2020 IN REVIEW

State of the Hydrocolloid Industry

Securing supply chains and exploring hydrocolloids *in situ* underscore some of the category's main events in 2020.

by Nesha Zalesny

t the close of 2019, no one could have predicted the impact COVID-19 would have on the world. The pandemic has highlighted both challenges and strengths of the food industry. While industry works to secure raw materials, consumer trends have produced opportunities for the hydrocolloid industry. Raw material trends include global interdependence, cyclic pricing of raw material markets and in situ hydrocolloid functionality. Consumer trends driving these ingredients include a shift toward formulations that can accommodate plant-based and free-from diets.

Disrupted Supply

One of the primary lessons from 2020 was the interdependence of the global economy. Specifically, pandemic conditions caused global disruptions in shipping container distribution. In February, hydrocolloid distributors that sold Chinese goods ordered additional stock in anticipation of Lunar New Year celebrations. When China extended the lockdown order, those inventories started depleting. Obtaining hydrocolloids from China or India was difficult and many businesses suffered delays due to lack of shipping options, not lack of material.

In response to disrupted supply chains, purchasing agents qualified backup suppliers, and put backup plans in place to meet production needs. Purchasers are more willing to make longer-term forecasts and plan for longer delivery times.

Price Increase

Purchasing agents faced additional

challenges from hydrocolloids such as locust bean gum and tara gum due to a steep price increase in 2020. Locust bean (carob) gum is popular in dairy and plant-based markets, both for its functionality and its clean label perception. The past few years have seen a lower-than-average harvest of carob pods for carob gum on top of increased demand. Accordingly, this has increased prices. As manufacturers look for and qualify alternatives such as tara gum, demand increases for the alternatives, dragging their prices up with it. These natural ingredients are cyclic and a return to more normal prices will surely come.

In Situ

Qualifying new suppliers and ingredients has led to some interesting discoveries, which can provide hydrocolloid functionality without adding a hydrocolloid. Some examples are tomatoes selectively bred to contain high levels of pectin for thicker ketchup or citrus fiber that has pectin native to the citrus fruit. Citrus fiber can be utilized for moisture retention or emulsifying capabilities. Seaweed flour contains unrefined agar or carrageenan and can be used to gel pet food. These ingredients essentially contain in situ hydrocolloids.

They not only impart some of the properties of the hydrocolloid, but they also have the added benefits of having micronutrients and the functionality of the whole food's fiber.

This is especially true for seaweed flour. There is a whole wealth of nutrients and textures just beginning to be explored and utilized in Western diets.

Plant Forward

Meatpacking plant closures across the globe may be just one of the reasons consumers have been more willing to try plant-based alternatives. This year multinational fastfood chains introduced more plantbased options to their menu, such as KFC's Beyond Friend Chicken nuggets. German grocery chains Lidl and Edeka made an announcement in September that they were offering vegetarian or vegan gummy confections. To meet consumer expectations for stability, appearance, and texture of these plant-based products, hydrocolloids are used.

Hydrocolloids that serve the plantbased markets have had a surge in popularity. Plant-based beverages contain carrageenan, gellan, and guar or locust bean gum; acidified plantbased protein beverages may contain pectin or carboxymethyl cellulose (CMC). Plant-based meats may contain methylcellulose and gum acacia or a combination of starches; plantbased sausages use casings made from sodium alginate. Plant-based confections can contain carrageenan, agar, gellan, gum acacia, pectin, or a wide variety of starches. There are many opportunities for hydrocolloids within plant-based markets.

A Few Bright Spots

Meal preparation has returned to the home leading to a surge in packaged and prepared food purchasing. Jam and jelly sales have been good in the US and Europe, which has been good for pectin. Hydrocolloids like xanthan gum may have lost some market in food service dressings and sauces, but have gained market in acid cleaners and detergents.

Consumer dietary choices run the gamut of plant-centric whole foods, to gluten- or cruelty-free. Whether motivated by health or concerns over the environment, consumers expect the food industry to deliver products that are convenient and meet their individual preferences and needs. Small startup companies that meet these niche markets are becoming the norm rather than the occasional success story. Developing good relationships with these small companies is an opportunity to invest in the continued success of the entire industry.

Looking to 2021

The COVID-19 pandemic has wrought massive consumption changes across the globe. Shelterin-place and lockdowns forced workers who can work from home to do so. Children remained home while schools were closed, while cafeterias and restaurants shut down for many months. There is much uncertainty about how long and how often these disruptions will occur. The food service industry has suffered, but retail sales make up for this loss and hydrocolloid sales remain steady.▼

Nesha Zalesny is co-author of The Quarterly Review of Food Hydrocolloids, an in-depth analysis on hydrocolloids, produced by IMR International since 1991.

