variety, Lenape, regarded as excellent for potato chip manufacturers, was withdrawn from the market as a precautionary measure because it was found to contain an increased concentration of solanine compounds.

Ironically, though such incidents indicate that adventitious changes in the concentrations of toxic substances have occurred and may pose a potential hazard, task force members generally agree that too little is known about toxic substances to devise a systematic monitoring scheme. Of the thousands of naturally occurring toxic substances in foods, the vast majority are apparently harmless in the amounts in which they occur. Indeed, some essential nutrients are toxic at high concentrations. Many of the toxic substances protect the plant against disease or insects. Unfortunately, only in relatively few crops—potatoes, peas, and green beans —have such substances that serve this function but are also harmful to man been identified. Moreover, very little is known about the effect of these compounds in very low doses over long periods of time. In addition, many substances in food which may be toxic have not been identified. Monitoring for potentially dangerous toxic substances is more difficult than looking for needles in haystacks said one task force member. In the haystack case, at least, the object of the search is known.

Nevertheless, the task force managed to produce two recommendations on the toxic substance question; first, that glycoalkaloids in potatoes, one of the few known potential hazards, not exceed the range present in the currently widely grown commercial varieties; second, that breeders pay "special attention" to possible increases in levels of toxic constituents when using alien species in crop improvement programs.

Neither recommendation has generated much concern among plant breeders, since potatoes are already being monitored for glycoalkaloids, and since affording a potential occurrence "special attention" is far less expensive than guidelines calling for toxic identification and laboratory analysis.

What has stirred up controversy is the task force's proposals for monitoring and reporting the nutritional content of several major food crops. The task force decided that any crop providing at least 5 percent of the average national intake of a nutrient, or at least 10 percent of the mean intake for a specific regional, income, age, sex, or ethnic group, should be monitored. The group narrowed the nutrients to be checked to nine—protein, magnesium, calcium, vitamins A, B6, and C, thiamin, riboflavin, and niacin. One or more of them will be monitored, according to the proposed guidelines, in nine crops, which include white and sweet potatoes, carrots, tomatoes, dried beans, oranges, cabbage, peanuts, and perhaps wheat.

The task force itself is divided over whether and how the guidelines should be implemented. H. M. Munger, a professor of plant breeding at Cornell University, who represented the American Society for Horticultural Sciences on the task force, opposes their implementation. Munger evaluated the impact of monitoring breeding programs for cabbage, carrots, sweet potatoes, and dried beans. He told the task force that a majority of the breeders indicated the new regulation and guidelines would "impede" the progress of their breeding programs. Of the breeders he contacted, only 6 perform vitamin analysis within their programs, 17 have the capability within their organizations, and 19 lacked such testing capability. One very large seed company, which Munger declined to name, indicated that many of its vegetable breeding programs might be discontinued if nutrient monitoring became too expensive. Increasing the cost of such programs, he argues, also conflicts with the government's objective of encouraging a shift in the development of new plant varieties from government to commercial plant breeders. Munger argues that the guidelines may delay or reduce the introduction of new varieties. Moreover, monitoring is unnecessary in the first place, he claims, because he finds no evidence that the nutrient content of the four crops he evaluated has declined over time. In fact, for sweet potatoes and carrots, the vitamin A content has apparently risen because breeders have been emphasizing the beta carotene content of the products to enhance their orange color.

In defense of the group's guidelines, and the FDA's regulation task force, chairman Senti says that the action is in keeping with the trend toward greater government vigilance over the nation's food supply. Plant growers, Senti argues, have not been singled out for onerous regulation. The FDA's new controls in several areas, such as the voluntary nutritional labeling program, encourage the food industry to supply safer and more nutritious food products. Senti claims that we don't know what has happened to food varieties over the years because, by and large, neither the government nor the companies have been monitoring nutrient composition. "These guidelines will simply enable us to determine what is happening to the nutritional value of our food," said Senti. "It is a useful and reasonable first step."

The fear that these procedures are, indeed, merely a "first step" is the real source of industry's alarm. Breeders fear that this policy may ultimately lead to an FDA regulation that would incorporate increased concentrations of nutrients in raw foods as a primary objective of breeding programs. Such a requirement would add thousands

New Blood for National Science Board

Eight new members have been nominated by President Nixon to the National Science Board, the governing body of the National Science Foundation (NSF). The nominations are expected to be confirmed automatically by the Senate.

Two of the members who are being renominated after completion of one 6-year term are Norman Hackerman, president of Rice University, and Grover E. Murray, president of Texas Tech University. The other six nominees are: Jewel P. Cobb, dean of Connecticut College; W. N. Hubbard, Jr., president of the Upjohn Company; Saunders MacLane, professor of mathematics, University of Chicago; Donald B. Rice, Jr., president of the Rand Corporation; L. Donald Shields, president of California State University, Fullerton; and James H. Zumberge, chancellor, University of Nebraska, Lincoln.

The board, consisting of 24 members plus the NSF director sitting ex officio, is scheduled to meet in September to elect a chairman and a vice-chairman who will serve 2-year terms.—S.B.M.