

November 2005 Supplement to *Prepared Foods*

[www.PreparedFoods.com](http://www.PreparedFoods.com)

# PREPARED FOODS

DEVELOPMENT TRENDS & TECHNOLOGIES FOR FORMULATORS & MARKETERS

*New Product Trends:  
The New Egg  
in Town*

# New Product Trends



## The New Egg in Town

The incredible edible egg™  
American Egg Board



REPRINTED FROM *PREPARED FOODS*



# The New Egg *in Town*

Elizabeth Mannie, Contributing Editor

**T**he retail packaged foods and beverage industry is roughly a half trillion dollar business. To succeed in this very competitive arena, food companies must develop and market products that appeal to today's consumers. Although consumers can be fickle, a number of food trends guide food manufacturers as to what their customers want, and thus help food marketers determine which packaged food products will thrive in the marketplace.

Shifting consumer demand drives change in food selections and materials needed to convert commodities, such as eggs, to value-added, finished retail and packaged foodservice products. Additionally, eggs and their derivatives (such as egg whites) are valued components in food formulators' toolboxes, as specific functionalities are required that only eggs can provide. Statistics from Mintel International's (Chicago) GNPD show that hundreds of packaged food products have recently been introduced onto U.S. grocery shelves that use the

word "egg" or "eggs" in their description. (See chart "Entering with Eggs.")

This supplement reviews food trends and provides examples of new products exemplifying these trends. The products mentioned in this article all contain egg as a key ingredient. Eggs can serve as main ingredients in a food, and also be utilized for their functional properties. They contribute to the appearance, taste, technical functionality and/or image of the end consumer products featured in this article.

For example, limited time for food preparation, fast-paced lives, and dual-income families with limited time have increased demand for convenience foods, many of which incorporate eggs as a main ingredient. Eggs also are seen in products in the growing ethnic category. Increasingly, diverse foods are dispersing into the mainstream, and eggs often play key roles. Another hot food trend is influenced by the growing interest in dietary health, and eggs are the perfect vehicles.

## ●● **Converging on Convenience Foods**

Convenient food products are increasingly handy and more creative. The number of food products entering the market that contain the word "go" in their name more than tripled from 134 in 2001 to 504 in 2004, according to Datamonitor's (New York) ProductsScan Online. Product examples include Nestlé's (Glendale, Calif.) Bacon, Egg & Cheese Hot Pockets® Meals, which use egg as the main ingredient.

Nestlé also uses eggs in its foodservice line of products. Craig "Skip" Julius, CDC, CCS, CRC, CCP, manager of product innovation/corporate executive chef for Nestlé Food Services, developed a soufflé product for a national chain with 500-plus units. The chain's operators line their muffin tins with sweet pastry dough, pour in the Nestlé soufflé mix filling and bake the product. The soufflé mix comes in two flavors, Bacon & Cheese and Spinach-Artichoke.

“Eggs are needed in this mix for their contributions to structure and substance. Plus, few things are as good at carrying flavors as eggs,” says chef Julius. “They don’t get in the way and they release the aromas slowly over time, which adds a great deal to the eating ‘eggsperience,’” he adds.

Chef Julius categorizes the soufflé product as a “grab ‘n’ go” or “grab ‘n’ eat” item, and has seen a trend in orders of 20 or more being delivered to area businesses; most likely, they are popular because they hold heat well and provide a more substantial offering than muffins and pastries.

General Mills’ (Minneapolis) Pillsbury® Toaster Scrambles®, a convenience breakfast product using eggs as a main ingredient, were developed as a savory alternative to the company’s sweet, fruit-filled Toaster Strudel™ line of products. According to John Graves, product development technologist at General Mills, “marketing research showed that breakfast items, such as various combinations of eggs, cheese, sausage and/or bacon, were very popular among consumers.” Using eggs as a main ingredient in Toaster Scrambles gave Graves the opportunity to work on some of the most interesting research in his career. He had to modify frozen scrambled eggs with a patented formula and process to deal with the high moisture content and large range of size variability of the scrambled eggs.

In another example, Huxtable’s Kitchen® (Vernon, Calif.) offers Itty Bitty Meatball Subs hors d’oeuvres for the time-pressed hostess. The product uses eggs for the same reason as any good meatball recipe does: Eggs help bind the meat and other ingredients together into the shape of a ball. Without eggs, meatballs crumble and taste dry.

### ● ● Emerging Ethnic Foods

A trend toward ethnic-inspired food products continues to melt into the mainstream as consumers are increasingly adventurous and manufacturers ever more innovative. In *Prepared Foods*’ “2005 R&D



Trends Survey: Flavoring Systems,” 33% of the respondents at food manufacturing companies checked off “preferences of ethnic groups within North American” and 29% checked off “flavorings typical of authentic foreign foods” as one of the top three flavoring trends they wished to know more about. (Bakery item flavor trends topped the list with 34% of responses.)

Ethnic restaurants and grocery stores are increasing in variety. Authentic ingredients can be found in restaurants and grocery stores for foods typical of the African, Caribbean, Greek, Indian, Italian, Korean, Latin American, Mexican, Middle Eastern, Russian, Thai, Vietnamese and other regions of the world. There are also mainstream ethnic products in conventional grocery stores in just about every one of these ethnicities. Eggs are a part of many traditional ethnic cuisines from the

Mexican main dish *huevos rancheros* to the Greek casserole-type dishes *spanikopita* and *moussaka*. These dishes use eggs for their functional binding properties, taste and texture.

A classic example of an early ethnic food is the Caesar salad. A Caesar salad is truly not a Caesar without the egg. Eggs have been the main ingredient in Caesar salad since the original recipe. The first Caesar salad is commonly credited to a restaurant owner in Mexico City named Caesar Cardini who created it in the 1920s with leftovers consisting of romaine lettuce, coddled eggs, Worcestershire sauce, lemon juice, olive oil, parmesan cheese, croutons, salt and pepper.

T. Marzetti Company™ (Columbus, Ohio), a division of the Lancaster Colony Corporation, claims on its website to make “one of the market’s best varieties of Caesar” dressing, Southwest Caesar Dressing, which adds a new flavor to the classic ver-



sion with a “south of the border zip.” Marzetti salad dressings are considered high-quality products and often contain eggs. Eggs contribute flavor, texture, mouthfeel, viscosity and structure to salad dressings. Pas-



▲ **General Mills’ (Minneapolis) Pillsbury® Toaster Scrambles® has been popular with consumers wishing for a convenient and nutritional way to start the day. The company has introduced several varieties where eggs are a key component in the U.S. and Mexico in the last few years.**

teurized egg products allow for the use of liquid eggs in Caesar dressing, as the temperature destroys the salmonella and other pathogenic bacteria.

Dole Fresh Vegetables’ (Salinas, Calif.) Asian Crunch Salad Kit, another example of an ethnic product featuring eggs, brings the popular salad found in restaurants home for easy preparation. The dressing included in this kit—along with flavor contributors, such as rice vinegar, soy sauce, sesame oil and vegetable oil—also employs egg yolk, which again provides flavor, texture and other properties, such as emulsification and nutrition to the product.

Don Miguel Mexican Foods (Anaheim, Calif.) recently added

taquitos in Beef & Green Chile, Chicken & Cheese and Breakfast (Sausage & Egg) varieties under its Don Miguel Monster brand. The taquitos are made with fried flour tortillas and can be prepared in the microwave. These products fit into all convenience, ethnic and breakfast categories, as could many of the other examples.

“The breakfast period is an extremely important part of the day for convenience stores, where we sell a majority of our Monster taquitos and large quantities of our breakfast burritos,” contributes Mike Elliot, vice president of sales and marketing for Don Miguel.

Don Miguel carries a variety of breakfast products, including ham and egg burritos, sausage and egg burritos, bacon and egg burritos and, to target the Hispanic market, egg and chorizo burritos. Other ingredients included in the products are fresh onions, green chilies, spices and a blend of three cheeses. Because of the success of these breakfast items, the company introduced a burrito that is called the “Whole Nine Yards,” which includes eggs, ham, bacon, sausage, chorizo, potatoes, cheese and beans.

▶ **Product developers at T. Marzetti Co.™ (Columbus, Ohio) continue to include egg yolk in their salad dressings to emulsify, add flavor and make a “consumer friendly” appearance on labels. This holds true for newly introduced flavors, such as Southwest Caesar and Three Cheese Italian, as well as newly repackaged Supreme Caesar.**

“When we first put together formulations for the breakfast sector, we started with eggs, since when most people think of breakfast, they think of eggs. [Given that] most breakfast menus include different breakfast meats to go along with the eggs, we did the same when formulating our products,” explains Elliot.

Consumers like this product because it gives them a chance to get their traditional egg breakfast in a more convenient and time efficient way. The pre-made, quickly heated taquito or burrito offers a breakfast that is ready in minutes and can be eaten on the run or in the car.

“We have found that by using fresh eggs, fresh breakfast meats, hand-stretched tortillas and other fresh ingredients, that even after cooking and freezing, when they are thawed and reheated, the products come out tasting like they were freshly made,” states Elliot.

### ● ● Wellness Foods

The wellness category is a fundamental trend with new product concepts often originating in the natural products/health industry that then are adapted by both mainstream retail products and foodservice industries. Health and wellness foods include products positioned as: low-carb, good for blood sugar management, including whole grains, ideal for sports or fitness, or organic, fortified with vitamins, minerals or nutraceuticals, for example.

Eggs are nature’s perfect wellness food. Consumers’ growing interest





▲ **Don Miguel's (Anaheim, Calif.) breakfast burritos are extremely popular because consumers can get a traditional egg breakfast in a convenient and time efficient way. The company also recently added a Breakfast (Sausage & Egg) Taquito under its Don Miguel Monster brand.**

in dietary health and eggs' excellent nutritional and functional properties allow eggs to play a key role in healthy food products. While whole egg offers unique functional and nutritional properties, egg white lays claim to "no fat, no cholesterol, no sodium and no (or insignificant amounts of) sugar" yet still contributing high-quality, functional attributes to the foods in which they are incorporated. Eggs appeal to organic food producers because of their many functions and contributions to nutrition, and clean labeling.

An egg contains 75 calories, 5g of fat and contributes 13 essential vitamins and minerals to the diet. Egg yolks are one of the few foods that naturally contain vitamin D. The macronutrients of dried eggs can be seen on the chart "Eggs: A Perfect Wellness Food."

"For large fast-casual chains like Starbucks (Seattle) and Panera (St. Louis), eggs bring in customers who advocate the Atkins plan because they contribute a complete protein. So eggs address health and wellness, but still the bottom line is that they taste great," adds chef Julius.

Egg protein contains the right type of essential amino acids needed to build human tissue. Egg protein quality can be measured using the

Protein Digestibility Corrected Amino Acid Score (PDCAA), which measures the completeness of the protein. A 1.0 is the highest score possible, which is the score of the egg white. And, Biological Value is a measurement determining the percent of an ingested protein that is used by the body. Egg protein scores 100, which means that when ingested, whole egg protein is used by the body to build muscle more than any other proteins. Egg is considered the ideal protein to which other proteins are often compared.

## Entering with Eggs

(Number of New Packaged Retail Foods with Egg in their Description,\* by Category)

Category	2003	2004
CBakery	34	80
Beverages	5	2
Breakfast cereals	0	0
Dairy	1	4
Desserts & Ice cream	9	17
Fruit & Vegetables	1	0
Meals & Meal centers	41	88
Processed fish, Meat & Egg products	16	22
Sauces & Seasonings	6	11
Side dishes	23	32
Soup	1	3
Spreads	4	0
Total	141	259

\* Products in which eggs are a key component in that the word "egg" or "eggs" is used in the product description.

Source: Mintel International's GNPD

▲ **Judging by the popularity of incorporating "eggs" into product descriptions, food marketers continue to use eggs as a marketing advantage, notes Christy Brinnehl, analyst, GNPD Consulting Services (Chicago).**

For example, egg protein can play a large role in the diet of a body builder. A snack eaten by a body builder might include Power House Nutrition's (Miami Beach, Fla.) N-joy LeanBrownie

Dietary Supplement, which contains a proprietary blend of whey, soy and whole egg. The product touts that it is "free of trans fat and contains only 2g of net impact carbs. It provides 15g of protein and is available in a Double Chocolate Chip flavor."

There is a growing concern over the increasing number of diabetics and those with insulin resistance. The National Center for Health Statistics (Hyattsville, Md.) reports that there were 13.4 million non-institutionalized adults (or 6.6% of that population) with diagnosed diabetes in 2002.

Island Farms Dairies (Victoria, B.C.) is just one company that has introduced a product that may be of benefit to such consumers or anyone concerned about the sugar or digestible carbohydrate content of their diet. Its ice cream-like "No Sugar Added Premium Frozen Dairy Dessert" contains sucralose and polyols which results in a product with only 3g net carbs. It also contains egg yolk, a crucial ingredient in many frozen dairy-based desserts, due to its flavoring and emulsification properties. As noted, egg is an excellent carrier of flavors, and the phospholipids in egg yolk provide superior emulsification in frozen dairy dessert systems.

In recent years, low-carb dieters have found a friend in high-protein eggs. Further processed, egg-based products—from quiches with low-carb crusts to concepts like *huevos* and chorizo-based pies—have provided foods that fit well within these challenging diets.

The low-carb product trend is evolving into interest in low-glycemic



products. American Italian Pasta Co. (AIPC, Excelsior Springs, Mo.) has introduced Golden Grain-Mission brand wide egg noodle with a low-glycemic index; it is an enriched noodle product made with North American-grown durum wheat. As explained by Dan Trott, president of AIPC Sales Co. and executive vice president of marketing for AIPC, “By definition, noodles are pasta products that contain eggs.” (According to 21 CFR 139.150, noodle products are the food made from flour and eggs.)

“Eggs serve different functions in noodles. One is impacting the bite of the noodle in comparison to regular semolina pasta, thereby making them terrific for soups, casseroles and other cooked foods. Secondly, noodles that contain egg yolks have a brighter yellow color that is more appealing to many consumers than traditional pasta. Consumers like egg noodles because they taste great and are an excellent source of energy for the body. Pasta and noodles contain protein, fiber and complex carbohydrates making them ‘good carbs,’” says Trott.

A substantial number of consumers consider “organic” almost synonymous with health and wellness. The Natural Marketing Institute’s (NMI, Harleysville, Penn.) “2005 Organic Consumer Trends Report™ (OCTR)” indicates that 2004 organic food and beverage sales were \$10.9 billion, an increase of 18% over 2003. Although there was a decline in household penetration (some 30% of U.S. consumers—or 62 million households—use organic products, down from 40% in 2003), this apparent paradox may indicate increased usage among a dedicated user base,

which translates into higher sales, says Maryellen Molyneaux, president of NMI.

In fact, 90% of the U.S. population reports it has heard of organics, far exceeding consumer awareness of subjects such as fortification, sustainable agriculture, functional foods, biotechnology, net carbs and trans-fat. Eggs can well play a role in the market arena as well.

Also, no commercial laying hen’s rations ever contain hormones.

According to its website, Whole Foods Market® (Austin, Texas) is the world’s leading retailer of natural and organic foods, with 171 stores in North America and the U.K. Founded in 1980 as one small store in Austin, Whole Foods Market® remains mission-driven, selective about the products it sells, dedicated to stringent

## Eggs: A Perfect Wellness Food

Nutrient/100g*	Dried Whole Egg	Dried Egg Yolk	Dried Egg White	Egg Whole, Raw, Frozen	Egg Yolk, Raw, Frozen
Calories (kcal)	594	666	382	148	303
Protein (g)	47.4	34.3	81.1	12.0	15.5
Total fat (g)	41.0	55.8	0	10.2	25.6
Saturated fat (g)	12.7	17.2	0	3.2	7.8
Cholesterol (mg)	1715	2335	0	432	1075
Ash (g)	3.7	3.4	5.3	1.0	1.6
Moisture (g)	3.1	3.0	5.8	75.9	56.2
Carbohydrate (g)	5.0	3.6	7.8	1.1	1.2
Sugar (g)	3.08	3.6	5.4	n/a	0.51

Source: USDA Nutrient Database (Note: figures rounded up)

**Besides fat, proteins, sugar and so on, egg components (particularly the yolk) also contain valuable micronutrients such as lutein and zeaxanthin, iron, choline and vitamin A, among others.**

Another example in the frozen dairy dessert category is Oregon Ice Cream’s (Eugene, Ore.) Julie’s Organic Blackberry Ice Cream, which has incorporated organic egg yolks.

Organic foods are defined by USDA standards. Organic ingredients are generally from farmers who utilize renewable resources and work to conserve environmental quality for future generations. According to the USDA, organic eggs come from chickens fed rations having ingredients that were grown without pesticides, fungicides, herbicides, or commercial fertilizers.

quality standards, and committed to sustainable agriculture. Since June 2004, the company has offered eggs only from cage-free hens. Beginning in January 2005, this standard was extended to partnership kitchens, bakeries, bake houses and commissaries for baked goods and prepared foods, that are made using only cage-free eggs as well.

Varying the hens’ diet has produced a variety of nutrient-enhanced eggs and egg products. Some successful egg products are produced from eggs with reduced levels of fat, lower cholesterol, and increased levels of vitamins and/or omega-3 fatty acids.

### Down Home Comfort

Comfort food grocery products often aim to be reminiscent of the olden days at church suppers, potlucks and grandma’s house.



**Some of the best comfort foods offer familiar indulgence. A slice of French silk pie, with texture- and flavor-enhancing eggs, provides emotional support.**

Whole eggs add authenticity to these products. Chef Julius adds, “In a very real sense, nearly anything you make with eggs is a comfort food. You can hardly go wrong with an egg item on the menu.”

Eggs give an old home quality appeal to comfort foods, having been eaten as far back as 600 B.C. when Europe first domesticated hens, according to Egg Nutrition Center (Washington) trivia. By the time of the French Revolution, the French had already come up with 685 ways to prepare eggs, including the omelet. Columbus introduced hens to the New World on his second trip in 1493. Eggs first appeared in French and English cookbooks in the 1400s.

“Many dishes containing egg noodles could certainly be considered comfort foods but, quite frankly, so are all pasta dishes,” contributes Trott.

Eggs are crucial in French toast. Country Creek Farms’ (Rogers, Ark.)

Great Day Breakfast™ Sausage French Toast Sandwiches are no exception. The innovative product places a sausage patty between two slices of French toast containing whole eggs, sugar and vanilla.

Many would argue the best comfort foods are those that offer a familiar indulgence. From a slice of French silk pie to an old-fashioned country breakfast, eggs often can be found in foods that provide emotional support. In baked products, egg proteins provide structure; fat in the yolk tenderizes and emulsifies, as well as provides liquid and color.

Perhaps one meal, breakfast, can be thought to provide comfort just for its reputation as a great way to start out the day. Eggs are the mainstay of the breakfast category. In foodservice and retail, eggs often show up as a main ingredient. Eggs bring diversity and new ideas to the breakfast category, incorporating ideas of convenience to ethnic fare. There are breakfast sandwiches, breakfast pizza and, of course, the old standby, quiche.

Pierre Foods’ (Cincinnati) Hot ‘n’ Ready® Twisters are croissants with sausage, eggs, cheese and “cheesy, buttery” twist tops. Schwann’s

Consumer Brands (Marshall, Minn.) Red Baron Breakfast Singles® consist of a biscuit-style crust topped with various breakfast items such as sausage, bacon, cheese, scrambled eggs, peppers and onions. The Red-L® Hors D’oeuvres (Pomfret Center, Conn.) line now includes Quiche Lorraine, a classic recipe with Swiss cheese, bacon, milk and whole eggs in a pastry shell. Other comfort foods requiring eggs as a main ingredient that have been launched into the marketplace include Aldi’s (Batavia, Ill.) Breakfast Best Scrambled Eggs, Hash Browns & Sausage.

Foam is a dispersion of gas in a liquid, a mass of bubbles that remains stable. Meringue cookies and pies rely on egg foams. Egg white volume can be increased by up to eight times by whipping. When air is incorporated into egg whites in this manner, the air bubbles in the liquid become coated with protein. The protein molecules unfold or denature and surround the air bubbles, stabilizing the foam.

In whichever direction consumers focus their interests, such as on convenience, comfort or wellness foods, companies can meet their demands by delivering new products based on eggs and egg-derived ingredients. **PF**

#### Information sources:

1984. McGee, Harold. *On Food and Cooking, The Science and Lore of the Kitchen*. Macmillan Publishing Co. New York, N.Y.

[www.aeb.org](http://www.aeb.org) — American Egg Board website

[www.ers.usda.gov/Briefing/FoodPriceSpreads](http://www.ers.usda.gov/Briefing/FoodPriceSpreads) — Economic Research Service (USDA)

[www.nal.usda.gov/fnic/foodcomp/search](http://www.nal.usda.gov/fnic/foodcomp/search) — USDA Nutrient Database

[www.gnpd.com](http://www.gnpd.com) — Mintel International’s GNPD

[www.marzetti.com](http://www.marzetti.com) — T. Marzetti Company™

[www.wholefoodsmarket.com](http://www.wholefoodsmarket.com) — Whole Foods Market®



*Making*

# delicious

*pasta with colorful appeal  
is within your grasp.*



© 2002 American Egg Board

*Using real egg products gives your pasta a yellow glow as warm as the Mediterranean sun. Plus, they supply the mouth feel that discriminating pasta consumers crave, as well as clean labels! Obtain formulas and/or technical assistance at [www.aeb.org](http://www.aeb.org). Or call the Egg Answer Line toll-free at 1-877-488-6143.*

The incredible edible egg  
American Egg Board

®