



**INSTITUTE FOR
AGRICULTURE AND TRADE POLICY**
PRESS RELEASE

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Press Contact

Andrew Ranallo
Communications Associate
+1 (612) 870-3456
andrew@iatp.org

About IATP

Institute for Agriculture and Trade Policy works locally and globally at the intersection of policy and practice to ensure fair and sustainable food, farm and trade systems. IATP is headquartered in Minneapolis, Minnesota with an office in Washington D.C.

Nanomaterials in fertilizer products could threaten soil health, agriculture

Moratorium proposed on fertilizing fields with nanomaterials in treated sewage waste

MINNEAPOLIS – Nanomaterials added to soil via fertilizers and treated sewage waste used to fertilize fields could threaten soil health necessary to keep land productive, says a new report released today by the Institute for Agriculture and Trade Policy (IATP). Peer-reviewed scientific research also indicates possible negative impacts of nano-fertilizers on public health and the food supply.

IATP's report, *Nanomaterials in Soil: Our Future Food Chain?*, draws attention to the delicate soil food chain, including microbes and microfauna, that enable plant growth and produce new soil. Laboratory experiments have indicated that sub-molecular nanoparticles could damage beneficial soil microbes and the digestive systems of earthworms, essential engineers in maintaining soil health.

Nanomaterials are advertised as a component of market-available fertilizers—designed to increase the effectiveness of fertilizers by making them the same size as plant and root pores—but because nanotechnology is an unregulated global industry, there is no pre-market safety assessment. Several researchers assume that nanomaterials are increasingly present in biosolids (also known as sewage sludge) used as fertilizer on about 60 percent of U.S. agricultural land.

“In light of published research, the Obama administration should institute an immediate moratorium on fertilizing with biosolids from sewage treatment plants near nanomaterial fabrication facilities. A moratorium would give researchers time to determine whether nanomaterials in soil can be made safe and to research alternatives to building soil health, rather than depending on fertilization with biosolids.” says IATP's Dr. Steve Suppan.

Over time, the report explains, nanomaterials in these agricultural inputs can accumulate and harm soil health. More research is urgently needed to adequately understand possible long-term impacts of nanotechnology.

“As agri-nanotechnology rapidly enters the market, can soil health and everything that depends on it can be sustained without regulation?” asks Suppan. “That’s the question regulators, researchers and anyone involved in our food system should be asking themselves.”

The report also details risks specific to farmers and farmworkers applying dried biosolids that incorporate nanomaterials, including inflammation of the lungs, fibrosis and other toxicological impacts.

With no regulatory system in place—in the U.S. or elsewhere—for producing, and selling nano-fertilizers, IATP’s report concludes by asking for governments to require robust technology assessments involving biological engineers, soil scientists, public health professionals, farmers and concerned citizens before allowing indiscriminate application by industry.

Read *Nanomaterials in Soil: Our Future Food Chain?* on www.iatp.org.

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