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FLAVOR FOCUS

Say it with SALT

A sea of artisanal products and more attention to sodium-reducing strategies bring salt into the spotlight

BY PRISCILLA MARTEL

When Wendy's launched its hand-cut sea salt french fries last year, we knew that specialty salts had reached the mainstream. Where once the biggest decision was whether to put rice in the salt shaker, today chefs are confounded by the variety of salts available and where to deploy them. From Himalayan pink to Portuguese flor de sal, artisanal varieties offer chefs *meroir*, the flavor and color of the saline seas from which they are harvested. And consumers are responding positively to the menuing of salt despite health warnings linking a high-sodium diet to the risk for developing chronic diseases.

SALT BASICS

Besides its appealing taste, salt helps finish a dish, heightening or enhancing other flavors and suppressing the bitter notes in food, allowing sweet or sour ones to come through. Functionally, salt inhibits or prevents bacterial growth, preserving foods. It binds water and improves the texture in processed meats and cheese. And salt has an important function in yeast activity and dough development in baked goods.

Culinary or table salt is sodium chloride (NaCl), available from several sources, each with its own form, flavor and degree of salinity. Naturally occurring, salt is found in seawater, saltwater lakes and mines. The mineral concentrations vary by source, and also contribute to color differences. Residual moisture content varies, resulting in the slightly moist clumping *sel gris*, for example.

According to the Salt Institute, virtually all food-grade granular table salt is made by evaporating purified brine made from mined salt to which iodine and anti-clumping agents are added. Kosher salt refers to the flake-like form of the salt crystals, not its kosher certification. And although kosher salt typically does not contain iodine, it may contain additives.

Salt SPECIALTIES

SEL GRIS – A grayish, mineral-rich French sea salt from crystals that fall to the bottom of the harvesting pan; also used to refer to any salt harvested in this manner.

SEA SALT – Made from evaporation of sea water, sea salt can be made by drying the salt in the sun (unrefined sea salt) or by boiling the salty liquid (refined sea salt). Unlike other table salts, unrefined sea salt retains additional mineral salts.

FLEUR DE SEL – A delicate and lacy French salt harvested from crystals that form on the brine’s surface; also used to refer to any salt harvested in this manner.

HALEN MÔN – A Welsh sea salt with a fine bright-white flake.

KALA NAMAK – Indian black salt; an unrefined mineral salt.

SOLOWAY MALDON – From England; a pure-white flake salt with a lacy crunch.

“Salt has many taste aspects depending on the preparation,” says Dr. Laith Wahbi, global product manager, savoury at Givaudan. In order to understand the sensory effects of salt in foods, Givaudan flavorists have created a “Salt Curve,” a chart that maps the wave of taste sensations of salt. The curve shows an initial saltiness peak before a longer yet less intense experience of salinity, which affects the body and mouthfeel of a food. Wahbi gives the example of eating salted potato chips. “The initial salty hit is very mineral and aggressive,” he says, followed by the body and lingering flavors.

“Salt’s lingering profile helps mask unpleasant aspects in food,” says Wahbi. When

salt is reduced, the body of a dish decreases, weakening its flavor and the lasting taste effects. Without salt, the balance of flavor in a dish or condiment like ketchup is knocked on its side. “If you reduce the sodium in ketchup, it will taste like tomato jam,” he says. “All the taste sensations work in balance,” which is especially important when Givaudan works to develop new products with less sodium.

SALT PREMIUMIZATION

Mentions of salt on restaurant menus increased 144 percent in the last five years according to Technomic’s MenuMonitor, which surveys 2,000 menus in its database. In the past year alone, “salt” as a listed menu item has increased by 18 percent on menus from fast-casual to fine dining. Where it once played a supporting role, today salt is a major menu descriptor.

“Salt has moved from being just an ingredient to having a more gourmet positioning,” says Technomic’s Darren Tristano. Popular new descriptive terms include kosher salt, Maldon sea salt and sea salt gremolata. And the term salted caramel has a strong showing in desserts and beverages.

In a consumer environment where value rules, specialty culinary salts are a point of menu differentiation. The term sea salt, for example, gives dishes a healthy, natural glow because, unlike table salt, many sea salts contain no added ingredients, although not all are created equal.

According to specialty salt retailer and author Mark Bitterman, calling out the type and source of salt “tantalizes” the customer, improving the value perception between an item that happens to have fleur de sel with one finished with Philippine fleur de sel.

“There is no improvement you can make in your restaurant that will cost so little and have such impact,” he says of switching to an artisan or small-craft salt. Although a rare salt can cost over \$50 per pound, he says that “most expensive salt is still cheaper than your cheapest ingredient.” By his calculation, the cover cost of switching from kosher salt to an all-natural hand-harvested fleur de sel is 3 to 5 cents.

A SEA OF SALTS

Cost notwithstanding, our appetite for culinary salts — especially sea salt — seems

Salt draws out the flavor and mouthfeel of foods, and salty ingredients like olives serve a similar complementary purpose.



INTERNATIONAL OLIVE OIL COUNCIL



Salty TASTE TREE

FROM BASIC TO COMPLEX

Sodium chloride, NaCl, Salt

Sea salt · Kosher salt · Iodized salt · Rock salt

Specialty Artisan Salts:

Alaea Hawaiian salt · Cyprus black flake · Maldon sea salt
Sel gris de Guérande · Shio · Salzburg rock salt

Soy sauce · Fish sauce · Miso · Nori · Seaweed · Bonito
Capers · Anchovies · Olives · Bottarga · Oysters · Sea urchin
Tomalley · Caviar · Fish roe

Olive puree/tapenade · Preserved lemons · Anchovy butter

insatiable. The unusual appearance and texture of different salts — from the jewel-like crystals of Cyprus flakes to the pebbly nuggets of Hawaiian lava salt — adds to the flavor punch of a dish.

“If you use a finer grain salt, you get more impact at the beginning,” says Wahbi.

Chef Tim Cushman of Boston’s O Ya favors pink salt from Australia’s Murray River to finish wagyu beef, citing its flakiness that is “not overly crunchy.” For chef Tyler Anderson of the Copper Beech Inn in Ivoryton, Conn., it’s Maldon sea salt that he uses exclusively for finishing meat. He finds the large, flat flakes

contrast nicely with a tender cut of juicy meat or fish. Other chefs talk about the “minerality” and “mouthfeel” of different flaked salts that add dimension to their dishes.

Although Bitterman feels that talking about the flavors of salt is a “misemphasis,” he and others acknowledge subtle differences. He describes French sel gris as “mineral and briny” whereas sel gris from the Adriatic is “sweet and fruity.”

FLAVORFUL SALTING

Whether from sea or land, flavored and smoked salts add their own unique components to dishes, according to chefs who use them in cures, brines or as finishers. While some cutting-edge chefs smoke and flavor salts in-house, a growing number of suppliers are offering salts in a vast array of flavors. At The Filling Station in New York City, salts are available in Merlot, bacon, Thai ginger and ghost pepper varieties, to name just a few.

At Big Jones in Chicago, chef/co-owner Paul Fehribach uses five-spice salt to cure duck and coffee salt on meats. In Boston, Clio chef Ken Oringer likes Danish Viking smoked sea salt for texture and depth of flavor without the “hint of sulfur” found in other brands.

When looking for maximum impact, smoked salt “layers up” the flavor of barbecue, says chef Dave Martin, a self-confessed fan of smoky southern barbecue and consulting chef at The Frying Dutchman and the Meatball Factory in Manhattan. He recommends creating a signature smoked salt in a covered grill or with a PolyScience smoker.

Smoked salt is one of those high-impact ingredients useful in vegetarian applications. As part of his strategy for creating vegan dishes that will appeal to meat eaters, chef Jason Wyrick, editor and executive chef of The Vegan Culinary Experience, recommends the use of bold flavorings, among them smoked salt, especially in chili.

Salt has always been necessary for finishing certain foods, especially fried foods and meats.

“Mindfully” finishing with top-shelf salts accomplishes three things, says Bitterman. “It makes the food taste better, improves the visual cohesion and impact of the dish and improves the value.”

“Steak or beef cry out for salt to the point that they should taste salty on the surface,” says O Ya’s Cushman.

Of the finishing-salt trend, Dan Soloway, owner of Kitchen Options in Port Chester, N.Y., feels that the pleasure comes from the saline punch of undissolved salts that are added last.

SALTY STAND-INS

Chefs rely increasingly on secondary ingredients to add a salty taste. Cushman likes Ligurian oil-cured olives which he calls “salty but not briny.” He builds depth of flavor with salty components like anchovies or olives that become unidentifiable in his preparations, and picks up umami as well as salinity with kombu and other seaweeds. Le Bernardin’s Eric Ripert favors lemon confit, adding the salty condiment to butter brushed over fish before broiling. Chef Michel Nischan of The Dressing Room in Westport, Conn., combines the brine from salting fish with tomatoes before simmering into a sauce. “It adds that protein flavor back with nothing to waste.” Even pickling brine is finding a use as such chefs as Paul Virant from Vie in Western Springs, Ill., blends it into vinaigrette.

According to recommendations compiled by the Department of Nutrition, Harvard School of Public Health and the Culinary Institute of America, seasoning with such salty staples may reduce sodium content in restaurant dishes. Last spring, the CIA tested this theory on a group of culinary students in a blind taste test of salt and a traditional Sichuan seasoning on french fries. This flavor profile — called mala — is a combination of Sichuan peppercorn and chile pepper. It adds taste and chemisthetic effects; the Sichuan peppers numb and cool while the chile peppers warm the tongue in waves of taste sensations. Testers ate separate batches of the fries seasoned with either salt or mala seasoning. They enjoyed each type of seasoning equally. Among terms used to describe the fries seasoned with mala were the words “refreshing,” “savory,” “satisfying,” “more depth” and “lemony tingle.” This has good implications for stealth health approaches in menu development.

CONSUMER PREFERENCES

Chefs and restaurant operators navigate rough seas when it comes to consumer opinions about salt in their food because individual preferences differ. There are genetic markers for salt preference, with women generally more sensitive to sodium concentration than men. Those supertasters who are sensitive to bitterness are sensitive to salinity, yet they may enjoy foods higher in sodium because salt masks the bitterness. And as chefs are well aware, a preference for salty taste can be adapted with increased consumption raising one’s tolerance to the salt.

Even among consumers with a declared salt preference, what appeals varies. Olson Communications’ Culinary Visions Panel recently conducted consumer research on the salty taste preferences among a group of over 500 consumers. The results showed that, while consumers might express preferences for various flavors, like “salty,” when presented with specific recipes or menu descriptions, reactions will vary depending upon how flavors are combined and balanced.

“Salt-loving consumers don’t always prefer salty menu items,” says Olson Communications’ Rachel Tracy. The time of day and the meal also has an impact on preferences — lunch was the only daypart in

Studies have shown that spicy flavors, such as the sriracha sauce served with these crispy potato wedges, can trick the taste buds into needing less salt.



IDAHO POTATO COMMISSION



CHICKEN OF THE SEA INTERNATIONAL

Bold, flavor-forward ingredients like the tuna, vinaigrette and Italian cheese on this open-faced sandwich allow chefs to deliver abundant flavor without the use of added salt.

which the salty item scored highest. At dinner and breakfast, sweet, umami and sour concepts scored better than the salty choice.

Olson's report also suggests that a salty taste preference does not always translate into an understanding of what foods contain large amounts of salt. Although consumers identified french fries, tortilla chips and nuts as salty, fewer than 15 percent perceived saltiness when used as a flavor enhancer, as in cold cuts or prepared Italian salad dressing. This implies more consumer education is needed to raise awareness of hidden sodium in foods.

SALT RESTRAINT

How does one reconcile these contradictory trends, the interest in reducing sodium on restaurant menus with the appeal of salty menu callouts?

"These two trends seem to be polar opposites but in some ways they have similarities," says Lisa Carlson, nutrition manager for Unilever Food Solutions. "If they

are both about having finished products that have a wonderful taste, maybe they both work. What we hear chefs say is that you can reduce sodium and the flavor comes through more." With menu labeling a priority, food manufacturers are working to reduce sodium in their products, a task that often involves reformulating to balance the savory flavors once salt is reduced.

And chefs employ different salting strategies conscious of consumer concerns. When chef Nischan cooks, he salts the oil in his skillet before adding unseasoned vegetables. "By salting upfront, I am always covered without oversalting," he says.

Although many chefs favor pre-salting meat to build flavor, Bitterman feels that it is overrated. "Seasoning more thoroughly later in the cooking process will give you more powerful results and control." Bitterman, whose company The Meadow markets over 150 finishing salts, suggests adding a positive menu statement — emphasizing the positive attributes of natural fleur de sel, for example — to dispel the fear that all salt is "evil."

Whether cooking with its reduced-sodium products or seeking to cut back in the kitchen, Carlson and her culinary team at Unilever have many suggestions, including:

- Use a stronger flavored cheese in small amounts;
- Add vinegar, wine or other concentrated flavors that might be lower in sodium;
- Distract taste buds with chile peppers, herbs and spices.

Even the use of finishing salt may complement a low-sodium dish. "By putting it on the very top you are going to get the whole taste that salt will give you," says Carlson. "It's a more powerful taste than if you mixed it in with the dish."

With chefs minding how much and what kinds of salts they use, the result may indeed be more powerful flavor with less sodium. ☺

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Take-Away TIPS

FROM FLAKY TO FINE: Understand the flavor, textural and visual differences among the many sources of salts, and consider each for optimum impact.

CALLING ALL SALTS: Calling out the type of salt used in a menu item adds culinary cachet and increases value perception.

TASTY TRICKS: As a sodium-reducing strategy, consider concentrated flavors like vinegars or distractionary flavors like chiles to fool the taste buds.