Africa needs a green revolution. Food yields on the continent are roughly one metric ton of grain per hectare of cultivated land, a figure little changed from 50 years ago and roughly one third of the yields achieved on other continents. In low-income regions elsewhere in the world, the introduction of high-yield seeds, fertilizer and small-scale irrigation boosted food productivity beginning in the mid-1960s and opened the escape route from extreme poverty for huge populations. A similar takeoff in sub-Saharan Africa is both an urgent priority and a real possibility.

Until this change happens, Africa’s vast rural areas, which are home to two thirds of its population, will remain mired in poverty, hunger and high child mortality and will stay isolated from the world market economy. Proven technologies—high-yield seeds, new water-management techniques and ways to replenish soil nutrients—are already achieving three to five tons per hectare in many parts of Africa but too often only in small demonstration projects.

Currently tens of millions of African farmers, with hundreds of millions of dependents, are stuck living in subsistence conditions. They lack the savings or creditworthiness needed to buy better seed, fertilizer and water technology. They lack even minimal community infrastructure (roads, storage capacity and power) to participate profitably in the market economy, and so they cannot better their situations.

Until recently, donors sent only food aid in response to Africa’s deepening agricultural crisis. Now they are waking up to the one real solution: increased agricultural production through a homegrown African green revolution. It would require four kinds of temporary help: financing for better farming inputs, extension services to advise farmers on the new technologies, community nurseries to diversify production, and investments in infrastructure. Market-based techniques of financial management can also offer weather-risk insurance to the farm communities.

The time for action is ripe for several reasons. Most important among them is that African leaders themselves are prioritizing agriculture and often getting major increases in harvests and farm incomes as a result. Malawi has more than doubled its food output in just three years, following a bold government program to ensure that all farm households have subsidized access to fertilizers and high-yield seeds. Others are following that lead.

International institutions such as the World Bank have returned to leadership on agriculture after years of waiting in vain for the markets alone to solve the problem. An internal review last year called on the World Bank and donors to “help design efficient mechanisms, including public-private partnerships, to provide farmers with critical inputs.”

New international donors have also stepped forward. The Alliance for a Green Revolution in Africa, sponsored by the Gates and Rockefeller foundations, has given a massive boost to the agenda. Aid to Africa from the governments of wealthy countries has been promised to double between 2004 and 2010, and much of that should go to agriculture.

An additional reason speaks to the urgency for change: Africa’s vulnerability to food insecurity has skyrocketed. The population has outstripped the food supply. Climate change is already wreaking havoc on crop yields. Depletion of soil nutrients has reached crisis proportions. Soaring world food prices have put a crippling burden on Africa as a net food importer. This way lies disaster.

Here are bold but realistic goals that Africa and its donor partners can adopt: to double grain yields in Africa by 2012, to graduate at least three quarters of African smallholder farm households from subsistence to commercial farming within a decade, and to expand nutrition programs alongside increased food production to cut the ranks of the hungry by at least half by 2015.

We should establish a special fund for the green revolution in Africa akin to the highly successful Global Fund to Fight AIDS, Tuberculosis and Malaria. An annual flow of $10 billion from the rich countries, half through the fund, would finance the needed breakthroughs. It would amount to roughly $10 per person in the donor countries, a modest sum that would give Africa the historic opportunity to banish extreme poverty and chronic hunger for hundreds of millions of its people.

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