

Case Study #17

April 2020

## The Globalization of Mexican Tortillas: GRUMA and the Mass Production of Corn Flour

In 2001, Disney opened the gates to the California Adventure Park. Billed as a celebration of the history and culture of the Golden State, the park featured Disneyfied versions of Wine Country, the Hollywood Backlot and other Californian landmarks. In the park's top left corner, stood the Mission Tortilla factory. The attraction run by Disney in partnership with Mission Foods (a division of the GRUMA corporation) showcased 'the history and the making of the traditional food of ancient and modern Mexico—the tortilla'.<sup>1</sup> In the first half of the exhibition, visitors watched a film about the ancient origins of the tortilla and learnt about the lengthy process in which women ground maize into dough. The second half of the exhibition celebrated all things modern. Visitors observed a working factory production line staffed by Mission employees who handed out free tortillas to passing customers. The final room told the story of Mission's role in transforming the corn tortilla from a dietary staple of the Mexican masses to a Californian delicacy.<sup>2</sup>

A century before, the idea that people might go to a theme park and learn about the "tortilla revolution" would have seemed improbable. But in the decades leading up to the park's opening, Mexican food had become a key component of the North American diet. Mexican restaurants, which first started to open in Southern California in the early 1900s, spread throughout America. Meanwhile, corn tortillas, taco shells, tortilla chips and frozen burritos became supermarket staples post-1950. By the time the California Adventure Park opened, Taco Bell, America's largest Mexican fast-food chain, had established outposts across the country. Salsa inched closer to replacing ketchup as the condiment of choice and the tortilla had become one of the fastest growing segments of the US baking industry.<sup>3</sup>



In 2019, 'Tortilla' opened in Oxford's city centre, roughly 100 metres away from another Mexican fast-food restaurant, 'Mission Burrito'. Source: Rebecca Orr

That the corn tortilla became a common food staple in North American and European diets was neither inevitable nor accidental. For many hundreds of years, the indigenous people of Mesoamerica consumed the vast majority of tortillas produced. Grinding maize kernels into dough and moulding evenly shaped

*This case study was prepared by Rosalía del Carmen Ríos Arreguín. Case study editors: Rebecca Orr and Prof. Christopher McKenna, University of Oxford*

tortillas proved difficult for all but the most skilled. The absence of affordable and portable technology compounded this problem. In areas outside Mexico, where populations lacked the necessary skills and inclination to make tortillas by hand, most people consumed bread. In the twentieth century, this began to change. Technological progress and government intervention combined to mean that for the first time, manufacturers could produce corn tortillas in bulk. Mass production, widely resisted in Mexico, paved the way for the food's globalization.

In the twentieth century, one firm in particular came to dominate the global corn tortilla industry: GRUMA, a Mexican corporation founded in 1949 by the businessman Roberto González. Since entering into business at the age of 18, González had acquired a reputation as a shrewd political operator and strategist. At GRUMA, he invested heavily in research and development with the aim of speeding up tortilla production and reducing operating costs. This investment paid off. By the time of González's death in 2012, GRUMA operated 100 plants around the world and sold its products in more than 100 countries.<sup>4</sup> As of 2014, GRUMA had grown into one of the world's largest manufacturers of corn flour and tortilla products.<sup>5</sup>

### The tortilla and Mexican culinary identity

To understand GRUMA's meteoric rise is first to understand the importance of maize to Mexican cultural identity. For at least 7,000 years before GRUMA's establishment, corn had been central to the Mexican diet. In fact, the Mexican idiom "sin maíz no hay país" translates into "without maize there is no country."<sup>6</sup> The persistence of mythologies and folklores surrounding the cultivation and consumption of the grain speaks volumes to the importance of corn not only to Mesoamerican cultures, but also to present day Mexicans. The sacred book of the Mayan people, the *Popol Vuh*, describes how gods formed the first humans from a dough made of yellow and white maize after their attempts to use clay and wood had failed. According to legend, the gods shaped the first man from the three primordial grains of maize, in an infinite cycle of life, death and resurrection. At death, the sovereign symbolically became a seed planted in the Sacred Mountain that sprouted as the young Maize God to ensure the sustenance of his people.<sup>7</sup>



Maya maize god statue.  
Source: The British Museum

During the Aztec era, women typically spent four to five hours a day making tortillas from corn. They first boiled the maize kernels and soaked them in an alkali bath, to remove the hard skins from the seed. Then, they used a *mano* (hand stone) to grind the softened kernels on a *metate* (grinding stone). Finally, women moulded the *masa* (dough) into disks approximately 20 centimetres in diameter, which they then baked in a clay *comal* (griddle). The Aztecs called the resulting product *tlaxcalli* and later, the Spaniards baptized it the "tortilla".<sup>8</sup>

During the early modern era, maize spread far and wide from its original site of cultivation in southwestern Mexico. Before the arrival of Columbus, the grain could be found across the Americas. After 1492, European vessels transported maize around the world and the crop grew everywhere from Southern Europe to the foothills of the Himalayas.<sup>9</sup> Europeans did not, however, choose to export the tortilla. The conquistadors, who arrived in Mexico, found the thin cakes of unleavened cornmeal objectionable and installed wood burning ovens so they could make their own bread of flour, yeast, and water. Subsequent generations of Europeans continued to prefer wheat bread over tortillas.<sup>10</sup>

Despite the best efforts of Europeans to convert indigenous populations to wheat bread, the popularity of the tortilla went undimmed in Mexico. In the twentieth century, the masses depended on the tortilla to provide cheap calories and nutrition. Meanwhile, the emerging middle classes appropriated the tortilla as a symbol of national pride. Given the popularity of the food, tortilla making curiously remained

a labour-intensive process well into the twentieth century. The anthropologist Margaret Park Redfield visited Mexico in the 1920s and observed women spending hours a day grinding corn on the *metate*. Rural society considered tortilla making so essential to daily life that a woman's eligibility for marriage could depend on them being able to demonstrate this skill.<sup>11</sup>



“Tortillera Mexicana” grinds the dough on the *metate* (1908). Source: INAH Fototeca Nacional. D.R. Instituto Nacional de Antropología e Historia, México. <http://mediateca.inah.gob.mx/repositorio/islandora/object/fotografia%3A431519>

In urban areas, tortilla production slowly but surely began to change. By the late nineteenth century, most Mexican cities had several *tortilleras* (a small tortilla workshop or factory where women made tortillas manually) and at least one corn mill. In the industrial corn mills, steam or electric-powered machines ground large quantities of *nixtamal* (softened maize kernels) into dough. To the distaste of traditional society, who resented the challenge the *nixtamal* mills posed to established domestic roles, women began to enter the mills as workers: soaking and softening maize kernels, cutting lime for *nixtamal*, and selling dough. Men also began to work in the mills, typically taking on supervisory roles, preparing maize kernels, and carrying dough from corn mills to shops.<sup>12</sup>

Storekeepers or individuals who didn't have time to grind maize could purchase dough from the *nixtamal* mills and mould it into tortillas at home or in their shop. The growing urban middle classes - time-poor and unable to afford domestic servants - formed the customer base of the new mills. Wealthier urbanites continued to pay servants to make tortillas, while rural communities expressed scepticism about the new establishments, fearing not only the expense of patronizing the mills but also the consequences of mechanization for women's role within the family.<sup>13</sup>

Technological difficulties prevented inventors from further modernizing the tortilla making process in the nineteenth century. The dream of manufacturers of creating the first mass produced tortilla largely stalled until the invention of the hand tortilla press in 1908. Miguel Bernardo designed the hand press to allow anyone to flatten out a perfectly round tortilla within seconds but in the early years, technical errors prevented any real progress from being made. Mechanically pressed tortillas stuck to the press leaving the resulting product semi-intact. Only after several years of experimentation did inventor Luis Romero solve the “sticking problem” with his system of three rolling presses. In the Romero model, two presses flattened the dough before feeding it into a round mould imprinted on a third press. The third press then rolled against a pair of wires to remove the tortilla from the mould. This produced the machine-pressed tortilla.<sup>14</sup>

Even with Romero's system of three rolling presses, the process of producing tortillas remained labour intensive. Inventors attempted to speed up the cooking process by designing a conveyor belt system to feed tortillas through the oven. But in the early 1900s, tortillas cooked in ovens rather than grills often emerged burnt and inedible. Engineers experimented with raised conveyor belts and steam cooking to no avail until Enrique Espinoza solved the problem in 1919 with his three-tier tortilla oven. The Espinoza machine flipped the tortilla as it dropped from belt to belt, ensuring that the finished product emerged in an edible state, neither over- nor under-cooked.<sup>15</sup>

Automatic tortilla makers that combined Romero's rolling press with Espinoza's three tier conveyor belt system eventually reached the market in the 1920s. By the mid-twentieth century, small, automated tortilla factories could be found in rural communities and urban *barrios* across Mexico. While most

deemed hand-pressed tortillas infinitely superior in taste, they also recognized the futility of spending hours crafting tortillas by hand. Increasingly, women only brought out the *metate* and *comal* on special occasions. The rest of the time, women purchased fresh tortillas from the neighbourhood *tortillera*.<sup>16</sup>



A man and women working in a *nixtamal* mill (1915). Source: INAH Fototeca Nacional. D.R. Instituto Nacional de Antropología e Historia, México. <http://mediateca.inah.gob.mx/repositorio/islandora/object/fotografia%3A451262>

### The advent of the tortilla flour industry

By the late 1940s, technological innovation had sped up the tortilla production process. The *tortilleras* could produce several thousand units an hour. Small factories began to spring up in neighbourhoods across Mexico to satisfy the growing demand for fresh, machine-produced tortillas. The transition to millwork did not, however, mark the endpoint of industrialization – instead, it represented its beginning. Agrarian reform and the masculinization of tortilla making accompanied the opening of the new mills. This transitional period laid the groundwork for a large-scale corporate takeover.<sup>17</sup>

Roberto M. González Barrera, a businessman from the northeastern state of Nuevo León, spied an opportunity in this moment. González recognized that making corn dough, even when using a machine to grind the kernels, remained a slow and inconsistent process. Dough made in this way had to be used up quickly before it soured and decomposed. In a story retold so often that it is hard to divide fact from fiction, it is claimed that González travelled to the Mexican border town of Reynosa in 1948. While there, the young González came across a mill owner using a little-known *masa harina* machine to grind dried *nixtamal* into flour. According to company lore, González quickly saw the solution to the industry's technological impasse: rather than making tortillas from fresh dough, industrial factories could just add water to a pre-prepared flour of *nixtamal*.<sup>18</sup>

González persuaded his father (an engineer) to join forces and go into business with him. The duo founded GRUMA, better known today by its brand names of Maseca, Mission Foods and Guerrero. The González family bought the *masa* flour mill for 75,000 Mexican pesos (50,000 dollars in 2018), using up most of their savings in the process.<sup>19</sup> The following year, the family transferred the recycled mill to Cerralvo and registered it under the trade name of Molinos Azteca (Maseca). In this early stage, 45 employees worked around the clock to produce 150 tons of *masa harina* (nixtamalized corn flour) each month. To make *masa harina*, workers fed lime-soaked corn dough through a grinding mill and then quickly dried the coarse particles at a high temperature. Industrial laborers then passed any remaining large particles back through the machine to be reground and resifted.<sup>20</sup>

While the dehydrated tortilla flour industry initially operated on a small scale, GRUMA faced stiff competition. By 1950, the Mexican government had made its first foray into the industry with the state-supported corn plant MICONSA, now better known as the privately owned Minsa. With the financial backing of the national development bank, MICONSA purchased subsidized corn from the State Food Agency, which it then ground into flour and sold to poorer consumers via agency shops. As the historian Jeffrey Pilcher has argued, the government's decision to subsidize food production benefited both the state and private enterprise. With its policy of providing cheap tortillas to the cities, the State Food Agency aimed to avoid a repeat of the tortilla riots of 1943 and win populist political support. At the same time, subsidizing grain prices allowed the agency to contain union demands for higher wages and cosy up to private businesses who benefited from reduced purchasing costs.<sup>21</sup>

In the early years, MICONSA and GRUMA operated on a reasonably level playing field. The two companies frequently collaborated on research in a quest to perfect the formula for tortilla *masa*. Inevitably, however, there came a point when their two paths diverged from one another. After more than a decade of experimentation, GRUMA began to sell its product across the country, and in bulk. By the end of 1960, MICONSA produced 370,000 tons of corn flour to GRUMA's one million.<sup>22</sup>

HASTE STEELCO ELGIN LONGINES WITTHAUER ETERNA-MATIC

**¡A CENAR DIJO ARREOLA!**

**Llévese y SUS SU PAVO REGALOS**

todo **GRATIS!** al comprar su reloj:

- HASTE
- STEELCO
- ETERNA-MATIC

**SIN ENGANCHE**

UNA BOTELLA DE BRANDY "MADERO" un bar estero en cada botella de Brandy Madero

1 KILO DE HARINA DE MAIZ "MASECA" ...tey la masa para

al minuto FRÍJOL INSTANTANEO MEDIO KILO DE FRÍJOL INSTANTANEO "AL MINUTO"

una caja con 25 Deliciosos refrescos Kist

4 LITROS de cerveza CARTA BLANCA CAGUAMA con envases

3 PLATOS Y 3 TAZAS de la nueva leza Terno Celta

10 POLLITOS de la granja MEZQUITAL DEL ORO

3 CAJAS DE GALLETAS Marsa una de TROPICANAS otra de CRISPA RICAS y otra más de SALADITAS

**ARREOLA** de GUADALAJARA CORONA No. 139 (entre Juárez y López Cortile)

HASTE STEELCO ELGIN LONGINES WITTHAUER ETERNA-MATIC

Corn Flour *Maseca* being advertised in a 1965 newspaper (1965). Source: El informador. <http://hemeroteca.informador.com.mx/Cache/1263556640/00435.tif636697224232652080.pdf>

patents in Mexico related to the methods of the manufacture of corn, wheat and tortillas. In the United States, he registered more than 60 patents.<sup>24</sup>

Rubio worked on a number of successful machines, including the pre-cooking machine system. Previous attempts to speed up the cooking process of tortillas by simply raising the temperature of the ovens had not ended well. Rubio promised to obviate these difficulties. His machine precooked dough within a specified temperature range before finally cooking it under intense heating action. This sped up the most time-consuming step or “bottleneck” of the tortilla making process: the final cooking of the product. As the oven represented a substantial capital outlay in comparison to other equipment, the machine allowed the firm to make considerable savings.<sup>25</sup> The company’s expertise in research and development eventually led González to open a subsidiary, Tecnomaz, which manufactured and sold proprietary equipment for businesses ranging from small *tortilleras* to mid-sized industrial factories.<sup>26</sup>

### Crossing the border

By the early 1970s, González had presided over a decade of nationwide expansion and technical progress. While they had failed to convince Mexicans of the industrial tortilla’s superiority, GRUMA executives had stamped out competition from the firm’s main competitor (MICONSA) paving the way for domination in the domestic corn flour market. González knew, however, that if the firm wished to expand further

The González family’s burgeoning success owed no small debt to their political savvy. The entrepreneurs used powerful political channels to divert resources from MICONSA as they cultivated a cosy relationship with bureaucrats at the same time. For many years, GRUMA had benefited from government largesse in the form of financial rewards, special dispensations, and corn subsidies. During the mid-1960s, this stepped up a level as the company received loans and permits from the minister of trade and industry to open new mills.<sup>23</sup>

While he oversaw the expansion of the company’s physical infrastructure, González invested in research. Though tortilla flour had become a marketable product, it did not yet satisfy consumer or investor demands. The average Mexican preferred corn tortillas made in a small *tortillera* or, better yet, at home. Tortillas produced from dehydrated corn flour had a gritty texture and lacked the robust, sweet flavour of the traditional *masa*-based product. While the firm had managed with González senior taking responsibility for technical matters and González junior fronting sales, the family decided to recruit an outsider in a bid to advance its manufacturing process. In 1963, the González family invited Manuel Rubio, a mechanical engineer, to join GRUMA as its head of research and production. Rubio – later honoured as the “father of GRUMA technology”- went on to develop 37

then they had to look beyond Mexico. In 1973, GRUMA executives took their first steps into the Central American market with the construction of a tortilla plant in Costa Rica. With the support of the Costa Rican government, factory employees used corn flour from Mexico to make tortillas that the sales team marketed under the TortiRicas brand.<sup>27</sup>

Costa Rica proved to be a valuable testing ground. González's experiences led him to manufacture high-speed machines, enrich tortillas with soy protein, and develop mass distribution channels. Before long, GRUMA's directors started to size up larger markets, judging the United States to be the logical next place to open a factory.<sup>28</sup> The US and Mexico shared a long border and history, and Mexican immigrants and US-born Mexicans had been making and selling corn tortillas in the American border states for years. González hoped that GRUMA's entrance into the US market might be eased by the country's growing Latin American population and relatively stable economic climate.<sup>29</sup>

In 1975, GRUMA acquired the Mission Foods' tortilla plant in Los Angeles. It used the plant as a base to launch its US operations. In America, GRUMA's managers found the tortilla market to be highly fragmented, competitive, and regional in nature. GRUMA sales teams faced stiff competition from local and regional *tortilleras*, as well as from rival manufacturers, including Olé Mexican Foods, La Tortilla Factory, and El Milagro. González launched an aggressive marketing strategy in response, pumping millions of dollars into developing the Mission brand, infrastructure, and distribution channels.<sup>30</sup> Within a decade, Mission had turned a profit and sold the first 100 million dollars' worth of its stock in the American market.<sup>31</sup> In the 1980s, González opened 10 new plants in the US. In the process, he launched the subsidiary Azteca Milling, a corn flour mill that substantially bolstered the company's profits.

Up until this point, the reluctance of consumers to switch allegiances from fresh *masa* to *masa harina* limited GRUMA's expansion into the Mexican market. Domestic political developments, however, stood to benefit González. In a boon for the company, Carlos Salinas entered office as President of Mexico in 1988. At the time that Salinas assumed the presidency, the Mexican economy had yet to recover from the 1982 financial crisis. The financial meltdown had plunged millions of Mexicans into poverty and the country's debt had soared as a result. Influenced by Thatcher and Reagan, Salinas set about rearranging the economy by reforming subsidies, privatizing state industries and removing barriers to trade. The profits of large transnational corporations began to grow as a result.<sup>32</sup>

As a long-term friend of Salinas, González used his connections to garner governmental favours. Shortly after taking office, President Salinas sanctioned a series of policies that stacked the market to GRUMA's advantage. Salinas's administration began to dismantle the National Company of Popular Subsistence (CONASUPO), a state agency that underwrote food consumption. With its subsidies on unprocessed corn, CONASUPO had supported 51,000 small-scale tortilla factories. Salinas's commerce department replaced the corn subsidy with a programme that gave eligible candidates tortilla vouchers called *tortivales*. In a further blow to traditional manufacturers, the department signed a decree with González, which declared that all new growth in the tortilla market must come from dehydrated flour and not wet dough. At the time, Mexicans could only purchase *masa harina* from one of two suppliers: GRUMA or MICONSA.<sup>33</sup>

Unsurprisingly, González began to rake in the profits. The government effectively forced local *tortilleras* to purchase GRUMA manufactured machinery and flour products. Redirected government subsidies provided an additional boost to company finances. In 1994, subsidies totalled \$300 million (43 per cent) of GRUMA's net revenues. At the same time as it promoted GRUMA, the Salinas administration stamped out any signs of competition. Officials aligned with Salinas targeted GRUMA's only competitor – MICONSA – stripping the company of its customers. González, the self-proclaimed “king of tortillas”, now had a virtual monopoly over the domestic corn flour market.<sup>34</sup>

President Salinas's negotiation of the North American Free Trade Agreement (NAFTA) remains his best-known legacy. NAFTA came into operation in 1994, reducing trade barriers between the United States of America, Canada and Mexico. The arrangement had a profound impact on the Mexican agricultural sector. American agribusinesses, that desperately needed new markets in which to sell their subsidized food products, flooded the Mexican market with cheap corn. Mexican small farmers, forced out of business by large-scale farms in the American Midwest, migrated north where they took jobs in factories and agribusinesses catering for North American consumers.

Commentators debate the legacy and impact of NAFTA. On the one hand, the arrangement freed many Mexican agricultural workers from the land and allowed them to consume industrial products previously out of reach. Yet, somewhat paradoxically, at the same time as NAFTA facilitated the rise of Mexican food as a global cuisine, ordinary Mexicans found their access to traditional foods diminishing.<sup>35</sup> The pitfalls of NAFTA became abundantly clear in 2001, when genetically modified maize imported from America threatened to contaminate corn fields in Oaxaca.<sup>36</sup> Six years later, a spike in the price of tortillas plunged Mexico into a food crisis. Not surprisingly, inflation hit the country's poorest citizens the hardest. In what journalists termed the "tortilla riots", urbanites took to the streets in cities across the country. Critics claimed that the price spike, conventionally attributed to increased demand for biofuels, resulted from collusion and price-fixing. Farming companies, tortilla makers, and members of the Mexican Congress blamed maize companies, including GRUMA, for hoarding corn and creating a false scarcity that fuelled price increases.<sup>37</sup>

González managed to successfully navigate the company through the vagaries of NAFTA. After the implementation of NAFTA, González negotiated a strategic partnership with Archers Daniel Midland (ADM), an American company that stored, transported, processed and traded US corn. The two companies, vertically integrated along the supply chain, controlled the majority of the corn-tortilla chain in Mexico.<sup>38</sup> As they imported vast quantities of maize from the American Midwest, the two firms could undercut the competitiveness of Mexican small farmers who catered to local *tortilleras*. When corn prices dropped, ADM and GRUMA reaped the profits from tortilla sales. When high tortilla prices forced Mexican consumers to switch to white bread, the two companies financially benefited from their joint venture to mill and refine wheat.<sup>39</sup>

### **Manufacturing new markets**

As GRUMA tightened its stranglehold over the Mexican market, it continued to pursue international expansion. In the late 1980s and early 1990s, GRUMA strengthened its presence in Central America, installing plants in Honduras, El Salvador, Guatemala, and Venezuela. Meanwhile, in the USA, GRUMA continued to perform strongly. In 1990, the company opened a tortilla mega-plant in Los Angeles, capable of producing 14 million tortillas per day. Several years later, the firm constructed a new plant in Los Angeles that produced a record-breaking 25 million tortillas per day.<sup>40</sup> The appetite for GRUMA products meant that by the early 2000s, the company's US operations accounted for the majority of its corporate sales.<sup>41</sup> Americans drank more tequila and ate more tortillas than any other nation in the world.<sup>42</sup>

In Mexico, meanwhile, President Salinas's successor, Ernest Zedillo, cut back financial support for the tortilla industry. Without a steady income stream from corn subsidies, González turned his attention to Europe. Until the late 1990s, GRUMA executives had focused on expanding into countries with similar corn consumption traditions to Mexico. González well knew, however, that there existed an untapped pool of customers across the Atlantic. Since 1997, GRUMA had sold tortillas manufactured in the USA to English customers. González then set about making the shift from importer to local producer. In 2000, the company started construction on its first tortilla plant outside the Americas in Coventry (UK).<sup>43</sup>

To determine which new markets to enter, GRUMA's managers used two methods: psychographics and "chefmanship". GRUMA's former CEO Jairo Senise defined psychographics as the study of personalities, values, attitudes, interests and lifestyles. Through focus groups and specialized research into local psychographics, the company's research teams attempted to answer two questions about potential consumers. Were they willing to try something new? And, specifically, were they willing to try GRUMA products? If research teams answered no or maybe to either of these questions, then company executives reconsidered whether or not to move into the new operating environment. Executives normally judged it a waste of money to spend money marketing their product to a resistant population.<sup>44</sup>

Senise defined "chefmanship" as the flavours and textures preferred by a particular market. Before setting up in a new region, GRUMA's teams had to determine how its products could incorporate local tastes. GRUMA executives knew, for example, that in Mexico, they should focus on selling corn flour to local *tortilleras* rather than marketing prepackaged tortillas to shopkeepers. Meanwhile, in America, GRUMA executives realized that the reverse was the case. Even within a country, there existed regional variations in tastes. GRUMA's researchers learnt that in Texas, people preferred fluffier tortillas. In California, they liked elastic tortillas, and in Arizona, chewy tortillas. The reason for this confounded GRUMA employees, until they worked out that Mexicans from different regions with distinctive culinary traditions had settled in each of these states, producing a variation in local tastes. GRUMA sales teams targeted their products accordingly.<sup>45</sup>

Ahead of every launch, GRUMA teams carried out extensive background research into target populations. Its “beachhead” research groups started out by determining the locations that had easy access to raw materials (corn) and major consumption markets. Then, they began to build up information on the country’s population. The picture they built up determined the products the company sold, brand name assumed and marketing strategy. In Venezuela, for example, GRUMA subsidiaries sold corn and wheat flour, as well as rice, oats and other products. Signature brands included Juana corn flour and Robin Hood wheat flour.

Before opening its UK plant, GRUMA executives sought to consolidate their understanding of the Northern European market. They observed the growing number of Mexican restaurants in the region and the increased popularity of Mexican dishes. Wraps, burritos, tacos, quesadillas, and nachos, they noted, had entered the mainstream. Aiming to secure a significant stake of the European market, GRUMA executives ploughed millions of pounds into a marketing campaign, which sought to rebrand the tortilla as the new sandwich. By marketing the corn tortilla as a wrap, the company hoped to remove rigid associations with Mexican cuisine.<sup>46</sup>

GRUMA achieved success in the UK market. Its Coventry plant, strategically located near to Birmingham, churned out tortillas and flatbread products. Pitta, naan, and wheat flour tortillas enjoyed particular success among health-conscious Northern Europeans. GRUMA executives exploited the potential of the wheat-based product range to achieve market dominance. In supermarkets, it placed its wheat products in the bakery aisle, while it positioned its Mexican portfolio of corn tortillas, tostadas, and Tex-Mex kits in the ethnic food section. At the same time as they catered for consumers seeking a healthier alternative to bread, company executives capitalized on the growing demand for fast food. The firm formed strategic partnerships with both cinema and fast food restaurant chains, which sold cheese-laden nachos and tortillas crammed with chicken and bacon to hungry consumers. These partnerships ultimately solidified GRUMA’s presence in the UK.<sup>47</sup>

Off the back of its success in Northern Europe, the company eventually expanded its operations to the rest of the continent. GRUMA acquired a wheat tortilla factory in the Netherlands and a corn flour mill in Italy. Its growth model of “targeted acquisitions” facilitated expansion into new markets. Some countries proved harder markets to crack than others. As GRUMA executives learnt, the populations of Portugal, Spain, Italy, Greece, and France ate more healthily and had more traditional eating habits than many Northern Europeans. Quick-serve meals of tortilla wraps did not satisfy the average Mediterranean consumer, at least initially. In a bid to improve uptake, GRUMA executives marketed their products to restaurant owners in tourist destinations including Rome, Venice and Florence. As tourists began to buy flatbread products from quick-serve restaurants, local resistance to GRUMA products slowly began to ebb.<sup>48</sup>

GRUMA’s owners later went on to acquire and open plants in Ukraine, Turkey, Russia, County Durham (UK), and Melbourne. Taking the opportunity to diversify its product range, GRUMA’s new corn milling operations catered not only to the growing tortilla market, but also to snack, beer and cereal producers in Europe, the Middle East and Africa. By the mid-2000s, like with many global food companies, GRUMA executives looked to expand into Asia. GRUMA’s directors knew that the Chinese population were largely unfamiliar with the tortilla and that Latin American companies lacked a strong record of accomplishment in Asia. Executives dispatched an experienced beachhead team to China to investigate the local market. The team observed a decrease in home cooking among dual career professionals, increased penetration of fast food chains, more cold storage in supermarkets, and rapid improvements in logistics and distribution channels.<sup>49</sup> Crucially, the Chinese population seemed predisposed to experimentation.<sup>50</sup> GRUMA decided to open a manufacturing plant in Shanghai, from which it planned to sell flatbreads and tortilla products to Japan, Korea, Singapore, Thailand, the Philippines and the rest of China.<sup>51</sup>

GRUMA’s product developers devised a two-pronged marketing strategy, simultaneously targeting Asian home cooks and food businesses. Rather than selling flatbreads with chicken and beans as they did in Mexico, the developers decided to sell them with duck and plum sauce. The company hired chefs who developed recipes with Chinese food and sold premade flatbread in supermarkets. GRUMA’s chefs also went to culinary schools, quick-serve restaurants, hotels and canteens where they taught proprietors how to make recipes incorporating the tortilla.<sup>52</sup> Significantly, like their European counterparts, GRUMA’s Asia representatives benefited from strategic partnerships with chain restaurants, including Kentucky Fried Chicken (KFC) and McDonalds.<sup>53</sup>

## **Mexican culture and culinary globalisation**

As Mexican cuisine began to occupy an ever-larger position on the global stage, a parallel process was unfolding back in Mexico. Beginning in the 1940s, industrial processed food and drink began to enter the country from the United States. The post-war boom brought refrigerated meats, canned vegetables and bottled drinks to the shelves of Mexican supermarkets. Upper-middle-class housewives living in cities purchased Aunt Jemima cake mix and the Mexican version of Wonder bread, known by its local brand name Bimbo. Pepsi and Coke, meanwhile, made significant inroads into rural Mexico, making use of the newly constructed roads lining the countryside.<sup>54</sup>

As global consumers adapted the tortilla to local tastes, Mexican home cooks devised hybrid dishes using mass-produced goods. Middle-class Mexicans began to rustle up such experimental dishes as pork loin in Pepsi-Cola and macaroni and milk soup. Mexicans also developed their own cultures of consumption. For example, while Americans viewed Pepsi-Cola as an everyday snack, in Mexico, the drink became a part of communities' ritual lives. In rural areas, Mexicans used Pepsi to make community toasts, as dowries for brides, and as a substitute for wine in religious ceremonies.<sup>55</sup>

Following the implementation of NAFTA in 1994, the presence of industrial processed food and drink in the Mexican diet increased significantly. As Mexican small farmers started to work in large-scale agribusinesses cultivating exotic fruits for the US market, ordinary Mexicans became increasingly dependent on imported foods. Cheap, yellow corn from the American Midwest came to replace domestic grown maize. Food producers used these varieties of corn for animal feed, chips, syrups, cereals and other snacks, rather than for corn tortillas or flour.<sup>56</sup> Instant noodles, first commercialised in 1958 by the Japanese inventor Momofuku Ando who founded Nissin Foods (and considered by many Japanese to be the greatest invention of the 20th century), also became a more affordable, if less nutritious, substitute for the traditional corn tortilla.<sup>57</sup>

Mexicans' increasing reliance on industrial processed foods came at a high nutritional price. The fresh *masa* tortilla had for a long time been a source of nutrients and vitamins for poorer consumers. All too frequently, imported goods and mass-produced foods failed to provide similar levels of nutrition. Adolfo Chavez, the Director of the Community Nutrition Division of the National Nutrition Institute, described the situation as an "epidemiological trap". In the aftermath of NAFTA, more Mexicans fell victim to the dietary diseases of the developed world, like diabetes and heart attacks. At the same time, poorer citizens suffered from the nutritional deficiencies of the developing world.<sup>58</sup>

Gourmands concerned about the loss of traditional Mexican cuisine have called for a return to older customs. In the 2010s, several high-end restaurants opened in Mexico City that served tortillas made from freshly ground maize. Customers paid a high price for the privilege of eating a food that their grandparents would have regarded as a cheap staple.<sup>59</sup> The majority of time-pressed and cash-strapped Mexicans, or at least those living in urban areas, have arrived at a compromise. They continue to purchase tortillas from the local *tortillera*, rather than the supermarket. But, to GRUMA's satisfaction, the vast majority of Mexican tortillas are produced not from fresh *masa* but from dehydrated flour.

## Endnotes

- <sup>1</sup> 'Mission Tortilla Factory Hosted by Mission Foods', Yesterland, [yesterland.com/tortilla.html](http://yesterland.com/tortilla.html). Accessed April 20, 2020.
- <sup>2</sup> David Lind and Elizabeth Barham, 'The social life of the tortilla: Food, cultural politics, and contested commodification', *Agriculture and Human Values*, 21 (2004), p. 57.
- <sup>3</sup> 'Tortillas at the Supermarket', *National Museum of American History*, <https://americanhistory.si.edu/food/resetting-table/tortillas-supermarket>. Accessed January 13, 2020.
- <sup>4</sup> Gruma. 2012. Annual Report, [https://www.gruma.com/media/341622/annual\\_report\\_2012\\_in\\_pdf\\_format.pdf](https://www.gruma.com/media/341622/annual_report_2012_in_pdf_format.pdf). Accessed January 13, 2020.
- <sup>5</sup> Gruma. 2014. Annual Report, [https://www.gruma.com/media/611048/gruma\\_20-f\\_final\\_version\\_with\\_exhibits.pdf](https://www.gruma.com/media/611048/gruma_20-f_final_version_with_exhibits.pdf). Accessed January 13, 2020.
- <sup>6</sup> Paula E. Morton, *Tortillas: A Cultural History* (Albuquerque, 2014), p. 22.
- <sup>7</sup> A. Recinos, *Popol Vuh: las antiguas historias del Quiché* (Mexico City, 1947).
- <sup>8</sup> Bernardino de Sahagún, *Florentine Codex: General History of the Things of New Spain* (translation of and introduction to Historia General de Las Cosas de La Nueva España; 12 Volumes in 13 Books ), trans. Charles E. Dibble and Arthur J. O Anderson (Salt Lake City, 1950-1982).
- <sup>9</sup> Jeffrey M. Pilcher, *Planet Taco: A Global History of Mexican Food* (New York, 2012), p. 14.
- <sup>10</sup> Morton, *Tortillas*, pp. 45-56.
- <sup>11</sup> Jeffrey M. Pilcher, 'Industrial Tortillas and Folkloric Pepsi: The Nutritional Consequences of Hybrid Cuisine in Mexico' in *Food Nations*, ed. Warren Belasco and Philip Scranton (New York, 2002), pp. 237-8.
- <sup>12</sup> María Teresa Fernández-Aceves, 'The Struggle between the "Metate" and the "Molinos de Nixtamal" in Guadalajara, 1920-1940' in *Sex in Revolution: Gender, Politics, and Power in Modern Mexico*, ed. Jocelyn H. Olcott, Mary Kay Vaughan and Gabriela Cano (Durham and London, 2006), p. 151.
- <sup>13</sup> Pilcher, 'Industrial Tortillas', pp. 238-9.
- <sup>14</sup> Jeffrey M. Pilcher, *Que Vivan Los Tamales!: Food and the Making of Mexican Identity* (Albuquerque, 1998), p. 104.
- <sup>15</sup> *Ibid.*, pp. 103-4.
- <sup>16</sup> *Ibid.*, p. 104.
- <sup>17</sup> *Ibid.*, pp. 104-16.
- <sup>18</sup> Gruma. 2018. History, <https://www.gruma.com/en/we-are-gruma/history.aspx>. Accessed January 15, 2020.
- <sup>19</sup> G. Vargas- Sánchez & L. Pérez- Osnaya, 'GRUMA: Un análisis microeconómico', 386, *Economía Informa* (2014), p. 32.
- <sup>20</sup> Gruma. 2010. Sustainability Report, [https://www.gruma.com/media/336862/sus\\_gruma\\_report.pdf](https://www.gruma.com/media/336862/sus_gruma_report.pdf). Accessed January 13, 2020.
- <sup>21</sup> Pilcher, 'Industrial Tortillas', p. 240.
- <sup>22</sup> J. Zepeda, *Los amos de México* (Mexico City, 2007), p. 405.
- <sup>23</sup> Anthony Depalma, 'How a Tortilla Empire Was Built on Favoritism?', *New York Times*, February 15, 1996.
- <sup>24</sup> Zepeda, *Los amos*, pp. 398-9.
- <sup>25</sup> John G. Longenecker et al., *United States Patent No. US3993788A*, November 23, 1976, <https://patentimages.storage.googleapis.com/36/97/46/d5fe5b09777f86/US3993788.pdf>. Accessed January 15, 2020.
- <sup>26</sup> Jorge E. Gómez and Miguel A. López-Lomelí, 'MultiMexicans in the Food Industry' in *Mexican Multinationals: Building Multinationals in Emerging Markets*, ed. Alvaro Cuervo-Cazzura and Miguel A. Montoya (Cambridge, 2018), p. 199.
- <sup>27</sup> Gruma. *DEMASA Costa Rica*, <https://www.gruma.com/es/nuestras-marcas/empresas/demasa.aspx>. Accessed January 15, 2020.
- <sup>28</sup> Zepeda, *Los amos*, p. 416.
- <sup>29</sup> Campbell Gibson and Kay Jung, 'Historical Census Statistics on Population Totals, By Race, 1790 to 1990, and by Hispanic Origin, 1970 to 1990, For the United States, Regions, Divisions, and States', *US Census Bureau, Population Division, Working Paper No. 56* (2002).
- <sup>30</sup> Marla Dickerson, 'Tortilla Makers Try Not to Get Flattened', *Los Angeles Times*, October 28, 2003.
- <sup>31</sup> Zepeda, *Los amos*, p. 417.
- <sup>32</sup> Judith Teichman, 'Neoliberalism and the Transformation of Mexican Authoritarianism', *Mexican Studies/Estudios Mexicanos*, 13.1 (1997), pp. 121-147.
- <sup>33</sup> Laresh Jayasanker, 'Tortilla Products: Mexican Food, Globalization, and the Sunbelt' in *Sunbelt Rising: The Politics of Space, Place, and Region*, ed. Michelle Nickerson and Darren Dochuk (Philadelphia, 2011), p. 326.
- <sup>34</sup> Depalma, 'How a Tortilla Empire Was Built on Favoritism'.

- <sup>35</sup> Pilcher, *Planet Taco*, p. 15.
- <sup>36</sup> Lauren E. Baker, *Corn Meets Maize: Food Movements and Markets in Mexico* (London, 2013), p. 52.
- <sup>37</sup> Chad Broughton, *Boom, Bust, Exodus: The Rust Belt, the Maquilas, and a Tale of Two Cities* (New York, 2015), p. 248.
- <sup>38</sup> Baker, *Corn Meets Maize*, p. 50.
- <sup>39</sup> Tom Philpott, 'How Archer Daniels Midland cashes in on Mexico's tortilla woes', *Grist*, February 23, 2007, <https://grist.org/article/tortillas/>. Accessed January 17, 2020.
- <sup>40</sup> Osmar Hazael Zavaleta-Vazquez and Jorge Alberton Wise-Lozano, 'Emerging MNEs Successfully Operating in International Markets: The Case of Some Mexican MNEs' in *Multinational Enterprise Management Strategies in Developing Countries*, ed. Mohammad Ayub Khan (Hershey, 2016), p. 166.
- <sup>41</sup> Jorge Castaneda, *Ex Mex: From Migrants to Immigrants* (New York, 2007), p. 23.
- <sup>42</sup> Chris Morris, 'Americans Drink More Tequila Than Any Other Nation on Earth', *Fortune*, May 3, 2019, <https://fortune.com/2019/05/03/tequila-cinco-de-mayo-americans/>. Accessed January 23, 2020.
- <sup>43</sup> Mission. *Mission Food Europe*, [http://www.missionfoods.eu/corporate\\_company.html](http://www.missionfoods.eu/corporate_company.html). Accessed January 15, 2020.
- <sup>44</sup> Jairo Senise, 'Who Is Your Next Customer?', *Strategy + Business*, August 29, 2007, <https://www.strategy-business.com/article/07313?gko=b65d3>. Accessed January 13, 2020.
- <sup>45</sup> Ibid.
- <sup>46</sup> Lind and Barham, 'The social life of the tortilla', pp. 56-7.
- <sup>47</sup> 'Gruma to continue "acquisition" growth model', *World Finance*, December 22, 2011, <https://www.worldfinance.com/markets/gruma-to-continue-acquisition-growth-model>. Accessed January 15, 2020.
- <sup>48</sup> Senise, 'Who Is Your Next Customer?'.
- <sup>49</sup> Isobel Doole and Robin Lowe, *International Marketing Strategy: Analysis, Development and Implementation*, 5<sup>th</sup> edn. (London, 2008), pp. 34-5.
- <sup>50</sup> Senise, 'Who Is Your Next Customer?'.
- <sup>51</sup> Paul Leinwand and Cesare R. M. Mainardi, *The Essential Advantage: How to Win with a Capabilities-Driven Strategy* (Boston, Mass., 2010), p. 43.
- <sup>52</sup> Senise, 'Who Is Your Next Customer?'.
- <sup>53</sup> 'Gruma to continue "acquisition" growth model'.
- <sup>54</sup> Pilcher, 'Industrial Tortillas', pp. 242-4.
- <sup>55</sup> Ibid., p. 245.
- <sup>56</sup> Alyshia Gálvez, *Eating Nafta: Trade, Food, Policies, and the Destruction of Mexico* (Berkeley, 2018), pp. 50-2.
- <sup>57</sup> Gálvez, *Eating Nafta*, pp. 10-11.
- <sup>58</sup> Pilcher, 'Industrial Tortillas', p. 247.
- <sup>59</sup> Kim Severson, 'Tasting original flavors where corn is king', *National Geographic Traveler*, November 27, 2018, <https://www.nationalgeographic.com/travel/destinations/north-america/mexico/mexico-city/best-trips-what-to-do-corn-tortillas>. Accessed January 20, 2020.