

MALT—AN ANCIENT FOOD WITH MODERN BENEFITS

By now, it is well known that consumers want healthier snacks. Low-cal, no-cal, fortified, organic, non-GMO ... all terms speaking to the notion that today's snackers are keeping a keen eye on what they put in their stomachs. The FDA's revamped nutritional label, which now contains—among other categories—a special notice for “added sugar,” reflects this newfound emphasis on ingredients that provide more than just flavor.

For snack food companies, this often means providing sweeteners with substance in a landscape where empty calories no longer fly. Luckily, a solution for this conundrum arose about 10,000 years ago.

Humans have consumed barley for over 10,000 years. The barley grain, from which malt extract is derived, was a staple of Roman gladiators, called hordearii or “barley-eaters.” Hippocrates and Pliny referenced barley's health benefits, and its medicinal effects were recognized in African and Asian cultures.

However, malt's complete nutritional properties have only recently been appreciated by nutritional science.

Malt extract is produced by mixing malted barley with hot water and allowing the natural enzymes to break down the starch in the whole grain into sugars, mostly maltose. The mash's insoluble parts are filtered out, but most of the whole grain's nutrients remain in the extract.

Maltose is a simple disaccharide sugar consisting of two bonded glucose molecules. And despite recent pushes to reduce sugar in snacks, not all sugars are created equal.

The sugar in malt extract is mostly maltose, which breaks down into glucose and can then be used by virtually every cell in the body. In the brain, it is the preferred energy source. Muscle



cells import glucose from the blood for a quick energy boost. Certain cells, such as red blood cells, can only use glucose for energy.

Malt extract also contains protein, essential amino acids, and soluble fiber, as well as vitamins B2, B3, and B6. It also contains the minerals iron, calcium, and potassium, and the micro-minerals magnesium, manganese, and selenium. And the real nutritional punch of malt extract is found in its complement of antioxidants, in particular polyphenols, which offer a range of health benefits.

Yet another source of malt extract's nutritional power comes from the class of molecules called Maillard reaction products. Bakers have always appreciated how amino acids and sugars in malt extract combine to produce a brownish color and enhanced flavor profile. Now, research has shown that byproducts of the Maillard reaction have antioxidant effects.

For snack and bakery products, malt extract is truly a sweetener with substance.

— Amy Targan, President, Malt Products Corp.