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POINT

News from agricultural biotechnology

Behind the headlines

Monarch butterfly

The environmental impact of GM crops is at the center of the debate on their commercialization. An analysis of the ecological studies carried out to date has recently been published and shows that that Bt corn planted in the field does not pose a significant risk to the monarch butterfly population and other non-target insects, including pollinators and natural enemies. Of the 44.3 million hectares of transgenic crops grown worldwide in 2000, 23% was maize genetically modified to express Bt toxins for insect protection of the crop. The primary threat to monarch populations is the loss of crucial winter habitats rather than the commercial cultivation of Bt corn. All factors taken into account, it is important to put the discussion on risks and benefits of GM crops into perspective, informing policy with scientifically verifiable observations.
Source: Trends in Genetics (2002) 18, 249-251

Behind the headlines

StarLink™

In a report to the US Food and Drug Administration (FDA), the Centers for Disease Control and Prevention (CDC) have reviewed and investigated reports of adverse ill effects from consumers who allegedly consumed corn products containing StarLink™ in 2000. No antibodies against Cry9c were detected in any of the blood samples from people who claimed to have experienced allergic reactions to food suspected of containing Cry9c, suggesting that the reported allergic reactions were not due to the presence of Cry9c. The GM corn StarLink™ contains the gene encoding the protein Cry9c, which has insecticidal proprieties. Cry9c originates form the naturally occurring soil bacterium *Bacillus thuringiensis*. The U.S. Environmental Protection Agency granted a limited authorization for the production of StarLink™ corn in 1998, excluding its use for human consumption. This was due to the suspected risk of allergenic potential of Cry9c at the time of the approval process.
Source: http://www.cdc.gov

Transgenic plants

Environmental cleanup

Phytoremediation is the name for a process that uses plants to clean up soils contaminated by pollutants such as organic chemicals or heavy metals. Some plants have the natural ability to hyper-accumulate the toxins and could be grown on contaminated sites to detoxify the soil. After the genes that are involved in the plant uptake and tolerance of toxins are identified, they could be transferred to faster growing species for a more efficient remediation process.
Source: Nature Biotechnology (2002) 20, 329

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Public perception of agricultural biotechnology (PABE)

European study

Ambivalence rather than entrenched views "for" or "against" GM crops characterizes the attitude of European participants in a five-country study exploring public attitudes, perceptions and evaluations of biotechnology in agriculture and food. In a report funded by the Commission of the European Commission, which was made public this month, the authors emphasize the need to understand the public response to GMOs in all its complexity. They identified three types of knowledge used by the public to shape their opinions: 1) non-specialist knowledge about the behavior of the natural world; 2) knowledge about human fallibility; and 3) knowledge about the behavior of institutions. Trust in institutions and policy makers appear to be the crucial issue for the acceptance of new proposed technologies and policies.
Source: http://www.lancs.ac.uk/depts/ieppp/pabe/

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