

capital investments—special fertilizer and the like—and thus have benefited only farmers who were well off to begin with. Sorghum, by contrast, is grown by farmers too poor to grow these more expensive crops.

At the press conference, Hannah likened the breakthrough to the discovery, also made by Purdue scientists, of high-lysine corn about 10 years ago. Oliver E. Nelson of the University of Wisconsin, a crop geneticist who worked on high-lysine corn, also told *Science* he thought the two discoveries are comparable. Nelson said, "Axtell's data looks very good to me." For peo-

ple "who . . . draw the major part of their protein from sorghum it would be tremendously important."

However, these rosy predictions were dimmed somewhat by the scientists themselves during the press conference and at briefing sessions, where they admitted that many obstacles and unknowns lie in the path of delivering the high-lysine sorghum to farmers world wide. Axtell stated that, in the next 3 to 5 years, the scientists will probably be able to have farmers grow the genetically improved strains in the "most promising" areas, such as Ethiopia, where they believe these

plants already grow. But the process of breeding the gene into the many other sorghum varieties used by farmers could be lengthy. Actual introduction of improved sorghum could take "7 to 10 years for the most difficult situations," Axtell admitted. "The tendency will be to overstate how quickly this will get into production."

For one thing, a plant that is healthy in the nursery might not fare so well in the field. The Purdue scientists so far have only preliminary results on how well the protein-rich sorghum really grows. "We don't have any data on the yield characteristics" of the strains, says Axtell, but from preliminary growing of them in a tropical environment, in Puerto Rico, "we have no reason to expect there will be any major problems." Another risk incurred by genetically altering plants is that other features—their appearance, taste, texture of grain, or resistance to disease—can be inadvertently altered. "The problem is not that they [the genes] can not be transferred to other varieties," explains Nelson. "The question is whether the gene will interact well with the genetic background into which it is put. . . . They may go to one variety with a favorable interaction, but in the other varieties," the result might be unfavorable. AID will continue to sponsor the work of crossbreeding, as will a number of international organizations.

Another set of unknowns involves the distribution of improved seeds to the farmers. Here, however, Axtell pointed out the advantages of marketing a genetically improved plant, instead of trying to get people to use food additives or of enriching their own food through processing. "Once you get the seeds to the farmer there is no further technical infrastructure needed to ensure that it will enhance his diet."

The work was part of AID's \$9 million per year research program aimed at addressing problems in less developed countries. Erven Long, a senior AID technical officer, indicated recently that the sorghum breakthrough is but one of a series of "firsts" likely to emerge from this program. Other key results could come from research at the University of Illinois on a biodegradable DDT, and at the University to emerge from this program. Other vaccine. Other work might result in protein-enriched wheat and alternatives to herbicides as a method of weed control.—DEBORAH SHAPLEY

## Briefing

### Congress Views Détente with a Fishy Eye

The ambiguousness of the current U.S.-Soviet détente was pointed up by two votes in Congress on 26 September, one to authorize accelerated construction of the Trident missile submarine, the other to require a free Soviet emigration policy as the price for removing discriminatory tariffs on Soviet goods.

By a vote of 49 to 47, the Senate authorized a \$1.5-billion appropriation for beginning work over the next 4 years on all ten of the Trident submarines presently proposed—a schedule opposed by Senator Thomas J. McIntyre's research and development subcommittee but not by the parent Armed Services Committee (*Science*, 20 April and 24 August). The House Ways and Means Committee voted, with no dissent, to deny "most-favored-nation" (MFN) treatment to the Soviet Union in levying tariffs unless Russian Jews and other Soviet citizens are permitted to emigrate if they choose. The Nixon Administration had lobbied against imposing this conditional MFN policy, contending that it might imperil détente. Ironically, however, on the other side of the Capitol, Administration spokesmen were emphasizing the gravity of the Soviet military threat in appealing to senators to support Trident. The Administration has given contradictory explanations of why it wants to rush ahead with Trident, but one reason is that it feels Trident will be a useful bargaining chip in strategic arms talks.

The Trident authorization is now in the bag, for both the House and Senate have approved it. The conditional MFN policy has not yet been approved by either the House or Senate, but a majority in each body has endorsed it. Since the recent harassment of Soviet physicist Andrei D. Sakharov (*Science*, 28 September) and novelist Aleksandr Solzhenitsyn, a broad-based coalition of liberals and conservatives has been pressing hard for Congress to stand up for Soviet dissenters.—L.J.C.

### Dominick Leaves EPA; Successor Not Yet Named

The Environmental Protection Agency's assistant administrator for hazardous materials, David D. Dominick, is leaving office 15 October to return to private life. Dominick, an attorney from Wyoming, was commissioner of the Department of the Interior's Federal Water Quality Administration until 1970 when that agency was absorbed as a part of the newly created EPA. At EPA, Dominick has been identified especially with efforts to eliminate or restrict the use of predator control poisons and the use of DDT and other persistent pesticides. Charles Wurster, chairman of the scientific advisory committee at the Environmental Defense Fund (the environmental law group that has led efforts to ban persistent pesticides), gives Dominick high marks for job performance and expresses the prayerful hope that his as yet unnamed successor will be equally competent and vigilant.—L.J.C.