	24.89	24.98	25.23	25.50	25.27	25.47	24.31	23.79	24.10	24.12	24.92	25.50
2006	24.13	23.85	23.04	24.02	27.35	28.16	27.51	33.49	36.39	32.99	32.11	31.29	28.69	26.66
2007	29.93	28.46	28.33	28.17	27.86	27.05	26.93	25.18	23.69	23.51	22.69	24.42	26.35	28.50
2008	22.98	21.92	22.06	23.60	22.17	21.86	23.73	23.47	22.34	18.95	18.27	18.97	21.69	22.90
2009	17.82	16.95	17.91	22.33	23.19	25.24	28.80	32.45	44.56	42.26	41.46	39.65	29.39	23.79
2010	39.11	43.94	40.99	41.04	36.56	34.40	34.98	35.75	40.60	39.57	38.74	36.11	38.48	39.23
2011	37.82	37.40	38.55	40.13	41.67	41.20	43.56	46.32	44.32	48.48	45.45	40.95	42.15	40.45
2012	39.68	39.43	37.27	35.92	37.74	33.44	33.30	30.65	29.22	29.77	27.51	27.02	33.41	37.63
2013	26.57	28.10	28.38	25.38	22.84	24.01	24.02	25.78	24.27	23.05	25.39	27.87	25.47	26.14
2014	26.12	23.58	23.59											

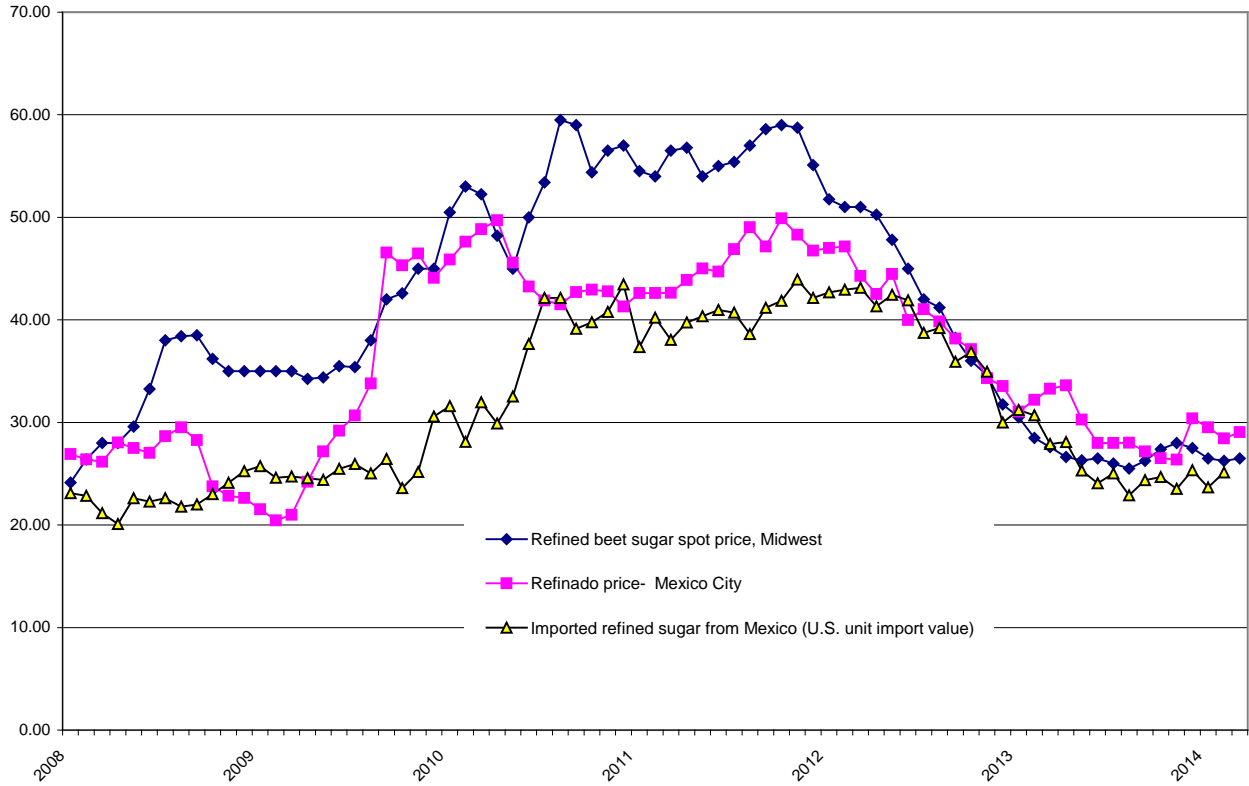
  

	Refinado -- US cents per pound													
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar	Fiscal
1994	29.73	29.59	27.97	27.58	27.85	27.44	27.15	27.32	27.15	27.00	26.84	23.28	27.41	27.64
1995	16.41	17.65	15.77	17.21	18.66	18.82	19.16	19.23	22.16	20.81	18.85	19.47	18.68	20.18
1996	19.56	20.15	21.23	21.75	21.81	21.74	21.84	22.49	22.65	22.01	21.37	21.47	21.51	21.03
1997	22.59	25.19	24.63	24.76	24.26	24.12	24.57	24.68	24.56	23.75	22.66	22.81	24.05	23.69
1998	23.05	22.11	21.42	21.17	21.71	21.35	21.64	22.24	20.41	21.82	22.75	22.58	21.86	22.03
1999	22.41	22.78	22.55	22.99	22.53	23.15	24.38	23.52	23.28	25.71	25.76	25.31	23.70	22.90
2000	24.75	24.30	24.43	23.99	23.44	21.91	23.55	24.13	23.83	23.31	24.77	26.02	24.03	24.26
2001	25.72	25.65	25.19	24.90	24.82	25.64	25.81	26.01	26.60	27.17	27.29	27.17	26.00	25.37
2002	28.55	28.25	28.43	27.77	26.57	25.95	26.53	26.98	26.89	27.24	27.31	27.46	27.33	27.30
2003	26.55	25.76	25.63	26.83	27.89	27.67	28.99	28.59	30.15	29.21	29.70	29.03	28.00	27.51
2004	29.28	27.96	27.76	27.37	26.58	27.12	27.29	26.86	26.81	26.99	26.98	27.62	27.39	27.91
2005	27.39	27.65	27.29	27.68	28.00	28.15	28.54	28.27	27.82	27.63	28.53	28.61	27.96	27.70
2006	28.64	28.79	29.54	29.15	30.72	32.81	34.30	38.36	43.97	40.52	36.22	35.50	34.04	31.75
2007	34.16	33.29	32.67	32.95	32.69	32.17	32.14	31.28	30.13	29.49	27.68	27.87	31.38	33.64
2008	26.91	26.39	26.15	28.04	27.49	27.04	28.65	29.52	28.28	23.77	22.85	22.65	26.48	27.79
2009	21.53	20.45	21.00	24.20	27.17	29.19	30.66	33.80	46.56	45.32	46.47	44.10	32.54	26.99
2010	45.87	47.62	48.85	49.71	45.57	43.24	41.89	41.52	42.71	42.94	42.79	41.31	44.50	45.24
2011	42.61	42.61	42.63	43.88	45.01	44.70	46.89	49.03	47.16	49.90	48.30	46.76	45.79	44.30
2012	47.02	47.15	44.28	42.52	44.47	39.97	41.04	39.84	38.17	37.15	34.31	33.55	40.79	44.12
2013	31.05	32.19	33.29	33.60	30.28	28.00	28.00	28.02	27.17	26.51	26.37	30.38	29.57	31.39
2014	29.53	28.45	29.06											

Source: Servicio Nacional de Informacion de Mercados SNIIM-ECONOMICA.

**Figure 9**  
**Monthly refined sugar, United States and Mexico, 2008-2013**

cents/lb (HFCS42 - dry wt. basis)

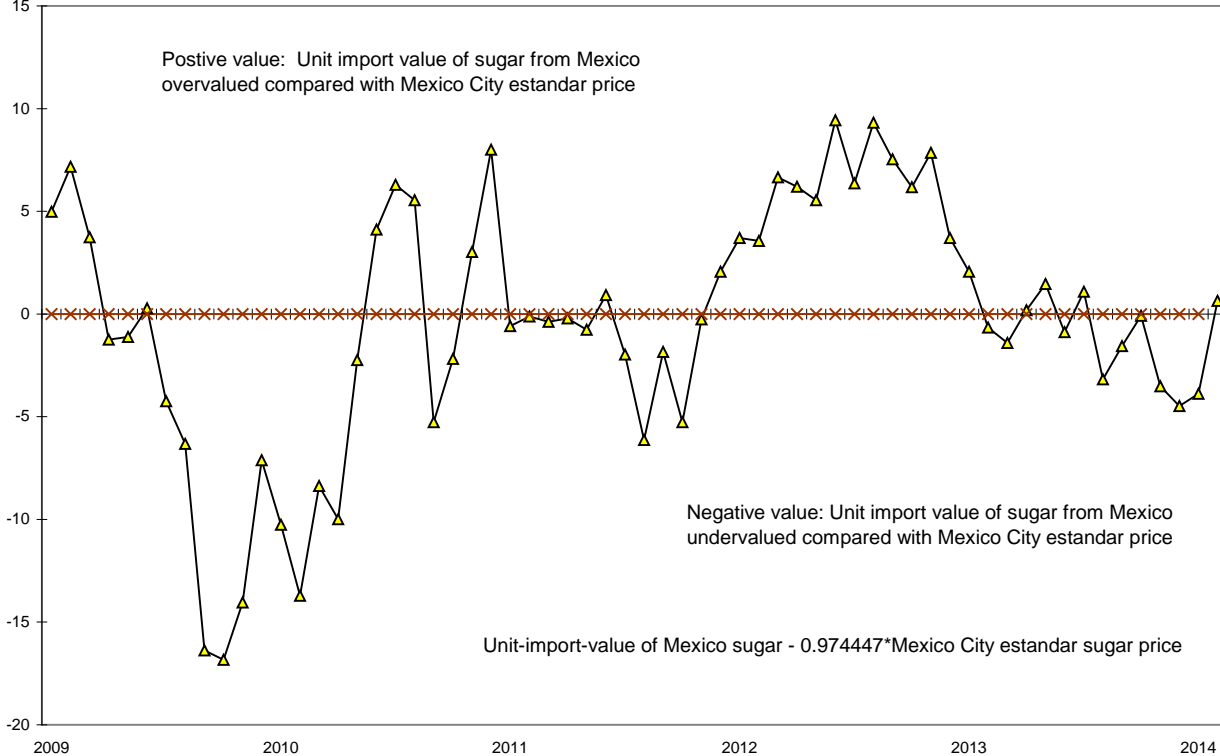




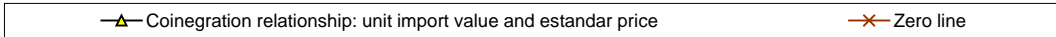
**Figure 10**

**U.S. unit import value of sugar from Mexico and Mexico City estandar price : deviations from equilibrium**

cents per pound



Source: U.S. Census Bureau, Sistema Nacional de Información e Integración de Mercados (SNIIM).



## Honey

### *Consumer Demand Is Strong Despite Higher Prices*

After declining 4 percent in 2012, U.S. production of honey increased 5 percent in 2013 to 149.5 million pounds as the number of honey bee colonies rose 4 percent and yield per colony inched up 1 percent. The number of bee colonies of 2,640,000 is closer to the recent high colony count in 2010. Among major honey-producing States, only Montana and Texas increased honey yield per colony last year. The other major honey States had lower yields, half of which were offset by a larger number of bee colonies that pushed production up in 2013. The near-doubling of Montana's honey harvest in 2013 more than offsets the production declines in California, Minnesota, South Dakota, and Wisconsin.

The number of bee colonies in Florida, Michigan, Montana, and Texas was up by 10 percent or more from 2012, which more than compensated for similar percentage reductions in yield per colony in Minnesota, South Dakota, and Wisconsin. Montana's 81-percent increased yield in 2013 is largely credited for the State's 98-percent production jump to 14.9 million pounds, which slightly exceeds South Dakota's output, the second-highest honey producer in 2012. Over the past two decades, the States that have suffered the sharpest declines in honey production are California, Florida, Minnesota, and South Dakota. Their honey outputs in 2013 were roughly half of their highest production levels since 1994.

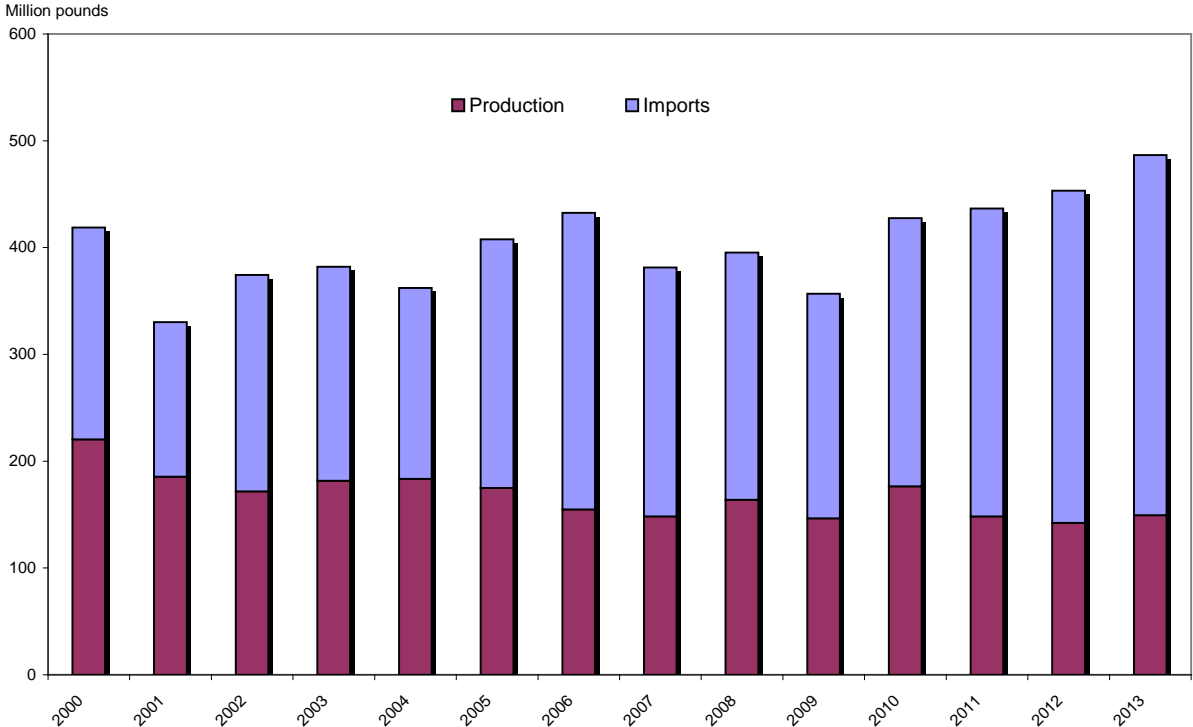
Notwithstanding the larger honey crop in 2013, domestic demand for this natural sweetener remains strong, as attested to by the eighth consecutive price hike starting in 2006. Honey prices averaged \$2.12 per pound in 2013, up 6.5 percent from \$2 in 2012, and are more than twice the 92-cent price in 2006. Prices of imported honey have generally mirrored this upward price trend since 2006. The corresponding wholesale and retail prices in 2013 are \$2.05 and \$3.74 per pound, significantly higher than the past decade's lowest prices of 84 cents and \$1.81 per pound in 2005—and the respective import price was only 54 cents per pound in 2005 when half of the domestic honey supply was imported from foreign producers. The margin between retail and wholesale prices is at a record \$1.69 per pound, close to double the \$0.89 per pound margin in 2008. Similarly, the margin between domestic wholesale and import prices is a record 62 cents per pound, which confers a 30-percent price advantage to the foreign honey crop.

The importance of honey supplied from abroad is indicated by the 65-percent share of imports in U.S. honey supply, up from 40 percent in 2000. Honey imports in 2013 were 60 percent larger in volume than the recent low level during the economic recession in 2009. Imports of 337 million pounds in 2013 are 72 percent of total domestic use of 468.3 million pounds. Per capita consumption of honey is at a record high of 1.48 pounds (the highest since 1966). An average 67.5 percent of honey consumed domestically from 1966 to 2012 was as an ingredient or additive in processed food products, and only 32.5 percent was purchased for table use.

Another indicator of strong domestic demand for honey is the low 31.8 million pounds of honey stocks in 2013, which are half of 2006's beginning stock level and among the lowest over the past five decades. As demand pushed up prices in 2013, the value of honey produced by domestic farmers exceeded \$317 million, up 12 percent in one year. Close to half of the \$33.6-million climb in production value from 2012 was from Montana's 111-percent value jump. The average U.S. farm value generated by each bee colony was more than \$120 in 2013, or 7.6-percent higher than in 2012. This value is 85 percent greater than \$65 generated per colony in 2006. In terms of (wholesale) value, \$2.40 was spent by each consumer for the average 1.48 pounds of honey consumed per capita in the United States in 2013.

The largest source of imported honey is Argentina, where 29 percent of U.S. import volume originated in 2013. The next biggest foreign suppliers were Vietnam and India. These three countries supplied more than two-thirds of the U.S. honey import volume in 2013. The U.S. import bill amounted to \$480.3 million, which is 15 percent higher than in 2012 and 51 percent more than the value of domestic honey production in 2013. Since most of imported honey is used in food manufacturing, domestically produced honey is largely sold for table use. This high dependence of U.S. food manufacturers on imported honey as inputs contributes to the competitiveness of their products, given lower import prices relative to domestic prices for honey.

**Figure 11**  
Imports are now 65 percent of U.S. honey supply



Sources: USDA, NASS, Honey; U.S. Census Bureau.