INVISIBLE STARCH MAY BE A HERO IN WEIGHT MANAGEMENT

HI-MAIZE™ resistant starch and satiety

With so many people around the world battling their weight, weight management is a strong driver within the food industry. Until recently, most of the focus for food companies has been on shedding fat, cutting carbs or reducing portion size.

Now research is showing that it may be what you put into a food or drink that may have the greatest effect on filling consumers up and keeping them feeling satisfied. And the surprising thing is that the 'hero' ingredient may be one that's largely invisible: resistant starch.
To learn more, read on.

Natural Hi-maize
The Vital Fibre

Ingredion™

Managing weight

Reducing food intake often leads to increased hunger which is almost impossible to resist. Hence significant interest and research in recent years has focused on foods that keep hunger pangs at bay.

Numerous studies show that resistant starch, in particular HI-MAIZE™ resistant starch, helps with weight management in three key ways:

- Lowering energy – adding HI-MAIZE™ resistant starch helps to reduce the energy density of foods. It delivers approximately 70% of the energy value of the flour it typically replaces[1];
- Improving blood sugar and insulin control to help reduce hunger and enhance satiety[2];
- Enhancing satiety in both the short and long term[3].

What is satiety?

Satiety is defined by Merriam Webster as: *"the quality or state of being fed or gratified to or beyond capacity."*

During a meal or snack, you stop eating when you become satiated or full. So, satiation is the process that causes you to stop eating. Satiety is the effect after eating the food, its impact on subsequent feelings of hunger and ultimately the amount of food eaten at your next meal or snack.

Enhancing short and long term satiety

Dietary fibre and wholegrains have had a reputation for enhancing satiety or helping to fill you up. More recent research, however shows that resistant starch may have an even more exciting satiety potential.

HI-MAIZE™ resistant starch enhances short-term satiety because its slow glycemic carbohydrates are digested lower in the small intestine, compared with other starches and flours[4]. Studies indicate that the physical location of absorption may be a trigger for satiety signalling.

One study with healthy people showed that a combination of HI-MAIZE™ resistant starch and another resistant starch in a muffin kept people feeling fuller over a three hour period compared with muffins made with either a rapidly digested maltodextrin or a soluble fibre[4].

> *Choosing the right sort of foods may help us better control our appetites. What surprised us most, though, was the fact that it was the fibre you couldn't see which had the greatest effect.*
>
> **– PROFESSOR JOANNE SLAVIN, UNIVERSITY OF MINNESOTA**

Previously, researchers thought that satiety effects could last only a few hours, but HI-MAIZE™ has also demonstrated longer-term satiety benefits[3]. This is an important breakthrough and point of differentiation compared with other dietary fibre sources.

"Increased intakes of resistant starch in the diet may therefore have beneficial implications in weight management.[4]"

Resistant starch – a natural fat burner

Not only is resistant starch more satisfying than other types of fibre, studies have shown that simply adding resistant starch to a meal helps the body switch to fat burning as its preferred source of energy.

In fact, one study showed that a meal containing five percent HI-MAIZE™ resistant starch led to an increase in fat burning of 20-25 percent[5]. And that increase was sustained throughout the day. It's an exciting prospect which is being further investigated.

REFERENCES:

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3. Bodinham CL, Frost GS, Robertson MD. (Mar 2010) Acute ingestion of resistant starch reduces food intake in healthy adults.
4. Willis HJ, Eldridge AL, Beiseigel J, Thomas W, Slavin JL., Nutr Res. 2009. (Note: the other resistant starch was NOVELOSE™, another ingredient from Ingredion.)
5. Higgins JA, Higbee DR, Donahoo WT, Brown IL, Bell ML, Bessesen DH., Nutr Metab (Lond). 2004 Oct 6; 1(1):8

Natural HI-MAIZE™ resistant starch

Made from a traditionally bred hybrid of corn that is naturally rich in resistant starch, HI-MAIZE™ invisibly adds fibre and resistant starch to a wide variety of foods including bread, pasta, noodles, snacks and breakfast cereals.

HI-MAIZE™ makes it easier for consumers to boost their fibre and resistant starch intake – without having to change what they eat. It offers a simple, natural way for food companies to add value, even beyond the benefits traditionally associated with dietary fibre.

The Ingredion team can help with labelling and regulatory advice, as well as share consumer insights to help optimise the success of new or reformulated products. Just contact us now to get started.

Contact Ingredion to find out how we can help:

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