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# Mitigating flavor proliferation and inflation: a sensory approach

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Flavors are a key ingredient to create delicious food and beverage and to drive consumer liking. Still, they are considered a “magic” box as their most important attribute, their taste, is not measured and standardized: you can’t compare between flavors and flavor choice remains artistry. This leads to proliferation and inflation.

In the following article, we look in more details at the root causes of proliferation and inflation, review practical tactics used today by the food and beverage manufacturers and explore new avenues enabled by flavor sensory data.

*Image 1 – Flavors are essential to create differentiation and products that consumers love.*



## Flavor proliferation by design

Does the flavor industry need 10'000 lemon flavor formulations? The usual response will be that taste is local and consumer expectations change with demographics and behaviors, hence the demand for so many different flavors.

For each development, food & beverage FMCGs (Fast Moving Consumer Goods companies) will brief 3 or 4 flavor houses that submit their best proposals. After tedious internal screening, the final choice is left to consumers 3-6 months down the line, either with an expensive consumer test or through a product launch, hoping for the best.

While effective, this process is far from being efficient: Technologists depend on flavor houses to pre-select flavors based on incomplete briefs and under time constraint. Flavors can't be compared or benchmarked. The selection is iterative, slow, and knowledge remains experiential. This inevitably leads to proliferation, inflation and regular attempts to rationalize flavors.

From the flavor houses perspective, the lack of flavor specification has been defining the way the industry operates:

Flavor uniqueness became a commercial argument since you can't compare: “we have the experts, and we'll customize the product for you”. As a result, flavors multiplied with large suppliers creating 1000 new vanilla flavors in a year (1). And “make to order” became the manufacturing model with consequences: longer lead time, working capital impact, minimum order quantities, and higher cost of goods sold.

We see customization coming at the expense of agility and affordability and triggering proliferation, both for the flavor houses and the food & beverage manufacturers. While the need for taste diversity is undeniable, the question remains: how can companies rationalize their flavor portfolio and avoid proliferation?



*Image 2 – Product developers are often “blind” when it comes down to flavors and consider them as “magic” boxes*

## Today's practical tactics to reduce flavor proliferation

Leveraging your existing flavors first - This is the obvious route. Chefs and Technologists try to re-use flavors they buy. But as soon as recipes and/or processes change, predicting the taste of the end-product becomes elusive and briefing a flavor house is re-assuring. Then trial iterations sanctioned by consumer testing remains the model. Proliferation still happens.

Blending your existing flavors to deliver the desired flavor profile – Chefs and Technologists often blend flavors to create a unique signature. In a similar manner, they may try to match flavors from blending pre-selected other flavors. Nevertheless, it is difficult, time consuming and expensive today, because of the lack of sensory data.

Asking a preferred flavor supplier to rationalize your portfolio - Large food & beverage FMCGs commonly ask one supplier to pay for the effort in exchange for increased market share. The “pro” is the absence of up-front cost.

The “cons” are many: the chosen supplier accesses its competitor flavors, it owns and leverages the data generated while the FMCG can't, and the FMCG misses an opportunity to build the independent knowledge that will guide future choice and prevent inflation. Next price increase will offset all the savings.

**Today, rationalization and preventing inflation efforts are mostly short-term repetitive fixes that do not drive FMCGs agility or productivity in the long run.**

So, what are other avenues to explore?

## Defining flavor for their taste is the starting point

The different “shades of vanilla” can be defined (2) in a similar manner to the shades of colors, like blue or green (3). Once flavors are specified for their taste, the sensory space can be mapped and organized, distances between flavors become measurable, and comparison, benchmarking and matching become possible. This offers new opportunities.

*Image 3 – Flavors can be defined and standardized in a similar manner as colors*



### **Benchmarking new flavor submissions addresses the source of proliferation.**

Colors are defined with Pantone and others, making benchmarking and selection easy. Once flavors are defined for their taste and within a standardized frame of reference, the same applies: briefing becomes efficient, selection sharper and benchmarking possible (4). You can assess in a minute whether to proceed with a new submission or rather use an existing flavor.

### **Cross-benchmarking each of your flavor's portfolio is the easiest way to identify quick wins.**

Whether the tail of your collection or flavors to match, once they are profiled, algorithms will indicate the closest match. It is done with a click. Then your Technologists will focus on the validation in application.

### **Matching flavors from blends of pre-selected other flavors, with a click.**

Up to now, blending was difficult to apprehend without a flavorist, and it required considerable time and resources. This changes today: standardized flavor sensory profiles combined with algorithms (5) empower FMCGs to find the optimal starting blend to match any profile, within a second. It includes dosage recommendations and directional cost in use. Weeks of work are saved.

### **Finally, defining flavor “building blocks” to create new profiles changes the game.**

For those FMCGs managing large flavor portfolios, a complete flavor sensory mapping allows to identify most relevant flavors to support blending. We call them building blocks. Once those 8-15 flavors are identified, algorithms propose optimal blends to match or create other flavors, within a second.

Although this demands an upfront investment, it also offers most rewards in terms of flavor count reduction, aggregating volumes, working capital, contingency, flavor customization and avoiding future proliferation.

One of the constant worries is to see inflation crippling back-up once a matching or a rationalization exercise is completed. We hear procurement complaining that “within 2 years of completion of a vanilla rationalization exercise, spend was back higher than originally”.

The benefit of defining flavors within a standardized frame is that benchmark can be done any time against other flavors or blends. FMCGs procurement gets leverage to source new suppliers and negotiate.



***Image 4 – Embracing flavor sensory standards is the key to avoid flavor proliferation and control spend***

### **What are the easy first steps to battle proliferation and inflation?**

Start with one relevant flavor type. The best is to map a particular portfolio like vanilla, whether you have 2 or 200 flavors, to gather your first data and learn how to leverage it.

For larger companies with different subsidiaries, a flavor census using cloud-based solutions is a good start, followed by flavor profiling. Then it is about leveraging the data with analytics.

### Flavor taste standardization drives efficiencies

All industries, starting with the color industry, went through standardization to successfully drive efficiencies. This represents a paradigm shift for the flavor industry: moving from 2 dimensions of artistry and chemistry to 3 dimensions, adding sensory.

The benefits go well beyond simplification and spend control, into accelerating innovation and delivering productivity.

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### References:

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- (3) [www.pantone.com](http://www.pantone.com)
- (4) Benchmarking flavors demo : <https://youtu.be/4XytWw-D7Mo>
- (5) Matching flavors demo : <https://youtu.be/e6GzdL7H1-k>

### About the author:

*Mathieu Asté is the founder & CEO of iSense. He has been working in the texture and flavor industries for 20 years across regions and functions, for Ingredion and IFF. Early on, he understood the opportunity offered by sensory sciences to define the flavor space and drive efficiencies. He then created iSense in 2018.*

*iSense is a flavor-tech start-up from Zurich that defines flavor standards and eases flavor choice, matching, creation, and sourcing. It makes flavor sourcing easier, quicker, and affordable, and drives transparency, agility, and productivity for both flavor houses and the F&B industry.*