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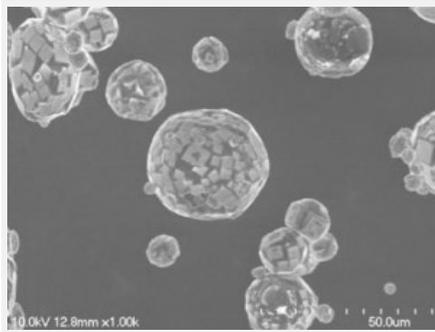
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Salt: A Favorite Ingredient Gets A Molecular Makeover

What's the best way to get people to reduce salt in their diet?

Don't let them know they're eating less of it.

[Nu-Tek Salt](#) has come up with a way to replace salt, or sodium chloride, in food with a proprietary crystal fashioned from potassium chloride and an organic acid. (see photo.) It tastes like salt, behaves like salt in recipes, and has the same texture and feel. But, because the crystal doesn't contain sodium, it's healthier.



Pass the Potassium Chloride, please

Americans consume about 3400 milligrams of sodium a day, far higher than the recommended 2300 to 1500 milligrams. A report in the British Medical Journal argued that reducing sodium remains one of the most cost-effective ways to improve global health, second only to getting people to stop smoking.

Cutting down on sodium, however, is challenging because of its prevalence in processed meats, cereals and pretty much anything that comes in a box.

By contrast, we only get about 1/3 of the daily 1400 milligram of potassium. While too much sodium is associated with cardiovascular problems, too little potassium can have the same effect, so potassium chloride has a double benefit.

“We have to get serious about getting sodium out of processed foods,” said Don Mower, the company's COO and president. “With our formula, you can reduce sodium by 35 to 50 percent.”

Ten of the top 13 food producers in the world incorporate Nu-Tek's so-called Advanced Formula Potassium Chloride into meats and other products since it came out in 2010. Khosla Ventures recently invested in the company to help it build a manufacturing facility in [Fargo](#), North Dakota.

But, Mower adds, it also helps that consumers generally don't know what's going on. Nu-Tek's customers generally do not advertise that they have reduced the salt in their products because low-salt foods have often earned a

bad reputation with consumers.

“We’re seeing more and more customers going stealth,” he said. “Some consumers assume less sodium means less taste.”

Food is emerging as a new frontier for entrepreneurs and investors and there is a definite overlap between the new foodies and the green/clean crowd. Processed food and agriculture constitute trillion dollar markets, governments are encouraging healthier eating through guidelines and regulations and Americans are more focused than ever on what they feed their kids. Changing tastes, entrepreneurs argue, is thus opening the door to innovation.

On top of that, a rising population, droughts and climbing commodity prices underscore how food security and supplies will be a major challenge in the coming decades. The New England Complex Systems Institute said the Arab Spring was rooted in food prices and predicts that the circumstances for civil disturbance will be ripe again in [August 2013](#).

“Soil is very precious,” [Hendrik Bruins](#), a professor of the Jacob Blaustein Institutes for Desert Research and the Swiss Institute for Dryland Environmental Research, told me last year. “You should stop thinking about it as dirt.”

Some of the early breakout hits include Nest Collective, which specializes in baby food and snacks for kids. Co-founded by Neil Grimmer, formerly a designer at IDEO, Nest’s revenue has grown from [\\$200,000 in 2008 to \\$39 million last year](#). Revolution Foods, which specializes in healthy school lunches, serves over 600 schools in nine states. Revenue tops \$50 million. DBL Investors and The Westly Group are two of Revolution’s investors. Emily Green—formerly the CEO of tech research firm The Yankee Group and CEO of [Cambridge Energy Research Associates](#)—is now the CEO of [SmartLunches](#).

While those companies target consumers, others, such as [Marrone Bio Innovations](#), target agribusiness. Marrone creates biopesticides with microorganisms. [Peter Thiel](#), the [Facebook](#) investor, recently plunked money into Modern Meadow, which wants to [make meat with 3D printers](#).

Khosla Ventures has been more active than most of the other Silicon Valley firms in this sector. Nu-Tek is just the latest investment for the firm. It has invested in Solum, a field tool for farmers to measure soil quality; Climate Corporation, an agricultural insurer; [BioDiscovery](#), which has developed microbes to enhance plant production and Unreal Foods, a candy company.

Potassium chloride has been employed as a salt substitute in certain situations in the past, but relatively sparingly. Because it has a metallic taste, it can only be used in small amounts and then has to be mixed with other substances that mask its flavors. Manufacturers typically dry mix it with other ingredients or loosely bind it to other materials.

Nu-Tek’s innovation revolves around binding potassium chloride with an organic acid in a unified crystal to ensure uniformity of flavor. Another added bonus: Nu-Tek’s formula is compatible with existing equipment and manufacturing processes.

Dr. Sam Rao, a retired ConAgra scientist, started working on the idea in 006. (Earlier in his career, Rao developed a way to make white bread with whole wheat.)

Salt isn't an easy substance to compete against. [Over 260 million tonnes](#) get produced each year (most of it goes to the chemistry industry) and it sells for around 10 cents a pound, Mower said. The public is also leery about low-sodium foods.

Nonetheless, sales are increasing. Mower further adds that the food industry, once an idea takes root, can move fairly quickly. Take trans fats. The debate swirled for years and the industry dragged its feet. But Mower recalls one meeting with the CEO of one of the country's largest bakers. "Ok. We're done," he said. "We've got nine months to get it out." The company followed through, said Mower.

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