

# MARCH/APRIL 2005 SFI E-zine

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## Upcoming Events

### **SFI Corvallis**

Dr. Elaine Ingham teaches three in-depth workshops at the Soil Foodweb, Inc. Laboratory in Corvallis, Oregon. The workshops include classroom instruction, hands-on laboratory work and field demonstrations.

#### **October 15—17, 2005**

Introduction to the Soil Food Web Workshop

[PDF registration form](#)

#### **October 19—20, 2005**

Compost Technology Workshop

[PDF registration form](#)

#### **October 20—21, 2005**

Compost Tea Technology Workshop

[PDF registration form](#)

In-depth [Description of the three workshops](#) are available as a PDF download.

To register download the corresponding workshop registration form.

For more information contact Twila or Matt at (541) 752-5066 or email

[info@soilfoodweb.com](mailto:info@soilfoodweb.com)

**May 13 - October 22, 2005 ( if the May 13<sup>th</sup> class fills we will be offering another class May 20)**

### **Microscope class. Register now to secure your place!**

Light Microscope Class - SFI Corvallis

[PDF registration form](#)

This class will give you the ability to assess your own compost teas. Discover the difference between fungal hyphae and organic matter; recognize bacteria, protozoa and nematodes.

Cost: \$200 per person (limit 20) all supplies will be provided in the class as part of the fee, as well as the new Microscope Manual, microscopes are an additional cost.

Two scopes have been recommended by Dr. Ingham. Alexis J-model \$400.00 or Leica CME-\$1200.00 (includes case). If you want to bring your own scope please contact us at the lab to discuss the specific requirements and be prepared to “upgrade” if necessary. To register contact Twila or Matt at (541) 752-5066 or email [info@soilfoodweb.com](mailto:info@soilfoodweb.com)

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## **1. Apologies from Elaine**

I need to apologize to all about being out-of-communication for the last two weeks. And before that, being a bit out of touch because of travel.

I have been teaching classes every day, all day for the last many weeks, in New Zealand, Australia, New York, and Corvallis. I’ve been run a little ragged! I’ve been trying to get some down time, because the days have been a bit intense. Lots of fun, and I love the interactions with people, but I have been bad about e-mail.

Please forgive me!

I hope you will all bear with me! I promise I will be good now and get back to the e-mails and communicate properly with people again. As far as I know, I have only one trip in the month of April, so I should be here most of the month.

I have the update on the Compost Tea Brewing Manual done. Everyone who has a copy of the old manuals will be able to copy the new pages, because I will put them in the e-zine over the next couple months.

The Compost Manual is about done. Have I said that before? Maybe it will really happen this month!

## **2. Corvallis Lab is moved!**

Soil Foodweb Inc. Corvallis has MOVED!!!!!! The staff did an amazing job getting everything moved with a minimum of fuss and craziness. Or maybe I just didn’t see the craziness and angst because I was teaching 10 hours a day, every day during that time. I had my own angst. Grin!

PLEASE COME VISIT!!!!!! We’d like everyone to see the new facility.

We will be putting in a compost tea brewing center, so we can train people to make tea properly.

We will have a compost production center, with ALL the different ways of making compost right here so people can compare. Worm composting, vertical composting, back-yard piles, kitchen waste piles, static piles and real, properly made wind-row piles! OK, we have to get a turner first, so we will borrow a local one for awhile. We have a few acres so we can make reasonable size piles. Hands-on training will be offered! Once the composting piles get started – give us a couple months.

The inaugural introductory class, compost class and compost tea class have been done at the new facility, and all have enjoyed the new area, despite some bugs that had to get worked out. The air ducts were a bit.... ahem, well, there was some stuff in them that was a tad indescribable. You don't want to know, but typical of what happens to air ducts after ten years of use.

So, the new address is 728 Wake Robin Ave., Corvallis, Oregon 97333

We share the building with Sustainable Studies Institute (SSI), with Earth Fortification Supply Company, the new Compost Tea Company (name not yet decided), and – new! – the Compost Tea Museum!!!!!!

Read below about this new effort.....

### **3. COMPOST TEA BREWER MUSEUM**

Along with the new building, along with Earth Fortification Supply starting up, and the Sustainable Studies Institute getting going again, we are going to start a Compost Tea Brewer Museum.

The idea is to have all the machine designs on display, so people can stop in and see them all at one place, and make decisions about which fits their needs best. Not all designs work for all people. Which one is best for you?

What are the cleaning issues? Quality issues? If the same compost is used, but the manufacturers “special mix for their machine”, what biology ends up in the tea?

Those who want to donate an old tea brewer and get a charitable deduction for doing that, please send it to the Sustainable Studies Institute. Contact Elaine so we can figure out the logistics.

At SFI right now we have one of the new GEO-TEA brewers, two 25 gal Microbe-Brewers, two small KIS 5 gal machines (my favorite small size brewer of all time, so far), an Alaska Giant, and several Soil Soup machines. I hope we will be getting a couple different sizes of KIS brewers, a Bruce Deuley machine, a couple EPM machines, and a 100 gallon GSI machine.

We have tested, or will be testing, each of those machines, and the results will be posted on the Earth Fortifications website. (Have to have a way to fund the maintenance of the website, and the testing! So – product sales will fund that!)

People can use the biological information to choose which machine grows which kind of organism's best, in standard conditions of water, compost, and care. The only thing that will be different will be the machines, and the foods added. The foods used will be what the manufacturer says is the proper recipe.

Manufacturers of machines, please consider that SSI will trade testing of brewers in exchange for SSI keeping the machine for the museum. Of course, we need to carefully and clearly define exactly what testing is being offered. Several people we worked with in the past assumed that when they asked us to do testing, that we'd do it for free. That isn't possible! Technicians get paid for their time, so there must be a clear benefit to the lab to enter into a testing agreement. Testing equal to half the cost of the tea brewer will be performed, and the testing to be done has to be clearly set forth and agreed to in advance.

As always, we would want to make sure that your machine can do a great job of making top quality compost tea! We cannot tell you what to do to change your machine in order that it will make top quality tea, but we will offer ideas and suggestions. It is up to you to make changes and implement them. It would be a good idea to change the machine at SFI so the modifications can be checked! The new machine design would need a new testing agreement, of course. Once testing is completed, SSI wants the right to post results from the machine on the internet.

Questions? Concerns? Please let me know. Elaine

## **4. Heavy Brown Paper Covers for Compost**

The heavy brown paper covers for compost are available in Australia and New Zealand.

Matt, President of Earth Fortification Supply Company has talked with the company making this product. It would be prohibitively expensive to import it to the US.

<http://www.ecocover.co.nz/index.php>

## 5. MILLIONS OF CITIZENS COUNTERING MONSANTO'S BUSINESS PRACTICES

From: Bea Bernhausen <beabernhausen@yahoo.com>  
Date: March 29, 2005 10:27:05 PM PST  
Date: Wed, 30 Mar 2005 13:48:23 +1000

Given Monsanto's ongoing, criminally irresponsible record of disregarding human health and the environment, the Organic Consumers Association (OCA) is stepping up the pace in our "Millions Against Monsanto" campaign. If you're talking about Agent Orange, rBGH, water privatization, PCBs, or DDT, you're talking about Monsanto. Sign the "Millions Against Monsanto" petition now, and forward this Alert to your friends and colleagues.

TAKE ACTION HERE: <http://www.organicconsumers.org/monlink.html>

### MONSANTO WARNS TWO BILLION FARMERS: "STOP SAVING YOUR SEEDS"

Since the advent of farming, thousands of years ago, farmers have carefully collected seeds at harvest so as to have enough seed for the next year's planting. Concerned that seed saving by farmers reduces their profits, seed and biotech giants like Monsanto have rammed though controversial "intellectual property laws" in numerous countries that make traditional seed saving a crime. Last year, Monsanto harassed and/or sued more than 500 U.S. farmers who saved their seeds, forcing them to pay the company over \$15 million in fines, including up to 8 month long prison sentences.

<http://www.organicconsumers.org/monsanto/seedsaving031405.cfm>

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GM food contamination: spinning out of control.  
March 29, 2005

On March 23 the journal Nature reported that between 2001 and 2004, the multinational corporation Syngenta "inadvertently" produced and distributed several hundred tonnes of an unapproved GM corn. However, it now looks as if the figure is closer to 185,000 tons. This GM corn was planted on about 150 square kilometers over four years in the USA.

Syngenta officials declined to list the countries that accidentally received the wrong seed. It appears that US authorities have known about this for several months but have kept it secret until Nature let the cat out of the bag. Since then both cyberspace and the media has been humming with the story.

We have given a sampling below.

1) We start with an overview from today's GM

Watch <http://www.gmwatch.org> which is an excellent source of information on the politics and science of GM foods. This summary was issued earlier today.

2) A second report from GM Watch today notes that Nature has published another story on the issue.

3) The second Nature report published today, March 29, 2005

4) The first Nature report published last week, March 22, 2005.

- 5) An AP article on the first Nature article.
- 6) A Knight-Ridder/AP article on the first Nature article.
- 7) Response to the story by Friends of the Earth, Europe.
- 8) Response to the story by GM Free Cymru (full of scientific detail).
- 9) Response by the Australian group GeneEthics Network.
- 10) Finally, a press release from GM Free Cymru, today, which draws attention to the integrity issue, pointing out how the British government agency DEFRA (Department for Environment Food and Rural Affairs) has been involved in several ways to cover-up this issue.

I am sorry that this is so long but again I believe it is important to keep up with these issues which, at their heart, like fluoridation, threaten both scientific integrity and democracy. Moreover, after global warming there is probably no more serious issue threatening life on this planet, as we know it, than genetic engineering. Who knows the arrogance to pursue this may have been spurred on by the same arrogance that allows some governments to force medicine on their "subjects" via the public water supply.

So grab yourselves a glass of wine or a cup of coffee and brace yourself for yet another horror story which starts with people who are far more clever than they are wise.

Paul Connett

1) FROM GMWATCH, March 29, 2005.  
NEW CONTAMINATION SCANDAL

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US LAUNCHES PROBE INTO SALES OF UNAPPROVED SYNGENTA GM CORN  
Between 2001 and 2004, Syngenta inadvertently produced and distributed "several hundred tonnes" of an unapproved corn, called Bt10. About 150 square kilometers of the crop was planted over the four years in the USA. Syngenta officials declined to list the countries that accidentally received the wrong seed.

But it looks like there was far more of it going into the food chain than Syngenta are owning up to. Dr Brian John points out that while Syngenta says that "some hundreds of tonnes" went into the food supply, they also say that over 4 years farmers planted 37,000 acres of the stuff. Average yields are around 150 bushels per acre, which translates to about 5 tonnes per acre. And that translates to \*185,000 tonnes\* of unauthorized Bt10 maize going into the food supply -- into corn oil, cornflakes, sweeteners, starch, many dairy products, and even medical products. Syngenta claims it only discovered the mistake in mid-December. Syngenta and the USDA say they didn't publicize the situation "because of the ongoing investigation"!

A report in Nature says, "Regulators and the company have since been involved in months of discussions over what should be done about the error, and how and when information should be released to the public. White House officials have also been involved in these sensitive talks, partly because the United States and the European Union are locked in a fierce trade dispute over whether tough European rules to trace the flow of genetically modified crops are scientifically necessary.

"Instead of building international confidence in genetic engineering, the industry continues to shoot itself in the foot," said Greg Jaffe of Center for Science in the Public Interest in Washington DC. But on top of that, it's becoming increasingly clear that the initial claims that Syngenta's rogue corn (maize) - Bt10 - was almost identical to an approved corn - Bt11 - are bogus - like the

claims that only small quantities were involved.

In particular, Bt10 has an antibiotic resistance gene which is not present in Bt11, and it also has a different promoter.

There are also concerns that Bt10 contains certain synthetic genes and proteins which are not easily broken down by stomach enzymes.

"It's a massive failure of the U.S. regulatory system," said Sujatha Byravan, executive director of the Council for Responsible Genetics, a nonprofit biotechnology interest group based in Cambridge, Massachusetts. "They didn't know about this until the end of 2004 and they only found out quite by chance. That tells you how poorly companies are monitoring the experiments they do."

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2) A second GM watch report today.

From: "GM WATCH" <info@gmwatch.org>

Date: Tue, 29 Mar 2005

Subject:GMW: Syngenta admits antibiotic-resistance genes in its rogue seeds

GM WATCH daily

<http://www.gmwatch.org>

EXCERPTS: Officials at the company last week argued that Bt10 is basically identical to Bt11 corn, which has been approved for sale (see Nature 434, 423; 2005). But this week, Sarah Hull, a spokeswoman for Syngenta, confirmed that a marker gene that confers resistance to ampicillin, a commonly used antibiotic, was present in the Bt10 seeds.

Critics have expressed surprise that neither Syngenta nor the US Environmental Protection Agency (EPA) announced the presence of the marker when they admitted that the release of Bt10 had taken place. "It is quite scandalous," says Greg Jaffe, head of the biotechnology project at the Center for Science in the Public Interest

In a ruling published last April, for example, the European Food Safety Authority, which advises European Union governments on food issues, said that marker genes conferring resistance to ampicillin "should be restricted to field trials and not be present in genetically modified plants placed on the market".

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3) Today's follow-up report in Nature.

Stray seeds had antibiotic-resistance genes

Nature. Published online: 29 March 2005;

Colin Macilwain

Accidental release of genetically-modified crops sparks new worries.

<http://www.nature.com/news/2005/050328/full/434548a.html>

Hundreds of tonnes of genetically modified corn seeds sold to farmers by mistake over the past four years contained a gene for antibiotic resistance, Nature has learned. The release of such genes into the environment is sometimes considered inadvisable, as there is a small chance that they could flow from crops to microorganisms and spread problems of antibiotic resistance.

The Swiss biotechnology company Syngenta admitted last week that it had accidentally released a variety of corn (maize) called Bt10 between 2001 and 2004. Like other crops with the name Bt, this corn had been genetically modified to produce a protective pesticide. But Bt10 has not been approved for sale by regulatory agencies.

Officials at the company last week argued that Bt10 is basically identical to Bt11 corn, which has been approved for sale (see Nature 434, 423; 2005). But this week, Sarah Hull, a spokeswoman for Syngenta, confirmed that a marker gene that confers resistance to ampicillin, a commonly used antibiotic, was present in the Bt10 seeds. She adds that this gene would not have been active in the corn plants that grew from the seeds.

Antibiotic-resistance genes are widely used as 'tags' during the production of genetically modified crops, to help breeders identify and preserve desirable strains. But the genes are often removed before the seeds enter the food chain. The presence of the marker gene in Bt10 corn was noted in a 2003 advice notice from a UK government committee, the Advisory Committee on Releases to the Environment, which was using Bt10 as a comparison to prove that there were no marker genes in Bt11 corn.

Critics have expressed surprise that neither Syngenta nor the US Environmental Protection Agency (EPA) announced the presence of the marker when they admitted that the release of Bt10 had taken place. "It is quite scandalous," says Greg Jaffe, head of the biotechnology project at the Center for Science in the Public Interest, a pressure group in Washington DC. "This shows that the government and the company are not being forthright."

Hull says that the company didn't mention the gene's presence because "it wasn't relevant to the health and safety discussion". She adds that the antibiotic-resistance genes have been around for a long time. "They've been studied extensively, and they pose no risk to humans or animals," she says. Regulators say that the genes present a very small risk to human health, either directly - if in the stomach of a patient on antibiotics, for example - or indirectly through gene flow into microbes.

Michael Rodemeyer, director of the Pew Initiative on Food and Biotechnology, a think-tank in Washington DC, says that the presence of such genes would be unlikely to see a crop declared unsafe in the United States - but adds that it could cause problems in Europe.

In a ruling published last April, for example, the European Food Safety Authority, which advises European Union governments on food issues, said that marker genes conferring resistance to ampicillin "should be restricted to field trials and not be present in genetically modified plants placed on the market". And the Codex Alimentarius Commission, the international food-standards body, has urged the agricultural biotechnology industry to use alternative methods to refine genetically modified strains in the future.

The EPA, which is jointly investigating the release of the Bt10 corn with the US Department of Agriculture, declined to say what it knew about the antibiotic-resistance marker. "What the company told us and when about the marker gene is part of our ongoing investigation and we are not able to discuss it at this time," the agency said in a statement.

"I think they've done a terrible job," says Margaret Mellon, head of the food and environment program at the Union of Concerned Scientists in Washington DC, referring to both Syngenta and the government agencies. "There are lots and lots of unanswered questions, and the longer they remain, the less confidence people are going to have in the technology and in the regulatory system."

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4) The earlier Nature article, March 22, 2005.

US launches probe into sales of unapproved transgenic corn  
Colin Macilwain  
NATURE, 22 March 2005

<http://www.nature.com/news/2005/050321/full/nature03570.html>

Syngenta admits 150 square kilometers accidentally sown with wrong seeds. Some US corn fields have been sown with a different transgenic strain to the one that was approved.

PunchstockA strain of genetically modified corn that does not have regulatory approval has been distributed by accident over the past four years, Nature has learned.

Syngenta, one of the world's largest agricultural biotechnology companies, revealed the mistake to US regulators at the end of last year. Although the crop is believed to be safe, the fact that it was sold for years by accident raises serious questions about how carefully biotechnology firms are controlling their activities, critics say.

The corn (maize) was modified with a gene from the soil bacterium *Bacillus thuringiensis* (Bt), which is inserted into the crop to act as a pesticide. Syngenta has approval to sell a variety of the transgenic crop called Bt11, which has been used successfully for many years in the United States and elsewhere. The strain has been approved for consumption in the European Union, for example, and may be one of the first food crops approved for cultivation there.

But between 2001 and 2004, Syngenta inadvertently produced and distributed several hundred tonnes of Bt10 corn - a different genetic modification that has not been approved.

Since the release was discovered in late 2004, US government scientists have assessed the Bt10 corn - which differs from Bt11 by only a handful of nucleotides on a section of the gene that does not code for the protein toxin - and have concluded that it is safe to eat and poses no environmental threat.

"What makes this somewhat unique is that Bt10 and Bt11 are physically identical and the proteins are identical," says Jeff Stein, head of regulatory affairs at Syngenta in Research Triangle Park, North Carolina.

Sarah Hull, a spokeswoman for the company in Washington DC, adds that Syngenta promptly reported the mistake to regulators after the discovery. She says this shows that the system is working as it should do. Company officials also note that the release was relatively small.

About 150 square kilometres of the crop was planted over the four years, they say, which is 0.01% of all corn planted in the United States during that period. As Bt corn seed has to be bought every year, rather than being gathered from the previous year's crop, the problem should not escalate.

Hard to swallow

But Michael Rodemeyer, director of the Pew Initiative on Food and Biotechnology, a think-tank in Washington DC, says that the release reflects the absence of a thorough monitoring system for genetically modified products in the US food supply.

"This will raise questions in the minds of countries that import food from the United States about whether we have adequate controls in place," Rodemeyer says. "It will provide ammunition for critics of genetically modified food - and it may provide incentives for countries to look at non-genetically modified varieties."

Syngenta discovered the mistake when one of its seed manufacturers, which was attempting to use the corn seeds in plant-breeding experiments, informed it that the seed was not Bt11. Syngenta then told the Environmental Protection Agency (EPA), the Food and Drug Administration and the US Department of Agriculture (USDA), which are jointly responsible for approving genetically modified crops.

Regulators and the company have since been involved in months of discussions over what should be done about the error, and how and when information should be released to the public. White House officials have also been involved in these sensitive talks, partly because the United States and the European Union are locked in a fierce trade dispute over whether tough European rules to trace the flow of genetically modified crops are scientifically necessary.

Syngenta officials declined to list the countries that accidentally received the Bt10 seed. In a statement released to Nature on 14 March, the EPA says that regulatory agencies are "conducting investigations to determine the circumstances surrounding and extent of any violations of relevant laws and regulations". The EPA says that it is investigating whether the Federal Insecticide, Fungicide, and Rodenticide Act has been breached, and that the USDA is looking at possible violations of the Plant Protection Act.

"The US government is also communicating with our major trading partners to ensure they understand there are no food safety or environmental concerns," it adds.

The last major, unintended release of a genetically modified crop in the United States occurred in 2000, when a Bt corn known as StarLink was inadvertently planted for human consumption. Because of possible allergic reactions, StarLink had been approved for use only in animal feed. Recall of StarLink corn cost the food industry an estimated US\$1 billion, according to Rodemeyer, and lent impetus to global concerns about the safety of genetically modified food.

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5) AP story on the first Nature article.

Tons of experimental biotech corn inadvertently sent to farmers.  
By PAUL ELIAS, AP Biotechnology Writer

Swiss biotechnology company Syngenta AG said Tuesday it mistakenly sold to farmers an experimental corn seed genetically engineered to resist bugs that was never approved by U.S. regulators, bolstering critics' claims that the industry needs tighter government scrutiny. Hundreds of tons of the genetically engineered seeds and resulting corn crop were shipped in the United States and overseas between 2001 and 2004. Federal investigators said there was no health or environmental risk because of the seed's similarity to another Syngenta product already approved for sale and consumption.

"While there are no safety concerns, the regulatory agencies are conducting investigations to determine the circumstances surrounding and extent of any violations of relevant laws and regulations," said Cynthia Bergman, an Environmental Protection Agency spokeswoman. "The U.S. government is also communicating with our major trading partners to ensure they understand there are no food safety or environmental concerns that could affect trade."

The Department of Agriculture and the Food and Drug Administration are also investigating, and the company faces a fine of up to \$500,000, USDA spokesman Jim Rogers said.

In trading Tuesday, U.S.-traded Syngenta shares fell 39 cents, or 1.8 percent, to close at \$21.45 on the New York Stock Exchange. The stock has traded in a 52-week range of \$13.93 to \$23.26.

Biotechnology critics say the fact that hundreds of tons of unapproved corn were planted in open fields for four years before Syngenta acknowledged the mistake shows that regulators and the industry can't now be trusted to keep genetically engineered organisms from contaminating the food supply.

They also complain that current government regulations are particularly lax once a genetically engineered crop has been approved for consumption.

Nearly half the nation's corn approved for market by the Department of Agriculture is genetically

modified, but many consumers want their groceries to be biotechnology-free, and are willing to pay a premium for food they trust to be organic.

Syngenta also acknowledged Tuesday that some of the unapproved corn may have been shipped overseas to countries that allow imports of either the genetically engineered seed or of products made with the genetically modified corn.

The United States and the European Union are in a bitter trade dispute over how strictly to regulate U.S. biotechnology imports. Syngenta spokeswoman Sarah Hull would not say whether EU countries have received the unapproved corn.

"Instead of building international confidence in genetic engineering, the industry continues to shoot itself in the foot," said Greg Jaffe, biotech director for the nonprofit Center for Science in the Public Interest in Washington D.C. "It proves this technology is hard to control and we have an industry that is not as diligent as we would like."

The corn in question is spliced with bacteria genes to resist bugs without the need for pesticides. It differs from Syngenta's approved seeds only in terms of where the foreign genetic material is placed in the plant's genome, said Jeff Stein, head of Syngenta's U.S. regulatory affairs.

Syngenta also did not say where in the United States the corn was grown, other than to say it sprouted on a total of 37,000 acres in four states - representing less than 1 percent of all U.S. corn. Still, the mislabeled corn amounted to several hundred tons shipped over the last four years.

In 2000, the inadvertent planting and distributing of genetically engineered corn not approved for human consumption - so-called StarLink - cost the food industry an estimated \$1 billion in recalled products.

No recalls for this wrongly shipped corn are planned, Hull said, because the government has declared the corn poses no health or environmental risks. But all unapproved plants and seeds Syngenta still had have been destroyed, she said. She declined to say how much the incident might cost the company.

Hull said the Swiss-based company discovered the mistake in mid-December and reported it immediately as required by law to federal authorities. Syngenta and the USDA said they didn't publicize the situation because of the ongoing investigation. The science journal Nature first reported the mishap on its Web site Tuesday.

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6) Knight-Ridder/AP story on the first Nature article.

U.S. quiet about sale of altered corn  
By Knight Ridder Newspapers and The Associated Press  
[http://seattletimes.nwsourc.com/text/2002216446\\_corn23.html](http://seattletimes.nwsourc.com/text/2002216446_corn23.html)

WASHINGTON - The federal government kept it secret for three months that genetically modified corn seed was sold accidentally to some U.S. farms for four years and may have gotten into the U.S. food supply.

The accidental use of unapproved seed became public when the scientific journal Nature published a story about it yesterday. The U.S. food supply and plant and animal stocks weren't harmed and remain safe to eat, according to officials of the seed company and the government. But the government's secrecy about the mistake raises serious concerns, according to independent experts.

Syngenta, a Swiss-based company, distributed the unapproved genetically altered corn seed, Bt

10, which was engineered to resist bugs. It mixed the Bt 10 with a similar and approved corn seed called Bt 11, company officials said yesterday. The Bt 10 was modified with a gene from the pesticide like bacterium *Bacillus thuringiensis*.

Hundreds of tons of the genetically engineered seeds and resulting corn crop were shipped in the United States and overseas between 2001 and 2004.

Spokesmen for the Department of Agriculture (USDA) and the Environmental Protection Agency (EPA) said there was no need to notify the public because the government had determined that Bt 10 was safe. The USDA is investigating the incident, and the seed company faces up to \$500,000 in fines, Agriculture Department spokesman Jim Rogers said.

"Most of the corn is used for industrial and animal use," company spokeswoman Sarah Hull said. "It may have gotten into the food supply, but regardless, the proteins are deemed safe, and there's no food concern."

Remaining seeds have been destroyed or isolated, Hull said.

Syngenta's U.S. headquarters is in Greensboro, N.C. It runs its seed operation out of Golden Valley, Minn.

"I personally don't see it would be a major issue," said Kendall Lamkey, the head of Iowa State University's plant-breeding center. But the way the federal government kept the mistake secret is alarming and may undermine public confidence in genetically modified crops, said Lamkey, who served on a National Academy of Sciences panel in 2002 on the environmental impact of genetically modified crops.

In mid-December, Syngenta told the EPA, the Agriculture Department and the Food and Drug Administration about the mistake, Hull said.

EPA scientists reviewed seven packets of information from Syngenta from Jan. 7 to March 10, and "as more data came in, the confidence of our scientific determination [of no risk] increased," EPA spokeswoman Cynthia Bergman said in an e-mail. "Had there been a human health concern, we would have alerted the public immediately."

Syngenta did not say where in the United States the corn was grown, other than to say it sprouted on a total of 37,000 acres in four states, representing less than 1 percent of all U.S. corn.

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7) FRIENDS OF THE EARTH EUROPE, March 23, 2005.

GMO crop scandal - Did Syngenta's illegal corn come to Europe?

FRIENDS OF THE EARTH EUROPE

Press release for immediate release: Wednesday 23 March 2005

Contact : Adrian Bebb, Friends of the Earth Europe + 49 1609 490 1163 (mobile)  
Brussels, 23 March 2005 -

Friends of the Earth has written to the European Commission asking for urgent reassurance that unapproved genetically modified (GM) corn has not been imported into Europe. The threat was highlighted as Swiss-based Syngenta admitted yesterday that they inadvertently sold hundreds of tonnes of the wrong GM corn to US farmers over the past four years.

According to Nature, who published a story on their website last night (22 March), Syngenta produced and sold several hundred tonnes of a corn containing an insecticide, called Bt10

between 2001 and 2004. The corn has not been approved for human consumption anywhere worldwide. According to the article, Syngenta and the US Government have been in discussions since last year over what should be done about the error, and how and when information should be released to the public.

Adrian Bebb, GM campaigner for Friends of the Earth said:

"This is an industry out of control. For four years Syngenta failed to notice that they were selling farmers an unapproved genetically modified seed. How are consumers and farmers supposed to trust them to produce our food in the future? This case makes a complete mockery of the US regulatory system for GM crops. To make matters worse the US Government has known about this accident for months and together with Syngenta decided to keep it a secret until now. This is complete scandal."

"Friends of the Earth is seeking urgent assurances from the European Commission that this corn was not imported illegally into Europe. The public will be concerned that they may have been exposed to unapproved GM foods and will demand answers. The Commission should insist that the US withdraws all corn suspected of contamination."

Contact: Adrian Bebb, + 49 1609 490 1163 (mobile)  
<http://www.nature.com/news/2005/050321/full/nature03570.html>

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Recall Foods Contaminated by GM Corn (24/3/2005)

8) GM Free Cymru, March 24, 2005.

Dr Brian John points out that while Syngenta says that "some hundreds of tonnes" of BT10 maize went into the food supply, they also say that over 4 years farmers planted 37,000 acres of the stuff. Average yields are apparently around 150 bushels per acre, which translates to about 5 tonnes per acre. And that translates to \*185,000 tonnes\* of unauthorized BT10 maize going into the food supply -- into corn oil, cornflakes, sweeteners, starch, many dairy products, and even medical products.

GM Maize imported into Europe had no US or EU approval  
Press Notice from GM Free Cymru, 24 March 2005

In another twist to the biggest scandal ever to hit the GM multinationals, it has now been revealed that Syngenta's BT 10 (Punchstock A) maize has never been authorized for release in the USA, and never authorized for export (1). Neither has it received any approvals for growing or food use within Europe (2).

GM Free Cymru has discovered that the GM variety has been imported into Europe, probably for use in human food rather than in animal feed. And since these imports have been going on, undetected and undeclared, for more than four years, the corn is probably already on supermarket shelves. This has happened in spite of accumulating evidence that BT10 is unfit for human consumption:

\*\* BT10 is virtually indistinguishable from BT11 sweet corn, which was given EC approval for use in food (fresh or processed) in 2004 in spite of grave reservations and even protests from independent scientists and member states (3).

\*\* BT10 was clearly an "experimental GM variety" which never entered the US approvals process, probably because it was found to be defective or genetically unstable.

\*\* The variety has never had its genetic "character" described in the literature, which means that even if the EU countries had effective import monitoring in place (which they do not) the GM

testing laboratories would not know what they are supposed to look for.

\*\* Syngenta has stated that the approved BT11 strain and the experimental BT10 strain produce the same proteins. This has not been demonstrated. This is a cause for considerable concern, because the BT toxins produced in these varieties are almost completely unknown and are untested for toxicity (3).

\*\* Belgian and French studies have shown that BT11 is an unstable transgenic line which is contaminated with BT176. This component contains antibiotic marker genes, and was linked with "unexplained" cattle deaths in Hesse, Germany, in 2001-2002 (4). It is reasonable to assume that BT10 is also unstable and contaminated with BT176.

\*\* BT10 contains certain synthetic genes and proteins which are not easily broken down by stomach enzymes. In some cases, such proteins may survive in the gut for ten to twenty times as long as most "natural" proteins, and this may account for the lesions and other physiological abnormalities observed in animal feeding studies involving GM crops (5). There are concerns that allergic reactions may follow, and that some abnormalities may lead to cancerous growths (6).

Syngenta refuses to name the countries into which contaminated maize supplies have been exported, but it has admitted that 37,000 acres of BT10 crops were grown between 2000 and 2004 (7). That means that at least 185,000 tonnes of BT10 maize grain (not "several hundred tonnes" as claimed by Syngenta) that should have been condemned has entered the food chain in many different countries (8).

Following the revelations about the four-year-long contamination of US maize supplies by BT10 crops, and the coordinated attempts by Syngenta and the US authorities to cover up the scandal, there is now a concerted effort emanating from the US to convince the rest of the world that BT10 maize is safe to eat and poses no environmental threat. GM Free Cymru refuses to accept these bland assurances, and says that the episode shows that the US regulatory system is a shambles, with no serious attempt to control GM contamination of related crops in the countryside, and no effective method for keeping GM and non-GM food supplies apart. Like many other NGOs, GM Free Cymru claims that there is an undeclared Bush Administration policy to allow the whole of the US food chain to be polluted with GM materials. Through the WTO and through foreign aid programs and diplomacy, the Administration is seeking to extend this policy across the planet.

GM Free Cymru spokesman Dr Brian John said today: "This really is the last straw. American complacency about GM crops and foods has allowed a large GM corporation to pollute food supplies with unauthorized GM materials, and to go on polluting them for five years. Then they withhold information for at least four months, try to cover the whole episode up, and finally mount a massive PR campaign designed to allay our fears. And what has the EC, the British Government, and our own FSA done about it? Nothing at all, as far as we can see, apart from a bland and complacent response from DEFRA (9) (10). We demand an immediate halt to all American maize imports into Europe as a minimum first step (11). We also demand the immediate implementation of GM testing measures at all British ports -- something that should have been done long ago. The US exporters and the EU importers must be prosecuted if any traces of BT10 are found in their shipments or food products or if their documentation is defective. And then imports should not be resumed until the EU has effective monitoring and testing procedures in place, and until GM liability legislation is on the statute books of all the EU countries. If they want it, let the Americans eat their own BT10 sweet corn."

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(1) "I have confirmed with FDA that "BT10 never went through an FDA consultation process." Therefore, it was never reviewed for unintended human health effects, at least not by the U.S. Doug Gurian-Sherman, Ph.D., Senior Scientist, Center for Food Safety, 660 Pennsylvania Avenue, Suite 302, Washington, D.C. 2000

(2) A search of the EC / EFSA web site reveals that BT10 has never featured in any studies or discussions. The Syngenta event Bt 10 is a Lepadopteran toxin Cry1Ab.

(3)<http://www.i-sis.org.uk/Bt11.php> 24 May 2004  
Approval of Bt11 Maize Endangers Humans and Livestock, by Dr. Mae-Wan Ho

(4)<http://www.indsp.org/ManorBeast.php>  
GM Food & Feed Not Fit for "Man or Beast" by Dr. Mae-Wan Ho and Prof. Joe Cummins

(5) The Lancet 354, 1353-4; also <http://plab.ku.dk/tcbh/PusztaiPusztai.htm>

(6)<http://www.indsp.org/StanleyEwenSummary.php>

(7)<http://www.nature.com/news/2005/050321/full/nature03570.html>

<http://www.syngenta.com>

(8) For typical Bt maize grain yield statistics, see: <http://www.ipm.iastate.edu/ipm/icm/1998/1-19-1998/yieldbt.html> Bt maize yields are c 150 bushels per acre or c 5 tonnes per acre.

(9)<http://www.gnn.gov.uk/Content/Detail.asp?ReleaseID=153346&NewsAreaID=2> DEFRA and FSA were informed by Syngenta of the contamination incident on 22 March 2005,

(10) According to DEFRA: "Food or feed derived from a mixture of Bt 11 and Bt 10 maize seeds would not reveal the two original sources of Bt protein as they are identical." This is an unsupportable contention, and has no scientific validity.

(11) At present, in spite of the EU's claim that it has the best GM regulatory system in the world, there is no mechanism for testing imported cargoes of GM grains -- or other materials that might be contaminated with GM -- at ports and other points of entry into the EU.

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9)GeneEthics Network, Australia.

Recall Foods Contaminated by GM Corn

NEWS MEDIA RELEASE 24/3/05 (AUSTRALIA)

GeneEthics Network calls on the Food Authority (FSANZ) and Biosecurity Australia (BA) to immediately check for unapproved genetically manipulated (GM) corn variety Bt10 in our food supply. If confirmed, a general recall of all affected products should occur over Easter.

The journal Nature says that for four years the Bt10 variety of insect toxin GM corn seed, not approved anywhere as human food, has been grown by US and other farmers. Large amounts of the insect killing corn seed, mixed with an approved variety, were grown in many countries. Thousands of processed food products may contain this unapproved and untested variety.

"It seems likely rogue GM corn, variety Bt10 is now in shops here," says GeneEthics network Director, Bob Phelps.

"FSANZ and BA must urgently find out how much contaminated corn was imported and immediately order a general recall of all affected products over Easter," he says.

"It's incredible that for four years an unapproved GM corn variety, never assessed for human safety nor approved anywhere, has been entering crop and food chains world-wide," he says.

"The GM industry is out of control," he says.

"This is just the latest of many serious food pollution events, with unapproved varieties of GM corn," he says.

"Genetic pollution from GM crops appears inevitable, even with elaborate monitoring and assessment systems that are supposed to ensure safety and segregation," he says.

"News of this contamination follows scientific reports from the UK, that GM canola and other crops have negative impacts on natural ecosystems," he says.

"And because the GM industry knows GM contamination, health impacts and environmental pollution are inherent to GM technology it flatly refuses to accept any liability for the harm done by GM products," Mr. Phelps says.

"The scandal is that governments do not require the GM industry to accept liability, responsibility or accountability, and they move it onto other vulnerable sections of our community," he says.

"The resources that regulators need to effectively guard our borders from invasions of genetic pollutants are wasted by the Australian government on punishing those innocent people in need of protection who arrive on our shores," he says.

"Much stronger and more effective import monitoring and assessment processes are urgently needed to ensure the Australian food supply and cropping systems are protected from secret GM contamination," Mr. Phelps concludes.

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10) Press Notice from GM Free Cymru, 29th March 2005  
Immediate release

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DEFRA accused of key role in GM contamination cover-up  
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DEFRA was accused today of playing a key role in a spin-doctor cover-up designed to protect the GM industry from the effects of the latest GM contamination scandal. According to GM Free Cymru, the Government Department rushed into print last week to protect the corporate giant Syngenta, within 24 hours of receiving notification of the contamination of maize supplies with the unauthorized variety Bt10. The organization insists that the DEFRA press notice was inaccurate and misleading, and contained statements which DEFRA must have known to be untrue (1).

\*\* The DEFRA statement stresses in several places that the contamination incident was on "an extremely small scale". But GM Free Cymru points out that by using Syngenta's own figures (2) it is clear that around 187,000 tonnes of contaminated maize has entered the food chain, and that unauthorized GM material has been distributed on a massive scale. Some of this material has been exported to Europe, but Syngenta refuses to release details.

\*\* DEFRA pretends that because USDA has concluded that there are no safety concerns about the contamination incident, we should all come to the same conclusion. What DEFRA does not say is that there is no effective regulation of GM crops and foods in the USA, and that Bt 10 maize has never come before the authorities for assessment or regulation either in the US or Europe (3). The DEFRA attitude is complacent and even negligent.

\*\* DEFRA states that Bt10 maize "is covered by the existing tolerance exemption for Bt11" and that it is virtually identical in its proteins. This is a disingenuous and dangerous statement, since

DEFRA and ACRE knew as long ago as 2003 that Bt10 is unique and identifiable (4). It also contains ampicillin antibiotic resistant marker genes, which makes it illegal in Europe (5).

\*\* DEFRA and ACRE are in possession of detailed technical data about Bt10 which they have refused, in spite of requests from a number of NGOs, to place in the public domain. This information is not commercially sensitive. We believe that since Bt10 was developed about ten years ago by the Northrup-King company (later taken over by Syngenta) it has changed its character and may be unstable. If this is the case, and if Bt10 really is a "failed" variety, DEFRA should be taking steps to protect the public instead of taking steps to protect Syngenta.

Speaking for GM Free Cymru, Dr Brian John said: "It is well known that one of DEFRA's policy objectives is the promotion of GM crops and foods against the clearly-expressed wishes of the British public. But in rushing to "damp down" speculation about the extent of Bt10 contamination, and any associated health dangers, it has danced to Syngenta's tune and has failed in its duty of care. Has DEFRA not learned anything from the BSE disaster and the F&M disaster? We may now have maize products on our supermarket shelves that contain antibiotics, and our Government appears to be quite disinterested."

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