

Clinical Insights



STEVIA.NET 
ALL ABOUT THE HERB THAT IS SWEETER THAN SUGAR!

History of Use

"Will sugar always be more advantageous than Kaa-he-e? We cannot suppose this. The superiority of sugar as an energetic food will not be contested, but this does not stop our plant from being stronger as a sweetener."

Kaa-he-e, Its Nature and Its Properties, by Dr. Moises N. Bertoni, Paraguayan Scientific Analysis, December 1905

A Powerfully Sweet Native Tradition

The Guarani Indians had known for centuries about the unique advantages of kaa he-he (a native term which translates as "sweet herb") -- long before the invaders from the Old World were lured by the treasures of the New. These native people knew the leaves of the wild stevia shrub (a perennial indigenous to the Amambay Mountain region) to have a sweetening power unlike anything else; they commonly used the leaves to enhance the taste of bitter mate (a tea-like beverage) and medicinal potions, or simply chewed them for their sweet taste. The widespread native use of stevia was chronicled by the Spaniards in historical documents preserved in the Paraguayan National Archives in Asuncion. Historians noted that indigenous peoples had been sweetening herbal teas with stevia leaves "since ancient times." In due course, it was introduced to settlers. By the 1800s, daily stevia consumption had become well entrenched throughout the region -- not just in Paraguay, but also in neighboring Brazil and Argentina.

Like the discovery of America itself, however, credit for stevia's "discovery" goes to an Italian. In this case, the explorer was a botanist whose initial unfamiliarity with the region (along with his difficulty in locating the herb) caused him to believe that he had stumbled onto a "little-known" plant.

A New World "Discovery"

Dr. Moises Santiago Bertoni, director of the College of Agriculture in Asuncion, first learned of what he described as "this very strange plant" from Indian guides while exploring Paraguay's eastern forests in 1887. This area was not the herb's native 'growing ground.' Consequently, Bertoni, by his own account, was initially "unable to find it." It was 12



years before he was presented with tangible evidence -- a packet of stevia fragments and broken leaves received from a friend who had gotten them from the mate plantations in the northeast. He subsequently announced his discovery of the "new species" in a botanical journal published in Asuncion.

Bertoni named the "new" variety of the Stevia genus in honor of a Paraguayan chemist named Rebaudi who subsequently became the first to extract the plant's sweet constituent. "In placing in the mouth the smallest particle of any portion of the leaf or twig," Bertoni wrote, "one is surprised at the strange and extreme sweetness contained therein. A fragment of the leaf only a few square millimeters in size suffices to keep the mouth sweet for an hour; a few small leaves are sufficient to sweeten a strong cup of coffee or tea."



Raising Stevia... and the Stakes

Bertoni's "discover" was a turning point for stevia in one very real sense (other than being identified, analyzed and given a name). Whereas prior to 1900 it had grown only in the wild, with consumption limited to those having access to its natural habitat, it now became ripe for cultivation. In 1908, a ton of dried leaves was harvested, the very first stevia crop. Before long, stevia plantations began springing up, a development that corresponded with a marked reduction in the plant's natural growth area due to the clearing of forests by timber interests and, to an extent, the removal of thousands of stevia plants for transplantation (the growing of stevia from seed simply doesn't work). Consequently, its use began to increase dramatically, both in and beyond Latin America.

As word of this unique sweet herb began to spread, so, too, did interest in its potential as a marketable commodity. That, in turn, raised concerns within the business community. Stevia was first brought to the attention of the U.S. government in 1918 by a botanist for the U.S. Department of Agriculture who said he had learned about stevia while drinking mate and tasted it years later, finding it to have a "remarkable sweetness."

Three years later, stevia was presented to the USDA by American Trade Commissioner George S. Brady as a "new sugar plant with great commercial possibilities." Brady took note of its nontoxicity and its ability to be used in its natural state, with only drying and grinding required. He also conveyed the claims that it was "an ideal and safe sugar for diabetics." In a memo to the Latin American Division of the USDA, Brady further stated that he was "desirous of seeing it placed before any American companies liable to be interested, as it is very probable that it will be of great commercial importance."

Stevia's commercial potential, however, was already known to others who were less than happy about it. In 1913, a report from the official public laboratory of Hamburg, Germany, noted that "specimens received are of the well-known plant which alarmed sugar producers some years ago."

Rediscovered in Japan

While nothing came of this early show of interest in the United States, an event occurred in France in 1931 that would later prove significant. There, two chemists isolated the most prevalent of several compounds that give the stevia leaf its sweet taste, a pure white crystalline extract they named stevioside. One U.S. government researcher, Dr. Hewitt G. Fletcher, described this extract as "the sweetest natural product yet found," though adding, "It is natural to ask, 'of what use is stevioside?' The answer at this point is 'none.'"

Within the next couple of decades, however, the enterprising Japanese had discovered just how useful stevioside really was. The Japanese either banned or strictly regulated artificial sweeteners during the 1960s, consistent with a popular movement away from allowing chemicals in the food supply. They soon discovered the ideal replacement for both sugar and its synthetic substitutes: refined stevia extracts.



Originally introduced to Japan in 1970 by a consortium of food-product manufacturers, stevioside and other stevia products quickly caught on. By 1988, they reportedly represented approximately 41% of the market share of potentially sweet substances consumed in Japan. In addition to widespread use as a tabletop sweetener, like the packets of saccharin ("Sweet-n-Low") and aspartame ("Equal") commonly found in the United States, stevia was also used by the Japanese to sweeten a variety of food products, including ice cream, bread, candies, pickles, seafood, vegetables, and soft drinks.

In addition to demonstrating stevia's nearly instant popularity in locales far removed from its native habitat, Japan's experience proved several other significant facts about this phenomenal plant: its adaptability and its safety. Adaptability was proven through the discovery that the plant could be grown

throughout most of this temperate island nation, albeit under special hothouse conditions. Studies were even initiated to evaluate the substitution of stevia for rice under cultivation in some areas. Stevia's safety was proven through extensive scientific testing.

The spread of the stevia phenomenon was not limited to Japan. Today it is also grown and used in approximately 10 other countries outside South America, including China, Germany, Malaysia, Israel and South Korea. Stevia might by now be entrenched in the United States as well, had it not been for a concerted effort to block its very entry.

*From "The Stevia Story: A tale of incredible sweetness & intrigue."
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