

FOOD INDUSTRY TACKLES THE BIG ISSUE

The food industry is more ready than ever to respond to the needs of consumers for products that assist weight control and contribute to their overall health. *Food Processing Intelligence* reports.

A revolution in eating habits is stirring consumers and prompting food processors around the world to react to their increasingly sophisticated demands. There are signs that a phase of carb-consciousness and healthy eating awareness is breaking out. For some manufacturers, it has been a case of sink or swim, with sales of many forbidden carbohydrate-filled products falling dramatically over 2004. The launches of low-carb beer, bread and pasta were the direct result of consumer demand for low-carb versions of popular foods. However, it's predicted that, in the next two years, we will see a different dieting trend and one that has the potential to stick around for longer than fad diets.

GROWING CRISIS

With increased consumer education regarding nutritional issues and weight management comes a growing need to prevent obesity spiralling even further out of control. It seems that eating habits today simply do not comply with dietary recommendations made by the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO) in 2004. According to one study, 34 per cent of countries now have populations whose diets, on average, contain more than 30 per cent fat, compared with 18 per cent of counties 40 years ago. It is clear that action needs to be taken, and the food industry bears much of the pressure to act.

INDUSTRY RESPONSE

Recent scrutiny of the food industry's role in obesity prevention has had mixed results. Many manufacturers have shied away from the low-carb/low-glycemic index (GI) concept, sticking with the low-fat message that has adorned supermarket shelves for decades. However, the Solae Company and Palatinit GmbH are just two food companies that have responded to the need to provide healthy eating solutions to consumers rather than shied away from what could be seen as a threat to the food business. Solae provides a high-protein, low-fat, low-carb soya, Palatinit offers as part of its product portfolio a new, low-GI carbohydrate alternative providing long-lasting energy.

Solae is an alliance between two global leaders: Dupont, known worldwide for innovative research and technology, and Bunge Limited, the leading oilseed processor in North, South and Central America. Formed in April 2003, Solae is now a leading researcher, manufacturer and marketer of high-quality soya ingredients. According to Solae's literature on the subject of weight management, 'Because fat is the least readily burned dietary fuel and the most easily stored, for many years, the nutrition and medical communities encouraged the consumption of a low-fat diet for weight loss. Food manufacturers followed government guidelines to develop more low-fat foods. However, many people interpreted "low fat" as "eat as much as you want". As part of this eating strategy, fat in

the diet was mainly replaced with carbohydrate. The result, for many, was not weight loss, but weight gain.'

GLYCEMIC INDEX FOCUS

When low-carb diets reached their popularity peak in 2004 across the UK and the USA, most Europeans remained unimpressed by stories of immense weight loss and celebrity-led eating plans, instead opting for a balanced diet free from excessively fatty and high-carb foods. For many consumers in Europe and Asia Pacific there has been a strong awareness that certain foods have a stronger impact on blood sugar levels than others, while in the UK, GI has only recently received intense attention.

This interest has led to the development of a range of low-GI products. Palatinit, a subsidiary of Südzucker, Europe's largest sugar producer, is well known in the confectionery industry as a supplier of Isomalt, which is the number one sugar replacement in sugar-free confectionery. In December 2004, the company launched a new carbohydrate, Palatinose™, also known under the generic name isomaltulose. Its low-glycemic response opens up innovative opportunities in the health and functional food and drinks markets. Palatinose is a disaccharide derived from sucrose; it is known as a natural constituent of honey and sugar cane and has a natural, mild, sweet taste. Like sucrose, it is fully digested and therefore provides the same caloric value. However, in contrast to sucrose, Palatinose is tooth-friendly and is

digested more slowly, leading to a low glycemic response and providing a prolonged glucose supply, thereby providing a 'better' energy supply for consumers.

According to Anke Sentko, manager of regulatory affairs and nutrition communication at Palatinit, the product is part of the company's response to promoting a healthy lifestyle. Sentko says: 'While we do not see a bright future for carbohydrate-restricted or low-carb diets in Europe, we see the future in carbohydrate-modified or carbohydrate-conscious food choices for a healthy lifestyle.'

Palatinit believes the low-glycemic concept is more complicated than low-carb diets that restrict carbohydrate consumption. However, according to Sentko: 'Information on packages can help [consumers] to make conscious choices.'

GI FACTS

According to the University of Sydney, Australia, which has devised the GI symbol for use on packaging: 'The glycemic index is a measure of the power of foods (or more specifically, carbohydrate) to raise blood sugar (glucose) levels after being eaten. 'Foods with a high GI contain rapidly digested carbohydrate, which produces a large, fast rise and fall in the level of blood glucose. In contrast, foods with a low GI score contain slowly digested carbohydrate, which produces a gradual, relatively low rise in the level of blood glucose. It seems consumers are moving from low-carb to good versus bad carbs. Assessing the GI rather than the 'net carbs' seems to be a preferable diet to many consumers, primarily because such diets typically encourage the consumption of carbohydrates such as fruit, vegetables, whole grains and beans, as well as low-fat dairy – unlike many low-carb diets.

Sentko says: 'There is a growing body of evidence from scientific studies showing that a low-glycemic diet can provide health benefits to the consumer. These positive effects may be achieved when the overall diet is low-glycemic because the daily profile of blood glucose and insulin level seems to be important. Today we are increasingly snacking through the day and putting a strain on our body's balance of blood glucose level and insulin response. So it makes sense that, especially between meals, snacks are low-glycemic. This is

where, for sweet snacks, sugar replacers such as the very low-glycemic Isomalt can be a useful tool for designing and developing lifestyle products.'

However, Sentko believes that the GI is just one way of measuring the blood sugar level response after eating. She adds: 'The disadvantage of the GI is that it is not related to the different foods eaten in a serving. We think it is relevant for the consumer to have information about how the serving will affect blood glucose levels. This can be expressed in several ways, for example as a blood glucose curve, as a glycemic load or as glycemic glucose equivalent.'

LOW-CARB ROLE

Hubertus Devroye, marketing director of Solae Europe, agrees with Sentko that GI is a very important feature for the food industry. The Solae Company is already working with GI and plans to increase activity in this area as it becomes more important to consumers. While not committed to one particular diet, Solae has introduced a focus on carb-controlled solutions, primarily for UK and US consumers, based on a combination of soya's health benefits and high protein/low-carb content. Devroye believes there is a future in low-carb: 'We have a tremendous amount of research and product development in all kinds of carb-controlled applications. Low-carb is an important segment to the food industry.'

It seems that low-carb, in a different guise, could have a future role to play in obesity prevention on both sides of the Atlantic. As governments push for a healthy response from the food industry, carb-consciousness is set to continue at a slower, steadier rate than experienced in 2004.

Devroye says: 'Obviously food and retail industries have a big responsibility can play an important role with regard to the challenges posed by the obesity issue. The debate, especially in Europe, has been ignored until now as simply a US problem. I think the food industry does need to do something. Popular diets of the moment are always extreme, and there are a lot of questions surrounding diets such as Atkins.' Devroye points to one of the primary criticisms facing low-carb diets: their reliance on animal protein. He says: 'If you replace this animal protein with soya protein of the equivalent value, it will help counteract the negative consequences of such diets.'

SOYA GOES MAINSTREAM

Until recently, soya products were mainly found in health food shops and health food sections of supermarkets, and they were positioned as a vegetarian or dairy alternative. Now, soya protein is shifting into the mainstream. But according to Devroye, despite consumers spending more than \$3bn a year on soy protein, many people remain unaware that soya is a positive nutrient and can play a significant role in weight management.

Solae has more than 30 years' clinical research experience and spends several million dollars a year on R&D – more than any company in the field. Solae also championed the first important FDA-approved health claim surrounding soya and its cholesterol-lowering potential in 1999. While low-carb will continue to hold a prime position in Solae's main communications – while it continues to receive high media coverage – Devroye stresses that the business is not only focused on low-carb. For example, in April 2004, Solae made a claim with the FDA based on 56 clinical studies, which showed soya protein may prevent certain types of cancer. Devroye added: 'In Spain, for example, there is a general acceptance of soya of more than 60 per cent. The Spanish know it's good for them, but not for one particular reason like low-carb.'

SHARED RESPONSIBILITY

It is widely acknowledged that food manufacturers and retailers are not solely responsible for our increasing weight: parents, governments, schools, advertising and a lack of exercise are also blamed. However, it is clear that governments now expect a degree of self-regulation in the food industry.

Companies such as Palatinit and Solae are now actively involved in communicating healthy eating messages and offering healthier alternatives to consumers, following close monitoring of the carb-consciousness trend over the past 18 months. Whether it is achieved through low-fat, low-carb or low-GI products, obesity prevention will increase in importance across a multitude of food categories. Palatinit with its low-GI, slow-release Palatinose for use in functional sports drinks and breakfast cereals and Solae with its high-protein soy are showing that the healthy eating market is no longer the reserve of speciality manufacturers but of the whole food industry. ■