

## What Makes Premium Cassava Flour Special?

Manufacturers of baked goods and snack foods differentiate in the crowded marketplace by offering specialty products that speak to today's consumers' wants and needs. Some of the most frequently requested products are those with gluten-free, grain-free and non-GMO claims.

*Food Business News* spoke with Mel Festejo, COO of AKFP to learn how Premium Cassava Flour, alone or in a mix, assists

with the development of delicious, high-quality baked goods and snack foods.

### **FBN: What is cassava?**

Mr. Festejo: Cassava, also commonly known as yucca or manioc, is a perennial woody shrub with an edible root that grows in tropical and subtropical areas of the world. While many food professionals are familiar with and have used tapioca starches and like derivatives, few know that tapioca's raw material is the root of the cassava plant. Tapioca or cassava starch is produced by the extraction of only the starch component of the root. Tapioca or cassava flour, on the other hand, requires the processing of the whole peeled root. Too many people erroneously believe that these starch and flour ingredients are one and the same.

### **FBN: Is cassava readily available in the U.S.?**

Mr. Festejo: Cassava processors and vendors, mostly from Asia, produced and sold tapioca flour up until the late 1970s. They then

adopted starch manufacturing technology and since produced and sold only tapioca starch and a number of them continued to refer to this new ingredient as tapioca flour. Tapioca flour, or more appropriately, cassava flour, is still produced and consumed in tropical countries where the cassava plant is indigenously grown. However, the quality and characteristics of the flour are adapted only to native dishes in these countries. These local cassava flours are not well suited for use in gluten-free baked goods and snack foods. Our proprietary technology is making cassava flour a highly suitable functional, nutritional, clean-label ingredient for gluten-free and even grain-free baking applications.

### **FBN: How is something old like cassava, now a new ingredient for product innovators to explore?**

Mr. Festejo: We developed Premium Cassava Flour, which delivers baking performance characteristics that closely mimic the structure, texture and taste of numerous



### **SmartSolution: Acrylamide Reduction.**

Acrylamide, a known Group 2A carcinogen, is formed in food when asparagine reacts with reducing sugars under high temperature/low moisture conditions. Consequently, many baked goods and snack foods contain this compound. This is particularly true of extruded snacks based on dehydrated potatoes, which are often used because of their excellent extrudate properties. The challenge is that potatoes contain high levels of reducing sugars. Premium cassava flour, on the other hand, has similar extrudate properties while having much lower levels (not exceeding 0.5%) of reducing sugars. Premium cassava flour can be used in baked and fried extruded snacks, providing a smart approach to addressing the acrylamide reduction challenge.

wheat-based products. We invested more than a year in developing and perfecting the specialized manufacturing process that produces this ingredient from cassava root, which is naturally gluten-free. It's an AKFP proprietary product exclusively sold by the company. It is very different from the various flours indigenous to cassava-growing countries. It is designed to work well in gluten-free baking and extrusion applications. Now consumers can enjoy gluten-free baked goods with all of the satisfying taste, moistness and texture they expect in high-quality baked goods. And bakers can offer these products with the confidence that they meet the same quality standards as their regular wheat-based products.

**FBN: How is Premium Cassava Flour special?**

Mr. Festejo: Premium Cassava Flour takes on most of the desirable characteristics of tapioca starch, including low-gelatinization temperature, paste clarity, good viscosity,

bland or neutral flavor and is relatively freeze-thaw stable. It has low levels of reducing sugars, which helps to minimize acrylamide formation. Our proprietary process yields flour with about 7% dietary fiber content, which positively contributes to the nutritional profile of foods. Our Premium Cassava Flour has been tested to perform well for cookies, brownies, cakes,

muffins, pancakes, tortillas, breads, buns and pizza crusts. This flour allows for high-quality gluten-free and grain-free baked products with minimal need for other flours and baking aids in the recipe.



80:20

70:30

60:40

50:50



Effect of addition of cassava flour to quinoa extrudate

**Smart Solution: Extruding with Plant Proteins.**

Plant proteins are increasingly being used to boost the nutritional value of breakfast cereals and snack foods. Formulating such high-protein extruded products, however, can be challenging, as proteins generally do not extrude well. Premium cassava flour has been shown to be an ideal extrusion aid when used to complement a high-protein grain, such as quinoa flour. A study performed by Rutgers University's Department of Food Science showed that cassava flour helped in the expansion and textural quality of ready-to-eat breakfast cereal based on a cassava-quinoa blend. Premium cassava flour is a smart solution to assist with the protein fortification of extruded grain-based foods.

