RICH APPETITES

HOW BIG PHILANTHROPY IS SHAPING THE FUTURE OF FOOD IN AFRICA

Episode 4: Science | Annotated Script

Corporate-dominated, industrial agriculture is exacerbating the climate crisis and biodiversity loss, leaving people more vulnerable to famine. There has never been greater urgency to adopt agricultural models that are more environmentally conscious and climate-resilient. And yet, Bill Gates and other US philanthropists are doubling down, funding industrial approaches to agriculture and "techno-fixes" that they insist will "feed the world" and solve climate change. But what does the science say?

In Africa, climate change is expected to reduce food production capacity by as much as 20 percent, with hundreds of millions of people severely affected by droughts, heatwaves, and other natural disasters. Faced with this dire outlook, African farmers are demanding more support for agroecology, a farmer-led solution to climate change and food security. Agroecology is an approach to farming that mimics and preserves ecosystems. This includes growing diverse crops, applying compost and manure to improve soil fertility, and avoiding expensive, toxic fossil fuel-based inputs. As our climate continues to change, agroecology helps farmers adapt—for example, by enhancing drought-resistant food production systems. It combines research, innovation, and experimentation with local and indigenous knowledge. And because it is grounded in principles of social justice, agroecology ensures that farmers — not multinational corporations — are in control of food production.

The evidence is clear: agroecology **works**. Time and again, scientific studies demonstrate that agroecology increases yields and provides healthy and

sustainable diets, while decreasing input costs and boosting farm profitability. For example, in Malawi, rates of household food security increased by 33 percent when farmers diversified their crops and added organic materials to the soil, while rates of dietary diversity increased by 24 percent. In Benin, farmers had 50 to 60 percent higher yields after adopting sustainable land management practices. Even in Europe, models have shown that agroecology can meet food needs for both domestic consumption and export, while reducing emissions by up to 45 percent. Globally, both the United Nations Food and Agriculture Organization and the Intergovernmental Panel on Climate Change have made it clear that we must scale up agroecology to reduce hunger and cope with climate change.

Philanthropists like Bill Gates claim to care about these issues.[1] But they continue to pour money into biotechnology and other costly high-tech, industrial approaches that do not address the root causes of hunger, mitigate the climate crisis, or help small-scale farmers. The Gates Foundation has spent billions of dollars and funded thousands of projects on chemical inputs and gene technologies at universities and research institutes around the world[2], but has funded only **one** project explicitly focused on agroecology. It is also the primary funder of the Cornell Alliance for Science, which has launched smear campaigns against agroecology[3] and its proponents, while advocating aggressively for GMOs.

The Foundation's investments bolster a narrow set of scientific approaches that create opportunities for agribusiness to profit, but do little to address climate change or hunger. After decades of research on GMOs, companies have failed to produce successful drought-tolerant crops that can assist in adaptation to climate change.[4] By contrast, climate-adapted seeds developed through traditional breeding practices are already grown and exchanged by farmers. Furthermore, only a handful of crops have been genetically modified, and they are the ones grown for industrial uses, such as soybeans, maize, and cotton. These GMO crops are

[1] On climate, see also this article, and this one.
[2] These include Cornell University (e.g. grant OPP1048542), UCLA (OPP1125410), Wageningen University (e.g. OPP1020032), University of Edinburgh (e.g. OPP1127286), North Carolina State University (e.g. OPP1052983), Donald Danforth Center (e.g. OPP1210659), Purdue University (e.g. OPP1052924, OPP1009185), Asilomar Bio, and other companies, universities, and research centers.
[3] See also this article by discredited GMO proponent Mark Lynas.
[4] Additional sources here and here.

extremely dependent on expensive, fossil-fuel based fertilizers and in some cases actually result in *increased* use of toxic pesticides.

The evidence shows the benefits of farmer-led agroecology and Indigenous food production methods. Scientists and small-scale food producers are already working together to identify appropriate and sustainable innovations in African food systems. Yet powerful institutions continue to fund corporate-friendly science, doing little to encourage vibrant or open-minded inquiry and failing to meaningfully address hunger.

To build a more climate-resilient food system, we must pressure philanthropists, institutions, and political leaders to move away from industrial models and support farmer-driven solutions instead.

Stay tuned for a look at agroecology in practice.