

At the end of 2003, Friends of the Earth's giant tomato toured Europe to raise awareness about the US attempt to force GM food on Europeans.



Eventually, once the panel has been selected, it will take evidence (in secret) from both sides before coming to a ruling towards the end of 2004. Notably absent in the process will be civil society representatives, who are prevented from officially participating and even from knowing what is being discussed. While informal sources in Brussels expect a WTO ruling against Europe's restrictive stance on GMOs, the EU will have the right to appeal. The WTO Appellate body will then reconsider the case and come to a final and legally binding ruling 3-6 months after the first ruling. If Europe loses, it will have to comply with the ruling: either adapt its legislation or face heavy trade sanctions.

This battle is not only about Europe: the Bush administration claims that the European moratorium is not only harming US farmers but also stopping developing countries from adopting the controversial technology. However Egypt, the only African country originally



The first shots in the transatlantic trade war over Europe's position on GMOs were fired in May 2003, when the US, Canada, Argentina and Egypt registered a formal complaint with the World Trade Organization (WTO). They complained that Europe's moratorium on new products and the various national bans were a barrier to trade costing the US an estimated \$300 million in lost exports. The complainants were backed up by a number of third parties including Australia, Chile and Mexico.

To date, the dispute has hardly gotten off the ground. In August, the US, Argentina and Canada requested that the WTO form a Dispute Panel, the usual next stage in any trade conflict. However, attempts to decide who should sit on the Panel have slowed the process, with each side repeatedly rejecting the other's suggestions. By the end of 2003 there was still no agreement about the identity of the panelists.

supporting the US position, withdrew even before the consultation process began. In a letter to the European Consumers' Organization, the Egyptian government announced its decision not to proceed "in conscious emulation of the need to preserve adequate and effective consumer and environmental protection". The move angered US trade negotiators, who reportedly tore up a draft free trade agreement with the North African country.

The European Commission has issued statements "regretting" the US move. They also take issue with President Bush's accusations that European policy is hindering hunger relief in Africa, calling the allegations "not founded". In one of their statements, the Commission points to opinion polls in the US that show "a whopping 92 percent of Americans support labeling".

Friends of the Earth Europe's Bite Back Campaign:
www.foeeurope.org/biteback/index.htm

“We strongly object that the image of the poor and hungry from our countries is being used by giant multinational corporations to push a technology that is neither safe, environmentally friendly nor economically beneficial to us. We do not believe that such companies or gene technologies will help our farmers to produce the food that is needed in the 21st century. On the contrary, we think it will destroy the diversity, the local knowledge and the sustainable agricultural systems that our farmers have developed for millennia, and that it will thus undermine our capacity to feed ourselves.”

Statement signed by 24 delegates from 18 African countries to the United Nations Food and Agricultural Organization.

the seeding of global opposition **nine**

the tarnished record of golden rice



“If anyone tells you that GM is going to feed the world, tell them that it is not. To feed the world takes political and financial will – it’s not about production and distribution.”

Steve Smith, head of Novartis Seeds.

“The public relations uses of Golden Rice have gone too far. The industry’s advertisements and the media in general seem to forget that it is a research product that needs considerable further development before it will be available to farmers and consumers.”

Gordon Conway, President of the Rockefeller Foundation, the chief funder of the Golden Rice project.

In light of the deluge of controversy, consumer rejection and increasing opposition to GM crops, biotech companies needed to gain public support. “Golden rice” seemed to be the perfect tool to convince global leaders and the public that GM crops were indispensable for feeding the world and overcoming

Rice farmers in Bangladesh.

Rice farmers in Bangladesh.



gm food unfit to feed the world

“Seeking a technological food fix for world hunger may be [...] the most commercially malevolent wild goose chase of the new century.”

Dr Richard Horton, Editor of the scientific magazine The Lancet, <http://news.bbc.co.uk/1/hi/sci/tech/3122923.stm>.

“Biotechnology and GM crops are taking us down a dangerous road, creating the classic conditions for hunger, poverty and even famine. Ownership and control concentrated in too few hands and a food supply based on too few varieties of crops planted widely are the worst option for food security.”

Statement by the international relief organization Christian Aid.

“There are still hungry people in Ethiopia, but they are hungry because they have no money, no longer because there is no food to buy. [...] We strongly resent the abuse of our poverty to sway the interests of the European public.”

Ethiopian Tewolde Berhan Gebre Egziabher, who runs the Ethiopian environmental protection authority.

“It is only too obvious to concerned scientists, farmers and citizens alike that we are about to repeat, step by step, the mistakes of the insecticide era, even before it is behind us. I would even argue that these new miracle technologies are mostly not necessary, let alone desirable, to solve the world's food security problem.”

Hans R. Herren, Director General, The International Center of Insect Physiology and Ecology, Kenya; winner of the 1995 World Food Prize.

malnutrition in developing countries.

In 1999, Swiss and German scientists announced the development of a “golden rice” genetically engineered to produce beta-carotene, a substance which the body can convert to Vitamin A. The new rice was quickly heralded as a miracle cure for Vitamin A deficiency (VAD), a severe condition afflicting millions of people in developing countries, especially children and pregnant women. At first glance, golden rice appeared to be a godsend. But a closer look reveals a tarnished truth.

eating mountains of rice

Golden rice will likely do little to ameliorate VAD because it produces so little beta-carotene – just 1.6 micrograms per gram of rice ($\mu\text{g/g}$) at present, with a goal of 2.0 $\mu\text{g/g}$. Even if scientists reach this goal, a woman

would need to eat 16 pounds (7.25 kilograms) of cooked rice every day in order to obtain sufficient Vitamin A, if golden rice were her only source of the nutrient. A child would need 12 pounds (5.44 kilograms). From a more practical perspective, three half-pound (.22 kilogram) servings of cooked golden rice per day would provide only 10 percent of her daily Vitamin A requirement, and less than 6 percent if she were breastfeeding. Yet even these modest contributions are uncertain. In order to absorb beta-carotene, the human body requires adequate amounts of zinc, protein and fats, elements often lacking in the diets of poor people. Those with diarrhea – common in developing countries – are also unable to obtain Vitamin A from golden rice.

“A single nutrient approach towards a nutrition-related public health problem is usually [...] neither feasible nor desirable.”

John R. Lupien, Director, Food and Nutrition Division,

Food and Agricultural Organization, United Nations.

Nutrition experts thus confirm what common sense tells us – a balanced, diverse diet supplying a full range of foods and nutrients is the only sound way to promote health and prevent VAD and other nutritional deficiencies. A preschool child's daily requirement of Vitamin A can be met with just two tablespoons of yellow sweet potatoes, half a cup of dark green leafy vegetables, or two-thirds of a medium-sized mango. And unlike golden rice, these vegetables supply other micronutrients as well and are available in many developing countries where people are affected by VAD.

source: www.foe.org/camps/comm/safefood/gefood/factsheets/ricefacts.html

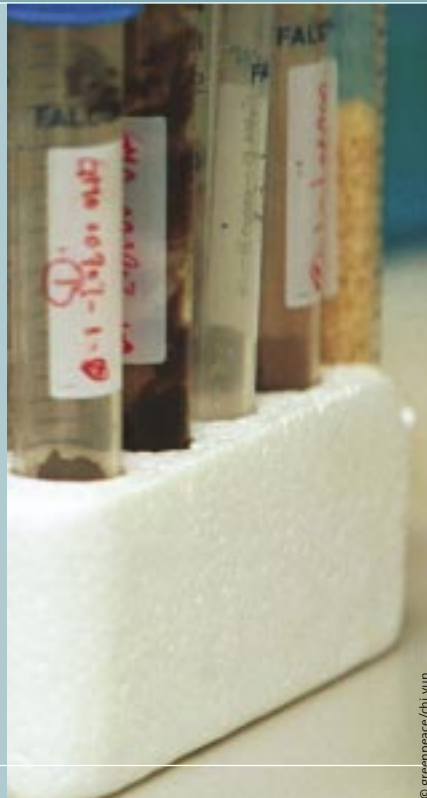
more information:
genetic resources action international (grain):
www.grain.org
Greenpeace: www.greenpeace.org

“I think consumers will boycott the whole wheat industry. [...] Millers have no choice, consumers do. If the consumers don't accept GM wheat, then the millers won't. The consumer is king.”

Dong Jin Chung, senior vice chairman of KOFMIA and president of the Daehan Flour Mills (CropChoice News, May 2, 2003).

the seeding of global opposition ten

monsanto's wheat dreams deferred



In December 2002, Monsanto applied for commercial authorization to cultivate GM wheat in Canada and the US, anticipating its introduction in both countries in 2004-2005. The new variety that Monsanto has in the pipeline is a Roundup Ready herbicide-tolerant wheat.

The introduction of wheat in the US and Canada is very controversial, and many farmers in these countries reacted skeptically to Monsanto's GM wheat plans, particularly given the possible negative economic consequences.

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“We don't want GMO wheat.”

Hi Sang Lee, chairman of the Korea Flour Mills Industrial Association (KOFMIA). KOFMIA represents nearly 100 percent of Korea's flour millers. (CropChoice News, May 2, 2003).

The National Farmers Union of Canada and the Canadian Wheat Board expressed in the strongest terms their concerns that GM wheat will damage exports. In the US, farm representatives in North Dakota and Montana have sought legislation restricting GM wheat production, saying that their customers will not accept GM wheat. In a letter to the Canadian Prime Minister, over 300 industry associations, local governments, citizen groups, experts and researchers said: “We represent diverse constituencies and interests, but we are unified in asking that you act immediately to prevent the introduction of GM wheat into Canadian food and fields unless the concerns of Canadian farmers, industry, and consumers are addressed adequately.”

Importers from the rest of the world are reacting to Monsanto's plans to market GM wheat. For example, a US Wheat Associates

survey on the Asian markets found overwhelming opposition: “100 percent of the markets surveyed in China, Korea, and Japan indicated that they would not buy Roundup Ready wheat. 82 percent surveyed in Taiwan, and 78 percent in South Asia said they would not buy genetically modified wheat.”

In Europe, the major wheat importers had similar reactions. Antonio Costato, CEO of Italy's biggest miller Grandi Molini Italiani, confirmed the company's opposition to GM wheat: “We will not only avoid buying GM wheat, but we will probably be forced to completely avoid importing from those countries/regions where it is known that GM wheat is grown.”

Opposition continues to blossom on every continent. Millers in Latin America, like the country's largest wheat importer Molinos de Costa Rica, wrote a letter to US Agriculture Secretary Ann Veneman informing the

Department of Agriculture that they will not buy wheat from the US if it commercializes genetically modified varieties. In Africa, Ethiopian millers have announced similar measures.

The rejection of GM wheat is gaining momentum within the US and Canada as well as at the international level, putting a brake on Monsanto's ambitious plans. The biotech giant has already announced that it will not seek registration for the grain for production in 2004, as was initially planned.

more information:

GE Food Alert Website:

www.gefoodalert.org/pages/home.cfm



the seeding of global opposition eleven

people vs. monsanto in colombian cotton fight

In 2002, the Colombian government authorized Monsanto's GM Bt cotton for "pre-commercial" purposes. The authorization, granted by the relevant agricultural authorities, was the result of a process full of irregularities. There were no adequate environmental impact assessments, and the approval was granted after only two field trials in a single location.

Moreover, the role of Monsanto in the authorization reflects a biased decision-making process. Monsanto authored the studies and the final report about the performance of the Bt cotton, and organized the field trials. In addition, a Monsanto employee was the vice president of the institution that advised the government on the final authorization of GM crops.

Colombian civil society was uneasy about the impacts of Bt cotton in Colombia, particularly fearing the effects on native varieties as the country is a center of diversity for cotton. Therefore, Colombian NGOs initiated a popular legal action against the government's decision in February 2003.

In October 2003, a Colombian administrative tribunal suspended Monsanto's authorization to import, grow and test genetically modified cotton. The tribunal ruled that the import and testing of this GM cotton violated the collective rights to a healthy environment and public health, as well as the consumer's right to choose and the right to public participation in decisions that can affect the environment.

The tribunal agreed with the plaintiffs that the lack of an environmental license granted by the Environment Ministry and the absence of the required Environmental Impact Assessment (EIA, which Monsanto should have prepared) contravene Colombian environmental laws.

The tribunal ordered the Environment Ministry to produce an EIA in accordance with the law, and charged Monsanto with carrying out such an assessment. Finally, the tribunal ordered the Public Defender's Office to investigate the process due to potential corruption.

This decision constitutes an important victory for environmentalists in Colombia, as it is the country's first court decision on the introduction of GMOs. It also reinforces the right to public participation in administrative decisions that can affect the environment, human health and the livelihoods of Colombian people.

source: *Semillas Colombia*:
www.biodiversidadla.org/article/view/3866
[in Spanish]

more information:
Friends of the Earth Colombia:
www.censat.org [in Spanish]

After ten years of commercialization of GM crops, there is increasing evidence that genetically modified crops are leading agriculture down an unsustainable path.

The challenges faced by the main producing countries - the US, Canada and Argentina - in planting genetically modified crops are key to assessing the potential environmental, health and socioeconomic impacts of GMOs. Other countries have begun planting for experimental, commercial or pre-commercial purposes, and their experiences will also help to illuminate the reality of GM crops. For example, India and Indonesia have started planting Bt cotton, and Spain has gained considerable experience with Bt maize. The UK initiated a farm-scale evaluation of GM crops in 1999. Disturbingly, GM corn has been found in the field in Mexico, a center of origin of corn.

chapter three | ten years later

broken promises and unsustainable agriculture



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Corn growing in the Garcia Rovira province, Colombia.

“What Monsanto wished for from Washington, Monsanto and, by extension, the biotechnology industry got. If the company's strategy demanded regulations, rules favored by the industry were adopted. And when the company abruptly decided that it needed to throw off the regulations and speed its foods to market, the White House quickly ushered through an unusually generous policy of self-policing.”

*‘Biotechnology Food: From the Lab to a Debacle’,
The New York Times, January 25, 2001.*

Throughout these ten years of commercialization, the US biotech industry has tirelessly asserted that GM crops are safe, that they present no risk to the environment or human health, and that they provide many benefits for farmers and consumers, such as higher yields and better food quality.

Genetically modified foods have been on US supermarket shelves for a decade. Over 50 percent of processed foods in the US contain some GM ingredient, and over 70 million US acres have been planted with GM crops. Yet the debate over GM crops in the US has been relatively tame in comparison with the outcry on the international level, where the introduction of GM foods has led to enormous turmoil, wide opposition and outright rejection.

united states: land of gmo freedom

In the United States, GM foods are considered to be substantially equivalent to their conventional counterparts. The regulatory system was founded on the notion that GM foods are unchanged, hence safe, and thus require no mandatory safety testing and no specific regulation. It is not surprising that the US government has allocated scarce funding for research into the potential

enable the FDA to ensure that GM crops are safe to eat: toxins and anti-nutrients that may affect food safety and nutrition are not always evaluated; the methods to determine allergenicity are inadequate; data summaries often lack sufficient detail or information to determine safety; and so on and so forth.

The fact that the US government continues to refuse mandatory safety testing and labeling of GM crops and food has infuriated a growing number of US citizens. Several legal actions have been filed, and hundreds of thousands of people have called for labeling and testing. Moreover, several incidents, including the StarLink scandal and the contamination of biopharmaceutical crops, have underlined the weaknesses and flaws in the US system.

the starlink scandal

“I think we’re just hitting the tip of the iceberg here. We just don’t know what’s in those elevators, and when we start letting this stuff go and it’s tested, it’s going to get worse.”

Iowa grain elevator operator, The Washington Post, October 25, 2000.

StarLink is a variety of GM maize authorized in the United States only for animal feed purposes.

ten years later: broken promises and unsustainable agriculture **one**

uncontrolled contamination in the united states

health and environmental impacts of genetically engineered foods. The US Department of Agriculture, for instance, spends just US\$3.6 million out of a \$193 million research budget on studies that examine the possible environmental impacts of GMOs.

One of the main reasons for the lax regulatory system in the US is the enormous influence of the biotechnology industry, and particularly the Monsanto corporation, upon the government.

questioning the safety of gm crops

In recent years, the debate about GM crops in the US has heated up, and the ineffective regulatory system has been subject to increasing criticism. For example, the policy of the US Food and Drug Administration (FDA) for evaluating the safety of GM crops has been deemed inadequate. A 2003 report by the Center for Science in the Public Interest concluded that the regulatory process does not

It was not allowed for food consumption because of the potential allergenicity of the protein Cry9C that was genetically engineered into the maize. Nevertheless, in 2000, Friends of the Earth campaigners discovered StarLink in ‘Taco Bell’ taco shells, a maize-derived food product. By extension, this meant that StarLink was present in the human food chain.

The magnitude and gravity of the StarLink contamination was breathtaking. More than 300 corn products were recalled across the United States. Despite the fact that StarLink was only planted on 0.4 percent of total US corn acres, the numbers of acres contaminated was much greater. More surprising, although the contamination was only supposed to be found in StarLink brand seeds, it was later reported that the Cry9C protein was found in another 80 varieties of yellow corn seed. Even more unexpectedly, it was found in a white corn product, when it was previously believed that contamination could only happen between varieties of yellow corn.



Larry Bohlen of FoE US tested supermarket products for illegal Starlink corn.

StarLink contamination was not contained to the US, but was also detected in 2000 and 2001 in food shipments to Japan and South Korea. This led to a series of recalls in these countries as well. At the June 2002 United Nations World Food Summit in Rome, Latin American NGOs announced that StarLink had been found in US food aid in Bolivia (see page 21). And at the end of December 2002, StarLink was discovered again in Japan.

The StarLink case provides clear evidence that GMO contamination is one of the most urgent problems posed by GMO releases into the environment. Once an organism is released, the consequences are unpredictable and the impacts unknown. The fact that a released organism is very difficult to recall has been ignored and downplayed by US authorities, but the problems of real life contamination illustrate the fact that US regulatory systems for GMOs are clearly inadequate.

"You'd think that the North American agricultural export industry would have no choice but to bow to the demand: keep GM seeds far away from their unaltered counterparts and in general move away from the controversial crops. You'd be wrong. The real strategy is to introduce so much genetic

that they do not produce naturally. A few known examples include a contraceptive, potent growth hormones, a blood clotter, blood thinners, industrial enzymes, and vaccines.

In November 2002, the first significant case of contamination by biopharmaceuticals was reported. The company involved, ProdiGene, conducted a range of open-air testing of crops containing pharmaceuticals and industrial products. In this incident, Prodigene failed to properly remove all remnants of GM maize from a field cultivated in 2002. Consequently, some seed remained in the ground, and these 'volunteer' seeds germinated in 2003, thereby contaminating a crop of soy. Subsequently, when the soy had been harvested and was at a grain elevator in Nebraska, it was discovered that it had been contaminated by the ProdiGene maize. 500,000 tons of soy worth some \$2.7 million were quarantined by the US Department of Agriculture and later ordered destroyed.

This example should prove that open-air cultivation of biopharmaceutical crops threatens global food supplies, jeopardizes non-biopharmaceutical crops with contamination, and may pose potential problems for wildlife and ecosystems. In the US, some 300 open-air cultivations took place between 1991 and 2002.

73.1 million pounds (33 kilos) in two sets of applications between 1996-8 and 2001-3.

There are many factors that can produce an increase in the average amount of pesticides applied per acre, but reliance on a single herbicide (the primary method for managing weeds on fields with GM herbicide-tolerant varieties) has been identified as the main cause.

"Reliance on a single herbicide as the primary, if not sole method for managing weeds on fields planted with HT varieties, and the resulting indeed inevitable ecological responses to such intense herbicide selection pressure remains the primary factor that has led to the need to apply more herbicides per acre to achieve the same level of weed control."

Charles Benbrook, "Impacts of genetically engineered crops on pesticide use in the United States: The first eight years", November 2003.

more information:

FoE United States website:

www.foe.org/camps/comm/safefood/gefood/index.html

GE Food Alert website:

www.gefoodalert.org/pages/home.cfm

pollution that meeting the consumer demand for GM-free food is seen as not possible. The idea, quiet simply, is to pollute faster than countries can legislate –then change the laws to fit the contamination."

The Guardian, January 21, 2001.

biopharmaceuticals contamination

"Plans to add drug genes to food crops prove we've learned nothing [...] Why on earth are companies adding these genes to plants which through pollination or mix-ups with seeds could allow the genes and their products to find their way into food?"

The New Scientist, July 2002.

The US experience with GMOs provides another example of major concern for the environment: 'biopharmaceuticals'. 'Biopharming' is an experimental application of biotechnology in which plants are genetically engineered to produce pharmaceutical proteins and chemicals

In October 2003, Monsanto announced that it was abandoning biopharming technology and closing its 70-person division. This followed extensive lobbying of the US government by consumer and environmental groups for tougher regulations, as well as outspoken opposition by the food processing industry, which is concerned about the health risks faced by customers through product contamination.

pesticide use in gm crops on the rise

One of the key arguments of the biotech industry has always been that GM crops have environmental benefits, in particular that the herbicide-tolerant (HT) varieties need fewer pesticides.

However, recent studies on the use of pesticides in GM varieties showed a progressive increase in their application between 1996 and 2003. The volume of pesticides applied to herbicide-tolerant GM corn, soybean and cotton increased

biosafety protocol contradicts us gmo policy

The Biosafety Protocol is a United Nations agreement adopted in 2000 in Montreal, Canada that seeks to protect the environment from the potential risks of GMOs. It became law on September 11th 2003, and by early 2004 over 80 countries around the world had become party to this treaty.

One of the Biosafety Protocol's main objectives is the regulation of the transboundary movements of GMOs. The Protocol is the first international agreement that clearly shows that GMOs are different from conventional organisms and therefore require different treatment. The Protocol thus contradicts policies held by some countries, such as the US, which maintain that GMOs are not different from the conventional plants and animals from which they are derived.

more information:

www.biodiv.org/biosafety/default.aspx

“In Argentina, the ‘success’ of the GM soybean story must largely be attributed to marketing by the seed companies involved, rather than scientific evidence and farmer experience.”

Walter Pengue, agricultural engineer specialized in genetic improvement at the University of Buenos Aires, Argentina.

ten years later: broken promises and unsustainable agriculture **two**

argentina shows gm does not ‘feed the world’



Argentina is the world’s second largest producer of genetically engineered crops, in particular soy. Eight years after the introduction of GM soy, the biotech industry’s claims that its crops are environmentally and socially benign have yet to bear fruit. Increasing evidence shows that GM soy is exacerbating the existing agricultural model, which is increasing poverty, damaging the environment and threatening food security for the vast majority of Argentineans.

During the last quarter of a century, soybean production increased at a swift rate from an area of 38,000 hectares in 1970 to approximately 13 million hectares in 2003. Around 70 percent of the soy harvested is converted into oil, and most of it is exported. Argentina is the source of 81 percent of the world’s exported soy oil, and 36 percent of the soybean meal.

GM soy was introduced in Argentina in the last half of the 1990s. Argentinean farmers started using the GM ‘Roundup Ready Soy’ sold by Monsanto in 1996, and after a few years practically all of the soy produced in the country was genetically modified.

smaller yields and more herbicides

Two of the biotech industry’s main arguments are that GM crops increase yields and that they require fewer herbicides.

The experience in Argentina shows exactly the opposite. Roundup Ready soy does not have higher yields. The increase in Argentinean soy production is the result of an increase in acreage, for example by the replacement of other crops with soy or by using more forestland, contributing to deforestation.



© greenpeace/buyse

Roundup Ready soy has proven to require more, not less, herbicide than conventional soy. In 2001, more than 9.1 million more kilograms of herbicide were used for GM soy in comparison with non-GM. The use of glyphosate herbicide (sold by Monsanto) doubled from 28 million liters in the period 1997-98 to 56 million liters in 1998-1999, and reached 100 million in the 2002 season.

Moreover, weeds resistant to Roundup Ready soy have already been identified in Argentina, and this is contributing further to the increased use of herbicides. This weed resistance has prompted the use of highly toxic herbicides with Roundup Ready soy, and farmers have started using herbicides, including some that are banned in other countries (including 2,4-D, 2,4-DB, Atrazine, Paraquat and Metsulphuron Methyl).

more poverty

A myth constantly promoted by proponents of GM crops is that they are key to solving global hunger and poverty. The example of Argentina, the world's second largest producer of GM crops, demonstrates the opposite.

Millions of Argentines go to bed hungry each night. There are many causes for the current situation in Argentina, but it is clear that the promotion of GM soy is further boosting the current model of export-oriented agriculture. This model is enriching a few and relegating the majority of Argentines to poverty. Within the past decade, 160,000 small farming families have been forced from the land, unable to compete with large farms. GM soy has exacerbated this trend towards large-scale, industrialized agriculture, and is thus aggravating poverty.

potential health risks

Faced with an increase in poverty, large amounts of soy and a lack of other agricultural products, the Argentinean government began to promote soy as a healthy alternative to traditional foodstuffs such as meat and milk. A campaign called 'Soja Solidaridad' (Soy Solidarity) was launched. Soup kitchens started serving soy-based meals, and cookbooks were written with soy-based recipes. As a result, many people are consuming soy-based foods on a daily basis.

This entails potential risks for the health of these populations. Although soy can form part of a healthy diet, there is a large body of scientific evidence showing that an over-reliance upon soy can have nutritionally damaging effects. Too much soy can inhibit the absorption of calcium, iron, zinc and Vitamin B12, and may produce problems like early onset of puberty in girls.

source: Grupo de Reflexion Rural Argentina.

“I’ve been using my own seed for years, and now farmers like me are being told we can’t do that anymore if our neighbors are growing (genetically modified) crops that blow in. [...] Basically, the right to use our own seed has been taken away.”

Percy Schmeiser, Canadian farmer.

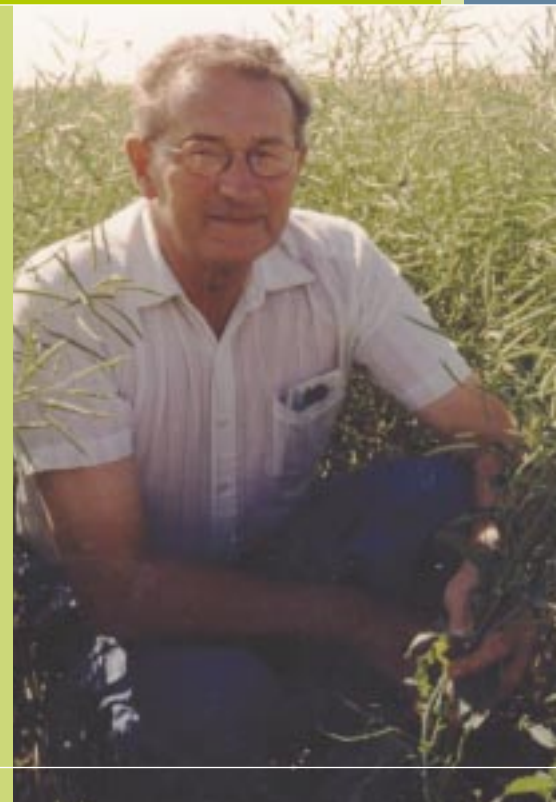
Percy Schmeiser in his fields in Saskatchewan, Canada.

ten years later: broken promises and unsustainable agriculture **three**

corporate control of seeds in canada

The customary right of farmers to save, use and exchange their seeds and other planting material is one of the cornerstones of agricultural practices. Traditionally, farmers have saved their best seeds and used them the following year. Now seed companies sell genetically modified seeds to many farmers, but with the agreement that they will only be used for one season. This means that farmers are forced to buy the company's seed each year.

US biotech giant Monsanto is suing US and Canadian farmers for saving their seeds and breaching patent rights. But even farmers who never bought GM seed are at risk of losing their rights to their own seeds due to genetic contamination. Monsanto is suing farmers whose fields have been contaminated by their patented GM varieties, despite the fact that those farmers never voluntarily grew GM crops. The case of Canadian farmer Percy Schmeiser is the perfect illustration of the new threats that GM crops pose to the livelihoods of farmers all over the world.



My neighbors and 40 percent of farmers in Western Canada plant GM rapeseed. Since 1993, Monsanto Canada has been licensed to use technology that will make plants resistant to its glyphosate herbicide, Roundup. Farmers can then use Roundup as a broad-spectrum herbicide without damaging their GM crop. In 1995, Canada approved the uncontained release of GM rapeseed, and in 1996 local companies started selling GM varieties.

Although Monsanto owns the gene and the technical know-how, they did little to contain their invention once it entered the environment. In 1998, Monsanto inspectors entered my land without permission and took rapeseed. They accused me of planting GM rapeseed without a license and prosecuted me. If Monsanto suspect farmers are growing GM rapeseed without a license, they take away rapeseed plants for inspection. If test results are positive and the license fee of Canadian \$15 per acre and contract have not been met, legal proceeding for infringing Monsanto's patent follow.

In my case, GM plants had seeded themselves on my land and they pollinated my conventional rapeseed. The following planting season I tried to contain GM contamination by buying new seed, but 20 percent of my harvest was still contaminated.

violation when I spray my crop with Roundup and activate the innovation - the gene that confers glyphosate resistance.

When this gene incorporates itself into a seed or plant, what are Monsanto's rights? The seed and plants are the farmer's property. GM rapeseed has the ability to intrude where it was not planted. It has the unique ability to replicate itself. I believe Monsanto lost its right to exclusivity when it lost control of its invention. How can farmers avoid GM rapeseed getting into their crops and becoming a contaminating weed?"

organic farmers sue big corporations

"Since wheat is the cornerstone of prairie agriculture, and essential for organic crop rotations, losing wheat to genetic contamination would devastate organic farming in Saskatchewan. [...] We feel we have no choice left but to pursue legal action. This is a matter of survival for organic agriculture in Saskatchewan."

Arnold Taylor, President of the Saskatchewan Organic Directorate.

Organic farmers' communities in Canada are fighting against the genetic contamination of their organic crops. In January 2002, two



Percy on tour with Polish farmers.

© Iza Kruszezewska

testimony by Percy Schmeiser about his fight against Monsanto

"My name is Percy Schmeiser. I am a Canadian farmer. For the last 50 years, my wife Louisa and I have farmed 1441 acres in Bruno, Saskatchewan. We have built up a farm that works well. Rapeseed is an important crop for us, and we used to sell it all over the world for cooking oil and cattle feed. Like most farmers in Western Canada, I collected and stored my own seed. After years of selection, I had a variety that gave a good yield, was quite resistant to local diseases and was relatively weed free.

In 1997, I sprayed Roundup as usual on the weeds and stray rapeseed plants growing around my fields. I was surprised that so much rapeseed survived the application. Had I got the herbicide concentration wrong? I now realize this was the first sign that my fields had been contaminated by genetically modified (GM) rapeseed.

In Canada there is no law against carrying rapeseed in open trucks or leaving cut rapeseed in the field. This makes it easy for the small seeds to spread. It is also impossible to contain pollen flows. The gene responsible for glyphosate resistance is a dominant gene and rapeseed is an open-pollinated plant. When a GM plant crosses with conventional rapeseed, resistance will be carried into the following generation. In my fields the GM variety was thickest along the roadway. There was little in the field itself. When I received the court summons I wondered why anyone would think I had deliberately mixed GM rapeseed with my own seed. The only advantage of growing GM rapeseed is its resistance to Roundup.

If farmers spray Roundup on a mixed GM and non-GM crop they can expect big losses. In my defense I argue that possessing the seed does not violate Monsanto's patent. It becomes a

organic farmers from Saskatchewan filed a class action lawsuit against biotech giants Monsanto and Aventis on behalf of all certified organic farmers in Saskatchewan. The aim of the suit was to obtain compensation for damages caused by the introduction of Aventis' and Monsanto's GM canola, and an injunction that prevents the introduction of Monsanto GM wheat in Saskatchewan. The suit also aims to make the companies liable for genetic contamination as well as trespass, negligence, and environmental pollution.

more information:

Percy Schmeiser's website:

www.percyschmeiser.com

Saskatchewan Organic Directorate:

www.saskorganic.com

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