AGRICULTURE AND FOOD SECURITY

WORLD BICYCLE RELIEF®

One of the world's cruelest ironies is that among the hungriest people on the planet are the farmers who grow the food we eat.[1]

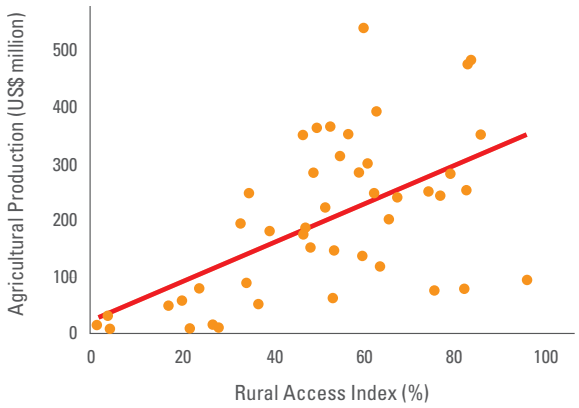
Nowhere is this more true than sub-Saharan Africa,[2] whose 33 million[3] farmers typically use seeds, tools, and farming practices handed down by their grandparents to eke out a meager harvest. Their crop yields measure roughly a quarter of the global average.[4]

Researchers increasingly recognize one critical factor undermining these hardworking farming families' efforts: *distance.*

The high-yielding hybrid seeds, modern fertilizers, and innovative farming practices that have boosted yields and incomes the world over are simply out of reach for the majority of Africa's smallholder farmers who live far from the nearest all-weather road,[5] will likely never be visited by an agricultural extension agent[6] nor access quality inputs.[7]

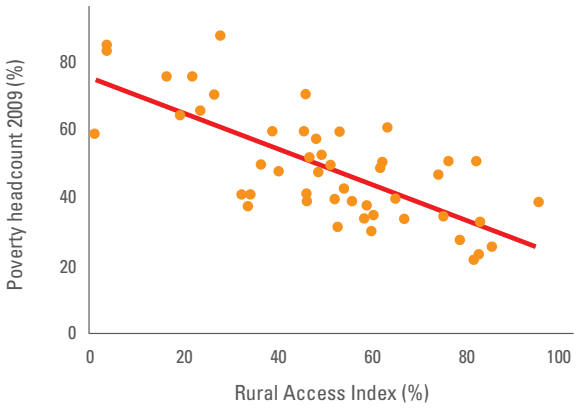
The relationship between access to transportation, poverty, and agricultural production is clear: The farther farmers live and the harder it is for them to access markets, the further they are from financial and food security.[8]

Kenya Agriculture Production and the RAI, by County



Agricultural Production increases as access to an all-weather road increases

Kenya Poverty Rate and the RAI, by County



Poverty decreases as access to an all-weather road increases

Source: Measuring rural access: Using new technologies. Washington, D.C. World Bank Group, 2016. http://documents.worldbank.org/curated/en/367391472117815229/Measuring-rural-access-using-new-technologies

EQUIPPING FARMERS WITH BICYCLES

We can help farmers grow a better future.

World Bicycle Relief has partnered with civil society organizations, governments, and farming cooperatives to distribute in its first 15 years more than 181,302 specially designed, durable Buffalo Bicycles to farmers and agricultural extension agents in seven countries—connecting farmers with quality inputs, information, and markets.

With a heavy-gauge steel frame and puncture-resistant long-wearing tires, the unisex Buffalo Bicycle is designed for rugged conditions, heavy loads of up to 100 kgs, and grueling daily use in challenging terrains—yet costs under $200. Our bicycles aren't playthings. They are workhorses. They boost productivity and efficiency.

In the hands of a farmer, our Buffalo Bicycle is a productive asset. It improves access to high-quality inputs that can grow harvests, such as hybrid seeds and modern fertilizer. It can help farmers access the knowledge they need to use these inputs effectively to grow higher-quality or higher-value crops. And, importantly, Buffalo Bicycles, with their heavy-duty carriers, help farmers transport more of their produce, more quickly, to sell it for a better price and reduce post-harvest loss. This can create a virtuous cycle, improving food security, finances, and health.

In a USDA-supported project led by Land O' Lakes International Development in Zambia, dairy farmers equipped with Buffalo Bicycles delivered 23% more milk and earned 23% more income. Previously, one-quarter of the milk produced simply spoiled before it could be delivered.

Farming Educators in a United Nations Food and Agricultural Organization project in Zambia more than doubled the number of farmers they visited and trained in sustainable farming techniques when equipped with a Buffalo Bicycle.

In Uganda, researchers found[9] that farming families equipped with a bicycle saved 2 hours a day in transportation time. They put that time toward enlarging the land they farmed or intensifying their cultivation. As a result, their income increased by 35%.

Because we focus on women farmers, our impact is multiplied. Research demonstrates that women spend more of their income on their children's health and education. There is no more powerful lever for reducing poverty than improving women farmers' productivity.

23%

DAIRY FARMERS IN ZAMBIA EQUIPPED WITH BUFFALO BICYCLES DELIVERED 23% MORE MILK AND EARNED 23% MORE INCOME.

CLIMATE CHANGE AND POPULATION GROWTH ADD URGENCY

The United Nations estimates that the global population will grow by 2 billion by 2050. More than half of that growth—a projected 1.3 billion[10]—would occur in Africa. Africa needs to boost its harvest to feed this growing population.

At the same time, climate change is reducing the amount of arable land in Africa[11] and Latin America,[12] forcing governments to do more with less. As rainfall patterns shift and temperatures rise, farmers across sub-Saharan Africa and much of Latin America need to adapt. Our Buffalo Bicycles help farmers access improved seeds that are drought-tolerant; education on climate-smart farming practices; and pesticides that protect their crops against a changing and growing assortment of pests and build resilience by boosting farmer incomes and savings.

When farmers are trained in sustainable climate-smart farming techniques, they are more resilient. The benefits extend beyond increased income to their children, their community, and the planet. Farmers can grow their yields without growing their footprint, allowing us to protect more land from Congo to Colombia.

CREATING A SUSTAINABLE BICYCLE ECOSYSTEM

World Bicycle Relief doesn't simply distribute bicycles. We create sustainable bicycle ecosystems by training local mechanics, linking communities with our global supply network for spare parts, and creating local community committees to shape, manage, and lead local bicycle programming.

Our goal is to ensure that in 10+ years, health workers, women, and other community members are still using our specially designed Buffalo Bicycles to broaden access to critical healthcare, education, livelihood opportunities and other essential services.

PARTNERS

Solidaridad

care

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

World Vision

UKaid from the British people

Food and Agriculture Organization of the United Nations

pact

CRS Catholic Relief Services

Land O'Lakes Venture37

Palabana Dairy Training Institute

Plan International

ABOUT WORLD BICYCLE RELIEF

World Bicycle Relief partners with communities, especially women and girls, in rural areas to establish and manage a sustainable transportation ecosystem in order to improve people's access to critical poverty-reducing services and opportunities with gender integration. Given the scale of this challenge, we collaborate with governments to help them change the way systems operate and services are delivered to make them more accessible and impactful.

We work with partners and communities to identify access challenges and deploy community-led programming and purpose-designed bicycles in a gender-responsive manner to improve access to healthcare, jobs, markets, and education.

Over the last 15 years, the lives of over 2 million women, men, and children have measurably improved through better access to resources and opportunities from the distribution of more than 560,000 Buffalo Bicycles and supportive programming. Leveraging extensive learning and a successful social enterprise, we are preparing to scale our impact with a continued focus on gender integration so that millions more can thrive through the Power of Bicycles.

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5 Transport & ICT Global Practice, and The World Bank. "Measuring Rural Access: Using New Technologies." 2016, https://documents1.worldbank.org/curated/en/367391472117815229/pdf/107996-REVISED-PUBLIC-MeasuringRuralAccessweb.pdf.

6 Global Forum for Rural Advisory Services (GFRAS). Fact Sheet on Extension Services. 2012, http://www.farmingfirst.org/wordpress/wp-content/uploads/2012/06/Global-Forum-for-Rural-Advisory-Services_Fact-Sheet-on-Extension-Services.pdf.

7 Westengen OT, Haug R, Guthiga P and Macharia E "Governing Seeds in East Africa in the Face of Climate Change: Assessing Political and Social Outcomes." 2019. Front. Sustain. Food Syst. 3:53. doi: 10.3389/fsufs.2019.00053. https://www.frontiersin.org/articles/10.3389/fsufs.2019.00053/full

8 Measuring rural access : using new technologies (English). 2016. Washington, D.C.: World Bank Group. http://documents.worldbank.org/curated/en/367391472117815229/Measuring-rural-access-using-new-technologies

9 Singhal, Gaurav. "An Analysis of the Huge Unnoticed Potential Increased Bicycle Density has in Accelerating Rural Growth in India." BicyclePotential.org, 2009, http://www.bicyclepotential.org/2009/04/quantitative-experiments.html.

10 United Nations. "Population." UN | Peace, Dignity and Equality on a Healthy Planet, https://www.un.org/en/global-issues/population. Accessed 2021.

11 FAO Regional Office for Africa. "Climate change in Africa: The threat to agriculture." 2009, https://www.uncclearn.org/wp-content/uploads/library/fao34.pdf.

12 Zhang, Xiao, and Ximing Cai. "Climate change impacts on global agricultural land availability." Environmental Research Letters, vol. 6, no. 1, 2011, https://iopscience.iop.org/article/10.1088/1748-9326/6/1/014014/meta.