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Health risks of genetically modified foods

Crops genetically modified to have reduced susceptibility to pests are promoted as a solution to low food yields in developing countries. The motive of these promoters is profit, not altruism. Monsanto, one of the largest developers of genetically modified crops, has developed a grain that gives an improved crop and is sterile, so instead of keeping back some seeds for the next year's sowing, farmers must return to the supplier for more.

In view of this unbridled commercial approach to genetic modification, it is perhaps not surprising that companies have paid little evident attention to the potential hazards to health of genetically modified foods. But it is astounding that the US Food and Drug Administration has not changed their stance on genetically modified food adopted in 1992 (<http://vm.cfsan.fda.gov/~lrd/fr92529b.html>). They announced in January this year, "FDA has not found it necessary to conduct comprehensive scientific reviews of foods derived from bioengineered plants . . . consistent with its 1992 policy". The policy is that genetically modified crops will receive the same consideration for potential health risks as any other new crop plant. This stance is taken despite good reasons to believe that specific risks may exist.

For instance, antibiotic-resistance genes are used in some genetically modified plants as a marker of genetic transformation. Despite repeated assurances that the resistance genes cannot spread from the plant, many commentators believe this could happen. Of greater concern is the effect of the genetic modification itself on the food. Potatoes have been engineered with a gene from the snowdrop to produce an agglutinin which may reduce susceptibility to insects. In April last year, a scientist, Arpad Pusztai, from the Rowett Research Institute in Aberdeen, UK, unwisely announced on television that experiments had shown intestinal changes in rats caused by eating genetically engineered potatoes. He said he would not eat such modified foods himself and that it was "very, very unfair to use our fellow citizens as guineapigs".

A storm of publicity overtook Pusztai. He was removed from his job, a sacrifice that did not quell public alarm in the UK or in Europe. Last week (May 22, p1769) we reported that the Royal Society had reviewed what it could of Pusztai and colleagues' evidence and found it flawed, a gesture of breathtaking impertinence to the Rowett Institute scientists who should be judged only on the full and final publication of their work. The British Medical Association called for a moratorium on planting genetically modified crops. The UK Government, in accordance with national tradition, vacillated. Finally, on May 21 the Government came out with proposals for research into possible health risks of genetically modified foods.

Shoppers across Europe had already voted with their feet. By the end of the first week in May, seven European supermarket chains had announced they would not sell genetically modified foods. Three large food multinationals, Unilever, Nestlé, and Cadburys-Schweppes followed suit. The Supreme Court in India has upheld a ban on testing genetically modified crops. Activists in India have set fire to fields of crops suspected of being used for testing. The population of the USA, where up to 60% of processed foods have genetically modified ingredients, seem, as yet, unconcerned.

The issue of genetically modified foods has been badly mishandled by everyone involved. Governments should never have allowed these products into the food chain without insisting on rigorous testing for effects on health. The companies should have paid greater attention to the possible risks to health and of the public's perception of this risk; they are now paying the price of this neglect. And scientists involved in research into the risks of genetically modified foods should have published the results in the scientific press, not through the popular media; their colleagues, meanwhile, should also have avoided passing judgments on the issue without the full facts before them.

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