



Better For You Tortillas

Shima Agah, Ph.D
Tortilla R&D Manager
May 19th, 2022
Las Vegas Nevada

Tortillas Better For You Trends

- Tortillas have become very popular baked products world wide.
- Versatility, functionally, and convenience as wraps.
- Low cost of tortillas, ease of preparation and a range of options (key drivers)
- Health is becoming a buzzword in tortilla segment.
- Primary focus across the food industry due to the COVID pandemic.
- The health-conscious customers are seeking products with
 - Simple food labels & high quality with fewer additives products.
 - Added health benefits (immune system booster, disease prevention and weight loss).
- Corn and flour tortillas still dominate the retail space.



Tortillas Better For You Trends & Challenges

- Better-for-you options are quite visible as niche (particular attributes).
- Staple flatbread in daily meal planning in homes (adapt to consumer preferences).
- Need of nutrient ingredients with improved functionality.
- Market newly developed better for you options for tortilla industry.
- Processability, finished product quality and shelf stability.
- Tortilla formulators continue to simplify and use more natural ingredients through product offering.
- The consumers are not willing to trade healthier for diminished quality or taste.
- Removing or replacing highly functional ingredients used for specific purposes.



Better For You Tortillas Challenges

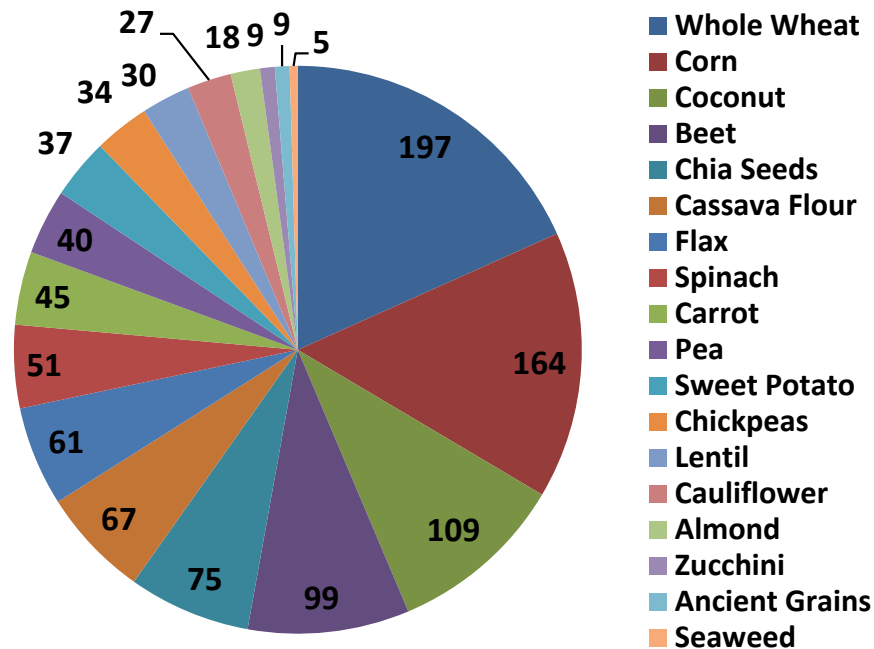
- The product's shelf life, flavor (sensory), texture, storage and other quality key characteristics.
- Alternative ingredients do not interact with other ingredients in the formulation.
- Affect the appearance and taste of the finished product.
- Price differentials in reformulations for cost/benefit analysis to finance and manufacturing for a systems-wide check.
- Cost differentials must be compensated by marketing and claims.
- A strong understanding of these market forces driving demand.
- Mastery of functional performances and sensory requirements.
- Bring these new items to market successfully.

ARE YOU UP FOR THE
CHALLENGE?

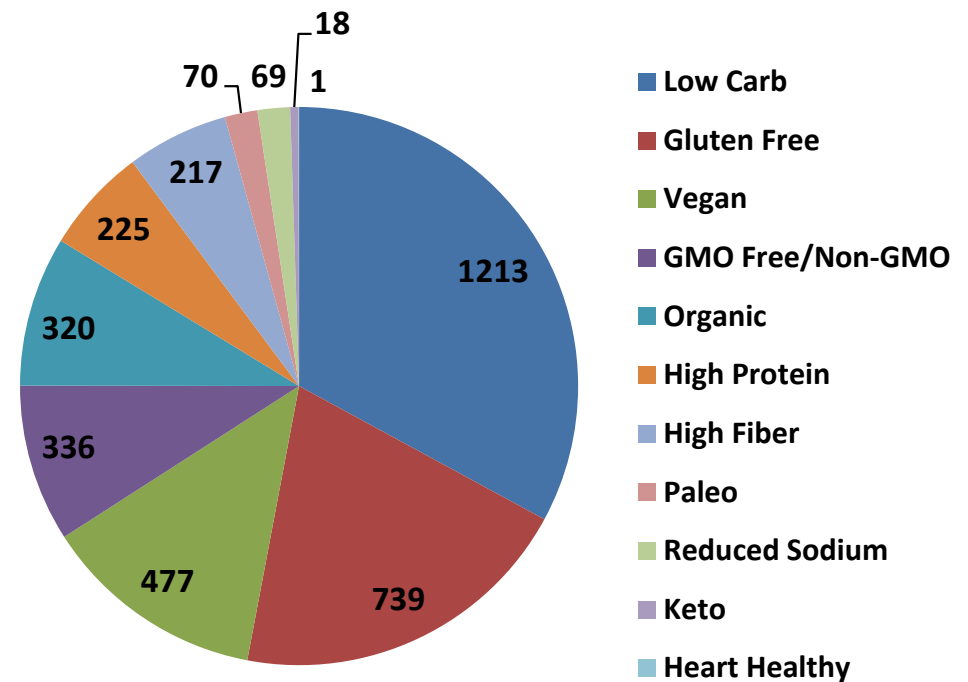


New Tortilla Product Launches

Specific Ingredients



Specific Health Claims



Areas: Western Europe and N. America

Time: Jan 2019 to present (to include non-covid days)

<https://indices.iriworldwide.com/covid19/?i=0>

<https://www.innovadatabase.com/search/productsearch>

Better For You Tortilla Options

- **Clean Label**
- **Non GMO**
- **Organic**
- **Diet Specific:**
 - **Low Carb/ High Fiber**
 - Keto Friendly (Low Carb High Fat)
 - **High Protein/ High Fiber**
 - Keto Friendly (Low Carb High Fat)
 - **Gluten Free**
 - Grain Free (Paleo)
 - **Vegan (No Animal Products)**
 - Dairy
 - Eggs
 - Dough Relaxer (L-Cysteine)-from feathers



GO CLEAN LABEL™



your guide to clean label™

Clean Label



- Clean label all starts off with consumer perception of “natural”
 - A simple and short ingredient list that is easy to understand
 - No chemicals, artificial preservatives, color agents nor flavor agents.
- No FDA definition (No definite regulations/guidelines)
- No ideal standard list of ingredients for clean label
- Created by Industries and/or customer advocates
- Retailers make their own guidelines
- Whole Foods calls their list “Unacceptable Ingredients for Food”
- Panera calls their list the “No No List”



Unacceptable Ingredients in Clean Label Tortillas

- Baking Powder- Aluminum containing (Sodium Aluminum Sulfate, Sodium Aluminum Phosphate)
- Emulsifiers (Sodium/Calcium Stearoyl Lactylate (SSL Emplex), Mono-diglycerides)
- Preservatives- Sodium/Calcium Propionate, Potassium Sorbate, Sorbic Acid, Benzoates, Parabens
- Dough Relaxers- L-Cysteine, Sodium Metabisulfite
- Shortening- Hydrogenated Fats
- Flour- Bleached Flour
- GMO (Aldi and Trader Joe's)



Clean Label Alternatives in Tortillas

- Natural Preservatives**

Cultured Wheat

Cultured Dextrose

Organic Acids
(Vinegar / Raisin Concentrate)

- Leavening Acids (Aluminum Free)**

Sodium Acid Pyrophosphate (SAPP)

Mono-calcium phosphate (MCP)

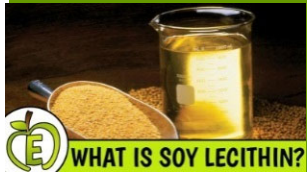
- Leavening Acids (Natural)**

Glucono-delta-lactone (GdL)

Tartaric acid & Cream of Tartar
(Not Commercial)

NO ARTIFICIAL PRESERVATIVES





Clean Label Alternatives in Tortillas



- **Natural Emulsifiers**

**Lecithin
(Soy/Sunflower/Rapeseed)**



- **Vegan Alternative Reducing Agent**

Vegetarian-grade L-cysteine

- **Natural Reducing Agents**

Bakery enzymes

Inactive non-leavening yeast

- These simpler labels may have consequences for manufacturers and may change the baking process, such as having to adjust the mix or production speed, changing the gluten/flour mix.
- The consumers driven by clean labels may be more flexible in accepting variations in quality and a premium price due to these changes.

Health Benefits of Lecithin



Non-GMO

- Environmental/food safety concerns
- Non GMO:
 - Product was produced without genetic engineering
 - Ingredients are not derived from GMOs
- Non-GMO Project:
 - includes stringent provisions for testing, traceability, and segregation.
- FDA recommends to use (instead of Non-GMO):
 - Not genetically engineered
 - Not bioengineered
 - Not genetically modified through the use of modern biotechnology
- USDA new labeling rules require (still voluntary):
 - Identifying foods with GMOs with a phone number or QR code guiding consumers



Common GMO Ingredients in Tortilla Formulations

- Corn-Corn Flour, corn starch, corn syrup, corn oil
- Soy-Soy flour, soy protein, soybean oil, soy lecithin
- Canola oil-genetic modification removed toxin
- Sugar-sugar beets



- Eating bioengineered foods poses no risk to human health?
- Foods derived from GM crops are as safe as conventional foods?



Organic



- USDA (The Organic Food Production of 1990)
 - National Organic Program (NOP)
 - USDA-accredited certifying agent

100% Organic

Organic (at least 95% organic content)

Made with Organic (at least 70% organic content)

- Water and Salt are not counted
- Produced without excluded methods (e.g., genetic engineering-GMO, ionizing radiation, or sewage sludge)
- Produced per the National List of Allowed and Prohibited Substances (National List)
- Overseen by USDA National Organic Program-authorized certifying agent, following all USDA organic regulations

Allowed Non Organic Ingredients

Non-agricultural Substances

Nonsynthetics	Synthetics	Non-organically Produced Agricultural Products
Citric Acid	Alginates	Guar; Locust Bean; Arabic Gums-water extracted
Carrageenan	Ascorbic Acid	Cornstarch (native)
Enzymes (from non-pathogenic organisms)	Calcium Phosphates	Lecithin
Malic Acid	Sodium Acid Pyrophosphate	Whey Protein Concentrate
Sodium Bicarbonate	Xanthan Gum	
Yeast		

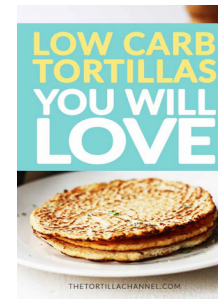
Organic Tortilla Formulations

ORGANIC (at least 95%)		Content (%)
Organic Flour	85	96
Organic Shortening	8	
Organic Preservative	3	
Baking Powder	2	
Dough Conditioners	1	
Acids	1	
Total	100	
Water		
Salt		

Made with Organic (at least 70% organic content)		Content (%)
Organic Flour	85	85
Shortening (Non GMO)	8	
Non-chemical Preservative	3	
Baking Powder	2	
Dough Conditioners	1	
Acids	1	
Total	100	
Water		
Salt		

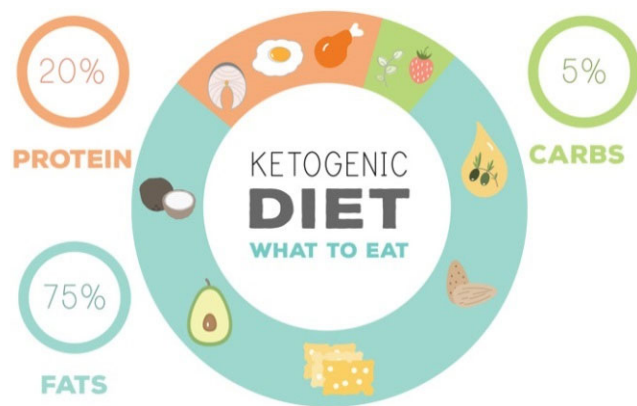
Low Carb

- Reducing the carbohydrate content for diabetics purposes/weight loss
- The FDA has not yet defined nutrient content claims for carbohydrates
- Labels with the level of carbohydrates violate FDA regulations
- Not digestible and not able to be converted to fatty acids or alternative nutritional ingredients
- The dietary fiber definition identified by FDA
- Net Carb = Total Carbohydrates - Dietary Fiber
 - **Cellulose**
 - **Modified Food Starch (Resistant Starch)**
 - **Wheat Protein Isolates**
 - **Oat Fibers**
 - **Vital Wheat Gluten**
 - **Soy Flour**



Keto Friendly (Low Carb High Fat) Tortillas

- Low carb tortilla (between 2-6 net carb) are keto-friendly.
- Consumed in moderation and can be very important when following a keto diet.
- Accommodate it in your 20-50 grams daily carb limit.
- Eat high-fat foods throughout the rest of the day to reach your fat goals!



Low Carb Tortillas

- 3g Net Carb
- 80 Calories per serving
- Vegan; Keto friendly
- Excellent source of fiber
- Good source of protein
- Zero sugar content
- Zero cholesterol
- Zero trans fat

Ingredient Statement:

- Water, Vital Wheat Gluten, Shortening, Wheat Flour, Modified Food Starch, Oat Fiber, Cellulose, Mono- and diglycerides, Calcium Propionate, Guar Gum, Sodium Bicarbonate, Salt, Fumaric Acid, Sodium Aluminum Sulfate, Sodium Aluminum Phosphate, Sorbic Acid.

Nutrition Facts

Serving Size (43g)

Servings Per Container

Amount Per Serving

Calories 80 **Calories from Fat 35**

% Daily Value*

Total Fat 4g **6%**

Saturated Fat 2g **10%**

Trans Fat 0g

Cholesterol 0mg **0%**

Sodium 180mg **8%**

Total Carbohydrate 12g **4%**

Dietary Fiber 9g **36%**

Sugars 0g

Protein 5g

Vitamin A 0% • Vitamin C 0%

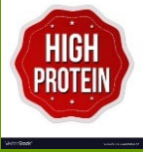
Calcium 8% • Iron 4%

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

		Calories: 2,000	2,500
Total Fat	Less than	65g	80g
Saturated Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Calories per gram:

Fat 9 • Carbohydrate 4 • Protein 4

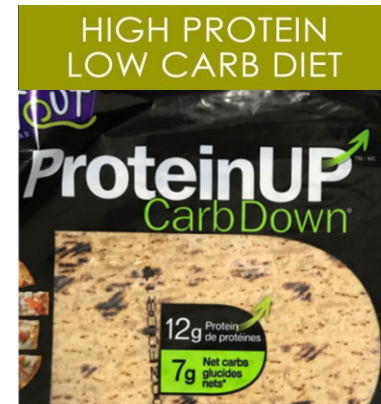


High Protein High Fiber Tortillas

- Boost the protein & fiber contents in tortilla formulations
- Using whole wheat flour as an alternative for regular wheat flour
- Adding high protein plant based ingredients & non-digestible carbohydrates
- Contribute in meeting our daily protein & fiber requirements
- 50 grams of high quality protein per day (daily value for protein based on FDA)
- Provides 10% of the recommended daily value
- Full of essential nutrients and amino acids to fuel an active lifestyle



- **Cellulose**
- **Modified Food Starch (Resistant Starch)**
- **Pea Protein Isolates**
- **Wheat Protein Isolates**
- **Soy Protein Isolates**
- **Oat Fibers**
- **Vital Wheat Gluten**



High Protein High Fiber Tortillas

- 6g Net Carb
- 100 Calories per serving
- Vegan; Keto friendly
- Good source of fiber
- Good source of protein
- Zero sugar content
- Zero cholesterol
- Zero trans fat

Ingredient Statement:

- Water, Whole Wheat Flour, Shortening, Vital Wheat Gluten, Pea Protein Isolate, Oat Fiber, Cellulose, Mono- and diglycerides, Sodium Acid Pyrophosphate, Calcium Propionate, Sodium Bicarbonate, Salt, Guar Gum, Fumaric Acid, Sorbic Acid, Inactive Yeast, Dough Conditioner.

Nutrition Facts

Serving Size (43g)
Servings Per Container

Amount Per Serving

Calories 100 **Calories from Fat 40**

% Daily Value*

Total Fat 4.5g **7%**

Saturated Fat 1.5g **8%**

Trans Fat 0g

Cholesterol 0mg **0%**

Sodium 280mg **12%**

Total Carbohydrate 10g **3%**

Dietary Fiber 4g **16%**

Sugars 0g

Protein 7g

Vitamin A 0% Vitamin C 0%

Calcium 8% • Iron 8%

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Saturated Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Gluten Free

- The proteins that naturally present in wheat, rye, malt and barley
- Adverse health effects to people diagnosed with celiac disease
- Less than 20 ppm (parts per million) for presence of gluten for a food with “Gluten Free” claim
- Food marked "gluten-free", doesn't make it healthy
- Made with starchy flours like corn, potato, tapioca and rice
- Using sugar and salt to mask the different taste or texture that might be off-putting to consumers



Gluten Free Tortillas

- 110 Calories per serving • Zero trans fat
- Vegan
- Zero sugar content
- Zero cholesterol

- **Ingredient Statement:**

- Water, Tapioca Starch, Rice Flour, Oil, Chickpea Flour, Corn Flour, Glycerin, Maltodextrin, Cellulose Gum, Salt, Xanthan Gum, Distilled Monoglyceride, Calcium Propionate, Sodium Acid Pyrophosphate, Sugar, Sodium Bicarbonate, Fumaric Acid, Sorbic Acid, Enzymes.

Nutrition Facts	
servings per container	
Serving size	(43g)
Amount per serving	
Calories	110
% Daily Value*	
Total Fat 3.5g	4%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Total Carbohydrate 21g	8%
Dietary Fiber 0g	0%
Total Sugars 0g	
Includes 0g Added Sugars	0%
Protein 1g	
Calcium 47mg	4%
Iron 1mg	6%
Potassium 35mg	0%
*The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.	
Calories per gram: Fat 9 • Carbohydrate 4 • Protein 4	

Gluten Free Tortillas

- Corn tortillas are very popular as a gluten free option (the most category sales)
- New product launches of gluten free varieties
 - Additional health benefits and high in nutrients
 - Ancient grains, plant based, and grain free (paleo) alternatives
- Alternative flours and mixes are emerging, including bases like:

- **Almond**
- **Cassava**
- **Cauliflower**
- **Coconut**
- **Lentils**
- **Chickpeas**
- **Beans**
- **Other Legumes**

Add a high-protein aspect to the tortilla





Paleo or Grain Free Tortillas



- The Paleo diet excludes:
 - **Gluten and other grains (like oats, rice and corn)**
 - **Legumes (like soy, peanuts and beans)**
 - **Refined oils (like canola, soybean, cottonseed)**
 - **Dairy**
 - **Sugar**
- Grain-free or Paleo versions (cassava flour and almond flour as choice ingredients)
- While these options are solid and exciting, they are still seem to be somewhat niche based and becoming mainstream has not yet been seen



Better For You Tortillas (Summary)

- AB R&D team has developed several better for you tortilla BatchPak™ formulations specifically designed to your own preference.
- Supplementing it with other carefully selected functional ingredients to provide the best results

- **On Trend BatchPak™ Formulations:**

- Traditional
- Low Carb
- Gluten Free
- Low Sodium
- Keto
- Non GMO
- Clean Label
- Low Fat
- Heart Healthy
- Wraps
- Organic
- Multi Grain
- Low Carb/High Protein

- **Summary of Formulation Tips**

- Not difficult
- Know the target
- Know the regulations
- Expect to change more than the target ingredients for sensory approval
- Add all possible claims to the front label- take advantage of your work
- Enter the Multi Million Dollar Health Market



Future Trends & Conclusions

- With health being front and center for consumers, we are seeing many shifts to nutritious ingredients and better for you products.
- Developing solid formulations that focuses on self-care (health, nutrition & ingredient transparency)
- Offering good taste, texture, and superior functionality is critical to ensure consumer acceptance and ultimately market success
- Allied Blending LP has been partnering with consumers for years to develop healthy and nutritious formulas.
- Help understand what your customer's need
- Our R&D team and technical services group work together with you to develop and implement better for you tortilla formulas that are desired by consumers.

Allied Blending

The natural choice for food solutions



Goals:

- **Develop Your High Performance, Custom, Private Label Formulas**
- **Meet & Exceed Your Customers' Health and Taste Demands**
- **Help you Keep an Eye on Your Market Trends**
- **Remembering that Growth is the Ultimate Trend**

Acknowledgement

- **Frederic Schulders**
- **Dr. Feliciano (Sonny) Bejosano**
- **Tara Perry**



Questions?

Allied  **Blending**
The natural choice for food solutions



Thank You