Monsanto wins DuPont suit

A decision by a federal district court has stated that DuPont's licence to market seeds with Monsanto's Roundup herbicide-tolerant technology ended when the firm merged with Pioneer Hi-Bred International in 1999. The ruling also indicates that all sales of Roundup Ready soybean and canola seeds by Pioneer since the merger were not authorised. A new license should be obtained by Pioneer to continue offering Roundup Ready seeds. Monsanto has also entered into a series of deals to see two pending lawsuits involving Aventis CropScience over Roundup Ready and Bollgard cotton varieties. These will allow Aventis to incorporate Monsanto technologies into its FiberMax cotton.

Are attitudes to GM softening?

…in the UK

A public opinion pole in the UK revealed that – half the population is now prepared to eat genetically modified (GM) food and the number that considered GMs unsafe fell by 10% compared with the previous year. Results suggest that public opinion against GMs is softening. The field trials programme in 2001 continues with the number of research sites unaffected by the outbreak of foot and mouth disease. The number of sites drilled in 2001, the second year of the three-year programme, is 32 to spring rape, 26 to sugar beet and 28 to maize.

…in Australia

According to a survey undertaken for the Commonwealth Government Agency, Biotechnology Australia, more people in Australia are willing to eat GM foods than was previously the case. The percentage of those who would eat GM foods has risen from 25% in 1999 to 32% in 2000, and is now almost 50% (http://www.biotechology.gov.au).

Aussie vaccine promises safe GM food

Australian scientists claim to have developed a vaccine to make plants immune to viruses and enable genetic modification of food in a way that may be more acceptable to the public. Like human vaccines, the vaccine activates plant defence mechanisms to knock out diseases before they take hold. It works by silencing an existing gene, rather than by inserting a foreign gene. It is hoped to increase yields of major crops by up to 30%. It could be used to produce non-browning bananas, caffeine-free coffee and other examples without altering the protein structure of the plants. The technology, which is about to be used in trial crops, involves inserting a small, incomplete piece of virus RNA into plant DNA (post-transcriptional gene silencing with intron-spliced 'hairpin RNA' (ihpRNA)). This allows the plant to produce double-stranded RNA known as 'hairpin RNA' (hpRNA). The presence of the hpRNA causes the plant to activate its defence mechanism degrading the hpRNA but also ensuring that the plant is primed to protect itself in the event of an invasion by the same virus. This results in immunity to the virus, which can be passed down through plant generations. The process can also target the cell's own RNA to make the plant think that it is a virus and silence genes. The government Commonwealth Scientific and Industrial Research Organisation (CSIRO) team has already used the technique to develop potatoes resistant to potato leaf roll virus. (For more information contact nick.goldie@nap.csiro.au).

Genes to control the glassy-winged sharpshooter?

….Californian grape growers are very concerned about the threat to the industry from the glassy-winged sharpshooter (*Homalodisca coagulata*) – a sap sucking insect that transmits Pierce's disease – a bacterial disease caused by *Xylella fastidiosa* that invades the plants xylem leading to death.

….workers at the University of Florida have patented synthetic genes that are closely related to genes found in silkworm larvae that produce a protein that kills bacteria and fungi and has been shown to be effective against the Pierce's disease organism. Work is now in progress to introduce this gene into elite vine germplasm as a means of making vines resistant to the disease.

….Demegen has granted a non-exclusive licence to ProfiGen for the purpose of studying the utility of antimicrobial (lytic) peptides on plant variety improvements for the grape industry. The goal of the research is to find solutions to important diseases affecting the grape industry, including Pierce's Disease (http://www.demegen.com).

GM crops require more (or less) pesticide?

….according to a recent study, Monsanto's GM Roundup Ready soybeans require more herbicide applications in the US than conventional soybeans. A growing number of weeds are becoming resistant to glyphosate, the main ingredient of Roundup herbicide. A study had shown that on average 11.4% more herbicide was used on Roundup Ready soybeans than on conventional types. But Monsanto and Roundup Ready growers say the study is misleading and designed to support groups that are against GM foods.

….according to the Centre for Agriculture and the Environment in the Netherlands, the cultivation of genetically modified soybean will lead to an average reduction of 10% in the use of chemical pesticides over a period of 3 years. GM strains are said to have better resistance to certain plant diseases. In the US, around half the soybean crops are genetically modified.

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