

Field Tests: A Weightier Message

Field tests of genetically modified organisms continue to stir up public apprehension and have prompted states to propose strict regulations. But a new report by the National Research Council suggests that these fears are largely unjustified.

On 20 September, the council released a report, "Field Testing Genetically Modified Organisms,"* that U.S. officials hope will provide a basis for uniform regulations. It has two basic themes: (i) there is no conceptual difference between altering a plant or microbe by classical breeding techniques or by gene splicing; and (ii) regulators should evaluate field tests of genetically engineered organisms on the basis of the potential hazard of the product itself rather than the molecular techniques by which it was made.

The message is, "Let's not worry about how you got there, but what you've got," says Robert H. Burris of the University of Wisconsin at Madison, who chaired the committee that conducted the 10-month study.

Federal agencies adopted that approach a couple of years ago. Nevertheless, "it reaffirms what the agencies have done," says Terry Medley, director of biotechnology regulations at the U.S. Department of Agriculture. USDA is one of several agencies that belong to the federal Biotechnology Science Coordinating Committee, which requested the study and provided \$325,000 in funding.

The importance of the report, Medley remarks, is that it says field tests of genetically modified organisms can be evaluated for their risk on a scientific basis. That's a major point, he says, at a time when groups in Europe are calling for a moratorium on field

testing novel organisms, and U.S. states are debating whether to pass their own regulations on field testing.

If the report's conclusions have a familiar ring, that's because the National Academy of Sciences said the same thing last year in a white paper that made headlines. But the white paper was subsequently criticized by some, including an editorial in the *New York Times*, for the absence of evidence to support its overall message that field tests of novel organisms are safe for the most part.

This time around, a different panel, which included ecologists and microbiologists, provided the backup documentation. The new report is chock-full of scientific cita-

tions, about 300 of them. It doesn't break new ground in its conclusions, Burris says, but it "formalizes" what's been said before.

Medley says that the new report is more important than the white paper because it provides in-depth documentation.

James Tiedje, a panel member from Michigan State University, also noted that the report provides a framework of scientific questions, in order of importance, that should help regulators assess the risk of proposed experiments. Tiedje says that the report may also help federal agencies to establish categories of field tests that pose little risk, which would speed up the regulatory process. ■ **MARJORIE SUN**

*"Field Testing Genetically Modified Organisms: Framework for Decisions" (National Academy Press, Washington, D.C., 1989.)

Malaria Researcher Indicted

One of the nation's leading malaria researchers, Wasim Siddiqui of the University of Hawaii, was indicted on 14 September by a grand jury on charges of embezzling research funds. Siddiqui's assistant, Susan Lofton, was named in the indictment as a co-conspirator. Speaking through attorneys, both have asserted their innocence, saying they will fight the charges in court.

Hawaii's deputy attorney general, Lawrence A. Goya, reports that Siddiqui has been accused of "employing a variety of means" to divert university research funds that he controlled as the chairman of the Department of Tropical Medicine "for his personal use or benefit." The missing money—put at more than \$130,000—was allegedly siphoned off between 1984 and 1987 through illicit accounting tricks. For example, according to the indictment, Siddiqui billed \$8,639 in unrelated expenses to an account that was meant to pay for the "Asia and Pacific Conference on Malaria" at the Pacific Beach Hotel in Honolulu in 1985. The attorney general claims in the indictment that another \$8,500 of unspent conference funds ultimately made their way into Siddiqui's personal bank account, as did a series of checks from the travel agency that worked on the project. According to Goya and the indictment, Siddiqui also took for his personal use more than \$30,000 intended for researchers in his department.

The indictment charges that Siddiqui tried to cover his tracks with a backdated letter. Siddiqui allegedly persuaded Gilbert Oshima, the comptroller at an outside agency that handled bills for the conference, to sign a letter in 1988 authorizing transac-

tions that took place in 1985.

By chance, this indictment came out on the same day the University of Hawaii received word that the U.S. Agency for International Development (AID) was renewing Siddiqui's malaria research grant for 3 years (worth \$1.65 million). However, AID spokesman Jerry Lipson says that the agency has insisted that Siddiqui be removed from the project until the charges are resolved.

These indictments may raise the curtain on the grand finale of an inquiry that has been running more than 2 years. The case began in 1987 when AID investigated James Erickson, its chief technical officer for the malaria vaccine program, on charges of sexual harassment (*Science* 29 July 1988, p. 521). The personnel office removed Erickson from his post and put him on indefinite leave with pay. This led to a legal brawl in which Erickson accused the agency of incompetence, while the agency investigated him for possible criminal actions.

Erickson, who maintains that he has been the target of a vendetta, says he was shocked by the Siddiqui indictment. He describes Siddiqui as one of the most trusted members of the research network he once supervised. Since 1987, several of Erickson's professional colleagues have been interrogated by grand juries. However, no charges have been filed against Erickson, who continues to draw full pay while working at home on legal briefs.

One official who has been involved in the inquiry but requests anonymity predicts that the state of Illinois and federal investigators will file more indictments soon.

■ **ELIOT MARSHALL**



Familiar ring. The report formalizes previous recommendations, says chairman Robert Burris.