FIXES

In Africa, a Drive to End Malnutrition Meets Covid-19

A way has been found to enrich the unfortified flour that Tanzanians eat as a staple. But the pandemic is getting in the way.

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When I began reporting this article, before the pandemic, it was about an ingenious solution to a huge but hard-to-see problem: In many poor countries, most people get their grain from mom-and-pop local mills. But these mills don't fortify their flour with the basic nutrients that children (and others) need.

That solution, which is important and hopeful, is still part of this story. But it has also become a tale of how Covid-19 kills in more than one way, including the terrible complexity of decisions of whether to reopen economies whose workers are desperate for an income.

The case for letting people go back to work isn't just about individual liberty. The public health argument for speeding up recovery is that poverty too sickens and kills. A childhood in poverty can mean a lifetime of suffering.

Wealthy countries can create a strong social safety net. France and Germany, for example, are replacing people's lost incomes. It's costly, but less costly than a recession. That could be the answer in America — if we choose it.

Outside of wealthy countries, you and your family must play the role of safety net, which means you go to work. "Poor people will prefer the lottery of infection over the certainty of starvation," Alex De Waal and Paul Richards wrote sadly in an article for BBC News.

So here's the hopeful story: Every rich country fortifies food. Our diets lack certain nutrients, so governments require manufacturers to add them to certain foods. (Milk doesn't actually contain vitamin D until it's fortified. Froot Loops don't supply vitamin C without help.)

If Americans need fortified foods, so much more do people who don't have the luxury of a varied diet. Most Tanzanians eat cornmeal mush, or ugali, every day. Many eat very little else. Ugali is filling. But it's not nutritious.

A third of Tanzanian children are deficient in iron and vitamin A (which prevents blindness). Many also lack zinc, vitamin B12 and iodine, causing damage to their immune systems and cognitive development. Women lack folate, a deficiency that can lead to neural tube defects like spina bifida in their children at birth. Only two-thirds of Tanzanian children grow to a normal height. And 130 children die of malnutrition every day; countless more are damaged for life.

At a cost of 25 cents per person per year, fortifying food is by far the cheapest way to improve health. Better nutrition also increases economic productivity. Every dollar a country spends on fortification will reap $30 in economic benefits paid back.

Since 2011, Tanzania has required all maize mills to add a powdered mixture of iron, zinc, vitamin B12 and folate to their flour.

Yet according to the Global Fortification Data Exchange, the amount of maize flour fortified is … close to zero. The equipment and nutrient mix must be imported, and millers know there are no consequences for failing to fortify.

In Dar es Salaam, the organization Sanku sends staff members to interview shop owners about the market for fortified flour there. Malicky Boaz/Sanku

One problem is that the government only has only about 55 people to monitor all food and medicine issues nationwide. “Prioritizing fortification is a big challenge when the benefits are invisible,” said Penjani Mkambula, the global program leader for fortification at the Geneva-based Global Alliance for Improved Nutrition. “If somebody eats unfortified food, it’s still food. This is a hidden problem.”

The situation is even worse in the mom-and-pop village mills that produce 87 percent of all maize flour.

“It was just too much money,” said Philipo Kulwa, the chief operating officer of Lina Millers in Dar es Salaam, a medium-size mill by Tanzanian standards. He said that in cities, many customers are aware of the benefits of fortification. “Sometimes people call and ask if our flour is fortified,” he said. But Tanzania is overwhelmingly rural. “There, people have no idea about fortified foods,” he said. “They just consider the price.”

At the end of 2018, Mr. Kulwa began working with Sanku, a nongovernmental organization. Sanku started as part of Project Healthy Children, which promotes large-scale fortification. “We were working with governments at the policy level,” said Felix Brooks-church, an American based in Dar es Salaam who co-founded Sanku (with Dave Dodson, a Stanford University lecturer, who is also a former Republican candidate in Wyoming for the U.S. Senate). “But 10 years in, we realized we were leaving out those arguably most at risk.” In 2013, they created Sanku to work on small-scale fortification.

Other organizations have tried to help small mills fortify flour. That involved scooping the right amount of nutrients into flour by hand. “They gave up,” Mr. Brooks-church said. “Small-scale fortification got a reputation as a waste of time.”

But Sanku invented new technology. It worked with Stanford to develop what it now calls a dosifier — a machine that mixes the right amount of nutrients into the flour.

Various organizations working in Africa now use Sanku’s dosifier. The World Food Program employs it to fortify flour in refugee camps in Kenya and Tanzania, feeding several hundred thousand children.

Parcels of empty flour bags bundled with a nutrient mix, in Sanku's warehouse in Dar es Salaam for delivery to local maize millers. Malicky Boaz/Sanku

Sanku itself works directly with millers in Tanzania. Mr. Kulwa said that Sanku helped him get a grant for the dosifier. It supplies the nutrient mix at no cost. Sanku also trained him, monitors the equipment via a cellular link and comes back when there's a problem.

Sanku also tackled a second challenge: a business model. "The cost of concentrated nutrients is not huge for small millers, but it's still material," Mr. Brooks-church said. "They couldn't afford it or pass it on to consumers — a mother in a village couldn't afford to pay more for a fortified product."

Sanku's answer was to bundle the nutrient mix with something every miller needs — flour sacks. Mr. Kulwa buys sacks from Sanku at market prices. Because Sanku buys in bulk, it can make enough on the sacks to throw in the vitamin-mineral mix.

Sanku tries to recruit millers by asking them to help their neighbors. "The first thing we say is, Do you want to be a health champion in your community?" Mr. Brooks-church said.

Of course, the miller says. The next question is invariably, What's it going to cost me?

Mr. Brooks-church tries to persuade them that they will make money. "Food fortification is a really hard concept to sell," he said. "But everybody knows what quality is." Most small mills also sell flour to the public. Mr. Brooks-church tells millers that Sanku will help bring visible improvements to their mills and flour. Normal bags are simple gunny sacks with the mill's logo. Sanku's bags are shiny, with big pink stripes. "They have the logo of Tanzania's food agency," Mr. Brooks-church said. "They look clean. We holistically try to make their business better."

A vendor delivering fortified flour to shops in Dar es Salaam. Malicky Boaz/Sanku

The government logo is particularly important, said James Flock, the head of the U.S. Agency for International Development's Nafaka (cereals) program in Tanzania: "The trust that small-scale farmers hold in government information is powerful."

Nafaka aims to help farmers and millers professionalize, including adding fortification. It also creates markets for their improved flour. Between November and January, Nafaka tried sending regular texts to farmers (most of them female) about fortified flour and where to buy it. Recipients' purchase of fortified flour went from 5 percent to 30 percent.

Another way Nafaka creates markets is by connecting millers to the government's school lunch programs. It worked with 37 millers to provide fortified flour to nearly 100 schools.

Until now, that is. Covid-19 has closed schools, and with them, a regular source of nutrients for many children.

Maize flour will be the last food Tanzanian families buy when they can buy nothing else. So fortification is more needed than ever. But it's risky. A miller who carried the virus could become a super-spreader. Sanku has given all its millers health kits containing masks, gloves, alcohol rub and cleaner.

Except for schools, Tanzania is largely open. People need to work today to eat today, and so in the markets it is business as usual. Buses are jammed. Many churches are full — the president of Tanzania, John Magufuli, has told people that prayer can vanquish the disease.

Tanzania, like most countries in Africa, is not equipped for the consequences. Many people have no water or soap. In hospitals, oxygen is in short supply. There are virtually no ventilators.

Tanzanians can, however, wear masks. So Sanku has hired an army of workers to cut and sew its flour sacks into masks — 10,000 so far. It has enough sacks to make millions of masks. Those polypropylene sacks embody the terrible dilemma of Covid-19: Should they be made into masks? Or hold fortified flour? Should they fight a virus? Or fight malnutrition? It is an impossible choice. But it's like the ones that billions of people must make.

Tina Rosenberg won a Pulitzer Prize for her book "The Haunted Land: Facing Europe's Ghosts After Communism." She is a former editorial writer for The Times and the author, most recently, of "Join the Club: How Peer Pressure Can Transform the World" and the World War II spy story e-book "D for Deception."