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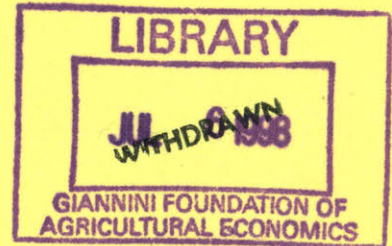
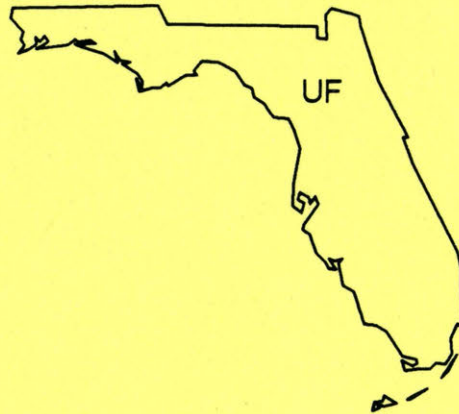
**World Sugar Markets and
U.S. Sugar Policy**

by

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**UNIVERSITY OF
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ABSTRACT

WORLD SUGAR MARKETS AND U.S. SUGAR POLICY

At a time when the sugar market in the United States is becoming even more competitive (under the 1996 Farm Bill), the European Union continues to maintain a high level of protectionism. Europe's sugar policies contain a complicated set of variable import duties, variable export subsidies, intervention prices, and threshold prices, plus type A quotas and type B quotas. Although historically the European union nations were net importers of sugar, they now export 3 tons of sugar for every 1 ton imported.

This heavy level of subsidy of Europe distorts world market prices for sugar. It has been estimated that if Europe were to unilaterally liberalize its sugar policies, world raw sugar prices would increase to levels near or above current U.S. levels. Thus, all the rhetoric about the cost of the U.S. sugar program to American consumers would disappear. American consumers have a good deal in their sugar supply.

In June of 1996, the U.S. House of Representatives passed an Agricultural Appropriations Bill that would impose price controls on raw sugar at 117.5 per cent of the loan rate, or a price cap of 21.15 cents per pound. Apparently, this legislation was intended to guarantee sugar refiners profitable operating margins and full capacity operations. While gross refiner margins were below normal in mid 1995, they are in mid 1996 over twice the level of normal profits.

More importantly, imposing price controls raises the ugly head of government intervention in resource allocation and inevitably leads to inequities among market participants. It is also contrary to the general direction of U.S. farm policies that had been moving toward freer markets.

In terms of likely impacts, the 1996 Farm Bill is expected to eliminate the incentives for expansion of beet sugar processing capacity simply to establish historic production bases. This legislation will also increase price risk and possibly limit borrowing by growers. The "safety net" of non-recourse loans disappears for U.S. sugar growers if foreign sugar imports fall below 1.5 million tons. This situation would result in "recourse" loans or no safety net at all. Given a larger than expected domestic sugar crop, prices and returns to growers would be disastrously low.

Environmental issues are not uniquely a Florida problem. Rational thinking and science need to be a cornerstone of solving problems in this area.

Key Words: sugar, raw sugar, world markets, European Union, marketing allotments, price controls, recourse loans.

TABLE OF CONTENTS

ABSTRACT	ii
KEY WORDS	ii
THE WORLD MARKET	1
EUROPEAN UNION SUGAR POLICY	1
THE PROPOSED PRICE CAP ON RAW SUGAR	3
SOME OTHER DOMESTIC ISSUES	6
Impact of Removing Marketing Allotments	6
Increased Price Risk	7
Environmental Pressures	7
Sugar Consumption Continues to Climb	8
CONCLUDING REMARKS	9
REFERENCES	11
APPENDIX TABLE	12

WORLD SUGAR MARKETS AND U.S. SUGAR POLICY

Leo C. Polopolus*

The World Market

The world market for raw sugar is not a free market. Prices reported on world market sales are highly distorted because of the extensive intervention of essentially all governments of the world into their domestic sugar markets.

Historically, the world market for sugar has been a "dumping ground" for sugar that was not tied to domestic markets or pre-arranged international trading arrangements. The residual or "free market" sugar not involved in domestic or international policy deals represents roughly 15 percent of world sugar production (Polopolus, 1993).

Thus, it is not unusual for the so-called world or free market in raw sugar to exhibit somewhat volatile price swings on major shifts in weather, international warfare, and/or sugar policies.

The Uruguay Round of the General Agreement on Tariffs and Trade (GATT) was supposed to lessen the role of government intervention in sugar markets throughout the world and create a "freer" world market. GATT has not materially changed the way sugar is traded on the world scene, but it will (by the early 21st Century) move world markets slowly in the direction of freer trade.

Of particular significance is the fact that the European Union (previously known as the European Community) continues to distort resource allocation in the direction of a larger beet sugar output than would otherwise be the case under competitive market conditions. From its historic role as a net importer of sugar, Europe is now a major exporter of sugar on the world market.

European Union Sugar Policy

Europe has a long history of supporting their domestic sugar industry. It is well known that the beet sugar industry of Europe began with Napoleon. France imposed protective duties on imported colonial sugar to permit the beet sugar industry to grow and prosper. In the mid-1880s, continental European countries supported their beet sugar industries through competitive and costly export bounties, plus import barriers. By 1889, beet sugar accounted for more than 60% of the world's sugar output (Schmitz, 1995).

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The current European Union (EU) sugar policy was initiated in 1968. Producers are supported by a common support price, which is set close to the high support prices that applied in Italy and Germany prior to the introduction of the EU sugar regime. Production quotas are used to limit the Union's financial liability.

The European Union uses both variable import levies, as well as variable export subsidies. Through these instruments, the EU is able to block imports when world prices are below EU levels, i.e., the normal situation. At the same time, the EU can export surplus quota sugar to the world market. Additionally, the European Union uses two institutional support prices -- the intervention price and the threshold price. The intervention price is a floor price and the threshold price is a minimum support price. The two form a domestic price band. The threshold price ensures that domestic market prices can rise toward a target price without being undercut by third country imports.

The EU sugar policy is further complicated with two types of quotas, A and B, plus C sugar. Type A quotas received a minimum producer price of 52.19 ecus per 100 kg, while Type B quotas received a minimum producer price of 28.31 ecus per 100 kg. (1987/88 season). The European Union produced 10.2 million tons of white sugar under the A Quota in 1987/88 and 2.2 million tons of white sugar under the B Quota in the same season. The C sugar is priced at about the world market level (18.43 ecus per 100 kg) and amounted to 0.8 million tons in 1987/88.

The high support prices for sugar of the European Union were not lowered under GATT because the required reduction in domestic support prices were covered by lowering of the prices of their cereals. Also, they did not have to change their level of imports under GATT because they met the 5% standard by the year 2000. The EU does import slightly over 10% of their total domestic sugar consumption, although they export about 3 tons of sugar for every ton of sugar imported.

However, the European Union is not GATT ready with the issue of subsidized exports. The nine nations of the European Community in the 1974/75 season, for example, had net imports of 1.62 million tons of white sugar. By the 1989/90 season or 15 years later, the twelve nations of the European Community had net exports of 3.2 million tons of white sugar. Their exports are heavily subsidized (Schmitz, 1995).

Under the GATT accord, subsidized exports have to be cut by 21% in volume and by 36% in expenditure terms by the year 2001. For sugar, the budgetary constraint is more likely to have an impact than the volume constraint, because EU exports have fallen somewhat from the amounts exported in the mid-1980s, the years that were used as the base period for this GATT policy.

What does all this mean to United States sugar producers and consumers? Europe is exemplary of the role that governments take throughout the world in protecting and maintaining domestic sugar industries. In fact, there is no doubt that Europe's heavy government intervention and the "dumping" of their surplus sugar on world markets has had the effect of lowering world sugar prices. (In contrast, the United States has a minimal "safety net" of price protection for growers and it does not export sugar to world markets).

Opponents of the United States sugar industry use these artificially low world sugar prices to estimate the cost of the U.S. sugar program on our consumers. The Government Accounting Office (GAO) report estimated that cost to be \$1.4 billion per year (U.S. Government Accounting Office, 1993). Even though no one in the U.S. sugar industry receives a penny of direct government subsidy, this estimate of \$1.4 billion is arrived at by calculating the difference between an assumed "long run equilibrium price of raw sugar in the world market" and the U.S. price of raw sugar. This difference is known as the "quota price premium".

All research studies (that I am aware of) have confirmed that if and when governments throughout the world reduce or eliminate their protective and interventionist sugar programs, world sugar prices will rise. My University of Florida colleague and world class trade economist, Professor Andrew Schmitz, has concluded that world sugar prices would rise significantly under multilateral trade liberalization. More importantly, the European Community's sugar policies have significant impacts on world sugar prices, when compared to the impacts of U.S. sugar policies.

Professor Schmitz's research reaches the dramatic result that if the European Community were to unilaterally liberalize its sugar policies, world raw sugar prices could increase to levels at or above current U.S. levels (Schmitz, 1995). This conclusion means that the quota price premium becomes zero or negative and that the consumer cost of the U.S. sugar program is zero or a net benefit. In effect, the U.S. sugar program is really consumer friendly.

The Proposed Price Cap on Raw Sugar

Under the sugar program of the 1996 Farm Bill, the United States moved its federal sugar policies further in the direction of freer domestic markets. The new federal sugar policy eliminated marketing allotment provisions, which previously permitted limits to domestic production and marketing. The "safety net" of minimum support prices was also removed if sugar imports fall below a specified threshold level. The new sugar law requires that loans to sugar producers be offered only on a "recourse" basis if sugar imports fall below 1.5 million tons, an import level which is 20 percent higher than required under GATT. For any forfeited sugar, the support price drops one cent or to 17 cents per pound. The

support price continues to be fixed at 18 cents per pound, raw value, for sugar not forfeited. Moreover, the special tax on sugar, the so-called marketing assessment, has been increased 25 percent so as to require the domestic sugar industry to contribute an additional \$288 million toward federal deficit reduction over the next seven years.

Even though the Congress only recently passed the new sugar program for what was believed to be for a seven year period, there continues to be attempts by the U.S. House of Representatives to tinker with federal sugar policy in a direction injurious to domestic sugar cane and sugar beet growers. The amazing part is that the Republican controlled House approved in June of 1996 an Agriculture Appropriations Bill that would impose government managed price controls on raw sugar. This action is clearly contrary to a freer market philosophy.

The House measure, if adopted by the Senate, would cap raw sugar prices at 117.5 percent of the loan rate or 21.15 cents per pound. Not only would this price cap require raw sugar prices to drop 1.5 cents per pound and cost U.S. sugar growers \$750 million, but it runs counter to the prevailing mood of the nation for less government intervention in the marketplace.

How could this have happened? In American society, we are accustomed to and generally approve of "safety nets" for various situations. The price support loan program offers a "safety net" to prevent total economic disaster when prices fall. Our Fair Labor Standards Act provides for minimum wages for working citizens, so as to prevent wages from falling to socially unacceptable levels. We generally understand that prices and wage rates are normally above "safety net" levels. How much above the safety net level is determined by the free play of market forces in each case.

The imposition of price controls on raw sugar markets or any other product or factor market runs counter to the American concept of competitive market behavior. Who would, for example, think of establishing a maximum hourly wage rate for U.S. workers? Our experience with price controls in the 1970s was disastrous. Not only are inequities created among participants in the marketplace, but resources tend to become inefficiently allocated and used. Price controls, however, clearly elevate government to a preeminent role in allocating resources.

While it is unlikely that the Senate will endorse the concept of price controls for U.S. raw sugar markets, one has to wonder why such a measure received approval by the U.S. House of Representatives? The answer lies with the problems encountered by the U.S. cane sugar refiners in 1995. Gross operating margins dropped to almost zero by July of 1995. That is, the cost of raw sugar and the price of wholesale refined were almost identical in

that month. It is widely held that sugar refiners can operate without economic losses if their market prices are roughly 3.5 cents per pound above their raw input (sugar) prices. In calendar 1995, gross refiner margins averaged approximately 2.4 cents per pound, considerably below break even margins (Appendix Table 1).

The economic stress on cane sugar refiners in 1995 was brought about in large measure by the expansion of beet sugar output. With the possibility of marketing allotments before 1996, beet growers continued to expand production, in part, because of the importance attached to having a larger historical base of production. This in turn caused beet sugar processors to expand processing capacity. Unfortunately, beet processors did not build storage capacity commensurately. As expanded beet sugar hit the market, prices fell. Cane refiners, having to compete, ended up with economic losses in 1995.

Based upon their economic experiences in 1995, cane sugar refiners sought to guarantee their profit margins by imposing federal price controls on the raw sugar needed for their refining operations. According to Luther Markwart, Executive Vice President of the American Sugarbeet Growers Association, cane refiners not only want to have guaranteed operating margins, but also assurances that their refineries would operate at full capacity (Markwart, 1996). Sugar growers certainly do not have "fixed prices" on their factors of sugar production nor do they have federal guarantees that their raw sugar processing plants operate at 100 percent of capacity.

The irony of the situation is that gross operating margins for sugar cane refiners in 1996 are now at the highest levels in years, with raw prices at 22.4 cents per pound and refined sugar prices at 32.0 cents per pound, an almost 10 cent per pound margin. Even though some sugar deliveries are committed from earlier (and lower priced) contracts, operating margins are at least twice the average cost of refining of 3.5 cents per pound. Moreover, refining capacity is close to 100 percent.

Throughput at cane sugar refineries has been buoyed by the largest foreign quota allocation since possibly 1983 or 2.38 million tons, raw value, for the current marketing year. In addition, many refineries are involved with the re-export program, plus the refining of domestically produced raw sugar from Louisiana, Texas, Hawaii, and Florida.

Upon close inspection of the relevant facts and the current economic situation (in mid 1996) facing cane sugar refineries, the case for price controls on raw sugar to guarantee profitability in cane sugar refining vanishes in the wind. The proposal for a price cap on raw sugar would only add to excess profits of cane refiners, contribute to economic losses to U.S. sugar growers, and provide no net benefits to American consumers.

(Parenthetically, if a price cap on raw sugar does unexpectedly become legislated into federal law, it would behoove domestic sugar cane growers to consider "integrating forward" into the cane sugar refining business, so as to capture some of the attractive profit margin in sugar refining that would result from this action).

Some Other Domestic Issues

Impact of Removing Marketing Allotments

Marketing allotments were legislatively permissible under the previous federal sugar program so as to guarantee foreign access to the U.S. sugar market. The notion was that marketing allotments on beet and cane sugar processing plants were needed to restrain domestic sugar marketings so as to permit foreign sugar to have at least a 1.25 million ton quota.

Somewhat surprisingly to policy makers, the possibility of the imposition of domestic marketing allotments had the unintended effect of increasing sugar beet acreage. That is, when marketing allotments were not actually imposed, beet growers expanded their sugar processing capacity so as to guarantee a sufficiently large allocation, if and when marketing allotments were actually imposed. Unfortunately, beet growers did not expand refined sugar storage capacity commensurate with their increases in production and processing capacity. Thus, domestic beet processors would heavily discount their refined sugar prices in periods of excess supply (and/or inadequate storage capacity). In order to compete in the market place, cane sugar refiners would likewise lower their prices to match beet sugar prices. Since beet sugar growers are paid on the basis of participation contracts that tie grower returns to the prices of refined sugar, among other factors, both beet growers and cane refiners became disenchanted with the marketing allotment provisions of the previous program.

The absence of marketing allotments in the new sugar program results in the following economic environment: (1) There is no incentive to expand processing capacity simply to increase your historical base; (2) Domestic production and processing capacity will be geared more closely to potential economic returns. And if foreign sugar imports fall below 1.5 million tons in a year when domestic beet and cane production achieves record levels, the "recourse" loan program kicks in with disastrously low domestic sugar prices and returns. Thus, prices to growers can become disastrously low; the "safety net" of a minimum support price of 18 cents per pound of raw sugar vanishes in this specific example.

The shift in federal sugar policy from non-recourse loans to recourse loans (when foreign imports are below 1.5 million tons) means that there can be no forfeitures of sugar to the federal

government. In simple terms, in years of large crops, prices to growers will be low and the "safety net" of price supports is completely removed. In this situation, domestic growers will be operating in a highly competitive and "free" domestic market.

From a resource allocation standpoint, the removal of marketing allotments should have the effect of a more rational allocation of scarce resources in the United States. Any new expansion of beet and/or cane acreage in the United States will likely be based on efficiency and profitability criteria. Thus, we expect to see increases, for example, in beet sugar production capability in the Red River Valley of North Dakota and Minnesota, but decreases in California, Nebraska, and Ohio. In sugarcane, we expect to see some increases in production capability in Louisiana, but continued decline in Hawaii's sugar production outlook. While Florida sugar production has increased over the past two decades, their future rate of growth will be limited by environmental factors and the limited acreage of muck soils not already dedicated to sugarcane.

Increased Price Risk

The 1996 Farm Bill has increased the degree of price risk in domestic sugar production. Without a minimum price guarantee, domestic raw sugar prices could become more volatile, particularly on the downside. This environment of potentially greater price risk could also seriously and negatively affect sugar growers' ability to borrow funds to finance domestic sugar production.

Environmental Pressures

Florida's sugar industry is engaged in a bitter struggle for survival against an environmental coalition determined to return the bulk of the state's sugar production region to a "river of grass". Despite all sorts of programs to ameliorate the water quality and other environmental problems, sugar growers in Florida have faced monumental pressures at state and national levels to pay more, give up sugarcane lands, and be portrayed in the media and elsewhere as "bad guys".

Under the Florida Everglades Forever Act, sugar growers are already being assessed a total of approximately \$300 million for environmental clean-up activities in the Everglades Agricultural Area. Best Management Practices (BMPs) are also being successfully practiced by Florida sugar growers to reduce phosphorus run-off, among many other programs to solve assumed environmental problems in good faith.

No matter how much sugar growers do or pay, the extreme environmentalists want more blood from Florida sugar growers. While a proposal to tax Florida raw sugar production at least one cent per pound did not pass in the U.S. Congress, a Florida

referendum to tax Florida sugar growers an additional one cent per pound of raw sugar for additional environmental projects in or near the Florida Everglades is underway. My analysis on this issue concludes that the one cent tax proposal would wipe out the current small profit margin in Florida sugar (production and processing) and lead to persistently negative returns when all economic costs are considered.

The important point here is that environmental issues and pressures will in due course become more apparent in other domestic sugar growing areas of the United States. Dealing with environmental issues will certainly not be restricted to Florida's sugar industry and the Everglades in the future. Louisiana, with such bountiful water resources and wetlands juxtaposed near and around sugarcane lands, is a prime candidate for harassment by extreme environmentalist groups.

Unfortunately, there is so much erroneous information and emotion on environmental issues surrounding sugarcane production. The focus of the domestic sugar industry, as well as the public generally, should be to rely upon science and research to identify problems and prescribe long run solutions. American farmers have the ingenuity and resourcefulness to solve these environmental problems, if given an honest chance to do so.

Sugar Consumption Continues to Climb

The good news for the domestic sugar industry is that sugar consumption in the United States grew at the average rate of 162,000 tons per year over the past decade, 1986-1995. The rate of sugar consumption growth exceeds the rate of population growth, another major and positive development for the industry.

According to the Economic Research Service of the U.S. Department of Agriculture, sugar consumption is increasing at the rate of 2.0 per cent per year, while population growth for the nation is approximately 1.0 per cent per year. Historically, sugar consumption growth has been constrained by population growth, except when high fructose sugar displaced real sugar in soft drinks, and sugar consumption went into a deep tailspin in the early 1980s.

Industrial use of sugar increased 6 percent in the first half of fiscal 1995-96. The bakery/cereal and confectionary sectors continue to underpin industrial sugar usage. Demand for sugar has been particularly high for non-chocolate confectionary products. Sugar-type confectionary is fat-free, thereby benefitting from heightened consumer choice to reduce fat in diets. These sugar-type products have grown 9 percent in volume over the past year and command 35 percent of the confectionary market.

There is also considerable interest throughout the national

sugar trade on the proposal by a New Orleans bottler to use Louisiana sugar in soft drinks. According to the Wall Street Journal (June 6, 1996), "an old ingredient is slipping back into the soft drink business: sugar". To fulfill the demand for premium foods and beverages, the Pepsi/Seven Up Beverage Group of Louisiana, has introduced "Louisiana Pepsi", made with locally produced cane sugar.

While "Louisiana Pepsi" will be priced at the same price as their regular Pepsi brand that contains the cheaper high fructose corn syrup, the Royal Crown Company has introduced "Royal Crown Draft", a premium and higher priced cola that features an upscale label and the slogan "made with pure cane sugar". Mystic Brands is also launching a line of premium colas, in vanilla and tropical flavors, made with cane sugar. There is also a premium brand (Abita) of root beer manufactured in Louisiana using real sugar.

In an affluent society, consumers should have the opportunity to express their wants and needs in the market place. The return of sugar to soft drinks tells us that consumers will pay for the better taste and the more natural image of cane sugar. The real question is how much sugar can be sold in soft drink formulations in the United States by the beginning of the 21st Century? Let's hope that American consumers are given a reasonable chance to rediscover the taste of soft drinks with the real thing: sugar.

Concluding Remarks

At a time when the sugar market in the United States is becoming even more competitive (under the 1996 Farm Bill), the European Union continues to maintain a high level of protectionism. Europe's sugar policies contain a complicated set of variable import duties, variable export subsidies, intervention prices, and threshold prices, plus type A quotas and type B quotas. Although historically, the European Union nations were net importers of sugar, they now export 3 tons of sugar for every 1 ton imported.

This heavy level of subsidy by Europe distorts world market prices for sugar. It has been estimated that if Europe were to unilaterally liberalize its sugar policies, world raw sugar prices would increase to levels near or above current U.S. levels. Thus, all this nonsense about the cost of the U.S. sugar program to American consumers would disappear. American consumers have a good deal in their sugar supply.

The proposed price cap on domestic raw sugar prices by the U.S. House of Representatives runs counter to the publically accepted notion of "less government" in the market place. Controlling prices of products or inputs raises the ugly head of government intervention in resource allocation and leads to inequities among market participants. Moreover, the problem the House was seeking to solve, i.e., low sugar refiner margins, has

completely disappeared. The House bill, if passed in 1996, would legislate losses to domestic sugar growers and guarantee extraordinary profits to cane sugar refiners. Gross refiner margins are currently running close to 10 cents per pound, while costs are assumed to average 3.5 cents per pound. The difference is clearly excess profits to the refiners.

In terms of likely impacts, the 1996 Farm Bill is expected to eliminate the incentives for expansion in beet sugar processing capacity simply to establish historic production bases, since the marketing allotment provisions have been eliminated. The new sugar program will increase price risk, as the previous safety net of non-recourse loans is replaced with recourse loans when foreign imports fall below 1.5 million tons. Because of this price uncertainty and increased price risk, lenders may be less willing to loan funds to domestic sugar producers.

Environmental issues are not uniquely a Florida problem. Rational thinking and science need to be a cornerstone of solving problems in this area.

While there are lots of problems in the domestic sugar industry, one of the most positive developments is the growth in consumer demand for sugar in the United States. Not only are sales of sugar increasing dramatically in certain bakery and confectionery sectors, but the return of sugar usage in soft drinks portends even better news for the future.

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Appendix Table 1. Estimated Gross Sugar Refiners' Margins,
Monthly, January 1994-June 1996

Month/ Year	Wholesale Refined Beet Sugar Prices	Raw Sugar Prices	Estimated Gross Refiners' Margins
--- cents per pound---			
<u>1994</u>			
Jan	25.75	22.00	3.75
Feb	25.50	21.95	3.55
Mar	25.50	21.95	3.55
Apr	24.50	22.08	2.42
May	24.75	22.18	2.57
June	25.25	22.44	2.81
July	25.00	22.72	2.28
Aug	25.00	21.84	3.16
Sept	24.70	21.78	2.92
Oct	25.00	21.58	3.42
Nov	25.38	21.57	3.81
Dec	25.50	22.35	3.15
	1994 Average Margin		3.12
<u>1995</u>			
Jan	25.50	22.65	2.85
Feb	25.50	22.69	2.81
Mar	25.50	22.46	3.04
Apr	25.50	22.76	2.74
May	25.13	23.10	2.03
June	25.10	23.09	2.01
July	24.75	24.47	0.28
Aug	24.75	23.18	1.57
Sept	25.50	23.21	2.29
Oct	25.75	22.67	3.08
Nov	28.13	22.60	5.53
Dec	28.85	22.63	6.22
	1995 Average Margin		2.40
<u>1996</u>			
Jan	28.69	22.39	6.30
Feb	29.00	22.68	6.32
June*	32.00*	22.40*	9.60*

*Estimated by the author.

Source: U.S.D.A., Economic Research Service, Sugar and Sweetener Situation and Outlook Report, March 1996.