

NATURAL & ORGANIC FOOD PARADIGMS

By Henk Hoogenkamp

Clean labels are rapidly moving from trend to industry standard. Consumers of today have a great desire to see clean labels on food products in which artificially and mysteriously sourced additives are eliminated. The emerging young American millennial generation increasingly rejects artificial dyes, flavorings, preservatives and GMO, and demand food formulated with ingredients they recognize which are, preferably, of natural origin. Sales of many legacy or mainstream brands that make processed food with artificial ingredients and additives have suffered. In contrast, many startup entrepreneurial natural-food companies have

healthier choices to consumers as well as implement legislation to stop in-store junk food promotion (The Royal Society for Public Health, July 2019). As an example may serve, the removal of junk food from shelves at eye level to help discourage people from impulse purchases. Reducing shelf allocation for unhealthy and not-natural products -hopefully- will reduce the consumption of foods with disproportionate amounts of fat, sugar and salt, while promoting the sales of healthier choices.

Affluent consumers look for cleaner labels more than they look for foods that have less calories or fat. There is little doubt that

ingredients into food products. Food and ingredients that give the impression that they are “natural” and have not been processed too harshly are of great appeal to consumers. Undoubtedly, the big legacy food companies are in the midst of a public relations crisis.

The prevailing sentiment of the millennial consumer -born between 1984 and 2004- is that their mental picture of hyper-processed robotic-made food is not in sync with the expectations of their evolving lifestyles. These expectations provoke fears about the true composition of formulated food products. In other words, modern consumers are increasingly approaching processed foods with a skeptical eye. It should also be said that the perceived naturalness is often synonymous with premiumization, attracting customers who have the means to afford these more expensive food products.

Consumers perceive foods with any “free-from” claim to be both healthier and less processed. Although the fear of artificial dyes and preservatives lacks scientific basis, consumers have been pushing to have these eliminated from the ingredient line-up.

The large food establishments are working overtime to reformulate and are trying to get their lost market share back. It is not easy to find acceptable alternatives. For some legacy food companies, it is even frustrating that after years of technological advances



grown. It seems, the bigger the size of a multi-national food company, the less consumers trust it.

Premiumization

Governments and the food industry should do more to support supermarkets in encouraging

“free-from” foods have become a movement as more consumers continue to be affected by the purity of food, as well as the avoidance of allergens and intolerances.

It has been said that food companies turn additives and

to make packaged food cheaper, more flavorful and longer lasting, the pendulum is now swinging back. It seems a *deja-vu* of the good old times.

There is no doubt that consumers in affluent societies are placing more emphasis on what is in their food and how it is processed. Ingredient choice and clean label is an irreversible trend. Unfortunately, there is no real definition for a clean (and green) label. A clean label often is synonymous with organic or all-natural, and thus a rejection of synthetic science-driven ingredients or foods.

However, something of a conflict is arising between the demand for natural food and meat products and the sustainability of the natural food supply chain. Take for example natural fruit flavors and vanilla. Not only has the price of natural vanilla multiplied by 20 times since 2015, there are also growing tensions harvesting these critical crops, threatening to destabilize local farming and as such the economy of the producing countries.

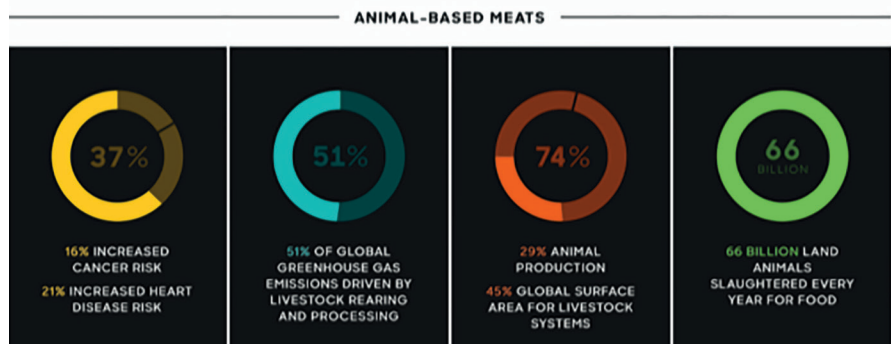
Going forward, it is likely that supply of some natural foods and ingredients will be limited supply and as such alternative solutions need to be found. Nevertheless, the bottomline is that only through the application of scientific research and implementation of the "natural" taste and aroma expectations, the food and meat industry will be able to keep prices affordable for the masses, while protecting the planet. Of course, many consumers remain somewhat skeptical about the involvement of science-based processes in the chain of food production.

The New Health Punch

Ever since shoppers have become more ingredients-savvy, legacy food companies had no other choice but to finally meet consumers' expectations and reactively pack more health

Naturalness

There is currently a massive global trend towards a healthy lifestyle that gives much more emphasis to plant formulated foods. Increasing numbers of food and beverage manufacturers have to revisit their formulas by



punch. After years of sagging market shares selling sugar-laden and chemical-rich foods, something had to be done to reverse the significant drop of sales figures.

The new health-oriented product transformations focus on giving consumers more of what they want and less of what they don't want. These reformulations are mainly driven by addressing claims of healthfulness as well as championing nutrition and "better-for-you" options delivered by no-nonsense clean label guarantees enhancing wholesome, clean and pure ingredients with absolutely no artificial colors, preservatives, flavors and sweeteners.

replacing artificial -and often chemically-sounding- additives with natural ingredients.

Unfortunately, the front pack claim does not often match the complex ingredient list on the back, hence not aligned with the consumers' perception of the term "natural".

People across the globe have a habit of defining the word "nutritious" in many different ways. These different interpretations add to the amount of label misconceptions, some of which are done on purpose by the food-marketing strategists.

There is no such thing as a universal definition of the term "nutritious",

so it is really no surprise that the general public interprets and understands the term in more ways than one. Since nutrient profiling and on-pack labeling are increasingly implemented in many countries, it is important to agree on a definition and regulation in easy-to-understand language for the consumers. While nutrition experts usually use words like “nutrient density” and macro-or micronutrients, the lay consumers use different descriptions like “body fuel”, “natural” and “wellbeing”.

“natural” really means when it comes to food. The words “natural”, “all-natural” and “100% natural” that often appear on products’ packaging, as well on the brand’s advertising, leave lots of room for misinterpretation. When meat products come into the equation, the definition of “natural” becomes even more worrisome. Are the animals raised indoors in a confined area and treated with sub-therapeutic antibiotics and artificial growth promoting hormones, including the controversial ractopamine?

ingredients is rapidly growing and constantly changing. Sales of “organic” and “natural” foods are growing at a faster pace than sales in other categories. While the word “organic” can be narrowly defined, “natural” food leaves lots of room for different interpretations. For example, can food retain the status “natural” if it is processed and when artificial additives are used to increase shelf life, improve flavor, taste, and health attributes or when it contains biotech ingredients? The answer is not easy - a barrage of lawsuits will most probably fight this issue with special interest groups on opposite sides.



Consumer demand for non-GMO food in affluent countries is growing and legacy food companies are responding. Even name-fame suppliers of world commodities like Cargill have bowed to consumer trends by offering products with a seal of approval for ingredients free of bioengineering. Of course, selling products verified as non-GMO can help boost profit margins for the specialty supply chain.

Consumers see “natural or organic food” as good and “processed food” as bad. The “clean eating” trend has inspired a back-to-basics approach in food development. “Free-from” and “flexitarian” options lead the way and existing products are upgraded to meet the new market demands for healthy and tasty food. An increasing number of consumers think non-GMO foods are inherently healthier.

Making Up the Mind

There is no doubt that there is a certain degree of misconception among consumers about what

Under the current FDA and USDA guidelines, “natural” can mean pretty much whatever a food company wants.

The “free-from” category is continuing to grow globally, including an increase in interest in GMO-free or non-GMO foods. Especially in the US, the GM-tide seems to have changed in recent years with many premium product launches featuring GMO-free claims.

The affluent consumers’ interest and attention for products that do not contain genetically-engineered

Clean is Confusing

There is no clear definition what “clean labeling” means, but it is obvious that food is now more than ever lifestyle-driven. Most consumers believe that food products with recognizable ingredients are healthier. This includes natural color and flavor ingredients, eliminating the usual science-sounding preservatives.

For example, the terms “clean” and “natural” are increasingly associated with “healthy”. In the mind and vocabulary of consumers, free-from foods are synonym with simple ingredients, non-GMO, and

minimally-processed. Yet, despite the positive name associations, many consumers find the words “clean” and “natural” polarizing and confusing, simply because there is no current agreed upon definition, and -subsequently- does not resonate when it related to sound dietary advice.

However, it is also true that there continues to be kind of inconsistency between what consumers say they want versus what they actually purchase. The point in case is that people still want their food to taste good even if healthier alternatives are available.

Come to think of it, the term “clean eating” is still confusing for many shoppers. This confusion is created by various words like “natural”, “healthy”, “fresh”, “minimally processed” or “free from artificial additives”. Consumers are inundated with these words and often feel a sentiment that the vocabulary is used as a marketing gimmick.

Basically, food manufacturers should agree to only use the term “natural foods” that are uncontaminated with pesticides, hormones, and antibiotics, as well as free from artificial - colors, - flavors, - emulsifiers, - stabilizers, and - sweeteners.

However, the confusion doesn't stop there. Especially progressive millennials like to move beyond the natural eating concept and include variables such as sustainability, animal welfare, no-GMOs, farming methods, and no chemical-sounding additives that imply a level of hyper-processing that alienate shoppers. As an example, for a simple cookie, it means ditching high fructose corn

syrup, partially hydrogenated oils, artificial colors and -flavors, as well as the preservative potassium sorbate and bleached flour.

Sustainable Greenhouse Gases for Organic?

Climate change and the food industry is a hot topic of debate

with many players setting ambitious goals to meet their own agenda.

To determine how agriculture food systems impact climate, it is very important to consider many variables, which are often clouded by the interpretation differing depending on what environmental goals one prioritizes. For some, it



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YOUR
LABEL



might even be an inconvenient truth if things appear different than hoped for. In broad terms, it is difficult to capture all aspects of the debate, wherein there is often no winner or loser.

For example, to compare organic and conventional farming as well as calculating the carbon footprint and specific land use, it can be concluded that organically-farmed food has a bigger climate impact. The main reason is that yield per hectare is much lower for organic-farmed grain, pulses, and vegetables. Greater land-use in organic farming indirectly leads to higher carbon dioxide emissions, hence the hypothesis that it contributes indirectly to bigger deforestation.

has huge impacts on global greenhouse gas emissions. The main reason is that only some 15 to 20 percent of artificial fertilizer is taken up by the food crops while the rest will find its way into the atmosphere and into waterways, subsequently eroding bio-diversity and contributing to acid rain, polluting of drinking water, and acidification of the top soil.

According to research conducted in England and Wales -Journal Nature Communications, October 2019- completely switching from conventional to organic agricultural practices will result in an overall increase in greenhouse gas (GHG) omissions. While it is clear that oranic farming might require less

Research indicates that compared to conventional farming methods, overall emission in organic farming potentially could rise by 21 percent. The baseline is that the initial GHG organic farming reduction will be offset by approximately 40 percent drop in food production yields. The decrease in GHG emissions to lower crop yields and the implementation of nitrogen-fixing legumes in crop rotation, will reduce the amount of land available for production. For example, grain crops such as wheat and barley would see significant declines in yields.

In livestock like beef cattle and sheep raised in an organic environment will see prominent reduced meat volume due to lower carcass weights and longer fattening times prior to slaughter. On the other hand, organic farming significantly benefits cleaner air and water, improved biodiversity and "healthier" top soil.

Green Washing Natural Foods?

Although the terms "natural food" and "clean label" have no specific legal definition to date, an increasing number of new food introductions use these expressions and tout recognizable authentic ingredients that sound natural and healthy.

The greatest downside for natural and organic food products is its lack of regulatory definition. "Natural" or "Organic" brands can be especially weak when the products contain "non-natural" additives and ingredients, including traces of GMO's. Even the US Food and Drug Administration (FDA) have a rather weak and non-binding description of a natural food product. The FDA-



On the flipside of this hypothesis, energy use should also be taken into consideration. As such, artificial fertilizer (nitrogen) used within the vast majority of conventional or non-organic food production

farm inputs and increased soil carbon sequestration, it might also worsen emissions through greater food production elsewhere in order to make up for lower organic crop yields.



FSIS has long considered foods to be natural if they do not contain anything artificial, synthetic or that would not ordinarily be expected in food.

The lack of a formally-defined regulation about the term "natural" opens up the door for companies to "green wash" food labels. Green washing is when food companies make claims that their products are actually more natural than what they really are. In other words, food products may be riddled with unhealthy ingredients and additives that somehow avoid disclosure. Going forward, it is important for all natural and organic food products to be subjected to a vigorous set of standards of identity as what is considered natural.

The current policy for the term "natural" on food labels is vague and leads to categorize foods as "natural" based on the degree of processing. If the definition of "natural" is limited to unprocessed foods, very few foods will be labeled as such.

Since there is considerable confusion on the term "natural", there is an urgent need to better define the terminology. Many food manufacturers add popular buzzwords on product labels, such as "cage free", "humanely raised", "grass fed", and "antibiotic free", and "no hormones, in an attempt to grab the attention of consumers willing to pay a premium.

Recently, litigation has thrown a wrench into the habit of food companies to loosely use the descriptive name "natural". For example, granola bars should not be labeled "natural" if they contain high-fructose corn syrup, maltodextrin or several other highly-processed ingredients. This is also the case if -for example- 100% natural oat bars contain small amounts of the common pesticide glyphosate.

As a reality check: the tested product contained 0.45 parts per million, a level well below the Environmental Protection Agency (EPA) 30ppm limit. Despite these ultra-low levels, the manufacturer

walked into a legal minefield. To avoid litigation, some food companies may avoid the word "natural" as part of the label design and other marketing tactics.

Going forward, it will be difficult to meet the "natural" expectations of the consumers. For example, natural food labels that use words like "isolate" are increasingly frowned upon. In the mind of the consumer, "isolate" stands for "processed" or "not natural". This is potentially a negative development for ingredients like soy protein isolate and other types of highly-concentrated plant protein powders.

Food companies should be 100 percent confident that there are no synthetic ingredients added when they use terms like "natural". Glyphosate applied on the fields prior to harvest can be considered a synthetic ingredient, thus, disqualifies the food as "natural". ●

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