Agralytica

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Economic Effects of the Sugar Program Since the 2008 Farm Bill & Policy Implications for the 2013 Farm Bill

Overview

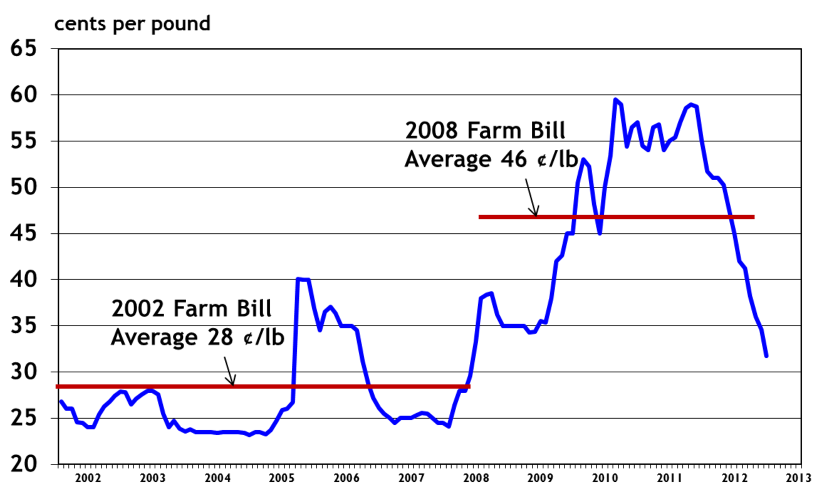
Changes to the sugar program in the 2008 farm bill made a bad program even worse and have destabilized the US sugar market. The bill increased price supports, restricted USDA's ability to adjust import quotas, and guaranteed that taxpayers would subsidize the disposal of any surpluses that arose by converting them to fuel ethanol.

US sugar prices rose to record levels during the first four years of the 2008 bill. The extra cost to consumers averaged $3.7 billion per year. To date, prices have averaged 46 cents per pound compared to 28 cents under the 2002 farm bill. Consequently, employment in sugar-using food and beverage industries (which compete against imported products made with cheaper world-market sugar) has continued to decline, with nearly 127,000 jobs lost since 1997.

US and Mexican sugar producers have responded to the record high prices in the US market by expanding production about 20-25 percent, and now we have a surplus that is putting downward pressure on prices and may force USDA to spend up to $250 million to deal with it.

While the new farm bill will cut support programs for most crops, the sugar industry seeks to be the lone exception and keep its sweet deal. If we are to get off this sugar price roller coaster, reform of the sugar program is required. We need a sugar policy that rolls back the changes made in the 2008 bill and strikes a fair balance between the interests of consumers and the interests of producers.

Wholesale Refined Sugar Prices



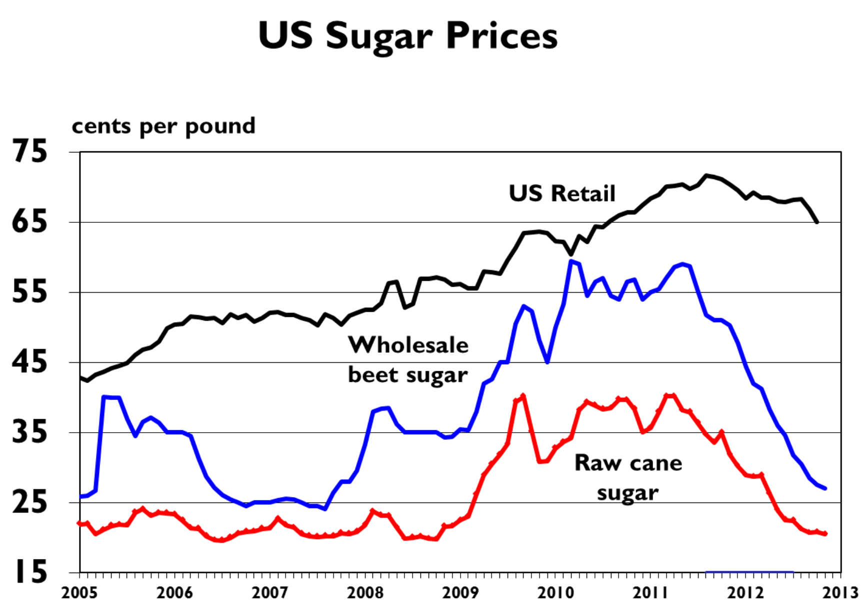
333 N. Fairfax Street, Suite 202, Alexandria, VA 22314 703 739 9090 703 739 9098 www.agralytica.com

Changes to the sugar program in the 2008 farm bill

Sugar producers got Congress to increase their support price, keep marketing allotments in place for domestic processors, impose new restrictions on the Secretary of Agriculture's ability to adjust import quotas, and add a program to divert any surplus sugar to production of fuel ethanol. More specifically:

- The price support loan rates were increased from 18 to 18.75 cents per pound for raw cane sugar, and from 22.9 to 24.09 cents for refined beet sugar.
- USDA was required to set the total marketing allotments for beet and cane sugar at no less than 85 percent of domestic human consumption, in effect reserving that portion of the market for US-produced supplies – a de facto domestic content requirement.
- The Secretary was required to set the import quotas at the WTO minimum of 1.26 million short tons and keep them at that level for the first six months of the marketing year (i.e. until April 1) unless there was an "emergency shortage" of sugar.
- The bill established a new program requiring USDA to estimate anticipated sugar surpluses quarterly, and then buy the surplus sugar and sell it to fuel ethanol producers at a discounted price. This new taxpayer-funded subsidy is called the Feedstock Flexibility Program (FFP).

The result of these changes was an extremely tight supply of sugar from 2009 through most of 2012. Retail sugar prices and the price of wholesale refined beet sugar were forced to record levels, as shown in the chart below. The traditional five-pound bag of sugar that sold for $2.50 in 2008 was selling for $3.50 by 2012. (So much for the sugar lobby's claims that their program does not cost consumers.)



Sugar program impact on consumers

US wholesale refined sugar prices were also much higher than the world market price at which we could have imported refined sugar – 64 to 92 percent higher over the past four calendar years. Refined sugar is what food manufacturers actually purchase; they cannot use raw sugar in the foods and beverages they make. Therefore, the wholesale refined sugar price is the most relevant way to look at how the sugar program is affecting the food industry and retail consumers.

The table below shows the refined price difference year by year under both the 2002 and 2008 farm bills, and calculates the extra cost to consumers by multiplying the price difference times the millions of tons consumed each year. Under the 2002 farm bill the price difference averaged 11.4 cents per pound and the extra cost to consumers averaged $2.2 billion per year. During the first four years under the 2008 farm bill, the price difference averaged 18.2 cents per pound and the extra cost to consumers averaged $3.7 billion per year.

Comparison of Consumer Cost of US Sugar Policy Under 2002 and 2008 Farm Bills

	2002 Farm Bill		**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**Average**
					cents per pound				
A	**US wholesale refined price**		27.0	23.7	25.6	36.0	25.7	29.9	28.0
B	**World refined price**		10.1	10.3	12.5	18.3	14.9	15.5	13.6
C	**Transport cost**		3.0	3.0	3.0	3.0	3.0	3.0	3.0
D	**Delivered to US**	B+C	13.1	13.3	15.5	21.3	17.9	18.5	16.6
E	**Price difference**	A-D	13.9	10.4	10.2	14.7	7.8	11.3	**11.4**
					million short tons				
F	**US consumption: raw**		10.0	10.2	10.0	10.2	9.9	10.5	10.1
G	**US consumption: refined**	F/1.07	9.4	9.5	9.4	9.5	9.3	9.8	9.5
					billion dollars				
H	**Consumer cost difference**	E*.02*G	2.60	1.98	1.90	2.79	1.45	2.22	**2.16**
							Oct-Mar		**4-year**
	2008 Farm Bill		**2008/09**	**2009/10**	**2010/11**	**2011/12**	**2012/13**		**Average**
					cents per pound				
A	**US wholesale refined price**		35.9	50.3	55.8	49.2	31.4		47.8
B	**World refined price**		18.9	26.5	33.5	27.7	23.4		26.6
C	**Transport cost**		3.0	3.0	3.0	3.0	3.0		3.0
D	**Delivered to US**	B+C	21.9	29.5	36.5	30.7	26.4		29.6
E	**Price difference**	A-D	14.0	20.8	19.3	18.5	5.0		**18.2**
					million short tons				
F	**US consumption: raw**		10.4	10.9	11.2	11.1	11.5		10.9
G	**US consumption: refined**	F/1.07	9.8	10.2	10.5	10.4	10.7		10.2
					billion dollars				
H	**Consumer cost difference**	E*.02*G	2.74	4.24	4.04	3.84	1.07	0.00	**3.70**

Source: Agralytica analysis of USDA price and consumption data

These calculations are consistent with the results of a study of the impact of the sugar program by Iowa State University researchers John Beghin and Amani Elobeid. That study found that the sugar program costs consumers $3.5 billion per year and that the domestic sugar industry would actually survive quite well without the current US sugar program.[1]

Sugar program impact on food industry jobs

The sugar program has also resulted in significant job losses in the industries producing sugar-containing products. The table below shows US Census Bureau data on employment in two groups of food and beverage industries – those that use sugar and those that do not. Between 1997 and 2011, US sugar-using industries lost nearly 127,000 jobs while employment in the other industries actually increased. Increased imports of sugar-containing products from countries with access to cheaper sugar were responsible for much of that job loss. The Beghin-Elobeid study referred to above found that sugar program reform would add back up to 20,000 American jobs.

Employment in U.S. Food and Beverage Industries

Industry	1997	2011	Absolute change	% change
Sugar-using industries				
Breakfast cereal mfg	14,396	11,510	-2,886	-20.0%
Choc. & confec. Mfg. from cacao beans	9,946	7,297	-2,649	-26.6%
Confec. Mfg from purchased choc.	32,871	26,385	-6,486	-19.7%
Nonchocolate confectionary mfg.	25,512	18,526	-6,986	-27.4%
Frozen food mfg.	94,192	85,457	-8,735	-9.3%
Fruit & veg canning, pickling., & drying	97,384	75,413	-21,971	-22.6%
Ice cream & frozen desert mfg.	19,786	18,901	-885	-4.5%
Bread & bakery product mfg.	222,596	187,202	-35,394	-15.9%
Cookie, cracker & pasta mfg	64,401	47,356	-17,045	-26.5%
Snack food mfg	46,609	42,177	-4,432	-9.5%
Flavoring syrup & concentrate mfg	6,243	6,718	475	7.6%
Soft drink & ice mfg	83,256	63,727	-19,529	-23.5%
Sub-total	**717,192**	**590,669**	**-126,523**	**-17.6%**
Other food & beverage				
Animal food mfg.	46,651	43,104	-3,547	-7.6%
Flour milling & malt mfg	17,877	15,554	-2,323	-13.0%
Starch & veg fats & oils mfg	26,970	23,435	-3,535	-13.1%
Dairy product (except frozen) mfg	112,082	111,889	-193	-0.2%
Animal slaughtering & processing	464,991	474,400	9,409	2.0%
Seafood product prep & packaging	40,763	29,686	-11,077	-27.2%
Tortilla mfg	11,303	14,421	3,118	27.6%
Coffee & tea mfg	12,895	12,934	39	0.3%
Seasoning and salad dressing mfg	26,055	31,171	5,116	19.6%
All other food mfg	56,886	62,237	5,351	9.4%
Breweries	34,251	23,061	-11,190	-32.7%
Wineries	18,193	33,737	15,544	85.4%
Distilleries	6,417	5,657	-760	-11.8%
Sub-total	**875,334**	**881,286**	**5,952**	**0.7%**
Sugar manufacturing				
Sugar manufacturing	16,547	12,803	-3,744	-22.6%
Total food & beverage	**1,609,073**	**1,484,758**	**-124,315**	**-7.7%**

Source: U.S. Census Bureau, Economic Census & Annual Survey of Manufactures

[1] The full study is available at the following link: http://sugarreform.org/wp-content/uploads/2011/11/The-Impact-of-the-U.S.-Sugar-Program-Beghin-Elobeid-Report-11.17.11.pdf

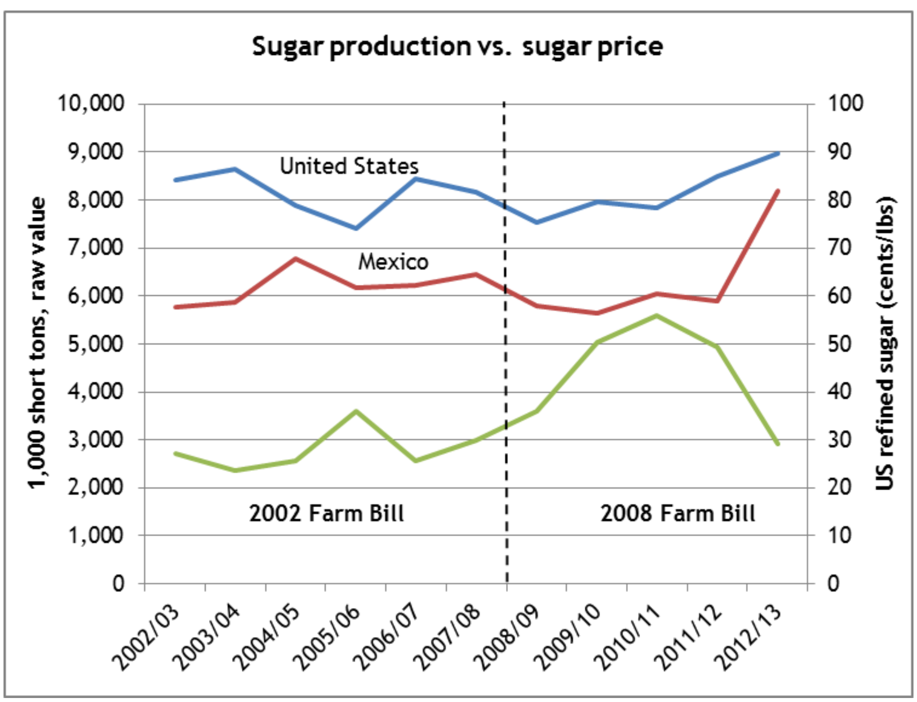
The current sugar market situation

Since US sugar prices have fallen from the record levels of recent years, the calculations for 2012/13 in the table above will eventually bring down the five-year average for the current farm bill. But it looks like USDA may have no other choice than now spending some taxpayer money to prop up the market for US sugar producers. How did we go so quickly from four years of shortages and historically high sugar prices to the current concerns about a looming surplus?

It helps to take a step back and focus on how the sugar program changes in the 2008 farm bill have destabilized the sugar market. All this happened at the same time that sweetener trade between the United States and Mexico was finally fully freed up (i.e. January 1, 2008) so that sugar producers in both countries began responding to the same price and policy signals.

The chart below contrasts the price and production situation under the 2008 farm bill with that under the 2002 farm bill. For the 2002 through 2007 crop years, the wholesale refined sugar price averaged 28 cents per pound and production in the United States and Mexico was comparatively stable, rising just 3 percent over the five years. The 2008 farm bill kept supplies too tight, so refined sugar prices rose to record levels, and sugar producers in both countries responded by planting more acreage and, aided by favorable weather, expanding sugar production by about 20-25 percent over the course of four years.

This has led to surplus supplies and pushed refined sugar prices back down below 30 cents per pound. The effect of the 2008 program changes has obviously been to destabilize the combined US-Mexican sugar market by making both shortages and surpluses worse than they needed to be. Sugar crop farmers and processors do in fact respond to price signals. Federal government policy drove prices up and the sugar producers expanded output. Now prices are coming down and we will probably see some contraction in sugar output over the next couple of years.



How big is the current sugar surplus?

The table below reproduces the latest USDA sugar balance estimates. The shaded numbers at the bottom of the middle column highlight the current challenge for the sugar program. The projected carryover stocks of more than 2.1 million tons are more than the market needs. USDA has historically aimed for ending stocks that are 14.5 percent of total use. That ratio has generally been associated with market prices that are above the official price support level. For 2012/13, a stocks-to-use ratio of 14.5 percent would mean ending stocks of 1.7 million tons, more than 450,000 tons below what is projected. And 2013/14 looks similar.

Mexico is also accumulating surplus stocks due to a large increase in production this year. Mexico's official production estimate is 6.68 million metric tons, while USDA is projecting 6.22 million. Both forecasts are more than a million tons above last year's production, and it is now clear that the crop will reach 7.0 million tons. Because the North American Free Trade Agreement created a largely unified sugar market for the United States and Mexico, it is the combined surplus in the two countries that has put prices under downward pressure in 2013.

US Sugar Supply and Use

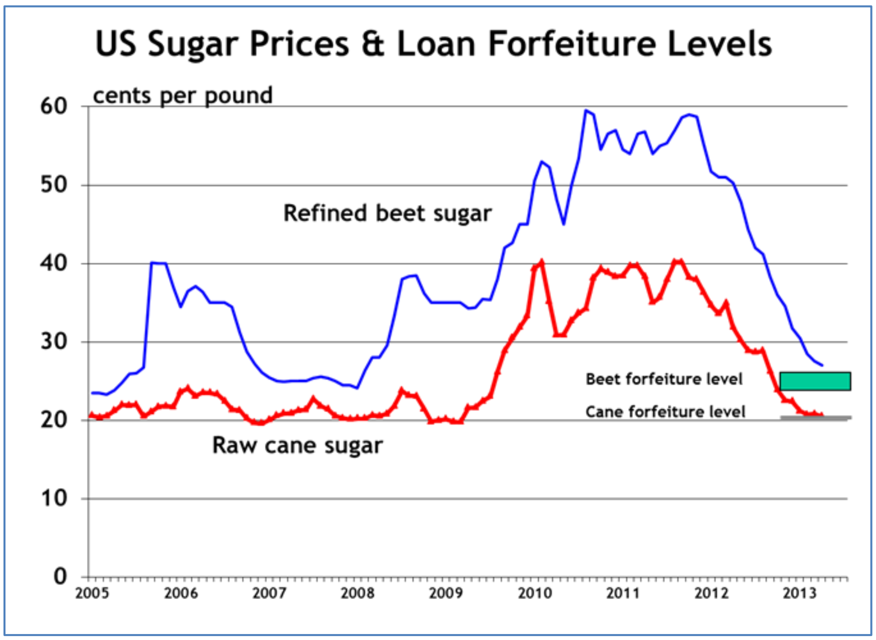
	2011/12	2012/13 Est. May	2013/14 Proj. May
	1,000 Short Tons, Raw Value		
Beginning Stocks	1,378	1,985	2,168
Production	8,488	9,015	8,584
Beet Sugar	4,900	5,100	4,840
Cane Sugar	3,588	3,915	3,744
Florida	1,828	1,866	1,833
Hawaii	172	180	180
Louisiana	1,438	1,700	1,561
Texas	150	169	170
Imports	3,631	2,903	3,438
TRQ	1,883	1,094	1,265
Other Program	664	125	400
Other	1,084	1,684	1,773
Mexico	1,071	1,674	1,763
Total Supply	13,497	13,903	14,190
Exports	269	200	200
Deliveries	11,243	11,535	11,745
Food	11,070	11,400	11,560
Other	173	135	185
Miscellaneous	0	0	0
Total Use	11,512	11,735	11,945
Ending Stocks	1,985	2,168	2,245
Stocks to Use Ratio	17.2	18.5	18.8

Source: USDA, World Agricultural Supply and Demand Estimates

The price support loan program

One of the features of US sugar policy is the price support loan program. Under that program, sugar processors have the option of getting loans from the government at a low interest rate, currently 1.125 percent per year. (In contrast to other commodity programs, loans are made to the companies that process sugar, not to individual farmers.) The value of the loan is pegged to the national average loan rates specified in the farm bill – 18.75 cents per pound for raw sugar, and 24.09 cents for refined beet sugar. These loan rates vary slightly by region, and the company's sugar serves as collateral for the loan. If market prices are not high enough to allow them to pay back the loan, sugar processors can just forfeit the sugar to the government.

USDA would like to avoid forfeitures because of both the initial cost to the taxpayer and the problem of dealing with that sugar once it is owned by the government. The chart below shows US prices for raw and refined sugar, and the price levels at which loan forfeitures become a risk – just under 21 cents per pound for raw sugar, and 24.0 – 26.3 cents for refined beet sugar, depending on the region. Market prices are now close to forfeiture levels for both raw cane and refined beet sugar.



What can USDA do about the current situation?

The 2008 farm bill added a new program feature designed to divert any surplus sugar to production of fuel ethanol. It is the first line of defense specified by Congress. The so-called Feedstock Flexibility Program requires the Secretary of Agriculture to estimate quarterly whether or not there is an expected sugar surplus, and if there is, USDA must arrange for that sugar to be removed from the market and sold to producers of fuel ethanol at a subsidized price at taxpayer expense. (The subsidy is necessary in order to persuade ethanol plants to buy sugar rather than corn as a feedstock. If corn is cheaper, the ethanol plants have no incentive to buy sugar.)

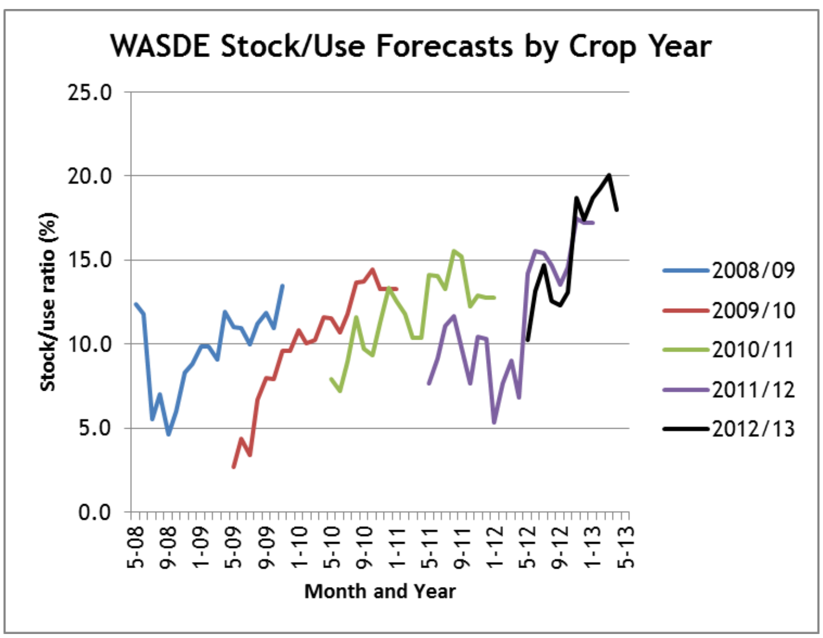
Final regulations for this sugar-to-ethanol program have not yet been published, so the precise details of how it will work are not currently known. But the general approach will be that USDA will pay a price for sugar under loan that is high enough to keep the sugar from being forfeited to the government, and sell that sugar at a price low enough for ethanol producers to be interested in using it. USDA's objective will be to minimize the difference between those two prices, because that subsidy comes out of taxpayers' pockets. USDA's Economic Research Service has estimated the government subsidy required at 13.66 cents per pound for sugar sold to ethanol producers. Thus, if 400,000 tons of sugar must be diverted, the cost would be about $110 million. The Congressional Budget Office has already plugged in a $51 million cost for the program this year in its latest baseline. We forecast that another 600,000 tons will have to be diverted in 2013/14, bringing total costs for the two years to more than $250 million.

The other primary way that USDA could tackle the surplus problem is to get our trading partners to export less sugar to the United States. USDA could offer to buy back the Certificates of Quota Eligibility that must accompany sugar imported under the WTO quotas, or offer to compensate Free Trade Agreement partners like Colombia and the Central American countries if they agree not to ship sugar to the United States. In the case of the FTAs, the agreements generally contain language that permits such measures.

Finally, USDA could buy sugar, or use any sugar forfeited to the government, to compensate sugar beet and sugarcane growers for plowing up a portion of their crops to reduce production in 2013/14. But all these options require spending taxpayer dollars on the sugar program, an unpopular consequence when so many other government programs are being cut back by the sequester.

What happens next?

The current sugar surplus certainly was not expected. For the first four years under the 2008 farm bill, US sugar policy starved the market of sugar, resulting in record domestic prices. The chart below shows the monthly USDA forecasts of the ratio of ending stocks to total use. USDA's target for this stocks-to-use ratio is 14.5 percent but we spent most of the last four years with the market expecting much lower stocks. Only after long-delayed import quota increases at the end of the marketing year did the ratio ever approach USDA's stocks target. For the current 2012/13 marketing year, the USDA forecast as late as last October was still a stocks-to-use ratio of only 13 percent.



Both US and Mexican producers responded to the tight supply and high prices by increasing production. They overdid it and now we are looking at a surplus that will have to be addressed at taxpayer expense. Both the past shortages and the current surplus are all a result of the changes in the 2008 farm bill. The additional program restrictions in that legislation have simply destabilized the market. When future production shrinks in response to low prices, US consumers and food and beverage companies will again face the tight supplies and high prices they endured during the first four years under the 2008 farm bill, unless there are some reforms to the sugar program in the 2013 farm bill.

Observations and implications

All indications are that support programs for most crops will be significantly cut back when Congress finishes its work on the 2013 farm bill. Billions of dollars of direct payments and other support for producers of corn, wheat, cotton, soybeans, rice, peanuts and other crops will be cut. And yet the House and Senate agriculture committees want to leave the sugar program untouched despite its obvious flaws.

Congressional advocates of reforming the sugar program have introduced two companion reform bills, S. 345 and H.R. 693, that roll back the changes imposed by the 2008 farm bill and make other policy improvements that make it easier for the Secretary of Agriculture to adequately supply the US sugar market. The bills do the following:

- Reduce loan rates to the levels in the 2002 farm bill;
- Reform domestic supply restrictions to provide more flexibility to USDA;
- Restore flexibility to USDA in administering quotas;
- Eliminate unnecessary trade restrictions and make import quotas transferable among quota-holding countries;
- Repeal the Feedstock Flexibility Program;
- Make “reasonable prices” one of the criteria for setting import quotas; and
- Establish a target of 15.5 percent for the ratio of ending stocks to total use.

In the Senate, the effort to amend the sugar program along these lines was beaten back on a vote of 45-54. Nevertheless, these are modest program reforms and the House of Representatives has yet to start floor debate on the farm bill. If these reforms are approved by Congress, there would still be a sugar price support program, defended by restrictive import quotas and marketing allotments, along the lines of the program in the 2002 farm bill. But the reforms would recognize that consumers and food and beverage manufacturers also have something at stake and that the program must be fair and reasonable and not destabilize the domestic sugar market.