Report calls for research on nanoparticles in food

LONDON (Reuters) - A global scarcity of scientific research on using nanotechnology in foods means food safety authorities are unable to properly regulate products that may be beneficial or harmful, a British science panel said on Friday.

The science and technology committee of Britain's upper house of parliament said in a report that use of nanoparticles in food and food packaging is likely to grow dramatically in the next decade, but too little is known about their safety.

"The technologies have the potential to deliver some significant benefits to consumers, but it is important that detailed and thorough research into potential health and safety implications ... is undertaken now to ensure that any possible risks are identified," said Lord Krebs, chair of the Science and Technology Committee which produced the report.

Nanotechnology is the design and manipulation of materials thousands of times smaller than the width of a human hair, called nanoparticles.

The technology has been hailed as a new way to make stronger and more lightweight materials, better cosmetics and tastier or healthier foods, but Friday's report said a paucity of scientific research across the world meant its potential benefits and risks in food were largely unknown.

According to Krebs whose committee heard evidence from food producer groups, regulators and scientific experts from across the world, the global market for nanotechnology in food was $410 million in 2006 and is set to grow to $5.6 billion in 2012.

"We are on the cusp of a potentially explosive growth in this novel approach to food manufacture and processing," he told a news briefing.

There are currently at least 600 products involving nanomaterials on the market but only around 80 of them are food or food-related and only two of those are available in the UK.

The report called for new rules to compel food companies to tell regulators about any work they are doing with nanoparticles in food, and also called for a voluntary public register of food products and packaging containing nanomaterials available.

Krebs said the food industry in Britain and worldwide was being "quite obscure" about any work they are doing on using nanotechnology for products or packaging -- an attitude he described as "exactly the wrong approach".

"The food industry must be much more open with the public about research it has undertaken in this area and where it sees nanomaterials being used in food production in future," he said.

Stephen Holgate, a clinical professor of immunopharmacology at the University of Southampton, who advised the committee on its report, said some studies suggest nanoparticles behave differently in the body than larger ones.

"Most of the research so far... has shown that these particles can penetrate barriers and get into the system -- and they can find their way into the liver, into the kidney and even into the brain," he told reporters. "Knowing that, we really need now to concentrate on finding out what their effects are."

The report's authors warned that the lessons of a public backlash against genetically modified food in Europe showed that "secrecy breeds mistrust, and that openness and transparency are crucial to maintain public confidence."

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