



Consumer Concerns and Agricultural Biotechnology¹

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Genetically-engineered crops in the United States have passed intensive scrutiny from scientific review boards, have received appropriate regulatory approval, and have been grown commercially for the past several years. Nevertheless, some consumer groups in Europe, Asia and the United States have challenged their use and raised concerns about their safety.

Studies of consumer opinions indicate attitudes toward biotechnology derived foods vary from country to country, and are thought to be impacted by such factors as age, socio-economic status and political affiliation. Men are generally more supportive of biotechnology than women, and those with formal education are also more likely to be in favor of it. Although the majority of U.S. consumers say they support genetically modified foods, some opposition in the U.S. has occurred from activist organizations and from a few food processing and food service companies, such as Frito-Lay, Gerber and McDonald's, refusing to buy genetically modified crops due to fears about potential consumer reaction.

In the U.S., numerous public opinion studies have consistently shown both low levels of awareness and generally positive attitudes toward biotechnology-derived foods. In 1996, studies by the

Food Marketing Institute (FMI) suggested that only about one third of U.S. respondents were aware of biotechnology, although this number may have increased significantly in 1997 with the extensive media coverage of Dolly, the first cloned sheep. More recent evidence from public opinion polling suggests that awareness of food biotechnology is increasing, although overall awareness of the presence of biotech foods in grocery stores, is still very low.

One national telephone survey conducted in 2000 indicated that approximately 70% of respondents considered themselves "not very" or "not at all" informed about biotechnology. A summary of several studies of public attitude and awareness of food biotechnology conducted between 1993-1997 reported that between two-thirds and three-quarters of U.S. respondents had positive attitudes toward biotechnology derived crops. Surveys conducted by FMI during this time period showed that a majority of consumers had positive perceptions of the benefits of biotechnology related to plant crops (better tasting; fresher; more insect-resistant). In terms of perceived risks, however, consumers cited a number of concerns. Perceived risks included food and worker safety; trait effects, such as increased resistance to pests creating

1. This document is AEC-366, one of a series of the Department of Agricultural Education and Communication, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Publication date April 2002. Please visit EDIS Web site at <http://edis.ifas.ufl.edu>
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"super weeds"; potential decline in genetic variability and biodiversity; fears about expression of genetic material from pathogens causing disease harmful to other plants, animals and humans; and uncontrolled (and perhaps unintended) gene transfer "upsetting nature's balance".

Not surprisingly, studies also suggest that most consumers' information on both the benefits and the risks of biotechnology most often come from the media, and that American consumers are more favorable toward biotechnology than those in Europe.

In a 1999 study, Europeans scored significantly higher than Americans on factual knowledge, yet were less accepting of food biotechnology. Also, Americans rated their trust in national government agencies considerably higher than did Europeans. Ninety percent of Americans indicated they would have trust in USDA (United States Department of Agriculture) statements about the safety of biotechnology, and 84% had trust in similar statements issued by the FDA (Food and Drug Administration).