Protein Choices Linked to Health Concerns

Eggs — an Easy and Familiar Protein Option

Protein is in the news, on the shelves and on the consumers’ wish lists for products. Mintel reports protein claims in 2013 for new products were three times higher in the U.S. than any other country. Research results from NPD Group and International Food Information Council Foundation (IFIC) all show increased consumer interest and desire for protein in their daily diets. Industry professionals gathered for a protein-focused conference in April; protein was featured as a topic a month prior to that at the IFT Wellness Conference, and numerous studies show protein aids in satiety, particularly when consumed at breakfast.

Last year’s survey by the IFIC concurs with these findings, showing 57 percent of Americans say they actively try to consume more protein.

REAL eggs offer formulators ingredient options to help create meatless meals, snacks and appetizers, while supplying an affordable, readily available source of high-quality protein. One large egg contains the equivalent of just 70 calories with six grams of protein — 12 percent of the Recommended Daily Value. Due to the amount of protein in the average egg, eggs are comparable to meat in terms of protein value in the diet. One egg is equal to one ounce of lean meat, fish or poultry.

In addition, when consumers read product labels to look for the protein source, eggs help create
a comfortable, easily and readily recognizable ingredient listing.

In concert with this search for greater protein in the diet, consumers have not abandoned the quest for a clean and simple label statement. Eggs can provide an advantage for food manufacturers when compared to other protein choices a formulator might select for a meatless application in particular.

Kantha Shelke, Ph.D., principal at Corvus Blue, L.L.C., a speaker at the IFT Wellness Conference in Chicago in March, implied many food ingredient names were confusing to consumers. She emphasized the importance of easy recognition, asking the audience, “What are you going to name your ingredients that very quickly tells (consumers) what it is?”

Protein is comprised of amino acids and essential amino acids are those that the human body needs but cannot synthesize on its own. A proper diet will contain foods that regularly supply a protein source containing these essential amino acids. Eggs in general and most further-processed egg ingredients contain all nine essential amino acids in a ratio and pattern similar to the requirements of the human body. The nine essential amino acids contained in one egg include histidine, isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophan and valine. In addition to these nine essential amino acids, eggs contain nine more amino acids.

Consumers are learning protein plays a role in weight management by increasing feelings of satiety. Multiple studies show that breakfast is particularly important in this regard. Eating a high-quality protein such as eggs for breakfast leads to greater satiety and a lower calorie intake at lunchtime than a lower quality protein such as cereal, for breakfast. Participants in a study published in 2012 reported feeling fuller following eating an egg breakfast and tests of their hunger hormones, ghrelin, were significantly lower than following ingestion of a wheat-based breakfast. In addition, protein supplies energy, can help build muscle strength and contribute to a healthy pregnancy.

The protein quality egg ingredients contain, combined with their clean label contributions, make eggs an attractive protein choice for new handhelds, bowls or other breakfast, mealtime or snack formulations.

AEB Update: 50-Year Sustainability Study Results

A landmark 50-year study documents the reduced environmental footprint achieved by the egg industry. Egg farmers increased their number of laying hens by just 18 percent while meeting the demands of a U.S. consumer population that grew 72 percent over the same time period.

Today’s egg production is cleaner, releasing 71 percent less greenhouse gas emissions. Feed efficiencies mean hens received a scientifically balanced diet of vitamins and nutrients but use a little over half the amount of feed to produce a dozen eggs. And today’s hens are healthier, living longer and producing 27 percent more eggs per day.

Egg farmers are doing their best to meet the nutrient requirements of a rapidly expanding global population while striving to maintain finite resources such as land, water and energy. Find the full study at http://www.incredibleegg.org/good-egg-project/farm-to-table/reducing-our-environmental-footprint.

Prepared Meals saw 70 new product introductions in 2013 (85 percent increase), and 76 new products using eggs were entered into Sandwiches and Wraps (71 percent increase).

Convenient and Clean

“Both of those categories, Prepared Meals and Sandwiches, speak to the popularity of eggs in convenient breakfast and lunch foods, such as handhelds or microwavable bowls,” says Elisa Maloberti, Director of Egg Product Marketing for the American Egg Board. “Egg ingredient functionality not only suits convenience trends, they also fulfill the need for a great tasting protein source that will fuel up and satiate consumers.” In fact under package claims listed for these new product introductions in GNPD, the second most popular after ‘kosher’...
is ‘microwaveable,’ supporting the convenience theory for prepared meals and sandwiches.

Third on the list for popular package claims is ‘no additives or preservatives.’ “We see this package claim growing in importance as marketers respond to the consumer push for clean, naturally occurring ingredients like eggs on product labels,” adds Maloberti.

Egg Functionality a Benefit

As the top two rather ‘sweet’ categories indicate, while Americans claim to be more diet conscious, consumers still enjoy a touch of dessert.

“And at the heart of these indulgent sweet goods is a single ingredient, the egg. Egg ingredients serves multiple, vital functions from aeration to binding and crumb structure, yet add just one simple line to the label statement,” says Maloberti.

“Every year the numbers prove the value of egg ingredients’ functionality and nutrition,” says Maloberti. “2013 was no exception. Formulators can rely on eggs for almost every product category.”

Top categories for 2008-2013 using egg ingredients:

Egg Ingredient Spotlight:

Yolks for You: Successful Formulating

While the benefits of whole eggs and egg whites are well-known and celebrated, last fall the consulting and research group Sterling-Rice in Boulder, Colo., named 2014 the “Year of the Yolk” in its annual “Cutting-Edge Dining Trends” report, bringing the yolk into the spotlight.

In January Restaurant.com predicted eggs would star in dishes in every daypart, not just breakfast, as the number one dining trend for 2014. Aside from being a tasty addition in foodservice establishments to everything from egg salad and omelets to more creative culinary concoctions such as egg topped burgers and pizzas, egg yolks play an important role in food manufacturing.

Salted yolk remains a staple for mayonnaise and salad dressing manufacturers for its emulsification properties, stemming from its composition of low-density lipoproteins. Pasta benefits, too, because egg yolks serve as a natural protein binder for all types of noodles. Plain dried egg yolk contains 30-32% protein and liquid/frozen egg yolk protein ranges from 15.3-16.0%. This binding capability is particularly useful in par-cooked pasta sold refrigerated under modified packaging conditions, or in prepared foods sold either refrigerated or frozen.

Egg yolks can supply a rich, golden color to pasta and baked goods, help bind, coagulate, act as a humectant to absorb moisture and of course, emulsify. Egg yolk thickens and binds when heated due to the protein denaturation making egg yolks a popular addition in meat and meat substitute patties and hot creamy sauces.

Egg yolks are available in dried, liquid and frozen forms. Typically, further processed frozen egg yolk will be comprised of either 10 percent salt or sugar. This is added to the egg yolk to inhibit gelation and avoid increasing the ingredient’s viscosity. Freezing the egg yolk does not affect their emulsification properties.

An enzyme modified egg yolk possesses high water solubility, enhanced emulsifying properties and has greater heat stability. In addition, the egg yolk features a full complement of impressive nutritional values.
Q. Our company is introducing a line of refrigerated pasta products. How do we maintain a good bite and texture through storage, refrigeration and then the reheating process the consumer will use at home?

A. Egg ingredients will certainly help pasta functionality, however the amount of egg added to formulation might vary depending on the product identity as defined by the Code of Federal Regulations (CFR). CFR 21 Part 139 defines the different types of macaroni and noodle products. The standard of identity for a product called a noodle contains not less than 5.5 percent by weight of the solids of egg or egg yolk. Typically, processors use whole egg or whites to help with dough strength, so the dough isn’t brittle when it goes through the forming machines. Currently yolks are attractively priced and in abundant supply. This percentage of egg solids represented by either whole or whites can be replaced 1:1 with egg yolks with no difference in performance. Egg yolks also add a pleasant yellow color to noodles. Other product definitions within the macaroni category can choose more selectively which ingredients to use in addition to the flour base. Egg white is a great addition to improve the bite and texture of pasta during storage, refrigeration and the reheating process. For best performance, when added to pasta, egg white, frozen egg white, dried egg white, or any two or all of these should be in such quantity that the solids thereof are not less than 0.5 percent and not more than 2.0 percent of the weight of the finished food (product).

Q. In order to expand our product line we are going to add a line of gelato to our premium ice cream products. What makes gelato distinctively different from ice cream?

A. A gelato introduction could prove quite successful. Nestlé USA Häagen-Dazs was the first national ice cream brand to launch a line of gelato in the U.S. in February, 2013, offering a portfolio of seven rich, creamy and decadent flavors. Other companies have followed suit because gelato appears to be trending. While The Code of Federal Regulations established standards of identity for ice cream, frozen custard, sherbets and other frozen treats, there is none for gelato. However, an authentic Tuscan-style version classically includes more egg yolk than even premium ice cream, creating an extremely dense, rich dessert.

In addition to rich flavor, egg yolk emulsifiers control the aggregation of fat globules, causing structure to be formed, to help stabilize air cells and impede growth of ice crystals. Ice crystals can cause a gritty mouthfeel and corresponding quality perception issues. Premium ice creams strive for a short list of ingredients and egg yolks are an important component to improve smoothness and mouthfeel, aid whipping, improve dryness, increase resistance to shrinkage and control melting. While even premium ice creams have some overrun, gelato should have no added air whatsoever. Egg ingredients and particularly egg yolk will help make it distinctively gelato and a rewarding, indulgent, premium dessert.
Egg Product Innovations

Nestlé, USA Lean Cuisine Salad Additions
A Greek-Style Chicken Salad Kit joined the Lean Cuisine Salad Additions family of products at Nestlé, (USA), Solon, Ohio, complete with cucumber dill dressing, grilled white chicken meat, black olives, chickpeas, red peppers and garlic Parmesan croutons for a low/no/reduced-fat meal option. Consumers simply add lettuce. A single serving contains 250 calories while offering 17 grams of protein. Egg yolk helps the cucumber dill dressing remain smooth and creamy.

Reduced Fat Sausage Egg & Cheese Biscuit Sandwich
New to Tyson Foods, Springdale, Ark., Day Starts brand, the Reduced Fat Sausage Egg & Cheese Biscuit Sandwich is a high-protein, filling breakfast ready to eat in just two minutes via microwave cooking. Real eggs join up with savory Tyson reduced fat sausage and American cheese atop a buttermilk biscuit for 400 calories and 14 grams of protein. Another handheld from Tyson is their Ham, Eggs, Cheese, Onion & Green Peppers Breakfast Flatbread, filled with a savory scramble of smoked ham, whole eggs, cheese and vegetables for 340 calories and 13 grams of protein.

Spicy Pickles
Adding a touch of spice for a unique entry into the appetizer category, Aldi, USA, Batavia, Ill., introduces its bold Spicy Pickles in a pretzel coating, created with garlic and a touch of turmeric for heat. An added container of dill cream sauce for dipping the pretzel-coated spicy pickle slices helps cool things off. The appetizer can be deep fried or baked. Egg ingredients help the pretzel coating adhere to the pickle slices and lend a smooth, creamy texture to the dill cream dipping sauce.

Grilled Chicken & Mozzarella Ravioli
Grilled Chicken & Mozzarella Ravioli Valley Fine Foods, Benicia, Calif., knows pasta. Alongside its Grilled Chicken & Mozzarella Ravioli, the company introduced a Dungeness Crab & Cheese Ravioli and Superfood Spinach & Kale Ravioli. The Grilled Chicken Ravioli is made with all white meat chicken with rosemary, Parmesan and mozzarella cheeses for 230 calories per serving and only 7 grams of fat. This minimally processed product is free of artificial ingredients, artificial flavors, colors and preservatives. Egg ingredients in the filling and the dough help maintain pasta structure for the ravioli and lend textural aid to the filling.

Gluten-free Coconut Macaroons
Weston Foods, Brownsburg, Ind., ramps up its offerings of gluten-free cookies and baked goods in its All But Gluten brand with Gluten-Free Coconut Macaroons. These sweet cookies rely on coconut for flavor and texture with egg white helping bind together a short list of ingredients. Other products newly introduced include Chocolate Chip Cookies, Mini Brownies and Blueberry Muffins which all include eggs in formulation. The products are manufactured in a dedicated gluten-free facility and certified by a program endorsed by the National Foundation for Celiac Awareness.

ips All Natural Protein Snacks
A new food company based in Los Angeles, ips All Natural, has cracked the code for creating a better-for-you protein-packed snack with the introduction of the first-ever snack chip created with egg white protein. Combining corn, egg whites and other natural ingredients, using a patent-pending Pressure-Puffed process, ips has a crispy crunch and is available in four delectable flavors. Each one-ounce bag of these “intelligent protein snacks” delivers 7 grams of high-quality protein and half the fat of fried chips as well as fewer carbohydrates.
REAL Eggs or Egg Replacers?

REAL eggs make a REAL difference on your label. A familiar and trustworthy ingredient, eggs can make an important difference in consumer buying decisions, while giving product developers incredible functionality. Using REAL Eggs makes a real difference in consumer acceptance and product quality.

Download our NEW white paper “The Egg and Clean Labeling” and get more info on the benefits of using REAL Eggs in your applications. Visit AEB.org/RealEggs.

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