

# Yes or No on Nanoparticles in Food?

By Michael Passoff, Senior Strategist, As You Sow | April 12th, 2011

You may have read that nanoparticles are used in literally hundreds of products on supermarket shelves. This new technology is reported to be prevalent in U.S. food applications, including nutritional additives, stronger flavorings and colorings, and antibacterial agents for food packaging and kitchenware. Meanwhile, the scientific community is raising serious concerns about the safety of nano-based technology.



Nanomaterials involve manipulating matter at the nanoscale (generally defined as 100 nanometers or less) to create new products. At such a small scale, the chemical and physical properties of these materials change to become much more chemically reactive than their normal-scale counterparts. Their size also makes them more likely to pass through biological membranes, circulate through the body, and enter cells. This combination of increased reactivity and bioavailability of nanoparticles, especially those used in food and agricultural products, pose novel risks to human health and the environment that have yet to be fully studied. These potential risks are also not adequately regulated by agency oversight or included in company disclosure policies.

At **As You Sow**, a shareholder advocacy group that has engaged the food industry on safety issues for more than a decade, we look to mitigate risks to both consumers and company bottom lines. We wanted to dig deeper into what was really happening with nano technology in our food supply, so we contacted senior management at some of the largest and most iconic food companies in the U.S., including Kraft, McDonald's, and Pepsi. What we learned surprised us—and may surprise you.

Far from finding confirmation of a food industry flooded with nanomaterials, we found these companies taking a precautionary approach.

McDonald's [2011 Corporate Responsibility website](#) states that:

“McDonald's Corporation is working to understand the use of nanotechnology and its application in food and packaging products. Given the current uncertainty related to potential impacts of nano-engineered materials, McDonald's does not currently support the use by suppliers of nano-engineered materials in the production of any of our food, packaging and toys.”

McDonald's proactive position on this issue sends a strong signal to consumers and investors who have become alarmed at the lack of nanofood safety standards, labeling requirements, and inadequate testing, which leaves consumers vulnerable to absorbing and ingesting such substances without their knowledge.

Similarly, Pepsi responded to shareholder inquiries by surveying its suppliers, and claimed to be nano-free and not looking to use or develop nano products, although it has not taken a public position as of yet.

Kraft, the world's largest food company, first posted [a statement](#) on their website in 2009 announcing that they are not using nano technology, although they did admit to be exploring nano applications for packaging. Two years later, Food Production Daily [reports](#) that “Kraft is one company to have taken a deliberate step away from the emerging technology.”

Over the years the food industry has taken much criticism for everything from genetically engineered food to childhood obesity, yet on what is shaping up as the next big controversial food issue the companies we have talked to are first trying to understand this complex issue and should be recognized for that. Companies are realizing that while the risks

and benefits of nano technology are still being discovered, the research is being played out with little transparency and inadequate regulatory oversight. They recognize that much more information is needed on the safety of nanomaterials before they should be used in food or food packaging.

Strangely enough, these promising updates from McDonald's, Pepsi, and Kraft do not seem to correspond to media reports of widespread use of nanomaterials in food and food packaging. This discrepancy seems to imply that nano is not in mainstream food, but may be gaining traction in health, sports, and nutritional supplements. Clouding the situation is that regulatory agencies do not require notification of nanomaterials in food products, nor do trade associations thoroughly track this – it seems to be anyone's guess as to who is really using nano.

To fill in some of these information gaps, [As You Sow](#) is about to survey a wide selection of food manufacturers and retailers regarding their use of nanomaterials in food products. We are hoping that responses will provide us with a more accurate understanding of company policies and the current status of nanomaterial use in the U.S. food market.

We are also developing a Nanofood Sourcing Framework that will highlight questions that all companies should be considering before they include these controversial ingredients in their commercial products. Questions such as: Do we use nanomaterials in our food products and packaging and how do we find out? How do we know if it is safe to use nanomaterials in food products and packaging? Are there certain risks or liabilities that we should explore in further detail? Is our supplier being transparent and providing "best practice" safety reporting on nanomaterials?

So, is nano technology prevalent in our food supply? It is still unclear. But what is clear is that when an industry giant like McDonald's says no to nano, it should leave the rest of the industry with food for thought.

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