Caution to People in Agriculture:

New evidence raises concerns about Bt corn

What started as warnings by people viewed as anti-business has turned into a big business concern. Insect resistance to genetically-modified crops, including Monsanto's Bt corn, threatens profitability. There is evidence production is being compromised. Insect resistance has prompted a new round of investigations, including new efforts by the U.S. Environmental Protection Agency.

Bt-corn is a type of genetically modified organism, termed GMO. A GMO is a plant or animal that has been genetically modified through the addition of a small amount of genetic material from other organisms through molecular techniques. GMOs on the market today have been given genetic traits to provide protection from pests, tolerance to pesticides, or improve its quality. Examples of GMO field crops include Bt-potatoes, Bt-corn, Bt-sweet corn, Roundup Ready soybeans, Roundup Ready Corn, and Liberty Link corn.[1]

In late 2011, a newly opened topic with the EPA[2] notes "*severe* damage to corn by root worm…in four states in the U.S." The description of the new investigation's threshold describes Monsanto's insect-resistance monitoring program "inadequate". Information gathering is going on, now, at the Agency.[3]

Scientists have expressed these concerns about corn and other crops.[4]

Much of the work on this subject was done outside the Untied States. Advantages of Bt cotton have been drawn into particular question. In the U.S., litigation is brewing. There are reports of lawsuits by farmers for the Bt cotton product's failure to protect against the boll weevil.[5]

Scientifically, the hypothesis appears to be that Bt crops can boost yields by reducing pest numbers. But three questions were raised. First, expression of the toxin in not reliably sufficient to kill targeted pests. Second, pests are not susceptible to the Bt toxins and can emerge as a result of reduced pesticide use, bad agricultural practices, or monoculture farming and reduction of competitors as hosts for the target pests. Third,

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1 Entfacat-130, Bessin, Bt-Corn: What Is IT and How It Works, Univ of Ky College of Ag

2 (EPA-HQ-OPT-2011-0922 [1]).

3 *See* EPA "Memorandum to Open Docket Plant-Incorporated Protectant Insect Resistance Management (RM) Briefing, November 30, 2011. (Docket No. EPA-HQ-OPT-2011-0922).

4 James C. Global Status of Commercialized Biotech\GM Crops: 2010 ISAAA Brief No. 42, Ithaca, New York 2010; Ho, M.W. & Saunders, P.T., Transgenic Cotton Offers no Advantage, Science in Society 38. 30, 2008; Navdanya (The GMO Emperor has no Clothes) International Report 2011. www.navdanyainternational.it/images/doc/Full_Report_Rapporto_completo.pdf.

5 *Id.*

resistance to Bt toxins appears to be presenting itself in pests, rendering the Bt toxins far less effective.[6]

This information, and its importance to producers, bears close scrutiny and continuing interest. Though much of the work is published by Science in Society, a London organization known to have interests in environment issues and viewed as an environmentally protective organization, its scientists are well trained, their research methods use approved scientific methodologies, and the society is not financed by large corporate interests with overt sales and profit objectives, even at the expense of customers and consumers.

[6] Sirinathsinghji, E., Bt Crops – Failures and Hazards (ISIS Report 14\12\11).