



Fortification of Organic Foods

OTA Task Force White Paper

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Introduction and Purpose

The purpose of OTA’s White Paper on Fortification of Organic Foods is to provide a data and fact-based analysis of the market for fortified organic foods. This analysis, along with historical NOSB recommendations, will serve as a critical foundation from which policy alternatives regarding the use of nutrient vitamins and minerals in organic foods can be evaluated.

The White Paper documents the size and scope of the market for fortified organic foods. Consumer acceptance and farmer revenue from the sector must be fully understood as a starting place for these discussions. The sheer volume of fortified organic products currently in the marketplace is reason for prudence in initiating destabilizing regulatory changes in advance of a full review by the National Organic Standards Board and potential materials petitions.

The White Paper demonstrates and documents that any policy changes to the acceptance of fortified organic foods would be “economically significant” or “major” as determined by the Office of Information and Regulatory Affairs (OIRA), one of several statutory offices within the Office of Management and Budget (OMB). Thus, no significant guidance or further instruction should be issued by NOP in advance of a recommendation from the National Organic Standards Board (NOSB).

A fact-based understanding of consumer preference, expectations, and trends is necessary to accurately answer the question of consumer acceptance and desire for fortified organic foods and their compatibility with organic handling systems. American shoppers are increasingly choosing fortified foods, and this includes organic shoppers as well. The Organic Trade Association does not want organic foods to be viewed by shoppers as “nutritionally inferior” to non-organic foods.

The economic impact is not limited to handlers and processors alone. The White Paper will reinforce the integrated nature of the supply chain. Disruption in availability of organic products on retail shelves has a direct impact on domestic and international agricultural markets. To not supply consumers with this choice will limit the growth of the organic sector, domestic agricultural production, environmental stewardship and farmer livelihood.

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OTA Accessory Nutrients Task Force

Following NOP's announcement at the Spring 2010 NOSB meeting, OTA formed a member Accessory Nutrient Task Force. The Task Force included members across the supply chain. The Task Force also included representatives of other trade associations whose members are stakeholders. The task force sought counsel from former NOSB members involved in the original 1995 recommendation on Nutrient Vitamins, and Minerals in order to better understand the intent of the board at the time of passage.

The mandate of the task force was two-fold. The first was to collect information to assist OTA in identifying a full list of accessory nutrients impacted by NOP action memorandum; identify range and scope of products containing these accessory nutrients; aggregate the economic impact of the implicated products; and identify the aggregate commodity impact of ingredients in implicated products.

Secondly, the Task Force remains active to help shape OTA's position on the upcoming NOSB recommendation.

OTA members provided business confidential information on the Uniform Product Council Codes (UPC codes) used to track retail sales of all products. OTA enlisted a third party to aggregate and verify the data analysis. Standard industry assumptions were used to extrapolate non disclosed data from Wal-mart and Whole Foods. Information on supply chain impact was gathered from members directly. Additionally, the 2008 Census of Agriculture and the 2008 ERS survey of organic production were used to dimensionalize the supply chain impact. The direct sales data in the White Paper have been stripped of company specific designation, and OTA does not hold the individual companies' confidential business information.

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Background and Timeline

Original NOSB recommendation: On October 31, 1995, the National Organic Standards Board (NOSB) voted to recommend allowing non-organic nutrient vitamins and minerals in organic processing. In its recommendation document the committee stated “that recommendation by independent professional associations may also be taken into consideration,” and that the term “accessory nutrients” means nutrients not specifically classified as a vitamin or mineral but found to promote optimal health. Examples include omega-3 fatty acids, inositol, choline, carnatine, and taurine. “Without this inclusion, we believe we may be limiting ourselves given future nutritional discoveries” stated the board documents. The recommended listing was: *Nutrient Vitamins and Minerals – Accepted for use in organic foods for enrichment or fortification when required by regulation or recommended by an independent professional organization.*¹

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NOP proposed rule: The National Organic Program (NOP) offered its first proposed rule in 1997, proposing the allowance of “nutrient supplements.” The listing was changed in the 2000 proposed rule to “Nutrient vitamins and minerals, in accordance with 21 CFR 104.20, Nutritional Quality Guidelines for Foods,”² although NOP did not comment on the change in the preamble.

NOSB comment on the proposed rule: On June 12, 2000, NOSB’s comment on the proposed rule was simple; “The NOSB recommends that 21 CFR 104.20 not be the reference for the allowance of nutrient vitamins and minerals for the organic industry.”³

NOP final rule: However, the listing in the final rule remained the same as in the 2000 Proposed Rule, “Nutrient vitamins and minerals, in accordance with 21 CFR 104.20, Nutritional Quality Guidelines for Foods.”

NOP Action Memorandum: On April 26, 2010, the National Organic Program requested that NOSB reevaluate its recommendation on nutrient vitamins and minerals in the sunset 2012 process due to a clarification of scope of the current annotation which references the Food and Drug Administration (FDA) fortification policy in 21 CFR 104.20.

“NOP requests that NOSB consider the following: Are the “nutrients and vitamins” specified within 21 CFR §104.20 aligned with the 1995 recommendation? If not, are there substances which should be prohibited or additional substances that should be allowed?”

¹ From “Toward Organic Integrity” (“The Green Book”), p. 180, Summary of NOSB Recommendations for Materials Considered at Austin, TX, November 1995.

² See 21 CFR 104.20 at: <http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=d34b49182d11080e5d7852963b9a65f9&rgn=div8&view=text&node=21:2.0.1.1.4.2.1.1&idno=21>

³ NOSB Chairman letter to NOP program manager RE comments to proposed rule, Docket Number TMD00-02-PR2.

Summary of Product Categories and Fortifiers Implicated

Fortification of organic products is widespread 15 years after the original NOSB recommendation and 10 years after the proposed rule. OTA has identified the following categories implicated:

Pet food – Organic pet foods are universally fortified.

Products include cat and dog food (wet and dry) as well as treats, biscuits and supplements. Organic pet food sales have multiplied tenfold since 2002, with sales growing 10% to \$84 million in 2009. Its market share of total organic non-food sales has likewise increased, more than doubling to 4.6% in 2009. The category's 9.9% growth in 2009, however, was far lower than its impressive 40% average annual growth for the previous seven years, and likely was impacted by regulatory uncertainty.⁴

Organic cereals exceeded \$1 billion dollars in 2009 and represent 36% of the total market for organic breads and grains. It is common for product launches in this category to be fortified in order to meet the needs and expectations of new consumers entering the organic market.

Cereals / bars / and other fortified food – Organic nutrition bars have been a fast-growing subcategory, climbing from below \$50 million in annual sales to above \$250 million in under a decade, reaching \$280 million in 2009. Organic nutrition bars are routinely fortified with 'accessory nutrients' and represent 25% of the organic snack food market.⁵

The organic dry breakfast market (cereals) exceeded \$1 billion dollars in 2009, representing 36% of the total market for organic breads and grains.⁶ It is increasingly common for new product launches in this category to be fortified in order to meet the needs and expectations of new consumers entering the organic market.

Infant Formula – Organic infant formula is a \$689 million a year category representing 20% of organic packaged and prepared food market share.⁷ Organic infant formulas are both soy and milk based and are distributed across all retail outlets. Many are fortified with Omega-3 fatty acids (e.g, DHA) and Omega-6 fatty acids (e.g, ARA), taurine, nucleotides, lutein, lycopene, carnitine, choline, inositol, and beta carotene.⁸

Baby and Toddler Food – The organic baby food subcategory reached \$289 million in 2009.⁹ Dry, canned and frozen products in cereals, protein, fruits and vegetables are often fortified with Omega-3 fatty acids (e.g, DHA) and Omega-6 fatty acids (e.g, ARA), ascorbic acid, calcium phosphate, calcium carbonate, reduced iron, alpha tocopheryl acetate, thiamine hydrochloride, riboflavin, niacinamide, pyridoxine hydrochloride, folic acid, cyanocobalamin, zinc oxide, and probiotics such as acidophilus for example.

⁴ Nutrition Business Journal 2010 Organic Report, pgs. 232-233.

⁵ Nutrition Business Journal 2010 Organic Report, pgs. 106-115.

⁶ Nutrition Business Journal 2010 Organic Report, pgs. 106-115.

⁷ Nutrition Business Journal 2010 Organic Report, pgs. 167.

⁸ Nutrition Business Journal 2010 Organic Report, pg. 167.

⁹ Nutrition Business Journal 2010 Organic Report, pg. 166.

{Summary of Product Categories and Fortifiers Implicated Continued}

Fluid Milk and other Dairy Products – Organic milk and dairy products are commonly fortified with Omega-3 fatty acids, DHA and vitamins A & D. Organic dairy represent 15% of the total organic market and forms the back-bone of domestic organic production. Growth of the \$3.6 billion organic dairy category slowed significantly in 2009, down from double-digit figures of the first several years of the decade when it averaged 23% growth per year between 1997-2008.¹⁰ After sluggish growth during the recession, organic dairy sales have rebounded to near double digits in the second half of 2010.¹¹

Dietary and Herbal Supplements - Organic supplements represented over a third (35.2%) of total organic non-food sales in 2009. The \$634 million organic supplements industry contributes the largest market share to the total organic non-food industry.¹² Sales of organic supplements have shown consistent strong growth since NOP's 2005 decision regarding labeling.

¹⁰ Nutrition Business Journal 2010 Organic Report, pgs. 97-102.

¹¹ Organic Trade Association 2011 Industry Survey.

¹² Nutrition Business Journal 2010 Organic Report, pgs. 226.

Economic Impact and Retail Sales of Fortified Organic Products

The estimated economic impact of fortified organic product sales is approximately one-half a billion dollars annually.

The total economic impact of fortified organic products includes retail sales of fortified products across all distribution channels as demonstrated by syndicated retail scan data and industry standard assumptions regarding unreported scan figures (Walmart and Whole Foods Market and select unreported private label sales), as well as ingredient commodity sales to fortified products based on a standard assumption of the ratio of farm-gate fluid milk sales to retail scan sales.

The estimated economic impact of fortified organic product sales is approximately one-half billion dollars annually. This figure is based on specific proprietary data/ UPC codes supplied and all products specifically not identified during the work of the task force. Thus, it should be considered a very conservative estimate. The ability to more precisely identify the entire universe impacted would reveal a much larger annual figure.

	Annual Sales
Retail sales - Natural and Specialty Channel exc. Whole Foods ¹³	\$55,976,244
Retail sales - Food, Drug, Mass exc. Walmart and undisclosed private label ¹⁴	\$235,277,863
Retail sales - Estimate for Whole Foods and Walmart ¹⁵	\$100,000,000
Commodity ingredient sales ¹⁶	\$97,800,000
Total	\$489,054,107

¹³ SPINSscan Natural 52 Weeks Ending 10/02/10

¹⁴ SPINSscan Conventional (powered by Nielsen Scantrack) 52 Weeks Ending 10/02/10.

¹⁵ Based on extrapolation of total market share held by Whole Foods and Walmart which do not report retail scan sales.

¹⁶ The 2008 census value of organic farm-gate sales is 25% of retail scan sales of organic products for the same period. This factor is applied to estimate the commodity ingredient sales.

Trends in Retail Sales and Insights into Fortification of Organic

The growth rate for fortified organic foods is two and one-half times the growth rate for all organic foods for the same time period.

Most of the qualitative and quantitative data about consumer attitudes and perceptions of fortified organic foods have been collected at the brand level and as such is proprietary. However, the growth rate for fortified organic foods is two and one-half times the growth rate for all organic foods for the same time period. This is a strong indication of consumer preference and future trends in consumer expectations for organic. **Nothing demonstrates more clearly how consumers *feel* about something than cash register scan figures.**

	Current Dollars	Year Ago Dollars	% Change Dollars
Current 52 Weeks Ending 2010-Oct-02			
ALL CHANNEL excluding Whole Foods and Wal-mart			
Total Organic Food & Bev (org=70%+)	\$6,549,517,115	\$6,094,291,161	7.5%
Fortified Organic Food & Bev (org=70%+)	\$97,664,453	\$83,334,572	17.2%

Commodity Sales into Fortified Products

In an attempt to estimate organic commodity sales into fortified organic products, the task force is using some basic assumptions about the relationship of retail sales to their counterpart farm-gate sales, both in context of the size of the organic industry as a whole. The ratio of farm-gate sales to retail scan sales to total size of the industry, based on 2008 data from the 2008 OPS/ 2007 Census of Agriculture, syndicated retail scan data plus an assumptions about excluded Wal-mart and Whole Foods sales, and the Organic Trade Association 2009 Industry Survey is 1: 4: 8. This means for every \$1 billion in farm-gate sales, on average there are \$ 4 billion in associated retail sales and a total of \$ 8 billion in industry size/ impact, this ratio is used as a basic assumption for the analysis below.

There is an \$11 million commodity impact at the farm level supplying the organic pet food market. Based on the 2007 Ag Census this equates to the full income for over 50 average sized organic family farms.

Pet food – Organic grains and meats are primary ingredients in fortified organic pet food products available on the market today. Crop commodities under contract to the \$84 million a year organic pet food sector include rice, oats, and barley. Organic meat products commonly found in organic pet foods include chicken, lamb and beef. Based on the standard assumptions above, there is an \$11 million commodity impact at the farm level supplying this market. Based on the 2007 Ag Census, this equates to the full income for over 50 average-sized organic family farms.¹⁷ Additionally, the practice of “carcass utilization” – selling of slaughter parts to the pet food market –is a critical commodity of overall profitability for organic slaughter stock operations. Removal of this outlet would greatly hamper an already constrained organic meat sector.

Cereals / bars / and other fortified food – Organic grains, tree fruits and nuts are primary ingredients in fortified organic nutrition bars and cereals on the market today. Commodities supplying the 280 million dollar-a-year market include oats, almonds, walnuts and other tree nuts as well as a range of dried fruits and spices. Ingredient sales to these markets may support up to \$35 million a year in commodity sales at the farm-gate, supporting approximately 160 average-sized organic family farms.¹⁸

Infant Formula – Organic milk powders and non dairy alternatives such as soy are primary ingredients in fortified organic infant formulas. The milk powder market plays an important role in the overall health of the domestic organic dairy sector. Milk powder sales ease over- supply periods and maintain a healthy price floor for fluid milk, both critical to farm level profitability.

¹⁷ 2007 Census of Agriculture Organic Production Survey (2008), Volume 3, Special Studies, Part 2.

¹⁸ 2007 Census of Agriculture Organic Production Survey (2008), Volume 3, Special Studies, Part 2.

{Commodity Sales into Fortified Products Continued}

Baby and Toddler Food – Organic grains, including rice, oats and barley, and organic fruits and vegetables are primary ingredients in the 289 million dollar-a-year baby and toddler food market. The diversity of product offering make it difficult to provide even basic estimates of commodity dollar and farm impact, but this is a critical category that brings new consumer entrants to organic purchases. If organic products are perceived as nutritionally inferior in this key gateway category, fewer new consumers will enter the market over time.

Fluid Milk and other Dairy Products – Organic dairy is the backbone of domestic organic agricultural production in the United States with over 2,000 certified organic farms in operation. The fastest-growing portion of the organic fluid milk market is nutritionally fortified and, as a result, is important in terms of market opportunities for new dairy farms to enter the organic market.

Dietary and Herbal Supplements - Certified organic dietary supplements include botanical crops such as ginger, cinnamon and turmeric, which are important fair-trade cash crops building strong livelihoods across the globe, as well as domestic botanical production that creates important high value diversified crop opportunities for U.S. farmers.

Statement of Data Sources and Citations

Organic Trade Association (OTA) is the membership-based business association for the organic industry in North America. OTA represents businesses across the organic supply chain and addresses all things organic, including food, fiber/textiles, personal care products and new sectors as they develop. Over sixty percent of OTA trade members are small businesses. *The Organic Trade Association's 2010 Organic Industry Survey* was conducted and produced on behalf of OTA by *Nutrition Business Journal*. The survey was conducted from January 21 through March 3, 2010. More than 350 companies responded to the survey, including revenues reported in narrow ranges, growth and product and sales channel breakdowns.

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Nutrition Business Journal (NBJ) is a research, publishing and consulting company serving the nutrition, natural products and alternative health care industries. NBJ publishes a monthly executive journal focusing primarily on the nutrition industry. NBJ is based in Boulder, Colorado, as a business unit of New Hope Natural Media, a Penton Media company. Data collected from the survey process were structured into a database and spreadsheet in order to create an industry model based on manufacturer data. The goal for each manufacturer in the database was to have wholesale sales figures, product breakdowns into at minimum the top level organic categories (beverages, condiments, supplements, etc.), sales channel breakdowns (natural food stores, grocery, farmers' markets, etc.), exports, employment and other statistics. Secondary sources included SPINS, the Nielsen Company, and Symphony IRI group (formerly known as Information Resources), among others.

SPINS is a market research and consulting firm for the Natural Products Industry. SPINSscan tracks sales of all UPC-coded products sold in the supermarket channel. Exclusive to SPINS, this channel represents full-format product supermarkets including the National Cooperative Grocers Association (NCGA) and the Independent Food Retailers Association (INFRA), small to mid-sized chains, and independent and cooperative stores across the continental United States. SPINSscan Conventional is a joint service providing sales information on products moving through the Food, Drug and Mass Merchandise channels. SPINSscan Conventional combines the strength and reputation of Nielsen data with the breadth and depth of SPINS attribute coding and brand positioning categorization.

2007 Census of Agriculture- Organic Production Survey (2008), Volume 3- Part 2. U.S. Department of Agriculture, National agricultural Statistics Service, February 2010. The 2008 Organic Production Survey (OPS) is a follow-on survey to the 2007 Census of Agriculture, It is the first organic production and practices survey conducted on the national level by the USDA's National Agricultural Statistics Service.

