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Sugar and Sweeteners Outlook

Stephen Haley and Andy Jerardo

USDA Establishes 2008 Fiscal Year Tariff Rate Quota and Overall Allotment Quantity

On August 10, 2007, the U.S. Department of Agriculture (USDA) established the FY 2008 raw sugar tariff-rate quota (TRQ) at 1,231,497 short tons, raw value (STRV), the U.S. minimum access commitment level under the World Trade Organization (WTO). The USDA also announced that raw sugar TRQ imports would not be subject to shipping patterns. The justification was that the raw sugar TRQ level was lower than previous years.

The USDA established the FY 2008 refined sugar TRQ at 94,251 STRV for which the sucrose content, by weight, in the dry state, must have a polarimeter reading of 99.5 degrees or more. This includes the United States minimum access commitment under the WTO (24,251 STRV) and an additional specialty sugar amount of 70,000 STRV to accommodate a rapidly expanding organic food sector. Included within the WTO refined sugar TRQ is a minimum specialty sugar TRQ of 1,825 STRV.

On August 10, 2007, the USDA announced the FY 2008 overall allotment quantity (OAQ). The OAQ was established at 8.450 million STRV. In its announcement, the USDA noted that the projected ending stocks-to-use ratio in the August 2007 *World Agriculture Supply and Demand Estimates* (WASDE) was 13.3 percent, a rate below the traditional range for the U.S. sugar market. According to the provisions of the 2002 Farm Act, the OAQ was allocated to the beet and cane sectors as follows:

- Beet sugar: 4,592,575 STRV
- Cane sugar: 3,857,425 STRV

The cane sugar allocation exceeded projected cane sugar production in the August 2007 WASDE by 187,000 STRV. However, given production and cane stockholding uncertainties before the start of the 2008 fiscal year, the USDA officially projected a surplus cane allotment at only 70,000 STRV. This amount was reassigned to imports. The USDA promised to make appropriate adjustments to the OAQ, as well as the TRQ, during the year to ensure an adequate supply of sugar for the domestic market, and to avoid sugar loan forfeitures and to prevent market disruptions.

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The next release is
January 2008

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World Agricultural
Outlook Board.

On September 12, 2007, the USDA released its latest supply and use estimates for FY 2007 and projections for FY 2008 in the WASDE report. FY 2008 sugar production is projected at 8.342 million STRV, a decrease of about 152,000 STRV from FY 2007. Beet sugar is forecast at 4.657 million STRV (371,000 STRV, or 7.4 percent, lower than FY 2007), and cane sugar is forecast at 3.684 million STRV (219,000 STRV, or 6.3 percent, higher than FY 2007).

The USDA projects that TRQ imports in FY 2008 will equal 1.354 million STRV. Raw sugar TRQ shortfall is projected at 70,000 STRV, implying raw sugar TRQ entries of 1.161 million STRV. Sugar imports under the Dominican Republic and Central Free Trade Agreement (DR/CAFTA) are projected at 98,590 STRV. Adding in the amount of the refined sugar TRQ brings the total to the 1.354 million STRV projection.

Other program sugar imports outside the sugar TRQ for FY 2008 are projected to total 425,000 STRV. Other USDA import programs include the Refined Sugar Re-export Program, the Sugar-Containing Products Program, and the Polyhydric Alcohol Program. Sugar from imported syrups is projected at 5,000 STRV. High-tier tariff sugar imports, mostly from Mexico, are projected at 325,000 STRV.

The USDA estimates FY 2007 sugar deliveries for food and beverage use at 9.850 million STRV and FY 2008 deliveries at 10.000 million STRV. Ending stocks are projected as the difference between total supply and total use. For FY 2007, ending stocks are estimated at 1.772 million STRV, implying an ending stocks-to-use ratio of 16.9 percent. Ending stocks for FY 2007 are the beginning stocks for FY 2008. Ending stocks for FY 2008 are projected at 1.803 million STRV, implying an ending stocks-to-use ratio of 17.3 percent.

U.S. Sugar

On September 12, 2007, the U.S. Department of Agriculture (USDA) released its latest supply and use estimates for fiscal year (FY) 2007 and projections for FY 2008 in the *World Agricultural Supply and Demand Estimates (WASDE)* report. On August 10, 2007, the USDA announced the FY 2008 raw and refined sugar tariff-rate quotas (TRQs) and the FY 2008 Overall Allotment Quota (OAQ).

Production

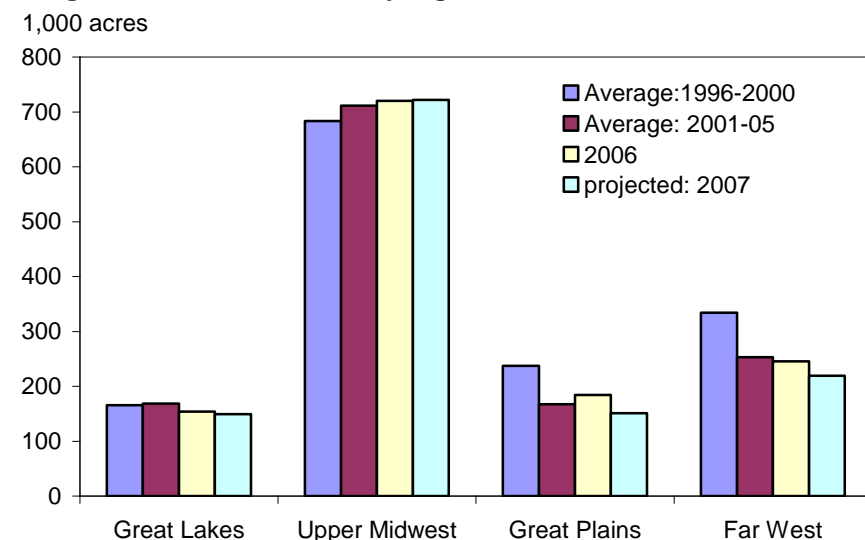
The USDA's production estimates and projections are based primarily on information provided by beet sugar processors and cane sugar millers to the Farm Service Agency (FSA). Processors and millers project FY 2008 sugar production at 8.342 million short tons, raw value (STRV), a decrease of about 152,000 STRV from FY 2007. Beet sugar is forecast at 4.657 million STRV (371,000 STRV, or 7.4 percent, lower than FY 2007), and cane sugar is forecast at 3.684 million STRV (219,000 STRV, or 6.3 percent, higher than FY 2007). FY 2007 beet sugar production is estimated at a record 5.029 million STRV, and FY 2007 cane sugar production is estimated at 3.465 million STRV.

Beet Sugar Production

The National Agricultural Statistics Service (NASS) forecasts sugarbeet area harvested for FY 2008 at 1.241 million acres, a decrease of 4.8 percent from FY 2007. The largest area reductions are forecast in the Great Plains (Colorado, Montana, Nebraska, and Wyoming) at 18.0 percent and the Far West (California, Idaho, Oregon, and Washington) at 10.6 percent. Area in the Great Lakes (Michigan) is forecast down by only 3.2 percent, and area in the Upper Midwest (Minnesota and North Dakota) is forecast at about same level as last year. These forecasts continue the trend of more harvested sugarbeet area in the eastern sugarbeet-growing areas than in western growing areas (fig. 1).

Figure 1

Sugarbeet area harvested, by region



Source: *Crop Production*, NASS, USDA.

In July 2007, NASS estimated the national sugarbeet price for the 2006 crop year at \$42.20 per ton, a decrease of \$1.30 from the high 2005 crop year price of \$43.50. Since 1980, a dollar change in the sugarbeet price is correlated with a like change in area harvested in the next crop year of about 15,000 acres (fig. 2). The forecast area reduction of 62,200 acres for the 2007 crop year is above the historical area contraction indicated by the price reduction.

Table 1 shows in the last column an efficiency measure of the U.S. beet sugar industry from the 1992/93 crop year through 2006/07 (the 2007/08 figures are projections). The measure is the ratio of the September/August crop year sugar recovery (fourth column) to the NASS estimate of sucrose content (fifth column). The higher the rate, the higher the extraction of sucrose contained in the beet crop. The average rate for the period has been 0.874. An Economic Research Service (ERS) regression model suggests that the efficiency measure is a negative function of the size of the sugarbeet crop (elasticity coefficient = -0.083) and a positive function of the recovery rate (elasticity coefficient = 0.584). There is no trend in the measure over time. The model explains 88 percent of the observed variation in the efficiency measure from 1992/93 to 2006/07. Assuming the parameter values in the table for 2007/08, the model would predict an efficiency level of 0.894, which would imply a high sucrose level for the 2007/08 crop of 17.34 percent.

Beet processors project that beet sugar production will be 4.657 million STRV, implying a sugar yield of 3.75 STRV (table 2). Table 3 compares the processors' forecast with that of ERS. ERS forecasts sugar yield as either a function of trend and sugarbeet yield (case 1) or a function of trend, sugarbeet yield, and sucrose level (case 2). Case 1 analysis shows a forecast sugar yield of 3.74 STRV per acre,

Figure 2
Relationship between U.S. sugarbeet area and previous year sugarbeet price, crop years 1980-2006

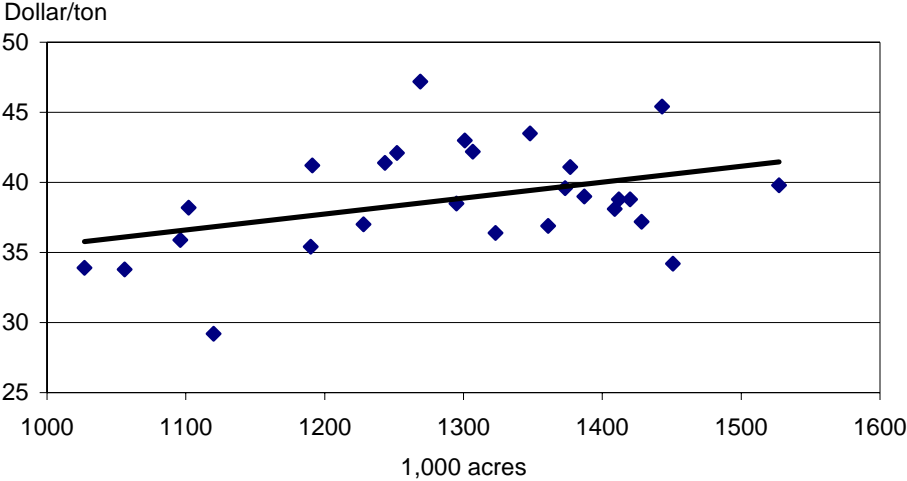


Table 1--U.S. sugarbeet crop, beet sugar production, sucrose content, and recovery

Sept./Aug. crop year	Sugarbeet production	Crop year (Sep/Aug) beet sugar production	Crop year beet recovery rate	Sucrose content of beets	Recovery efficiency
	-----Tons-----	-----	----- Percent -----	-----	Ratio
1992/93	29,143	4,478	15.36	17.28	0.889
1993/94	26,249	3,965	15.10	17.13	0.882
1994/95	31,853	4,577	14.37	16.65	0.863
1995/96	28,065	3,944	14.05	16.29	0.863
1996/97	26,680	4,042	15.15	17.14	0.884
1997/98	29,886	4,272	14.29	16.94	0.844
1998/99	32,499	4,410	13.57	16.70	0.813
1999/00	33,420	4,931	14.75	17.15	0.860
2000/01	32,541	4,766	14.65	17.27	0.848
2001/02	25,764	4,019	15.60	17.15	0.909
2002/03	27,707	4,220	15.23	16.92	0.900
2003/04	30,710	4,912	15.99	17.73	0.902
2004/05	30,021	4,576	15.24	17.36	0.878
2005/06	27,433	4,299	15.67	17.15	0.914
2006/07 (estimated) 1/	34,064	5,195	15.25	17.45	0.874
2007/08 (projected) 1/	30,090	4,621	15.36	17.29	0.888

1/ Projected based on beet processors' forecast of sugar production in Sept. 2007 WASDE and NASS sugarbeet forecast (Sept. 2007 *Crop Production*).

Sources: NASS, *Crop Production*, USDA.

Table 2--Beet sugar projection for 2007/08

State	Projected area harvested	Trend yield for 2007/08	Projected prod. sugarbeets	Trend sugar yield for 2007/08	Projected beet sugar prod.
	1,000 acres	short ton/acre	1,000 short tons	Short ton, raw value	
California	39,100	39.20	1,384,000	--	--
Colorado	29,300	24.13	744,000	--	--
Idaho	167,000	27.98	5,094,000	--	--
Michigan	149,000	21.83	3,204,000	--	--
Minnesota	475,000	20.71	10,640,000	--	--
Montana	47,000	24.40	1,222,000	--	--
Nebraska	44,500	21.05	1,037,000	--	--
North Dakota	247,000	20.68	5,681,000	--	--
Ohio	0		0	--	--
Oregon	11,000	30.46	337,000	--	--
Washington	2,000	37.74	76,000	--	--
Wyoming	30,500	21.75	641,000	--	--
Total	1,241,400	24.21	30,060,000	3.75	4,657,424

-- = Data unavailable.

Source: *Crop Production*, NASS, USDA; WASDE, USDA.

Table 3--Comparison of regression-based forecasts of beet sugar per acre for FY 2008 with processors' July 2007 forecast

Item	Explanatory variables				Performance measures			Forecasts for FY 2007	
	Constant	Trend 1/	Sugarbeet yield	Sucrose level 2/	Adj. R2	Standard error	Durbin-Watson	Sugar per acre STRV/acre	Sugar production 3/ 1,000 STRV
Case I:									
Coefficient	-	0.025	0.115	-	0.905	0.105	2.053	3.741	4,643
Std. Dev.	-	0.003	0.003	-	-	-	-		
T-Statistic	-	9.098	35.746	-	-	-	-		
Case II:									
Coefficient	-	0.024	0.083	0.041	0.953	0.076	1.923	3.657	4,540
Std. Dev.	-	0.002	0.010	0.013	-	-	-		
T-Statistic	-	12.590	8.422	3.170	-	-	-		
Case III:									
Processors' forecast	-	-	-	-	-	-	-	3.752	4,657

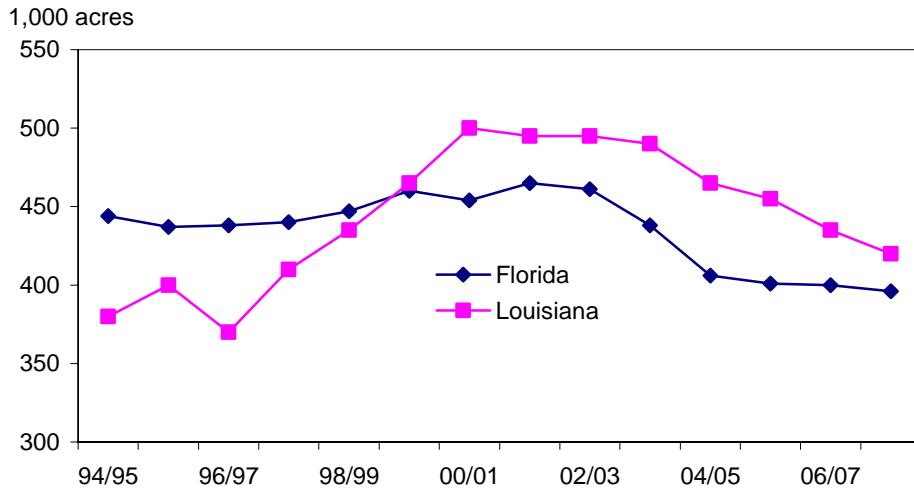
1/ Trend(FY 2007) = 37.

2/ Forecast sucrose from table 1 = 17.34 percent.

3/ Acreage harvested = 1.241.4 million acres (Source: NASS).

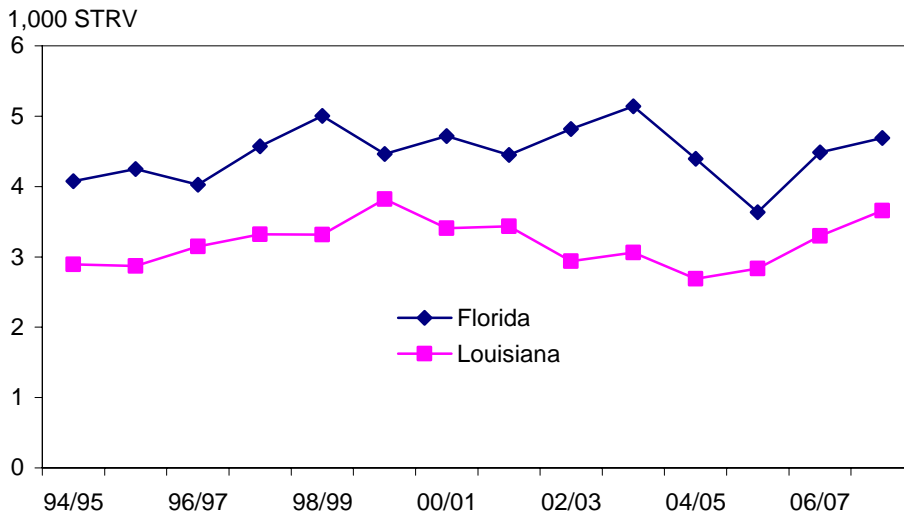
Source: ERS for Case I and II ; WASDE, USDA for Case III.

Figure 3
Sugarcane area harvested in Florida and Louisiana, 1994/95-2007/08



Source: *Sweetener Market Data*, FSA; *Crop Production*, NASS.

Figure 4
Cane sugar yields in Florida and Louisiana, 1994/95-2007/08



Source: *Sweetener Market Data*, FSA; *Crop Production*, NASS.

The USDA established the FY 2008 refined sugar TRQ at 94,251 STRV for which the sucrose content, by weight, in the dry state, must have a polarimeter reading of 99.5 degrees or more. This includes the United States minimum access commitment under the WTO (24,251 STRV), and an additional specialty sugar amount of 70,000 STRV to accommodate a rapidly expanding organic food sector. Included within the WTO refined sugar TRQ is a minimum specialty sugar TRQ of 1,825 STRV.

USDA will administer the FY 2008 specialty sugar TRQ of 71,825 (1,825 + 70,000) STRV in five tranches. Because this is a first-come, first-served TRQ, tranches are needed to allow for orderly marketing throughout the year. The first, totaling 1,825 STRV, will open October 24, 2007. All specialty sugars are eligible for entry under this tranche. The second tranche will open on November 15, 2007, and be equal to 24,850 STRV. The remaining three tranches will each be equal to 15,050 STRV, with the third opening on January 30, 2008, the fourth on May 14, 2008, and the fifth on August 27, 2008. The second, third, fourth, and fifth tranches will be reserved for organic sugar and other specialty sugars not currently produced commercially in the United States or reasonably available from domestic sources.

The USDA projects that TRQ imports in FY 2008 will equal 1.354 million STRV (table 4). Raw sugar TRQ shortfall is projected at 70,000 STRV, implying raw sugar TRQ entries of 1.161 million STRV. Sugar imports under the Dominican Republic and Central Free Trade Agreement (DR/CAFTA) are projected at 98,590 STRV. Adding in the amount of the refined sugar TRQ brings the total to the 1.354 million STRV projection.

Other program sugar imports outside the sugar TRQ for FY 2008 are projected to total 425,000 STRV. Other USDA import programs include the Refined Sugar Re-export Program, the Sugar-Containing Products Program, and the Polyhydric Alcohol Program. Sugar from imported syrups is projected at 5,000 STRV.

High-tier tariff sugar imports, mostly from Mexico, are projected at 325,000 STRV.¹ Mexican sugar supply (i.e., the sum of beginning stocks, production, and imports) in FY 2008 is projected at 7.5 million metric tons, raw value (MTRV). The sum of expected consumption, deliveries to food manufacturers under the IMMEX sugar-containing product re-export program, and reasonable ending stocks are projected at 7.2 million MTRV. The difference available for export is, therefore, about 300,000 MTRV.

Sugar imports for FY 2007 are estimated at 2.090 million STRV (table 5). The raw sugar TRQ was established at 1.481 million STRV. Early entries prior to the start of the fiscal year amounted to about 30,000 STRV, and TRQ shortfall is estimated at 100,000 STRV, leaving the estimate for the raw sugar TRQ at 1.351 million STRV. Mexico's duty-free sugar allocation under the North American Free Trade Agreement (NAFTA) was established at 267,575 STRV. Only 78,575 STRV of this amount is expected to enter before the end of the fiscal year. All sugar under the refined sugar TRQ, established at 102,831 STRV, is expected to enter. (Of this amount, 80,406 STRV is constituted by specialty (mostly organic) sugar.) Sugar imports under DR/CAFTA are estimated at 96,694 STRV. Total TRQ imports are, therefore, estimated at 1.630 million STRV. Other program imports for FY 2007 are estimated at 400,000 STRV and high-tier tariff sugar imports, mostly from Mexico, are estimated at 60,000 STRV.

¹ Under the North American Free Trade Agreement (NAFTA), high-tier tariffs on raw and refined sugar are eliminated on January 1, 2008.

Table 4--USDA estimate of sugar imports, FY 2008

Item	Metric tons, raw value	Short tons, raw value
Raw sugar TRQ	1,117,195	1,231,497
Less shortfall	-63,504	-70,000
Total raw sugar TRQ	1,053,691	1,161,497
Refined sugar TRQ		
Allocation to Canada	10,300	11,354
Allocation to Mexico 1/	2,954	3,256
Global	7,090	7,815
Specialty		
Base	1,656	1,825
Additional	63,503	70,000
Specialty total	65,159	71,825
Total refined sugar TRQ	85,503	94,251
CAFTA/DR TRQ	89,440	98,590
Total estimate TRQ entries	1,228,634	1,354,337
Re-export program imports	385,557	425,000
Sugar syrups (molasses, thick juice)	4,536	5,000
High-tier tariff sugar imports (mostly Mexico)	294,838	325,000
Total projected imports	1,913,566	2,109,337

1/ Mexico allocated 7,258 MTRV (8,000 STRV) under raw cane TRQ.

Source: Foreign Agricultural Service, USDA.

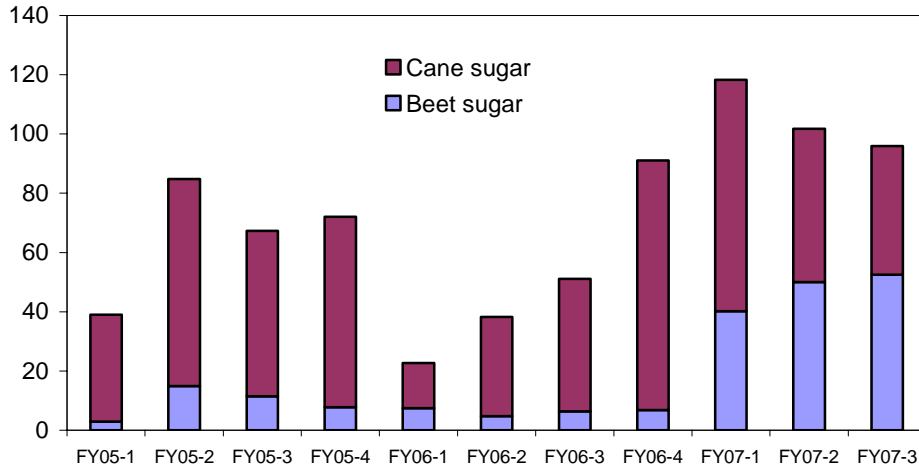
Table 5--USDA estimate of sugar imports in FY 2007

Item	Metric tons, raw value	Short tons, raw value
Raw sugar TRQ	1,343,992	1,481,482
Less early entries (Aug./Sept. 2006)	-27,216	-30,000
Less shortfall	-90,719	-100,000
Total raw sugar TRQ	1,226,057	1,351,482
Refined sugar TRQ		
Allocation to Canada (7/27/2006)	10,300	11,354
Allocation to Mexico (7/27/2006)	2,954	3,256
NAFTA allocation to Mexico 1/ Less shortfall	242,742 -171,460	267,575 -189,000
Global	7,090	7,815
Specialty		
Base	1,656	1,825
Additional	71,288	78,581
Specialty total	72,944	80,406
Total refined sugar TRQ	164,570	181,406
CAFTA/DR TRQ	87,720	96,694
Total estimate TRQ entries	1,478,347	1,629,581
Re-export program imports	362,878	400,000
Sugar syrups (molasses, thick juice)	0	0
High-tier tariff sugar imports (mostly Mexico)	54,432	60,000
Total projected imports	1,895,656	2,089,581

1/ Mexico allocated 7,258 MTRV (8,000 STRV) under raw cane TRQ.

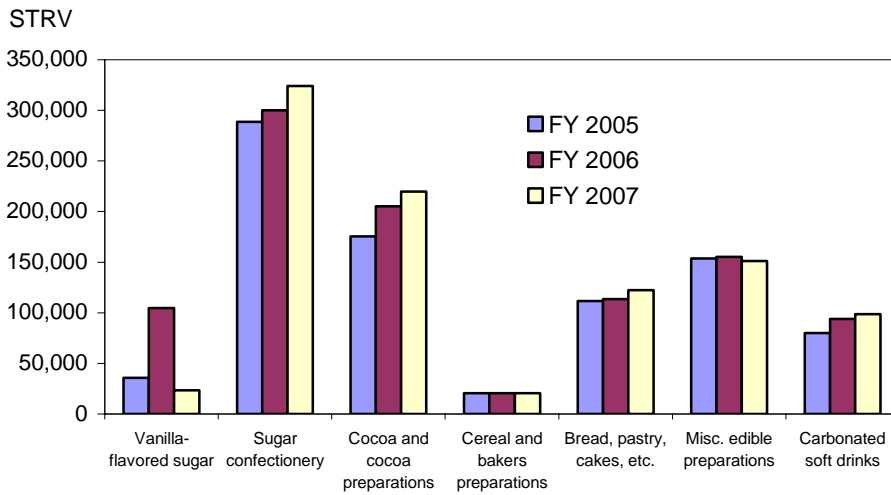
Source: Foreign Agricultural Service, USDA.

Figure 5
U.S. sugar exports, by type of sugar, by quarter, FY 2005-07
 1,000 STRV



Source: *Sweetener Market Data*, FSA, USDA.

Figure 6
Sugar in product imports, comparison of first three quarters of FY 2005, FY 2006, and FY 2007, by product category



Source: Sugar and Sweetener Team, MTED, ERS.

Table 6--Estimated U.S. sugar deliveries and sugar in traded sugar-containing products 1/

Fiscal year	Oct-Dec	Jan-Mar	Apr-June	July-Sept	FY Total
1,000 short tons, raw value (STRV)					
Domestic sugar deliveries for food and beverage use:					
1996	2,379	2,191	2,355	2,519	9,445
1997	2,430	2,143	2,401	2,591	9,565
1998	2,443	2,233	2,428	2,568	9,672
1999	2,458	2,208	2,553	2,655	9,873
2000	2,580	2,318	2,484	2,611	9,993
2001	2,564	2,370	2,486	2,580	10,000
2002	2,474	2,227	2,439	2,645	9,785
2003	2,497	2,183	2,360	2,464	9,504
2004	2,504	2,286	2,368	2,520	9,678
2005	2,547	2,335	2,471	2,666	10,019
2006	2,571	2,436	2,487	2,690	10,184
2007	2,389	2,307	2,535		
Estimated sugar in imported sugar-containing products:					
1996	99	85	95	110	389
1997	112	100	119	128	459
1998	125	115	138	151	529
1999	140	140	163	177	620
2000	173	162	177	191	704
2001	185	174	195	216	769
2002	215	192	223	250	879
2003	236	226	256	284	1,002
2004	266	251	288	315	1,119
2005	291	277	298	340	1,205
2006	322	313	358	352	1,345
2007	334	304	321		
Estimated sugar in exported sugar-containing products:					
1996	97	85	90	103	376
1997	103	98	102	108	411
1998	109	91	98	103	401
1999	106	96	99	109	409
2000	116	104	107	128	456
2001	134	115	129	130	508
2002	130	112	118	125	485
2003	138	123	130	140	531
2004	150	137	140	148	575
2005	152	142	160	161	616
2006	175	143	150	150	621
2007	157	145	151		
Estimated sugar in USDA sugar-containing product re-export program:					
1996	21	20	30	32	104
1997	22	68	22	45	157
1998	21	24	32	46	123
1999	44	58	35	32	169
2000	21	21	22	22	86
2001	18	21	29	30	98
2002	40	39	35	42	156
2003	43	44	49	47	183
2004	35	28	40	39	142
2005	28	24	37	33	121
2006	25	25	23	32	106
2007	31	43	55		
Estimated sugar deliveries for domestic consumption (adjusted for trade in sugar-containing products):					
1996	2,402	2,211	2,390	2,558	9,561
1997	2,461	2,213	2,439	2,656	9,770
1998	2,480	2,281	2,500	2,662	9,923
1999	2,536	2,311	2,651	2,755	10,253
2000	2,658	2,396	2,576	2,697	10,328
2001	2,632	2,450	2,580	2,697	10,359
2002	2,599	2,346	2,580	2,811	10,335
2003	2,637	2,330	2,534	2,656	10,158
2004	2,655	2,428	2,555	2,726	10,364
2005	2,714	2,493	2,646	2,877	10,730
2006	2,743	2,630	2,719	2,924	11,016
2007	2,597	2,509	2,760		

1/ Includes Puerto Rico.

Source: *Sweetener Market Data*, FSA, USDA (deliveries data), ERS (sugar in traded products).

information, it was not certain when the imported sugar was actually delivered to an end user or for how long it was held as an unreported stock.

Deliveries for the first several months of FY 2007 were far below expectations. The estimate of deliveries for food and beverage use for calendar year 2006, which include the first 3 months (October-December) of FY 2007, was 9.975 million STRV, slightly less than calendar year 2005 deliveries (10.000 million STRV) and more than 200,000 STRV less than the FY 2006 estimate. Deliveries through July 2007, or for the first 10 months of FY 2007, have been consistently below earlier expectations, leading to the current estimate in the September 2007 WASDE of 9.850 million STRV.

Total industrial deliveries for FY 2007 are about equal to their level in FY 2005 (fig. 7).³ Baking and cereal uses have grown markedly (6.3 percent growth since FY 2005), as have beverage uses (16.7 percent growth) and canned, bottled, and frozen food uses (9.9 percent growth). Deliveries for confectionery uses, however, have been down 5.7 percent relative to FY 2005. Deliveries for ice cream and dairy uses have been down 2 percent.

Deliveries to nonindustrial end users have been down 5 percent compared with their level in FY 2005 (fig. 8). Deliveries to retail grocers and chain stores are 6.1 percent lower than in FY 2005, and deliveries to wholesalers and dealers are 1.6 percent lower.

ERS End User Delivery Model

Table 7 shows an ERS econometric model of sugar deliveries to industrial and nonindustrial sugar end users.⁴ These models provide estimated coefficients on trend and seasonal components of end user demand for sugar. The models include adjustments for periods that cannot be adequately explained by trends or seasonal factors. These models can be used to project forward the demand for sugar by industrial and nonindustrial end users.

Table 7 provides statistical indicators for various aspects of both equations. The model for industrial end user deliveries accounts for 81.6 percent of the observed monthly variance for deliveries since October 1991. The model for nonindustrial end user deliveries accounts for 87.0 percent of the observed monthly variance. Both equations show strong seasonal components to sugar demand with strongly statistically significant coefficients on the month variables.

The industrial end user equation shows two strong periods of delivery growth. The first was the period between June 1993 and August 1997, when monthly deliveries were on average 31,686 tons higher than in the period October 1991 through May 1993. The second period was immediately after the first, from September 1997 through August 2001. Monthly deliveries averaged 32,308 tons higher. This latter growth period ended in September 2001.

The nonindustrial end user equation shows a steady delivery pattern for almost all of the observation period since 1991.

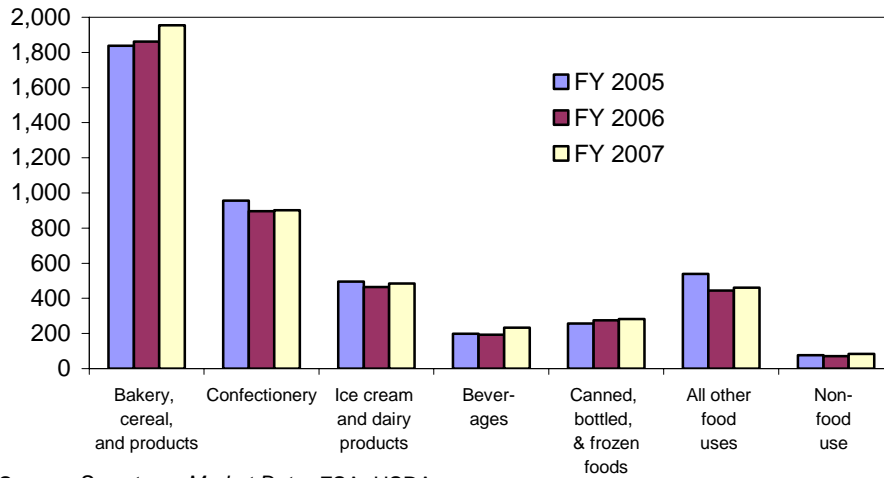
³ FY 2006 end user deliveries are included in figure 7 and 8 but are understated because of the high proportion of deliveries attributable to direct sugar imports that cannot be tracked to end user categories.

⁴ Products manufactured by industrial sugar end users include bakery and cereal products; confectionery; ice cream and dairy products; beverages; canned, bottled; and frozen foods; and nonfood products. Nonindustrial sugar end users include wholesale and retail grocers; hotel, restaurants, and institutions; government

Figure 7

Sugar deliveries to industrial end users, by sector, October-July, first 10 months of fiscal year, FY 2005-07

1,000 short tons, actual weight

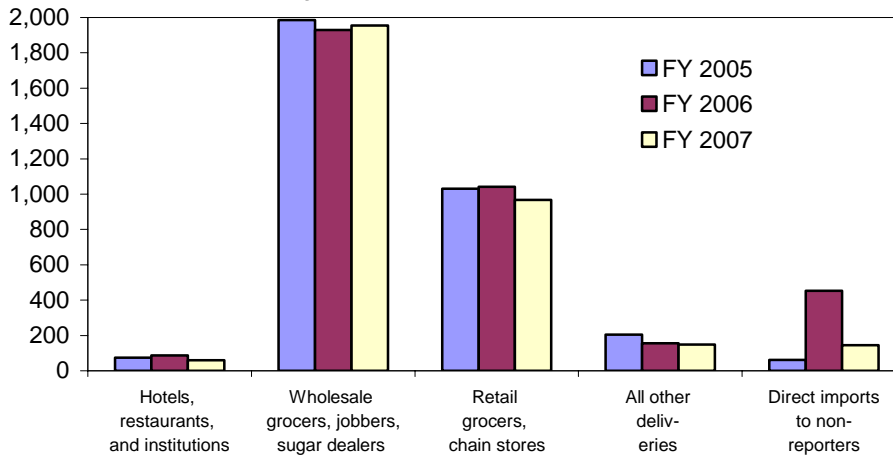


Source: *Sweetener Market Data*, FSA, USDA.

Figure 8

Sugar deliveries to nonindustrial end users, October-July, first 10 months of fiscal year, FY 2005-07

1,000 short tons, actual weight



Source: *Sweetener Market Data*, FSA, USDA.

Table 7--Economic Research Service forecasting model: Domestic sugar deliveries to industrial and nonindustrial end users

Econometric specification: Sugar deliveries to end user = $c(1) + c(2)*\text{Annual growth trend (TT)} + \sum c(i)*\text{Month index (i), for } i = 3 \text{ to } 14 + \sum c(j)*\text{Indexes for outlier periods (D, followed by period interval)}$

Dependent Variable: Sugar deliveries to industrial end users, short tons, actual weight

Sample(adjusted): 1992:01 2007:09

Included observations: 189 after adjusting endpoints

Dependent Variable: Sugar deliveries to nonindustrial end users, short tons, actual weight

Sample(adjusted): 1992:01 2007:09

Included observations: 189 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Variable	Coefficient	Std. Error	t-Statistic
Constant	452,063	4,501	100.447	Constant	348,546	3,588	97.154
D199201TO199308 1/	-31,686	5,597	-5.661	D200312	151,612	16,264	9.322
D199712TO200111	32,308	3,343	9.663	D200412	93,026	16,286	5.712
D200401	-139,866	20,035	-6.981	D200612TO200703	-50,327	8,511	-5.913
D200605TO200701	-22,022	6,847	-3.217	Yearly trend (TT)	2,607	263	9.923
Yearly trend (TT)	1,659	391	4.244	NOV	-17,876	4,966	-3.600
OCT	-11,917	5,751	-2.072	DEC	-45,902	4,966	-9.244
NOV	-69,803	5,640	-12.376	JAN	-116,302	5,004	-23.243
DEC	-107,596	5,640	-19.077	FEB	-108,505	5,004	-21.685
JAN	-65,437	5,616	-11.652	MAR	-52,125	5,004	-10.417
FEB	-73,046	5,616	-13.007	APR	-78,220	5,004	-15.632
MAR	-18,550	5,616	-3.303	MAY	-68,439	5,004	-13.677
APR	-46,444	5,616	-8.270	JUN	-35,817	5,004	-7.158
MAY	-28,453	5,616	-5.066	JUL	-43,435	5,004	-8.681
JUL	-35,710	5,602	-6.374	AUG	-26,079	5,103	-5.111
R-squared	0.830	Mean dependent var	430,480	R-squared	0.879	Mean dependent var	320,950
Adjusted R-squared	0.816	S.D. dependent var	44,974	Adjusted R-squared	0.870	S.D. dependent var	44,155
S.E. of regression	19,296	Akaike info criterion	22.649	S.E. of regression	15,937	Akaike info criterion	22.266
Sum squared resid	6.52E+10	Schwarz criterion	22.905	Sum squared resid	4.44E+10	Schwarz criterion	22.523
Log likelihood	-2,137	F-statistic	60.836	Log likelihood	-2,100	F-statistic	91.130
Durbin-Watson stat	1.995	Prob(F-statistic)	0.000	Durbin-Watson stat	2.073	Prob(F-statistic)	0.000

1/ Outlier period 199201to199308 covers first month of fiscal year (FY) 1992 (October 1992) to eighth month of FY 1993 (May 1993).

Sugar deliveries to end user = $c(1) + c(2)*\text{Annual growth trend (TT)} + \sum c(i)*\text{Month index (i), for } i = 3 \text{ to } 14 + \sum c(j)*\text{Indexes for outlier periods.}$

Source: Analysis by Sweetener Team, Market and Trade Economics Division, Economic Research Service of sugar delivery data from *Sweetener Market Data*, FSA, USDA.

Both equations provide an estimate of how much deliveries of domestic beet sugar processors and cane sugar refiners were affected by the sugar supply disruptions in FY 2006. Monthly industrial end user deliveries were on average 22,022 tons lower in the period from February 2006 through October 2006. Monthly nonindustrial end user deliveries were 50,327 tons lower in the period from September 2006 through December 2006. These results imply that FY 2007 deliveries from domestic sources were lower from what would have been normally expected by 173,000 tons, or 185,000 STRV.⁵

⁵ $22,022 + 50,327 * 3 = 173,003$ tons, actual weight; convert to raw value by multiplying by 1.07 = 185,113.

Table 8 shows what the models imply about expected deliveries in FY 2007 and FY 2008. The first column shows estimates for industrial end user deliveries and the second for nonindustrial end users. The first 10 observations corresponding to October 2006 through July 2007 are actual deliveries from USDA's *Sweetener Market Data*. The remaining data come from the equations. After subtracting out estimated nonfood deliveries and then summing, FY 2007 food and beverage deliveries from domestic processors/refiners are estimated at 9.137 million tons, or 9.777 million STRV. For FY 2008, the deliveries are projected at 9.334 million tons, or 9.988 million STRV. These estimates/projections include deliveries for re-export products, which must be subtracted from the total—these are 175,000 STRV for FY 2007 and 125,000 STRV for FY 2008.

To arrive at the USDA fiscal year estimate/projection, one adds in an estimate/projection for direct sugar imports. With a FY 2007 delivery estimate of 9.850 million STRV, the implied estimate for direct imports is 247,880 STRV. FY 2007 direct imports have totaled 155,334 STRV through July, implying that 92,546 STRV would have to enter in August and September. That total would be far above the norm for those 2 months.

For FY 2008, the table entry for direct imports is set equal to the sum of the refined sugar TRQ and an estimate for high-tier tariff refined sugar, or 94,251 STRV plus 50,000 STRV, or 144,251 STRV. The resulting projection is 10.000 million STRV, which is the USDA projection in the WASDE.

Ending Stocks

Ending stocks are projected as the difference between total supply and total use. For FY 2007, ending stocks are estimated at 1.772 million STRV, implying an ending stocks-to-use ratio of 16.9 percent. Ending stocks for FY 2007 are the beginning stocks for FY 2008. Ending stocks for FY 2008 are projected at 1.803 million STRV, implying an ending stocks-to-use ratio of 17.3 percent.

Overall Allotment Quantity

On August 10, 2007, the USDA announced the FY 2008 overall allotment quantity (OAQ). The OAQ was established at 8.450 million STRV. In its announcement, the USDA noted that the projected ending stocks-to-use ratio in the August 2007 *World Agriculture Supply and Demand Estimates* (WASDE) was 13.3 percent, a rate below the traditional range for the U.S. sugar market. According to the 2002 Farm Act, the OAQ is to be calculated as the sum of desired ending fiscal year sugar stocks plus projected deliveries for human food and beverage use less 1.532 million STRV and beginning stocks. Although the USDA did not quote a reasonable ending

Table 8--Economic Research Service forecasting of end user sugar deliveries, fiscal years 2007 and 2008

	Monthly forecasts 1/					Annual forecasts				
	Industrial end users	NonIndustrial end users	Total	Nonfood end users	Total food and beverage	Annual food deliveries	Annual food deliveries	Direct imports to nonreporters	Product re-exports	Forecast deliveries
	Short tons, actual value						Short ton, raw value			
						A = Σ monthly delv.	B = 1.07*A	C	D	E = B+C-D
2006/07 - Oct	452,644	357,866	810,510	7,836	802,674					
	420,641	320,436	741,077	6,659	734,418					
	363,586	292,358	655,944	8,987	646,957					
Jan	432,321	274,167	706,488	6,629	699,859					
	406,370	251,367	657,737	6,804	650,933					
	456,975	335,041	792,016	7,822	784,194					
Apr	455,929	327,773	783,702	7,315	776,387					
	479,301	326,209	805,510	8,834	796,676					
	467,492	325,955	793,447	11,225	782,222					
July	463,981	318,346	782,327	11,474	770,853					
	478,599	364,172	842,771	10,098	832,673					
	478,599	390,251	868,850	9,201	859,650	9,137,496	9,777,120	247,880	175,000	9,850,000
2007/08 - Oct	468,340	392,857	861,198	8,615	852,583					
	410,455	374,981	785,436	8,234	777,203					
	372,662	346,955	719,617	7,985	711,632					
Jan	414,821	276,556	691,377	7,822	683,555					
	407,212	284,353	691,565	7,716	683,848					
	461,708	340,733	802,441	7,647	794,794					
Apr	433,814	314,638	748,451	7,602	740,849					
	451,805	324,419	776,224	7,573	768,651					
	480,258	357,040	837,298	7,554	829,745					
July	444,548	349,422	793,970	7,541	786,429					
	480,258	366,778	847,036	7,533	839,503					
	480,258	392,857	873,115	7,528	865,588	9,334,380	9,987,786	144,251	125,000	10,007,037

1/ Actual data through July 2007 from *Sweetener Market Data*, FSA, USDA.

Source: Analysis by Sweetener Team, Market and Trade Economics Division, Economic Research Service.

year stock level, applying the Farm Act formula to the announced level would indicate a desired level of 1.458 million STRV, implying a desired ending year stocks-to-use ratio of 14.0 percent. According to the USDA, this level falls within the traditional range of what is considered to be reasonable.

According to the provisions of the 2002 Farm Act, the OAQ was allocated to the beet and cane sectors as follows:

- Beet sugar: 4,592,575 STRV
- Cane sugar: 3,857,425 STRV

The cane sugar allocation exceeds projected cane sugar production in the August 2007 WASDE by 187,000 STRV. However, given production and cane stockholding uncertainties before the start of the 2008 fiscal year, the USDA officially projected a surplus cane allotment at only 70,000 STRV. This amount was reassigned to imports.

The USDA promised to make appropriate adjustments to the OAQ, as well as the TRQ, during the year to ensure an adequate supply of sugar for the domestic market, and to avoid sugar loan forfeitures and to prevent market disruptions.

Maple Syrup

The number of maple tree taps climbed slightly in 2007, largely from 8 percent more taps in the Midwest. The number of taps in New England was down by less than 1 percent and in New York by 4 percent. However, maple syrup yield per tap was lower in all producer States in 2007. On average, yield was down 14 percent in all States, especially in the Midwest, where yield dropped 24 percent. As a result, U.S. maple syrup production fell 13 percent from 2006 after rising 17 percent in the preceding year. In New Hampshire, Vermont, and Ohio, syrup production declined by single-digit rates. In the rest of the producer States, production slipped by double digits.

Syrup output in the Midwest, particularly in Wisconsin and Michigan, was down 18 percent as temperatures were not favorable for sap flow in 2007. The length of the maple tapping season lasted 27 days on average for all producer States in 2007, a day shorter than in 2006. The biggest declines in production were experienced in Maine, Massachusetts, and Wisconsin at 25 percent. Next were Michigan, Pennsylvania, and Connecticut, where syrup output dropped by 20 to 23 percent. Production in New England retreated by an average of 12 percent to its lowest level since 2001.

Prices Advanced in 2006 Even as Production Rose

Prices of maple syrup tapped in 2006 were up almost 5 percent from \$29.90 to \$31.30. The bulk of this rise is from the New England States, except Massachusetts, where prices retreated 6 percent. The largest gains were in Connecticut and Maine, where prices rose by double digits. Prices in Connecticut were above \$58 per gallon, significantly higher than other States because 75 percent of sales were retail. Prices were lower in Ohio and Wisconsin but were not enough to offset production gains in 2006. Thus, the value of production in all producer States advanced by an average of 22 percent. After a poor year in 2005, production value in 2006 in the Midwest States expanded 40 percent, double that of New England.

Value per tap averaged \$6.24 for the 2006 syrup crop, 19 percent higher than 2005's crop. The Midwest States led other States at \$7.63 per tap, 41 percent more than the 2005 crop and twice as much as New England's value per tap. The exception was Massachusetts' 8 percent lower value per tap, the only decline among all producer States. Higher values per tap in the Midwest last year provided an incentive to increase the number of taps in 2007 by 8 percent.

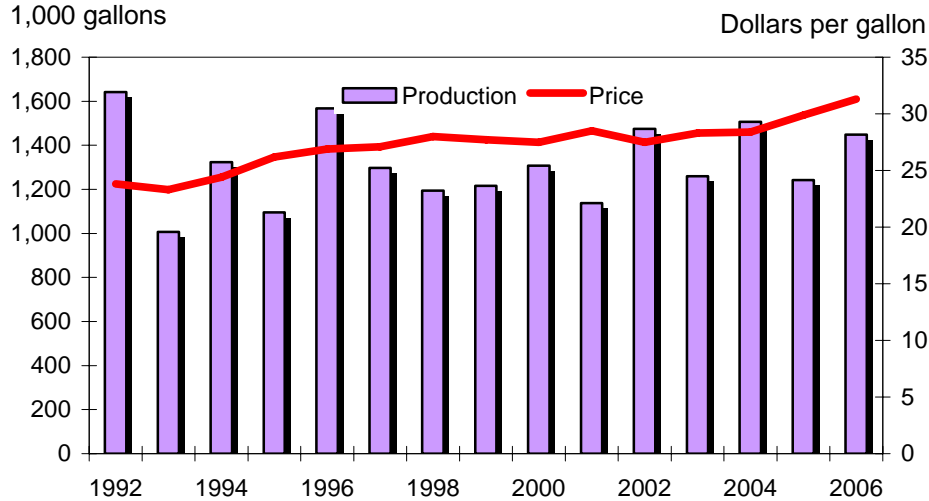
Bulk sales of maple syrup produced in 2006 comprised about 48 percent of total U.S. sales, which account for the larger value of production from bulk sales than from retail sales despite lower prices of bulk versus retail sales. The percentage of bulk sales is largest for Vermont, Maine, and New York, although New York's retail sales about equal bulk sales. Vermont's bulk sales are twice as large as its retail sales. Among the major maple syrup producer States, Massachusetts, Michigan, New Hampshire, Ohio, Pennsylvania, and Wisconsin all have larger retail sales than bulk sales. Since sales for retail generate bigger revenue due to higher prices, the production value of syrup for retail is boosted as well.

U.S. consumption of the 2006 maple syrup crop is up almost 18 percent from 5.3 million gallons in 2005 to 6.2 million gallons. U.S. imports of maple syrup

increased 13 percent in 2006 to 5.6 million gallons, virtually all from Canada. Given that import share in U.S. maple syrup consumption was 90 percent and export share of U.S. supply was 9 percent for 2006, only a small percentage of what Americans consume is domestically produced. U.S. exports of maple syrup were about half the volume of U.S. syrup production in 2006, although a portion of these exports is likely to have been produced in Canada.

Per U.S. household, consumption of maple syrup amounted to 7.1 ounces in 2006, up 17 percent from 2005. In values, the amount spent on maple syrup by each U.S. household was \$1.39 in 2006, up 22 percent from \$1.13 in 2005, based on all types of sales. U.S. consumption has slowly trended upward since the early 1990s from 4 ounces per household to the present 7 ounces, a 70-percent gain. The value of syrup consumed domestically in 2006 was \$156 million, or 78 percent more than in 2000. Although production in Canada peaked in 2000, U.S. imports of Canadian syrup rose 200 percent in value and 85 percent in volume.

Figure 9
Maple syrup: U.S. production and prices



Source: USDA, NASS, *Crop Production*.

U.S. and World Sugar and HFCS Production Costs

U.S. and World Sugar and HFCS Production Costs, 2001/01-2005/06

LMC International annually publishes its estimates of world sugar and high fructose corn syrup (HFCS) costs of production. The data go back to 1979/80, and the 2007 report extends the data through 2005/06. Field, factory, and administrative costs are detailed for 40 beet-producing countries and for 62 cane-producing countries. HFCS production costs are presented for 22 countries. Articles in previous *Sugar and Sweetener Outlook* reports have described data through 2002/03. This article updates the earlier articles and continues the focus on comparisons of U.S. costs of production with those from other countries.

Using production cost estimates has many limitations. For instance, the LMC data refer to estimated, averaged costs within individual countries. Economists generally argue that marginal costs are more relevant in predicting supply response changes due to changes in output prices, government support, input prices, and the like. Knowledge of industry structures and specific production technologies in use are also necessary for predicting supply response changes when underlying price and cost variables change.

Nonetheless, cost-of-production estimates provide very useful information. They typically form the basis for comparing competitiveness in production across regions and countries. They aid in the calculation of government support to sugar/sweetener industries in many countries. In addition, trends in production costs can be compared with long-term trends in world prices to evaluate the viability of production in markets that may be liberalized. Cost-of-production estimates are also useful in analyzing the consequences for sugar and sweetener industries of changing government support and of the formation of regional preferential trading areas, such as the North American Free Trade Agreement (NAFTA), the Dominican Republic and Central American Free Trade Area (DR/CAFTA), and others.

U.S. cane and beet sugar producers argue that they are cost-efficient even though their production costs usually exceed the world price of sugar. They say the world market for sugar is sufficiently distorted by other producing and consuming countries' policies that the world price is a biased measure against which to compare domestic costs. Therefore, the producers claim other producing countries' costs of production relative to their own provide a more valid comparison of cost efficiency.

This article reports on yearly trends in costs for various categories of raw cane and refined beet sugar producers. The categories include low-cost producers and major exporters. World HFCS cost trends are also traced out. Several diagrams directly compare regional U.S. costs of production with those of other countries, for both beet and cane sugar. Components of these costs show where certain U.S. advantages may lie vis-a-vis other countries. The article also briefly describes the LMC approach to estimating production costs for beet and cane sugar and HFCS (see box).

Cost-of-Production Estimates

Raw Cane Sugar

The lowest cost cane producers were Australia, Brazil (Central/ South regions), Colombia, Ethiopia, Guatemala, Malawi, Sudan, Zambia, and Zimbabwe. As a group, they accounted for about 43 percent of world sugar production. The averaged total costs per pound remained steady over the period, with a low of 6.59 cents in 2002/03 and a high of 8.69 cents in 2005/06.

Major cane sugar exporters were Australia, Brazil, Colombia, Guatemala, South Africa, and Thailand. Together they produced about 48 percent of the world's sugar. Average unit costs ranged from 7.07 to 9.20 cents a pound. These costs were low, only about 0.51 cents higher than the lowest cost producers. (This result is not surprising because of the overlap between low-cost producers and major exporters.)

The LMC data show that unit costs for U.S. mainland cane producers ranged widely from 12.88 to 21.38 cents a pound. This range was about twice as high as that of the lowest cost producers. LMC data show the weighted world average to range between 11.07 and 12.97 cents per pound.

Beet Sugar

Low-cost beet-sugar-producing countries were Chile, China, Czech Republic, France, United Kingdom, Red River Valley (United States), and Pacific Northwest (United States). Together they accounted for 29 percent of the period's beet sugar production. Unit costs per pound ranged between 18.51 and 21.22 cents.

We compared the lowest beet sugar costs to the lowest cane costs. To make the numbers comparable, the raw cane sugar costs were converted into their refined equivalent using a method used by LMC International. The lowest cost cane producers have a cost advantage over the like-defined beet-producing group (tables 9 and 10). Yearly averages differ between 8.46 and 10.45 cents a pound.

The United States emerges as a relatively low-cost producer of beet sugar. Costs in the eastern producing regions of Michigan and Ohio and in Minnesota and North Dakota ranged between 18.7 and 28.1 cents a pound between 2000/01 and 2005/06, or about 37 percent less than the weighted world average. Costs in the U.S. western regions (Northern Great Plains; Central Great Plains; the Pacific Northwest of Idaho, Oregon, and Washington; and California) ranged between 22.5 and 34.6 cents a pound, or about 24 percent less than the weighted world average.

High Fructose Corn Syrup

Argentina, Bulgaria, Canada, Egypt, Hungary, and the United States are low-cost HFCS producers. Low cost world HFCS (55 percent, dry weight) costs averaged between 10.90 and 11.52 cents a pound between 2000/01 and 2005/06. The United States was the lowest cost producer, followed by Canada, and Argentina.

Table 9--Average costs of producing raw cane sugar, beet sugar, and high fructose corn syrup, by select categories of world producers, 2000/01-2005/06

Category	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
	Cents/pound 1/					
Raw cane sugar:						
Low-cost producers 2/	8.33	7.23	6.59	7.01	7.52	8.69
Major exporters 3/	8.83	7.73	7.07	7.50	8.08	9.20
Cane sugar, white value equivalent:						
Low-cost producers 2/	12.00	10.80	10.11	10.56	11.12	12.39
Major exporters 3/	12.54	11.35	10.63	11.10	11.72	12.94
Beet sugar, refined value:						
Low-cost producers 4/	20.45	20.89	18.51	21.01	20.71	21.22
High fructose corn syrup: 5/						
Low-cost producers 6/	11.23	10.90	11.07	11.38	11.52	11.50

1/ Measured in current U.S. cents per pound, ex-mill, factory basis.

2/ Average of 10 producing regions: Australia, Brazil (Center/South and North/Northeast), Colombia, Ethiopia, Guatemala, Malawi, Sudan, Swaziland, Zambia, and Zimbabwe.

3/ Average of six countries: Australia, Brazil, Colombia, Guatemala, South Africa, and Thailand.

4/ Average of seven countries/regions: Chile, China, Czech Republic, France, United Kingdom, Red River Valley (United States), and Pacific Northwest (United States).

5/ Cents per pound, HFCS-55, dry weight.

6/ Average of six countries: Argentina, Bulgaria, Canada, Egypt, Hungary, and United States.

Source: LMC International.

Table 10--Ranges of average costs of producing raw cane sugar, beet sugar, and high fructose corn syrup, United States and select categories of world producers, 2000/01-2005/06.

Category	Costs
	Cents/pound 1/
Raw cane sugar:	
U.S. mainland regions 2/	12.88 - 21.38
Low-cost producers 3/	5.52 - 11.54
Major exporters 4/	5.82 - 15.11
Weighted world average	11.07 - 12.97
Cane sugar, white value equivalent:	
U.S. mainland regions 2/	16.95 - 26.19
Low-cost producers 3/	8.95 - 15.50
Major exporters 4/	9.28 - 19.38
Weighted world average	14.98 - 17.05
Beet sugar, refined value:	
Eastern U.S. producing regions 5/	18.09 - 27.26
Western U.S. producing regions 6/	18.53 - 32.32
Low-cost producers 7/	14.23 - 23.93
Weighted world average	25.31 - 28.42
High fructose corn syrup: 8/	
Low-cost producers 9/	10.63 - 15.35
Weighted world average	12.23 - 13.43

1/ Measured in current U.S. cents per pound, ex-mill, factory basis.

2/ U.S. mainland regions comprise Florida, Louisiana, and Texas.

3/ Average of 10 producing regions: Australia, Brazil (Center/South and North/Northeast), Colombia, Ethiopia, Guatemala, Malawi, Sudan, Swaziland, Zambia, and Zimbabwe.

4/ Average of six countries: Australia, Brazil, Colombia, Guatemala, South Africa, and Thailand.

5/ Eastern U.S. producing regions comprise the Great Lakes and the Red River Valley.

6/ Western U.S. producing regions comprise the Northern Great Plains, Central Great Plains, the Northwest, and the Southwest.

7/ Seven countries: Belgium, Canada, Chile, France, Turkey, United Kingdom, and United States.

8/ Cents per pound, HFCS-55, dry weight.

9/ Average of six countries: Argentina, Bulgaria, Canada, Egypt, Hungary, and United States.

Source: LMC International.

Sweetener Costs by Region

Table 11 shows the range of low to high costs in world regions, ordered from the lowest cost region (South America) to the highest cost region (Europe). The data represent the costs of producing the sweeteners of cane sugar, beet sugar, and HFCS, expressed in terms of equivalent refined white sugar. The ranges show the distribution of sweetener costs, even within a region, can be fairly wide. The average cost of producing sweeteners, white sugar basis, is \$405/metric ton (mt), or 18.35 cents/pound (lb) (fig. 10). South American sweetener production costs are about 63 percent of the world average, and South America accounts for about 21 percent of total sweetener production. Costs in Sub-Saharan Africa and Central Asia are nearly the same. Although some of the lowest cost sugar producers are located in Africa (Ethiopia, Malawi, Sudan, Swaziland, Zambia, and Zimbabwe), Africa's share of world sweetener production is only 5 percent. Central Asia's sweetener production, 15 percent of the world total, is dominated by relatively cost-efficient India.

Average costs of sweetener production in Southeast Asia/Oceania and North and Central America are only slightly higher than those in Central Asia. Both regions combined account for almost 30 percent of world sweetener production. Low costs of producing HFCS in the United States, along with low cane sugar costs in Guatemala, largely account for the competitive position of the North and Central American region.

Sweetener production costs in the remaining regions of East Asia, North Africa/Middle East, and Europe are all above the world average. Although China's

Table 11--Ranges of average costs of producing sweeteners, cane sugar, beet sugar, and high fructose corn syrup (white sugar basis), by geographical grouping, 2000/01-2005/06.

Regions 1/	Costs
	Cents/pound 2/
South America	10.51 - 43.17
Sub-Saharan Africa	12.42 - 35.44
Central Asia	15.63 - 35.68
Southeast Asia and Oceania	14.34 - 23.88
North and Central America, including Caribbean	14.03 - 40.62
East Asia	16.70 - 47.60
North Africa/Middle East	21.10 - 49.05
Europe	19.62 - 60.67

1/ Regions ordered from lowest to highest average cost of producing sweetener products.

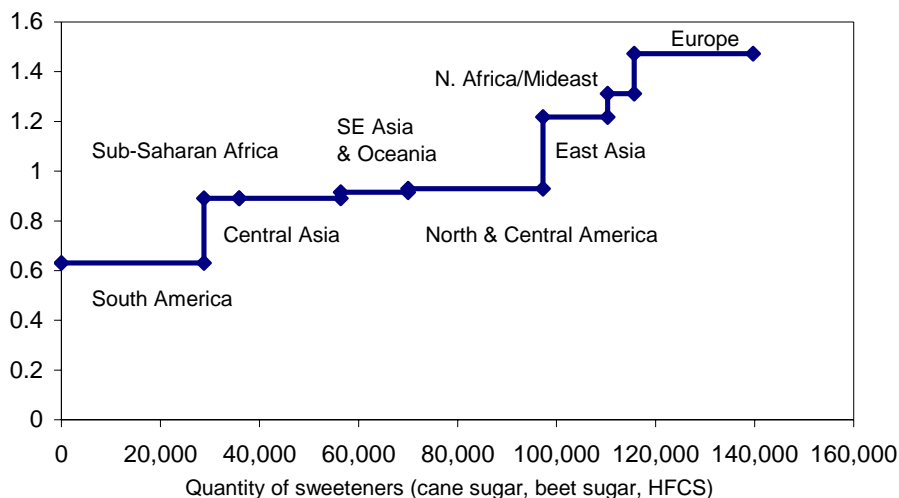
2/ Measured in current U.S. cents per pound, ex-mill, factory basis.

Source: LMC International.

Figure 10

Distribution of sweetener costs across world geographical regions

Production of world average, refined basis = \$404.5/mt



Source: LMC International.

sweetener costs are not high relative to the world average. East Asia’s average is high because Japan, one of the world’s highest cost beet and cane sugar producers, is included. Sweetener production in Europe is dominated by the production of relatively high-cost beet sugar.

Implications for the United States

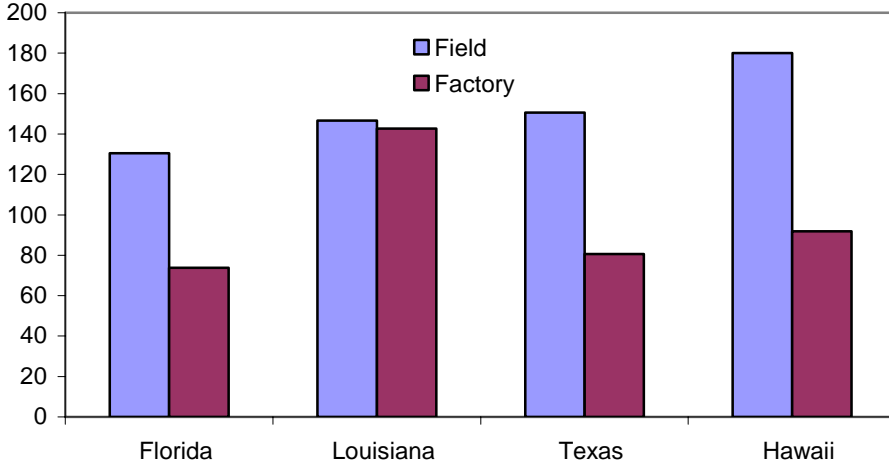
U.S. costs of production were above the world average for cane sugar but below the average for beet sugar. The competitiveness of the U.S. cane sector has been enhanced by relatively lower factory costs, which were only 1 percent higher than the weighted world average (fig. 11). Florida’s factory costs averaged 26 percent lower than the weighted world average. Overall, U.S. cane sugar production costs were made higher by relatively high field costs, about 41 percent higher than the world average field costs.

U.S. beet-producing regions include the Great Lakes region (Michigan and Ohio), Red River Valley (Minnesota and eastern North Dakota), Northern Great Plains (Montana, northwest Wyoming, and western North Dakota), Central Great Plains (Colorado, Nebraska, and southeast Wyoming), Northwest (Idaho, Oregon, and Washington), and the Southwest (California). All U.S. regions, except the Central Plains States, produced at less cost than the weighted average of all other beet countries (fig. 12). In terms of total costs, the Red River Valley was the lowest cost region, while Central Great Plains was the highest.

Figure 11

U.S. cane sugar costs as percentage of world average, 2000/01-2005/06

Percent

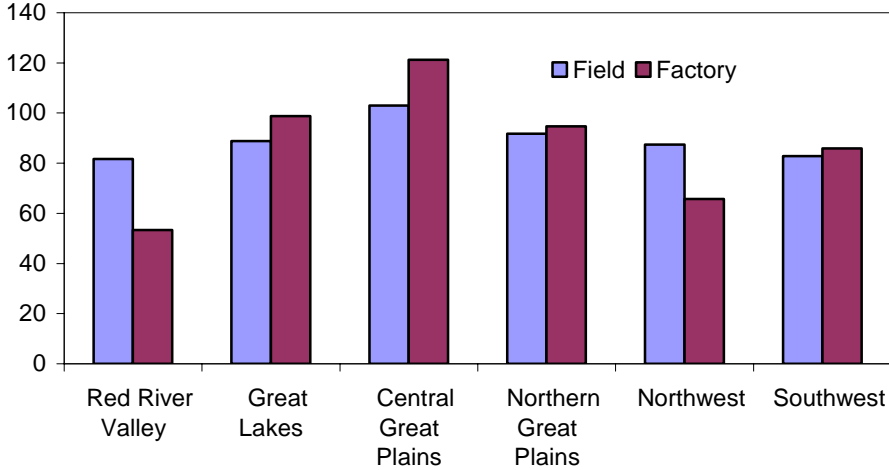


Source: LMC International.

Figure 12

U.S. beet sugar costs as percentage of world beet sugar average, 2000/01-2005/06

Percent



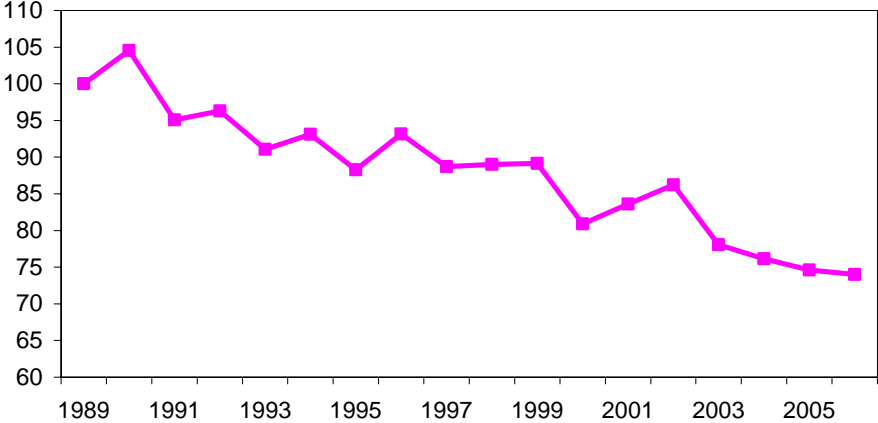
Source: LMC International.

Real costs of producing U.S. refined sugar, relative to costs in 1988/89, have seen a marked annual downward trend of about 1.5 percent between 1989 and 2006 (fig. 13). Since 2002/03, real production costs have been more than 20 percent lower than the 1988/89 level.

Figure 13

Changes in real costs of producing sugar in the United States, 1989-2006, relative to 1988/89

Percent (FY 1989 = 100)



Source: LMC International.

Cost Estimating Procedures

LMC bases its estimates on an engineering cost approach. Its computations account for the physical inputs of labor, machinery, fuel, chemicals, and fertilizers used in alternative technologies employed in field and processing operations. The data, therefore, represent actual average costs and do not necessarily reflect minimum attainable costs.

Cane and beet sugar costs are presented at three different stages. The first comprises field costs. It covers land preparation before planting to the delivery of beets or cane to the processing mill. Estimates are made for labor, capital, and all fuel, chemicals, and fertilizers used in the field. The second stage is the factory stage. For cane, these costs cover all costs from the initial arrival to the delivery of raw sugar into bulk storage at the mill. For beets, these costs account for everything through the delivery of refined white sugar into storage at the factory. For both cane and beets, all byproduct credits are applied against factory costs. As with the field costs, estimates are divided into labor, capital, and fuel and chemical components. The third stage represents administrative and overhead costs that cannot be adequately included solely as a field or factory expense.

HFCS costs are calculated somewhat differently. Unlike for sugar, the purchase of the raw agricultural product (i.e., corn) is represented as a factory cost. The close links between growers and processors that typify the sugar industry are largely absent in relations between grain farmers and corn wet-millers. For that reason the cost of producing corn is not included in the analysis as is the cost of growing beets and cane.

The process by which HFCS is produced provides several additional products, including ethanol, corn oil, feed products, starches, related sweeteners, and other chemicals. Because of the joint product nature of the production process, LMC tracks HFCS production costs at two stages. The first is the processing of corn into starch slurry. This process is common to all starch-based products. The second stage is the conversion of the starch slurry into HFCS. Byproduct credits are separated out from the costs of processing and applied against corn costs, thereby reducing the net cost of the raw material. Administrative costs are implicitly included in the processing costs, and therefore are not separated out as with sugar.

The data are reported in terms of U.S. dollars using official exchange rates. A country can, therefore, become a low-cost producer by a depreciation of its currency and the opposite when its currency appreciates. (Although not reported here, LMC uses various deflators when reporting country estimates in order to give a clearer picture of changing costs.) Capital costs are estimated on the basis of replacement costs. Real interest rates are used in the valuation of capital, and capital gains are excluded from revenue calculations.

Cost Estimating Procedures

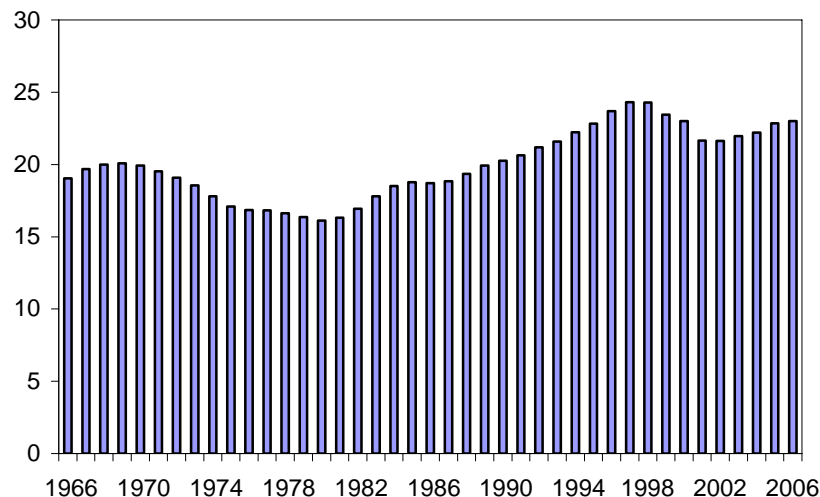
Continued--

Because the benefits of capital goods investment flow over a number of years, using current exchange rates may bias depreciation charges. LMC instead links the cost of capital to the U.S. index of capital goods prices, denominated in U.S. dollars. The ideal case for tracking land costs is to attach value to the land in its next alternative use (i.e., opportunity cost). This procedure is more easily followed for beets, where there are almost always returns from the cultivation of cereals and other crops. Information from land rental systems can be used to attach a value to land use. Where this procedure may prove difficult, costs associated with getting land suitable for cane cultivation is treated as a separate production process.

Confectionery At-A-Glance

U.S. confectionery consumption, per capita, 1966-2006

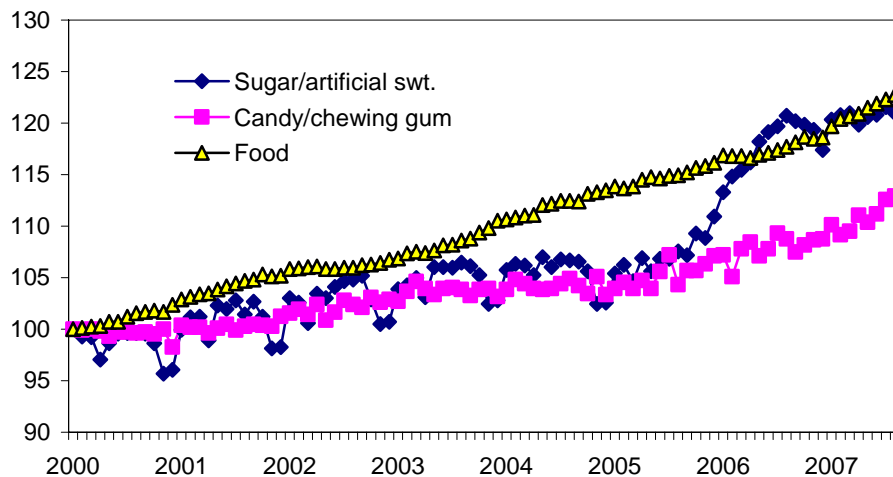
Pounds per capita



Source: U.S. Census Bureau.

Relative monthly consumer prices: Sugar, confectionery, food, 2000-07

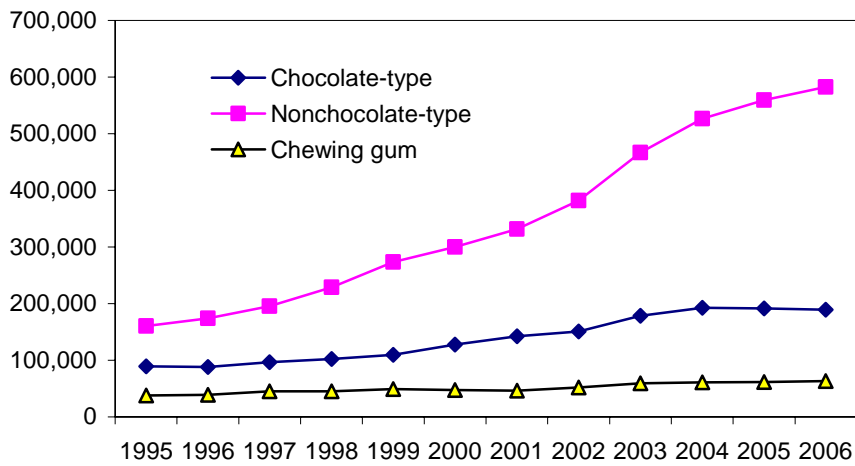
Jan. 2000 = 100



Source: Bureau of Labor Statistics, Consumer Price Index database.

Confectionery product imports, by type of product, 1995-2006

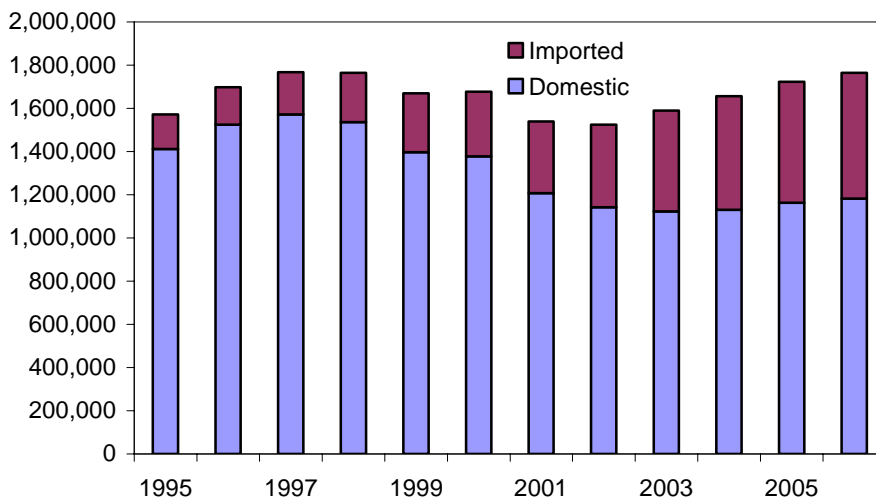
Short tons



Source: U.S. Census Bureau

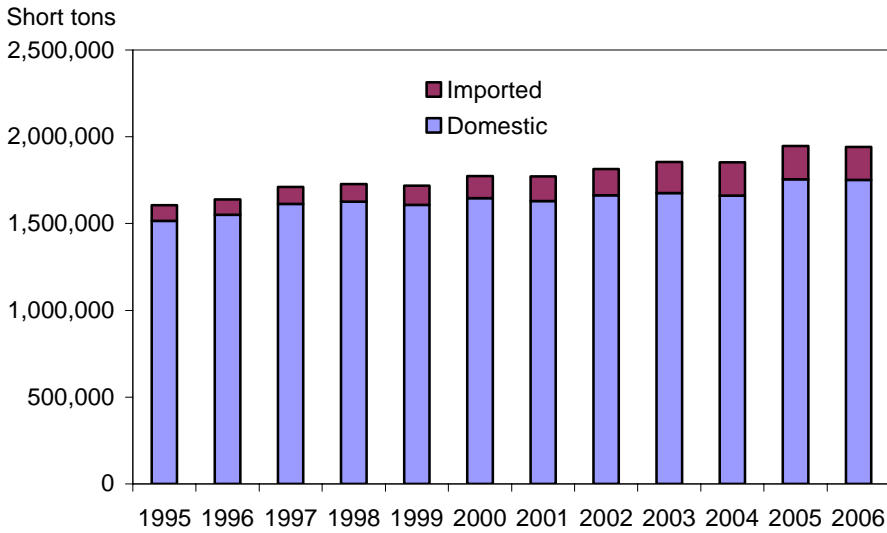
Supply of nonchocolate-type confectionery, by source, 1995-2006

Short tons



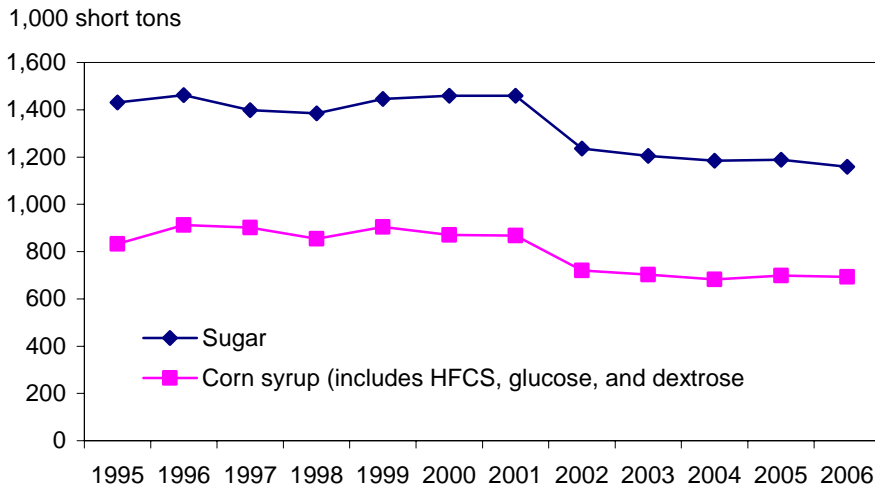
Source: U.S. Census Bureau, Report MA311D

Supply of chocolate-type confectionery, by source, 1995-2006



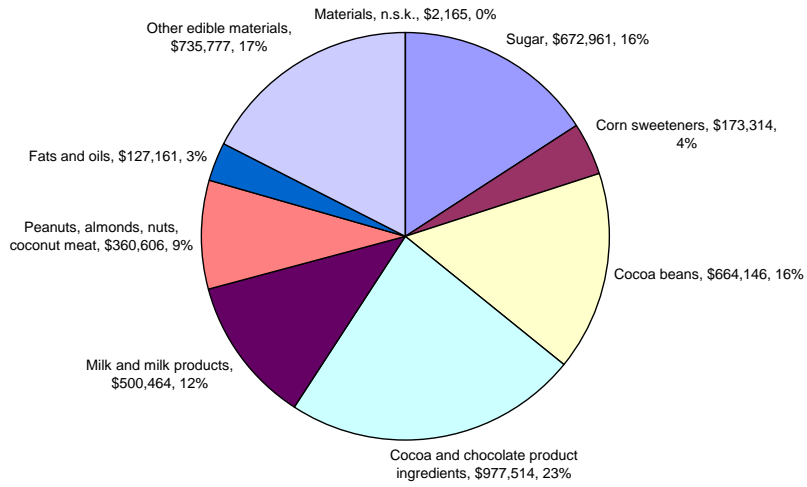
Source: U.S. Census Bureau, Report MA311D

Consumption of sweeteners by the U.S. confectionery industry, 1995-2006



Source: U.S. Census Bureau.

Value (thousand U.S. dollars) of selected ingredients of U.S. confectionery industry, 2006



Source: U.S. Census Bureau, MA311D(06)-1

Contacts and Links

Contact Information

Stephen Haley, (202) 694-5247, shaley@ers.usda.gov

Andy Jerardo (202) 694-5266, ajerardo@ers.usda.gov (Maple Syrup)

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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

WASDE <http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documented=1194>

Sugar Briefing Room, <http://www.ers.usda.gov/briefing/Sugar/>

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Table 12--World refined sugar price, monthly, quarterly, and by calendar and fiscal year 1/

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	:	1st Q.	2nd Q.	3rd Q.	4th Q.	:	Calendar	Fiscal
Cents per pound																				
1991	13.39	13.40	13.86	12.90	12.99	13.94	14.73	14.40	13.09	13.03	12.71	12.46	:	13.55	13.28	14.07	12.73	:	13.41	13.71
1992	12.18	11.92	12.19	12.54	12.89	13.41	13.41	12.96	12.29	11.94	11.68	11.26	:	12.10	12.95	12.89	11.63	:	12.39	12.67
1993	11.60	11.97	13.05	13.38	13.39	12.64	12.20	13.05	12.90	13.23	13.15	12.97	:	12.21	13.14	12.72	13.12	:	12.79	12.42
1994	13.14	14.11	15.46	14.92	15.77	16.05	15.54	15.62	15.42	15.46	17.77	18.65	:	14.24	15.58	15.53	17.29	:	15.66	14.62
1995	18.75	18.17	17.45	16.31	17.05	19.16	20.27	20.01	16.58	17.29	17.64	17.21	:	18.12	17.51	18.95	17.38	:	17.99	17.97
1996	17.36	17.90	18.14	18.02	17.79	18.00	16.99	16.81	15.74	14.87	14.09	13.95	:	17.80	17.94	16.51	14.30	:	16.64	17.41
1997	13.87	13.98	14.05	14.19	14.61	14.93	15.07	15.66	14.51	13.58	13.81	13.64	:	13.97	14.58	15.08	13.68	:	14.33	14.48
1998	13.52	12.78	12.23	11.63	12.00	11.80	11.65	11.62	10.05	10.00	10.78	10.97	:	12.84	11.81	11.11	10.58	:	11.59	12.36
1999	10.99	10.50	9.85	8.79	9.13	9.93	9.47	9.04	8.28	7.85	7.73	7.61	:	10.45	9.28	8.93	7.73	:	9.10	9.81
2000	7.70	7.67	7.83	8.66	9.06	10.63	11.38	11.29	11.74	11.76	11.02	10.95	:	7.73	9.45	11.47	11.24	:	9.97	9.10
2001	11.27	10.65	10.26	10.61	11.71	12.68	12.60	12.08	10.66	10.19	11.27	11.52	:	10.73	11.67	11.78	10.99	:	11.29	11.35
2002	11.88	10.80	10.81	10.09	10.28	10.02	10.23	10.33	9.68	9.72	10.16	10.25	:	11.16	10.13	10.08	10.04	:	10.35	10.59
2003	10.64	11.10	10.51	10.14	9.95	9.66	9.84	9.74	8.95	8.39	8.67	9.23	:	10.75	9.92	9.51	8.76	:	9.74	10.06
2004	9.16	9.54	10.59	11.19	10.78	10.73	11.81	11.80	11.12	11.21	11.27	11.23	:	9.76	10.90	11.58	11.24	:	10.87	10.25
2005	11.63	12.09	12.02	11.76	11.75	12.61	14.70	14.81	14.60	14.18	13.10	15.00	:	11.91	12.04	14.70	14.09	:	13.19	12.47
2006	16.92	19.99	20.45	21.35	21.81	20.93	20.95	18.16	17.32	17.92	16.41	15.86	:	19.12	21.36	18.81	16.73	:	19.01	18.35
2007	15.13	14.92	15.59	14.21	14.94	14.36	14.13	12.87						15.21	14.50					

1/ Contract No. 5, London Daily Price, for refined sugar, f.o.b. Europe, spot, through June 2006. Starting in July 2006, spot price replaced by average of nearest futures month for which an entire month of prices is available.

Source: London International Financial Futures and Options Exchange. (LIFFE).

Table 13--World raw sugar price, monthly, quarterly, and by calendar and fiscal year 1/

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	:	1st Q.	2nd Q.	3rd Q.	4th Q.	:	Calendar	Fiscal
Cents per pound																				
1991	8.88	8.57	9.22	8.55	7.88	9.37	10.26	9.45	9.39	9.10	8.79	9.03	:	8.89	8.60	9.70	8.97	:	9.04	9.26
1992	8.43	8.06	8.22	9.53	9.62	10.52	10.30	9.78	9.28	8.66	8.54	8.15	:	8.24	9.89	9.79	8.45	:	9.09	9.22
1993	8.27	8.61	10.75	11.30	11.87	10.35	9.60	9.30	9.52	10.27	10.10	10.47	:	9.21	11.17	9.47	10.28	:	10.03	9.58
1994	10.29	10.80	11.71	11.10	11.79	12.04	11.73	12.05	12.62	12.75	13.88	14.76	:	10.93	11.64	12.13	13.80	:	12.13	11.25
1995	14.87	14.43	14.58	13.63	13.49	13.99	13.46	13.75	12.72	11.94	11.96	12.40	:	14.63	13.70	13.31	12.10	:	13.44	13.86
1996	12.57	12.97	13.07	12.43	11.94	12.54	12.83	12.33	11.87	11.65	11.29	11.38	:	12.87	12.30	12.34	11.44	:	12.24	12.40
1997	11.13	11.06	11.17	11.50	11.54	12.02	12.13	12.54	12.65	12.86	13.19	12.90	:	11.12	11.69	12.44	12.98	:	12.06	11.67
1998	11.71	11.06	10.66	10.27	10.17	9.33	9.70	9.50	8.21	8.24	8.73	8.59	:	11.14	9.92	9.14	8.52	:	9.68	10.80
1999	8.40	7.05	6.11	5.44	5.83	6.67	6.11	6.39	6.98	6.90	6.54	6.00	:	7.19	5.98	6.49	6.48	:	6.54	7.05
2000	5.64	5.51	5.54	6.48	7.33	8.72	10.18	11.14	10.35	10.96	10.02	10.23	:	5.56	7.51	10.56	10.40	:	8.51	7.53
2001	10.63	10.26	9.64	9.27	9.96	9.80	9.48	8.77	8.60	7.15	7.80	8.02	:	10.18	9.68	8.95	7.66	:	9.12	9.80
2002	7.96	6.81	7.27	7.12	7.33	7.07	8.02	7.86	8.54	8.84	8.87	8.81	:	7.35	7.17	8.14	8.84	:	7.88	7.58
2003	8.56	9.14	8.50	7.92	7.41	6.85	7.18	7.30	6.70	6.74	6.83	6.95	:	8.73	7.39	7.06	6.84	:	7.51	8.01
2004	6.42	7.01	8.23	8.21	8.08	8.41	9.19	8.99	9.10	9.84	9.65	10.19	:	7.22	8.23	9.09	9.89	:	8.61	7.85
2005	10.33	10.51	10.57	10.19	10.23	10.45	10.89	11.09	11.59	12.40	12.86	15.09	:	10.47	10.29	11.19	13.45	:	11.35	10.46
2006	17.27	18.93	18.01	18.21	17.83	16.19	16.61	13.58	12.42	12.09	12.38	12.47	:	18.07	17.41	14.20	12.31	:	15.50	15.78
2007	11.85	11.63	11.44	10.85	10.78	11.05	12.18	11.66						11.64	10.89					

1/ Contract No. 11, f.o.b. stowed Caribbean port, including Brazil, bulk spot price, plus freight to Far East.

Source: New York Board of Trade (www.nybot.com).

Table 14--U.S. raw sugar price, duty fee paid, New York, monthly, quarterly, and by calendar and fiscal year 1/

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	:	1st Q.	2nd Q.	3rd Q.	4th Q.	:	Calendar	Fiscal
Cents per pound																				
1991	21.86	21.42	21.46	21.23	21.29	21.42	21.25	21.83	22.06	21.76	21.75	21.50	:	21.58	21.31	21.71	21.67	:	21.57	21.89
1992	21.38	21.56	21.36	21.38	21.04	20.92	21.10	21.34	21.55	21.61	21.39	21.11	:	21.43	21.11	21.33	21.37	:	21.31	21.39
1993	20.76	21.16	21.56	21.76	21.36	21.42	21.89	21.85	21.97	21.80	21.87	22.00	:	21.16	21.51	21.90	21.89	:	21.62	21.49
1994	22.00	21.95	21.95	22.08	22.18	22.44	22.72	21.84	21.78	21.58	21.57	22.35	:	21.97	22.23	22.11	21.83	:	22.04	22.05
1995	22.65	22.69	22.46	22.76	23.10	23.09	24.47	23.18	23.21	22.67	22.60	22.63	:	22.60	22.98	23.62	22.63	:	22.96	22.76
1996	22.39	22.68	22.57	22.71	22.62	22.48	21.80	22.51	22.38	22.37	22.12	22.14	:	22.55	22.60	22.23	22.21	:	22.40	22.50
1997	21.88	22.07	21.81	21.79	21.70	21.62	22.04	22.21	22.30	22.27	21.90	21.93	:	21.92	21.70	22.18	22.03	:	21.96	22.00
1998	21.85	21.79	21.74	22.14	22.31	22.42	22.66	22.19	21.92	21.67	21.83	22.19	:	21.79	22.29	22.26	21.90	:	22.06	22.09
1999	22.41	22.38	22.55	22.57	22.65	22.61	22.61	21.24	20.10	19.50	17.45	17.87	:	22.45	22.61	21.32	18.27	:	21.16	22.07
2000	17.70	17.24	18.46	19.43	19.12	19.31	17.64	18.12	18.97	21.15	21.39	20.56	:	17.80	19.29	18.24	21.03	:	19.09	18.40
2001	20.81	21.18	21.40	21.51	21.19	21.04	20.64	21.10	20.87	20.90	21.19	21.43	:	21.13	21.25	20.87	21.17	:	21.11	21.07
2002	21.03	20.69	19.92	19.73	19.52	19.93	20.86	20.91	21.65	21.94	22.22	22.03	:	20.55	19.73	21.14	22.06	:	20.87	20.65
2003	21.62	21.91	22.14	21.87	21.80	21.62	21.32	21.26	21.34	20.92	20.91	20.37	:	21.89	21.76	21.31	20.73	:	21.42	21.76
2004	20.54	20.57	20.86	20.88	20.69	20.03	20.14	20.10	20.47	20.31	20.40	20.55	:	20.66	20.53	20.24	20.42	:	20.46	20.54
2005	20.57	20.36	20.54	21.21	21.96	21.89	21.94	20.49	21.10	21.71	21.83	21.74	:	20.49	21.69	21.18	21.76	:	21.28	20.94
2006	23.61	24.05	23.10	23.56	23.48	23.32	22.44	21.38	21.27	20.22	19.66	19.59	:	23.59	23.45	21.70	19.82	:	22.14	22.62
2007	20.03	20.59	20.85	20.91	21.27	21.33	22.72	21.80							20.49	21.17				

1/ Contract No. 14, duty fee paid New York. Average of nearest futures month for which an entire month of prices will be available. For example, April 2001's price

average of 21.51 cents is the average of closes for the July 2001 futures during the month of April since there was not a full month of May 2001 futures in

April (the May 2001 futures expired April 10th; July 2001 became the nearest futures, so July 2001 was used for the entire month of April).

Source: New York Board of Trade (www.nybot.com).

Table 15--U.S. wholesale refined beet sugar price, Midwest markets, monthly, quarterly, and by calendar and fiscal year

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	:	1st Q.	2nd Q.	3rd Q.	4th Q.	:	Calendar	Fiscal
Cents per pound																				
1991	26.88	26.50	26.50	26.13	26.00	25.75	25.50	25.50	25.00	24.94	24.60	24.50	:	26.63	25.96	25.33	24.68	:	25.65	26.57
1992	25.40	26.50	26.50	26.50	26.40	26.00	25.00	25.00	25.00	24.90	24.13	23.90	:	26.13	26.30	25.00	24.31	:	25.44	25.53
1993	23.25	23.00	23.00	23.50	23.50	23.50	25.50	27.75	27.50	27.50	27.25	26.50	:	23.08	23.50	26.92	27.08	:	25.15	24.45
1994	25.75	25.50	25.50	24.50	24.75	25.25	25.00	25.00	24.70	25.00	25.38	25.50	:	25.58	24.83	24.90	25.29	:	25.15	25.60
1995	25.50	25.50	25.50	25.50	25.13	25.10	24.75	24.75	25.50	25.75	28.13	28.85	:	25.50	25.24	25.00	27.58	:	25.83	25.26
1996	28.69	29.00	29.50	29.50	29.70	29.50	29.50	29.00	29.00	29.00	29.00	29.00	:	29.06	29.57	29.17	29.00	:	29.20	28.84
1997	29.00	29.00	28.13	28.00	28.00	27.50	27.00	26.65	26.38	24.90	25.00	25.50	:	28.71	27.83	26.68	25.13	:	27.09	28.06
1998	25.50	25.50	25.50	25.50	26.00	26.00	26.00	26.00	26.50	26.90	27.00	27.00	:	25.50	25.83	26.17	26.97	:	26.12	25.66
1999	27.20	27.13	27.00	27.00	27.00	27.00	27.00	27.00	27.00	26.00	26.00	25.20	:	27.11	27.00	27.00	25.73	:	26.71	27.02
2000	23.38	22.25	21.50	21.00	19.75	19.00	19.00	19.00	20.70	21.25	21.00	21.80	:	22.38	19.92	19.57	21.35	:	20.80	21.90
2001	23.13	22.75	22.00	20.50	21.38	21.90	22.50	22.50	24.63	25.75	26.20	26.50	:	22.63	21.26	23.21	26.15	:	23.31	22.11
2002	26.75	26.00	25.95	24.63	24.50	24.00	24.00	25.40	26.25	26.75	27.40	27.88	:	26.23	24.38	25.22	27.34	:	25.79	25.49
2003	27.80	26.50	27.13	27.63	28.00	28.00	27.63	25.50	24.00	24.70	23.94	23.63	:	27.14	27.88	25.71	24.09	:	26.21	27.02
2004	23.70	23.50	23.50	23.50	23.50	23.50	23.50	23.50	23.50	23.50	23.38	23.20	:	23.57	23.50	23.50	23.36	:	23.48	23.66
2005	23.50	23.50	23.25	23.80	24.75	25.88	26.00	26.75	40.10	40.00	40.00	36.90	:	23.42	24.81	30.95	38.97	:	29.54	25.63
2006	34.50	36.50	37.10	36.38	35.00	35.00	35.00	34.50	31.20	28.75	27.19	26.10	:	36.03	35.46	33.57	27.35	:	33.10	36.01
2007	25.50	25.00	24.90	25.00	25.00	25.00	25.38	25.60					:	25.13	25.00			:		

Source: *Milling & Baking News*. Simple average of the lower end of the range of quotations for days in that month. Quotations are weekly.

Table 16--U.S. retail refined sugar price, monthly, quarterly, and by calendar and fiscal year

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	1st Q.	2nd Q.	3rd Q.	4th Q.	Calendar	Fiscal		
Cents per pound																				
1991	43.40	43.00	43.40	43.30	43.10	43.20	43.50	42.80	42.20	42.00	41.90	41.80	:	43.27	43.20	42.83	41.90	:	42.80	43.08
1992	42.50	42.40	41.90	41.70	41.70	41.50	41.50	41.10	41.00	41.20	41.20	40.60	:	42.27	41.63	41.20	41.00	:	41.53	41.75
1993	41.20	41.00	40.60	40.80	40.80	40.30	40.20	40.60	40.40	40.50	40.30	39.80	:	40.93	40.63	40.40	40.20	:	40.54	40.74
1994	40.70	40.50	40.10	39.90	40.10	39.70	40.00	39.70	40.30	40.20	39.50	39.20	:	40.43	39.90	40.00	39.63	:	39.99	40.13
1995	39.70	39.90	39.80	39.40	39.70	39.50	39.70	39.60	39.80	40.40	40.70	39.80	:	39.80	39.53	39.70	40.30	:	39.83	39.67
1996	40.50	40.30	40.60	40.40	41.50	41.80	42.40	42.80	42.60	43.20	42.60	42.80	:	40.47	41.23	42.60	42.87	:	41.79	41.15
1997	43.40	42.90	43.10	43.50	43.40	43.60	43.30	43.60	43.60	43.00	42.90	42.80	:	43.13	43.50	43.50	42.90	:	43.26	43.25
1998	43.00	42.90	43.30	43.10	42.80	43.10	43.20	43.60	43.20	42.30	42.50	42.70	:	43.07	43.00	43.33	42.50	:	42.98	43.08
1999	43.60	43.00	43.70	43.20	43.60	43.10	43.20	43.10	43.70	43.80	42.60	42.60	:	43.43	43.30	43.33	43.00	:	43.27	43.14
2000	43.70	43.20	42.90	41.40	42.40	42.80	42.50	42.40	42.40	42.50	41.30	41.40	:	43.27	42.20	42.43	41.73	:	42.41	42.73
2001	42.80	43.50	43.70	42.90	43.80	43.50	44.30	43.30	44.20	44.00	42.50	42.50	:	43.33	43.40	43.93	43.00	:	43.42	43.10
2002	44.10	43.70	42.60	44.40	42.70	43.00	43.30	43.30	43.70	42.40	41.90	42.10	:	43.47	43.37	43.43	42.13	:	43.10	43.32
2003	43.00	42.70	42.70	42.70	43.10	42.90	43.10	43.50	42.60	42.50	41.10	42.20	:	42.80	42.90	43.07	41.93	:	42.68	42.73
2004	42.90	42.60	42.60	42.70	42.50	42.50	42.90	42.60	42.60	42.60	42.20	43.00	:	42.70	42.57	42.70	42.60	:	42.64	42.48
2005	43.70	43.50	43.30	43.60	42.70	42.80	42.40	43.20	43.70	44.20	44.50	44.90	:	43.50	43.03	43.10	44.53	:	43.54	43.06
2006	46.10	46.80	47.10	48.00	49.90	50.40	50.50	51.60	51.50	51.20	51.30	50.60	:	46.67	49.43	51.20	51.03	:	49.58	47.96
2007	51.90	51.40	51.80	50.80	51.30	52.10									51.70	51.40				

Source: Bureau of Labor Statistics.

Table 17-U.S. Producer Price Index for corn sweeteners and sugar, monthly

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Corn sweeteners (liquids and solids), incl. glucose, dextrose, and HFCS, June 1985=100 1/													
2000	98.9	98.0	97.8	98.0	97.9	97.9	97.8	98.0	98.0	97.6	99.2	100.3	98.3
2001	111.3	111.6	111.6	111.5	111.9	111.3	111.3	111.3	112.2	112.3	113.9	114.0	112.0
2002	116.5	120.1	119.7	119.8	117.4	119.6	121.2	121.0	127.4	127.9	125.9	126.5	121.9
2003	130.0	131.4	131.3	131.3	131.5	131.9	--	132.2	131.9	130.6	130.9	130.7	131.3
2004	131.9	132.0	131.9	131.7	131.6	131.7	131.8	131.5	131.6	131.5	131.6	131.6	131.7
2005	133.1	133.3	133.5	133.1	133.1	133.1	133.2	132.9	133.2	137.2	133.1	133.2	133.5
2006	144.5	144.8	145.1	153.4	151.1	151.2	151.2	150.9	150.9	150.9	151.1	151.0	149.7
2007 2/	175.5	176.8	176.8	176.8	176.9	177.1	176.8	176.8					
Raw cane sugar and other can mill products and byproducts, June 1982=100 1/													
2000	92.7	89.4	95.1	97.4	97.0	99.5	92.7	90.7	95.9	106.1	106.9	103.4	97.2
2001	106.3	107.6	107.6	108.6	107.8	106.1	107.7	107.4	107.1	107.4	108.2	109.8	107.6
2002	109.2	107.0	103.8	103.4	101.4	102.7	106.7	106.9	111.2	111.6	113.9	112.7	107.5
2003	108.8	111.3	113.5	111.6	112.1	111.1	109.8	109.8	108.0	106.8	107.4	105.2	109.6
2004	104.7	104.5	106.4	105.6	105.8	102.7	104.6	103.3	107.1	104.2	104.2	106.5	105.0
2005	106.5	105.6	120.0	121.4	122.9	124.5	125.0	127.2	123.3	125.0	126.4	126.3	121.2
2006	129.5	133.2	129.9	132.9	134.6	135.4	134.2	132.0	132.1	127.5	124.4	123.0	130.7
2007 2/	123.9	125.4	125.9	125.9	127.3	127.0	128.8	128.1					
Refined beet sugar and byproducts, June 1982=100 1/													
2000	105.4	101.5	100.3	99.1	98.3	98.3	97.7	96.2	95.5	94.7	95.0	94.0	98.0
2001	97.5	97.6	97.8	98.0	99.4	99.5	99.5	100.9	102.0	103.3	105.0	106.8	100.6
2002	108.5	109.8	110.5	111.2	111.1	110.9	111.3	111.3	114.2	114.3	116.1	117.9	112.3
2003	118.7	118.8	119.1	119.5	119.2	119.4	119.3	119.4	113.7	116.6	116.4	116.2	118.0
2004	116.1	116.3	116.4	116.8	116.3	116.6	116.6	116.7	116.9	115.5	115.8	116.1	116.4
2005	116.3	117.8	115.9	116.5	117.3	118.6	118.5	118.4	118.2	122.6	136.0	141.5	121.5
2006	141.9	147.4	148.8	149.0	148.6	149.2	152.0	151.2	146.2	145.0	143.5	138.1	146.7
2007 2/	136.2	136.5	133.8	132.9	129.4	126.2	123.3	123.2					
Refined cane sugar and byproducts, June 1982=100 1/													
2000	124.7	121.8	121.7	119.8	120.4	119.8	120.5	119.2	117.5	113.9	113.2	114.4	118.9
2001	112.8	117.5	116.2	114.6	115.1	115.3	115.6	116.6	115.5	115.2	115.2	116.3	115.5
2002	117.4	117.9	121.0	122.3	119.7	121.2	121.3	120.8	120.8	121.0	119.5	120.1	120.2
2003	119.1	122.3	122.8	122.9	122.9	123.5	123.8	124.5	125.5	124.3	122.3	123.4	123.1
2004	120.5	120.4	121.6	121.6	123.0	124.3	123.3	123.5	123.1	123.6	122.5	121.6	122.4
2005	122.8	121.9	121.5	121.4	122.6	123.7	122.4	124.4	125.3	130.4	133.6	140.8	125.9
2006	142.8	146.2	155.5	156.9	155.5	150.7	156.4	153.1	152.3	148.2	143.9	142.3	150.3
2007 2/	144.9	140.4	137.9	136.1	134.3	131.3	132.4	126.4					

1/ Based on a sample of domestic producers. 2/ Preliminary, all indexes are subject to revision 4 months after original publishing.

Source: Bureau of Labor Statistics.

Table 18--U.S. Consumer Price Index for sugar and selected sweetener-containing products 1/

Year and month	Sugar and sweets	Sugar and artificial sweeteners	Flour and prepared flour mixes	Cereals and bakery products	Breakfast cereal	White bread	Cakes, cupcakes, and cookies	Other bakery products
	2/	3/	4/	5/	6/	7/	8/	9/
1982-84=100								
2000	154.0	137.1	160.2	188.3	198.0	199.1	187.9	191.5
2001	155.7	140.3	164.3	193.8	199.7	208.3	192.0	199.1
2002	159.0	143.2	171.0	198.0	203.0	213.4	196.7	203.0
2003	162.0	145.7	178.4	202.8	204.3	218.6	202.8	207.3
2004	163.2	146.9	177.8	206.0	203.5	223.8	206.4	211.8
2005	165.2	149.1	179.6	209.0	203.6	232.1	209.8	211.4
2006	171.5	163.9	182.2	212.8	199.9	238.0	214.2	215.5
2005								
Jan.	163.0	146.6	181.3	207.6	203.5	229.3	207.7	209.6
Feb.	164.2	147.8	181.7	208.4	205.8	231.7	209.5	208.7
Mar.	162.6	145.6	179.8	208.5	206.5	232.1	208.7	207.3
Apr.	164.9	148.7	181.0	209.1	204.6	233.4	209.0	212.6
May	163.3	146.9	184.2	209.7	204.1	233.7	208.9	212.6
June	165.7	148.6	182.0	209.4	203.3	235.5	209.2	214.0
July	167.1	148.6	183.7	209.4	202.6	232.2	209.8	214.4
Aug.	164.7	149.6	182.3	210.1	205.3	229.5	208.6	216.6
Sep.	165.8	149.1	179.8	208.3	202.3	228.9	208.9	212.5
Oct.	166.3	152.0	176.1	209.4	202.0	231.8	211.1	212.9
Nov.	166.5	151.4	171.4	209.1	201.4	234.8	212.3	210.2
Dec.	167.8	154.3	171.6	208.4	201.3	232.5	213.9	205.9
2006								
Jan.	169.3	157.6	181.8	210.6	200.3	234.4	212.9	213.9
Feb.	167.3	159.7	180.0	210.3	195.3	232.7	213.8	215.5
Mar.	170.1	160.6	182.5	210.9	196.9	234.5	212.9	214.3
Apr.	171.0	161.6	177.4	210.9	200.7	236.8	212.7	211.2
May	171.3	164.4	184.0	211.9	200.6	234.8	213.9	214.6
June	171.9	165.7	184.3	212.8	201.9	234.7	213.9	217.2
July	173.3	166.5	185.2	214.6	201.2	238.0	214.7	219.7
Aug.	173.5	167.9	187.5	214.6	201.9	239.7	214.6	219.2
Sep.	172.1	167.2	184.3	213.6	198.4	238.7	213.9	217.9
Oct.	172.5	166.7	182.9	214.6	198.9	242.4	214.3	218.1
Nov.	172.7	166.0	179.2	214.5	200.5	244.5	217.0	211.7
Dec.	172.4	163.3	177.0	214.8	202.3	244.6	216.1	212.4
2007								
Jan.	175.2	167.4	189.9	216.3	197.5	249.2	215.8	219.3
Feb.	174.3	168.0	189.0	219.0	204.1	250.4	219.0	218.9
Mar.	174.6	168.3	189.2	218.5	201.7	247.5	219.8	217.5
Apr.	175.9	166.7	189.6	220.5	204.2	255.4	220.6	218.1
May	175.5	167.7	191.1	220.9	204.6	254.8	219.1	219.3
June	176.7	168.0	192.8	222.6	206.3	257.1	219.6	224.3
July	178.2	169.1	194.2	223.3	205.6	259.0	221.6	223.1
Aug.	178.3	168.3	195.7	224.0	205.7	259.9	221.4	226.3

See footnotes at end of table.

Continued--

Table 18--U.S. consumer price index for sugar and selected sweetener-containing products 1/

Year and month	Non-alcoholic beverages	Carbonated drinks	non-carbonated juices and drinks	Canned fruits	Candy and chewing gum	Ice cream and related products	Food
	10/	11/	12/	13/	14/	15/	16/
1982-84=100							
2000	137.8	123.4	104.2	106.9	103.8	164.4	167.8
2001	139.2	125.4	106.0	109.0	104.3	173.4	173.1
2002	139.2	125.6	106.4	111.6	106.2	179.1	176.2
2003	139.8	125.6	106.5	113.7	107.8	175.5	180.0
2004	140.4	127.9	105.7	114.0	108.4	178.3	186.2
2005	144.4	131.9	106.5	118.4	109.5	177.6	190.7
2006	147.4	134.2	109.5	121.5	112.2	179.3	195.2
2005							
Jan.	142.2	130.0	105.3	117.0	108.1	180.1	189.1
Feb.	142.5	130.4	105.4	115.7	108.7	178.9	188.8
Mar.	143.6	130.6	107.5	114.7	108.1	175.0	189.1
Apr.	144.8	132.0	107.9	118.3	108.9	178.5	190.2
May	144.3	131.1	107.2	120.0	108.1	179.1	190.6
June	144.0	131.5	105.7	120.9	109.8	171.9	190.4
July	144.8	132.6	106.1	120.6	111.5	174.0	190.8
Aug.	144.3	131.6	105.7	120.7	108.5	178.8	190.9
Sep.	145.2	133.9	106.2	120.6	109.9	178.9	191.4
Oct.	145.6	133.8	106.1	118.3	109.9	180.6	192.1
Nov.	145.5	132.2	106.9	115.9	110.6	176.6	192.4
Dec.	145.5	133.1	107.4	117.8	111.4	179.1	192.9
2006							
Jan.	147.2	135.7	108.4	121.0	111.5	182.0	194.1
Feb.	147.3	134.7	108.5	120.3	109.3	179.3	194.0
Mar.	148.0	134.9	109.2	121.7	112.1	178.8	194.0
Apr.	146.3	132.3	109.4	118.8	112.8	178.9	193.7
May	146.6	132.9	109.4	122.2	111.4	177.0	194.2
June	146.6	133.9	109.2	123.2	112.1	178.3	194.5
July	146.3	132.6	110.1	123.1	113.7	176.8	195.0
Aug.	146.9	134.2	108.8	122.4	113.1	174.9	195.5
Sep.	147.5	134.4	110.0	122.6	111.8	180.3	196.2
Oct.	148.3	135.6	110.2	120.4	112.5	180.9	197.1
Nov.	148.9	135.6	109.9	119.4	113.0	181.8	196.8
Dec.	148.5	133.6	110.7	122.3	113.1	182.0	197.0
2007							
Jan.	151.1	137.8	112.1	122.9	114.5	185.5	198.8
Feb.	151.7	138.0	112.1	124.4	113.5	181.6	200.0
Mar.	153.9	141.4	113.4	123.3	113.9	183.6	200.4
Apr.	151.8	138.9	111.0	123.8	115.5	180.0	200.8
May	152.9	139.3	113.1	125.6	114.8	179.5	201.8
June	153.1	139.5	113.0	126.7	115.6	181.3	202.4
July	153.4	140.8	112.3	127.8	117.1	180.2	203.1
Aug.	154.8	141.5	113.4	126.8	117.4	181.8	203.9

1/ All-urban, unadjusted, U.S. city average. 2/ Series:SEFR, Base: 1982-84=100. 3/ Series: SEFR01, Base: 1982-84=100.
4/ Series: SEFA01, Base: 1982-84=100; 5/ Series: SAF111, Base: 1982-84=100. 6/ Series: SEFA02, Base: 1982-84=100.
7/ Series: SS02011, Base: 1982-84=100. 8/ Series: SEFB03, Base: 1982-84=100. 9/ Series: SEFB04, Base: 1982-84=100.
10/ Series: SAF114, Base: 1982-84=100. 11/ Series: SEFN01, Base: 1982-84=100. 12/ Series: SEFN03, Base: Dec. 1997=100.
13/ Series: SS13031, Base: Dec. 1997=100. 14/ Series: SEFR02, Base: Dec. 1997=100. 15/ Series: SEFJ03, Base: 1982-84=100.
16/ Series: SAF1, Base: 1982-84=100.

Source: Bureau of Labor Statistics.

Table 19--Bulk sugar prices in Mexico, estandar sugar 1/

Year	Nominal pesos per 50 kg 1/													
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar	Fiscal
1994	90.85	90.85	90.85	90.85	90.85	90.85	90.85	90.85	90.85	90.85	90.94	91.70	90.93	88.62
1995	91.70	99.33	105.95	106.34	110.92	117.25	117.25	119.80	133.76	140.30	144.91	149.57	119.76	106.32
1996	148.43	152.71	159.88	160.92	162.21	166.86	168.24	171.81	176.29	172.51	160.87	155.08	162.98	158.51
1997	173.20	196.96	187.29	179.11	172.99	179.36	175.96	173.60	176.78	169.63	162.55	162.99	175.87	175.31
1998	178.10	176.01	155.70	163.12	180.02	189.52	186.70	210.43	214.81	215.07	223.54	227.44	193.37	179.13
1999	222.59	214.45	195.14	184.23	184.54	223.55	220.27	207.16	211.56	224.71	242.96	228.98	213.35	210.80
2000	220.61	207.89	207.75	201.33	219.23	216.75	232.14	232.22	230.60	224.57	243.21	263.77	225.01	222.10
2001	248.89	234.25	208.67	189.46	185.45	218.39	222.00	219.07	249.51	249.34	240.23	233.55	224.90	225.60
2002	245.76	244.46	243.44	242.14	240.83	239.15	244.95	248.15	253.40	262.31	266.23	268.39	249.93	243.78
2003	268.50	266.46	265.01	270.04	273.14	278.50	285.05	287.64	294.90	302.40	303.75	319.10	284.54	273.85
2004	309.70	296.25	291.25	298.25	297.25	302.95	317.85	326.20	331.00	329.60	326.05	329.85	313.02	308.00
2005	322.70	312.00	306.00	306.00	305.25	304.10	297.25	300.00	289.00	284.10	283.50	282.50	299.37	310.65
2006	280.40	275.60	273.00	292.50	334.40	353.69	333.00	401.40	440.75	395.85	386.25	374.35	345.10	319.57
2007	361.40	344.95	347.10	341.00	332.30	323.00	321.00	306.50						
Year	Real 2000 pesos per 50 kg													
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar	Fiscal
1994	291.09	290.35	289.24	287.68	286.14	284.35	282.58	280.92	279.11	277.91	276.82	276.20	283.53	280.77
1995	260.81	270.52	273.49	251.99	252.37	259.17	254.39	255.71	280.13	287.73	288.90	287.20	268.53	265.79
1996	275.99	277.40	283.88	277.74	275.96	280.77	279.65	282.07	286.42	276.86	253.98	238.66	274.11	281.98
1997	260.65	292.10	275.10	261.28	250.64	257.85	251.08	245.75	247.90	236.06	222.49	220.70	251.80	259.32
1998	235.08	228.17	199.79	208.01	228.51	237.82	232.07	258.32	256.06	251.28	257.56	257.90	237.55	230.26
1999	246.64	235.89	213.78	201.54	201.29	242.12	237.54	222.51	225.78	237.91	255.51	238.94	229.96	232.82
2000	227.62	212.96	211.64	203.45	220.66	216.19	231.47	230.72	228.57	220.84	237.72	256.34	224.85	226.30
2001	239.04	224.96	198.79	180.34	176.92	208.53	212.44	208.82	236.28	235.45	226.80	221.21	214.13	216.75
2002	232.16	230.78	226.27	222.92	219.68	216.46	220.50	222.04	224.84	232.90	234.77	233.63	226.41	224.92
2003	230.61	225.60	223.77	230.67	234.29	236.88	241.79	242.88	247.86	251.43	250.47	260.23	239.71	234.64
2004	251.54	236.92	229.38	231.45	229.22	233.43	243.92	248.38	250.64	247.88	244.67	249.04	241.37	243.09
2005	242.80	233.10	227.17	226.06	226.75	226.65	220.25	221.88	212.64	208.61	208.12	206.31	221.69	231.57
2006	202.63	198.62	195.00	205.52	232.00	242.77	228.05	273.25	300.12	270.17	263.83	254.75	238.89	225.08
2007	246.37	233.58	233.06	228.11	224.06									
Year	U.S. 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						

1/ D.F.- Central de Abasto de Iztapalapa, D.F.

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

Table 20--Bulk sugar prices in Mexico, refinado sugar 1/

Year	Nominal pesos per 50 kg 1/													
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar	Fiscal
1994	101.83	101.83	101.83	101.83	101.83	101.83	101.83	101.83	101.83	101.83	101.85	102.00	101.85	99.31
1995	102.00	110.46	117.80	118.19	122.85	129.30	129.30	132.15	154.33	154.75	159.84	164.98	132.99	118.50
1996	161.26	167.01	177.07	179.04	178.82	181.29	183.36	186.30	188.39	187.66	186.40	186.42	180.25	173.51
1997	194.96	216.67	216.01	215.62	211.40	211.37	213.08	211.71	210.68	206.09	206.63	204.38	209.88	205.17
1998	209.08	207.25	202.34	198.37	205.43	209.93	212.25	229.75	229.88	244.41	250.01	246.63	220.44	210.12
1999	250.22	251.28	241.93	239.00	233.35	242.83	251.83	243.62	239.71	271.33	267.38	263.02	249.63	244.57
2000	259.02	252.50	250.11	248.45	245.58	237.48	244.47	246.61	245.91	245.09	259.57	271.48	250.52	252.66
2001	276.98	274.56	266.54	256.03	250.26	256.90	260.85	261.87	276.33	279.72	277.48	274.21	267.64	263.04
2002	288.40	283.56	284.03	280.56	278.54	279.34	285.98	292.64	298.51	303.09	306.90	309.50	290.92	283.58
2003	310.81	310.73	308.13	313.20	315.26	320.36	334.24	339.84	363.00	360.00	365.00	360.00	333.38	319.59
2004	352.50	340.00	337.20	340.00	337.50	340.60	345.00	337.40	339.50	339.25	338.20	341.00	340.68	346.23
2005	340.00	339.50	335.60	339.00	338.80	335.75	335.75	333.00	330.75	330.00	335.60	335.10	335.74	337.22
2006	332.80	332.75	350.00	355.00	375.60	412.00	415.25	459.70	532.63	486.20	435.75	424.75	409.37	380.54
2007	412.55	403.50	400.25	398.80	389.94	384.16	383.13	380.84						
Year	Real 2000 pesos per 50 kg													
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Calendar	Fiscal
1994	326.27	325.44	324.20	322.45	320.72	318.72	316.73	314.87	312.84	311.50	310.04	307.23	317.58	314.64
1995	290.10	300.83	304.08	280.07	279.52	285.81	280.54	282.07	323.19	317.36	318.65	316.78	298.25	296.25
1996	299.85	303.38	314.40	309.01	304.22	305.05	304.79	305.86	306.08	301.17	294.28	286.89	302.91	308.79
1997	293.39	321.33	317.29	314.54	306.29	303.87	304.05	299.70	295.44	286.79	282.82	276.75	300.19	303.19
1998	275.98	268.67	259.64	252.96	260.76	263.43	263.83	282.04	274.03	285.56	288.06	279.66	271.22	270.64
1999	277.25	276.41	265.04	261.46	254.53	263.00	271.57	261.68	255.83	287.27	281.19	274.47	269.14	270.00
2000	267.25	258.66	254.80	251.06	247.19	236.86	243.76	245.02	243.74	241.02	253.71	263.83	250.57	257.61
2001	266.02	263.67	253.92	243.70	238.75	245.30	249.62	249.61	261.68	264.14	261.97	259.72	254.84	252.57
2002	272.44	267.69	263.99	258.29	254.07	252.84	257.43	261.85	264.87	269.10	270.63	269.41	263.55	261.61
2003	266.95	263.09	260.18	267.53	270.42	272.48	283.52	286.95	305.09	299.33	300.98	293.59	280.84	273.78
2004	286.31	271.91	265.57	263.85	260.26	262.44	264.75	256.91	257.08	255.13	253.79	257.46	262.96	273.58
2005	255.81	253.64	249.15	250.44	251.67	250.24	248.78	246.28	243.36	242.31	246.37	244.72	248.56	251.31
2006	240.50	239.80	250.00	249.44	260.58	282.79	284.38	312.93	362.66	331.83	297.64	289.04	283.47	268.04
2007	281.24	273.23	268.75	266.77	262.92									
Year	U.S. 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						

1/ D.F.- Central de Abasto de Iztapalapa, D.F.

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

Table 21--U.S. cane and beet sugar deliveries, monthly, quarterly, and by fiscal and calendar year

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	1st Q.	2nd Q.	3rd Q.	4th Q.	Fiscal	Calendar
1,000 short tons, raw value																		
U.S. beet sugar for domestic consumption:																		
1992	301	284	315	312	283	341	344	356	375	343	357	355	901	935	1,075	1,055	3,902	3,966
1993	303	287	397	299	328	367	358	372	367	346	325	338	988	994	1,097	1,008	4,134	4,087
1994	312	313	370	303	338	406	360	406	437	338	304	282	995	1,047	1,204	924	4,254	4,170
1995	301	311	378	311	356	399	384	450	465	404	395	331	989	1,066	1,300	1,131	4,279	4,486
1996	316	342	361	343	338	325	350	335	300	333	315	267	1,018	1,006	984	915	4,139	3,923
1997	280	272	315	312	326	332	351	373	428	375	316	317	867	970	1,152	1,009	3,903	3,997
1998	324	316	362	344	342	401	393	388	409	392	334	308	1,002	1,087	1,190	1,034	4,288	4,313
1999	319	325	374	346	361	417	400	427	416	438	392	321	1,018	1,124	1,244	1,151	4,419	4,536
2000	320	340	385	341	393	384	348	411	392	412	378	329	1,045	1,118	1,152	1,119	4,465	4,433
2001	366	346	401	375	405	403	414	450	408	429	373	311	1,113	1,183	1,272	1,112	4,686	4,680
2002	349	315	347	340	375	332	369	365	380	423	396	300	1,012	1,047	1,114	1,119	4,285	4,291
2003	315	307	341	338	338	365	380	366	388	395	335	353	962	1,041	1,134	1,082	4,255	4,219
2004	359	367	407	387	333	438	408	433	392	423	378	342	1,133	1,159	1,233	1,143	4,607	4,668
2005	358	368	395	387	370	416	384	415	449	457	375	337	1,120	1,173	1,248	1,169	4,684	4,710
2006	342	306	357	323	362	381	348	406	366	369	329	306	1,005	1,067	1,120	1,004	4,360	4,195
2007	339	330	378	396	414	404	422						1,047	1,214				
Cane sugar for domestic consumption:																		
1992	324	339	406	406	375	455	417	419	468	479	371	349	1,069	1,236	1,303	1,200	4,820	4,808
1993	311	339	391	387	351	423	422	441	469	427	424	395	1,042	1,161	1,332	1,246	4,734	4,781
1994	332	358	422	361	400	448	411	427	473	443	434	420	1,112	1,209	1,310	1,298	4,877	4,929
1995	340	332	432	380	424	438	369	444	423	431	413	381	1,104	1,243	1,236	1,226	4,880	4,808
1996	353	376	443	425	452	471	463	488	565	547	500	456	1,172	1,349	1,515	1,504	5,262	5,539
1997	397	396	481	444	474	509	462	476	500	525	459	431	1,274	1,427	1,437	1,416	5,641	5,553
1998	369	391	470	430	429	481	432	438	506	486	467	451	1,230	1,339	1,377	1,404	5,361	5,349
1999	355	379	453	452	500	476	433	490	485	483	481	433	1,186	1,429	1,407	1,396	5,427	5,419
2000	383	404	484	425	452	488	455	530	471	534	481	398	1,272	1,365	1,456	1,414	5,490	5,508
2001	410	371	470	413	431	458	419	446	417	487	467	384	1,251	1,302	1,282	1,338	5,248	5,172
2002	392	378	437	424	458	490	472	486	549	468	444	407	1,208	1,373	1,507	1,320	5,424	5,407
2003	372	377	467	434	408	475	421	488	415	476	486	413	1,216	1,317	1,324	1,375	5,177	5,232
2004	346	393	406	377	415	408	404	448	415	528	466	383	1,144	1,200	1,268	1,377	4,987	4,989
2005	377	363	459	400	437	441	418	477	458	476	429	401	1,199	1,277	1,353	1,306	5,207	5,136
2006	405	383	440	405	434	466	435	494	441	487	456	384	1,228	1,305	1,369	1,327	5,209	5,230
2007	399	363	455	426	426	429	400						1,217	1,281				
Imports to non-reporters																		
1992	6	6	3	3	2	2	2	7	3	6	7	6	15	7	12	19	49	52
1993	4	2	3	2	5	9	1	2	1	9	6	8	10	17	3	23	48	52
1994	5	3	6	1	4	4	5	5	7	10	15	12	14	9	18	38	63	78
1995	9	1	1	2	0	0	1	1	4	17	5	0	12	3	6	22	59	44
1996	0	0	0	0	0	0	0	1	19	10	1	1	1	1	20	12	44	33
1997	1	0	1	2	1	1	1	0	1	15	2	2	2	4	2	19	20	27
1998	0	1	0	0	1	1	1	0	0	13	5	1	1	2	1	19	23	24
1999	3	1	0	0	0	0	0	0	4	27	3	4	4	0	4	33	28	41
2000	0	0	1	0	0	0	0	0	3	26	4	1	1	0	3	31	38	36
2001	5	1	0	0	0	0	3	21	3	6	10	8	6	1	27	24	65	58
2002	3	1	4	7	1	12	3	6	14	36	19	2	8	20	24	58	76	109
2003	3	1	1	1	0	1	1	1	4	25	16	5	5	2	6	47	71	60
2004	1	2	6	4	3	3	4	11	4	16	11	1	9	9	19	27	84	64
2005	1	1	13	6	4	11	2	6	57	17	24	55	16	21	65	96	128	197
2006	92	6	104	26	29	60	71	70	61	32	22	5	202	115	202	58	615	577
2007	16	22	4	15	22	4	14						43	40				
Total sugar for domestic consumption:																		
1992	631	629	725	720	660	798	763	782	846	828	736	710	1,985	2,178	2,390	2,273	8,772	8,826
1993	619	629	791	688	685	799	782	815	836	783	755	740	2,039	2,172	2,432	2,277	8,916	8,920
1994	649	674	798	665	742	857	776	838	918	792	754	714	2,121	2,265	2,532	2,260	9,195	9,177
1995	651	644	811	694	780	837	755	894	892	853	813	713	2,105	2,311	2,542	2,379	9,218	9,337
1996	670	718	804	769	790	796	813	823	883	891	816	724	2,191	2,355	2,519	2,430	9,445	9,496
1997	678	668	797	758	801	841	813	849	928	915	778	750	2,143	2,401	2,591	2,443	9,565	9,578
1998	694	707	832	774	772	883	826	826	915	892	806	760	2,233	2,428	2,568	2,458	9,672	9,686
1999	676	704	827	798	861	894	833	916	905	947	876	757	2,208	2,553	2,655	2,580	9,873	9,996
2000	703	745	870	766	845	872	804	941	867	973	863	728	2,318	2,484	2,611	2,564	9,993	9,977
2001	781	718	871	788	837	861	835	917	828	922	849	703	2,370	2,486	2,580	2,474	10,000	9,911
2002	744	695	788	771	834	834	844	858	943	927	860	709	2,227	2,439	2,645	2,497	9,785	9,808
2003	689	685	809	772	746	841	802	856	807	896	837	771	2,183	2,360	2,464	2,504	9,504	9,511
2004	706	762	819	767	751	850	817	893	810	967	855	726	2,286	2,368	2,520	2,547	9,678	9,722
2005	737	732	866	793	811	867	804	897	964	951	828	793	2,335	2,471	2,666	2,571	10,019	10,043
2006	839	695	901	755	825	907	853	969	868	888	806	694	2,436	2,487	2,690	2,389	10,184	10,002
2007	754	715	838	837	862	837	836											<i>continued -</i>

Table 21-U.S. cane and beet sugar deliveries, monthly, quarterly, and by fiscal and calendar year

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	1st Q.	2nd Q.	3rd Q.	4th Q.	Fiscal	Calendar
1,000 short tons, raw value																		
Reexported in products:																		
1992	8	6	5	6	10	9	6	8	8	10	8	7	19	26	23	26	86	93
1993	10	4	9	7	7	12	14	22	20	8	8	7	23	26	57	24	132	129
1994	7	7	7	9	15	15	10	17	17	12	11	5	20	39	44	28	127	131
1995	3	7	7	8	4	7	15	18	5	6	8	7	18	18	39	21	103	96
1996	5	5	10	14	8	8	8	13	11	9	7	6	20	30	32	22	104	104
1997	32	30	6	6	7	10	12	16	17	7	6	8	68	22	45	21	157	156
1998	6	9	9	12	10	10	14	15	16	18	15	11	24	32	46	44	123	146
1999	26	19	12	14	11	10	15	10	7	9	5	7	58	35	32	21	169	145
2000	7	7	7	7	8	7	6	11	5	6	6	7	21	22	22	18	86	84
2001	8	5	8	9	10	10	11	11	8	10	16	13	21	29	30	40	98	120
2002	15	13	11	12	12	11	12	14	15	17	12	14	39	35	42	43	156	158
2003	16	13	14	14	15	20	19	15	13	16	10	9	44	49	47	35	183	175
2004	9	10	9	10	18	11	12	15	13	10	9	9	28	40	39	28	142	135
2005	7	8	9	11	9	17	11	11	11	6	14	6	24	37	33	25	121	118
2006	6	10	9	10	6	7	7	10	15	11	8	12	25	23	32	31	106	111
2007	18	11	14	17	22	16	16						43	55				
Polyhydric alcohol and livestock feed use:																		
1992	1	1	1	2	1	1	2	2	2	2	1	1	4	4	5	4	17	17
1993	2	2	1	1	1	1	1	1	1	1	1	1	5	4	3	2	15	14
1994	1	1	1	1	1	1	1	1	1	1	1	1	4	3	4	4	13	14
1995	1	1	2	1	2	2	1	2	2	2	1	1	4	5	4	4	17	17
1996	1	1	2	1	2	2	2	2	2	2	1	1	4	5	5	5	18	18
1997	1	1	1	2	2	2	2	2	3	2	1	2	4	6	6	5	21	21
1998	1	1	2	2	2	1	2	2	2	2	2	2	4	5	5	6	20	21
1999	1	2	2	2	2	2	2	2	2	2	2	3	5	6	6	8	24	26
2000	3	3	3	3	2	2	3	2	3	2	3	2	9	8	7	7	32	30
2001	3	3	3	3	4	3	3	4	10	4	3	2	8	10	17	9	42	44
2002	3	2	2	2	3	4	4	2	2	2	1		7	8	8	5	33	28
2003	2	2	2	2	2	2	2	2	3	2	3	3	6	7	7	7	24	27
2004	3	3	4	4	4	3	4	4	4	4	3	4	9	11	13	10	41	44
2005	4	4	4	4	4	5	4	4	5	4	4	5	12	13	13	13	48	51
2006	5	4	5	4	4	4	4	4	4	5	4	4	13	12	12	12	50	49
2007	4	5	5	4	5	4	4											
Total U.S. sugar deliveries 1/:																		
1992	640	637	731	728	671	809	771	792	856	840	745	718	2,007	2,208	2,418	2,303	8,875	8,937
1993	630	635	801	697	693	812	797	838	857	792	763	748	2,067	2,201	2,492	2,303	9,063	9,063
1994	657	682	806	675	758	873	787	856	936	804	767	720	2,145	2,307	2,579	2,291	9,334	9,322
1995	655	653	820	703	786	846	772	914	899	861	823	721	2,127	2,334	2,585	2,405	9,337	9,451
1996	676	724	815	785	800	806	822	838	896	901	824	731	2,215	2,390	2,557	2,457	9,567	9,619
1997	712	699	804	766	810	854	827	867	948	924	785	760	2,215	2,429	2,641	2,469	9,742	9,755
1998	701	718	843	787	784	894	843	843	933	912	823	773	2,261	2,465	2,619	2,508	9,815	9,854
1999	704	725	842	814	875	906	850	928	915	958	883	767	2,271	2,594	2,693	2,609	10,066	10,167
2000	713	755	880	776	855	881	813	954	875	981	871	737	2,348	2,513	2,641	2,589	10,111	10,091
2001	792	726	882	800	851	874	849	932	847	936	869	718	2,399	2,524	2,628	2,524	10,140	10,075
2002	761	710	801	786	848	849	860	874	960	946	874	724	2,272	2,483	2,694	2,544	9,973	9,994
2003	707	701	825	788	764	863	823	873	823	914	849	783	2,233	2,415	2,519	2,546	9,711	9,713
2004	718	775	832	782	773	864	833	912	827	980	866	739	2,324	2,419	2,572	2,586	9,861	9,901
2005	748	744	879	808	824	889	820	912	979	960	846	803	2,370	2,521	2,711	2,609	10,188	10,212
2006	850	709	914	768	835	919	865	984	886	903	818	710	2,474	2,522	2,734	2,432	10,339	10,162
2007	776	731	857	858	889	857	855						2,364	2,604				

Totals may not add due to rounding.

Note: This table commenced in October 1991 when USDA began reporting monthly production data. Puerto Rico data were added beginning October 1993.

1/ Fiscal year totals prior to 1994 differ from supply and use (table) since WASDE includes Puerto Rico.

Source: *Sweetener Market Data*, Farm Service Agency, USDA.

Table 22--U.S. sugar: supply and use, by fiscal year 1/

Items	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07 Estimate Aug-07	2007/08 Projection Aug-07
1,000 short tons, raw value												
Beginning stocks 2/	1,492	1,488	1,679	1,639	2,216	2,180	1,528	1,670	1,897	1,332	1,698	1,772
Total production 3/, 4/	7,204	8,021	8,366	9,050	8,769	7,900	8,426	8,649	7,876	7,399	8,494	8,342
Beet sugar	4,013	4,389	4,421	4,974	4,680	3,915	4,462	4,692	4,611	4,444	5,029	4,657
Cane sugar	3,191	3,632	3,945	4,076	4,089	3,985	3,964	3,957	3,265	2,955	3,465	3,684
Florida	1,679	1,924	2,127	1,966	2,057	1,980	2,129	2,154	1,693	1,367	1,713	1,774
Louisiana	1,054	1,262	1,325	1,683	1,585	1,580	1,367	1,377	1,157	1,190	1,335	1,430
Texas	91	80	107	105	206	174	191	175	158	175	180	198
Hawaii	340	350	384	318	241	251	276	251	258	223	237	282
Puerto Rico	27	16	3	4	0	0	0	0	0	0	0	0
Total imports	2,774	2,163	1,823	1,636	1,590	1,535	1,730	1,750	2,100	3,443	2,090	2,109
Tariff-rate quota imports 5/	2,277	1,729	1,256	1,124	1,277	1,158	1,210	1,226	1,408	2,588	1,630	1,354
Other Program Imports	493	349	386	388	238	296	488	464	500	349	400	425
Non-program imports	4	85	181	124	76	81	32	60	192	506	60	330
Mexico 6/											60	325
Total Supply	11,471	11,672	11,868	12,325	12,575	11,615	11,684	12,070	11,873	12,174	12,282	12,223
Total exports 3/	211	179	230	124	141	137	142	288	259	203	435	250
Quota-exempt for reexport	211	179	230	124	141	137	142	288	259	203	435	250
Other exports	0	0	0	0	0	0	0	0	0	0	0	0
CCC disposal, for export	0	0	0	0	0	0	0	0	0	0	0	0
Statistical difference 7/	0	0	0	0	0	0	0	0	0	0	0	0
Miscellaneous	30	-1	-67	-126	123	-24	161	23	94	-67	0	0
CCC disposal, for domestic non-food use	0	0	0	0	10	0	0	0	0	0	0	0
Refining loss adjustment	0	0	0	0	0	0	0	0	0	0	0	0
Statistical adjustment 8/	30	-1	-67	-126	113	-24	161	23	94	-67	0	0
Deliveries for domestic use	9,742	9,815	10,066	10,111	10,132	9,974	9,711	9,862	10,188	10,340	10,075	10,170
Transfer to sugar-containing products for exports under reexport program	157	123	169	86	98	156	183	142	121	106	175	125
Transfer to polyhydric alcohol, feed	21	20	24	32	33	33	24	41	48	51	50	45
Deliveries for domestic food and beverage use	9,564	9,672	9,873	9,993	10,000	9,785	9,504	9,678	10,019	10,184	9,850	10,000
Total use	9,983	9,992	10,238	10,090	10,396	10,087	10,014	10,172	10,542	10,476	10,510	10,420
Ending stocks 3/	1,488	1,679	1,639	2,216	2,180	1,528	1,670	1,897	1,332	1,698	1,772	1,803
Privately owned	1,488	1,679	1,639	1,919	1,395	1,316						
CCC	0	0	0	297	784	212						
Percent												
Stocks-to-use ratio	14.91	16.81	16.01	21.96	20.97	15.15	16.68	18.65	12.63	16.21	16.86	17.30

NOTE: Numbers may not add due to rounding.

1/ Fiscal year beginning October 1. 2/ Stocks in hands of primary distributors and CCC. 3/ Historical data are from FSA (formerly ASCS), *Sweetener Market Data*, and NASS, *Sugar Market Statistics* prior to 1992. 4/ Production reflects processors' projections compiled by the Farm Service Agency.

5/ Actual arrivals under the tariff-rate quota (TRQ) with late entries, early entries, and (TRQ) overfills assigned to the fiscal year in which they actually arrived. The 2006/07 available TRQ assumes shortfall of 325,000 tons.

6/ Does not include Mexico TRQ imports.

7/ Receipts compiled by NASS and FSA Customs data. 8. Calculated as a residual. Largely consists of invisible stocks change.

Table 23--Net cost of corn starch to U.S. wet-millers, Midwest markets

Period	Corn byproducts				Byproduct credits				Net cost		
	Yellow dent corn 1/	Corn oil	Corn gluten feed	Corn gluten meal	Corn oil	Corn gluten feed	Corn gluten meal	Total byproduct	Corn	Corn starch	Corn sweetener
	Dollars per bu	Cents per lb	Dollars per short ton		---Cents per bushel---			Dollars per bu	Dollars per bu	Cents per lb	
1992	2.33	23.89	102.80	259.72	37.03	69.39	34.41	1.41	0.92	2.93	2.77
1993	2.27	21.52	87.99	296.53	33.35	59.39	39.29	1.32	0.95	3.02	2.85
1994	2.40	27.22	89.59	262.50	42.19	60.47	34.78	1.37	1.03	3.26	3.08
1995	2.70	26.67	88.34	244.02	41.33	59.63	32.33	1.33	1.37	4.34	4.10
1996	3.82	24.52	116.25	332.40	38.00	78.47	44.04	1.61	2.22	7.04	6.65
1997	2.67	24.87	83.99	345.22	38.55	56.69	45.74	1.41	1.26	4.00	3.78
1998	2.23	29.90	64.86	260.54	46.34	43.78	34.52	1.25	0.98	3.12	2.95
1999	1.92	23.59	58.77	231.88	36.56	39.67	30.72	1.07	0.85	2.68	2.54
2000	1.88	14.66	51.71	237.63	22.72	34.90	31.49	0.89	0.98	3.13	2.95
2001	1.90	15.75	62.46	253.98	24.41	42.16	33.65	1.00	0.90	2.86	2.70
2002	2.17	20.78	60.33	243.72	32.21	40.72	32.29	1.05	1.12	3.55	3.36
2003	2.29	28.65	72.15	251.36	44.40	48.70	33.31	1.26	1.02	3.25	3.07
2004	2.39	27.59	72.01	308.44	42.76	48.61	40.87	1.32	1.07	3.39	3.20
2005	1.90	28.42	51.33	288.09	44.04	34.65	38.17	1.17	0.73	2.33	2.20
2006	2.41	25.06	59.87	264.89	38.84	40.41	35.10	1.14	1.27	4.02	3.80
2005											
Jan.	1.86	27.41	53.63	245.63	42.49	36.20	32.55	1.11	0.75	2.37	2.24
Feb.	1.86	27.58	51.38	232.50	42.75	34.68	30.81	1.08	0.78	2.47	2.33
Mar.	1.97	28.08	51.90	240.50	43.52	35.03	31.87	1.10	0.87	2.75	2.60
I	1.90	27.69	52.30	239.54	42.92	35.30	31.74	1.10	0.80	2.53	2.39
Apr.	1.94	29.29	51.75	246.25	45.40	34.93	32.63	1.13	0.81	2.57	2.43
May	1.93	30.65	52.80	274.60	47.51	35.64	36.38	1.20	0.73	2.33	2.20
June	2.02	30.73	50.63	322.13	47.63	34.18	42.68	1.24	0.78	2.46	2.33
II	1.96	30.22	51.73	280.99	46.85	34.92	37.23	1.19	0.77	2.46	2.32
July	2.20	30.01	50.38	334.25	46.52	34.01	44.29	1.25	0.95	3.02	2.86
Aug.	1.98	28.83	51.90	327.70	44.69	35.03	43.42	1.23	0.75	2.38	2.25
Sept.	1.75	27.75	47.13	294.75	43.01	31.81	39.05	1.14	0.61	1.94	1.83
III	1.98	28.86	49.80	318.90	44.74	33.62	42.25	1.21	0.77	2.45	2.31
Oct.	1.67	27.50	51.75	300.00	42.63	34.93	39.75	1.17	0.50	1.58	1.49
Nov.	1.75	27.08	50.10	319.00	41.97	33.82	42.27	1.18	0.57	1.81	1.71
Dec.	1.89	26.08	52.63	319.75	40.42	35.53	42.37	1.18	0.71	2.24	2.12
IV	1.77	26.89	51.49	312.92	41.67	34.76	41.46	1.18	0.59	1.88	1.77
2006											
Jan.	1.98	25.22	55.75	303.75	39.09	37.63	40.25	1.17	0.81	2.57	2.43
Feb.	2.07	23.65	57.75	259.38	36.66	38.98	34.37	1.10	0.97	3.08	2.91
Mar.	2.04	22.61	61.63	263.75	35.05	41.60	34.95	1.12	0.92	2.93	2.77
I	2.03	23.83	58.38	275.63	36.93	39.40	36.52	1.13	0.90	2.86	2.70
Apr.	2.18	23.19	57.88	250.63	35.94	39.07	33.21	1.08	1.10	3.49	3.29
May	2.22	25.25	60.38	251.70	39.14	40.76	33.35	1.13	1.09	3.45	3.26
June	2.15	25.70	58.25	250.00	39.84	39.32	33.13	1.12	1.03	3.26	3.08
II	2.18	24.71	58.84	250.78	38.31	39.71	33.23	1.11	1.07	3.40	3.21
July	2.22	25.75	56.13	240.00	39.91	37.89	31.80	1.10	1.12	3.57	3.37
Aug.	2.07	25.42	56.00	229.25	39.40	37.80	30.38	1.08	0.99	3.16	2.98
Sept.	2.21	24.71	55.90	237.50	38.30	37.73	31.47	1.08	1.13	3.60	3.40
III	2.17	25.29	56.01	235.58	39.20	37.81	31.21	1.08	1.08	3.44	3.25
Oct.	2.82	24.70	60.20	272.20	38.29	40.64	36.07	1.15	1.67	5.30	5.01
Nov.	3.43	26.47	68.63	306.25	41.03	46.33	40.58	1.28	2.15	6.83	6.45
Dec.	3.53	28.05	69.88	314.31	43.48	47.17	41.65	1.32	2.21	7.01	6.62
IV	3.26	26.41	66.24	297.59	40.93	44.71	39.43	1.25	2.01	6.38	6.03
2007											
Jan.	3.66	28.05	92.00	333.00	43.48	62.10	44.12	1.50	2.16	6.87	6.49
Feb.	3.90	28.66	85.38	346.88	44.42	57.63	45.96	1.48	2.42	7.68	7.26
Mar.	3.76	29.08	84.94	361.50	45.07	57.33	47.90	1.50	2.26	7.16	6.77
I	3.77	28.60	87.44	347.13	44.32	59.02	45.99	1.49	2.28	7.24	6.84
Apr.	3.36	29.93	72.82	363.33	46.39	49.15	48.14	1.44	1.92	6.11	5.77
May	3.52	31.56	59.50	344.00	48.92	40.16	45.58	1.35	2.17	6.90	6.52
June	3.68	34.71	62.25	352.75	53.80	42.02	46.74	1.43	2.25	7.16	6.76
II	3.52	32.07	64.86	353.36	49.70	43.78	46.82	1.40	2.12	6.72	6.35
July	3.03	37.25	66.40	398.50	57.74	44.82	52.80	1.55	1.48	4.69	4.43
Aug.		39.61									

Note: To calculate the net cost of corn, it is assumed that the average bushel of corn wet-milled in the United States contains 31.5 pounds of recoverable starch, dry weight, as well as 1.55 pounds of corn oil (crude weight), 13.5 pounds of corn gluten feed (commercial weight), and 2.65 pounds of corn gluten meal (commercial weight). Also, 31.5 pounds of starch, dry weight, produces about 33.33 pounds of corn sweetener (dry weight) because of the chemical gain converting starch to sweetener.

1/ Reported prices are Illinois points. These corn values represent country elevator producer bid prices and do not reflect the additional costs of handling and transporting the corn to Midwest processing plants.

Sources: USDA, Agricultural Marketing Service, <http://marketnews.usda.gov/portal/lg>; Economic Research Service, USDA, byproduct credits and net cost calculations.

Table 24--U.S. use of field corn, by crop year 1/

Description	1995/96	1996/97	1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07 2/	2007/08 2/
HFCS	473	492	513	530	540	530	541	532	530	521	529	510	515
Glucose syrup and dextrose	227	233	229	219	222	218	217	219	228	222	229	240	243
Total corn sweetener	700	725	742	749	761	748	758	751	758	743	758	750	758
Corn starch	226	238	246	240	251	247	246	256	272	278	275	275	280
Wet milling excluding alcohol	926	963	988	989	1,013	995	1,003	1,007	1,030	1,021	1,033	1,025	1,038
Alcohol													
Fuel	396	429	481	526	566	628	714	996	1,168	1,323	1,603	2,125	3,300
Beverage	125	130	133	127	130	130	131	131	132	133	135	136	137
Total	521	559	614	653	696	758	845	1,127	1,300	1,456	1,738	2,261	3,437
Total	1,447	1,522	1,602	1,642	1,709	1,753	1,848	2,133	2,329	2,477	2,771	3,286	4,475
U.S. corn crop	7,374	9,233	9,207	9,759	9,431	9,915	9,503	8,967	10,089	11,807	11,114	10,535	13,308
Corn sweetener share	9.49	7.85	8.06	7.67	8.07	7.54	7.97	8.38	7.51	6.29	6.82	7.12	5.70
Wet milling excluding alcohol share	12.56	10.43	10.73	10.13	10.74	10.04	10.56	11.23	10.21	8.64	9.30	9.73	7.80
Alcohol share	7.07	6.05	6.67	6.69	7.38	7.64	8.89	12.56	12.88	12.33	15.64	21.46	25.82
Total	19.62	16.48	17.40	16.83	18.12	17.68	19.45	23.79	23.09	20.97	24.93	31.19	33.62

1/ September/August crop year. 2/ Forecast.

Source: Economic Research Service, USDA.

Table 25--Shipments, exports, imports, and apparent consumption of confectionery products

Year	Population	Manufacturers' shipments	Exports of domestic merchandise	Imports for consumption	Apparent consumption	Per capita consumption	Imports as percentage of consumption
	Millions		Short tons			Pounds	Percent
Chocolate-type confectionery							
1995	266.6	1,515,925	79,464	89,447	1,525,907	11.45	5.86
1996	269.7	1,550,048	86,421	88,104	1,551,731	11.51	5.68
1997	272.9	1,613,503	94,199	96,781	1,616,085	11.84	5.99
1998	276.1	1,625,556	84,641	101,979	1,642,894	11.90	6.21
1999	279.3	1,608,051	90,168	109,704	1,627,588	11.65	6.74
2000	282.3	1,645,622	136,141	127,721	1,637,203	11.60	7.80
2001	285.0	1,629,723	191,987	142,260	1,579,995	11.09	9.00
2002	287.7	1,662,999	137,454	150,693	1,676,238	11.65	8.99
2003	290.3	1,676,262	137,197	178,808	1,717,873	11.94	10.41
2004	293.0	1,660,772	131,683	192,576	1,721,664	11.97	11.19
2005	295.7	1,755,183	132,027	191,554	1,814,710	12.62	10.56
2006	298.4	1,751,727	141,035	189,187	1,799,879	12.51	10.51
Nonchocolate-type confectionery							
1995	--	1,411,612	72,091	160,642	1,500,163	11.26	10.71
1996	--	1,523,949	77,311	173,926	1,620,565	12.02	10.73
1997	--	1,571,466	91,462	195,240	1,675,244	12.28	11.65
1998	--	1,536,032	90,391	229,035	1,674,676	12.13	13.68
1999	--	1,396,721	90,183	273,313	1,579,850	11.31	17.30
2000	--	1,377,233	108,220	300,252	1,569,264	11.12	19.13
2001	--	1,207,365	112,884	331,371	1,425,851	10.01	23.24
2002	--	1,142,433	95,307	381,785	1,428,911	9.93	26.72
2003	--	1,123,569	97,001	466,584	1,493,152	10.38	31.25
2004	--	1,130,330	93,849	526,571	1,563,052	10.87	33.69
2005	--	1,163,671	95,716	559,113	1,627,068	11.31	34.36
2006	--	1,181,760	89,751	582,748	1,674,757	11.64	34.80
Chewing gum, sugar and nonsugar							
1995	--	NA	16,817	37,799	NA	NA	NA
1996	--	NA	15,487	38,883	NA	NA	NA
1997	--	212,606	22,250	45,284	235,640	1.73	19.22
1998	--	203,414	17,864	45,243	230,793	1.67	19.60
1999	--	196,597	16,291	49,126	229,432	1.64	21.41
2000	--	203,213	13,014	47,449	237,648	1.68	19.97
2001	--	215,230	12,012	46,414	249,632	1.75	18.59
2002	--	217,011	18,776	51,911	250,146	1.74	20.75
2003	--	223,535	20,179	59,045	262,402	1.82	22.50
2004	--	213,840	16,363	60,916	258,393	1.80	23.57
2005	--	190,312	20,232	61,346	231,426	1.61	26.51
2006	--	199,785	13,751	63,285	249,318	1.73	25.38
Total confectionery							
1995	--	NA	168,373	287,888	NA	NA	NA
1996	--	NA	179,219	300,913	NA	NA	NA
1997	--	3,397,575	207,911	337,305	3,526,969	25.85	9.56
1998	--	3,365,002	192,896	376,257	3,548,363	25.70	10.60
1999	--	3,201,369	196,642	432,142	3,436,869	24.61	12.57
2000	--	3,226,069	257,375	475,422	3,444,116	24.40	13.80
2001	--	3,052,317	316,884	520,045	3,255,478	22.84	15.97
2002	--	3,022,443	251,536	584,389	3,355,296	23.33	17.42
2003	--	3,023,367	254,377	704,437	3,473,427	24.15	20.28
2004	--	3,004,941	241,894	780,063	3,543,109	24.63	22.02
2005	--	3,109,166	247,975	812,013	3,673,204	25.54	22.11
2006	--	3,133,272	244,538	835,220	3,723,954	25.89	22.43

NA = Not available.

Source: U.S. Census Bureau.

Table 26--U.S. maple syrup production, imports, exports, and prices, by calendar year

Calendar year	Production	Imports	Exports	U.S. price
		1,000 U.S. gallons	Dollars/gallon	
1975	1,201	607	70	
1976	927	886	80	
1977	1,221	891	90	
1978	1,154	811	60	
1979	1,219	857	62	
1980	973	856	41	
1981	1,410	1,046	66	
1982	1,317	1,154	54	
1983	1,167	1,288	37	
1984	1,390	1,248	52	
1985	1,344	1,323	123	
1986	951	1,673	211	
1987	792	1,410	211	
1988	1,153	1,246	178	
1989	1,198	1,606	270	NA
1990	1,073	1,872	209	NA
1991	1,299	1,960	305	NA
1992	1,641	2,302	457	23.80
1993	1,007	2,702	603	23.30
1994	1,324	3,304	569	24.40
1995	1,096	3,166	607	26.20
1996	1,567	3,257	821	26.90
1997	1,298	3,648	655	27.10
1998	1,159	3,724	460	27.80
1999	1,188	3,957	843	27.60
2000	1,231	4,101	431	27.56
2001	1,049	4,615	396	28.60
2002	1,475	4,670	500	27.50
2003	1,260	4,689	617	28.30
2004	1,507	4,712	758	28.40
2005	1,242	4,931	916	29.90
2006	1,449	5,551	618	31.30

Sources: National Agricultural Statistics Service, USDA; New England Agricultural Statistics; New York Agricultural Statistics Service; Bureau of the Census, Commerce Department.

Table 27--U.S. maple syrup production and value, by State, calendar years

State and region	2000	2001	2002	2003	2004	2005	2006	2007
Production - 1,000 gallons								
New England:								
Connecticut	7	9	10	10	11	10	10	8
Maine	250	200	275	285	290	265	300	225
Massachusetts	39	34	48	37	50	40	40	30
New Hampshire	75	45	83	60	83	57	64	60
Vermont	460	275	510	420	500	410	460	450
Total	831	563	926	812	934	782	874	773
Northeast:								
New York	210	193	260	210	255	222	253	224
Midwest:								
Pennsylvania	47	69	60	52	60	61	66	51
Ohio	34	96	75	51	78	69	78	75
Michigan	44	60	75	59	80	58	78	60
Minnesota	0	0	0	0	0	0	0	0
Wisconsin	65	68	79	76	100	50	100	75
Total	190	293	289	238	318	238	322	261
U.S. total	1,231	1,049	1,475	1,260	1,507	1,242	1,449	1,258
Value of production - 1,000 dollars								
New England:								
Connecticut	307	411	472	486	569	500	582	--
Maine	3,550	3,740	5,335	6,413	5,626	5,698	7,290	--
Massachusetts	1,474	1,380	1,896	1,550	2,315	2,048	1,916	--
New Hampshire	2,858	1,800	3,411	2,580	2,938	2,354	2,810	--
Vermont	13,800	8,470	13,770	11,676	13,650	11,398	13,892	--
Total	21,989	15,801	24,884	22,705	25,098	21,998	26,490	--
Northeast:								
New York	6,090	5,694	6,838	5,628	7,191	7,037	8,020	--
Midwest:								
Pennsylvania	1,335	1,746	1,602	1,425	1,740	1,922	2,145	--
Ohio	1,166	3,005	2,423	1,790	2,496	2,484	2,652	--
Michigan	1,544	1,782	2,438	1,841	3,040	2,088	2,886	--
Minnesota	--	--	--	--	--	--	--	--
Wisconsin	1,800	1,986	2,315	2,212	3,230	1,620	3,120	--
Total	5,845	8,519	8,778	7,268	10,506	8,114	10,803	--
U.S. total	33,924	30,014	40,500	35,601	42,795	37,149	45,313	--
Price per gallon - dollars								
New England:								
Connecticut	43.86	45.67	47.20	48.60	51.73	50.00	58.20	--
Maine	14.20	18.70	19.40	22.50	19.40	21.50	24.30	--
Massachusetts	37.79	40.59	39.50	41.89	46.30	51.20	47.90	--
New Hampshire	38.11	40.00	41.10	43.00	35.40	41.30	43.91	--
Vermont	30.00	30.80	27.00	27.80	27.30	27.80	30.20	--
Total	26.46	28.07	26.87	27.96	26.87	28.13	30.31	--
Northeast:								
New York	29.00	29.50	26.30	26.80	28.20	31.70	31.70	--
Midwest:								
Pennsylvania	28.40	25.30	26.70	27.40	29.00	31.51	32.50	--
Ohio	34.29	31.30	32.31	35.10	32.00	36.00	34.00	--
Michigan	35.09	29.70	32.51	31.20	38.00	36.00	37.00	--
Minnesota	--	--	--	--	--	--	--	--
Wisconsin	27.69	29.21	29.30	29.11	32.30	32.40	31.20	--
Total	30.76	29.08	30.37	30.54	33.04	34.09	33.55	--
U.S. total	27.56	28.61	27.46	28.25	28.40	29.91	31.27	--

-- = Not available

Source: National Agricultural Statistics Service, USDA.