

It's time for some straight talk on contamination and co-existence. The co-existence of genetically modified (GM) crops and non-GM crops is not possible and policy makers need to stop pretending that it is. Genetic contamination is an inevitable consequence of GM agriculture and a deliberate ploy by the industry to make the global acceptance of GM crops a *fait accompli*. Forget co-existence, we must say no to GM crops altogether.

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GRAIN

People all over the world are looking to Europe, where the hard-fought moratorium on genetically modified organisms (GMOs) is about to be lifted and where the struggle is now on to determine what will take its place. Genetic contamination is at the centre of the debate and much is being said about thresholds, co-existence and preserving “consumer choice”. But there’s a lot that’s not being said, particularly when it comes to how Europe’s decisions will affect the rest of the world. The larger issues at stake are in danger of disappearing in the minutiae of official negotiations.

Genetic contamination should be seen for what it is: an inevitable consequence of genetically modified (GM) agriculture and the cornerstone of the biotech industry’s efforts to make the global acceptance of GM crops a *fait accompli*. The biotech industry wants its opponents to believe that the only option left is to ‘manage’ the co-existence of

GM and non-GM agriculture. They want us to abandon the fight to stop genetic engineering and to turn our efforts to salvaging remnants of non-GM agriculture, in much the same way that they’ve tried to co-opt the struggle for biodiversity into a non-threatening campaign to protect global ‘hot spots’. But such co-existence will inevitably lead to a two-stream system of global food and agriculture – a GM free niche market for the very rich and a GM polluted supply for the rest of us – with the same small number of corporations controlling both streams, from seed to supermarket.

Here are five reasons why the issue of contamination must lead to a complete rejection of GMOs:

1 The only way to prevent contamination is not to grow GMOs

Agriculture does not take place in a laboratory. Pollen travels. Seeds travel. Food travels. And they do not travel in nice, neat predictable ways.



Insects can transport pollen over kilometres.¹ So can the wind.² The ability of seeds to stay in the soil for years before germinating can make things even more complicated.³ And there is no way to guarantee against human error and activity, whether it be scientists mistakenly sending GM seeds around the world to unsuspecting colleagues (like the University of California at Davis), people smuggling seeds across borders (in Paraguay and Brazil), farmers sowing the grains of GM food aid (Mexico and Romania), or biotech companies violating biosafety regulations (US).⁴ This is only logical: food and agriculture have always been about exchange, experimentation and trade, and this is no different in the current context of globalisation.

Nobody is denying this basic fact in the European debate around co-existence. Study after study demonstrates the impossibility of practicing GM-free agriculture next to GM agriculture. This is why the co-existence negotiations are actually about thresholds (what are “acceptable” levels of contamination) and liability (who is responsible for the inevitable contaminations that will occur).⁵

Of course, the most practical and cost-effective way to prevent GMO contamination is not to grow GM crops at all. Given that the arguments for growing GM crops are pretty weak from a farmer perspective and weaker still from a consumer perspective, there’s really no good justification for all the added effort and cost that it takes to bring GMOs into the agricultural system.

2 Damage control measures obstruct normal agricultural practices

The proposed European plans for co-existence make it clear that separating GM and GM-free agriculture requires massive regulatory intervention. Crops have to be segregated by distance and barriers, seeds have to be certified at low levels (0.1%-0.3%), funds need to be established to compensate non-GM farmers for contamination, post-harvest handling systems need to be developed, and so on.⁶

The end result is far more control over farmers. They will be forced to conform to “co-existence” practices that have little to do with good farming. There will be more bureaucracy, paperwork, and pressure for certification and far less flexibility in deciding what to grow, when and how to grow it, and how to sell the harvest. Seed saving and exchanges, if they are not prohibited, will be much more complicated. The future of non-GM agriculture will be a tightly regulated system governed by onerous contracts that will leave farmers more vulnerable to the power of agribusiness. Moreover, for those countries without

the resources for such regulatory intervention, there simply won’t be a future for GM-free agriculture once GMOs are allowed in.

3 Contamination increases corporate control

It’s no big secret that the GM industry’s interest lies in pushing GM crops as quickly and as widely as possible across the globe. Industry has raced to get its GM crops into the fields before biosafety regulations and public opposition set in. But it would be wrong to assume that the GM industry does not want regulation of its products.

Big business likes regulations. It wants regulations that enable it to control the market, while not preventing it from selling its products. Industry’s lax attitude to the ‘black market’ for GM crops, such as that for Bt cotton in India or Roundup Ready soybeans in Romania, is just a temporary phenomenon.⁷ It likes this initial contamination because it puts authorities in an awkward position, and puts pressure on them to approve the crops. In the face of widespread smuggling of Roundup Ready soybeans from Argentina to Paraguay, the Paraguayan Minister of Agriculture and Livestock said he was inclined to free-up transgenic production because he was “convinced that there is no alternative under the current circumstances.”⁸ But once they attain this initial objective, the big companies quickly move in to squash the ‘black market’ and take control. This is what is happening in Argentina and Brazil (see box).

The division between the biotech seed industry and downstream agribusiness is another temporary phenomenon. Alliances and mergers between the two industries will take off if and when the European and Japanese moratoriums on GM imports come to an end, giving rise to tightly controlled “identity preservation” systems, where farmers grow particular varieties under contract to corporations dictating what inputs they must use. These identity preservation systems, whether for non-GM or “value-added” GM crops, will be based on certified seed. Meaning, in order to “guarantee” the identity of their crops, farmers will have to grow their crops from seeds purchased from the company, leaving no room for seed saving or exchange. Farmers growing farm-saved seed will have to sell their crops outside of the non-GM stream, unless they can find informal local markets.

All of this is going to elevate the seed industry to a much more powerful position in the agribusiness chain, making seed companies, including organic seed companies, take-over and merger targets for

¹ J Sweet (2003), “Pollen dispersal and cross pollination” in Birte Boelt (ed.), *Proceedings of the 1st European Conference on the Co-existence of GM Crops with Conventional and Organic Crops (GMCC-03): GM Crops and Co-existence*, Danish Institute of Agricultural Sciences, Research Centre Flakkebjerg.

² Y Brunet et al (2003), “Evidence for long-range transport of viable maize pollen”, in Birte Boelt (2003), *ibid*.

³ R Van Acker et al (2003), “GM/non-GM wheat co-existence in Canada: Roundup Ready® wheat as a case study” in Birte Boelt (ed.), *ibid*.

⁴ “Tomato Seed from Seed Bank Found to be Genetically Modified (2003),” *UC Davis News & Information*, December 18; Indigenous and farming communities in Oaxaca, Puebla, Chihuahua, Veracruz et al (2003),

“Contamination by GM Maize in Mexico Much Worse than Feared,” Mexico City, Mexico, October 9: www.etcgroup.org/article.asp?newsid=407; Iza Kruszewska (2003), *Romania: The Dumping Ground for Genetically Engineered Crops: A Threat to Romania’s Agriculture, Biodiversity and EU Accession*, Asociatia Bioterra, ANPED, Friends of the Earth Europe, Ecosens; Philip Brasher (2003), “U.S. team to monitor biotech field trials,” *Des Moines Register*, Oct 18:

⁵ Birte Boelt (2003), *op cit*.

⁶ Birte Boelt (2003), *op cit*.

⁷ Iza Kruszewska (2003), *op cit*.

⁸ Inter Press Service (2003), “Legalization of GM crops appears imminent”, Nov 10.



bigger companies in the food and feed industry.⁹ In the end, a small set of corporations or corporate alliances will emerge with complete control over the agriculture and food system, controlling both the GM stream, whether it be bulk commodities like Roundup Ready soy or “value-added” GM crops, and the non-GM stream, turning it into an expensive niche market for the rich, much like organic agriculture has become. Just look at Romania, where the only certified non-GM seed available is seed imported by Pioneer Hi-Bred from the US.¹⁰

4 Contamination is aggression against the cultures that created agriculture

Most discussions of contamination focus on the “thresholds” of GM that consumers and industry will accept in non-GM products. But for many people, any GM contamination is an attack on their most sacred, fundamental beliefs. The most glaring example of this is the recent contamination of maize in Mexico.

For the indigenous peoples of Mexico and Guatemala, maize is the basis of life. In the Popol Vuh (creation story of the Maya), maize was the only material into which the gods were able to incorporate the breath of life and the gods used it to make the flesh of the first four people on Earth.¹¹ For other peoples of Mexico, maize is the food of the gods and different gods are responsible for caring for maize at particular stages of its development. For others, maize itself is a goddess.¹² Maize has also been the fundamental food of Mexicans for centuries and thousands of varieties provide an amazing range of flavours, consistencies, recipes, nutrients and medicinal uses. It has kept indigenous peoples alive in the face of discrimination, poverty and plundering. It has become equally key and often equally sacred for peasant communities in Mexico and in many other parts of the world. The vast majority of Mexicans will not hesitate to tell you “we are the children of maize”. So when the people of Mexico discovered that their maize was contaminated by GMOs, they saw it as a violation of what is most sacred to them. Alvaro Salgado of the National Center to Support Indigenous Missions (CENAMI) expressed the popular sentiment: “Contamination isn’t just one more problem. It’s an aggression against Mexico’s identity and its original inhabitants.”¹³

There is no easy way to clean up this contamination while protecting the sacred biodiversity of the people. It is simply a tragedy, which the biotech industry has no interest in accounting for. Contamination, as this case so clearly demonstrates,

Contamination in Argentina and Brazil pays off for Monsanto

Monsanto introduced its GM soybeans into South America through Argentina, where farmers regularly save and exchange seeds. There are no laws that prevent farmers from saving seed and, while there are legal provisions that restrict farmers from exchanging saved seed of certain varieties, it remains a common practice, especially with the recent currency crisis. The US government estimates that 80% of the crop is grown from farm saved seed. In this context, GM soybeans have spread rapidly, accounting for as much as 99% of the present soy crop.¹⁴ The GM soy has also spread to neighbouring countries, where the GM crop was illegal.

Monsanto used the smuggling of GM soybeans to its advantage, working with the illegal GM soy producers to pressure governments to legalise the crop. But now that the GM soy is legal in Paraguay and Brazil, Monsanto wants to put an end to the ‘black market’. In Brazil, where the government has offered an amnesty to farmers who register their crops as GM soy, Monsanto worked out an agreement with certain producer organisations and soybean crushers, cooperatives and exporters to force farmers to pay royalties.

Under the agreement, farmers pay a fee of between US\$3.45 and US\$6.90 a tonne when they drop their harvests off at the elevators. The elevators are responsible for collecting the fees and, in exchange, they keep a percentage. If farmers don’t declare their soybeans as GM they’ll have their soy crops tested, leaving them liable to thousands of dollars in fines and penalties if the tests prove positive, even if they unknowingly planted GM soybeans.¹⁵

Monsanto plans to extend the same system to Argentina. But first it is working with other seed industry players to crack down on seed saving. In October 2003, Monsanto announced it was withdrawing its GM soybeans and holding off on a \$40 million investment in the country due to a “lack of adequate intellectual property protection policy.”¹⁶

This was a cleverly timed contribution to a long-running seed industry push for “extended royalties” and it paid off. In early 2004, the government reconstituted its seed police and announced a proposed global royalty fund that forces farmers who can’t prove that they grew their crops with purchased certified seeds to pay a tax on their wheat and soybean sales. The government will administer the tax and the seed industry will pocket it.¹⁷

⁹ Richard Lewontin (2000), “The Maturing of Capitalist Agriculture: Farmer as proletarian” in Fred Magdoff et al (eds.) *Hungry for Profit: The agribusiness threat to farmers, food, and the environment*, Monthly Review Press: New York.

¹⁰ Presentation by Avram Fitiu of the National Federation of Ecological Agriculture at the workshop *Reconquerir la Biodiversité dans les Fermes* at the European Social Forum, Paris, France, 13 November 2003.

¹¹ Popol Vuh, Part I of Book III and Part II of Book I.

¹² Alfredo López-Austin (2000), *Tamoanchan y Tlalocan*. Fondo de Cultura Económica, México.

¹³ Indigenous and farming communities in Oaxaca, Puebla, Chihuahua, Veracruz et al, (2003), *Contamination by GM Maize in Mexico Much Worse than Feared*, Mexico City, Mexico, October 9. See also ETC Group, “Maize Rage in Mexico: GM maize contamination in Mexico - 2 years later,” *Genotypes*, 10 October 2003: www.etcgroup.org

¹⁴ USDA Foreign Agricultural Service (2003), “Argentina Planting Seeds Annual 2003” *GAIN Report*, April 29.

¹⁵ Rachel Melcer (2004), “Monsanto sees sales rise 22%; posts loss of \$97 million,” *St. Louis Post-Dispatch*, USA, Jan 7; Reese Ewing, “Brazil soy trade to pay Monsanto royalties,” *Reuters*, January 28; Reese Ewing (2004), “Growers register 12 pct of Brazil soy crop as GMO,” *Reuters*, January 15.

¹⁶ Elizabeth Johnson (2003), “Monsanto puts \$40m Argentine investment on hold” *CropChoice News*, October 29.

¹⁷ ETC Group (2004), “Argentina Announces Corporate Welfare for Monsanto”, *Genotype*, 26 February: www.etcgroup.org; David Dechant (2003), “Monsanto wants extended seed royalties”, *CropChoice News*, 22 May: www.cropchoice.com; “Argentina to create royalties fund for soy, wheat” *Reuters*, 20 February 2004; “Monsanto and farmers battle over GM seeds,” *Inter Press Service*, 10 February 2004.



is inseparable from real world power relations, where the people closest to biodiversity, the world's indigenous peoples and peasants, are the most affected. GMOs are profoundly disrespectful of these peoples. Unfortunately this is rarely, if ever, considered by those who develop, authorise and produce GM crops.

5 The poor will suffer the most

There is simply no way that poor countries of the South will be able to implement the kind of co-existence measures being put forward in Europe. You only have to look at the situation with pesticides to understand the disparity in regulations and implementation between the North and the South. Whenever GMOs are introduced into Southern countries, contamination is inevitable, even if the GMOs come in as grain for food aid. But it's not just the ease with which contamination can occur that is so problematic for the South; it's also the implications.

The stakes are much higher in the South, since the poor are highly vulnerable to any disruptions in local agriculture, local food supplies, and local customs. Southern countries are also in a weak position vis-à-vis their exports. While they rely on agricultural exports for much of their foreign exchange, the export markets are controlled by Northern companies, who are free to block exports from Southern countries if they fail to meet the

thresholds for contamination set by importing countries or even the companies themselves. The push for GM comes from the North, but it is the North that will end up dominating the non-GM market, if GMOs make their way into the South.

The only practical option for Southern countries is to close their borders to all imports of GMOs. But doing this takes a level of political courage that is unfortunately absent from many governments in the South. The unrelenting pressure from the biotech industry, the US government and their allies is often too much. In this context, support for "co-existence" in the North is an attack on solidarity with the people of the South. It will only encourage the spread and domination of GMOs over the South's agriculture.

Getting back to basics

There is no acceptable justification for GMOs. There is already more than enough knowledge and technology for farmers to practice agriculture in ways that will feed the world's population, look after the planet, and support the well being of rural communities. Who cares if these practices aren't profitable for big agribusiness? GMOs are obstacles that prevent us from moving in the right direction and we need to treat them as such. For GRAIN, the only possible position in support of pro-farmer ecological agriculture and in solidarity with the world's peoples, is a complete rejection of GMOs. 2

