

Collaboration

...*Monsanto and Ceres*

Monsanto and Ceres have announced an important product discovery and development collaboration focused on applying genomics technologies to provide improvements in certain agricultural crops. Under the collaboration, Monsanto will acquire rights to Ceres technologies in certain crops and applications in exchange for payments over several years. Ceres will receive additional payments subject to meeting specified objectives for developing additional related technology, as part of its continuing commitment to genomics-based product discovery.

Gene technology regulation in Australia

The first licence under the new Australian Gene Technology Act has been granted to Cotton Seed Distributors by Gene Technology Regulator, Dr Sue Meek. The company will now be able to conduct a limited and controlled release of two kinds of genetically modified insecticidal or insecticidal and herbicide-resistant cotton on a 122-hectare site in the shire of Emerald in Queensland. The licence also includes monitoring provisions as well as requirements that research be conducted during the trial.

Monsanto's biotech wheat seed delayed in the US

Monsanto expect the US market launch of its herbicide-resistant Roundup Ready spring wheat will occur by 2005. Monsanto will apply to register the product in Canada, Japan and the EU during 2002 and in other major countries at the end of 2002–2003.

Molecular biology and spray timing

Researchers at University of California Kearney Research Center have identified small fragments of DNA that are specific to fungal pathogens of fruit and nut crops. The first pathogen to be identified was *Monolinia fructicola*, the causal agent of brown rot in stone fruit and this was followed by *Botryosphaeria dothidea*, a pathogen of pistachios. Samples from trial orchards were tested for the presence of the

marker DNA. If it was found, the farmer sprayed; if not, he did not. Preliminary trials have shown the technique to be very successful with the possibility of saving the state around \$8 million in spray costs annually.

Monsanto shares technology with Donald Danforth Plant Science Center

Monsanto recently announced that it is to share its enabling technologies through a royalty-free license with the Donald Danforth Plant Science Centre for the development of cassava plants that are resistant to attack by pathogens, that last longer in storage and that have improved nutritional qualities (<http://www.monsanto.com>).

European Commission study

The European Commission has released a report by the Joint Research Centre (JRC) which examines purported implications of the co-existence of traditional and organic systems of agricultural production with increased production of GM crops in Europe. The report concludes that GM crop production could co-exist with other systems, as long as reasonable standards of purity are developed, e.g. practicable and reasonable thresholds (below 5%) for GM material found in non-GM crops. However, if thresholds are set at the virtually zero levels being demanded by some, it would be difficult for European seed producers and farmers (traditional or organic) to meet them, and the costs of avoiding contamination would be prohibitive. See http://www.europabio.org/upload/articles/article_133.doc

GM foods pose no additional risk to health

A study prepared for US Congress by the US General Accounting Office found that consumers of GM foods are at no greater risk of allergies or toxic reactions. Researchers found that the US Food and Drug Administration had carried out sufficient tests to ascertain the safety of biotech foods before clearing them for the market. The average risk assessment by the FDA for a new GM food product takes between 18 months and 3 years. The study, which did not address the environmental

impact of GM foods, nevertheless had some recommendations for how the government could improve its procedures.

Public Perceptions of Agricultural Biotechnologies (PABE) in Europe

A research team from five European countries directed by Prof. Brian Wynne from Lancaster University (UK) was asked by the European Commission to conduct an in-depth study on public attitudes, perceptions and evaluations of biotechnology in agriculture and food. A total of 55 focus groups were organised, between 1998 and 2000, in the five participating countries: United Kingdom, Spain, Italy, France and Germany. In addition to the focus groups, the researchers conducted interviews with the key actors and organised several workshops with stakeholders in the debate.

The study showed that most stakeholders misjudge public view, leading to misguided communication strategies by decision makers in government and business.

The study identifies as a priority the need for a broad-based cultural change in policy thinking about public perceptions of science, technology, and risks. It states that policy makers should be prepared to consider that the source of the problem is not only to be found in the behaviour of the public but also in the behaviour of institutions responsible for creating and managing innovations and risk.

Longer lasting plants

Plant scientists Professor Meyer and Dr Elena Zubko at the University of Leeds have identified the plant gene which produces cytokinins to counteract aging, and control shoot production. By enhancing the gene to overproduce cytokinins, they saw dramatic results: a cut plant survived over six months in water alone, and other plants grew abundant shoots which could be cut off to produce new plants. The gene could help maintain vegetables in prime condition during transportation. The ability to grow abundant shoots very quickly could also speed up reforestation programmes, by combating the slow growth of trees in the early stages (*The Plant Journal*, 2002, 29, 799).