Tropix, a Toronto food company, specializes in coconut drops: a delicious Jamaican cuisine treat also known as cut cake, which is made by combining chopped coconut, ginger and brown sugar. Tropix coconut drops are handmade in small batches using the best quality ingredients.

Denise Edwards, the owner of Tropix, is extremely enthusiastic about her coconut treats. Denise has the ambition to scale up the product and make a viable business selling her four flavours of coconut drop: Coconut Apricot, Coconut Cranberry, Coconut Ginger and Original.

Tropix came to FIRST when they noticed a dry appearance on their delicious product: white spots would appear on the product 2-3 weeks into storage.

FIRST quickly and accurately diagnosed the root cause of the issue: sugar recrystallization. Sugar recrystallization can be caused in part by inadequate moisture removal, recipe, and improper product handling practices.

The research team set out to find a simple solution: Principal Investigator Rob McCurdy was joined by students Zoe Smith, of the Baking and Pastry Arts Management program, and Cody Nairn, a student of Food and Nutrition Management Post Graduate Program.

To eliminate this problem, FIRST trialed numerous crystallization inhibitors, modified the processing methodology, and changed the packaging technique, all in an effort to extend the shelf life.

The process to the finished product was also improved: now, the cooked treats are poured into a specific metal frame designed for Tropix candies before cooling.

The new sizing process is much quicker and produces a uniform finished product. The new square pieces are more attractive, and the recrystallization flaw is a thing of the past.

“‘The team at the Food Innovation and Research Studio was simply amazing,’ says Denise, owner and founder of Tropix. ‘They continue to offer their expertise even though the project was completed.’

Cooking time has been reduced by 50% (45 min vs. 1.5 hrs); the batch yield has increased by 75%; and the apparent shelf life has increased by 400% vs. the original, meaning the product tastes and looks better, and lasts longer. That means Tropix can stay delicious for longer.

“I find myself smiling all the time now while I’m preparing my coconut drops,” says Denise. “I’d be back there in a heartbeat with my next product.”