

Designing Food by Engineering Animals

A committee sponsored by the National Academy of Sciences recommends lower fat foods and says the place to start is on the farm

PART of the solution to the high-fat American diet may be to put farm animals on a diet of their own, according to a major new report on animal food products released on 5 April by a National Research Council committee.

Americans consume too much fat, the committee said, which leads to heart disease and numerous other ailments. A promising way to solve the problem is to lower the fat content of farm animals and processed foods through breeding, changes in diet, and genetic engineering of the livestock, according to the committee's report, "Designing Foods."

Although food producers are already cutting fat from some products, such as beef, they should be doing a lot more to provide consumers with lower fat food and a lot more information about nutrition. The committee criticizes federal agencies for stifling innovation in the food industry. "The overall federal role in the food system appears disjointed, sometimes functioning at cross-purposes," the report said.

The report, the product of a 3-year, \$750,000 study funded by the U.S. Depart-

ment of Agriculture (USDA), paints a complex picture of trends in American's eating habits. Americans have been eating less fat during the past decade, but they are still not meeting the targets recommended by health authorities, said Barbara Luke, project officer for the study.

The committee found that fat accounts for 36% of the average American's total caloric intake. The American Heart Association recommends a goal of no more than 30%. Consumers are eating less red meat—beef, pork, lamb, and veal—and sales of yogurt, fresh vegetables, seafood, and poultry have been booming.

On the other hand, sales of frozen french toast and pancakes, and potato chips have swelled too, the report says. The study's findings show that people "are snacking constantly," Luke said. People are eating more fried food. "They're eating fried chicken with the skin on," Luke, a nutritionist, says with exasperation. (Eating the skin doubles the grams of fat consumed.) In addition, the sales of superpremium ice cream, such as Haagen-Dazs and DoveBars, containing 15% to 20% butterfat, jumped

20% in 1985. It is part of the "workout/pig out" paradox, the report said.

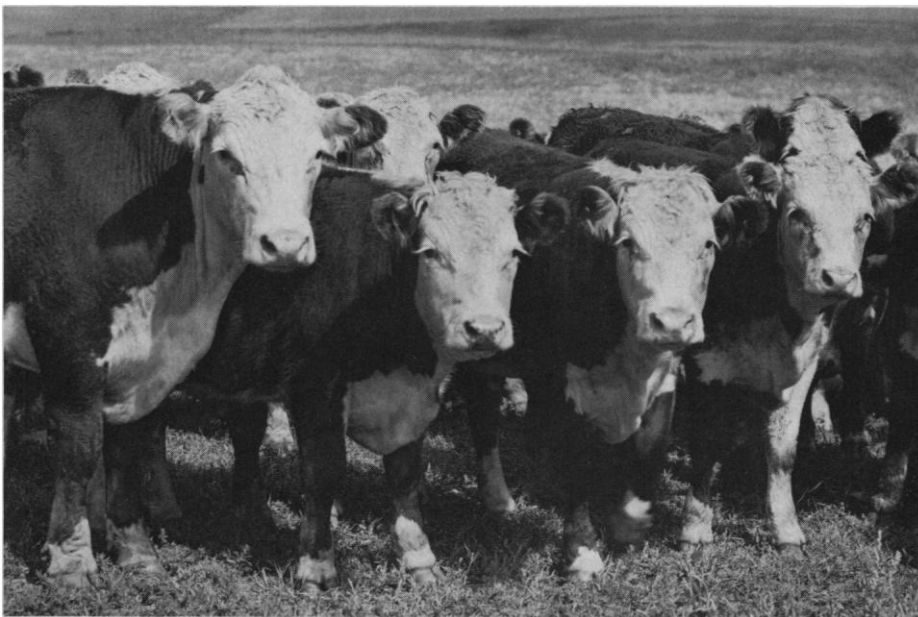
Since most fat calories still come from animal food products, the committee made several recommendations to produce less fatty animal products before they reach consumers' tables. The goal is to get rid of fat early in production. "The trimming of fat at slaughter or at purchase is only a partial, short-term response. The real solution lies in the production of leaner animals," the report said.

In the future, steers may look the same, but they should be trimmer in terms of fat. Changes in their diet, breeding, and genetic engineering will all help to produce less fatty meat. The committee suggests that the administration of growth hormone produced by recombinant DNA technology can boost muscle growth more efficiently and cut fat production. Luke says that growth hormone does not compromise the nutritional value of the beef, but acknowledges that consumer reaction to the idea of beef with growth hormone "is something to overcome. It's a very real problem."

The report also encourages changes in milk production. The most promising method to reduce fat content of milk is to change the diet of the dairy cow. (The goal is to cut down milk fat production, so that there is less butter and cream produced.) Genetic manipulation will also produce cows that give lower fat milk. Swine "are about as lean as they're going to get," Luke said. Even so, various hormones can also be administered to pigs to lower the fat composition, the report said. Pork products, such as sausage and bacon, need modification because of their high fat content, Luke said. Chickens are "already fine-tuned" for low-fat, but genetic selection can be exploited even further to reduce poultry's fat content. Altering the cholesterol levels in eggs has proved to be extremely difficult, however.

Federal policies hamper attempts by the food industry to change its products, the committee asserts. The USDA meat grading system is confusing to consumers and rewards cattlemen for producing fatter livestock. The Food and Drug Administration's labeling regulations make it difficult to provide better nutritional information on food packaging. There is no uniform system of judging the fat content of food products. The current USDA grading system "is not only costly and inefficient, but it encourages the overfattening of beef and lamb (but not pork)," the report said. Federal policies need to be changed to provide the consumer with more information about the food they are eating, the committee said. ■

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Meat on the hoof *should be leaner.*