

Functional Foods: What they mean for Agribusiness

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Although no formal definition of a **functional food** exists in U.S. legislation, it is essentially a whole food (as opposed to a dietary supplement) that is fortified, enriched, or enhanced with a component having a health benefit beyond basic nutrition. Such functionality may be added in production, through processing or by combining various ingredients. The 2001 market for such items was estimated to be around \$19 billion, part of the larger (greater than \$70 billion) “Foods for Health” market which includes medical foods, herbs, natural or organic products, and dietary supplements. Recent annual growth rates are estimated at 8- to 10- percent for functional foods, outpacing the dietary supplement market. Most early products are in the form of beverages (e.g. teas, juices, dairy products), breads and grains. To date, functional foods’ growing market share has not attracted the kind of increased (unwanted) regulatory review seen in the supplements market. This report of preliminary research on the evolving market for functional foods presents general definitions, market trends and implications for agribusiness. It focuses on the potential benefit to producers of this newly emerging market.



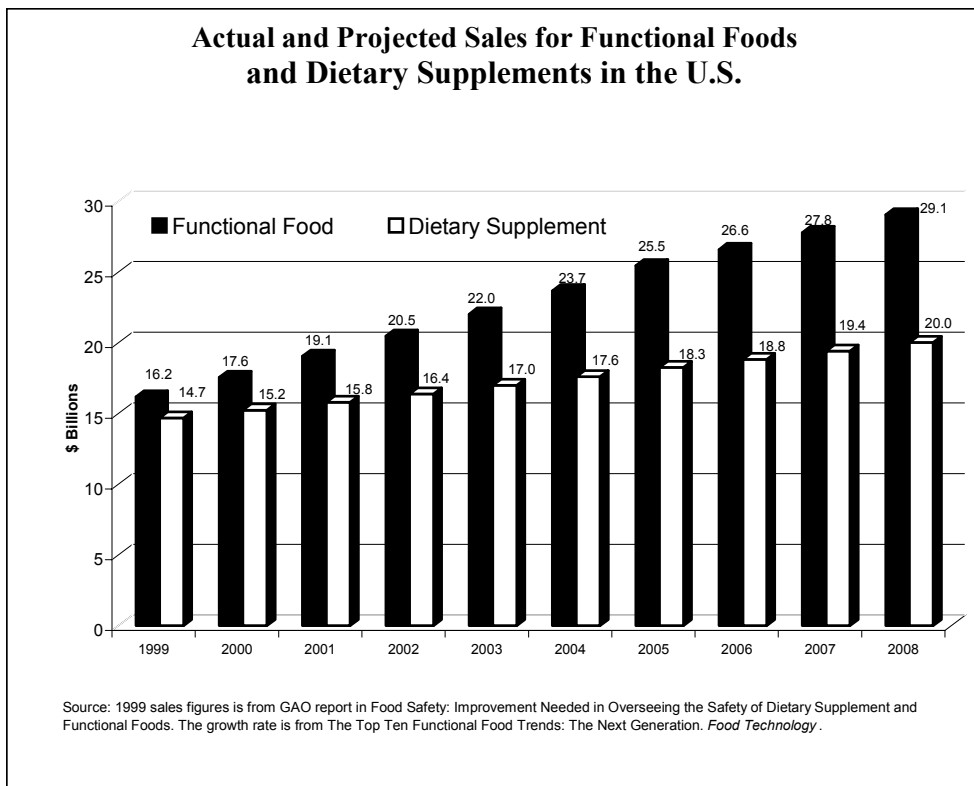
What is Driving this Market?

Changing consumer attitudes, an aging population, increasing health-care costs, advancing technology, and research identifying more links between diet and health are part of the story. But high-margin growth opportunities, and potential economies of scale to retailers or processors offering functional versions of current products as brand extensions also fuel this expansion.

Not everything is rosy. The lack of a formal definition, a cumbersome and protracted process for approving health claims, little proprietary protection for market leaders, and differences in regulatory approaches across international trading partners muddies the waters for producers and processors aiming at this market. Confusion over consumer attitudes, behavior, key target markets, and effective marketing strategies, further constrain growth.

Who Cares about this stuff?

Four of the 10 top causes of death in the U.S. – heart disease, cancer, stroke, and diabetes – are associated with diets too high in calories, total fat, saturated fat, cholesterol, or too low in dietary fiber. Diet-related health conditions cost society at least \$250 billion a year in medical costs and lost productivity. With approximately 4 percent of the U.S. population, the



annual costs in Ohio from poor diets are some \$10 billion. Not all of these illnesses can be prevented, but even conservative estimates of the role of diet and the impacts of functional foods lead to dramatic reductions in society's burden from poor health.

The "traditional" consumer of health-based products is over 50 years old. This group is an increasing proportion of the population, yet is far from the only target consumer of functional foods. As shown in the table below there is a range of health or disease concerns for every demographic group, with a possible role for functional foods in each:

Children/Teenagers	Women	Men	Aging People (over 50)
<ul style="list-style-type: none"> • Obesity • Improved physical fitness • Basic nutritional requirements • Enhance cognitive ability • Reduce hyperactivity • Performance 	<ul style="list-style-type: none"> • Heart disease • Breast cancer • Fatigue • Weight control • Menopause • High cholesterol • Arthritis 	<ul style="list-style-type: none"> • High cholesterol • Cancer • High blood pressure • Weight control • Diabetes 	<ul style="list-style-type: none"> • Arthritis • High blood pressure • Obesity • High cholesterol • Fatigue • Poor eyesight

Based on "The Top Ten Functional Food Trends: The Next Generation" *Food Technology*. April 2002

What this Means for Agribusiness

As with all discussions of agricultural and food quality attributes, the marketing of functional foods requires enhanced communication throughout the supply chain. This starts with an understanding of *the importance of inputs* (use of certain agricultural chemicals or genetic stock contained in the seeds), *the manner of production* (whether certain micro-climates or soils enhance functional characteristics in the raw product), *the segregation of the crop* (identity preservation to ensure that the product is not co-mingled with generic commodities), and *the manner of processing*. Such complex discussions throughout supply chains may require contracts or even backward vertical integration by food manufacturers and processors to assure quality and consistency of functional properties. In the least, this evolving market is another reason to encourage enhanced identity preservation (traceability) by farmers to attempt to capture value-adding opportunities when the functional characteristic is achieved during production.

About the research...

The concepts behind this report are part of a multi-disciplinary research project funded by the USDA Initiative for Future Agriculture and Food Systems grant program. The project will: Forecast the growing market share of functional foods and specific example products, which are under development. Determine the influence of a range of product labels, sources of health information, and promotion campaigns on consumer perception and acceptance of these products. Perform economic assessments of functional foods, including a description of the regulatory environment, international differences, and potential target marketing mixes.

The initial focus is on tomato and soy-based products, two crops of economic significance to Ohio. These products show evidence of health benefits through anti-cancer properties (lycopene) and cardiovascular improvements (isoflavones). Other products and functional food markets will be assessed as they evolve. These products can provide additional, high-value markets for our farmers products.

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