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Consumer Attitudes about Agricultural Biotechnology

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Abstract

U.S. consumers are likely to support biotechnology if its application reduces pesticide use and makes the product taste fresher or better. Male and college-educated U.S consumers are most likely to support biotechnology. U.S. consumers are more accepting of biotechnology than consumers in any other country, except China. While United States consumers generally support biotechnology, skepticism among consumers is growing. In the U.S., continued acceptance of biotechnology will depend upon consumer awareness and understanding, recognition by the public that benefits are ethically acceptable, confidence in the government, and trust in information.

Introduction

The promises of biotechnology have become a reality, at least for farmers. To succeed, their agricultural products must be acceptable in the international marketplace. Some activist groups in Europe, as well as in Asia, have mounted highly effective, well-funded campaigns in opposition to biotechnology. To date, most U.S. consumers have accepted biotechnology, but consumer skepticism found in other countries may be spreading to North America. To maintain acceptance of biotechnology, communication is vital and must be based on an understanding of public attitudes.

Findings about Consumer Attitudes

Acceptance of applications across nations and population groups. Consumer acceptance varies among nations and also varies among different types of biotechnology applications. The

willingness of U.S. consumers to buy genetically modified (GM) produce has remained fairly consistent over the past five years -- 74 percent in 1995 compared to 67 percent in 1999. Specifically, surveyed consumers were supportive if biotechnology reduced pesticide use and made the product taste fresher or better.

The only nation that is more acceptant than the United States of GM foods is China. Seventy-one percent of surveyed Chinese said they would buy GM foods, compared to 65 percent of surveyed U.S. consumers and 56 percent of surveyed Canadian consumers. U.S. consumers' support for agricultural biotechnology has remained consistently high for nearly a decade (70 percent in 1992; 72 percent in 1998). Support for agricultural biotechnology is very low in other developed countries, such as Japan and some European nations. Only 16 percent of the Japanese are willing to buy GM foods, although 75 percent of Japanese are in favor of using biotechnology for the development of human medicines. European consumers are more likely than U.S. consumers to view GM foods as a potential health hazard -- 44 percent compared to 16 percent.

Within the general population, men and college-educated U.S. consumers are most likely to support biotechnology. U.S. consumers and farmers have widely different views of the benefits of biotechnology. Nearly 80 percent of farmers perceive biotechnology as being beneficial to health, while only 41 percent of consumers believe it is beneficial.

Knowledge levels. Consumer awareness of biotechnology varies, but knowledge levels are quite low. Since 1992, the percentage of U.S. consumers who had heard "a lot" or "something" about biotechnology has never been more than 47 percent. Compared to the Europeans, Americans have heard or read much less about biotechnology. Twenty-five percent of British and 22 percent of German consumers have heard or read a lot about biotechnology compared to only 10 percent of U.S. consumers. Only 9 percent of British consumers and 2 percent of German consumers have heard nothing, compared to 18 percent of U.S. consumers. When U.S. consumers are asked what they have heard or read about biotechnology, 41 percent don't know. Only 37 percent reported they have heard about its benefits.

In educating consumers, positive, but accurate, language should be used to describe GM products. Consumers prefer the terms "animal/plant biotechnology" and "genetically enhanced animal/plant products." They do not like the terms "genetically engineered animals/plants," "transgenic animals/plants," and "genetically modified organisms (GMOs)."

Confidence and trust are key influences on social acceptance. U.S. consumers are more confident in government food safety efforts (76 percent responded that they had "a great deal" or "a fair amount" of confidence) than are German consumers (63 percent had "a great deal" or "a fair amount" of confidence). U.S. consumers trust professional organizations, such as the American Medical Association, University scientists, and the government as sources of

biotechnology information. Only 4 percent said that they trust food manufacturers. In Europe the most trusted sources of biotechnology information are environmental (23 percent), consumer (17 percent), and farmer organizations (16 percent). Only 7 percent of Europeans believed that the government was a trustworthy source of information.

Labeling. In the U.S., opposition to labeling of GM foods is increasing. In 1997, 20 percent of consumers were opposed to labeling compared to 30 percent in January 2000. When consumers were asked what information they want on a label, only 4 percent want to know if it was genetically modified. Very few (8 percent) say they would stop buying a product if they noticed a GM ingredient on the label. Eighty-one percent agreed or strongly agreed that simply labeling products as containing GM ingredients does *not* provide enough information.

Focus group data shows that people already are overwhelmed by information and choice. Some consumers claim to want information about everything but most want information primarily about nutrition. Many consumers agree in principle that products should only be labeled *if* the product is really changed. Fewer consumers find a need for labels on processed foods (or meat) compared to whole produce items. Also, most are unwilling to pay for labels; they believe that the company should pay. A compromise would be to encourage voluntary labeling of "non-GM" foods because this would allow concerned consumers choice.

Conclusions and Implications

In Europe, opposition to biotechnology is grounded in politics and economics. The BSE (bovine spongiform encephalopathy) incidents have resulted in a lack of confidence in government. Furthermore, there is insufficient proactive education from industry, professionals, leaders, and consumers. The lack of proactive education has created an information vacuum that opposition groups have filled. A strong anti-American sentiment and trade barriers also contribute to opposition. Some Europeans simply want to slow progress so that they can catch up with biotechnology. Some of the social and cultural reasons for opposition in Europe include negative and sensational media coverage; concerns over risk; lack of perceived benefits; support of small farms for food security, open space, and culture; connections to nature and the strength of the green movement; and general opposition to any processed or foreign foods.

In the United States, acceptance of biotechnology will be dependent on the following: awareness and understanding of this technology, recognition by the public that benefits are ethically acceptable, confidence in government, and trust in information. One way to increase acceptance is through education. When developing an educational campaign, it is important to highlight the following:

- Biotechnology promotes agricultural sustainability by reducing inputs, such as pesticides, fuel, and water. As a result, the land becomes more productive.

- Food biotechnology can help reduce world hunger by increasing productivity and reducing losses.

- Biotechnology will soon deliver a host of nutrition and food safety benefits.

- Independent scientists and government agencies have determined the products of biotechnology are as safe or safer than traditional foods.

Consumers also need to know the following:

- Biotechnology is the latest in a series of tools that have already "modified" plants to improve the yield and nutrition of crops.

- Crop biotechnology has provided real benefits to both small- and large-scale farms.

- Research and development in biotechnology are good for the national economy.

- Ethical issues are important and limits will be respected in response to societal concerns.

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