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Agricultural Research and U.S. Trade

Farm exports have long been a major source of foreign exchange for this country and a primary factor in offsetting our adverse balance of payments, but during the past 2 years, our agricultural exports have leveled off and even declined. This has triggered a depressed U.S. agricultural economy that is of national concern.

Recently well-meaning agriculturalists are placing the blame for this decline on U.S. support for agricultural research and education in developing countries. Although a simplistic assessment might lead to such a conclusion, a study of the facts strongly supports the contrary view—that collaborative agricultural research with developing countries has been and is a decided benefit to U.S. agriculture.

Countries that have and are receiving assistance from the Agency for International Development are not the primary sources of current food surpluses. Improved varieties and new technologies that U.S. support has helped create have prevented the massive starvation and hunger that the pessimists of the 1960's predicted. But unprecedented population growth has permitted only marginal increases in per capita food production in the countries that we support—some 2 percent over the past 8 years. This insignificant increase can hardly be the source of serious competition with U.S. agriculture. In contrast, during the same period of time, per capita food production in Western Europe has risen 16 percent and in China 39 percent. None of these countries has received technical assistance from the United States, but their food production increases, stimulated by costly subsidies, are resulting in significant competition.

The primary objective of U.S. technical assistance for Third World agriculture is to enhance the economic development of these countries. But U.S. agriculture is also a direct beneficiary of these efforts. Experience in Asia and Latin America during the past two decades shows that American farm exports have generally benefited from increased agricultural productivity in the Third World. Countries such as Taiwan, Korea, Brazil, and Nigeria, which once were recipients of U.S. technical assistance, are now among the major purchasers of U.S. food exports. Developing countries have become the fastest growing markets for U.S. agricultural exports in the past decade, accounting for 52 million metric tons of cereals and feed grains in 1983 or 50 percent of all such exports.

Collaborative research with Third World countries has benefited U.S. agriculture in another important way—through the infusion of yield-producing genetic materials into the seeds of our cultivated crops. The center of origin of essentially every major crop that we grow is in the Third World. Consequently, genetic diversity is highest there. Through collaboration with developing countries, we help them use the reservoir of wild species to improve their own crop-producing potential. But we also have access to that same genetic diversity to improve our own cultivars. For example, semi-dwarf wheat varieties, the genes for which came from Asia, occupy almost 60 percent of our wheat acreage. The genetic sources of resistance for pests, such as the golden nematode for potatoes, came from Peru. Strains resistant to southern corn leaf blight, corn rust, and maize dwarf mosaic virus resulted from collaboration with scientists in developing countries, as did the resistance to the soybean mosaic virus. Comparable benefits can be cited for essentially every crop we grow.

There are other valid reasons for a decline in U.S. agricultural exports. Competition from other countries is enhanced by the high value of the dollar and by lingering U.S. policies that encourage high food prices. Also, the worldwide slowdown in economic growth limits the foreign exchange to purchase U.S. goods. But continued scientific and technical assistance to the developing countries is essential and in the long run will provide expanded trade opportunities for U.S. agriculture and industry.—NYLE C. BRADY, Senior Assistant Administrator for Science and Technology, Agency for International Development, Washington, D.C. 20523