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performance. Many failures are to be expected, however, and those enterprises that succeed, whether they be private companies or publicly owned organizations, should reap the rewards for their efforts.

We certainly agree that gene banks are vulnerable to destruction, and we discuss the reasons and remedies for this elsewhere (1). It is important to maintain duplicate collections in different locations to reduce the chances of crop germplasm loss. As much of the genetic diversity of crops and their wild relatives as possible should remain under natural conditions. In the case of wild species, parks and reserves are needed to ensure the survival of crop relatives. In situ conservation of crop varieties, though, is likely to prove more difficult. Farmers are not likely to resist adopting high-yielding varieties for long and will probably continue to abandon land races. Giving subsidies to farmers would be one way of prolonging the planting of traditional varieties, but the administrative costs would be high; we consider this approach impractical. Planting varieties on stations is artificial, as they would no longer be integral parts of agroecosystems.

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References

1. *The Role of the CGIAR in Plant Germplasm Conservation* (Consultative Group on International Agricultural Research, Washington, D.C., 1982).

Nuclear Test Yields

In his briefing about the American Geophysical Union session on the Threshold Test Ban Treaty (News and Comment, 17 June, p. 1254), R. Jeffrey Smith misquotes us as saying that, since 1976, two U.S. nuclear explosion tests have exceeded the 150-kiloton limit of the treaty "by 33 and 75 percent, respectively." We certainly did not say this. On the contrary, we were careful to point out that very accurate radiochemical measurements show that no U.S. test has exceeded 150 kilotons since 31 March 1976. What we did say is that there is imprecision in the yield estimates based on seismic signals recorded at great distances and that occasionally

150-kiloton explosions will produce signals larger than expected for that yield. Recognizing this, we compared the largest 40 U.S. and Soviet explosions with magnitudes determined by the U.S. Geological Survey and found that only two U.S. events, but nine Soviet events, had signals larger than expected for 150 kilotons. This asymmetry raises serious concern that many of these tests have actual yields well over 150 kilotons. Our analysis included a fairly large adjustment (reducing the Soviet yield estimates) to correct for suspected geophysical differences between the test sites. To give some perspective on how large this adjustment must be for the Soviet yields to be less than 150 kilotons, we point out that the largest Soviet explosions produce signals that, in U.S. experience, have only been seen for yields of more than 600 kilotons and usually more than 800 kilotons. An adjustment this large is inconsistent with the best available geophysical evidence. Another important point conceded by nearly all involved is that the yields of the larger Soviet tests increased abruptly by about a factor of 2 in recent years. Thus, those concluding that the Soviets have not exceeded the 150-kiloton nuclear testing limit are also saying, by implication, that the Soviets did not test above 75 kilotons or so for the first several years of the treaty (when the United States was testing up to 150 kilotons). Why would they stay so far below an agreed limit? The question is not one we can answer but certainly is added cause for concern.

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David Emery, the new deputy director of the Arms Control and Disarmament Agency, has consulted a variety of government seismologists and reached a different conclusion about the best available geophysical evidence. In congressional testimony on 17 May, Emery said that "by far and away the great majority of detonations that have occurred have been in a range which leaves little or no doubt that those particular shots have been within compliance. . . . I am convinced that there is no conclusive proof [that] the Soviets have violated" the treaty.—R. JEFFREY SMITH

Erratum: In table 1 of the report by M. Essex *et al.*, "Antibodies to cell membrane antigens associated with human T-cell leukemia virus in patients with AIDS" (20 May, p. 859), the heading for columns 4 and 5 should have read

"Cells positive
(> 40 percent)"