

# CRS Report for Congress

## Sugar Policy and the 2007 Farm Bill

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Remy Jurenas  
Specialist in Agricultural Policy  
Resources, Science, and Industry Division



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## Summary

Congress is expected to decide the future of the U.S. sugar program in the omnibus farm bill this year. Growers of sugar beets and sugarcane, and processors of these crops, favor continuing the structure of the current sugar price support program but seek changes. Food and beverage manufacturers that use sugar want Congress to address their concerns about the impact of sugar prices and those program features that restrict supplies.

To meet the current statutory directive that the sugar program operate at no cost, the U.S. Department of Agriculture (USDA) makes loans available to processors at mandated price support levels, limits the amount of sugar that processors can sell domestically under "marketing allotments," and restricts imports. USDA also seeks to ensure that supplies of sugar are adequate to meet domestic demand. "No cost" is achieved if USDA applies all these tools in a way that maintains market prices above support levels. Should prices fall, processors that took out loans have the right to hand over as payment sugar that has been pledged as collateral, which USDA treats as a cost.

With free trade in sugar with Mexico set to take effect in 2008, and the prospect of additional sugar imports under four other negotiated free trade agreements, both sugar producers and users agree that the program cannot be sustained without change. If the sugar program were to be continued without change, USDA and the Congressional Budget Office (CBO) project that prices below support levels because of imports would result in program costs of up to \$1.4 billion over the next 10 years. This contrasts with USDA's success in recent years in operating the program at no cost, and even generating revenue.

The House-reported farm bill (H.R. 2419) would mandate a sugar-for-ethanol provision intended to address any sugar surplus. USDA would be required to purchase as much U.S.-produced sugar as necessary to maintain market prices above support levels. Purchased sugar would be sold to bioenergy producers for processing into ethanol. USDA funding would be open-ended. The bill also would increase minimum guaranteed prices for raw sugar and refined beet sugar by almost 3%, and tighten the rules (i.e., remove discretionary authority) that USDA must follow to implement marketing allotments and administer import quotas. These provisions reflect the recommendations made by sugar crop producers and processors. CBO projects that this bill's sugar-related provisions would cost about \$660 million over the five-year farm bill period and \$1.2 billion over 10 years.

Food and beverage manufacturers that use sugar oppose the House Agriculture Committee-reported provisions, arguing that costs to consumers would increase by \$100 million annually and that the availability of sugar for food use in the domestic market would be further restricted. Their advocates in the House have signaled they will offer amendments to strike certain Committee-reported provisions and/or simply extend the current program without change. This report will be updated to reflect key developments. For additional information, see CRS Report RL33541, *Background on Sugar Policy Issues*, by Remy Jurenas.

## Contents

Overview of Sugar Program .....	1
Issues in Current Debate .....	1
Level of Sugar Price Support .....	1
Controlling Sugar Supply to Protect Sugar Prices .....	2
Import Quotas .....	2
Marketing Allotments .....	4
Sugar for Ethanol .....	5
Background .....	5
Sugar Program Costs .....	7

## List of Tables

Table 1. Annual U.S. Sugar Import Commitments When the 2002 Farm Bill Was Enacted .....	3
Table 2. Outlays (-) or Receipts (+) of the Sugar Program under the 2002 Farm Bill .....	7
Table 3. CBO's Projection of Sugar Program's Cost under House Farm Bill ...	8

# Sugar Policy and the 2007 Farm Bill

## Overview of Sugar Program

The current sugar program is designed to protect the price received by growers of sugarcane and sugar beets, and by the firms (raw sugar mills and beet refiners) that process these crops into sugar. To accomplish this, the U.S. Department of Agriculture (USDA) makes non-recourse price support loans available at mandated price levels to processors, limits the amount of sugar that processors can sell domestically under “marketing allotments,” and restricts imports. USDA is required to operate the sugar program on a “no-cost” basis. This means USDA must regulate the U.S. sugar supply using allotments, import quotas, and related authorities so that domestic market prices do not fall below guaranteed minimum price levels. If the market price is below the support level when a sugar price support loan comes due, its “non-recourse” feature means a processor can exercise the legal right to forfeit, or hand over, sugar offered to USDA as collateral for the loan in fulfillment of its repayment obligation. This report will focus on the issues raised by the sugar program provisions in major bills and floor amendments. For more information, see CRS Report RL33541, *Background on Sugar Policy Issues*.

## Issues in Current Debate

This year's consideration of future U.S. sugar policy to date has revolved around four issues. These are raising the level of minimum price guarantees to be made available to processors, how to use two tools to manage the domestic sugar supply, authorizing any sugar surplus to be used as a feedstock for ethanol, and accounting for projected program costs. Though industrial users of sugar in food and beverage products explored converting the sugar program to operate similar to the programs in place for the major grains, oilseeds and cotton, this policy option has not received further attention.

## Level of Sugar Price Support

The sugar program guarantees producers of the sugar crops and the processors that convert these crops into sugar a price that since the early 1980s has ranged from two to four times the price of sugar traded in the world marketplace. The statutorily-set loan rates<sup>1</sup> account for most of the effective support level made available to

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<sup>1</sup> For sugar, the loan rate is the price per pound at which the government will provide nonrecourse loans to processors by the Commodity Credit Corporation (CCC). This short term financing at below market interest rates enables processors to hold their commodities (continued...)

producers and processors, a level that USDA is directed to protect.<sup>2</sup> Loan rates for raw cane sugar have not changed since 1985; for refined beet sugar, since 1992.

The House Agriculture Committee-reported bill (H.R. 2419) would increase loan rates by almost 3% – from 18.0¢ to 18.5¢ per pound for raw cane sugar, and from 22.9¢ to 23.5¢ per pound for refined beet sugar. This increase is about one-half of what growers and processors reportedly were seeking, and may reflect a scaling back of expectations to deflect the impact of other sought provisions. They argue that the increase in the loan rate is needed to cover increased production costs, particularly energy inputs. Sugar users counter that the proposed higher loan rates will increase costs to taxpayers by an additional \$100 million annually. They also note that while the bill's ethanol provisions (see **Sugar for Ethanol** below) "are supposedly designed to deal with surpluses," the loan rate increase "can only encourage *higher* surplus production."<sup>3</sup> The Bush Administration, in its statement on the House farm bill, opposes the increase in the loan rates for sugar.

## Controlling Sugar Supply to Protect Sugar Prices

The current sugar program uses two tools – import quotas and marketing allotments – to ensure that producers and processors receive price support benefits. By regulating the amount of foreign sugar allowed to enter and the quantity of sugar that processors can sell, USDA can for the most part keep market prices above effective support levels, meet the no-cost objective, and ensure that domestic sugar demand is met. If successful, the likelihood that USDA acquires sugar due to loan forfeitures is remote.

**Import Quotas.** The United States must import sugar to cover the balance of domestic demand that the U.S. sugar production sector cannot supply. However, USDA restricts the quantity of foreign sugar allowed to enter for refining and/or sale primarily to manufacturers for domestic food and beverage use. Quotas are used to ensure that the quantity allowed to enter does not depress the domestic market price to below support levels. Quota amounts are laid out in U.S. market access commitments made under World Trade Organization (WTO) rules and under bilateral free trade agreements (FTAs).

The current sugar program accommodates, or makes room for, imports of up to 1.532 million tons each year. This import level is one of the four factors that USDA uses to establish the national sugar allotment (called the “overall allotment

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<sup>1</sup> (...continued)  
for later sale.

<sup>2</sup> The loan rates alone do not serve as the intended price guarantee, or floor price, for sugar. In practice, USDA sets marketing allotments and import quota levels in order to support raw cane sugar and refined beet sugar at slightly higher price levels. Each price level takes into account the loan rate, interest paid on a price support loan, transportation costs (for raw sugar), certain marketing costs (for beet sugar), and discounts. These are frequently referred to as “loan forfeiture levels” or the level of “effective” price support.

<sup>3</sup> Letter to Members of Congress, from food and beverage companies and trade associations, and public interest groups, July 13, 2007.

quantity”), and reflects U.S. trade commitments under two trade agreements in effect when the 2002 program was authorized (**Table 1**).

Beginning on January 1, 2008, U.S. sugar imports from Mexico will no longer be restricted. However, they could fluctuate from year to year. First, the amount of Mexican sugar exported to the U.S. market will depend largely upon the extent that U.S. exports of cheaper high-fructose corn syrup (HFCS) displace Mexican consumption of Mexican-produced sugar. Surplus Mexican sugar, in turn, would be expected to move north to the United States. Second, Mexico’s sugar output, though trending upward, does vary from year to year, depending upon weather and growing conditions. Mexican government policy also is to hold three months worth of sugar stocks in reserve and to allow sugar imports when needed to meet demand and lower prices.<sup>4</sup>

**Table 1. Annual U.S. Sugar Import Commitments  
When the 2002 Farm Bill Was Enacted**

	<i>short tons</i>
World Trade Organization Quota (minimum)	1,256,000
North American Free Trade Agreement – Mexico Quota (maximum) <sup>a</sup>	276,000
<b>Total</b>	<b>1,532,000</b>

a. Applies only through the end of calendar year 2007.

Also, the United States has committed under other existing and pending bilateral FTAs to allow for additional sugar imports.<sup>5</sup> Such imports in 2013, potentially the 5<sup>th</sup> and last year that the sugar program authorized by the 2007 farm bill would be in effect, could total from about 420,000 tons to 1.215 million tons **above** existing WTO and NAFTA/Mexico trade commitments. The wide range reflects the extent that HFCS use in Mexico actually displaces sugar consumption and creates a surplus available for export to the U.S. market.

**Legislation.** The sugar program provisions in H.R. 2419 do not directly address the issue of additional sugar imports. Instead, section 9013 in the Energy Title proposes a new sugar-for-ethanol program to handle the price-related impact of such imports (see **Sugar for Ethanol** and **Program Costs** below). However, the bill prescribes how USDA would administer import quotas in two ways. First, to cover shortfalls in what processors can sell (because of hurricanes or other disastrous

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<sup>4</sup> U.S. sugar processors also will be free to export sugar to Mexico to take advantage of the occasional higher prices there.

<sup>5</sup> Most of the sugar access provisions in the Dominican Republic-Central American FTA (DR-CAFTA) already are in effect. Congress has yet to consider the FTAs with Panama, Peru, and Colombia, all of which would grant additional access for their sugar to the U.S. market.

events) under allotments, USDA would be directed to ensure that most imports enter in the form of raw cane sugar rather than refined sugar. While historically most permitted imports have entered in raw form, USDA allowed large quantities of refined sugar to enter after the late 2005 hurricanes significantly affected the ability of cane refineries in Louisiana and Florida to process raw sugar. The Committee's provision is intended to ensure that cane refineries (which process raw sugar into refined sugar) can more fully use their operating capacity. Also, limiting the entry of refined sugar would enhance the position of the domestic beet sector to increase their sales of refined sugar.

Second, USDA would be directed to regulate when and how much raw cane sugar imports are allowed to be shipped to U.S. cane refineries. While USDA announced shipping patterns in FY2003-FY2005, the impact of the hurricanes led to a decision not to follow this long-standing practice in FY2006-FY2007. USDA justified removing these restrictions because of "changes occurring over time in the domestic marketing of cane sugar." Food and beverage firms oppose "micro-managing" the timing of imports, noting that the application of such rules will limit the ability of cane refiners to efficiently use their processing capacity and could lead to serious shortfalls at times in the amount of sugar supplied to the market.<sup>6</sup> The Bush Administration has expressed concern over requiring shipping patterns for sugar imports.

**Marketing Allotments.** In the 2002 farm bill, the domestic production sector accepted mandatory limits on the amount of sugar that processors can sell – known as marketing allotments – in return for the assurance of price protection. It viewed allotments as a way to try to capture any growth in U.S. sugar demand, and assumed that the then-U.S. sugar import quota commitments would continue without change (see **Import Quotas** above). The statute, however, stipulated that if USDA estimates imports will be above 1.532 million short tons, then USDA must suspend marketing allotments. Suspending allotments because of additional imports raises the prospect of downward pressure on market prices if most sugar demand is already met. If the additional imports were to cause the price to fall below support levels, forfeitures would occur and USDA would be unable to meet the no-cost requirement. Including the allotment suspension provision was designed to ensure that USDA not lose control over managing U.S. sugar supplies for fear of the consequences that could be unleashed (i.e., demonstrating its inability to implement congressional policy).

**Legislation.** Implementation of the 2002 farm bill's marketing allotment authority has resulted in the U.S. sugar production sector's share of domestic food consumption ranging from a low of 73% in FY2006 to a high of 89% in FY2004. Concerned with the prospect that their market share would decline as sugar imports increase under various trade agreements (see **Import Quotas** above), sugar producers and processors have decided to pursue a different strategy. H.R. 2419 would guarantee that the domestic production sector always benefits from a minimum 85% share of the U.S. sugar for food market. USDA would be required to announce an "overall allotment quantity" – the amount of sugar that all processors combined can

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<sup>6</sup> Letter to Members of Congress, July 13, 2007.

sell – that represents at least 85% of estimated sugar consumption. This addresses the sector's objective that imports not displace domestic production.

## Sugar for Ethanol

**Background.** Sugar producers and processors have had an ongoing interest in exploring the potential for using sugar crops and processed sugar as a feedstock to produce ethanol (a gasoline additive). In the 2002-2003 period, they encouraged USDA to explore selling forfeited sugar stocks to corn-based ethanol processors. A few ethanol producers experimented by adding sugar to speed up the ethanol fermentation process, but the results appear to have been disappointing.

In 2005, Congress approved the Dominican Republic-Central American Free Trade Agreement (DR-CAFTA) that gives six countries increased access for their sugar to the U.S. market. During the debate, producers and processors sought a deal with the Bush Administration on a sugar-for-ethanol package. Their objective was to have the option available to divert additional sugar imports under DR-CAFTA whenever domestic prices fall below support levels.<sup>7</sup> With Congress mandating in 2005 the use of renewable fuels be doubled by 2012,<sup>8</sup> some have advocated that sugar be considered as a feedstock along with other agricultural crops and waste. Separately, Hawaii mandated (effective April 2006) that 85% of the gasoline sold must contain 10% ethanol. This requirement assumes that over time, the sugarcane produced on the islands will be used as the prime feedstock for ethanol.

If the cost of feedstock is excluded, producing ethanol from sugar cane can be less costly than producing it from corn. This is because the starch in corn must first be broken down into sugar before it can be fermented. This extra step adds to the cost of processing corn into ethanol, when contrasted to using sugarcane or processed sugar. Further, sugar cane waste (bagasse) can be burned to provide energy for an ethanol plant, reduce associated energy costs, and improve sugar ethanol's energy balance relative to corn ethanol.

Brazil's success at integrating sugar ethanol into its passenger vehicle fuel supply has stimulated interest in exploring prospects for sugar-based ethanol in the United States. However, wide differences in sugar production costs and market prices in the two countries cause the economics of sugar-based ethanol to differ significantly. In investigating the economics of ethanol from sugar, USDA concluded that producing sugar cane ethanol in the United States would be more than twice as costly as U.S. corn ethanol and nearly three times as costly as Brazilian

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<sup>7</sup> Though the Administration did not agree to such a package, the Secretary of Agriculture pledged to divert surplus sugar imports – through purchases – for ethanol and other non-food uses, to ensure that the sugar program operates as authorized only through FY2008. For additional information, see “Sugar in DR-CAFTA – Sugar Deal to Secure Votes” in CRS Report RL33541, *Background on Sugar Policy Issues*, by Remy Jurenas.

<sup>8</sup> For more information, see CRS Report RL33564, *Alternative Fuels and Advanced Technology Vehicles: Issues in Congress*, by Brent D. Yacobucci.



sugar ethanol.<sup>9</sup> Feedstock costs accounted for most of this price differential.<sup>10</sup> The USDA study showed that while sugar ethanol may be a positive energy strategy in such countries as Brazil, it may not be economical in the United States.<sup>11</sup>

**Legislation.** Section 9013 of H.R. 2419 incorporates a proposal presented by the U.S. sugar production sector. The “Feedstock Flexibility Program for Bioenergy Producers” would require USDA to administer a sugar-for-ethanol program using sugar intended for food use but deemed to be in surplus. USDA would sell both surplus sugar that it purchases if determined necessary to maintain prices above support levels, and sugar acquired as a result of loan forfeitures to bioenergy producers for processing into fuel grade ethanol and other biofuel. Competitive bids would be used to purchase sugar from processors, at a price not less than sugar program support levels, to then be sold in turn to ethanol firms. USDA would implement this program only in those years where purchases are required to operate the sugar program at no cost. Open-ended funding would be provided by the Commodity Credit Corporation, USDA’s financing arm. This new program would take effect in FY2008, one year prior to the expiration of current sugar program authority.

Because it would cost much more to produce ethanol from U.S.-priced sugar than from corn, this new program would require a considerable subsidy to operate as intended. The prime market for such sugar likely would be existing and planned corn-based ethanol facilities close to sugar beet and sugarcane producing areas (e.g., the Upper Midwest and Hawaii). Producers of ethanol from corn in the continental United States, though, would likely need to adjust their fermentation process and/or invest in new equipment to handle sugar. As a result, they may not be as interested in purchasing sugar as a feedstock unless the price is significantly discounted further (e.g., requiring even more of a subsidy) to reflect the additional costs of processing sugar instead of corn. However, the availability of this subsidy could facilitate the development of the ethanol sector in Hawaii and partially reduce the islands’ dependence on importing gasoline for its vehicle transportation needs. CBO estimates that the demand created by this program would increase demand for sugar and slightly reduce the cost of the sugar program itself (see **Program Costs** below). It appears that a large portion of CBO’s earlier projected baseline cost of continuing the current program, even with these estimated savings, assumes substantial forfeitures as prices fall below support levels.

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<sup>9</sup> Office of Economics, *The Economic Feasibility of Ethanol Production from Sugar in the United States*, July 2006.

<sup>10</sup> In Brazil, the cost of producing raw cane sugar reportedly ranges from 6 to 9 cents per pound (or 9 to 12 cents when converted to refined basis). In the United States, raw cane sugar production costs range from 12 to 20 cents per pound; U.S. production costs for refined beet sugar range from 17 to 33 cents per pound. For additional perspective, see “Costs of Production and Sugar Processing” in USDA, Economic Research Service, *Sugar Backgrounder*, July 2007, pp. 17-21.

<sup>11</sup> This discussion is adapted from “Sugar Ethanol” in CRS Report RL33928, *Ethanol and Biofuels: Agriculture, Infrastructure, and Market Constraints Related to Expanded Production*, by Brent D. Yacobucci and Randy Schnepf.

As formulated, this program would rely on U.S.-produced (rather than foreign) sugar. The amount that USDA decides to purchase would approximate its estimate of the extent that imports under trade agreements reduce the U.S. sugar price below support levels. Producers support this provision, viewing it as an insurance policy for receiving the benefits of a guaranteed minimum price for sugar marketed for food use.

Sugar users oppose this program “to ostensibly manage surplus supplies.” In their July 13<sup>th</sup> letter to Members of Congress, they argued that this authority “will likely be used to short domestic markets, further restricting the availability of sugar for food use in the U.S. market.” They characterized this approach as “wasteful of taxpayer resources” because sugar is not price competitive with corn as a feedstock, and will require large subsidies to ethanol producers “to induce them to accept the sugar.”

## Sugar Program Costs

USDA has succeeded in operating the sugar program at no cost for the years covered by the 2002 farm bill. Though processors forfeited small quantities of sugar in FY2004 and FY2005, USDA subsequently sold the acquired sugar to offset the earlier outlays.<sup>12</sup> The net revenue, or sales proceeds (shown as receipts in some years), were from the sale of acquired sugar (see **Table 2**). The proceeds shown for FY2003 reflected the sale of a significant amount of sugar acquired due to loan forfeiture in FY2000 (under the previous farm bill’s sugar program provisions). In

**Table 2. Outlays (–) or Receipts (+)  
of the Sugar Program under the  
2002 Farm Bill**

Fiscal Year	<i>millions of \$</i>
2003	+ 84
2004	– 61
2005	+ 86
2006	– 10
2007 Estimate	+ 10
<b>Total, 2003-2007</b>	<b>+ 109</b>

**Source:** USDA, Farm Service Agency, “CCC Net Outlays by Commodity and Function,” June 2007 looking at the entire five year time period, sugar program operations generated more than \$100 million in revenue.

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<sup>12</sup> The forfeiture of a price support loan results in a budget outlay, because the credit that had been extended is not paid back by the processor (resulting in a loss to the U.S. government). To the extent USDA succeeds in selling forfeited sugar, proceeds flow back to USDA and reduce the loss.

Budget forecasts issued earlier this year projected that the sugar program, if continued without change, would cost almost \$700 million (USDA) to about \$800 million (CBO) for the five-years covered by the 2007 farm bill (FY2008-2012). For the 10-year period (FY2008-2017), program outlays were projected at almost \$1.3 billion (CBO) to \$1.4 billion (USDA). These outlays reflect the effect of projected sugar imports from Mexico and other FTA countries. Projections assume that this additional supply depresses the domestic sugar price below support levels, and leads processors to forfeit on portion of their loans.

Though the sugar price support and marketing loan provisions in the House farm bill are designed to ensure that USDA operates the program at no cost, CBO scores these provisions as increasing program outlays by \$84 million over five years and \$167 million over 10 years. CBO projects that the sugar-for-ethanol program would increase sugar demand and reduce sugar support program by \$107 million over five years and \$240 million over 10 years. With these proposed policy changes, the net cost of the sugar-related provisions in H.R. 2419 would be \$659 million over five years and \$1.2 billion over 10 years (see **Table 3**).

**Table 3. CBO's Projection of Sugar Program's Cost under House Farm Bill**

	CBO's Baseline Projection (Current Law)	Effect of House Farm Bill Policy Changes	Total Projected Cost (Current Law & House Farm Bill Changes)
Fiscal Year	<i>Outlays, in millions of dollars</i>		
2008	215	0	215
2009	130	-8	122
2010	120	-2	118
2011	109	-4	105
2012	108	-9	99
Subtotal, 2008 - 2012	682	-23	659
Subtotal, 2013 - 2017	605	-50	555
TOTAL, 10- Years	1,287	-73	1,214

**Source:** Derived by CRS from CBO's March 2007 Baseline Projection and detailed CBO cost estimate published in H.Rept. 110-256, Part 1 accompanying H.R. 2419, pp. 383, 392.