



## GMOs Inevitably Contaminate and Persist

GM crops are a source of self-propagating genetic and environmental pollution. The experience over the last 15 years demonstrates that GMOs are uncontainable. They inevitably contaminate non-GM crops and sometimes wild relatives, and will persist in nature for many years.<sup>1</sup> The industry idea that their crops can “coexistence” and remain segregated is short-sighted and ignores the impacts of wind, insects, floods, animals, theft, and human error. The entry of GM crops into a country generally removes choice, where everyone that type of species is gradually forced to grow GM crops or to have their non-GM crop contaminated. Those seeking to remain non-GMO are burdened with the costs of buffer zones, testing, segregated storage and shipping, and losses due to contamination.

The spread of GMOs takes place through cross pollination, seed movement, “volunteer” crops (growing from previous years’ unharvested seeds), and accidents by seed companies and farmers. It occurs not only from commercialized GMOs, but also field trials of unapproved varieties. Contamination can impair the ability of organic and non-GMO farmers to receive premiums, create super weeds, permanently alter a species gene pool, and block export and specialty markets.



- In 2006 GM rice grown for one year in field trials five years earlier was reported to have contaminated the US rice supply and seed stocks,<sup>2</sup> and found in Africa, Europe, and Central America. US rice futures dropped immediately by \$150 and exports dropped by about 20% from the previous year.<sup>3</sup> The total cost could reach as high as \$1.2 billion.

- Contamination of US corn by StarLink in 2000 halted exports and cost about \$1 billion in recalls, lost markets, price reductions, clean up, and lawsuits.<sup>4</sup> Five years later, US corn exports again suffered additional losses when Bt10—not approved for commercialization—contaminated US stocks.

- US courts acknowledge that approval of GM alfalfa threatened the existence of non-GM alfalfa through cross-pollination.<sup>5</sup>

- Cross-pollination problems by Spain’s GM corn production caused their organic corn production to drop significantly.<sup>6</sup>

- In 2009, the Canadian flax seed export market to Europe collapsed after widespread contamination with an unauthorized GM variety was discovered.<sup>7</sup>

- In 2007 alone, there were 39 new instances of GM contamination in 23 countries, and 216 incidents have been reported between 2005-2007.<sup>8</sup>

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## Incompetent Regulation of Field Trials

Field trials are conducted without third party verification that contamination has not occurred. Oftentimes, the government jurisdiction overseeing the site does not even have the capabilities of testing the crops. And the companies never provide insurance to cover the costs or clean up if contamination occurs.

*"Illegal GM seeds are present in several provinces because of weak management."*

**--Chinese environment ministry official**

A 2005 report by its Office of Inspector General, concluded that the US Department of Agriculture (USDA) was not competently overseeing the nearly 50,000 field trials it had approved since 1986. It said, "current regulations, policies, and procedures do not go far enough to ensure the safe introduction of agricultural biotechnology." In addition, "at various stages of the field test process—from approval of applications to inspection of fields—weaknesses in APHIS [a USDA department's] regulations and internal management controls increase the risk that regulated genetically engineered organisms will inadvertently persist in the environment before they are deemed safe to grow without regulation."

- Illegal GM rice has been spread for years in China, and was found in European food imports at least 115 times between 2006 and May 2011.<sup>9</sup>
- Field tests of Monsanto's GM bentgrass in 2003 contaminated natural grass at least 13 miles away. The contamination continues in the area.
- Even a rumor that GM papaya was stolen from a Thailand field trial interrupted sales to European markets in 2004.
- Canola seeds imported into Japan have spilled from trucks at the ports, causing contamination of illegal GM canola growing in that country.<sup>10</sup> Now GM canola has crossed with indigenous Japanese weeds in the same area. Hundreds of GM plants were found along roadways in North Dakota, USA.<sup>11</sup> GM canola spread from field trials in California and has been found growing wild alongside roads and highways.<sup>12</sup> And 32 of 33 bags of non-GMO canola seed in Canada were contaminated with GM varieties.<sup>13</sup> Such contamination from GM canola has made it virtually impossible to cultivate organic, non- GM oilseed rape.<sup>14</sup>



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