

Business

Why Totino's Needs 25 Ways to Make Pizza Rolls

As supply chain delays and rising costs made individual ingredients harder to procure, food companies had to become very flexible.

By JULIE CRESWELL

It takes about 21 ingredients to make a Totino's pizza roll, the bite-size snack that soared in popularity during the pandemic as people sought easy-to-make meals.

And on any given day since last winter, at least one of those ingredients, if not many, has either been difficult to find or insanely expensive.

The shortages became so bad at one point that General Mills, which makes Totino's, simply couldn't produce enough.

"We had lots of empty shelves," said Jon Nudi, the company's president of North America. "Every time we had something fixed, something else popped up."

General Mills is not used to empty shelves. The company sells \$19 billion worth of food a year, everything from Chex and Cheerios cereals, Annie's organic Cheddar bunnies and Betty Crocker cake mixes to pet food under the Blue Buffalo brand. With 26 factories in North America, it juggles 13,000 ingredients from around the world for its many products.

So the company's scientists, supply chain heads and procurement managers began meeting daily late last year. The solution? The company found 25 ways — recipes, if you will — to make the pizza rolls, each with a slightly different list of ingredients, swapping in cornstarches, for example, for tapioca starch that had become hard to find, or substituting one kind of potato starch for another.

The pizza roll conundrum is a microcosm of an issue that's affecting the food industry more broadly. Managing soaring prices for most of the ingredients in cookies, chips and pizza is one thing. But for many food executives, the bigger headache now is wondering each week which ingredients will — or won't — show up at their factories.

For a while last year, sugar and low-calorie sweeteners like erythritol, which is used in products like yogurt and cereal, were tough to pin down. Then palm oil, an



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Pulling apart a cheesy pizza roll at Ingredient, which tests recipes with substitute ingredients for clients.



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From left, Nia Bowdoin, Conner Thompson, and Taylor May working in the Ingredion kitchen in Bridgewater, N.J.



One ingredient being tested is pea protein, which adds texture to food.



Testing substitute ingredients has become a greater focus at Ingredion, which food companies also hire to work on new products.



Ms. May removing pizza rolls from an oven. For General Mills, the starch in cheeses in its Totino's pizza rolls was an early scarcity.

odorless and tasteless oil that's in about half the packaged goods in supermarkets, became hard to find. After Russia invaded Ukraine, global supplies of sunflower oil, produced by both countries, disappeared. And more recently, because of the avian flu that swept across the United States this spring, egg prices soared, leading to shortages.

While food companies have long had to manage scarcity of one or two ingredients because, say, drought reduced crop yields in a part of the world, the recent rolling shortages have affected multiple ingredients for a variety of reasons. And it's

not just ingredients that are M.I.A. Some packaging, such as aluminum cans, has been hard for soda and beer manufacturers to find.

Many executives say the culprit is a combination of increased extreme weather patterns around the world because of the changing climate, global transportation and labor problems, the war in Ukraine, high energy prices, and ever-shifting consumer patterns in a post-Covid environment that make the years of data they collected to try to predict trends basically useless.

"All of these wrinkles are cascading

through the entire food system, and I don't think anyone is banking on it resolving itself in the next 12 or 18 months," said Joe Colyn, a partner at JPG Resources, which works with food companies and their supply chains. "Right now, supply trumps price. It's more important to get surety of supply, because you can't afford to shut the factory down because you don't have what you need."

After years of whittling down the number of their suppliers to get better prices and keep up with quality control, food companies are racing to find alternatives. Just-in-time inventory systems that worked



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Mr. Thompson cutting out pizza rolls. “The overall reformulation of a product is a very complicated equation,” an Ingredion executive said.

just fine for years are being overhauled, with companies adding warehouses, silos and storage tanks to hold raw ingredients and finished products for longer periods. They’re trying to reduce transportation costs, either by looking for manufacturers nearby or removing water from goods like vegetable and fruit juices — used frequently in beverages — and transporting them as concentrates.

And, like General Mills, they’re revamping recipes, or “reformulating” in industry parlance. It’s not as easy as it sounds. Swapping out one oil or emulsifier for another not only can change the product’s texture or shelf life but can affect nutrition and allergy labeling.

The Food and Drug Administration, which ensures that nutritional labels and other information on food are accurate, has put in temporary guidance to

allow manufacturers to make “minor formulation changes” because of supply disruptions or shortages without updating the ingredient list.

The leeway doesn’t apply to a change that increases the safety risk because it contains a food allergen or gluten, or that replaces a key ingredient or one featured in the name or marketing. For example, a product that claims to be made with “real butter” cannot now be made with margarine, and raisin bread must contain raisins.

Before the pandemic, Ingredion, a company that makes sweeteners, starches and other ingredients used by large food companies, often had its 500 scientists and 26 labs all over the country working on new products for companies. But in recent months, much more of their time has been spent figuring out what happens to the taste, texture and shelf life of a food when one or two ingredients are switched out.

“The overall reformulation of a product is a very complicated equation,” said Beth Tormey, a vice president and general manager of systems and ingredient solutions at Ingredion. “It has to meet parameters of texture and taste so that consumers like it, but it also has to fit into the regulatory box and the nutrition box. It all sounds simple from a distance, but it’s not.”

Take eggs. They are, explained Leaslie Carr, a senior director at Ingredion, a key source of protein for many products, but they are more than that. For baked goods, for instance, they provide moisture and volume, helping make cakes light and fluffy.

“Salad dressings also use a lot of egg for body and texture,” Ms. Carr said. “So we’re trying to figure out how to use different emulsifiers to reduce the amount of egg used, maybe reduce the egg amount by half, to produce the dressings. That gives you some flexibility to continue to manufacture the product until the egg situation stabilizes.”

General Mills started to notice the supply

chain disruptions late last year.

The company’s plant in Wellston, Ohio, which had churned out Totino’s pizza and pizza rolls, working to meet the surge in sales that accompanied the pandemic, suddenly couldn’t get key ingredients.

“First it was the starch that we use for the cheeses,” Mr. Nudi said. “Then certain packaging and oils were hard to find. A lot of the materials that we use for Totino’s were challenged from an ingredient standpoint.”

By February, there weren’t enough Totino’s pizza and pizza rolls to keep grocery freezer sections full.

By then, the company had started daily meetings across its research and development, procurement and supply chain departments to figure out how to revamp and substitute ingredients. For instance when starch became difficult to find, the company began substituting and combining different starches in order to figure out what worked to make the pizza rolls look and taste the same.

In March, the company had filled freezer sections again, Mr. Nudi said.

But the lessons being learned from the “new normal” in the supply chain are being felt across the entire company.

Before the pandemic, the packaged food industry was a stable environment, with a consistent level of growth, Mr. Nudi said. That made having a secure, steady supply of ingredients easier.

Now General Mills is lining up multiple suppliers for each ingredient and keeping more ingredients on hand.

“Just-in-time deliveries don’t work anymore,” Mr. Nudi said. “We’re adding to inventory, holding more dry ingredients and fats and oils, even though that’s tough too right now. We need tanks to store those liquids, and those just aren’t readily available.”

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