Corn rootworm-tolerant maize

Monsanto has announced the development of a new Bt-corn that produces a toxin that is active against the corn rootworm (*Diabrotica* spp.). The gene (*cryIIIB*) was developed as part of Monsanto's collaboration with Ecogen and is at least as effective as insecticides in controlling the pest. Corn rootworm costs US farmers $1 billion a year in crop damage and insecticide costs. In 2000, farmers spent $171 million spraying corn with 8 million pounds of insecticide.

Procter & Gamble forced to withdraw GM snack

Proctor & Gamble has recalled all its Pringles snacks which were sold in Japan, following the discovery that they contained NewLeaf Plus and NewLeaf Y GM potatoes, which are authorised for use in the USA, but not yet in Japan, where an application has been pending since 1998. In April 2001, Japan prohibited all imports of food containing GM products which are not approved and labelling of all those which are approved.

Aventis increases StarLink compensation offer

Aventis CropScience increased its offer of compensation payments by an undisclosed sum (previous offer amounted to $100 M) to compensate farmers whose crops were contaminated with the GM StarLink maize. StarLink contains the protein Cry9C which has a property also shown by human allergens.

GM labelling in the EU

The EU Commission proposes to seek the labelling of GM food "from farm to table" with records held at each stage of the food chain and for retail labels to specify the presence of authorised GMs in foodstuffs, including animal feed, above a 1% threshold. Environmentalists see the proposals as the thin edge of the wedge, opening up the EU market to the entry of unauthorised GMs. A clause permitting products to contain up to 1% of modified material, passed as safe by the EU Commission but now on hold due to a moratorium on new licences, causes particular concern. US traders, however, see the plan as a trade barrier since trying to keep GM and non-GM soybeans apart would raise prices. Further, labelling is unjustified as GM crops do not substantially differ from other crop varieties; to treat them differently violates World Trade Organisation rules.

Reduced investment and confidence in GM technology

A report published in the *Guardian* (28 August 2001) has suggested that the growth of GM crop plantings and company investment in research is falling. Nevertheless, global plantings are still around 40 M hectares, with more than 80% of all plantings in the USA. The lack of enthusiasm of customers and tighter regulation imposed by countries such as Japan and the EU is beginning to cause US maize and soybean growers to reconsider the use of GM crops. The economic rewards are becoming counter-balanced by the lost export markets.

Glyphosate-tolerant weeds in Roundup Ready crops?

A report in the Kansas City Star (21 August) has suggested that water hemp (*Amaranthus tuberculatus*) and mare's tail (*Conyza canadensis*) have become tolerant of applied glyphosate in Roundup Ready soybeans. Glasshouse trials have shown that about 5% of the water hemp tolerated almost any rate of glyphosate but, surprisingly, only 5% of the offspring from these survivors withstand treatment. The mare's tail, by contrast, is not killed by the herbicide, only stunted.

GM salt-tolerant tomato

A team led by Eduardo Blumwald of the Uinversity of California at Davis has created a salt-tolerant GM tomato. They added a gene which codes for a membrane-transport protein called AtNHX1, which pumps sodium into vacuoles. Expression of the transporter gene was increased by adding a 'promoter' sequence which they took from the cauliflower mosaic virus. Such GM salt-loving plants could be grown on the large areas of saline land around the world; the removal of salt in this way would also help to clean the soil.

Snippets

…work being undertaken by Ralph Bock in Munster, Germany, has been targeted at introducing novel genes into chloroplast DNA. To date the team has been successful in introducing a gene into tomato chloroplasts and has demonstrated the production of high levels of the desired protein.

…work at Abertay University, Dundee, Scotland has produced elm trees that may be resistant to Dutch elm disease. A gene coding for a natural fungicide has been introduced into the trees and these saplings are being grown in glasshouses to a size where their resistance can be tested. Dutch elm disease has destroyed over 25 million elm trees in the UK alone from the late 1960s.

…researchers at DuPont's Pioneer Hi-Bred unit have developed GM corn that is able to resist corn rootworm, using endotoxins from *Bacillus thuringiensis*.

…Monsanto is calling for protection for its GM crop field trials after the destruction of a site in Beaumont-sur-Leze, France. The group wants the authorities to enforce the law and pointed out the Beaumont-sur-Leze trial was destroyed after the Minister for Agriculture listed field trials planned for 2001.

…in July 2001, the new John Innes Genome Centre was opened in Norwich, UK. The centre was jointly funded by Syngenta, the East of England Development Agency, the Biotechnology and Biological Sciences Research Council and the John Innes Foundation (http://www.jic.bbsrc.ac.uk/press/).

…transgenic papaya is being developed in Thailand in response to the spread of papaya ringspot virus (PRSV).

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