Going global: one formulation for many markets

Food and beverage brands wanting to establish or extend their global presence have to contend with an intricate web of regulatory requirements. The aspiration is to develop a product formulation that can be sold across as many territories as possible in order to deliver maximum economies of scale and a consistent product that is loved by consumers. Achieving a single global formulation is rare, but it is often possible to rationalise formulations to address the regulatory and consumer needs of market clusters.

The limitations of Codex Alimentarius

The Codex Alimentarius series of standards provides an international benchmark to facilitate free trade and consumer protection. But it only offers recommendations. Member countries and organisations are free to implement the framework in their own way, so there can be discrepancies in how the guidelines are interpreted, legislated and enforced. Understanding where differences lie, and how to navigate them without compromising product quality or consumer enjoyment, is a critical factor for efficient development of global products.

A spotlight on international differences

Some ingredients, such as additives, represent a small percentage of a formulation, yet play an important functional or sensory role. They can also be some of the most heavily regulated aspects of food and beverage products, with requirements varying significantly between countries.

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1 Permitted additives and positive lists

The Codex General Standard on Food Additives (CODEX STAN 192-1995, as revised) is heavily influential. Conditions of use for additives are very similar across markets such as the Gulf Cooperation Council, Thailand, Vietnam, Panama, Peru, Ecuador and some African countries, where certain additives can be used with minimal restriction, as per the Table 3 Generally Permitted Additives list compiled by Codex.

Some international markets however, such as Australia, Malaysia, Hong Kong, Brazil, Peru and Chile, do not have their own positive lists of food flavourings. Instead, they refer to flavourings lists evaluated by organisations such as the Joint FAO/WHO Expert Committee on Food Additives (JECFA), the Flavor Extract Manufacturers Association (FEMA) and, in some cases, the European Union.

2 Artificial ingredients

Use of 'artificial' preservatives, antioxidants, sweeteners and colors is more strictly regulated in terms of permitted applications and maximum limits. Furthermore, conditions under which these substances may be used can vary between different markets, particularly in the case of sweeteners.

Incorporating such substances into a formulation can be a limiting factor when it comes to moving products across borders. In addition, their use can trigger certain labeling requirements, such as warning or advisory statements that can have an undesirable impact on consumer perception of a product or brand.

3 Sourcing natural alternatives

Identifying and sourcing natural alternatives may be possible but finding a like-for-like substitute that provides the same functional properties as its chemical counterpart is challenging. It's important to qualify and evaluate the performance of natural alternatives in specific applications across the full spectrum of product manufacture, distribution and consumption. This is a highly complex area that is best orchestrated by food scientists. For brand-signature products we would suggest translating conventional sensory profiling into analytical criteria that can be measured objectively in near real-time across a global manufacturing base.

4 Herbal ingredients

Adding herbal ingredients to a formula, particularly botanicals with medicinal properties, can be problematic from a globalisation perspective. In the Far East, where there is a cultural history of herbal medicines and botanical ingredients in foods, regulations are fairly comprehensive. Japan, South Korea and Taiwan have well-established lists of permissible botanic ingredients. For some species, legislation even specifies which parts of the plant can be used.

5 New-to-market ingredients

Adding botanicals to a formula can be challenging in circumstances where an ingredient originates in a foreign country and has no prior history of consumption in the country of destination. In these situations, pre-market authorisation for novel food is often required; in some countries, this can be a lengthy and costly process.

6 Ingredients of animal origin

Ingredients of animal origin can pose similar complexities. Cultural and religious beliefs represent a barrier to trade in some parts of the Middle East, Israel and India, in terms of labeling, product certification and import restrictions, as well as formulation.

Making the most of changing the formulation

Sometimes, there's no escaping the need to adjust a formulation. When this happens, best practice would be to use this opportunity to review it in its entirety, so that it can be adapted to suit a greater number of markets. Rationalising to one formulation across all of your markets is unlikely to be an option, but it will be possible to keep the number of variations to a minimum and hence take advantage of international synergies and maximise economies of scale. To do this well will require active collaboration between regulatory experts, food scientists and sensory specialists, and the earlier this happens, the smoother the process.

About Leatherhead Food Research ¬

Leatherhead Food Research provides expertise and support to the global food and drink sector with practical solutions that cover all stages of a product's life cycle from consumer insight, ingredient innovation and sensory testing to food safety consultancy and global regulatory advice. Leatherhead operates a membership program which represents a who's who of the global food and drinks industry. Supporting all members and clients, large or small, Leatherhead provides consultancy and advice, as well as training, market news, published reports and bespoke projects. Alongside the member support and project work, our world-renowned experts deliver cutting-edge research in areas that drive long term commercial benefit for the food and drink industry. Leatherhead Food Research is a trading name of Leatherhead Research Ltd, a Science Group Company.

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