

Understanding and Managing Sweetness

A Scientific Conference on Sweetness and Sweeteners

*Taj Mahal Hotel, New Delhi, India
September 17, 2009*

Dr. Maxime Buyckx, MD, MBA
*The Beverage Institute for Health and Wellness
The Coca-Cola Company*

Why Manage Sweetness?

A Perspective

from

the Food Industry

• **MANAGING SWEETNESS** •

An Educational Program

The Oldways Approach
To a Balanced Diet and Lifestyle

Based on
High-Level Nutrition Science
and
Best-evidence Principles of Behavioral Sciences

What is Managing Sweetness?

Introduction to the Managing Sweetness Project
and
The Managing Sweetness Consensus Statement

“Managing Sweetness is an innovative international public education program that offers simple tools to help individuals and families enjoy the pleasures of sweet foods and drinks in sensible ways.

“The Managing Sweetness Consensus Statement, prepared by prestigious groups of leading international scientists, describes the background, rationale and content of the Managing Sweetness Program.”

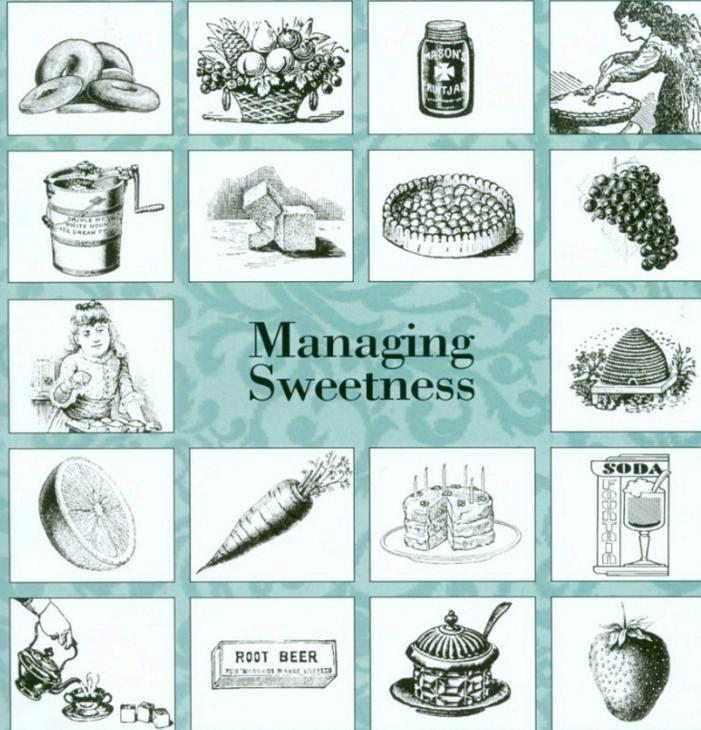
Sweetness and Health

Oldways

Mexico City, 2004

AN OLDWAYS SCIENTIFIC CONSENSUS CONFERENCE

SCIENTIFIC STRAIGHT TALK ON
SWEETNESS AND HEALTH



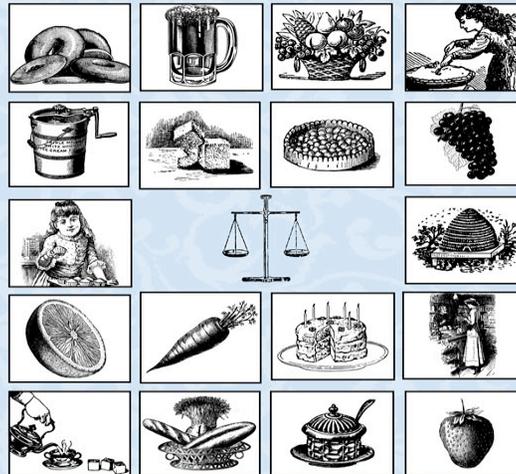
Organized by Oldways Preservation Trust
October 21 – 23, 2004 • Four Seasons Hotel, Mexico City

MANAGING SWEETNESS

A Scientific Consensus Conference for Policy Makers and Stakeholders

“TOWARDS CONSTRUCTIVE, WORKABLE SOLUTIONS”

21 June, 2006



Organised by Oldways • Albert Hall Complex, Brussels

• **MANAGING SWEETNESS** •

SCIENTIFIC CONSENSUS STATEMENT

Agreed in Brussels, June 20, 2006

1. The acceptance of sweetness is innate and universal. Sweetness directs newborn mammals toward safe and nourishing foods and drinks, while bitterness signals potential harm.
2. Of the five most widely acknowledged tastes, three generally signal acceptance (sweet, salty, and umami*), while two generally signal avoidance (sour and bitter). These early responses are modified by life experiences, producing adult tastes preferences. **associated with amino acids.*

• **MANAGING SWEETNESS** •

3. Humans have sought sweet foods, sweet drinks, and sweeteners throughout their history, and sweetness continues as a strong force in food and drink selection, influencing large sectors of modern life.
4. There are many different sources of sugars in nature, in addition to sugar cane, sugar beet, and corn. These include fruits, vegetables, and milk.

• **MANAGING SWEETNESS** •

5. The desire for sweetness is also satisfied by intense sweeteners, low-energy sweeteners (such as polyols), or by combinations of these.
6. Sugars, intense sweeteners, and low energy sweeteners together offer useful options for managing sweetness.
7. Human digestion and metabolism do not distinguish between sugars found naturally in foods and those added to foods. All sugars are 4 Calories per gram (4 kcals or 17 kJ/g).

• **MANAGING SWEETNESS** •

8. Maintenance of a healthy body weight depends on wise management of energy from all food and drink sources, coupled with wise lifestyle choices that include regular physical activity. This is particularly so in a society where energy and physical activity are not in balance.
9. A high frequency of consumption of sugars and other fermentable carbohydrates, combined with a lack of appropriate oral hygiene, has been linked to an increased risk of dental caries.

• **MANAGING SWEETNESS** •

Signatories of the Scientific Consensus Statement Brussels, 20 June 2006

France Bellisle

PhD, Research Director, Institut National de la Recherche Agronomique (INRA) (Paris, France)

Flora Correia

PhD, Assistant Professor, Pathology and Diet Therapy, Faculdade de Ciências da Nutrição e Alimentação da Universidade do Porto (Porto, Portugal)

Adam Drewnowski

PhD, Professor, Epidemiology and Medicine; Director, Centre for Public Health Nutrition, University of Washington (Seattle, USA)

John Foreyt

PhD, Professor, Department of Medicine; Behavioural Research Centre, Baylor College of Medicine (Houston, USA)

Michael Gibney

PhD, Professor of Nutrition, Clinical Medicine, Trinity College Medical School (Dublin, Ireland)

K. Dun Gifford

JD, President, Oldways Preservation Trust (Boston, USA)

Ulrich Huehner

European Federation of the Associations of Dietitians (EFAD) (Dresden, Germany)

Barbara Livingstone

PhD, Professor of Nutrition, School of Biomedical Sciences, University of Ulster (Coleraine, Northern Ireland)

Dominique Parent-Massin

PhD, Professor, University of Bretagne Occidentale (Brest, France)

Patrick Pasquet

PhD, Director of Research, CNRS, French National Centre for Scientific Research (Paris, France)

Sandrine Raffin

General Manager of Protines, Nutritionist and Coordinator, EPODE (Ensemble Prévenons l'Obésité Des Enfants) (Paris, France)

Lluís Serra Majem

MD, PhD, Director, Department of Clinical Sciences, University of Las Palmas de Gran Canaria (ULPGC) (Las Palmas and Barcelona, Spain)

Wim Wientjens

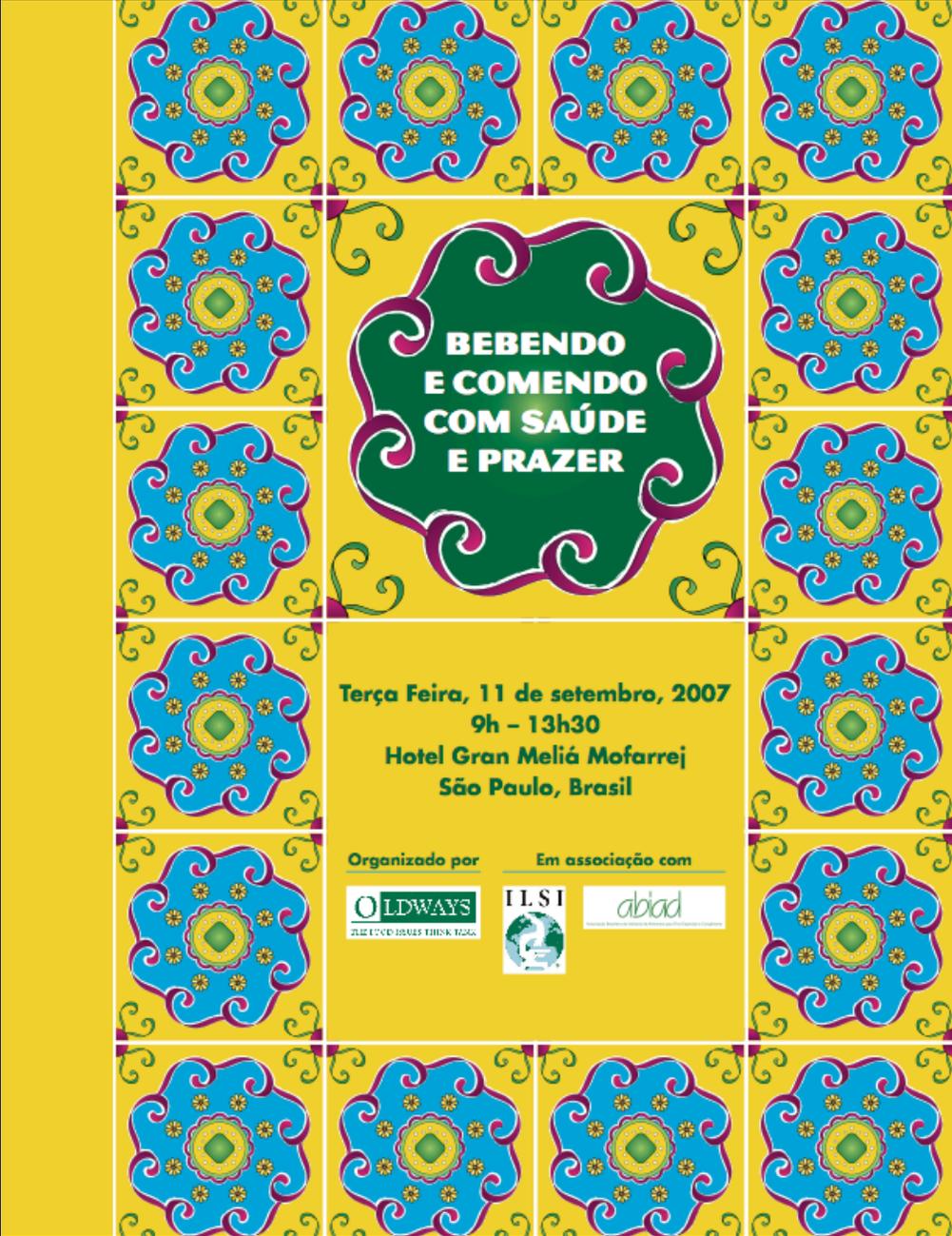
PhD, Chair, International Diabetes Federation European Region (Leidschendam, The Netherlands)

These individuals are also members of the Scientific Consensus Committee.



Managing sweetness





**BEBENDO
E COMENDO
COM SAÚDE
E PRAZER**

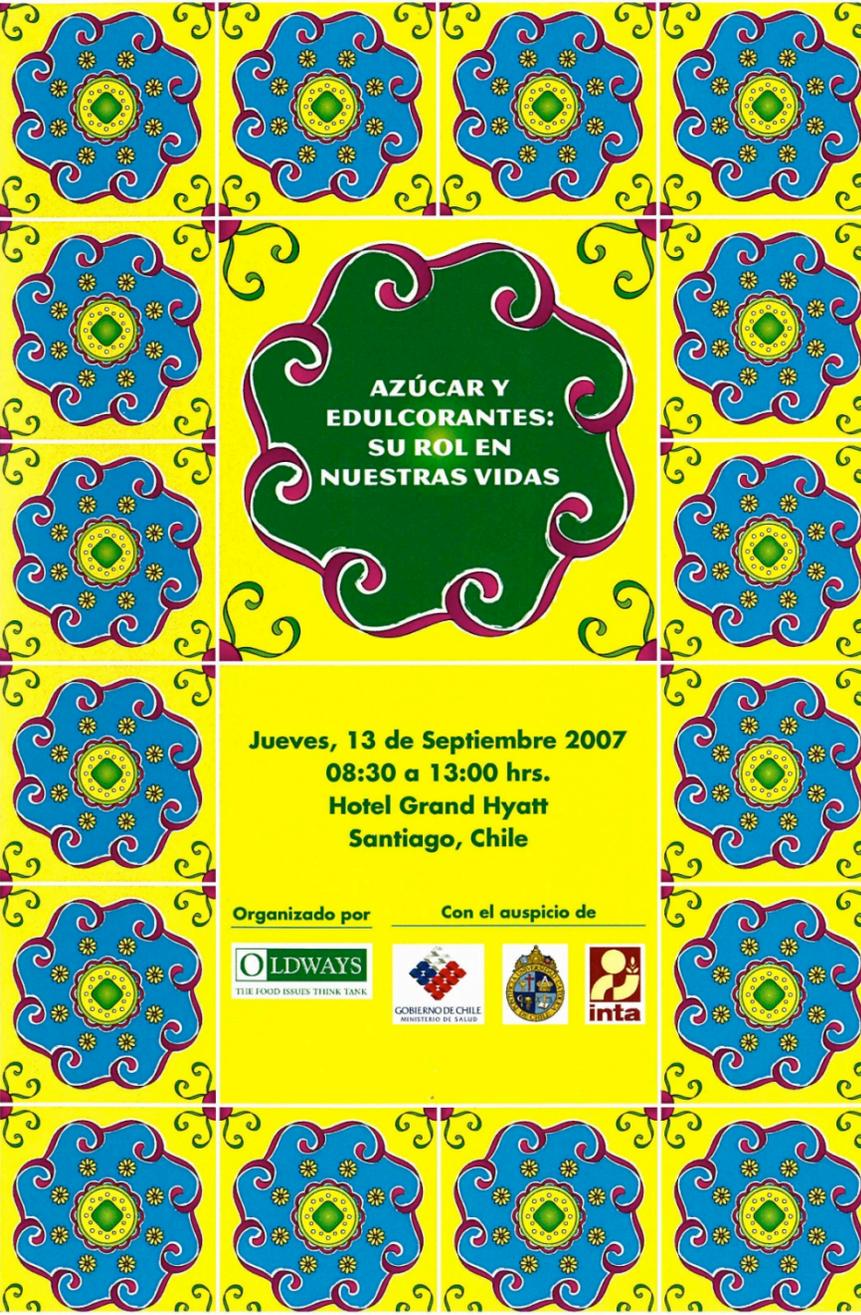
Terça Feira, 11 de setembro, 2007
9h - 13h30
Hotel Gran Meliá Mofarrej
São Paulo, Brasil

Organizado por



Em associação com





**AZÚCAR Y
EDULCORANTES:
SU ROL EN
NUESTRAS VIDAS**

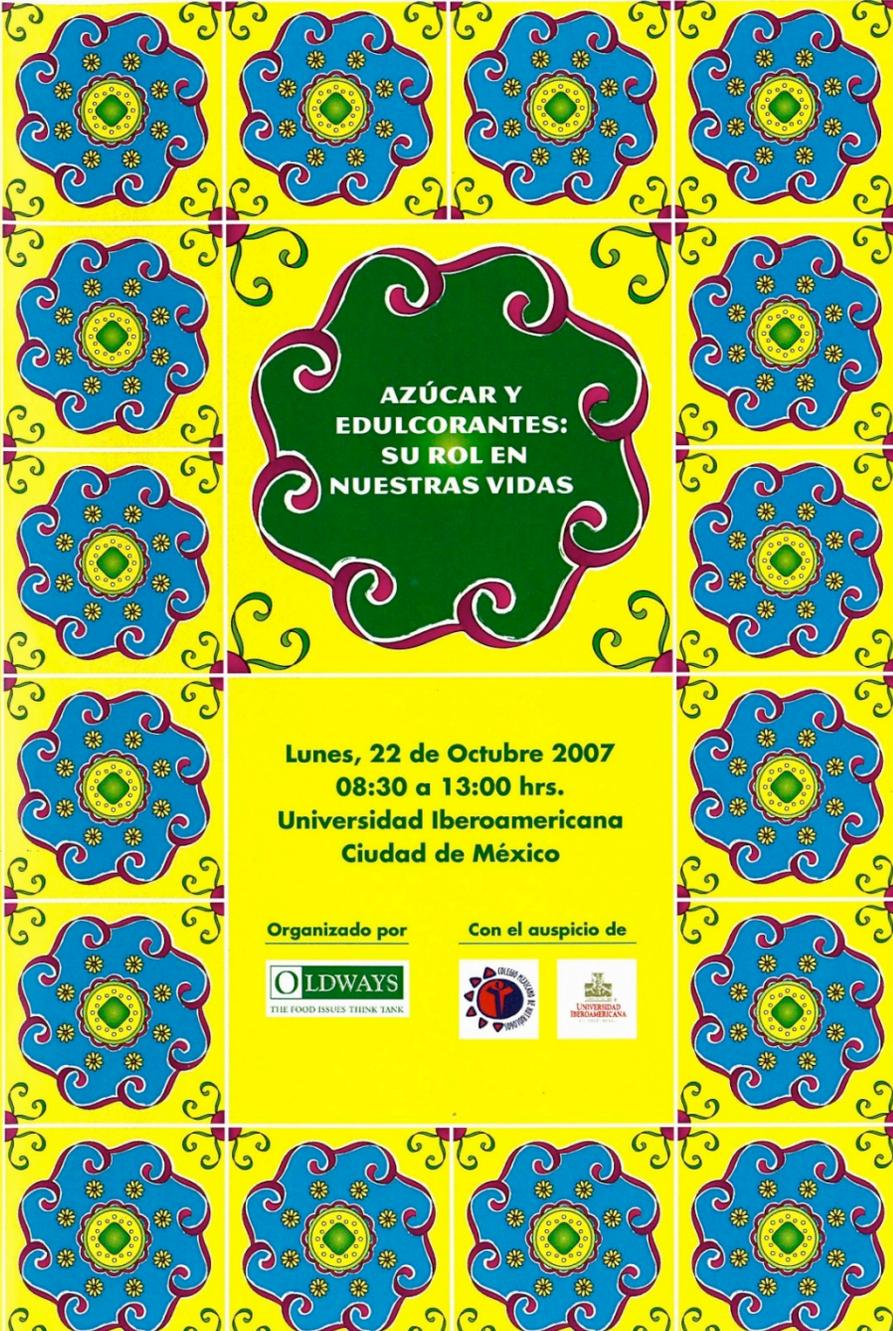
**Jueves, 13 de Septiembre 2007
08:30 a 13:00 hrs.
Hotel Grand Hyatt
Santiago, Chile**

Organizado por



Con el auspicio de





**AZÚCAR Y
EDULCORANTES:
SU ROL EN
NUESTRAS VIDAS**

**Lunes, 22 de Octubre 2007
08:30 a 13:00 hrs.
Universidad Iberoamericana
Ciudad de México**

Organizado por



Con el auspicio de



Azúcar y Edulcorantes:



Oldways



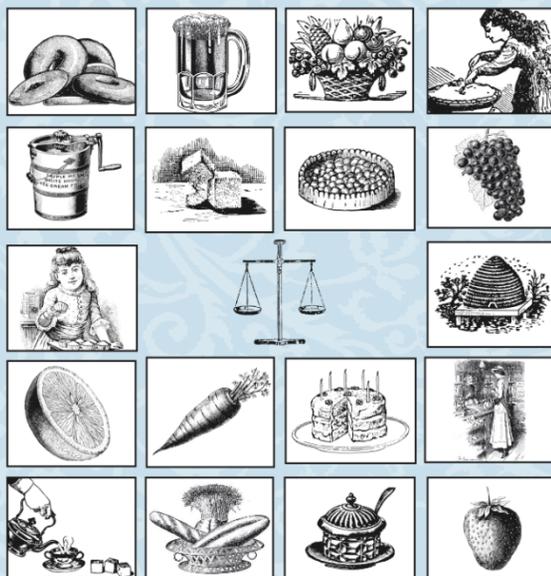
Buenos Aires, 2007

AZÚCAR Y EDULCORANTES:

Su Rol en Nuestras Vidas

Viernes 14 de Septiembre 2007

08:30 a 13:00 hrs.



Organizado por



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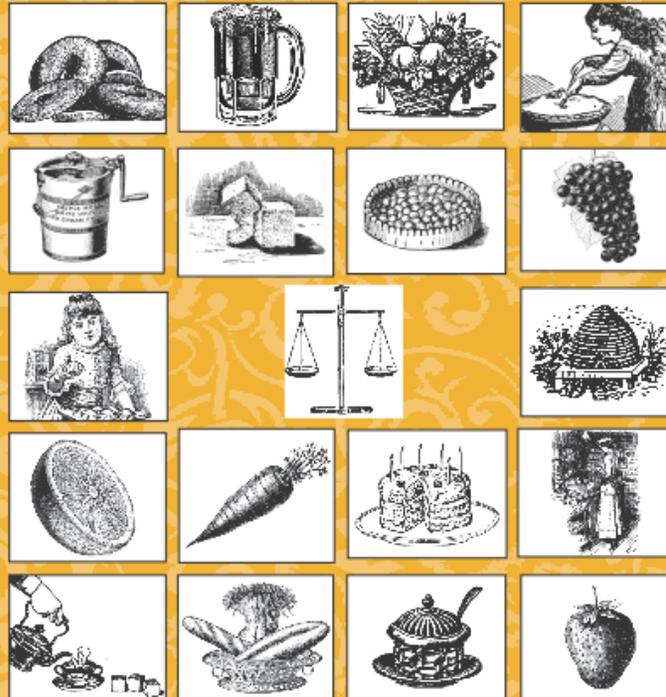


Asociación Médica Argentina, Buenos Aires, Argentina

UNDERSTANDING SWEETNESS

MAKING SENSE OF THE SCIENCE:
SUGARS, SUGAR SUBSTITUTES, SWEETNESS AND HEALTH

April 2, 2008



Organized by

OLDWAYS

THE FOOD ISSUES THINK TANK

National Press Club, Washington, D.C.

甜与健康学术研讨会

Workshop on Managing Sweetness

2008年4月30日 30 April 2008
中国·北京 Beijing, China

主办单位 Co-organizers
国际生命科学学会中国办事处
ILSI Focal Point in China
美国Oldways基金会
Oldways Preservation Trust



UNDERSTANDING SWEETNESS “TURKISH DELIGHT”

A Scientific Conference on Sweetness, Sugars and Non-nutritive Sweeteners

24 November 2008



Organized by

OLDWAYS



Hyatt Regency, Istanbul, Turkey

Moving forward....

Sweeteners - Real Aid, or Excuse to Indulge?
New York Times, 17 February 2009, by Jane E. Brody (excerpts)

Behavior, Not Biology

-In the AJCN, Richard D. Mattes of Purdue University and Barry M. Popkin of the University of North Carolina reviewed 224 professional studies of the effects of non-nutritive sweeteners on appetite, food intake and weight.
-They concluded that "taken together, the evidence summarized by us and others suggests that if non-nutritive sweeteners are used as substitutes for higher-energy-yielding sweeteners, they have the potential to aid in weight management."
-"Used prudently, non-nutritive sweeteners can work," Dr. Popkin said.....

Moving forward....

Sweeteners - Real Aid or Excuse to Indulge?

New York Times, 17 February 2009, by Jane E. Brody (cont.)

“...It's more a behavioral issue than a biological one,” Dr. Popkin said. “Some people use non-nutritive sweeteners as a crutch; other use them to help create a healthy diet.”

Why Waste Calories?

In one of the largest and longest studies, Dr. Blackburn and his colleagues at Beth Israel found that among dieters who were randomly assigned to consume liquid calories or artificially sweetened drinks for 175 weeks, those who drank the diet drinks took in 100 fewer calories a day and lost significantly more weight and kept more of it off.

“Those 100 calories add up to 10 pounds a year,” Dr. Blackburn said. “Small changes in caloric intake can result in small but meaningful healthier weights.”“.....

Managing Sweetness

Key Points:

- * Science-based
- * Common sense
- * Easy to understand by consumers
- * Involve public and private partners

FINANCIAL TIMES

USA | SATURDAY SEPTEMBER 24 / SUNDAY SEPTEMBER 25 2005

USA \$1.50 Canada C\$2.50 Bermuda \$2.25

WINES TO ADMIRE

Jancis Robinson indulges in world-class vintage Montroses

PAGE 8



FT Weekend

SATURDAY SEPTEMBER 24 / SUNDAY SEPTEMBER 25 2005

BLOBJECTS OF DESIRE

Karim Rashid wants to make design more democratic

PAGE 15



Arch-foe of the food extremists

Advocate of dietary moderation K. Dun Gifford tells Paul Sullivan it's time to stop demonising food and learn to eat sensibly

I hate extremists," says K. Dun Gifford. He is thumbing through an anti-foie-gras pamphlet handed to him by protesters outside Union Square Cafe in New York. Glancing at the menu, he smiles: "They shouldn't be picketing for a crummy terrine of foie gras - fresh foie gras seared with apples, okay, okay. How wimpy."

Gifford has faced down plenty of extremists. As a campaign adviser he was by Robert F. Kennedy's side when Sirhan Sirhan assassinated him. And after working for Edward Kennedy, Gifford became a target of wrath for acting as an intermediary with the family of Mary Jo Kopechne, who died in the senator's car.

But for the past 15 years, Gifford, 66, has been focused on food extremists through Oldways Preservation & Exchange Trust, a think-tank he runs. Oldways promotes the Mediterranean diet and olive oil. It lobbied the US Department of Agriculture ahead of its introduction this year of new food guidelines. It opposes fat diets - particularly low-fat and Atkins' low-carb - and

abstinence. "We need to teach people that food is glorious and you don't have to eat a whole lot of it to be satisfied," says Gifford. "The path to success is managing calories. You can't do that unless you enjoy your food."

The lawyer practises what he preaches. After a lunch of pasta and scallops washed down with Montepulciano, he can't wait for dessert - cinnamon ice cream and caramel sauce. "The message for us is the pleasures of the table. Eat what you want. Balance your calories."

This year Oldways has launched Managing Sweetness: "We don't think there is anything intrinsically wrong with Coke. If you want to demonise Coke, then you probably have to demonise coffee with sugar, because they're both caffeine products with sugar."

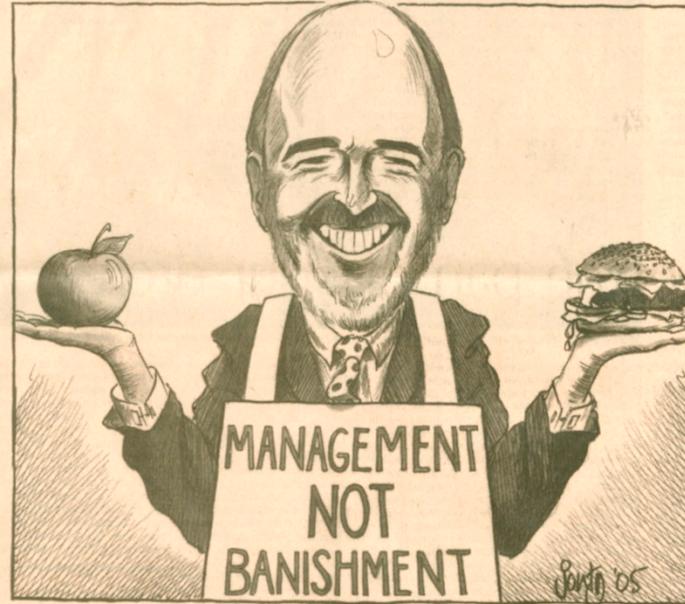
Oldways is expanding its Whole Grains Project to persuade food producers to reduce the percentage of processed grains in their products. In return, Oldways has created a bright yellow seal for producers to affix.

It may seem unusual for a food think-tank to advocate both Coca-Cola and seven-

grain bread, but it is consistent with the "management, not banishment" philosophy. "Don't make it bad to eat foie gras. Don't make it bad to eat only plant protein. Don't make it bad to eat sugar. It isn't," he says. "You can drink a Coke or a Pepsi. You can eat a hot dog at the ballpark. Don't think you have to stop eating or drinking this stuff. Enjoy it. Understand it. And balance your calories. Bingo."

In the 1980s, after a decade at a property company that owned the Ritz in Boston, Gifford met Charles Ritz, who taught him about wine and food service. He started lunching with Julia Child, who introduced French cooking to millions of Americans, and wine maker Robert Mondavi, and helped them run the American Institute of Wine and Food. By the middle of the decade he was a restaurateur and co-owner of a Boston cookie company with Senator John Kerry.

However, it wasn't until Gifford visited China in 1987 that he started thinking more about food health issues. In Qufu, birthplace of Confucius, he attended a banquet of 30 small courses



Pyramid selling: K. Dun Gifford helped devise the Mediterranean diet pyramid as a weapon in his long fight with low-fat dogma

accompanied by 30 thimbles of alcohol. He awoke the next morning with "a malol hangover" and the seed for Oldways: that food prepared in traditional ways was better for people.

"I knew you couldn't sell a concept about traditional food ways. Nobody would care," he says. "I knew you

had to sell health. I knew you had to back it up with bulletproof science. And I knew we had to have authority figures around us in the field to give credibility."

What resulted was the Mediterranean diet pyramid "as a model of healthy eating habits" and an antidote to the low-fat craze. Old-

ways' research showed that without fat, satiation was not triggered, so people ate more. Satiation came with healthier, mono-unsaturated fats such as olive oil. Oldways won the backing of the World Health Organisation and the Harvard School of Public Health.

"We knew we had a hit

with the Mediterranean diet, so we really went after that," he says. The formula was adapted for Asian, Latin American and vegetarian food pyramids. Oldways is now working with the European Commission to increase olive oil consumption in northern Europe. Oldways has positioned

itself between the extremes of the debate. Gifford says it has much in common with the left-leaning Center for Science in the Public Interest, but diverges on sweetness. The CSPI recently published a study criticising soda drinking among teens.

Yet Oldways has no problem working with manufacturers. It helped small olive oil producers get their products on US shelves, and is working with conglomerates from Frito-Lay to Cargill on whole grains.

"When I had my first meeting with General Mills, I said we have exactly the same goal with some minor modulation," he says. "We want people to put your whole grain product in the cart and you want them to put the whole grain product in the cart. We don't necessarily want them to put your highly refined product in their cart."

On managing sweetness, Oldways has taken its lead from the American Diabetes Association. "They specifically don't tell [diabetics] not to eat sugar," he says. "It's academics and advocacy groups that do."

Bringing nuance to the debate may be Oldways' greatest challenge. Americans like fat diets, and counting calories is not the sexiest slogan. But Gifford hopes hard data can startle people into changing habits, the way lung cancer figures jarred smokers. If not, Americans - who grew 10 per cent fatter from 1990 to 2000 - will continue to suffer the health effects of obesity.

"It's not Coke, it's not cake, it's not meat, it's not junk food," he says. "It's too much - that's what it is."

Paul Sullivan is an FT writer in New York