



# Newsletter

National Sweetener and Ingredient Marketing Assn  
National Sugar Broker's Association



Issue # 5

July 28, 2006

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## *Message from Ray Washmera, President;*

BREAKING NEWS TODAY: USDA announces 2006/2007 Sugar Allotments and what looks like the final resolution of the U.S.-Mexico Sugar v. HFCS battle (see attachments)

Your association is moving forward with the NSIMA logo and website projects. In fact, final copy of the logo is done as above. We hope you like it.

The website project continues and we are asking for your immediate help and input. On the site, we are having a testimonial page and need help in gathering those testimonials. Would you please ask your customers and principals to offer their thoughts about your involvement in their business? We would like to use their comments either by name or anonymously. Please get those testimonials to Bruce Penner by e-mail at [penner@cass.net](mailto:penner@cass.net) or by fax at (517) 447-3166.

We will show both our logo and website at our luncheon at Maggiano's Little Italy Restaurant on August 2. Reservations were mailed, but if you did not get yours, copies are attached. As our guest speaker, we are fortunate to have Peter Meyer (PMI Consultants). Mr. Meyer is a well known consultant to the sweetener industry and has a unique historical perspective, having been "in" the business for many years with Clinton Corn and ADM. He presently writes editorials for Milling and Baking and speaks at many engagements. Knowing Peter, it will be an interesting and thought provoking presentation.

See you there.

Ray

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Also in this issue: (Check out the attachments)

- [Chicago NSIMA Luncheon August 2 reservation forms](#)
- [Chicago Sugar Trade Golf Outing August 3 reservation forms](#)
- [07/03 - Sucralose plant neighbors in South Alabama sue](#)
- [07/03 - Ethanol may be part of sugar cane future](#)
- [07/03 - Big sugar targets organic market](#)
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- [07/12 - WASDE 436-16](#)
- [07/11 - USDA Questions Sugar-To-Ethanol Profits](#)
- [07/18 - Storms cut power to 290,000 - \(Michigan\) Cherry crop hurt](#)
- [07/21 - State provides more financial backing for Odom sugar system](#)
- [07/24 - Global trade talks collapse](#)
- [07/26 - Two Central Valley crops unaffected by heat](#)
- [07/26 - Offering Some Relief from Globalization's Merciless Quest to replace fossil fuels](#)
- [07/27 - Sweet Success for pioneering Hydrogen Energy Project](#)
- [07/27 - USDA ANNOUNCES FISCAL YEAR 2006 & 2007 SUGAR PROGRAM ALLOTMENTS](#)
- [07/28 - Sweet end to bitter U.S.-Mexico sugar trade dispute](#)

The National Sweetener and Ingredient Marketing Association  
(The National Sugar Brokers Association)  
3000 Chestnut Avenue  
Suite 100A  
Baltimore, Maryland 21211  
Phone: 410-366-7400 Fax: 410-467-9552  
E-Mail: [smisweet@chesa.com](mailto:smisweet@chesa.com)

June 19, 2006

The NSIMA's annual Chicago luncheon meeting will be held on Wednesday August 2, 2006 beginning at 11:45A.M. Maggiano's Little Italy will again be the restaurant at 240 Oakbrook Center – Oak Brook, IL (directions from Chicago's O'Hare Airport: Take I-294 South to I-88 West to Aurora – Exit Cermak Road / 22nd Street to the Oak Brook mall – Next to Saks Fifth Avenue).

Peter Meyer, President, PMI Consultants, will be our speaker. If you attended The Milling and Baking Purchasing Seminar, where Peter spoke, you can appreciate Peter's wealth of knowledge. He is most insightful ! In addition, Bob Lindon and Ray Washmera will again give their crop reports and market updates.

Enclosed is a reservation form along with other useful information concerning the luncheon, and the flyer with all the information you'll need for the Chicago Sugar Trade Association's annual outing which will be held on Thursday August 3, 2006 at Ruffled Feathers Golf Club, Lemont, IL.

We are looking forward to seeing you in Chicago.

Sincerely,

*Neale Smith*

Neale Smith  
President

\*\*\*\*\*Reservation Form\*\*\*\*\*

NSIMA Luncheon  
Wednesday August 2, 2006

Maggiano's Little Italy  
240 Oakbrook Center  
Oakbrook, IL

Time: 11:45A.M.

Reception/Buffer Luncheon.....\$70.00 Per Person

\$75.00 At the door

Company:

Attendees:

Make checks payable to:

NSIMA  
3000 Chestnut Avenue  
Suite 100A  
Baltimore, MD 21211

# Chicago Sugar Trade Golf Outing Association

## 77<sup>th</sup> Annual Golf Outing

THURSDAY  
AUGUST 3, 2006

### Ruffled Feathers Golf Club

1 Pete Dye Dr  
Lemont, IL 60439

#### **SHOTGUN START 1:30 PM**

*Lunch served 12:30 PM - Cocktails 5:30 PM. - Dinner 6:30 PM.*

*Ticket Price \$ 190.00*

*Includes: Lunch, Golf, Cart, and Dinner*

*Dinner only \$ 135.00 (purchase in advance)*

**DINNER ONLY - AT THE DOOR: \$ 165.00**

**\*\*\*\* GOLF LIMITED TO THE FIRST 100 GOLFERS \*\*\*\***

**DIRECT YOUR REMITTANCE BEFORE JULY 8<sup>th</sup> TO:**

*Tom Speck*

**C/O SWEETENER SUPPLY**

9501 West Southview Avenue

Brookfield, IL 60513

(708) 588-8400

FAX (708) 588-8460

*Upon receipt of remittance, prepaid tickets will be forwarded promptly.*

CHAIRMAN- *John Yonover*

TICKET COMMITTEE

*Tom Speck*

HOUSE & GREENS COMMITTEE

*Jay Russ*

To arrange foursomes, fax the attached foursome/table request sheet to:  
Jay Russ - email: [jay@buvsugars.com](mailto:jay@buvsugars.com) fax# 630-986-1030 ph. # 630-986-9150

# Chicago Sugar Trade Golf Outing Association

August 3, 2006

## Foursome/Table Request Sheet

*Foursome*

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*Foursome*

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*Table Request*

\_\_\_\_\_ is requesting \_\_\_\_\_ tables of ten.

Please return this completed foursome/table request sheet (by July 8, 2006) to:

Scott Sievers - email: [scott@buysugars.com](mailto:scott@buysugars.com) fax: 630-986-1030, ph.: 630-986-9150

## **Sucralose plant neighbors in south Alabama sue over noise, odor**

Associated Press

**McINTOSH, Ala.** - A federal lawsuit filed by 29 residents living near the Tate & Lyle sucralose plant in McIntosh claims the operation is noisy and emits bad odors that have lowered property values.

Ferne Hudson, spokeswoman for London-based Tate & Lyle, declined to comment on the suit filed this month in U.S. District Court in Mobile.

The plant is the only North American source of the artificial sweetener marketed under the brand name Splenda.

Mobile lawyer Herndon Inge, representing the plaintiffs, said the residents live in nine homes that are all within view of the plant.

He said his clients have experienced medical problems, with symptoms similar to exposure to phosgene gas.

He compared the noxious odor to that of freshly cut hay.

The plant, which employs 160 workers, recently completed a \$75 million expansion to double its production capacity.

<http://www.theadvocate.com/news/business/3260071.html?showAll=y>

## **Ethanol may be part of sugar cane future**

By **ELLYN COUVILLION**

Advocate business writer

Published: Jul 2, 2006

In the freezing cold this past winter, scientists found themselves shoveling 600 pounds of dried, straw-like sugar cane discarded after processing at an area sugar mill.

Called bagasse, the dried-out stalks would provide the researchers with a year's worth of raw material for a product that seems these days to be fueling more debate than cars — ethanol.

“It was sort of like a field trip,” said Giovanna De Queiroz, a post-doctoral researcher from Peru who is working on ethanol research at the Audubon Sugar Institute.

The LSU Agriculture Center's institute has been researching ethanol production under three years of federal funding.

Working in a pilot plant, a core group of five researchers at the institute on River Road in St. Gabriel work on batches of ethanol several times a week, tweaking different parts of the process to get as much ethanol as they can from the bagasse.

“Lots of people have worked on this bit and that bit. We're doing the whole thing outside the lab scale,” said professor Donal Day, who works on ethanol research at the institute.

There's one factor that seems to be standing in the way of rapid introduction of ethanol production to the sugar cane industry, and that's economics.

The cost of the enzymes needed to break down the bagasse is high, and, according to Chris Taylor, senior editor with CNNMoney.com's “Business 2.0 Magazine,” some experts say the enzymes won't be commercially available for several more years.

“How cheaply we can make it underlies everything we've done to date,” Day said.

“It's a tremendous opportunity for us that lies ahead,” said Jim Simon, general manager of the American Sugar League, a nonprofit organization of growers and processors based in Thibodaux.

“Louisiana cane growers still and for the foreseeable future will be sugar producers,” he said.

The incentive for the industry to succeed in ethanol production is great, though.

The federal government has mandated by the year 2030 that 30 percent of fuel for vehicles in the United States be an ethanol fuel, according to local researchers.

If the sugar cane industry can one day produce ethanol, as well as sugar, the benefits would be great.

“Should the opportunity to produce ethanol from cane” come, it would be an excellent “opportunity to expand,” said Simon.

“Right now, the opportunity for expansion in our industry is miniscule — the USDA controls how much sugar we can sell every year,” he said.

Other benefits of an ethanol product for the sugar cane industry:

- n Mills could operate longer than three months of the year — roughly October through December — that the cane is harvested and sugar is produced.

- n Other breeds of sugar cane that can survive freezes and don't have to have as much sugar content could be raised, Day said.

- n And, “it would create new jobs,” said assistant professor Benito Stradi of Costa Rica, another of the ethanol researchers.

Other researchers working on the project are Chang-Ho Chung of Korea, a post-doctoral researcher, and Bernard Prior, visiting professor from South Africa.

The Audubon Sugar Institute, with a faculty and staff numbering more than 20, researches ways to improve the efficiency of sugar production, as well as find new commercial uses for sugar cane.

For ethanol research, the U.S. Department of Energy gave the institute \$500,000 in 2004; \$1 million in 2005; and \$2.5 million for this fiscal year, which begins this month, said Peter Rein, department head of the institute.

Part of the funding goes to the Michigan Biotechnology Institute International, a subcontractor to the Audubon Sugar Institute, Rein said.

The Michigan facility has been working on similar research on corn husks and stalks, he said.

“We're hoping it will continue until 2007,” said Rein of the federal funding.

Rein said that Sen. Mary Landrieu, D-New Orleans, and Rep. Richard Baker, R-Baton Rouge, helped secure the federal funding for the research.

Ethanol, also known as ethyl alcohol or grain alcohol, is produced by fermenting and distilling crops that have been converted down into simple sugars, according to the U.S. Department of Energy.

The federal government is particularly interested in ethanol's research and production.

According to several Web sites on the subject, ethanol is a cleaner-burning fuel than gasoline and is a renewable, environmentally friendly fuel.

Most ethanol in the country these days is made from corn kernels, but it can also be made from what's called “cellulosic biomass,” which includes material such as corn stalks and husks, wheat and barley straw, small diameter trees — and sugar cane.

On a recent warm day, wearing lab coats and safety goggles, the group of ethanol researchers at the Audubon Sugar Institute headed to a covered work area outside the main facility.

They were working on a batch of bagasse that had first been ground to a soft powder, then sealed in a metal canister with ammonia hydroxide, and heated and pressurized.

For about an hour, the mixture had been tumbling so that the structure of the cellulose in the bagasse would start breaking down.

When it was time to move to the next phase, Stradi pressed a button on a remote control. A red warning light went off above the canister, and a valve at the bottom opened, discharging the hot mass of material into a container.

The next phase would come over several days. The material, after being rinsed and filtered, would be put into a fermenter with enzymes that would break down the cellulose into glucose over 24 hours.

Next came the addition of yeast to convert the glucose into ethanol over 72 more hours.

Finally, the researchers would remove the ethanol from the solution by distilling, evaporating and condensing it, De Queiroz said.

“It’s different every day,” she said of the ethanol research done throughout the week.

“Even though it’s the same process, we change parameters, more questions need to be answered. It’s always challenging,” De Queiroz said.

The Audubon Sugar Institute moved to its \$5.4 million location in St. Gabriel in 2004.. The facility was donated to LSU by the Syngenta Crop Protection company

Julie King, the sugar institute’s factory manager, ensures the researchers have what they need and keeps things in running order. The staff creates new devices for experiments, hoping one day the institute will have the funds to reassemble its full-scale sugar mill taken down in the move.

Before the move, the institute had been housed on the LSU campus.

The institute does research in a number of different areas. For instance, its research led to the development of a product, now patented, that is used to control bacteria in dental equipment, according to the institute.

More recently, a faculty member and student have been working on erosion mats made from bagasse. They could be used to combat coastal erosion.

Of the ethanol research, Day said, “The next stage, if we get it outside this scale, (would be) a demonstration scale and from there, commercial.”

If the economics become favorable, such an operation could “fit in an existing sugar mill operation,” he said.

## ***Big sugar targets organic market***

By [Susan Salisbury](#)

Palm Beach Post Staff Writer

Monday, July 03, 2006

SOUTH BAY — When Florida Crystals Corp. decided to try growing and processing sugar cane for the organic market nine years ago, even some of its top officials were skeptical.

"The biggest challenge was the processing. How do you process it without chemicals?" said Ricardo Lima, vice president and general manager of the firm's Okeelanta Corp., which includes 65,000 acres of cane fields, plus a mill, processing plant and distribution center. "I said, 'That's not possible. You're nuts.' But we decided to try it, starting out with 50 to 60 tons of sugar."

Another challenge was the organic operation's size. Florida Crystals has 160,000 acres of cane, and the project was designated for a tiny portion of that.

"Organic sugar is a small niche market," Lima said. "We are used to producing large volumes of everything."

Still, the company felt it was time to pursue it.

"The organic movement had been around a while, and there was a need for organic sweeteners," said Stephen Clarke, director of industrial research and development at Okeelanta.

Now the sugar producer is enjoying the sweet taste of success.

Today, Florida Crystals of West Palm Beach is the nation's only producer of certified organic sugar — grown without herbicides or pesticides. The rest of the nation's organic sugar supply is imported from other countries. Florida Crystals grows organic cane and rice on 3,800 to 4,200 acres each year, and peak production of organic sugar has reached 3,600 tons. That's a very small percentage of its total sugar output, which has reached 900,000 tons in years not affected by hurricanes.

This fall, the company — a division of the Fanjul family's Flo-Sun Inc. — plans to increase its organic production by another 900 acres west of its Okeelanta Mill south of South Bay, where its existing organic farmland is. With the addition, the company will have 20 times the organic farmland with which it started in 1997.

Michael DeLuca, Florida Crystals' vice president for specialty ingredients, said 80 percent of the company's organic sugar business is conducted with 100 or so food industry customers. The sweetener is used in products such as Silk soy milk, Kashi cereal, Tazo tea and Clif Bars.

"We always felt that sooner or later the mass-market companies such as Kellogg's, Kraft and General Mills would move into organics, providing explosive growth for the industry," DeLuca said.

The prediction was correct. Kraft, which owns Nabisco, will be coming out with organic Oreos, the nation's top-selling cookie, in the near future, DeLuca said. Florida Crystals will supply sugar for organic Oreos, as it does

the organic sugar — as well as the rice — for Kellogg's Organic Rice Krispies. The cereal hit supermarket shelves last month.

### **Standards ensured**

Florida Crystals' organic farming, manufacturing and products are certified organic by privately held Quality Assurance International of San Diego, which ensures that standards set by the U.S. Department of Agriculture's National Organic Program are met.

The other 20 percent of Florida Crystals' market is in sugar sold directly to consumers, who can buy it in 14-ounce or 48-ounce canisters or 32-ounce bags at retail stores including Publix, Albertsons, Winn-Dixie, Whole Foods Market and Wal-Mart.

"The growth curve is significant. Organic sugar is outpacing the overall organic food growth," DeLuca said. "We sell everything we produce."

Organic sugar is actually organic evaporated cane juice syrup that is crystallized only once, retaining more of the character of the juice than conventional multiple-crystallization sugar, according to The Sugar Association.

### **Better for environment**

Cookies, cakes and candies made with organically grown products are nothing new, and while it might be more healthful to eat an apple instead, at least the organic products are better for the environment, organic advocates say.

"Over the last decade, you have seen the proliferation of organic processed foods, such as Amy's Burritos," said Marty Mesh, executive director of Gainesville-based Florida Organic Growers. "You do see organic sugar and chocolate and coffee. I guess it's not so much a commentary on 'Is the Oreo good for you?' Clearly, it's not. What you are supporting is a more ecologically sustainable agriculture."

Barbara Haumann, spokeswoman for the Greenfield, Mass.-based Organic Trade Association, agrees.

"It comes down to consumer choice," Haumann said. "We would prefer that consumers choose something with ingredients produced organically because of what it does to the earth. We would prefer to see more acreage used in organic production."

The timing of Florida Crystals' decision coincided with an unprecedented boom in the organic food industry. In 1997, U.S. sales of organic food and beverages were \$3.59 billion, and in 2005, reached \$13.83 billion, the Organic Trade Association said.

The overall organic food and beverage sector grew at 16 percent last year, but the organic sweetener category, including sugar, honey and syrups, exceeded that. The sweetener category reached \$49 million in 2005, up from \$33 million in 2003. The differences between conventional sugar farming and organic farming start before the first stalk of cane is planted and continue through the final manufacturing.

Before an organic crop is begun, the field cannot have had any herbicides, pesticides or chemicals applied to it for three years, said Raul Perdomo, Okeelanta's director of agriculture research. The harvest also differs because the fields are never burned before the harvest to rid them of debris, as they are with conventional cane.

Perdomo drove through the conventional sugar cane fields and the organic fields on a recent morning, pointing out the differences. The organic fields are easy to spot because they are plagued with half a dozen major weeds such as ragweed and giant barnyard weed, some of which have grown high as 5 feet tall.

"Weeds are the number one challenge," Perdomo said. "They take up nutrients and water. Weeds can stress cane and make the production go down."

Perdomo sets foot in a field of cane rustling in the breeze and pulls a weed: "That's what a small organic farmer would do," he said. But the labor costs are too high here to do much hand weeding.

Because of the proliferation of weeds, only one crop is harvested from each planting of organic cane, instead of the usual three years of crops from each conventional cane planting. After the organic cane is harvested, the field is flooded and organic rice is planted. Rice and cane crops are rotated each year, and the flooding helps keep the insect and weed populations down.

"The philosophy of organic farming is: You feed the soil, you don't feed the plant," Perdomo said. Natural fertilizers, such as rock phosphate, are permitted.

### **Special methods used**

All the organic fields are harvested over three days so the product never mingles with non-organic cane. Once the organic cane is harvested and taken to the mill, another problem has to be solved. Since the fields were not burned, each load contained as much as 25 percent debris. So Florida Crystals has developed special filters to clean the sugar.

Also, conventional sugar is processed with food-grade chemicals to rid it of impurities, but those cannot be used with organic sugar.

"The issue is with the naturalness," Clarke said.

Before the organic sugar is milled and processed, every piece of equipment is pressure-cleaned to make sure no residue remains from the conventional cane. The mill is cleaned for two days, then for three days the mill grinds only organic cane, which is then processed for 35 days.

"A key issue is organic integrity from when you plant it until it leaves the packaging plant. It costs 25 to 30 percent more to grow organic cane," Clarke said.

Whether it's the learning curve, the investment of time and dollars or the pesky weeds that keep other producers out of the organic cane business, Florida Crystals rules the sector for now. And despite the many headaches, it plans to keep babying the special fields.

"We want to be able to look our customer in the eye, and say, 'This is how we do it,'" Lima said.

# A Sweetener With a Bad Rap

By [MELANIE WARNER](#)

Published: July 2, 2006

EVERY time Marie Cabrera goes shopping, she brings along her mental checklist of things to avoid. It includes products with artery-clogging trans fats, [cholesterol](#)-inducing saturated fats, MSG and the bogeyman du jour, high-fructose corn syrup. That last one, she says, is the hardest to avoid unless she happens to be shopping in the small natural-foods section of her supermarket.

As she pushed her shopping cart down an aisle of the Super Stop & Shop near her hometown of Warren, R.I., recently, Ms. Cabrera, a retired schoolteacher, offered her thoughts on why she steers clear of high-fructose corn syrup: "It's been linked to [obesity](#), and it's just not something that's natural or good for you."

This is the perception that many consumers have of the syrup, a synthetic sweetener that has replaced plain old sugar and become a ubiquitous ingredient in American processed foods. High-fructose corn syrup provides the sweet zing in everything from Coke, Pepsi and Snapple iced tea to Dannon yogurt and Chips Ahoy cookies. It also lurks in unexpected places, like Ritz crackers, Wonder bread, Wishbone ranch dressing and Campbell's tomato soup.

In the news media and on myriad Web sites, high-fructose corn syrup has been labeled "the Devil's candy," a "sinister invention," "the crack of sweeteners" and "crud." Many scientific articles and news reports have noted that since 1980, obesity rates have climbed at a rate remarkably similar to that of high-fructose corn syrup consumption. A distant derivative of corn, the highly processed syrup was created in the late 1960's and has become a hard-to-avoid staple of the American [diet](#) over the last 25 years. It spooks foodies, parents and nutritionists alike. But is it really that bad?

Many scientists say that there is little data to back up the demonization of high-fructose corn syrup, and that links between the crystalline goop and obesity are based upon misperceptions and unproved theories, or are simply coincidental. "There's no substantial evidence to support the idea that high-fructose corn syrup is somehow responsible for obesity," said Dr. Walter Willett, the chairman of the nutrition department of the Harvard School of Public Health and a prominent proponent of healthy diets. "If there was no high-fructose corn syrup, I don't think we would see a change in anything important. I think there's this overreaction."

Dr. Willett says that he is not defending high-fructose corn syrup as a healthy ingredient, but that he simply thinks that the product is no worse than the refined white sugar it replaces, since both offer easily consumed calories with no nutrients in them. High fructose corn syrup's possible link to obesity is the only specific health problem that the ingredient's critics have cited to date — and experts say they believe that this link is tenuous, at best.

Even the two scientists who first propagated the idea of a unique link between high-fructose corn syrup and America's soaring obesity rates have gently backed off from their initial theories. Barry M. Popkin, a nutrition professor at the University of North Carolina at Chapel Hill, says that a widely read paper on the subject that he wrote in 2004 with George A. Bray, a professor of medicine at the Pennington Biomedical Research Center in Baton Rouge, La., was just meant to be a "suggestion" that would inspire further study.

"It was a theory meant to spur science, but it's quite possible that it may be found out not to be true," Professor Popkin said. "I don't think there should be a perception that high-fructose corn syrup has caused obesity until we know more." Professor Popkin says that he and Professor Bray both decided not to raise the issue of high-fructose corn syrup for a beverage panel that they and four other scientists formed last year at the [University of North Carolina](#). The panel was convened to provide clear guidelines to consumers about the nutritional risks and benefits of various beverages.

Rather than single out high-fructose corn syrup for derision, the panel focused on the proliferation of beverages with added sugars, regardless of what sweetener was used. Those beverages, the panel said, should be consumed at the lowest possible level, no more than eight ounces a day. "We felt there were much bigger issues and it would be a distraction," Professor Popkin said of high-fructose corn syrup.

AS America's obesity problem has evolved into a major public health concern over the last five years, singling out high-fructose corn syrup as a singular culprit reflects, perhaps, society's early response to a vexingly complex issue. Scientists say part of the confusion about the ingredient's role in the nutrition debate stems from a basic misunderstanding: the idea that high-fructose corn syrup is actually high in fructose.

Studies have shown that the human body metabolizes fructose, the sweetest of the natural sugars, in a way that may promote weight gain. Specifically, fructose does not prompt the production of certain [hormones](#) that help regulate appetite and fat storage, and it produces elevated levels of triglycerides that researchers have linked to an increased risk of [heart disease](#).

But the name "high-fructose corn syrup" is something of a misnomer. It is high only in relation to regular corn syrup, not to sugar. The version of high-fructose corn syrup used in sodas and other sweetened drinks consists of 55 percent fructose and 45 percent glucose, very similar to white sugar, which is 50 percent fructose and 50 percent glucose. The form of high-fructose corn syrup used in other products like breads, jams and yogurt — 42 percent fructose and 58 percent glucose — is actually lower in fructose than white sugar.

Even if high-fructose corn syrup is no worse than sugar, it may never be popular with consumers like Ms. Cabrera who routinely seek out natural and organic foods. Most manufacturers of natural products shun the syrup, in part because many of them consider it an artificial ingredient. Among natural-foods enthusiasts and many nutritionists, there is a belief that the foods humans have been consuming for hundreds or even thousands of years are better handled by our bodies than many of the modern and chemically derived concoctions introduced into the food supply in the last 60 or so years. Among producers of organic products, there is a similar prohibition against high fructose corn syrup in favor of regular sugar, although one ingredient company, **Marroquin International** of Santa Cruz, Calif., sells organic high-fructose corn syrup.

Michael F. Jacobson, director of the [Center for Science in the Public Interest](#), a nutrition advocacy group that often criticizes the food industry, says that unlike sugar molecules, which reside in the stalks of sugar cane or the beets that are used to make sugar, high-fructose corn syrup is artificial because it is not found anywhere in corn.

"You're causing a change in the molecular structure, and that shouldn't be considered natural," he said, adding, however, that he never supported the notion that high-fructose corn syrup was a unique contributor to obesity.

Produced in large manufacturing facilities scattered mostly across the flat, golden expanse of the American corn belt, high-fructose corn syrup is not a product that anyone could cook up at home using a few ears of corn. The process starts with corn kernels and takes place in a series of stainless steel vats and tubes in which a dozen different mechanical processes and chemical reactions occur — including several rounds of high-velocity spinning and the introduction of three different enzymes to incite molecular rearrangements.

The enzymes turn most of the glucose molecules in corn into fructose, which makes the substance sweeter. This 90 percent fructose syrup mixture is then combined with regular corn syrup, which is 100 percent glucose molecules, to get the right percentage of fructose and glucose. The final product is a clear, goopy liquid that is roughly as sweet as sugar. The major manufacturers of high-fructose corn syrup — the farm giants [Archer Daniels Midland](#), [Cargill](#) and [Corn Products International](#) and the ingredients company [Tate & Lyle](#) — say that their product is natural because it is made from plain old corn (though some of it is genetically modified) and contains no synthetic materials or color or flavor additives.

The [Food and Drug Administration](#) has never established rules on what, exactly, "natural" means, allowing companies to pitch products as natural even if they contain high-fructose corn syrup. [Cadbury Schweppes](#) recently began promoting 7-Up, which is sweetened with high-fructose corn syrup, as "100 percent natural." Capri Sun fruit-flavored drinks from [Kraft](#) are also promoted as all-natural, although they, too, are sweetened with high-fructose corn syrup. Cadbury and Kraft both say they believe that high-fructose corn syrup is natural because it is made from corn.

Sugar is considered natural because there are no chemical processes involved in its production and no molecular changes occur as it is processed. The Sugar Association, which represents sugar growers and producers, filed a petition in February with the Food and Drug Administration asking the agency to define "natural," but the association says the agency has not yet responded.

THE modern supermarket, of course, is stocked with artificial additives and the highly processed products of modern food science, most of them unknown outside of food technology circles. Still, even with this cacophony of indecipherable, hard-to-pronounce ingredients, few have been singled out for the scorn heaped upon high-fructose corn syrup.

Yoshiyuki Takasaki, a scientist, patented high-fructose corn syrup in 1971 while working for a government-affiliated laboratory in Japan. But it wasn't until 2001, shortly after the United States surgeon general issued a landmark report on obesity, that the brouhaha over the substance began. Warning that America's expanding waistline could reverse many health gains achieved in recent decades, the report prompted new research into the causes of obesity.

Professor Bray of the Pennington research center — a lean, bespectacled man who had spent much of his career studying obesity and [diabetes](#) — said he had been pondering the obesity problem for several years when, in early 2002, he had a sudden insight. Charting federal data on the consumption of high-fructose corn syrup against data on obesity rates, he found amazing parallels between his two graphs.

Starting in 1980, around the time that manufacturers started replacing sugar in sodas with a more cheaply produced sweetener — high-fructose corn syrup — there was a sharp increase in male and female obesity in the United States. From 1980 to 2000, the incidence of obesity doubled, after having remained relatively flat for the preceding 20 years, the data showed. Could high-fructose corn syrup be making us fat, Professor Bray wondered? After all, according to his analysis of government consumption data, per capita intake of the syrup had increased by more than 1,000 percent from 1970 to 1990, exceeding the changes in the intake of any other food group tracked by the Department of Agriculture. Professor Bray's theory received enormous attention when he teamed up with Professor Popkin to publish the idea in *The American Journal of Clinical Nutrition* in April 2004. Around the same time, a breezy and provocative book about America's obesity problem, "Fat Land" by Greg Critser, generated more awareness of high-fructose corn syrup. Mr. Critser proposed that the syrup made consumers fat because it was so cheap, and thus food makers could afford to offer more products with it and more copious portions.

Manufacturers had always been able to buy the sweetener at prices 20 percent to 70 percent less than those of sugar. In a 1983 article in *Fortune* magazine, one beverage analyst estimated that by switching to high-fructose corn syrup, [Coca-Cola](#) gained a cost advantage over Pepsi and its bottlers of \$70 million a year. A year later, Pepsi followed in Coke's footsteps and also began using the sweetener. Mr. Critser argued that the cost savings allowed soft-drink companies to create larger sizes that were only marginally more expensive, thus propelling people to drink more soda. It also freed up extra marketing money, he said. "High-fructose corn syrup really allowed companies to transform their brands and to become some of the biggest brands in the world," Mr. Critser said in a recent interview.

There is little question that after beverage companies began adding high-fructose corn syrup into soda in the early 1980's, soft-drink consumption soared. From 1980 to 2000, per-person consumption of sweetened soda rose by 40 percent, to 440 12-ounce cans a year, according to the Agriculture Department's Economic Research Service. During roughly the same period, the inflation-adjusted price of soda declined by about one-third, according to [Bureau of Labor Statistics](#) data. Also in the 1980's, supersizing began in earnest. In 1983, for example, 7-Eleven rolled out its 44-ounce soda and, in 1988, the huge 64-ounce. And [McDonald's](#) began supersizing its drinks in the late 80's. But whether all of this would have happened anyway, even if sodas still were sweetened with pricier sugar, is hard to say, according to analysts.

John Sicher, publisher of the trade journal *Beverage Digest*, says he thinks that the lower cost of soda today, versus 20 years ago, is attributable largely to the advent of bigger packaging, which lowers distribution and manufacturing costs. He cited several reasons for soda's dominant presence in the American diet: "I think that the higher consumption of soft drinks today is more about the increased prevalence of product," he said. "It's the growth of fast-food restaurants, much more availability in supermarkets, the growth of convenience stores with coolers in them and a huge build-out of new vending machines in the 1990's. I don't think it has anything to do with high-fructose corn syrup."

Dave DeCecco, a spokesman for Pepsi, says the company's decisions over the years about package and portion sizes were based on the changing desires of consumers — and had nothing to do with the price of high-fructose corn syrup. "The cost of the sweetener in the product is extremely minimal to the point of not even mattering," he said.

Mr. Critser, the author of "Fat Land," says that John Peters, a scientist at [Procter & Gamble](#) and a founder of America on the Move, a foundation devoted to obesity prevention, was the first person to get him thinking about a link between the cheap cost of high-fructose corn syrup and obesity.

Reached three weeks ago at his office at Procter & Gamble in Cincinnati, Mr. Peters said the idea was "just a hypothesis, without any data to back it up." Asked if he thought that high-fructose corn syrup had played a unique role in America's obesity problem, he said, "I don't think we know."

Few scientists and nutritionists are willing to believe that the small amount of additional fructose in high-fructose corn syrup, as opposed to sugar, makes a difference in people's weight. Dr. Peter J. Havel, an endocrinology researcher in the department of nutrition at the [University of California](#), Davis, said he did not think that the replacement of sugar, or sucrose, with high-fructose corn syrup in the food supply was, by itself, responsible for the increase of obesity in the population.

"I don't think it is likely that things would be very different if people consumed increased amounts of either sucrose or high-fructose corn syrup," he said in an interview. "Overconsumption of either sweetener, along with dietary fat and decreased physical activity, could contribute to weight gain."

THE recent backlash against the ingredient, which has enjoyed more than 20 years of uninterrupted sales growth, has caused its corporate sponsors to take notice. Audrae Erickson, president of the Corn Refiners Association, a trade group in Washington that represents the biggest makers of high-fructose corn syrup, put up a Web site, [HFCSFacts.com](http://HFCSFacts.com), three years ago to blunt criticism of the sweetener. The site includes information about the amount of fructose in the syrup and charts showing sharp increases in obesity in countries that use very little of the liquid. (Outside of Canada, the United States is the only country with a significant consumption of high-fructose corn syrup, largely because other countries have erected successful trade barriers to protect sugar.)

But Ms. Erickson says her arguments that high-fructose corn syrup is a safe ingredient have gained little traction. She says her trade group recently entertained the idea of changing the sweetener's name. "It really does have this negative connotation," she said.

Manufacturers of high-fructose corn syrup, however, may have more than an image problem to deal with. Annual per capita consumption of the sweetener is down 7 percent, to 59.2 pounds in 2005, from its peak of 63.7 pounds in 1999, according to the Agriculture Department. Ms. Erickson says that this is attributable less to the negative perceptions of high-fructose corn syrup than to the popularity of drinks with fewer calories, such as diet soda, bottled water and sports drinks. Annual per capita consumption of refined sugar has also declined, falling 4 percent from 1999 to 63.4 pounds, in 2005.

All of which suits Ms. Cabrera just fine. Regardless of what experts say about high-fructose corn syrup, she says she will still try to avoid it. But now, after learning that many experts say the substance is handled no differently in the body than sugar, she says that she will probably let some products with high-fructose corn syrup slide. "I guess I don't need to be so hard-core about it," she said.

## WASDE-436-16; July 12, 2006

SUGAR: Projected 2006/07 U.S. sugar supply is increased 157,000 short tons, raw value, from last month, due to higher beginning stocks and production. Processor projections compiled by the Farm Service Agency put 2006/07 production at 8.35 million tons, up 115,000 tons from last month's projection. Sugar use is unchanged. For 2005/06, total supply is increased 42,000 tons. Production is reduced 28,000 tons, while imports are raised 70,000 tons mainly due to lower shortfall in filling the tariff rate quota (TRQ). The shortfall in filling the TRQ is decreased 60,000 tons and stands at 180,000 tons. Total use is unchanged.

### WASDE-436-16 - U.S. Sugar Supply and Use 1/

Item	2006/07 Projection			
	2004/05	2005/06	June	July
: Estimate :				
: June July				
: 1,000 short tons, raw value				
Beginning stocks	1,897	1,331	1,389	1,431
Production 2/	7,877	7,365	8,230	8,345
Beet sugar	4,611	4,335	4,700	4,800
Cane sugar	3,266	3,030	3,530	3,545
Florida	1,693	1,368	1,800	1,745
Hawaii	258	237	250	265
Louisiana	1,157	1,245	1,300	1,350
Texas	158	180	180	185
Imports	2,100	3,235	1,818	1,818
TRQ 3/	1,408	2,525	1,318	1,318
Other program 4/	500	300	325	325
Other 5/	192	410	175	175
Supply, total	11,874	11,931	11,437	11,594
Exports	259	200	200	200
Deliveries	10,188	10,300	10,415	10,415
Food	10,019	10,150	10,250	10,250
Other 6/	169	150	165	165
Miscellaneous 7/	96	0	0	0
Use, total	10,543	10,500	10,615	10,615
Ending stocks	1,331	1,431	822	979
Stocks to use ratio	12.6	13.6	7.7	9.2

1/ Fiscal years beginning Oct 1. Includes Puerto Rico. Historical data are from FSA, "Sweetener Market Data" except imports (U.S. Customs Service, Census Bureau). 2/ Projections for 2006/07 are based on processors' submissions compiled by the Farm Service Agency. 3/ 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. For 2006/07, includes only U.S. commitments under current trade agreements, minus shortfall of 50,000 tons. The Secretary will establish the actual level of the TRQ at a later date. 4/ Includes sugar under the re-export and polyhydric alcohol programs. 5/ Includes high-tier and other. 6/ Transfers to sugar-containing products for reexport, and for nonedible alcohol and feed. 7/ Residual statistical discrepancies.

METRIC CONVERSION FACTORS	1 Hectare = 2.4710 Acres	1 Kilogram = 2.20462 Pounds
Metric-Ton Equivalent	: = Domestic Unit	* Factor
Sugar	: = short tons	* .907185

## USDA Questions Sugar-To-Ethanol Profits

By FREDERIC J. FROMMER , 07.10.2006, 07:54 PM

Making ethanol from sugar could be profitable with the current high demand for the gasoline substitute, but it probably won't be for long, the Agriculture Department said Monday.

At current market prices for ethanol, converting sugarcane, sugar beets, raw sugar and refined sugar to ethanol would be profitable, the department said in a report. However, the report added that those market prices are expected to drop as more ethanol is produced, mostly from corn.

"At this high, unusual price, I can conclude that it's economically feasible to produce ethanol from sugarcane and sugar beets," the USDA's chief economist, Keith Collins, said at a news briefing. "However, I would not want to pour concrete based on \$3-a-gallon ethanol prices" because the futures market predicts ethanol will drop to \$2.50 by next year.

At that price, sugar to ethanol would not be economically feasible, Collins said.

The report concluded that sugarcane and sugar beets were nearly 2 1/2 times as expensive to turn into ethanol as corn.

"Corn certainly has the competitive advantage in the current market environment," Collins said.

The report did find that molasses, a byproduct of sugarcane and sugar beets, could be produced at a price in the neighborhood of corn. But Collins said there isn't much molasses made in the United States, negating it as a significant source of ethanol.

The report was put together through a cooperative agreement between USDA and Louisiana State University. It said no U.S. plants currently produce ethanol from sugar.

Sugar in the U.S. is made from two sources: beets in some northern and western states, and cane in a few southern states and Hawaii. Minnesota is the largest producer of sugar produced from beets, while Florida leads in sugar from cane, according to the American Sugar Alliance, a trade group.

Some lawmakers from those states have been pushing sugar-to-ethanol, citing the model of Brazil, which produces ethanol made from sugar cane. But Collins noted that Brazil has cheaper sugar than the U.S.

## Storms cut power to 290,000 - Cherry crop hit hard

7/18/2006 11:58:50 AM; by Keith Baldi/mjh; WZZM13 Online

HART - Michigan's cherry farmers in the Hart area were hit hard by Monday's storms.

The storm destroyed a number of trees that will be hard to replace.

The storm also caught many cherry farmers with as much as half of their current cherry crop still on the trees.

The fruit was badly damaged and bruised and is now fit to be harvested for juice only.

One cherry farmer estimated his losses at over \$150,000.

Statewide, at least 290-thousand utility customers had no power after thunderstorms rolled through the state overnight.

Parts of the Lower Peninsula had winds gusting up to 66 miles-per-hour and as much as two inches of rain.

Broadcast reports say one woman was killed early today when lightning hit her and a male companion in a Detroit park. Police are gathering information about the incident.

The storms broke a heat wave that drove temperatures into the mid-90s as far north as Traverse City.

## State provides more financial backing for Odom sugar syrup mill

7/20/2006, 11:38 a.m. CT; **The Associated Press**

BATON ROUGE, La. (AP) — The state is digging deeper than originally predicted to provide financial packing for a taxpayer-funded sugar syrup mill in southwest Louisiana.

Commissioner Bob Odom first started building the \$45 million Lacassine mill, he touted the project as a self-financing venture that, upon completion, would be transferred to the local farmers, who would begin paying it off.

But documents filed last month in Jefferson Davis Parish show that, in addition to paying off the bonds used to build the plant, the state agriculture department — through the 12-member State Market Commission — has guaranteed a loan for up to \$7 million for the sugar cane farmers to buy equipment, make modifications to the mill and operate it.

Also, instead of immediately selling the mill to the cane farmers around Lake Charles, Odom has entered into a lease agreement with them, with an option to eventually purchase the facility. According to the lease document, the first annual lease payment of \$100,000 is not due until Dec. 31, 2007.

Odom said he is prohibited from talking about the loan guarantee, which he said would amount to a violation of banking protections for loan recipients. He said the lease-purchase agreement includes a \$60 million price for the facility.

"If they are going to pay \$60 million for the \$45 million deal, that is a hell of a good deal for the state," Odom said.

Odom told The Times-Picayune on Wednesday that another business besides the Lake Charles Cane Cooperative wants to buy the facility. Such a sale would be possible, he said, if the co-op exercised its option to purchase the mill and then sold it to the other company.

Later in the same conversation, Odom said the mill had in fact already been sold for \$60 million, but refused to say to whom, the newspaper reported.

The longtime agriculture commissioner first won State Bond Commission approval for the syrup mill in Lacassine in September 2003, with construction beginning in 2004.

The facility was built with \$45 million raised from bonds backed by \$12 million that the Louisiana Agricultural Finance Authority receives each year in tax dollars from slot machines at horse racing tracks.

Unlike traditional sugar mills, the Lacassine plant will boil cane into syrup, which can be taken by rail to private mills along Bayou Teche, near New Iberia. The concept is that syrup will be cheaper to transport, saving struggling sugar cane farmers money.

Using the powers of the Louisiana Agricultural Finance Authority, Odom acted as general contractor on the project, using dozens of his employees as construction workers. But the mill was not ready in time for last year's fall harvest season, as had been scheduled. Odom blamed the delay on Hurricane Rita.

Critics of the venture have questioned the financial underpinnings of the project, saying the mill can make money only by processing much more cane than is currently grown in the area.

# Global trade talks collapse

## Top World Trade Organization members fail to reach breakthrough

Updated: 8:16 a.m. ET July 24, 2006

GENEVA - Global commerce talks at the World Trade Organization collapsed Monday as top powers failed to agree on steps toward liberalizing trade in farm and manufactured goods.

Indian Trade Minister Kamal Nath said the talks had been suspended and added that "it could take anywhere from months to years," to restart the negotiations. "This is a serious setback, a major setback," said Brazilian Foreign Minister Celso Amorim.

EU trade chief Peter Mandelson blamed the failure on the United States. "The United States judged that it would be better for the process to be discontinued at this stage," he said. "This action has led to the round being suspended."

But U.S. officials said the fault lay with other countries.

"Unfortunately things became clear yesterday that 'Doha light' seems still to be the preferred option of some of the participants," U.S. Trade Representative Susan Schwab told reporters at the World Trade Organization on Monday.

U.S. Agriculture Secretary Mike Johanns said the proposed steps forward from other countries "appeared to be getting lighter and lighter in the last few weeks." "Today truly represents a failure," Johanns said. He blamed Brazil and India for being inflexible on their refusal to cut barriers to industrial imports and the EU for refusing to open up its farm markets. "There was just simply nothing there," Johanns said.

Johanns said the United States indicated it could increase its offer to cut subsidies to American farmers, but he would not say whether the U.S. team had made a concrete proposal.

However, Mandelson said the United States showed little willingness to compromise. "The U.S. was unwilling to accept or indeed to acknowledge the flexibilities being showed by others in the room and as a result felt unable to show any flexibility on the issue of farm subsidies," he said. Mandelson stressed his "profound disappointment" with the result and noted that a stall in the talks would threaten previous agreements that were painstakingly reached to help the world's poorest countries. "This was neither desirable nor inevitable. It could so easily have been avoided," he said.

Though Schwab said the U.S. was committed to "a robust, ambitious and balanced round," other officials had worried that the failure of leading commercial powers to make compromises would wreck the talks. She said it was for Lamy to decide when talks should be restarted. "We need to focus on how to look forward ... without this degenerating into a finger-pointing exercise," Schwab said.

The complex trade talks aim to boost the global economy and lift millions out of poverty worldwide by lowering trade barriers across all sectors, with particular emphasis on clearing obstacles to increased exports from developing countries.

But the Doha round has stalled because of differences between rich and poor countries, as well as between the EU and the U.S. The Doha negotiations are named for the Qatari capital where they were launched in 2001.

Most countries have been sticking rigidly to the same positions they have maintained for months. The entire process is rapidly running out of time because President Bush's authority to "fast track" the trade deal — enabling U.S. envoys to negotiate an agreement that can be submitted to Congress for a yea-or-nay vote without amendments — runs out in mid-2007.

## Two Central Valley crops unaffected by heat

FRESNO - July 26, 2006 7:37am

- Sweet potato harvest starts
- **Sugar beet production good**

Perhaps there's something good about living your life under ground, especially if you're a vegetable – you're less affected by the blistering heat above ground. That seems to be the case with two Central Valley crops as their harvest gets underway.

Sweet potato harvest has started in the San Joaquin Valley, with growers saying the crop is developing well and quality should be excellent. The hot weather doesn't adversely affect sweet potatoes. The early variety now ready for harvest normally produces only a small volume, with the heavier volume beginning in another week or so. Fresh sweet potatoes will hit the market at the same time those in cold storage from last year run out.

Sugar beets aren't affected by the heat, either. In fact, the Central Valley is rivaled in its production only by the Imperial Valley, much of which is lower than sea level with commensurate higher summer temperatures.

Farmers in the Central Valley are continuing their harvest, while Imperial Valley growers have concluded for this year and are getting fields ready for planting the 2007 crop, which starts in September. Dairy farmers use sugar beet pulp to feed their animals. It is especially valuable in the hot weather as it provides animals high protein food, which is easy to digest.

Wednesday, July 26th, 2006

## **Corn-based Ethanol: Offering Some Relief from Globalization's Merciless Quest to Replace Fossil Fuel**

- Corn versus sugar-based substitute fuels
- Latin American corn producers could again become competitive
- Brazil wants entry into U.S. ethanol market
- U.S. agro-industry ultimate beneficiary of federal government's promotion of corn ethanol

Contrary to the usual outcome of Washington's subsidies to U.S. farmers, recent grants for ethanol producers could actually improve many lives, both at home and abroad. As the Bush administration aggressively encourages the production of ethanol, a renewable, more environmentally friendly biofuel, to replace increasingly pricey gasoline in automobiles, domestic and foreign corn markets will have to undergo some major adjustments. The U.S. hopes to decrease gasoline consumption by augmenting the production of compounds such as E-85 fuel, which is a mixture of 85 percent ethanol and 15 percent gasoline, that can replace regular gasoline in almost every vehicle sold today in the U.S. This could make a real dent in U.S. reliance on foreign petroleum as a result of a major shift to a domestic, non-hydrocarbon fuel source.

### **A Growth Industry**

In the U.S., ethanol is made by distilling corn kernels, but for this country to make enough ethanol to keep foreign oil off its highways, half of the nation's farmland would have to be devoted to growing corn for fuel. Realistically, U.S. farmers cannot grow enough corn to feed all U.S. cars, cows, and humans, as well as Washington's close trading partners; farmers abroad should see this as a welcomed opportunity to reverse their present status and again see themselves as competitive. Currently, farm subsidies awarded by Congress to U.S. farmers to harvest bounteous corn crops allows for low domestic prices while also guaranteeing U.S. dominance in international corn markets. But as the need for growing ethanol production strains domestic corn supplies, U.S. corn producers may have to consider curbing their exports to Latin American countries in order to meet the increasing demand for domestic U.S. ethanol production. One thing is for certain: the ultimate beneficiaries of heavily subsidized U.S. corn-ethanol will be major agro-industries like Archer Daniels Midland and Cargill.

According to the USDA Foreign Agriculture Service's report on 2006 corn exports, Mexico receives about 15 percent of the U.S. commodity while other Latin American countries such as Colombia, Costa Rica, Cuba, and Guatemala take in another 15 percent. With U.S. producers accounting for smaller amounts of corn shipments for export and asking for higher prices due to the resulting corn scarcity, corn farmers in these countries, especially those in Mexico, at some point will be able to compete on the world market and gain the revenues recently denied them due to their inability to compete. The extent to which these changes in the marketing of corn will affect Latin America depends on how strong the corn-ethanol demand remains. Although there are some potential threats to corn-ethanol's much touted future, its general prospects look promising.

### **Shifting Priorities**

The U.S. corn market is already feeling the effects of an expansion in ethanol production, as the newly created industrial demand for this category of corn makes up about 14 percent of this year's corn harvest, according to the United States Department of Agriculture (USDA). The department also estimates that the quantity of corn used for ethanol manufacturing will double within the next 10 years, using about a quarter of total U.S. corn output. To satisfy the mounting need for corn, U.S. farmers can increase production by planting more acres and engineering better corn genetics. However, as the USDA has stated, increasing corn output may not be an attractive option because the equipment used to cultivate corn must operate on fossil fuel. More production normally means burning more oil, which contradicts the main reasons for producing ethanol in the first place. Farmers may have to displace soybean fields to plant more acres of "yellow gold," as a New York Times article

called it, because soybeans grow under the same conditions as corn. However, changing crop rotation to favor corn may damage soil quality, impairing corn production in the end.

Since vastly expanding the U.S. corn crop could have such negative consequences, U.S. farmers will probably not be able to increase the acreage devoted to corn in order to supply sufficient output to offset the increased demand. Warren R. Staley of Cargill, a multinational U.S. agricultural giant, expressed concern about corn supplies in a New York Times interview, "Unless we have a huge increase in productivity, we will have a huge problem with food production ... and the world will have to make choices." Corn is normally sold to food industries or exported to foreign countries, but with ethanol manufacturers buying so much of the crop, U.S. corn sellers may have to choose among their buyers and divert sales from traditional commodity purchasers toward those engaged in fuel production.

### **Corn across Borders**

The USDA predicts that U.S. corn farmers will continue selling to domestic food industries and cut back on exports in order to supply domestic ethanol producers. The U.S.'s cutback on exports could be a saving grace for Latin American farmers who have been battered by fierce U.S. competition. The U.S. has been dominating foreign corn markets with their heavily subsidized exports that make its crop relatively cheaper, against which disadvantaged Latin American farmers have been unable to compete. In Mexico, the North American Free Trade Agreement (NAFTA) of 1994 eliminated tariffs on U.S. shipments to Mexico, allowing U.S. farmers to export low-cost subsidized corn, effectively crowding Mexican farmers out of their own market. In 2002, Mexico's Secretaria del Trabajo y Provision Social published a survey on national employment, where tens of thousands of Mexican corn farmers were forced to leave their land parcels throughout the 1990s as NAFTA took effect. The number of all agricultural producers fell 21 percent, renters and sharecroppers had dropped by 36 percent, and communal farmers by 21 percent. The Free Trade Area of the Americas (FTAA) and the Central American Free Trade Agreement (CAFTA), both recently enacted, call for similar tariff reductions which would inevitably hurt small farms throughout Latin America. On the other hand, corn farmers who had grievously suffered from free trade agreements are now likely to benefit from Washington's new ethanol obsession, since U.S. corn shipments will be heading for Midwest ethanol plants, rather than displacing foreign producers in their own local markets.

With less U.S. corn available for exporting, the price of U.S. corn both abroad and at home is bound to rise. Wealthier countries such as Japan, Taiwan, and Canada, where food comprises a small fraction of their foreign purchases, are unlikely to reduce imports on slightly more expensive U.S. corn, but poorer countries like Mexico, Guatemala, Costa Rica, and Colombia will be inclined to search for a cheaper option. This could give Latin American farmers the business they need since higher U.S. grain prices make cheaper domestic Latin American grain that much more attractive. The USDA expects that as the U.S. cuts back on exports due to domestic demand, corn exports from Mexico, Argentina, and Brazil will fill the gaps in the world corn market. For example, corn farmers from the state of Sinaloa in northwestern Mexico have been growing corn comparable to that of the U.S. product in quality, but Sinaloa is located quite far from most corn buyers in Mexico. Because of this, transporting the grain is expensive, and when Sinaloan corn finally reaches the market, buyers find that the price is much higher than U.S.-imported corn. However, if the price for U.S. corn continues to increase, shipping Sinaloan corn may become the cheaper option.

### **Brazil's Sweet Advantage**

A number of potential barriers exist to the success of corn-based ethanol, which could in turn limit its effects on Latin America. However, subsidies and protective tariffs from Washington and a slough of corn-ethanol investors can be expected to ensure continued growth of the industry.

Brazil's ethanol program should be an inspiration to up-and-coming U.S. producers who hope to efficiently use ethanol-based fuel in the future; however, Brazil's sugar-based ethanol can be expected to provide stiff competition to U.S. corn ethanol. Brazil has been developing its sugar-ethanol program since the world's first oil scare in the 1970s. Since then, the program has facilitated cheap and efficient ethanol manufacturing,

resulting in ethanol fueling about half of the country's automobiles. With access to cheap farm labor and sugar's high alcohol yield, production costs for Brazil's ethanol are about 30 percent less than the U.S. corn-based product. Yet the U.S. lacks the surplus of sugar needed to supply a domestic fuel industry, and the Midwest is restricted by the facts of agricultural cultivation to using corn as an alternative source for ethanol.

### **Power Politics**

Despite the fact that the U.S. strongly advocates free trade throughout the Americas, it has maintained restrictions on imported sugar products to protect domestic sugar farmers. Jack Roney of the U.S. Sugar Alliance claims that "when you import subsidized foreign sugar, you export U.S. jobs," as cheaper Brazilian sugar would displace U.S. producers. Now U.S. corn farmers and ethanol producers share the same concern. With sugar's relative efficiency and the government's sugar subsidies, Brazil can provide cheaper and more effective production, and thus, hold its competitive advantage over the U.S. This makes Brazilian ethanol exports to the U.S. a menacing threat to corn-ethanol demand. However, the U.S. currently enforces trade restrictions on all foreign sugar products, which also limits Brazilian ethanol imports that could hurt corn-ethanol producers and the farmers who supply them.

At a recent Senate hearing for energy security in Latin America, Eduardo Pereira de Carvalho from the São Paulo Sugar Cane Agroindustry Union (UNICA), asked the U.S. to lower tariffs to create a more open world market, allowing Brazil to sell more ethanol to the U.S. Knowing that Brazil's cheap sugar-based ethanol would competitively oust U.S. ethanol, the U.S. refused Brazil's request, deciding instead to protect U.S. farmers and its own budding ethanol business. Carvalho stated that "the Brazilian private sector does not want to displace the foreign market," specifically U.S. ethanol producers, but the amount of revenue Brazilian companies expect to receive by exporting to the U.S. shines much light on the true intentions of Brazilian ethanol producers. The U.S. has always been persistent in maintaining that its trade policies protect its farmers; as long as the Sugar Alliance and other farm lobbyists continue making noise in Washington, U.S. corn-based ethanol will carry on thriving domestically, handsomely protected against foreign competition.

### **Ethanol on the Rise**

Technology for corn-based ethanol is still relatively undeveloped: it remains expensive to produce and using corn to distill ethanol is not the most efficient method. The actual cost of corn-based ethanol is higher than the current prices for gasoline, but subsidies from Washington have kept the prices low enough so consumers can pay less for ethanol than gasoline. Corn-based ethanol's effectiveness in cutting fossil fuel usage is also uncertain, as the USDA estimates that it actually takes more than one gallon of gasoline to fertilize, harvest, transport, process, and distill corn to yield one gallon of ethanol.

### **A Way Forward**

With ethanol plants sprouting up across the country, one can safely expect corn-ethanol production to soar in the next few years. According to the New York Times, around 40 new ethanol plants have been slated for construction across America's Corn Belt this year. Archer Daniels Midland and other ethanol refining megaliths have been lobbying for Washington to subsidize ethanol, and their efforts have paid off with the Energy Policy Act of 2005. According to the Act, Washington will make certain that the U.S. is consuming at least 7.5 billion gallons of ethanol a year by 2012. That is 50 percent more ethanol than what the U.S. is currently producing, which means a huge increase in production and corn consumption is preordained in the next six years. The act also finances research to improve ethanol technology to eventually minimize corn-ethanol's current inefficiency.

Although the economic practicality of corn-based ethanol is still questionable, it remains a hugely popular commodity in the U.S. and in the minds of its potential users because it can reduce dependency on foreign oil. Weaning the U.S. economy off of oil is Washington's main priority in the near future, and that is why the U.S. Congress will continue to pour money into the ethanol industry to achieve this end. With Washington backing corn-based ethanol with subsidies and trade protections, the industry will continue to increase output, buy more

of the Western Hemisphere's corn, and inadvertently help undo some of the damage U.S. trade policy has done to Latin America in the past.

*This analysis was prepared by COHA Research Associate Stephanie Leland  
July 26th, 2006*

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## Sweet Success for Pioneering Hydrogen Energy Project

Source: [GreenBiz.com](http://www.GreenBiz.com)

BIRMINGHAM, England, July 27, 2006 - Bacteria that can munch through confectionery could be a valuable source of non-polluting energy in the years ahead, new research has shown.

In a feasibility study funded by the Engineering and Physical Sciences Research Council, bioscientists at the University of Birmingham have demonstrated that these bacteria give off hydrogen gas as they consume high-sugar waste produced by the confectionery industry.

The hydrogen has been used to generate clean electricity via a fuel cell. Looking to the future, it could also be used to power the hydrogen-fuelled road vehicles of tomorrow. There is increasing recognition that, over the coming decades, hydrogen could provide a mainstream source of energy that is a safe, environmentally friendly alternative to fossil fuels.

This was a highly successful laboratory demonstration of bacterial hydrogen production using confectionery waste as a feedstock. An economic assessment undertaken by another partner, C-Tech Innovation Ltd, showed that it should be practical to repeat the process on a larger scale.

As well as energy and environmental benefits, the technique could provide the confectionery industry (and potentially other foodstuff manufacturers) with a useful outlet for waste generated by their manufacturing processes. Much of this waste is currently disposed of in landfill sites.

In this project, diluted nougat and caramel waste was introduced into a 5 litre demonstration reactor (although other similar wastes could be used). The bacteria, which the researchers had identified as potentially having the right sugar-consuming, hydrogen-generating properties, were then added.

The bacteria consumed the sugar, producing hydrogen and organic acids; a second type of bacteria was introduced into a second reactor to convert the organic acids into more hydrogen. The hydrogen produced was fed to a fuel cell, in which it was allowed to react with oxygen in the air to generate electricity. Carbon dioxide produced in the first reactor was captured and disposed of safely, preventing its release into the atmosphere.

Waste biomass left behind by the process was removed, coated with palladium and used as a catalyst in another project aimed at identifying ways of removing pollutants such as chromium (VI) and polychlorinated biphenyls (PCBs) from the environment. The reactors used by this parallel initiative also required hydrogen and this was supplied by the confectionery waste initiative too, further underlining the 'green' benefits offered by the new hydrogen production technique.

Professor Lynne Macaskie of the University of Birmingham's School of Biosciences led the research team. "Hydrogen offers huge potential as a carbon-free energy carrier," she comments. "Although only at its initial stages, we've demonstrated a hydrogen-producing, waste-reducing technology that, for example, might be scaled-up in 5-10 years' time for industrial electricity generation and waste treatment processes."

Dr David Penfold, microbiologist from the School of Biosciences, who has developed this technology, says, 'The process has enormous potential. In theory, any waste can be used for hydrogen production as long as it contains sugars that the bacteria can utilise. This allows the possibility of using the process in countries which have a high sugar surplus. We have already received interest from countries with high levels of waste who are keen to make use of this technology.'

The team is now engaged in follow-up work which will produce a clearer picture of the overall potential for turning a wider range of high-sugar wastes into clean energy using the same basic technique.



# NEWS RELEASE

United States Department of Agriculture • Office of Communications • 1400 Independence Avenue, SW  
Washington, DC 20250-1300 • Voice: (202) 720-4623 • Email: [oc.news@usda.gov](mailto:oc.news@usda.gov) • Web: <http://www.usda.gov>

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Release No. 0267.06  
Contact: Ed Loyd (202) 720-4623

## USDA ANNOUNCES FISCAL YEAR 2006 AND 2007 SUGAR PROGRAM PROVISIONS

WASHINGTON, July 27, 2006 - The U. S. Department of Agriculture today announced sugar program provisions for the remainder of this fiscal year (FY) and for FY 2007 concerning administration of the tariff rate quotas (TRQ's) and the domestic allotment program.

### SUMMARY

Today's action includes:

- An increase in the FY 2006 refined sugar TRQ of 100,000 short tons raw value (STRV).
- An increase in the FY 2006 specialty sugar TRQ of 9,921 STRV.
- Establishing the FY 2007 raw sugar TRQ at 1,481,497 STRV, which is 250,000 STRV above the World Trade Organization (WTO) Agreement required minimum of 1,231,497 STRV.
- Establishing the FY 2007 refined and specialty sugar TRQ at 62,832 STRV, 38,581 STRV above the WTO Agreement required minimum of 24,251 STRV.
- In accordance with the North American Free Trade Agreement (NAFTA), permitting duty-free entry of 275,578 STRV (250,000 metric tons) raw or refined Mexican sugar during FY 2007, and at least 192,904 STRV (175,000 metric tons) from October 1, 2007 through December 31, 2007.
- The FY 2006 Overall Allotment Quantity (OAQ) remains at 9,350,000 STRV and the FY 2007 OAQ is set at 8,750,000 STRV.

### 2006 Refined Sugar TRQ

USDA announces that the FY 2006 TRQ for refined sugar is increased 100,000 STRV.

Due to the unprecedented disruptions to the U.S. sugar market, the supply of refined sugar in the United States is below optimum levels. This adjustment in the refined sugar TRQ should provide adequate supplies to sugar users until full production of the 2006 sugar crop is well underway.

The additional refined sugar TRQ will be allocated by the United States Trade Representative (USTR). For that portion of the refined sugar TRQ increase that is unallocated, entries must be in containers of 120 metric tons or less. This limit will apply only to the FY 2006 refined sugar TRQ increase. The opening date for the TRQ will be the second business day after the day on which USTR announces its allocation. The intent of this action is to make available to the market high quality refined sugar from all available sources that is ready for immediate use.

### 2006 Specialty Sugar TRQ

USDA also announces that the specialty sugar TRQ is increased 9,921 STRV to 41,508 STRV. The specialty

sugar TRQ will be opened on a first-come, first-served basis in two tranches of 4,960 STRV each, on August 17, 2006 and August 31, 2006. This specialty sugar must have a sucrose content, by weight in the dry state, corresponding to a polarimeter reading of 99.5 degrees or more.

These TRQ tranches (the fifth and sixth of FY 2006) of 4,960 STRV are reserved for organic sugar and other specialty sugars not currently commercially produced in the United States or reasonably available from domestic sources. Only specialty sugar certificates which specify the FY 2006 fifth and/or sixth tranches will be accepted; previously issued FY 2006 certificates will not be valid. This action is intended to address directly the market requirements for organic sugar as an ingredient in manufactured products for the rapidly growing organic foods market.

The total FY 2006 refined sugar TRQ is composed of the minimum amount of 24,251 STRV, which includes 1,825 STRV of specialty sugar, that the United States must make available in accordance with its WTO commitments; 29,762 STRV announced on August 12, 2005 for specialty sugar; 75,000 STRV announced on September 9, 2005; 150,000 STRV announced on December 2, 2005; 250,000 STRV announced February 2, 2006; and today's 109,921 STRV.

The authority for modification of TRQs is the Harmonized Tariff Schedule of the United States, Chapter 17, Additional U.S. Note 5. As a result of these two actions, the total FY 2006 refined sugar TRQ is increased from 529,013 STRV to 638,934 STRV.

#### 2007-2008 Sugar Outlook

The July World Agriculture Supply and Demand Estimates (WASDE) Report clearly indicates that total sugar production from 2006 crop sugar beets and sugarcane along with carry-in stocks will not be sufficient to meet domestic use requirements and provide for rebuilding ending stocks to reasonable levels. Additional imported sugar thus will be required, over and above the minimum WTO TRQ import quantities.

#### 2007 Raw Sugar TRQ

USDA today sets the FY 2007 raw sugar TRQ at 1,481,497 STRV, which is 250,000 STRV above the WTO Agreement minimum. Considering the current market situation, increased sugar use and refiners' needs for additional flexibility in acquiring and processing raw sugar, the FY 2007 raw sugar TRQ will be allowed early entry beginning August 7, 2006 and no shipping patterns will be established. Country allocations will be announced subsequently by USTR.

#### 2007 Refined and Specialty Sugar TRQ

The FY 2007 refined sugar TRQ is established at 62,832 STRV for which the sucrose content, by weight in the dry state, must have a polarimeter reading of 99.5 degrees or more. This amount includes 24,251 STRV, the minimum level to which the United States is committed under the WTO Agreement, and an additional 38,581 STRV for specialty sugars. This additional amount combined with a specialty sugar allocation of 1,825 STRV included in the WTO Agreement minimum, brings the total specialty sugar allocation to 40,406 STRV. USTR will subsequently allocate the refined sugar TRQ.

USDA will administer the FY 2007 specialty sugar TRQ in four tranches to allow for orderly marketing throughout the year. The first, totaling 1,825 STRV, will open October 24, 2006. All specialty sugars are eligible for entry under this first tranche. The next three tranches each will be equal to 12,860 STRV. The second tranche will open on November 7, 2006; the third on February 5, 2007; and the fourth on July 24, 2007. The second, third and fourth tranches will be reserved for organic sugar and other specialty sugars not currently commercially produced in the United States or reasonably available from domestic sources.

## 2007-2008 NAFTA Sugar

The United States has consulted with Mexico and the two parties have determined jointly, in accordance with Annex 703.2 of NAFTA, that Mexico is projected to be a net surplus producer of sugar for the next marketing year (FY 2007). In accordance with this determination, USDA is announcing that Mexico will be permitted to enter up to 275,578 STRV (250,000 metric tons) raw or refined sugar duty free in FY 2007.

USDA notes that the United States and Mexico have concluded an agreement under which:

- As noted above, the United States will provide duty-free access to 250,000 metric tons of Mexican sugar during the next marketing year (FY 2007).
- Mexico will provide duty-free access to the Mexican market for an equivalent amount of U.S. high fructose corn syrup (HFCS) during the same period (October 1, 2006 through September 30, 2007).
- Effective January 1, 2008, Mexico will not impose duties on U.S. HFCS.
- Mexico will establish a duty-free quota for U.S. sugar of not less than 7,258 metric tons (raw value) for each of marketing years 2006, 2007 and 2008. The over-quota tariff on U.S. sugar will be eliminated effective January 1, 2008 as provided for in NAFTA.
- The United States will provide duty-free access of a minimum of 175,000 metric tons and, based on market conditions, up to 250,000 metric tons of Mexican sugar and Mexico will provide duty-free access to an equivalent amount of U.S. HFCS from October 1, 2007 through December 31, 2007.
- Mexico and the United States confirm that on July 3, 2006 they submitted a joint letter to the WTO Dispute Settlement Body regarding the elimination of Mexico's soft drink and distribution taxes.

## FY 2006 OAQ

The effects of earlier disruptions, most notably last year's hurricanes, continue to affect sugar supplies as the current marketing year draws to a close. The most recent forecasts of beet and cane sugar production, in combination with the current OAQ of 9,350,000 STRV, results in a total domestic supply shortfall of 246,000 STRV. This shortfall, in accordance with statute, is reassigned as follows: 100,000 STRV to the FY 2006 refined sugar TRQ increase, 9,921 STRV to the FY 2006 specialty sugar TRQ increase, 75,000 STRV to estimated early entries of the FY 2007 raw sugar TRQ, and 61,079 STRV to FY 2006 non-program imports. These imports do not count against the import trigger of 1,532,000 STRV contained in the 2002 Farm Bill.

## FY 2007 OAQ

USDA today affirms that domestic sugar marketing allotments will continue in effect for FY 2007. USDA seeks to meet the statutory objective of an orderly market operation of the program at no cost to the taxpayer to the maximum extent practicable. The calculation of the OAQ is based on the estimate of domestic sugar food use minus the amount of sugar that is expected to be supplied from alternative (non-OAQ) sources.

USDA is establishing the FY 2007 OAQ at 8,750,000 STRV. The OAQ is allocated to the beet and cane sectors as follows:

(STRV)

Beet Sugar: 4,755,625

Cane Sugar: 3,994,375

OAQ: 8,750,000

This allocation is estimated to result in a supply shortfall of 375,000 STRV for the cane sector, all of which is reassigned to imports. This reassignment is being made now to facilitate shipping arrangements that will help ensure availability of the sugar to the market.

Preliminary market indicators incorporating the latest available information from the July 12, WASDE report plus changes reflecting today's announcement indicate a preliminary FY 2007 situation as shown below:

	FY 2006 (1,000 STRV)	FY 2007
Carry-in stocks	1,331	1,616
Production	7,365	8,345
Imports	3,420	2,248
Total Use	10,500	10,615
Ending Stocks	1,616	1,594
Stocks-to-Use Ratio(%)	15.4	15.0

Due to considerable uncertainties involving the underlying estimates, USDA will closely monitor stocks, consumption, imports, and all other program variables on an ongoing basis. During the year, appropriate adjustments will be made to the OAQ as required to ensure an adequate supply for the domestic market, avoid forfeitures, and prevent market disruptions.

Separately, the Farm Service Agency will, on an individual processor basis, adjust FY 2006 allocations and announce initial FY 2007 cane State allotments and sugarcane and sugar beet processor allocations.

For further information regarding the foreign program changes, contact Ron Lord, Foreign Agricultural Service at 202-720-2916, and for domestic program changes, contact Dan Colacicco, Farm Service Agency at 202-690-3451

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## **Sweet end to bitter U.S.-Mexico sugar trade dispute**

9:04 a.m. July 28, 2006; REUTERS

MEXICO CITY – The United States and Mexico have ended a heated, decade-long dispute over sugar and sweetener trade, lifting all barriers from 2008 under the North American Free Trade Agreement.

The two countries agreed to reciprocal tariff-free import quotas prior to 2008, Mexico's government said late Thursday.

The deal allows free trade from 2008 in the products that go to make Coke and other soft drinks and are also heavily used in the baking industry.

It includes the United States accepting 500,000 tons of sugar imported from Mexico tariff-free between 2006 and 2007 and Mexico taking 500,000 tons of high-fructose corn syrup from U.S. producers.

The accord ended a bitter trade battle that pitted the powerful U.S. sugar and sweetener lobbies against Mexico's heavyweight sugar industry, with tens of thousands of cane growers and mill workers.

Mexico wanted to export its excess sugar to the United States, which the U.S. sugar industry staunchly blocked, and the United States saw its high fructose corn syrup exports to Mexico cut off by a tax on soft drinks made from the sweetener.

Sugar shortfalls in the United States – in part because of damage to cane fields and sugar mills by hurricanes Katrina and Rita last year – helped to end the dispute.

The U.S. Corn Refiners Association welcomed the deal on Friday, although it said it did not fully compensate for losses of more than \$4 billion in the past 10 years from Mexico's barriers to U.S. exports of HFCS.

It said the agreement guarantees access for HFCS to the Mexican market, eliminates the soft drink tax and removes all tariffs on HFCS exports.

“It sets in motion an irreversible path to free trade in January 2008, as the NAFTA intended,” said Audrae Erickson, the group's president.

The NAFTA accord between the United States, Canada and Mexico came into being in January 1994.

Mexico's economy ministry said it expected Mexican producers to export around 600,000 tons of sugar to the United States in the 2005/06 export cycle, which ends in October.