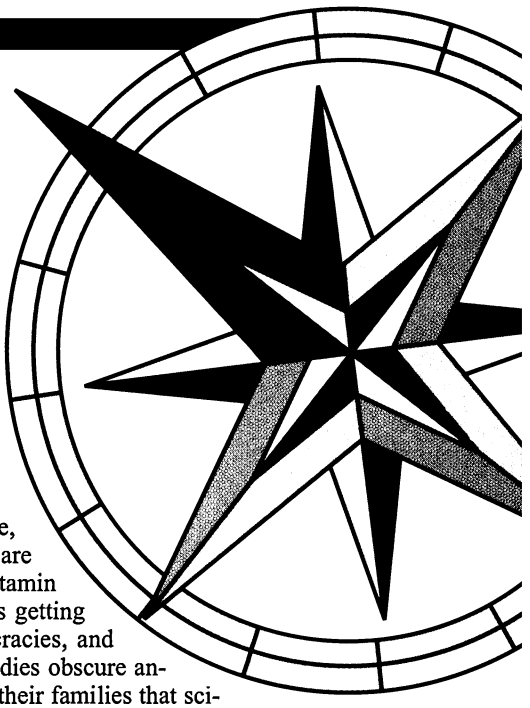

Helping Africa Feed Itself

Gordon Conway and Susan Sechler

"I challenge the foremost experts in the world to think through the barrier of low agricultural productivity in Africa. I implore the great philanthropic foundations—which have stimulated so much good and practical research on agriculture—to rise to this vital challenge." Kofi Annan, Secretary General, The United Nations.

The 3-day United Nations Millennium Assembly of Heads of State, which ends today (8 September 2000), addresses a critical issue raised by Kofi Annan in his millennium report*: helping Africa feed itself. Hunger is commonplace in sub-Saharan Africa: Of the 600 million people who live there, nearly 200 million are chronically undernourished; some 40 million children are severely underweight; over 50 million people, mostly children, suffer from vitamin A deficiency; and 65% of women of childbearing age are anemic. Africa is getting poorer and hungrier. Decades of war, weak governments, one-party democracies, and widespread corruption are part of the problem. But these human-made tragedies obscure another, in some ways more enduring, set of problems for African farmers and their families that scientists could help address.

Elsewhere, agricultural production and economic growth received a big boost from the Green Revolution. Yet few of the technologies were aimed at Africa's staple crops or growing conditions. Green Revolution technology allows plants to channel more photosynthate into grain production, dramatically increasing yields if fertilizer and irrigation are provided. But it diminishes other useful traits, such as vigorous deep roots, sturdy stems, and ability to compete with weeds. Asking African farmers to invest in Green Revolution technology meant asking them to invest in fragile plants in a harsh landscape. Cereal yields in Africe have barely increased over the past 30 years and stand at a meager 1 ton per hectare; per capita food production is stagnant.

"Now is the time for the Western scientific community to apply its knowledge..."

First, the science must be tailored to Africa's circumstances. Traditionally, the poor rely on governments to do their research. But today the United States and other donors have greatly scaled down their aid for agricultural research aimed at poor farmers; about 80% of new biotechnology products and processes, for example, are being developed by the private sector. Biotechnology offers tremendous possibilities for developing plants suitable to Africa, but neither governments nor companies are bending biotech toward these ends. Second, Africa needs cheap agrotechnologies just when agriculture is becoming bound up in privatized intellectual property rights regimes. The great agricultural universities that helped generate the Green Revolution technologies no longer make their inventions available to the poor. We have to find innovative ways to encourage public-private partnerships that deliver new technologies where they are most needed. The partnership (involving AstraZeneca; the ETH Institute of Plant Science, Zurich; and international and national crop improvement centers) to deliver vitamin A rice to poor farmers is a promising example. Third, Africa needs more sustainable agricultural technologies—not just more fertilizer or advanced organic approaches, but the integration of both, together with other techniques such as water harvesting, zero tillage, legume rotations, crop-livestock systems, and composts and mulches. Fourth, Africans know their lands and soils, and this knowledge needs to be harnessed by the growing number of farmer-participatory field trials and experiments. Why should new varieties not emerge from genuine on-the-ground cooperation between farmers and scientists?

Africa has long suffered from bullying by richer countries concerned with their own programs: to shift food surpluses and call it aid; to unload hazardous chemicals; to provide advanced training for Africa's brightest young scientists but fail to encourage them to return home. Now is the time for the Western scientific community to apply its knowledge, in genuine partnerships with African scientists, to help Africa escape from the tyranny of hunger. In the 1960s, we began to conquer hunger in the United States. We are at a similar moment for world hunger. Let us hope that our children and grandchildren do not look back and say: How could scientists and policymakers at the prosperous end of the past millennium have let hunger persist for so long?

Gordon Conway is the president and Susan Sechler is the director of global inclusion at the Rockefeller Foundation in New York City.

*Kofi A. Annan, *"We the Peoples": The Role of the United Nations in the 21st Century* (United Nations, New York, 2000), p. 31.

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