



News from agricultural biotechnology

Food safety of
genetically
modified
plants

Royal Society,
UK

The Royal Society, UK, concludes in its updated report that there is no additional health risk from the consumption of transgenic plants in the human diet. This report updates the previous report published in 1998, by incorporating new scientific evidence regarding the human health aspects of GM food consumption, such as potential allergenicity, nutrition, safety of DNA from GM plants and viral sources of transgenes. The long history of mankind cultivating, selecting and breeding plants provides the background against which the safety assessment of GM foods is performed. Humans consume large amounts of DNA of all sources in a normal diet, including any viral or microbial contaminants on conventionally grown plants, without any significant risk to health. Source: <http://www.royalsoc.ac.uk/files/statfiles/document-165.pdf>

Feed safety of
genetically
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GM maize and
chickens

Antibiotic resistance marker genes in transgenic maize fed to chickens are degraded during digestion. There is concern about the potential transfer of the antibiotic resistance marker gene present in feed with biotechnology traits to gut bacteria of animals and thus potentially conferring the resistant trait to pathogens. Food safety regulations require that the potential for gene flow be examined as part of the safety assessment. Under a grant by the Food Standards Agency, UK, scientists conducted feeding studies and found that a) chickens fed non-GM maize also tested positive for antibiotic resistance genes and; b) chickens fed GM maize where the resistance gene has been incorporated did not have detectable levels of the marker gene in the lower digestive tract. This confirms the assumption that marker genes from transgenic plants are digested in the same manner as other plant associated genes.

Source: <http://jac.oupjournals.org/>

China looks to
biotechnology

Food security

With \$112 million spent in 1999, China accounts for more than half of the developing world's expenditures on plant biotechnology. China's concern for national food security is reflected in the nation's commitment to biotechnology, with emphasis on research and development programs for food crops that do not receive attention in other major GM crop producing countries. Examples of GM plants include rice, peanut, cabbage, melon, sweet pepper, chili and papaya. A success stories of Chinese plant biotechnology is insect resistant Bt cotton, which was grown on about 700,000 hectares in 2000. Small farmers who grew Bt cotton benefited from reduced pesticide use, reduced costs, reduced labor and improved health from decreased exposure to pesticide. China's experience and knowledge in plant biotechnology may become another exportable commodity for the country in the near future. Source: Science (2002) 295: 674-677

Approvals of transgenic crops

Products on the market worldwide

Approvals and plantings of plants with biotechnology traits continue for both research and commercialization. Monsanto reports ten more new commercial approvals in over eight countries worldwide in 2001. In Australia, field trials are underway with GM barley modified to resist the yellow dwarf virus and enhanced to improve germination rates and wheat modified for improved baking qualities. Earlier this month, the Australia New Zealand Food Authority invited the public to comment on two new recommended food approvals: herbicide tolerant canola and maize modified for resistance to insects and tolerance to glufosinate ammonium herbicide.

Sources: <http://www.isaaa.org/kc>
<http://www.anzfa.gov.au/>

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InterNutrition

Swiss Food and Seed Industry Association, P.O. Box 556,
8034 Zürich
T: 01 421 1691; F: 01 421 1681; E: info@internutrition.ch