

The Economic Impacts of GM Contamination Incidents on the Organic Sector

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This paper examines the significant economic impact of GM coexistence on the global organic sector thus far through GM contamination of organic food and crops. A literature review identified a total of 16 GM contamination incidents across 9 countries and 4 crops, occurring either from cross-pollination or due to contamination in the postharvest supply chain.

Maize: In Spain, 16 organic farms were affected by GM contamination through cross-pollination between 2003 and 2007. Contamination levels ranged from 0.03% to 12.6% and in all cases organic certification was withdrawn, leading to financial loss as the grain could no longer fetch a premium. One farmer lost €4,000 because of the lower market price. U.S. organic farmers are affected by lost sales and lower prices, as they are unable to stop GM contamination through cross-pollination. Organic grain elevators have to turn away up to 5% because of GM contamination. Contamination of the U.S. organic maize crop could lead to a lost income of over \$90 million for organic farmers. Because of GM contamination, Terra Prima had to recall 87,000 bags of organic tortilla chips at a cost of \$150,000.

Oilseed rape: Cross-pollination has led to almost complete contamination of non-GM seed stocks in Canada, forcing organic farmers to all but cease oilseed rape production. The loss of access to the organic market has cost farmers millions of dollars and they are pursuing a class-action lawsuit.

Soya: GM contamination in the United States, Japan, Korea, and the United Kingdom has cost organic businesses through recalls and negative publicity. Contamination of animal feed in the UK led to certification withdrawal and lost sales for both the feed mill and the livestock that had eaten it. Brazilian farmers face higher production costs and lower prices as they fight and lose the battle against cross-pollination.

Papaya: Mislabeling of seeds led to widespread planting of GM trees on organic farms in Hong Kong, discovered after the GM fruit had been sold as organic. Cross-pollination has led to 50% GM levels in organic papaya orchards across Hawaii, meaning that farmers must sell their fruit at one-third of the former price. Export markets have shrunk as the EU and Japan refuse the contaminated product.

The financial losses incurred by the organic farmers and food companies in these cases were considerable. The costs of GM contamination were shown to arise from a wide range of impacts: lost markets, lost sales, lower prices, negative publicity, withdrawal of organic certification, prevention measures, and product recalls. It is important that coexistence measures address the full range and extent of impacts that can occur through the marketplace, with the GM sector being held accountable.

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