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Food Corporations Turn to Chefs in a Quest for Healthy Flavor

By **STEPHANIE STROM**

ST. HELENA, Calif. — The chicken thighs, smoked for two hours, then soaked in buttermilk spiked with Crystal hot sauce and dredged in flour, turned a perfect golden brown, full of the promise of succulence and crunch, under the stern watch of Chef H. Alexander Talbot.

But not one, alas, went into a salivating mouth as soon as it left the bubbling rice bran oil. Rather, it was rushed under a glass “udder” bristling with slender filaments and tended by technicians, who would soon analyze it at a PepsiCo lab in Illinois for the magic that gave it such flavor and crispiness.

Other creations, destined for the same lab, went into Styrofoam containers bedded on dry ice, part of a continuing effort to find new ways to improve the nutritional quality of the giant food company’s products without losing recognizable flavors.

“The challenge facing us and other big food companies today is not easy: to have a great-tasting product without as much salt, fat and sugar,” said Greg Yep, senior vice president for long-term research and development at PepsiCo. “Chefs have ways of tricking the taste buds that we can use in our products.”

Prodded by consumers, regulators and politicians, major food companies like PepsiCo are under extraordinary pressure to make healthier foods. Kellogg has cut as much as 30 percent of the sugar in children’s cereals like Apple Jacks and Froot Loops, removed salt from others and increased fiber. Taco Bell last month announced a new Power Protein menu that will include items with less fat and calories, and other companies are rushing to get their products in shape.

“We’re not only thinking about making great-tasting foods but about the nutrition guidelines we need to deliver on,” said Greg Creed, chief executive of Taco Bell, referring to the company’s pledge to bring one-third of the meal options in its restaurants into compliance with the federal dietary guidelines by 2020. “This is a huge change in mind-set.”

While snack sales like those in PepsiCo’s Frito Lay division are still increasing and show no signs of slowing, it and some of the country’s other major companies have worked to reduce the amount of sugar, fat and salt in products aimed at children. The efforts are part of a voluntary system that they hope will keep regulators and lawmakers at bay as well as address growing

consumer knowledge of what is in food.

Guiding Stars, a program created in 2006 by the Hannaford grocery stores to tell consumers about the nutritional quality of the food sold in supermarkets using small tags attached to shelves, now awards at least one star out of a total of three to more than one-third of products, compared with about a quarter when the program started.

Cookies, crackers, snacks, cereals and yogurts are among the latest products to receive a star, according to Sue Till, client services manager for the Guiding Stars Licensing Company. Ms. Till said a confluence of factors, like the crusade by the first lady, Michelle Obama, to foster healthy eating among children, and consumers' growing concern about gluten and genetically modified ingredients, was forcing food manufacturers to pay more attention to nutritional quality.

"It can be as simple as using fresh herbs to replace salt or raisin paste to replace sugar," she said. "They're learning it's not as hard as they might have thought."

In fact, Mr. Yep, in his white lab coat, and PepsiCo's executive research chef, Stephen Kalil, in a white chef's coat, argue about which one of them has the "best job in the world."

They are on the teams responsible for carrying out the plans of PepsiCo's chief executive, Indra K. Nooyi, [which are controversial on Wall Street](#), to improve the healthiness of the PepsiCo portfolio, which she has long insisted is critical to the \$65 billion company's long-term survival.

One of the first products to emerge from their efforts was Quaker Real Medleys, instant cereals made from whole grains and chunks of fruit and nuts. It has a similar amount of sugar as the company's traditional instant oatmeal, but about half comes from the fruits and the oats; most of the sugar in instant oatmeal is added.

They also have reduced salt in flavored Lay's potato chips by roughly one-quarter by building flavors first and then turning to other seasonings, Mr. Kalil said. His team of chefs learned how to do that by exploring regional cuisines. Sales of Lay's regional flavored potato chips — honey mustard in the Northeast, say, or balsamic sweet onion in the Northwest — "exceeded plan by 150 percent," he said proudly.

The workshop here was an effort to capture some of the same kind of information used to build the regional flavors through the work of eight chefs who worked in the Viking test kitchen of the Culinary Institute of America's western outpost. The chefs included Mr. Talbot; [Jeanette Chen](#), a food blogger and consultant; and Paul Viggiano, a chef who serves on the culinary council at Baldor Specialty Foods, a major distributor.

Ms. Chen prepared a silken cream of cauliflower soup using chestnuts in place of the cream. It

totally fooled the mouth into believing the soup contained a dairy product of some sort.

Mr. Viggiano used parsnips to reduce the amount of butter and cream in a lemon vodka Alfredo sauce. The recipe eliminated the butter usually found in Alfredo sauce and deployed a small amount of half-and-half in lieu of the standard cream. Tossed with eggy pappardelle noodles, the sauce coated the mouth and tongue.

“I’m really curious about the parsnips,” said Ted Russin, director of the consulting business at the Culinary Institute, who interviewed the chefs while they were cooking in an effort to record descriptions of their techniques, catch them adding and subtracting ingredients intuitively and understand the rationale behind the use of different flavors and ingredients. “Fresh flavors don’t stay around too long, so I’m interested in how he’ll use them to replace cream.”

In fact, Mr. Viggiano threw in a little brewer’s yeast to round out the texture of his sauce. Mystery solved.

Salt was definitely the ingredient that the chefs missed the most. “I would be lying if I told you that not using salt will make a dish better than if I used salt,” said Beau MacMillan, executive chef at Elements, the restaurant at the Sanctuary Camelback Mountain Resort and Spa in Scottsdale, Ariz.

But it was hard to miss the salt in the roasted Chilean sea bass that Mr. MacMillan topped with a coriander peanut crust or in the sausage he made from a handful of herbs and puréed scallops.

“Food is tending to be healthier and healthier,” Mr. MacMillan said. “People come into our restaurant and read labels and want to know more about what’s in what they’re eating. They’re looking for foods that are fresh and healthy but also make them feel good.”

Mr. Yep hovered around his station, breathing in the aromas that drifted from a pot on the stove where Mr. MacMillan was reducing vegetables and seaweed to make the hijiki lime broth to accompany his creation. “He’s boiling this down to intensify the flavor, and the kelp will provide saltiness without salt,” Mr. Yep said. “These are techniques we can use, too.”

He also noted that several chefs were using smoking as a means of imparting saltiness without actual salt. At another station, for instance, [Kristopher Plummer](#), better known as Chef Plum from his appearances on ABC’s “The Taste” and the Food Network, was smoking avocados in a big metal bowl, using a smoke gun and plastic wrap.

“It’s a real challenge not to use salt, fats and sugar,” said Mr. Plummer, who operates pop-up restaurants in Newtown, Conn. “But that’s what makes this so interesting.”

He used the avocados in a salsa that accompanied tofu grilled like a steak. Pickled red onions, the garnish, also conveyed a salty sort of taste.

Mr. Plummer pointed out that avocado, of course, has fat in it, “but fats aren’t always bad; they kind of get a bad name.”

A creamy Gouda macaroni and cheese, studded with crispy bacon bits, however, earned him a challenge from Mr. Kalil. “Tomorrow, I want to see you do this with less fat,” Mr. Kalil said, then added, “Delicious.”

Mr. Yep was more interested in the smoking. “What about smoking potatoes before cooking?” he wondered aloud. “Or maybe smoking a dried potato product instead of putting salt in the flavoring?”

“You could smoke the water you cook the potatoes in,” suggested Mr. Talbot, who together with his wife, Aki Kamoza, writes the [Ideas in Food blog](#) and books, as well as doing consulting work.

He also suggested using fermented ingredients, which he said helped carry aromas.

By the end of the day, Mr. Kalil was already weighing what PepsiCo might use instead of dried porcini, which Mr. Viggiano had deployed to impart what he described as “a long, rich flavor,” since the ingredient was most likely too costly to use commercially.

For his part, Mr. Yep was already letting PepsiCo’s headquarters know his thoughts about how fermentation, anchovies, smoking, seaweed and other techniques and ingredients might be used to improve products. “I’m sure,” he said, “that someone is already at work smoking a potato.”