FDA looks at food biotech

Experts polled in a U.S. Food and Drug Administration (FDA) study on the implications of biotechnology for the food industry predicted that advances will be most prevalent in the areas of food processing, agriculture and food safety diagnostics.

Food industry representatives cited more than 1,200 specific advances that could affect the industry. More than half were feasible in the lab by the end of last year, and "virtually all developments (95%) will be technically feasible within the next two years," the FDA report said.

The most frequently mentioned advance was the development of genetically engineered enzymes for food processing. Heat-stable lipases, enzymes with pH tolerance, improved proteases, cellulases and lipoxygenase were among the enzymes seen as having potential. The report also said work is under way in enzyme-catalyzed synthesis in organic solvents and the production of emulsifiers and surfactants.

The experts named a number of products that would be produced using biotechnology: novel surfactants from functionalized fats and oils, low-calorie fats, oil substitutes, a low-calorie oil produced from soybeans, cocoa butter replacements, interesterified fats, cholesterol-reduced animal products and infant formula. Details: *Food Chemical News*, March 21, 1988, pp. 9–15.

Fat consumption shows paradox

Americans have shaved fat from their diets, but counterproductive federal policies have hampered consumer success in limiting fat intake, according to a study.

Information from a National Research Council (NRC) report released this spring indicates that many consumers may have increased their consumption of invisible fats while cutting back on visible fat. *Science* reported that the committee found that fat averaged 36% of total caloric intake for most Americans, 6% more than the 30% recommended by the American Heart Association (AHA). Data showed that 90% of the women studied and 96% of the children studied ate more saturated fat than AHA recommends.

The committee suggested that the problem of saturated fat overconsumption might be solved by producing leaner animal products, providing consumers with better nutrition information and changing federal regulations.

Federal policies have limited the ability of the food industry to change its products, the report said, adding that the U.S. Department of Agriculture (USDA) meat grading system is confusing and rewards the livestock industry for producing fatter meat. Also, Food and Drug Administration nutrition labeling practices are not uniform in describing the fat content of food.

NRC pointed out that even though consumers are eating less red meat and purchasing more seafood, poultry and vegetables, consumption of fried foods and snacks is up. Sales of premium ice creams with butterfat contents of 15%–20% rose 20% in 1985. The report called this phenomenon the "workout/pigout" paradox.

The study also indicated a steady increase in fat in the U.S. food supply over the past 20 years. Data for the report came from a three-year study funded by USDA. Details: *Science News*, April 9, 1988, p. 228, and *Science*, April 8, 1988, p. 136.

Prices decline for retail fats

In 1987, while U.S. retail prices for most foods rose, those for shortening, margarine, eggs and poultry declined.

U.S. food prices, as measured by the Consumer Price Index (CPI), rose overall by 4.1%, up from 3.2% measured in 1986. However, the U.S. Department of Agriculture (USDA) said excessive supplies of soybean and other vegetable oils reduced edible oil product prices. As a result, shortening and margarine retail prices dropped 10%-12%.

Peanut butter prices, however, increased 13% due to a decline in peanut supplies caused by the 1986 drought. Poultry prices dropped 1.4%, and egg prices fell 5.9%.

Seafood, pork, beef, dairy products and cereals cost more in 1987.