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Session: Sugar Outlook: Economics, Science, and a Healthy Diet

## SOUND SCIENCE AND PROSPECTS FOR SUGAR CONSUMPTION

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### INTRODUCTION

The Sugar Association educates consumers and professionals about the benefits of pure, natural sugar. When consumed in moderation, it contributes to a balanced diet and healthy lifestyle. The Association was established in 1943 and represents American family farmers and processors of sugar cane and sugar beets. Our longstanding reputation for responsible and accurate nutritional policy recommendations and dissemination of information is based on our founding belief that nutrition policy must be based on sound, reproducible, publishable, and rigorous science.

Sugar is pure, natural and contains 15 calories and only 4 grams of carbohydrate in a teaspoon.

### A REVIEW OF KEY ISSUES

#### *Obesity*

The growing obesity epidemic is driving nutrition policy. The Sugar Association recognizes that obesity is a serious public and personal health problem that affects adults and children alike. The causes of obesity must be based on the totality of scientific data and lifestyle changing programs must be communicated to the public. The consumption of sugar is inaccurately linked to obesity in both scientific opinions and the general media. In fact, sugar consumption per capita has trended downward for the last 30-40 years. Thus, it is difficult to understand how sugar (sucrose) can be targeted as the cause of obesity.

A recent Center for Disease Control (CDC) study indicates that caloric intake by Americans has increased up to 15 percent. This information suggests that Americans are consuming more calories than they are expending. Thus, the Sugar Association supports and promotes nutrition and physical activity programs based on a nutrition model those calories in must equal or exceed calories out for weight management and/or weight loss. Such a nutrition program would provide for consumption of a variety of foods (no diets limiting certain nutrients), portion control, and physical activity being treated equally (weighted 50%) with the diet or intake side of the equation. Until physical activity is

accepted by the nutritional community as half the equation in fighting obesity, we will not be successful in our battle. Finally any programs or nutrition policy recommendations that attempt to reach children directly without the inclusion of parents in the education process is bound for failure. Good nutrition policy must be taught from the earliest ages at home and reinforced and practiced throughout one's lifetime.

### *Sugar Consumption*

In 1970, the USDA Caloric Sweetener Total Supply Availability indicated refined sugar (sucrose) comprised 83 percent of the market, corn sweeteners comprised 16 percent of the market, and honey and other sweeteners held only 1 percent. The sweetener profile in 2000 reflects a dramatic change in the marketplace. Forty-four percent of the market is comprised of refined sugar, 55 percent corn sweeteners, and 1 percent honey and other sweeteners.

U.S. sugar deliveries over the last 40 years have remained relatively constant ranging between 11.4 million tons 1972 and 7.7 million tons in 1986. Therefore, the average sugar deliveries were 9.6 million tons per year.

When compared to population growth in the U.S., per capita deliveries of sugar (sucrose) has trended downward from a high of 102.3 lbs. per person in 1972 to 63.2 lbs. in 2002. In September 2003, the Economic Research Service (ERS) determined that deliveries are not an accurate reflection of consumption. This is attributed to loss due to food waste, spoilage, and other disappearances. ERS calculates average food loss, supported by scientific studies, at approximately 29 percent of deliveries. In response to this loss data, ERS created, a new "Table 51--Refined cane and beet sugar: Estimated number of per capita calories consumed daily, by calendar year." Table 51 accurately portrays sugar consumption at 45 pounds per person per year in 2002. This is substantially lower than previous delivery figures which are often cited by the media and referenced by anti-sugar advocates to promote their agenda to limit sugar intake. And again, these updated consumption figures further exonerate sugar as a causative factor in the obesity crisis.

### *Macronutrients Report*

The Institute of Medicine (IOM) Daily Reference Intakes or Macronutrients Report was released in September 2002. This exhaustive and independent report was undertaken at the request of the Dietary Guidelines Committee of 2000. It involved 3 years of research, over 25,000 human subjects, and findings were supported by 279 scientific references.

Regarding added sugars consumption, the report found that,

"Based on the data available on dental caries, behavior, cancer, risk of obesity, and risk of hyperlipidemia, there is insufficient evidence to set an UL [upper limited] for total or added sugars."

This key scientific study will support nutrition policy not only in the 2005 Dietary Guidelines but for years to come. The IOM went on to say,

“Although a UL is not set for sugars, a maximal intake level of 25 percent or less of energy from added sugars is suggested based on the decreased intake of some micronutrients of American subpopulations exceeding this level.”

The Sugar Association clearly understands that the IOM is NOT recommending that people eat 25% of their daily carbohydrate calories in added sugars. Nor is the Sugar Association making such a recommendation. USDA documented in the 1994-1996 Continuing Survey of Food Intakes by Individuals in February 1999, that Americans only consume 15.7 percent of their caloric intake in added sugars. The Sugar Association supports this consumption figure as responsible consumption of sugar (sucrose), in moderation within the context of a balanced diet.

What is key to IOM’s findings is that added sugars of up to a level of no more than 25 percent do not cause displacement of micronutrients in our diets. Thus, it is clear that at a consumption level of 15.7 percent in the U.S., no displacement of micronutrients occurs.

*World Health Organization – Diet, Nutrition and Physical Activity*

World Health Organization’s (WHO) Diet & Nutrition Report 916 and their Global Strategy clearly has been on the front burner of world nutrition policy since 2002 when the first draft was circulated for comments. Officially, the Report 916 was rolled-out in April of 2003 called for limiting free sugars intake to less than 10 percent. Since the IOM suggested a maximal intake up to 25 percent, we felt the WHO report had several weaknesses and inaccuracies. The report:

- 1) Lacked the preponderance of science. Only 11 scientific references were cited, one of which is 30 years old.
- 2) Lacked a broad-based, outside peer-review. Thus, it never withstood the scrutiny of transparent, independent scientific analysis
- 3) Lacked an economic impact analysis. The impact on the economy of developing countries was never considered.
- 4) Lacked due process. The report was issued as a “DRAFT” with a disclaimer that it was only the opinion of group of experts and should not be consider as official WHO or FAO policy. And even though the Report has now been publicly rolled out, it still carries this disclaimer.

The earlier referenced IOM study was totally ignored, indicating that the “Group of Experts” developing the Report clearly utilized selective science to support the misguided free sugars guideline. The Sugar Association continues to stand on its founding principles that all nutrition information about sugar be based on the preponderance of scientific evidence. We continue to work with the broader food industry to ensure that science guides the proper drafting of the WHO’s Global Strategy for consideration by the World Health Assembly in May 2004.

### *Dietary Guidelines*

The U.S. government first issued Dietary Guidelines in 1980. The guidelines hold as one of its founding principles that all nutrition policy recommendations be grounded in Public Law 101. That is, the preponderance of scientific evidence must be the basis for each and every guideline. These Guidelines influence food nutrition policy for over 56 million government controlled meals every day. Regulatory agencies also use them to set policy within their purview. Every five years the Secretaries of Health and Human Services or US Department of Agriculture (on a rotation basis) appoint a Dietary Guidelines Advisory Committee to review the most current science and determine if changes to the guidelines are warranted. The 2005 DGAC is currently in the review process.

The present guideline (2000) on sugars reads, “Choose a diet moderate in sugars.” In written and oral testimony, we have raised two concerns relating to sugars during this review:

- 1) Added sugars should be de-emphasized, particularly in the text of the sugar guideline.
- 2) Basing guidance on the Food Guide Pyramid (FGP) is misguided. The Pyramid is a communication tool to help interpret the Guidelines. The Dietary Guidelines are to drive the content of the FGP, not the reverse.

### *Food Guide Pyramid*

U.S. Department of Agriculture (USDA) created the Food Guide Pyramid (FGP) in 1992 as a communication tool to help consumers with a visual reference when it comes to what foods to consume and in what quantities for a healthy diet.

The Sugar Association has two major concerns with the FGP. First, the present Pyramid is not based on science. The caloric calculations they provide to guide us in our intake levels of certain foods are purely mathematical in creation. There is no science which provides specific intake levels supporting the FGP. Second, the Pyramid is not supported by outside peer review. The Office of Management and Budget has issued a memorandum calling for all science which is utilized by regulatory agencies in the creation of policy to include peer review in the process. Therefore, until USDA incorporates outside peer review in the FGP updating process, the specific recommendations will be questionable.

### *Nutrition Labeling*

Labeling of food contents is presently under review by the Food and Drug Administration (FDA). The Center for Science in the Public Interest (CSPI) submitted a petition to FDA to consider singling out “added sugars” on the nutrition label. Currently sugar is referenced in an all encompassing terminology of “sugars.”

The FDA defines sugar as sucrose and sugars as all other caloric sweeteners. The Sugar Association agrees with this definition and recommends the label make this distinction. This is supported by recent independent focus groups research that indicates consumers would prefer to know the source of the sugars and/or sweeteners rather than whether sugars are added to the content. As it relates to “source,” consumers indicated that they would like to know if a sugar or sweetener is natural, artificial or somehow chemically manipulated, formulated or “made in a lab.”

Additionally, the terminology “added sugars” is not enforceable by FDA. Other alternative and consumer friendly terminology continues to be explored for providing more accurate sugar/sugars information to the consumer helping them to make good nutritional decisions.

The Association has also publicly opposed continuation of the use of “and/or” by the soft drink industry to portray that their products contain “high fructose corn syrup and/or sucrose.” Since it is clear that most soft drink companies do not use sugar in their products, we have submitted comments to the FDA opposing the use of “and/or” in an effort to provide consumers with an accurate reflection of soft drink contents. A ruling from FDA is anticipated early this year.

#### *Assuring Scientific Integrity and Accountability*

Two new pieces of legislation including the Access to Data established in 1999, and the Data Quality Act of 2002 are helping to contribute to the transparency of science and research used by the U.S. government. The Access to Data initiatives provide for raw data to be supplied if a study is publicly funded and once it is published or presented in a public forum. Data Quality has been embraced by all agencies with their own standards of scientific rigor in order to be accepted for consideration in the development of policy. Both of these new laws clearly challenge academic and research scientists to provide solid, repeatable interpretations of their findings when reporting their publicly funded works. Needless to say, this has added an accountability level and assurance of sound science and repeatable results that were not engaged before these bills were adopted into law.

#### *Impacts on Sugar Consumption*

Atkins and the low-carb trend have become obsessive. There have been some short term successes by individuals. However, as most diets go, 50 percent of those that start on a low-carb diet are no longer on it after one year. As highlighted by the low-fat trend, ultimate success of such a trend is usually short term or not effective at all. The Atkins diet, which advocates limiting carbohydrate intake, has long been criticized by nutritionists who say that it puts dieters at risk for heart disease. Also, many persons who have tried the Atkins diet and failed have professed that when they went off the diet, they actually ended up gaining more weight back than what they originally weighed.

Competition by artificial sweeteners adds to consumers choices. The newest and fastest growing is sucralose (a.k.a. Splenda) which is now controlling 35 percent of the artificial sweetener market. Referenced recently by Chicago market researcher IRI, the total monetary value of the artificial sweetener market is \$300 million. Compared to the \$5 billion sugar market, the formulated sweetener market is still considered a small but growing concern to monitor and counter with the benefits of all natural sugar. Also, as some beverage companies have reported, the testing of blends including Splenda could adversely influence the corn sweetener market in the near future more than the sugar market.

There is a bright spot in sugar consumption figures. In spite of general declines in sugar deliveries since 2000, sugar consumption for beverages is up. In 2002, sugar deliveries for beverages increased 19 percent, and in the first three quarters of 2003, the increase continued at 14 percent. This is now being reinforced by the Sugar Association with its development of our All Natural, Sugar-Based E-Business website promoting regional beverages which use only sugar.

## **Conclusion**

The issues that influence U.S. sugar consumption are multifactoral and interrelated. First and foremost, the foundation for good nutrition policy and actionable programs must be based on the preponderance of rigorous and sound science. The Data Quality Act and Access to Data laws help to ensure that published scientific results are reproducible and held to the highest standards.

Science is the foundation on which all nutrition policy, recommendations, dietary guidance and food labeling are based. Faulty science only serves to create a scenario in which a domino effect occurs ...

Bad science = poor nutrition policy = inadequate dietary guidance = inaccurate public perceptions = increased obesity or related illness and disease = decreased demand for sugar and other agricultural products = loss of farmland and catastrophic impacts to farmers and growers.

We must be pro-active to ensure that sound science prevails to guide us in our nutrition policy in the years ahead, not opinion nor activists' agendas.