vick. And there were general complaints about the inadequacy of evaluations or descriptors as they are called.

Do plant breeders see genetic vulnerability as a serious current problem? The response of those surveyed was negative. None of the sorghum breeders saw a current threat. At the other extreme, 25 percent of the wheat breeders did perceive one. A divergence worth noting is that plant breeders in the public sector were more likely to see genetic vulnerability as a problem than were those working in industry. In a major hedge on the generally optimistic view, just under half of those polled said that genetic vulnerability might cause a serious problem some day because of "the unpredictability of biological systems."

On balance, the plant breeders seem to believe that they have an adequate reserve of backup varieties to meet future threats. They indicated that the elite lines offer sufficient genetic diversity to provide an adequate spectrum of resistance. Duvick noted that the relatively short periods for which leading varieties dominate seed sales afford protection of "diversity in time."

Duvick pointed out, however, that "greater diversity does not infallibly prevent epidemics, nor does it always give protection against environmentally produced crop failures." He cited the ravages of Dutch elm disease and the blight that drove the American chestnut to near extinction as evidence.

In the future, genetic engineering techniques are expected to provide means to counter threats from insects and diseases to food crops, but informed opinion discounts early help from biotechnology.

If genetic diversity is not a guarantee against disaster, there is wide agreement that national management of germplasm resources needs attention. The NPGS has been getting some $15 million a year in federal funds; there is a broad consensus that more money and manpower are needed. In public policy terms, however, the problem of plant genetic vulnerability and germplasm preservation seems fated to be a backburner issue unless a crisis occurs. And with the present prospects of bumper crops and a lean year for the federal budget it would be particularly difficult to muster support to transform the system. An emergency worse than the corn leaf blight epidemic brought on through some doomsday mutation, however, is not out of the question. Strengthening the system to preserve and use germplasm resources, therefore, seems a prudent way to increase the odds against it.

—JOHN WALSH

R & D Agencies Brace for Budget Cuts

Confusion reigns in most federal departments and agencies following President Reagan's latest proposals to cut government spending. In a televised address on 24 September, Reagan said that $13 billion must be slashed from the fiscal year (FY) 1982 budget to keep the federal deficit in check, and he proposed that the bulk of it should come from a 12 percent across-the-board cut in federal spending. Only a few priority areas would be exempted, Reagan said, and the Department of Defense would be asked to suffer only a token cut of $2 billion.

These proposals, which were made just 6 days before FY 1982 began, face tough opposition in Congress, where skepticism about the Reagan Administration's economic program is growing. It is thus certain that no appropriations bills will be passed until FY 1982 is well under way, and federal officials will not have a clear idea which programs will be cut or eliminated.

As for R & D programs, Congress is being asked simply to approve funding levels 12 percent below the budget request submitted by Reagan last March. In some areas, such as science education, the appropriations committees have already voted to increase Reagan's original request and they are thus unlikely to agree to the new levels. The Administration has, however, threatened to veto any bill that breaks the new ceilings.

Reagan also announced that he plans to send another tax bill to Congress in the next few weeks. This will remove some tax incentives and close a few loopholes, resulting in additional tax revenues of $3 billion in FY 1982. Among the incentives targeted for reduction or extinction are tax credits for investments in energy conservation and renewable energy technologies.

Finally, the Administration plans to offer Congress a proposal in November to dismantle the Department of Energy (DOE). Such a move would save $1.5 billion by 1984, and cut 4400 jobs from the federal payroll, according to a fact sheet distributed by the White House. DOE now has some 15,700 employees and another 115,000 people are working in DOE-owned facilities operated by contractors. Secretary of Energy James B. Edwards said in congressional testimony on 25 September that the Administration is considering setting up a National Energy Development Agency to administer nuclear programs, transferring responsibility for the National Petroleum Reserve to the Department of the Interior and giving the Department of Commerce authority over energy information activities. Responsibility for DOE's basic research programs has not yet been decided.

The federal government has thus entered FY 1982 in a state of budgetary uncertainty. Moreover, even though this year's budget has not yet been decided, negotiations have started for FY 1983. The Administration has already announced that it is looking for a cut of $40 billion next year.—***Colin Norman***

Moscow Scientists Bow to Police Threats

The most recent victim of official Soviet wrath was the Fifth International Conference on Collective Phenomena, scheduled to be held in Moscow beginning on 20 September. The sponsors felt compelled to cancel the meeting at the last moment after ten Soviet participants were threatened with reprisals and ten American invitees were refused visas. Among those who lost their visas were Nobel laureates George Wald and Arno Penzias.

The meeting was an outgrowth of the "Sunday seminars," which were organized by dissident scientists in Moscow as a means of keeping abreast of new information despite official attempts to isolate them. Most of these scientists have been banished from state laboratories.

Several American groups immediately filed protests, among them the Committee of Concerned Scientists (CCS), a New York–based society of 4000 members "dedicated to the protection and advancement of the human rights and scientific freedom of colleagues worldwide." According to spokeswoman Dorothy Hirsch, the CCS sent letters to U.S. Secretary of State Alexander Haig and Soviet Foreign Minister Andrei Gromyko asking that an attempt be made to end the

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