



SENSORY SENSATIONS:

How tortilla chips transformed American snackers

Legend has it that Rebecca Webb Carranza, president of the El Zarape Tortilla Factory in Los Angeles, invented the tortilla chip by happenstance. Preparing for a party in the 1940s, she cut a few tortillas into triangles and fried them. Those original chips must have been quite a hit, as soon she was selling them for ten cents a bag. Nonetheless, it's safe to assume Rebecca never envisioned her humble chips would become one of the nation's largest and fastest-growing snack segments.

Seventy-some years later, tortilla chips are a national snacking staple. And why not? The crunchy, corn-based treat dials into many of the biggest trends in the snack landscape.

Tortilla chip sales generated in 2021:

\$6.2 billion

Source: IRI data

"Snacks are meant to be fun, with plenty of sensory appeal," says Ansu Xu, principal scientist for Cargill's dry corn ingredient lines. "Today's tortilla chips deliver, enticing all the senses with impactful shapes, textures, colors and flavors."

While the original salted and nacho-flavor-dusted varieties remain popular, recent introductions have highlighted bold flavors and exotic combinations – think bacon-habañero or Korean barbeque. In that same spirit of innovation,

chip makers have also branched out with a wealth of grip-and-dip-friendly shapes, including scoops, circles, squares, "footballs," rolls and even hexagonal shapes. You'll also find an array of eye-catching colors, spanning the rainbow from traditional yellows to blues, reds, purples and more.

And yet, the simplest of recipes serves as the foundation for these tasty treats: just corn, vegetable oil, salt and water are all that are needed to create a basic chip. Cargill's Xu says there's a segment of label-conscious consumers drawn to this stripped-down chip, and another group enticed by versions that bring a range of health-forward attitudes – be it baked-not-fried options, keto-friendly choices or protein-fortified offerings. Still, the biggest reason for tortilla chips' steady growth may lie in its rich cultural associations and a rapidly growing Hispanic consumer base. (Nielsen projects Latinos will comprise 53% of U.S. population growth in the next five years.)

"America's shifting demographics certainly play a role in snack preferences," Xu acknowledges, "but snack makers have also made great strides in creating chips with intriguing textures and spicy-hot flavors we just can't resist."

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For Xu – and millions of American snackers – the perfect tortilla chip delivers on four key sensory points: appearance, texture, mouthfeel and flavor (comprised of both the base chip and its seasoning). “To me, the gold standard is a light-textured, crispy chip with small, even blisters and a creamy texture when chewed,” he says. “It needs a fresh aroma and mouthwatering taste, with an addictive seasoning that keeps you coming back, chip after chip.”

Xu should know. He’s spent the last two decades perfecting Cargill’s dry corn ingredient lines and helping customers – including tortilla chip makers – with problem-solving and innovation. In that time, he’s become an expert on masa flour production – the type of corn flour that typically serves as the foundation for tortilla chip production.

Most masa flour is made by soaking corn in water, then using an alkaline solution to soften the kernel before cooking, drying and grinding those kernels into flour. This water-intensive approach to processing corn into masa flour is called nixtamalization. Cargill, however, takes a different tack, leveraging proprietary technology to create a masa flour using a unique, dry-milling process. The resulting masa flour yields chips with lighter textures, more aromatic flavors and brighter colors – all winning attributes with American consumers.

“It’s an approach that delivers rewards to all the senses,” Xu explains, “but it’s only available from Cargill. No one else makes masa flour this way.”

He notes that the process delivers nutritional benefits too, as traditional masa production can leach away some of the antioxidants, proteins and fiber naturally present in corn. Then there’s the sustainability considerations. Cargill’s novel approach to masa flour production largely eliminates wastewater, giving it a significant environmental edge over traditional masa flour suppliers. “The conventional approach requires vast amounts of water that must be treated and disposed,” Xu notes. “With our dry-milling processes, we preserve those water resources.” It even makes it possible for the company to offer customized masa flours that adjust to specific customers’ needs for textures, flavor profiles, color and shape functionality... another clear distinction from conventional processes.

That flexibility, combined with its superior masa flour base, may prove key if brands are to keep pace with consumer appetites for sensory stimulation in the snack aisle. “Hot flavors, crunchy textures, unexpected colors, those are the attributes driving sales,” Xu says, “but it all starts with the base, and it takes a great masa flour to create a great base.”

Grab a handful of snacking success with Cargill’s unique blend of ingredients and formulation expertise.

Learn more at cargill.com/food-bev/na/masa-flour.