

“Did You Know?”

Carbohydrates affect your blood glucose level (the amount of sugar in your blood), since your body converts carbs into sugar. Carbs are fuel for the body, but too many of the wrong kind of carbs can mean increased blood sugar levels.

Researchers at the **ARS National Center for Agricultural Utilization Research** in Peoria, IL, developed and patented food-grade bacteria whose enzymes can be used to convert sugar into a slow-release carbohydrate-based sweetener. They teamed with Cargill, Inc., under a cooperative partnership trust fund agreement.

Cargill surveyed more than 100 bacteria and compared them to the ARS enzyme. It turns out that the ARS enzyme was superior. Cargill licensed ARS' technology, which led to the discovery of a novel low-glycemic-index sweetener, called Xtend™ sucromalt. The glycemic index ranks carbohydrates in foods by the effect it has on blood sugar levels. Low-glycemic-index foods keep blood sugar levels lower.

Sucromalt provides natural sweetness for products such as nutritional beverages and bars, cereals, ice cream, jams and jellies, and yogurts. The product is named sucromalt because it is derived from a combination of sucrose (cane or beet sugar) and maltose (corn sugar). Cargill is commercially producing Xtend™ sucromalt as a food ingredient, rather than a finished food product. In food and beverages, sucromalt releases its carbohydrates into the bloodstream slowly, which results in more stable blood sugar levels, versus a fast release that results in rapid increases in blood sugar levels followed by quick dropoffs.

Sucromalt offers manufacturers and consumers health benefits over traditional sweeteners, while still providing a satisfyingly sweet-tasting product. Sucromalt is 70 percent as sweet as sugar.

Commercial products like Glucerna® use sucromalt as an ingredient in some of its low-glycemic food products, such as cereals and select shakes. These products are designed to help people with diabetes

minimize blood sugar spikes when used as part of a diabetes management plan, while still offering sweetness and taste.

The best way to manage blood sugar levels is through a combination of eating balanced meals, physical activity, and working with your doctor to monitor and manage your blood sugar levels.



Please submit story ideas and national award items to Tara T. Weaver-Missick, tara.weavermissick@ars.usda.gov or call 301-504-1663.