

Thin Ice



the GM Freeze Campaign newsletter

Issue 23, October 2011

US Bt corn hit by insect resistance

An Iowa State University study has confirmed the damage to fields of Monsanto Bt corn is caused by rootworm now resistant to the GM designed to kill it saying, "Farmers reported severe feeding injury by corn rootworm to Bt maize in problem fields." Similar reports came from up to half a dozen states through July and August, including Minnesota, where the crop is worth US\$7 billion and University of Minnesota entomologist Ken Ostlie said, "Basically we found that there is a significant amount of corn rootworm feeding in the field, indicating that populations have built up." Entomologist Michael Gray from the University of Illinois Urbana said, "It's very, very significant damage. Producers buy these Bt hybrids to protect their root systems, so it understandably makes them not very happy."

Around two thirds of the US corn crop is GM, with Monsanto's

share about a third of that. Environmentalists note that monitoring farms for compliance with the refuge requirements supposed to prevent such insect resistance has been lax at best, with a spokesperson for the Washington-based Environmental Working Group saying, "Everybody

We found there is a significant amount of corn rootworm feeding in the field

was fudging, and no one was looking." A further complication has been the high corn prices driven by ethanol demand, fostering poor practices, like failure to rotate crops, which promote resistance developing.

The news was a blow for Monsanto, a company steering its business toward seeds sales as it comes under pressure from widespread weed resistance to their weedkiller Roundup (used on GM RR crops).

Monsanto says only its YieldGard® VT Triple and Genuity® VT Triple PRO™ corns are affected, with a Vice President adding, "What we're seeing this year is no different than we've seen the last five, six, seven years, since we've introduced the products," perhaps not appreciating this was not a comfort – Monsanto's share price fell 4% as news of the resistance was confirmed. The company announced in September it will raise the price of its DeKalb brand corn seeds next year by an average of 5-10% to reflect improved performance and higher production costs.

Meanwhile US corn yield forecasts have been reduced to the lowest since 2005.



INTERNATIONAL ROUNDUP

Africa

Kenya

In August the National Biosafety Authority (NBA) published new regulations for import of GM crops for food, paving the way for companies to gain 10-year licenses to import provided their products have no negative effects on health or the environment. GM labelling has yet to be resolved. The new Biosafety Act came into force previously after longstanding pressure from millers in particular (six of whom account for 20% of the country's market) complaining of shortages of raw materials. Millers were warned by the NBA the grain must not end up as seed, and that fines of not less than Sh20 million (£128,000) or a jail term of 10 years, or both, and/or clean up costs, would be levied for any lapses on their part that resulted in GM seed being planted.

The move was opposed by the Chair of the Parliamentary Agriculture Committee, and one MP said, "We need protection from the government from these unscrupulous traders who can sell anything to the public just for their financial gain." A spokesperson from the African Biodiversity Network said, "We can easily import GMO free maize from Malawi and Zambia who had a bumper harvest last season." The Secretary of the Kenya Small-scale Farmers' Forum said, "[F]armers are seriously endangered by GM products. Patented seeds and chemical fertilizers threaten the livelihoods of smallholders. Genetically modified crops can only give short term solutions."

US support for Kenya's biotech research came from Secretary of State Mrs Hillary Clinton, who was reported to have praised scientists at the Kenya Agricultural Research Institute for what she called their gallant efforts to feed the country, saying the Institute is, "[C]ultivating crops that can thrive in drought and are enriched with essential nutrients." Just before the import regulations were published a

delegation including the wife of Vice President Joe Biden toured the Institute in a visit closed to local media before meeting Agriculture Minister officials. (see TI 21)

Mali

In August *Crop Protection* published results of a six-year study on 12 trials showed "topping" cotton (cutting the shoot tips off plants), a practice for improving yields, may also control pests. One of the authors from the Mali Institute of Rural Economy, said, "We were amazed to see that non-topped cotton plants in plots near the topped plants also had reduced bollworm infestations."

South Africa

In June Government-backed plans to boost food security with GM crops came under severe criticism as research by the Masifunde Education and Development Project Trust and Rhodes University found that the programme has instead pushed some small farmers to the brink of economic ruin.

The project claimed to encourage poverty alleviation by heavily promoting monoculture GM food and biofuel crops while providing small farmers with subsidies for input/GM seeds packages, marketing and other needs. Researchers reported, "We saw a deepening of poverty and people returning to the land for survival." They said the project was, "making these farmers depend on expensive agro-chemical inputs by the private sector," as traditional agricultural practices were undermined and the crops produced did not address local needs. Farmers reported they were not told they would be growing GM (many dropped

dropped out of the project when they found out), that they felt exploited by companies and that contracts were written in English with no consultation or training being offered.

Americas

Argentina

In June The Guardian reported charges brought by the Government for tax evasion against the world's four largest grain traders for large-scale tax evasion include claims for US\$476 million from Bunge, US\$252 million from Cargill and US\$140 million from Dreyfus. The companies have all denied all the allegations. (see TI 21)

Peru

In June Congress approved 10-year moratorium on the import of GMOs for cultivation, breeding or production. The President of the Agrarian Commission said the moratorium was needed to protect the country's biodiversity. (see TI 22)

US

GM salmon update (see TI 19 and 20): In June the House of Representatives voted to prohibit the FDA spending any money to approve the GM salmon, a decision designed to prevent the application from progressing. A similar vote is expected in the Senate. In July members of both the House and Senate sent letters to the FDA urging against approval. Legal challenges are being considered, and one lawyer with experience of GM litigation said, "There are more places than a creative person can think of to challenge the introduction of such a thing into the food stream." The fact

**"Are they running out of options?
The simple answer is yes."**

**Aaron Hager, weed scientist, University of Illinois
at Urbana-Champaign**

that AquaBounty's patent on the GM traits in the salmon is due to expire in 2016 goes a long way to explain the company's need to get the GM fish approved quickly.

In August Monsanto announced its new triple stacked GM insect tolerant Roundup Ready sweetcorn will be sold to consumers next year. A company spokesperson said the public launch would be "very, very small", targeting the Eastern US market for fresh corn, but the company hopes to secure use (unlabelled) in frozen and canned corn markets. The food manufacturer General Mills and retailer Trader Joe's have already signalled they will not use the corn, and other companies are under pressure from the Center for Food Safety and others to follow. The announcement came "out of the blue" according to one critic and sparked controversy because the product was not subject to any approval process by US regulators who say the three GM traits stacked in the corn have already been approved in other single GM trait products and are therefore assumed to be safe when used together in one plant.

In June news emerged that Monsanto was subpoenaed to supply documents to a US Securities and Exchange Commission investigation over its cash incentives to distributors to buy Roundup.

In August the University of Arkansas announced the discovery of populations of wild canola (oilseed rape) plants containing GM genes from cultivated herbicide resistant crops. The scientist presenting the findings said, "We really don't know the consequences of the gene escape. We don't know what these plants are going to do." The team collected samples over 3,000 miles of highways in South Dakota and found 46% of test sites had wild canola, with 83% of these testing positive for GM material. She added that some contained double herbicide resistance, a combination not available commercially, saying, "That has to be happening in the wild. That leads us to believe that these wild populations have become established populations. Technically these plants are not supposed to be able to compete in the wild. Once this happens, it would be difficult to get rid of these weeds using current herbicides."

Meanwhile cotton farmers are hiring in crews to chop down herbicide resistant weeds, some with stems four inches around. The President of the Missouri Farm Bureau said, "I swung a hoe for 15 years, and I fail to see the romance in it."

In July a Purdue University report showed a growing number of farmers are switching to crops like corn to meet demand at biofuel refineries receiving US\$6 billion in Government subsidies. The US Department of Agriculture now confirms ethanol refiners are using more corn than livestock and poultry farmers, with Purdue saying ethanol accounted for 27% of last year's crop – up from 10% in 2005. The Chief Executive of General Mills said as a result corn and oat prices are up 30-40% in the last year, adding, "We're driving up food prices unnecessarily. If corn prices go up, wheat goes up. It's all linked."

Also in July the Obama administration announced a joint venture to remove the prohibition on growing GM crops in national wildlife refuges, ostensibly to boost exports. The Agricultural Biotech Working Group, created in 2010 (including officials from the White House, US Trade Representative, and Departments of State and Agriculture, as well as EPA and FDA), aims to prevent further litigation on the subject and has assisted in preparing environmental assessments for GM planting on 75 refuges in 30 states.

Asia

Pakistan

In July Punjabi Bt cotton crops were reported to be under serious attack by sucking insects (which are not targeted by GM crops) after heavy rains and humidity, which also impeded recommended additional applications of insecticides. By October reports began to emerge that the entire crop may be lost to continuing rains.

India

In August the National Biodiversity Authority launched legal action against Monsanto/Mayco and others for biopiracy in developing Bt brinjal (eggplant) without the prior approval of the competent authorities. (see TI 17, 21 and 22)

Australasia

Australia

The Western Australia farmer stripped of his organic status after his crop was contaminated by a neighbour's GM canola announced in July he has retained lawyers and intends to issue a writ for compensation and damages from that neighbour. (see TI 20 and 21)

In August a trailer fire spilled several tonnes of GM canola seed on a roadway along some 50 metres of farm fenceline. Wild parrots came to feed on the seed, and some began to germinate to the dismay of the farmer who said, "My non-GM and no-chemical production systems are threatened by the GM seed, spread by birds and humans. The authorities and their contractors scooped up the GM canola seed spilled last week but they obviously didn't get it all. Me and my neighbours wanted to stay GM-free but our worst nightmare is now outside our front gates. We want real action not promises."

GM canola plants were also discovered growing along major roadways South East of Perth. The research leader from the Conservation Council, which discovered the plants, said, "Vehicles or containers used to transport GM canola will need to be literally water tight if they are going to avoid dispersing seed and contaminating the regions they pass through."

In June Western Australia's Agriculture Minister admitted to the Parliament that demand for GM crops was so weak none of last year's GM canola crop had been sold.

Europe

Further evidence of industry influence over the European Food Safety Agency (EFSA) in research by Corporate Europe Observatory and Réseau Environnement Santé revealed two newly-appointed experts on EFSA's panel on food additives failed to declare consulting activities for the lobby group International Life Sciences Institute (funders include Coca-Cola, Danone, Kraft, Unilever, Nestlé and leading producer of aspartame Ajinomoto). The pair signed declarations of interest in July and August that did not mention these activities.

Hungary

In July new crop checks by regulators discovered GM products from Pioneer and Monsanto, so some 400 hectares of maize were destroyed, with radio reports suggesting that since the two biggest international seed companies are involved thousands more hectares may be affected. GM seeds are banned in the country, and affected farmers will lose an entire year's crop as it was too late in the season to replant a non-GM crop. They are also unlikely to receive any compensation as the seed company who supplied them has gone into liquidation.

Norway

In June the Norwegian Directorate for Nature Management announced the cultivation and use of the GM potato Amflora in feed and food should be prohibited in Norway due to the controversial presence of the antibiotic resistance marker gene for kanamycin. (see TI 17, 18, 19 and 21)

Spain

In August authorities in Valencia overturned national level approval and denied Italian pharmaceutical company Transactivia permission to trial a GM rice with human genes designed to provide enzymes to treat Gaucher's disease (a hereditary disorder causing fats to accumulate in key organs).

UK

In August Defra approved an open-air trial of a new GM wheat designed to repel aphids despite a lack of information about the safety of the crop, clear risks of outcrossing to couch grass, which is already a major weed in arable fields, and the presence of an antibiotic resistance marker gene for kanamycin. (see TI 22 and www.gmfreeze.org)

IN MEMORIAM

GM Freeze would like to mark with sadness the passing of two dedicated colleagues. Rudolf Kirst (b 1928) and Helen Holder (b 1972) had each struggled with long illnesses. They are missed.

ECJ: GM honey needs GM label

In September the European Union Court of Justice (ECJ) issued a landmark ruling that honey contaminated with GM pollen must go through full GM food authorisation and carry a GM label before it can be marketed in the EU. This applies even if the pollen is non-viable and no longer able to fertilise flowers.

The case was brought by Bavarian beekeeper Karl Heinz Bablok after his honey was contaminated by a field trial of GM Mon810 maize on land owned by the Bavarian state. Mr Bablok's bees collected the GM maize pollen for food (maize is only wind pollinated; insects play no role in maize fertilisation).

The judgment means that GM companies must have GM crop marketing licenses that cover sale of honey as food (under Directive 2001/18 and Regulation 1829/2003). The European Commission had previously refused to accept that honey contaminated with GM pollen should carry GM labels, saying the pollen was unintentionally present, was not an ingredient of the final product and was only present in small amounts. EU Health Commissioner Dalli has now confirmed Monsanto must reapply to acquire full authorisation for GM pollen to be in honey.

Beekeepers, already hard hit by a variety of bee diseases and disorders, are concerned they will now bear the costs of expensive GM testing and labelling, and that many will lose markets as honey is viewed as a

healthy product and their customers will not buy GM-labelled products.

Commissioner Dalli has also said "adequate separation distances" are the key for beekeepers and honey production. As honey bees are known to fly long distances to collect pollen, meaningful coexistence based separation distances would seem to be impossible. Governments will ultimately have to choose between pollination services and honey sales or GM crops.

Get Active

Please write to Commissioner Dalli asking for his assessment of an "adequate" separation distance between a beehive and a GM crop given:

- Honey bees are known to travel long distances (up to 9.5 kilometres) in search of pollen (see *Protecting Bees, Beekeepers and Honey from Contamination in Wales* at www.gmfreeze.org) and
- Researchers in Japan have demonstrated that maize can cross-fertilise at distances of at least 1200 metres.

You can email to Commissioner Dalli at john.dalli@ec.europa.eu Or write to: DG Health and Consumer Policy, European Commission, Rue de la Loi 200, B-1049 Brussels, Belgium

The GM Freeze Campaign is calling on the Government for a Freeze on:

- The growing of genetically modified plants and the production of genetically modified farm animals for any commercial purpose.
- Imports of genetically modified foods, plants, farm crops and farm animals, and produce from genetically modified plants and animals.
- The patenting of genetic resources for food and farm crops.

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