New Opportunities in Sensory Innovation for Flavor Ingredients

A new report by *Companiesandmarkets.com* provides an insight into future flavor trends in food

Flavor is an integral part of food and what it offers consumers, and therefore the optimization of flavor in food is important for manufacturers in adding value to their products. Currently, there are major changes in food flavor innovation driven by shifts in consumer behavior. The report helps to understand these drivers and their effects. In addition, emerging technologies, new business practices and novel R&D are driving developments in sensory innovation.

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Ethnic Food

The impact of travel and immigration has led to a general increase in the range and complexity of foods available (and expected) in most developed regions. The number of people traveling to all continents has increased in recent years. Increased travel means increased awareness and knowledge about diverse cultures, food and flavors.

There is predicted continued growth in the value of the ethnic food retail market in both the United States and Europe. Asian cuisine is expected to show the highest rate of growth in Europe, but the growth rates for Chinese, Indian and Mexican foods are also high and offer opportunities for manufacturers.

Garlic—a flavor often associated with ethnic and international food—accounted for 2.0% of new product launches in this food group. The popularity of garlic in the natural foods group shows a trend towards the fusion of natural foods with ethnic foods.

Healthy and Indulgent

Ingredients companies are facing a new set of challenges as ongoing consumer demand for healthy and indulgent products creates both new growth opportunities and commercial pressures. Trust and transparency have become more important, particularly in accounting for health claims of new ingredients, their ethical and environmental credentials and their provenance. In health, legislation affecting claims and product safety are changing, meaning functional ingredients will be subject to increased scrutiny.

Naturals: Those natural ingredients offering new flavors as well as realizable and tangible health benefits are likely to achieve the highest growth. The appetite for natural ingredients that can deliver health benefits to the substantial number of consumers seeking wellness remains high and will remain strong as the population ages. In fact, 81.4% of respondents rated "flavors from natural ingredients" as the most important trend within health over the next five years. Despite the push towards natural ingredients, there remain opportunities for manufacturers taking a more scientific-based route. Development of proprietary ingredients and improved delivery systems that offer better bioavailability or taste sensations are key areas of expansion for the future.

Functional foods: Products that provide benefits beyond basic nutrition by way of added components and that may help prevent disease and promote health are known as functional ingredients. The compound annual growth rate (CAGR) of functional ingredients was 4.7% or higher in all areas between 2001 and 2006. This growth is predicted to continue, albeit at a slightly lower rate. Sweden and Italy show the highest predicted growth rate (**T-1**). Food manufacturers are using a new range of ingredients that provide or enhance functional properties in familiar products.

Dark chocolate: The rise in popularity of dark chocolate is, in some part, linked to health concerns and the perceived benefits of high cocoa percentage products.

Functional food and drink market value (in US$ millions) for Europe and the United States, 2001–2011 **T-1**

Country	2001	2006	2011
United States	15,570	21,298	27,179
France	599	764	941
Germany	1,375	1,890	2,398
Italy	677	1,042	1,426
Netherlands	216	272	331
Spain	401	596	765
Sweden	140	215	296
United Kingdom	1,565	1,998	2,416
Rest of Europe	893	1,235	1,589
Europe Total	5,865	8,013	10,163
Total	**21,435**	**29,311**	**37,342**

Top five emerging flavors by sector	T-2
Bakery & Cereals: vanilla, cranberry, cinnamon, nuts, almond	
Confectionery: dark chocolate, green tea, pomegranate, cranberry, caramel	
Dairy: vanilla, mango, fruit, coffee, pomegranate	
Snacks: spice, barbeque, cranberry, Indian, nuts	

In Spain, Italy and the United Kingdom more than 30% of consumers surveyed said they were purchasing more ethical or socially responsible grocery items.

Many traditional products/brands (for example chocolate-covered biscuits) are focusing on or introducing dark chocolate variants. Moving towards the future, there is demand in the bakery market for chocolate products, although some of these will need to be perceived as healthy as well as indulgent.

The overall top flavor in 2007 in terms of product launches was chocolate. It was the number one flavor in product launches in the bakery, confectionery and snacks sectors, and second in the dairy sector. This demonstrates chocolate's global appeal in terms of applicability across sectors and for consumers in many different regions. Variations on chocolate dominate the top product launches, with the top three flavors being chocolate, milk chocolate and dark chocolate. Dark chocolate is the fastest growing flavor.

Confectionery

The top 20 list of flavors in the confectionery category contains mainly traditional fruit flavors, such as strawberry, orange, lemon and cherry. Many varieties of dark fruits feature in the current top and fastest growing flavors in the dairy category. (See **T-2** for the top five emerging flavors by food sector.) Raspberry, blueberry, pomegranate and blackcurrant are the most important of these. Blueberry is currently a popular flavor in dairy product launches in Japan. Pomegranate is a newer flavor offering, often blended with other fruits, in many yogurt multipacks.

Mint, various nuts, cream, caramel and vanilla also feature in the confectionery top 20 list. An analysis of the growth rate in flavors in new product launches in confectionery from 2004 to 2007 showed no flavors to be growing at a rate of more than 1.1% per year. This indicates that although flavors in confectionery products are changing, these changes are taking place gradually.

The 10 fastest growing flavors in confectionery are:

1. Dark chocolate
2. Wafer
3. Hazelnut
4. Peppermint
5. Mango
6. Marzipan
7. Licorice
8. Bitter chocolate
9. Spearmint
10. Cranberry

An analysis of those flavors decreasing in new product launches in this category over the period 2004–2007 showed the largest mover to be milk chocolate, which decreased by 1.5% over the period. The 10 fastest decreasing flavors in confectionery are:

1. Milk chocolate
2. Peanut butter
3. Sour
4. Grape
5. White chocolate
6. Cherry
7. Fruit
8. Blue raspberry
9. Strawberry
10. Praline

Overall, the confectionery market appears to be restructuring towards mature/adult flavors (complex and intense), as opposed to flavors traditionally aimed at children (sweet, sour and simple). This may be to move away from dependence on the children's market and the complex ethical issues surrounding it. As within the bakery category, chocolate is very popular and looks to remain that way, but white and milk chocolate are losing popularity while dark chocolate is becoming more prevalent. Some traditional fruits (strawberry, grape and cherry) are slowly being replaced by exotic and antioxidant source fruits (cranberry).

Ethical Flavors for the Future

Thus far, the trend for ethical food has not greatly affected food flavor itself but is likely to in the near future. Food miles, fair-trade and child labor could affect the acceptance of flavors derived and manufactured from natural ingredients in developing countries. There may be more scrutiny around the use and source of exotic flavors in the industrialized economies.

Some consumers in the United States and most countries in Europe (except for Germany) say they are buying more ethical or socially-responsible grocery items. In Spain, Italy and the United Kingdom more than 30% of consumers surveyed said they were purchasing more ethical or socially responsible grocery items.

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