



The story behind the ingredient:

Tapioca

While for many Westerners, “tapioca” may bring to mind the humble pudding (and the balls in boba tea), in South America and Indonesia, the starch from the cassava plant is relied on by many as a food staple. Travel through those regions, and you will see acre upon acre of the dark-green leaves of the ornamental plant growing.

Tapioca’s minor culinary role in the West is poised to change as its viability grows as an alternative to corn for sweeteners and thickeners. Cargill has been working with farmers and processors to bring quality tapioca syrup to manufacturers around the world.

Tapioca’s mother plant

Technically not a plant itself, tapioca is the name given to the starch extracted from the brown root of the cassava (sometimes called yuca) plant. Indigenous to Brazil, today this hardy tuber is grown in more than 90 countries in the world’s developing regions because of its ability to flourish in low-quality soil, drought conditions and its fast growth-to-harvest cycle. The root is highly versatile and consumed much like potatoes. In 2017, a whopping 300 million tons were produced globally.



Working with farmers

Cargill sources its tapioca starch from farmers in Thailand and Indonesia. “The farmers we work with are family farmers. Many have been cassava farmers for several generations,” says Fanny Hosea, Risk Management Lead, CSST Indonesia. Cargill has worked closely with the farmers over the years. “Sometimes the farmers will try and sell early, before the product is at its peak. They do this to pay the school fees for their children. We’ve arranged to give them incentives against their crops, and then they can keep their plants in the ground until harvest – ensuring a better-quality product,” Hosea says.

Most cassava farmers tend small plots, but some of the cassava farms are made up of multiple family farms that can span up to 50 hectares. “One big area might be 400 different owners, each farming a small ¼-hectare plot,” Chik Liang Tan, Business Development Director, CSST Indonesia says. Cargill’s close relationship with many of these farmers allows the company to monitor quality control. For example, “If a farmer is using old roots to grow a new crop, we will supply new ones,” Tan says.

Non-GMO* cassava

Cargill sources both conventional and organic tapioca, but all of it is non-GMO. There are no genetically modified cassava crops, according to Tan. “This is another attribute that differentiates it from corn syrup.” The organic tapioca is certified organic by government agencies in Thailand and Indonesia. “The government agencies do frequent farm visits to ensure organic farming methods are being used,” he says.

From plant to syrup

From the farms, the cassava root is taken to starch mills where it is sorted, grated and essentially pressed into tapioca starch, similar to corn starch in appearance and texture. Cargill then converts it into a syrup using an enzymatic process, according to Project Manager John Thompson. “You basically liquefy the starch, and then run it through a jet cooker that heats it up very quickly and adds enzyme to it, and then it starts breaking down.

Starch is nothing but a really long sugar molecule, so by using specific enzymes you can get the desired syrup sugar profile,” he explains.

The tapioca syrup is then shipped in 55-gallon steel drums or totes and also flexi tanks. As the business grows, it will be shipped in tankers or rail cars, according to Thompson.



Cargill is excited to be adding tapioca syrup to its ingredient offerings. “Tapioca’s functionality is amazing. It works great in numerous categories, including sports nutrition products, bars, gummies and snacks,” says Dana Johnson, Product Line Manager. “Customers are thrilled about the new option, and so are we.”

* There is no single definition of “non-GMO” in the USA. Contact Cargill for source and processing information.