

neering. The usual caveats apply about the influence of wording; not surprisingly, results are about as mixed as those concerning attitudes. The 2001 Pew study found that 38% of respondents were willing to eat biotech food, with 54% unwilling. In the IFIC surveys, about 70% said they would be willing to purchase biotech foods modified to resist insect damage so that fewer pesticides may be used, while the corresponding proportion is a bit lower (50% to 60%) for food modified to taste better or fresher. In the CSPI study, 40% to 43% said they would buy labeled biotech foods (the proportion depending on the type of food), about the same proportions as those who said they would buy food labeled as being produced from crossbred corn. Overall, stated willingness to purchase biotech products is fairly consistent with stated attitudes.

Preferences for labels

When consumers are asked if foods produced using biotechnology or genetic engineering should be labeled, a majority will say yes, usually around 80%. Eighty-six percent of the respondents to a 2000 Harris Poll survey said they thought biotech food should be labeled. In the 2001 Pew study, 75% said it was "very" or "somewhat" important that they know whether a product contains biotech ingredients.

In the CSPI study, 70% said that GE food should be labeled. However, in another question, consumers were given a list of characteristics for a box of Wheaties and asked to pick which one piece of information they would like to see added to its label. Only 17% chose "contains genetically engineered wheat," while 31% chose "contains pesticides in minute amounts" and 31% said they did not know or did not think any new information should be added. While the majority of consumers consistently say they would prefer biotech products to be labeled, this is a top priority for a relatively small group. Further, only 12% in the CSPI study said they would be

Consumers purchase Bt sweet corn

Bt corn is one of several widely adopted genetically engineered (GE) crops. It contains a gene from a soil bacterium (*Bacillus thuringiensis*) that causes the corn to produce a protein toxic to European corn borer and other insect pests, essentially building worm control into the corn. This form of pest control reduces pesticide costs and may improve yields; it is especially beneficial for sweet corn, which has higher insecticide loads than most other fresh-market vegetables. Producer benefits from choosing to plant a Bt sweet corn are clear, but uncertainty about consumer willingness to purchase GE corn reduces those benefits.

A study designed to measure consumer preferences for Bt sweet corn was conducted in central Pennsylvania in summer 2001. The goal was to assess consumer willingness to purchase Bt sweet corn and determine how consumers responded to price variations. Two types of corn were grown at the Penn State farm: one contained the Bt gene, and the other was a related variety that had not been genetically engineered. Corn was clearly labeled as either "Bt Sweet Corn" or "IPM Sweet Corn" and sold side-by-side at five stores in central Pennsylvania and at Penn State's Ag Progress Days. The IPM (produced using integrated-pest-management methods) and Bt sweet corn were described briefly in a brochure available to consumers in each store. The relative prices of Bt and non-Bt corn were varied from location to location and week to week. Retailers were encouraged to set the price of the IPM corn according to market conditions, but were instructed to sell the Bt cultivar at either the same price as the IPM corn, 15% less or 15%

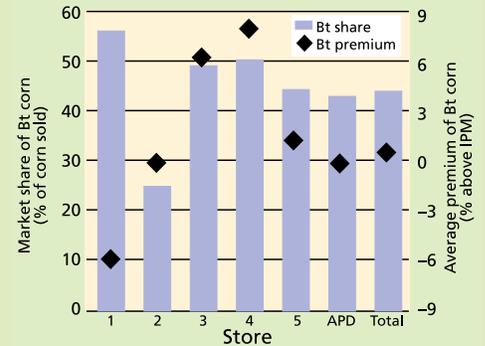


Fig. 1. Market shares (bars, labeled on left axis) and corresponding average price premiums (diamonds, labeled on right axis) for Bt sweet corn by store, plus at Penn State's Ag Progress Days (APD). Corn labeled "Bt Sweet Corn" was sold side-by-side with corn labeled "IPM Sweet Corn"; a brochure explained the difference between the transgenic (Bt) and integrated-pest-management (IPM) products.

more. Sellers recorded how much corn of each type was sold each week.

The results from this geographically specific study cannot be interpreted as nationally representative, but they suggest that there is a viable market for Bt sweet corn. The overall market share of Bt sweet corn was 44%, shown in figure 1 along with the store-specific market shares. Price seems to have played a fairly minor role in consumer choices, as indicated by the fairly large market shares of Bt sweet-corn in stores 3 and 4, where price premiums were higher, on average, than in other stores. — J.S. James

This study was conducted by J.S. James, Shelby Fleischer, Twilla Parker and Michael Orzolek, Pennsylvania State University, University Park, Penn.



Results from a consumer-preference study in central Pennsylvania suggest that there may be a viable market for Bt sweet corn, above.