THE LAST WORD/

FOOD BIOTECHNOLOGY: TRUTH IN ADVERTISING

By Marion Nestle

The labeling issue is really this simple: consumers are more likely to buy the food products of biotechnology if they think the foods are worth the price and if they trust the producer. Trust requires disclosure.

Consumer attitudes toward biotechnology and the food supply are no secret. They include the hope that new technology will lead to a greater abundance of healthy food choices, fear of the unknown dangers of such food, concerns about ethical applications of recombinant techniques, and a profound distrust of governmental regulatory processes. These views should be taken seriously; consumers who hold them are unlikely to be converted by education alone. They need to trust the products and the industry that produces them.

Biotechnology tells consumers that it will help to solve world food problems by improving the nutritional quality of the food supply, increasing food safety, and reducing food costs, especially under the poor soil and climate conditions found in many developing countries. These visions have inspired industry claims that "biotechnology promises consumers better, cheaper, safer foods," federal pronouncements that the new technologies will provide "foods that are tastier, more varied, more wholesome, and that can be produced more efficiently," and editorials exulting that "more nutritious and abundant foods will be produced more quickly and easily" now that the FDA has removed regulatory obstacles.

That biotechnology has not yet delivered on these promises does not mean that it never will. Given enough time, talent, and research dollars, technical barriers to solving world food problems should eventually be overcome. But a more important barrier to solving them derives from the economics of agriculture and food. In 1990, the leading 30 American agrochemical, animal health, and agricultural biotechnology companies spent nearly \$400 million on food research and development, but only one-tenth as much on food problems in the developing world.

Biotechnology was a \$4 billion industry in 1991 and is expected to grow to at least a \$50 billion industry by the year 2000. This economic promise accounts for the enthusiastic response of the biotechnology industry to the FDA's non-intervention policy, lauded by the *Wall Street Journal* as a "very strong incentive for investment in the agricultural/food biotechnology area."

Driven by economics, most biotechnology research empha-

sizes the control of weeds, insects, and plant disease, and the development of plant foods that resist herbicides, last longer on the shelf, and reduce processing costs. Nearly 40 percent of food biotechnology projects focus on product development and processing methods, more than a fourth involve food enzymes, and the rest involve sweeteners, flavors, fragrances, colors, and better detection of contaminants.

And what is the result of such efforts? The Flavr Savr tomato. According to reports, Calgene spent \$20 million and 8 years of effort to engineer it for long shelf-life. This otherwise astounding amount makes sense in light of Calgene's expectations that its tomato will capture 15 percent of the \$3.5 billion annual market. Rumors are that the Flavr Savr tomato will cost consumers nearly twice as much as a regular tomato. If so, this first product of food biotechnology is nothing more than a luxury item targeted to an upscale market. Consumers will buy it if they can afford it and if they think it is worth the price, but they are unlikely to believe it is going to solve world food problems.

Let's admit that the primary beneficiary of biotechnology research and development is not the developing world but the food industry, which badly needs products that can compete in today's fiercely competitive food marketing system. The average supermarket now contains 30,000 food items, yet about 13,000 new food products were introduced into the U.S. food supply in 1991. Growth in the food processing sector has been less than 1 percent per year since the late 1940s, stagnant by comparison to other industries. What all this means is that any food chosen by a consumer necessarily excludes another.

Some investment analysts expect biotechnology stocks to rise by 25 percent annually during the next 5 years. That such projections are not yet reflected in current market figures may be because investors are waiting to see whether the new tomato is going to sell.

With so many food choices, and so much money at stake, consumer acceptance of genetically engineered food products has become an issue of major importance. Yet FDA officials have decided that premarket reviews of foods developed through biotechnology will "not advance public health." Instead, their protocols for safety assessment use the phrase "consult FDA" at each decision point, implying that oversight responsibility is to be conducted through informal discussions with food producers. This method is neither ideal nor reassuring.

With FDA avoiding involvement, the food biotechnology industry must take responsibility for keeping consumers informed both about the real goals of their research and about what's in the products they make.

All the evidence suggests that consumers will welcome superior products—those that are cheaper, taste better, and have better nutritional value—no matter how they were produced. And if the product is superior, consumers and the industry should rejoice together. But food biotechnology should not be celebrated as a solution to the world's food problems—at least not yet.

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