



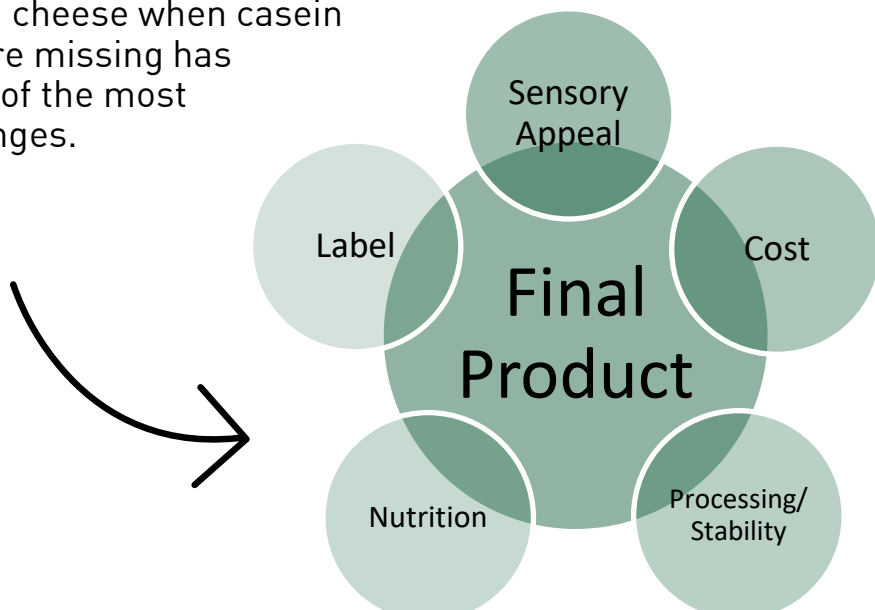
## ADDRESSING THE STRETCH CHALLENGE IN PLANT-BASED CHEESE PRODUCTS

By Ming Lui, Sr. Scientist



The plant-based trend continues to gain momentum in NOAM for a variety of reasons, such as sustainability or environmental impact, concern for personal health, or the growing shift towards vegetarianism/veganism/flexitarian diets. Additionally, consumers also demand plant-based products with functional and nutritional benefits as well as a parity or better taste experience compared to what had previously been on the market.

Plant-based ingredients present functional and nutritional differences when compared to traditional dairy ingredients. Formulating plant-based cheeses requires an in-depth understanding of ingredient functionality, stabilization, and processing. To develop plant-based cheese that meets consumers' expectations present innovators with challenges such as sensory appeal, nutrition, processing, labeling, and cost. The stretchability of plant-based cheese when casein interactions are missing has remained one of the most critical challenges.

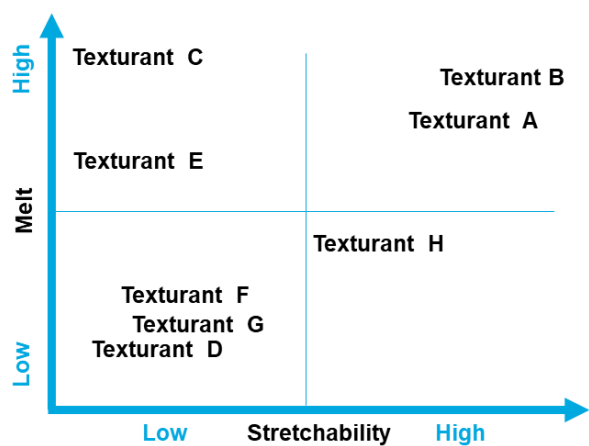


A multi-faceted system is needed to address the stretch challenge in plant-based cheese development. To identify ways to help our customers overcome, we conducted studies analyzing texturants from different botanical sources that are designed to provide a range of functionalities. Through this research, we were able to identify solutions and create prototypes that help provide ease of processing, great shreddability, texture, melt, and excellent stretch in plant-based cheese applications.

Figure 1. Stretchability of Tate and Lyle’s Vegan Cheddar-Type Shredded Prototype



Figure 2. Tate and Lyle’s Solutions for Plant-based Cheese Stretch Optimization



The in-depth ingredients and process knowledge from Tate & Lyle allows us to tailor our systems to your plant-based formulas – giving them extraordinary stretchability, without sacrificing other key attributes, like great taste.

**Want to learn more about which of our texturants could be a good fit for your plant-based application? Let’s chat!**

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