

A woman wearing a red headwrap and a patterned dress is planting a seedling in a field. She is barefoot and holding a wooden tool. The background shows a field of young plants under a blue sky with clouds.

ONE ACRE FUND

2017

Annual Report

“ *Before enrolling, we were living in poverty. It wasn't only poverty of the home, but it was poverty of the mind. I could only think about food, and I put all of my energy into making sure my children had something to eat.*

— FARMER PHELESIA NYARANGA, KENYA

Purpose

We serve smallholder farmers. In everything we do, we place Farmers First. We measure success in our ability to make more farmers more prosperous. We envision a future in which every farm family has the knowledge and means to achieve big harvests, support healthy families, and cultivate rich soil. 🌱

Values

Humble Service

We meet farmers in their fields, and we get our shoes muddy. Farmers are our customers, and we serve them with humility.

Hard Work

We work hard every day. We execute with world-class professionalism and business excellence. Farmers deserve nothing less.

Continual Growth

We improve every season. We work with determination to meet our goals, and then stretch ourselves by raising the bar even higher.

Dreaming Big

We envision serving millions of farm families. We build for scale with every idea and solution.

Family of Leaders

We bring together the best leaders and build long-term careers. We care for team members like family.

Integrity

We do what we say, and our words match our values.

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GREETINGS *from One Acre Fund!*

I'm happy to share with you our 2017 Annual Report, which details our progress over the past year and highlights some of the work we're most excited about.

»»» 2017 was a milestone year for One Acre Fund because for the first time ever, we directly served more than 600,000 farmers. This is good progress, but we know there is still a lot of work to be done. At this stage in our

growth, it's more important than ever to ensure that we're using our resources productively and creating the maximum impact for farmers. In order to do this, we're concentrating even harder on increasing our "social return on investment" (SROI), a metric that measures farmer income against the cost it took to achieve that impact. SROI matters because it looks at the *efficiency* of resources deployed, not just the total impact created. As we continue to increase our scale, we see huge benefits to improving our productivity, and our aspiration is to become one of the most cost-effective solutions to poverty in Africa.

In 2017, our primary services in Africa attained an SROI of 4.7—meaning that farmers saw \$4.70 of additional income for every \$1 in donor funding we invested. While this is already a strong achievement, we're going to be doubling down in the upcoming year, with the goal of growing our SROI to over \$7 in farmer impact for every donor dollar spent. This is a bold target, but we're already making great strides by rapidly scaling our most efficient operations, particularly in Kenya, our largest and most mature operating country. We should have some exciting news to share about this progress in upcoming reports.

As we move closer to serving more than 1 million farming families in 2020, SROI will be a central part of our long-term strategy, helping us strengthen our foundation and shape our organization more deliberately as we grow. Our goals are ambitious, but we know how much is at stake. Hunger and poverty remain huge problems, but by working together and dreaming big, we'll keep endeavoring to end them both in our lifetimes.

Farmers First,



ANDREW YOUN
Executive Director, One Acre Fund

2017 Governing Board Members

Joel Ackerman
Chief Financial Officer
DaVita Inc.

Matt Forti
Managing Director
One Acre Fund USA

Karl Hofmann
President & CEO
Population Services International

James Mwangi
Executive Director
The Dalberg Group

Fred Ogana
Managing Partner
East Africa Market Development Associates Ltd

Rebecca Onie
Co-founder and CEO
Health Leads

Ada Osakwe
Founder &
Chief Executive
Agrolay Ventures

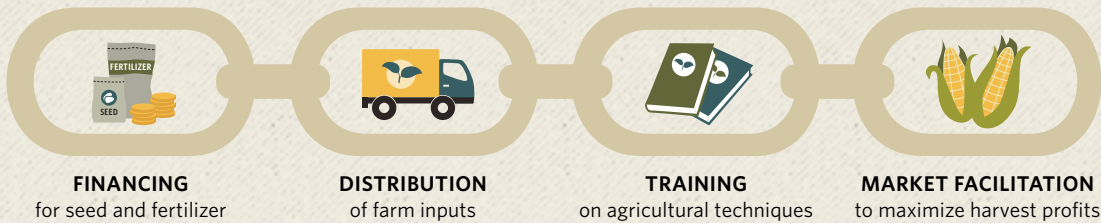
Andrew Youn
Senior Partner/
Executive Director/
Co-founder
One Acre Fund

What We Do

It's a bitter irony that the majority of the world's hungriest people grow food for a living. Millions of smallholder farmers don't harvest enough to feed and support their families simply because they lack access to the basic tools, training, and financing they need.

One Acre Fund is working to eliminate hunger and build pathways to prosperity by supplying a bundle of goods and services on credit, delivered to the rural villages where farmers live.

Providing all of these services together generates the greatest possible impact.



Other Areas of Work

Government Services

We're working with governments across Eastern and Southern Africa to create impact that often goes beyond the farmers we serve directly. In Rwanda, for instance, we've partnered with the government to train agricultural extension agents who are delivering services across the country.

Partnerships

We're building partnerships with other like-minded organizations to increase support for smallholders worldwide. In the microfinance industry, we're a founding member of Propagate, a coalition that's encouraging financial service providers to offer more and better services to farmers.

Impact Ventures

We're experimenting with new, rapidly scalable channels to reach farmers with impactful products and services, including short-term campaigns to adopt trees and hybrid seed, and new technologies such as solar home systems that use pay-as-you-go technology.

One Acre Fund in 2017

>>> 2017 was a year full of milestones, opportunities, challenges, and successes. Here are just a few of our highlights from the previous year.



We employed 6,925 staff.

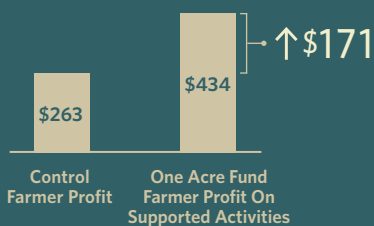


DID YOU KNOW?

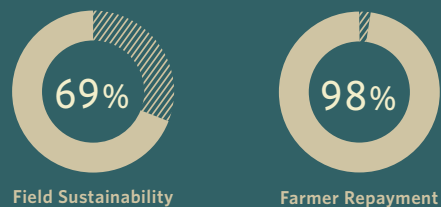
We delivered 30,700 metric tons of life-changing products to farmers.

ILLUSTRATIONS BY Shaw Nielsen

INCREASING IMPACT



FINANCIAL SUSTAINABILITY





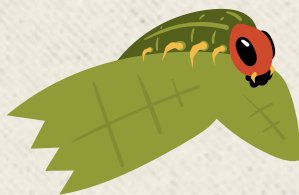
HEALTHY FAMILIES

We're working to improve the health and nutrition of farmers and their families. This includes offering trainings on healthy diets and hygiene, trialing nutrition supplements for pregnant women, and encouraging farmers to produce and consume more healthy foods including vegetables and animal proteins.



GOING DIGITAL

After rolling out mobile repayment in Kenya, we're now running trials in Rwanda, Burundi, and Tanzania.



CHALLENGES & OPPORTUNITIES

While many farmers had to contend with fall armyworms in 2017, One Acre Fund quickly mobilized, rolling out trainings and products to combat this invasive pest.



MICROFINANCE ACCESS

We launched operational pilots with microfinance institutions in Ethiopia and Tanzania.

DID YOU KNOW?



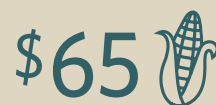
60% of One Acre Fund clients are women (based on training attendance)



The average household size per farmer is 6



Average farm size of a One Acre Fund farmer



Average loan size per farmer

PLANTING TREES



8,600,000

trees planted in 2017

"ONE THOUSAND HILLS, THREE MILLION TREES" CAMPAIGN

3,000,000

seedlings distributed across Rwanda



IMPACT DEEP DIVE

»» ONE ACRE FUND farmers saw strong increases in their incomes in 2017. Here's a detailed look at our impact and how we're reevaluating our measurement approach.

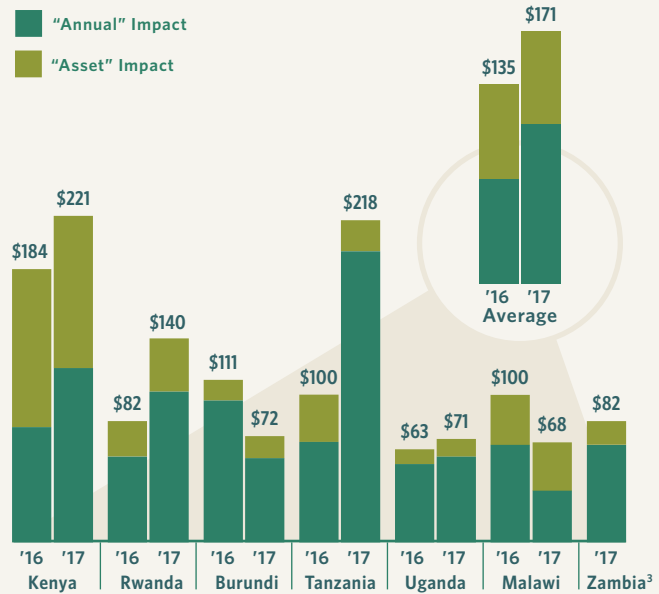
Absolute Dollar Impact

One Acre Fund farmers experienced strong harvests and dollar impacts in 2017. Overall, weather patterns were much improved, as many regions recovered from severe droughts in 2016. We also made several adjustments to our services and trainings that ultimately contributed to higher harvest outcomes, including introducing more one-on-one training sessions with farmers and encouraging them to apply One Acre Fund practices to a greater portion of their land.

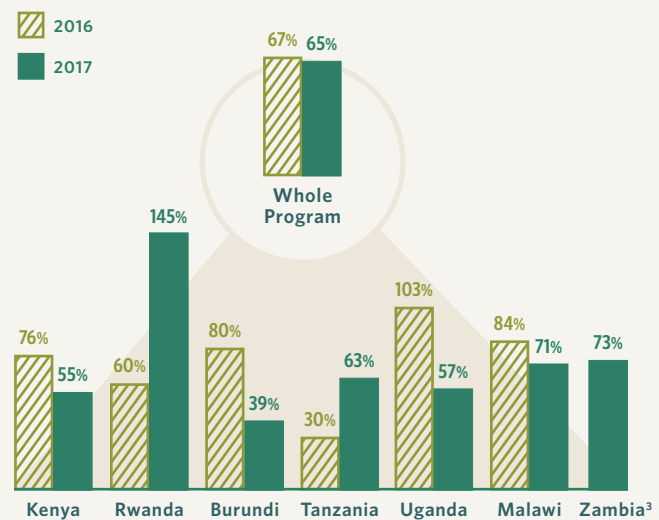
To determine our impact, we physically weigh and value randomly selected harvest samples from thousands of One Acre Fund farmers and subtract all input costs. We then compare this data to farmers who do not work with One Acre Fund, controlling for differences such as education and wealth. After collecting this information, we examine our impact in three ways. Absolute dollar impact is the dollar difference between a One Acre Fund farmer's profit, on average, and a comparable non-enrolled farmer. We only measure profits on activities that we support. Percent gain in dollar impact measures the percentage increase in average profit, compared with non-enrolled farmers, on One Acre Fund-supported activities. And finally, farmer return on investment (ROI) is a measurement of the extra profit that a One Acre Fund farmer makes, relative to a comparison farmer, for every dollar she spends on our services.

Here's how 2017 fared, by each of these measurements:

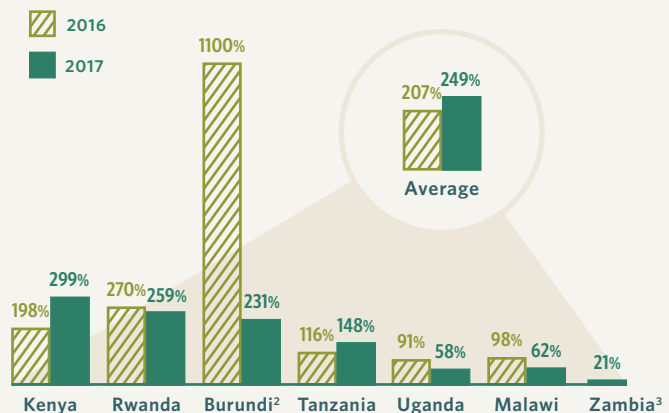
- 1. Absolute dollar impact:** Strong program performance allowed for an overall profit impact of \$171 per farmer (\$107 in annual impact and \$64 in asset impact¹). The results were a marked improvement from 2016 and exceeded our goals. Tanzania in particular saw sizable improvements because of very strong agronomic conditions, which had an outsized effect because farmers there grow crops on larger areas of land.
- 2. Percent gain in farmer dollar impact:** In 2017, we increased farmer profit by 65 percent across our operations, which met our goal. To be clear, this percentage gain only represents the impact of products and services farmers received through One Acre Fund, not on their total household incomes.



Percent Increase Dollar Impact



Return on Investment (ROI)



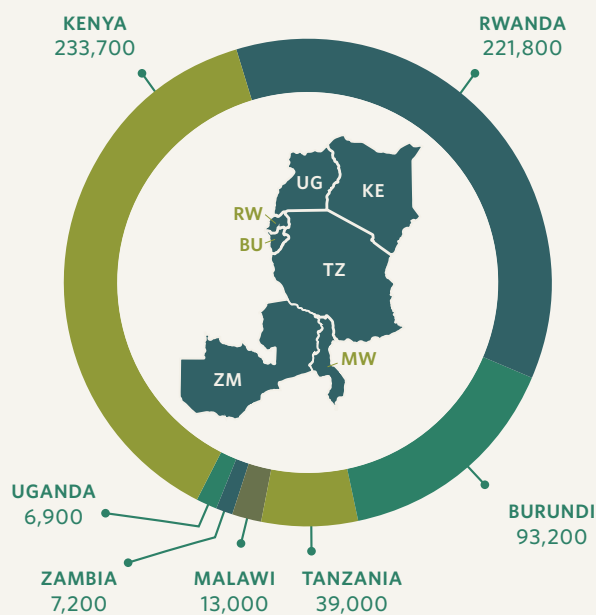
¹ See "We've Changed How We Measure Impact" on page 9 for further explanation. We have applied the same methodology to 2016 figures.

² Burundi's ROI is quite high due to the relatively low program costs.

³ Pilot Country

One Acre Fund served 614,800 farming families in 2017, topping half a million for the first time ever and increasing 38 percent year-on-year. Kenya operations grew 18 percent to 233,700 farmers, a slower pace than in recent years, likely because of the lingering effects of the 2016 drought. We don't expect this to be a long-term trend, as we've seen strong gains in Kenya enrollment for 2018.

Burundi saw the fastest growth of all our operating countries, increasing by 93 percent to 93,200 farmers as we expanded into several new districts. Rwanda also experienced sizable growth, increasing 35 percent year-on-year to reach 221,800 farmers. Tanzania grew to 39,000 farmers, Malawi rose to 13,000, and Uganda reached 6,900. For the first time, we're also including Zambia in our organization-wide scale totals, because the size of our pilot grew significantly to 7,200 farmers.



Sustainability

We measure our financial sustainability by calculating the percentage of our direct service model and agrodealer program costs covered by farmer repayments. In 2017, our sustainability was 69 percent. This was down from 73 percent the prior year because of higher costs associated with shifting government regulations in Rwanda and Burundi, as well as increased investment in expansion in Kenya. Our farmer repayment rate was 98 percent, slightly lower than the previous year because of a mid-season operational interruption in Burundi.

3. Farmer return on investment (ROI): A 100 percent ROI means that our clients received \$1 of extra income for every \$1 of cost invested. In 2017, we achieved a very strong 249 percent ROI—more than \$2 in income for every \$1 invested.

BUILDING OUR EVIDENCE BASE

In 2017, we partnered with 3ie and Emilia Tjernström of the University of Wisconsin to conduct our largest and most rigorous randomized controlled trial (RCT) assessing impact. RCTs are considered the “gold standard” in evaluation because they produce the most unbiased estimates. Our trial, which was conducted in Kenya’s Teso District, randomly assigned a select number of farmers to receive our services from within a larger pool of participants who had signed up.

The results showed that One Acre Fund farmers produced between 300 and 370 kilograms more maize than non-participant farmers, translating to \$60-\$90 of extra profit per farmer. These results were highly statistically significant (greater than 95 percent confidence) in all models and generally similar to what we’ve found in our internal monitoring and evaluation surveys. While we have a large degree of faith in our internal monitoring and evaluation impact assessments, which cover a much more diverse programmatic area, this finding gives us the highest proof to date of the effectiveness of One Acre Fund’s model.

UNDERSTANDING RESILIENCE

In 2017, we also completed our most comprehensive work to date on understanding farmer resilience. We assessed resilience in two ways. First, we examined farmers’ preparedness for severe shocks, such as drought and illness, by creating an index of factors that drew from others’ work as well as discussions with One Acre Fund farmers. Secondly, we asked farmers how well they were able to bounce back from these shocks after they occurred.

Our results showed that One Acre Fund farmers are overall much better prepared to face shocks than comparison farmers, particularly due to their increased food security and, a bit unexpectedly, their larger social networks, which appear to expand after program participation. However, we did not detect an impact on farmers’ ability to endure shocks when they actually did occur. Only a very limited number of farmers reported experiencing a shock in the past year, and so the small sample size may have complicated our ability to detect a statistically meaningful result. More details about the RCT and our investigation into farmer resiliency will be available in the Insights Library section of our website. 🌱



FLORENCE MUGAYA, UGANDA

»» *We've Changed How We Measure Impact*

This year, we have altered how we quantify and communicate the magnitude of our impact, to better take into account the long-term benefits of some of the products we offer, such as trees and solar lights. Previously, when these initiatives were new, we were not particularly confident in our ability to forecast their multi-year impacts. Accordingly, we gave ourselves little “impact credit” for a tree successfully planted or a solar light purchased, for example.

Now that we have more than five years of operating history with these products, we feel more confident in assuming their total lifetime value. We feel it is important to capture and transparently report out this longer-term impact because we believe that eradicating poverty is about both: (1) day-to-day income impact to alleviate the immediate harmful effects of poverty, such as hunger; and (2) long-term asset accumulation that presents more opportunity to rise out of poverty.

Therefore, we are now presenting our impact figures in terms of “annual impact,” which reflects the additional profit

farmers gained this year, and “asset impact,” which reflects the lifetime impact of the products that farmers adopt. To be transparent, this method results in an increase to our dollar impact per family. However, we have adjusted our 2016 estimates so that we have comparable year-on-year numbers to understand trends.

To estimate “annual impact,” we collect detailed data on farming inputs including labor, plowing, fertilizer, and seeds, and subtract these costs from physically measured and monetized harvests. We compare One Acre Fund farmers’ profits to similar neighbors who are subject to the same agroecological conditions, and we statistically control for other differences, such as education and wealth. In 2017, we conducted nearly 20,000 physical harvest measurements across six countries and five different crops. To estimate “asset impact,” we do individual studies on all products, discounting future benefits and accounting for depreciation. We then multiply the lifetime impact by the adoption rate. 🌱



The POWER of INVESTMENT

FARMING IS AN EXERCISE IN HARD WORK AND INGENUITY. Smallholders have to adapt to difficult conditions—resources are limited, weather is volatile, and necessary tools can be impossible to reach. Families make do with what’s available and stretch what little they have as far as it will go.

One Acre Fund is working to support farmers so that their work can become profitable. Often, the impact of new income can be compounded by investment. When farmers have access to resources, they can put their ingenuity into action, building new businesses to support their communities and accelerate progress toward prosperity.

Meet

Cissy Buuza and Mangalena Nsaiga

The walls of Cissy Buuza's pharmacy and medical clinic in Iziru, Uganda, are lined with items to treat almost any ailment. There are menthol tablets for sore throats, vitamins, and children's cough syrup. In a glass display case, she keeps menstruation products, pain medication, and treatments for the flu. Even more inventory is packed in boxes in the back, in a small room where she also sleeps. In a drawer, she keeps her stethoscope to examine patients, who at busy times line up in a row of chairs just inside the door.

Cissy, who has a nursing degree and is just 26 years old, is the only female practitioner in Iziru. She's proud of this accomplishment—women patients like to visit her because she's easy to talk to and discreet. Cissy is also proud of her mother, Mangalena Nsaiga, a smallholder farmer who helped her achieve this once impossible dream.

Cissy grew up in a nearby village, the oldest of Mangalena's four children. Harvests were small, and the family often rationed food to one meal a day. Cissy managed to put herself through nursing school but had trouble finding work after she graduated. For a while, she was an assistant in another pharmacy, but business was bad and her employer didn't pay her regularly.

Then in 2015, Mangalena heard about One Acre Fund. She was skeptical at first, so she only purchased a small amount of seed and fertilizer. She followed the planting instructions exactly as taught during training sessions. Soon, to her surprise, her maize was growing healthier and stronger than ever before.

The next two seasons, Mangalena bought more inputs so she could apply One Acre Fund practices on a larger portion of her farm. Her harvest kept climbing, finally reaching 10 bags of maize on just a half-acre plot, the most she'd ever seen. For the first time, the family had enough to eat and income left over. Mangalena knew exactly how to spend it. She gave the money from her harvest to Cissy, who used it to open her pharmacy.

"It was difficult for me to open this shop because I didn't have money, but my mother paid the rent," says Cissy, who had dreamed of being a nurse since primary school. "Now people admire me because I'm a young woman and I have my own shop. I feel good. I'm unique."



MANGALENA NSAIGA, UGANDA

LIVES IN: *Kisozi Village, Uganda*

YEAR ENROLLED: 2015

ACRES FARMED: ~3 Acres

HOW MANGALENA HAS USED ADDITIONAL INCOME



Helped Daughter
Open Up
a Pharmacy



Bought
a Goat



More Food
for Family

FUTURE ASPIRATIONS



Mangalena would like to
own cattle some day.

“

“Everyone admires me here because I have my own shop. It isn't common for a woman.”

— Cissy

Meet

Wycklyfe Mwanje



Wycklyfe Mwanje's *posho* mill sounds a lot like a lawnmower—its loud, mechanical chugging reverberates against the mud walls of the small shed where he keeps it. The machine, used for grinding maize, sputters a bit in the beginning, but it works surprisingly fast. The tiny kernels of grain poured into one side of the machine are soon streaming out as flour through a pipe on the other side.

Many farmers from the area surrounding Wycklyfe's village of Munzakula, in western Kenya, pay him for the use of his machine. It's much easier than grinding grain by hand to make *ugali*, the traditional maize flour dish that's a staple food in Kenya. His prices are also reasonable,

and cheaper than most of his competitors.

Wycklyfe, 40, is an astute businessman, and the *posho* mill isn't his only project. He also buys and sells livestock, and last year opened a butcher shop in nearby Kakamega to take advantage of the town's large population of students, who are eager customers. To run all his businesses, Wycklyfe employs three full-time staff, in addition to a number of casual laborers who do various jobs around his farm, depending on the season.

Not long ago, Wycklyfe's life looked drastically different. His only source of income was from his farm, which is about two acres in size. The land was fertile, but he didn't use good planting techniques or improved seeds and fertilizer. As a result, he usually harvested around eight bags of maize a year, enough to pay school fees for his five children but with little income left over. During the leanest times of year, the family would often run short of food and ration meals to get by until the next harvest.

Then in 2012, Wycklyfe heard about One Acre Fund. The organization supplied him with hybrid seeds and fertilizer and taught him how to space his crops and plant in rows. The increase in his harvest was astounding. Now, he regularly produces 50–60 bags of grain a year, more than enough to feed his family, pay school fees, and make improvements on his home. Wycklyfe soon began looking for ways to invest his income, and his ideas for creating new businesses started to develop.

"Everything here started from One Acre Fund," Wycklyfe says of his growing prosperity. "With dedication and hard work, it is possible to be very successful."

LIVES IN: *Munzakula Village, Kenya*

YEAR ENROLLED: 2012

ACRES FARMED: 2 Acres

HOW WYCKLYFE HAS USED ADDITIONAL INCOME



Bought
Additional
Land



Built a
New House



Bought
Pigs



Bought
Cattle



Started a
Butchery
Business



Bought
a Milling
Machine



"Because of One Acre Fund, we were able to eliminate hunger from our home." — Wycklyfe





Meet

Andria Mukamazimpaka

Andria Mukamazimpaka spreads thousands of tiny grains of sorghum in an even layer across a giant tarp, crawling on her hands and knees to reach the farthest corner. She spent the last three days soaking the grains in water until they sprouted and turned black, and now they're drying in the heat of the Rwandan sun. There are three large tarps covered in sprouted sorghum lying on the hillside road in front of Andria's house—luckily, not much traffic comes this way. By tomorrow, the grain will be dry enough to take to the market to be sold as malt.

Malt-making is good business for Andria, who has several loyal customers who buy the sprouted grains to make *ikigage*, a local type of beer, and *ubushera*, a traditional Rwandan drink that's non-alcoholic. After buying sorghum from local suppliers and reselling it as malt, she usually makes around 45,000 Rwandan francs (about \$50) a week.

In previous years, that sort of money would have been unheard of for 52-year-old Andria. She used to support the family growing beans and maize on a small farm, less than an acre in size, and by taking out loans to run her malt business, which cut into her profits. Then in 2014, Andria heard about One Acre Fund. After enrolling in the organization, she received high-quality seeds and used fertilizer for the first time. Her harvest more than quadrupled.

Andria invested her new income into expanding her malt business. Now she's buying and selling about three times more grain than before. She no longer has to take out loans to buy raw materials, which means she gets to keep more of her profits. Over time, the family has become more prosperous. They've installed electricity and running water in their house, and Andria was able to pay for driving lessons so that her 25-year-old son, Vedaste, could get his license. Vedaste started out driving a motorbike for another person's taxi company, but now he has his own bike and a business of his own.

"I will keep working hard for my family," says Andria, who hopes her youngest son, who's 9, will go to university. "I hope my children will have more than I had."



LIVES IN: **Mubuga Village, Rwanda**

YEAR ENROLLED: **2014**

ACRES FARMED: **< 1 Acre**

HOW ANDRIA HAS USED ADDITIONAL INCOME



Buys Sorghum
to Make Malt



Installed
Electricity



Installed
Running
Water



More Food
for Family



Paid for Driving
Lessons for
Her Son



"Now instead of going to the market to buy food, we are going there to sell." — Andria



CULTIVATING *Career Passion*

GROWING UP IN BURUNDI'S URBAN CAPITAL, AURÉLIEN Sasagara developed an unexpected passion for farming. Now, he's putting his agricultural knowledge to use on One Acre Fund's product innovations team, researching new ways for farmers to increase their harvests in the country's rough and rugged terrain.



Aurélien Sasagara talks with smallholder Lazzare Hakizimana in his field to learn about how his trial plots are performing.

Aurélien Sasagara stands between two garden-sized plots of land on Lazzare Hakizimana’s farm in Burundi, quizzing the farmer about which side looks best.

On the right, Lazzare has planted using the local method, mixing several crops together with multiple seeds in every hole. Several weeks later, it’s a tangle of greenery, with a few maize stalks fighting through the dense carpet below. On the left, Lazzare has planted more neatly—two rows of beans alternating with a row of maize. It’s still too early to know exactly how the harvest will turn out, but Aurélien expects the outcome to be significantly better for the plot on the left, because the plants aren’t competing for nutrients, water, and sunlight.

Aurélien, a specialist on One Acre Fund’s product innovations team, wants to determine if Lazzare would be likely to change his long-held planting practices. Was it hard to plant this way? he asks. Which one will better enable you to feed your family? Nearby, there are two more test areas with maize and beans growing in separate plots, and Aurélien asks how those are doing. In addition to gathering Lazzare’s opinions, Aurélien is trying to find out if monocultures or intercropped fields will lead to larger production.

“The objective is about the harvest,” Aurélien says. “We want to see which one will have higher yields.”

Trials like Aurélien’s are important to One Acre Fund because

they help us decide what products and trainings to offer farmers. We want to ensure that all our services have the highest impact possible and that farmers will readily adopt our recommendations. In Burundi, most One Acre Fund clients use the monoculture method of planting different crops in separate fields. The results of Aurélien’s trial may determine whether we provide more trainings on intercropping, which can benefit the soil and potentially increase crop yields.

Aurélien, who has a master’s degree in agro-environmental sciences, is an expert at running trials like this. He also has a friendly, easy-going way about him, cracking jokes with Lazzare as he conducts his interview, so the farmer is at ease and answers questions openly.

AN UNEXPECTED PATH

It’s easy to see that Aurélien feels at home on the farm, even though he grew up in Burundi’s capital city, Bujumbura. When he was in school, few young people from the city were interested in agriculture.

But Aurélien developed a passion for farming at a young age while visiting his aunts in the countryside near Muramvya, where One Acre Fund has its Burundi headquarters. Aurélien’s aunts were smallholders, and as a boy, he would spend vacations with them, tending to the fields by hand. He remembers being amazed by how much food could grow from a single seed.

After finishing high school, Aurélien decided to study

“
It is inconceivable how a country like ours can have a population living in a famine. So it was always my passion to work with farmers and share my knowledge.

agriculture at university. This was something that his friends and neighbors in the city found strange, and many encouraged him to pursue a different profession, such as economics or computer science. But Aurélien was strong in his resolve—he considered agriculture as a calling, and he knew it was the best way for him to make a difference.

“People did not understand how someone in the capital could have such a passion for agriculture,” Aurélien says, laughing at the memory. “It was said to be purely a sector for peasants, or an area for people who have not studied. But I never thought that at all.”

Burundi is a country of farmers—the majority of the population lives in rural areas, and 90 percent of people depend on agriculture for their livelihood, according to the World Bank. Burundi is also one of the top five poorest countries in the world, with up to 58 percent of people chronically malnourished. Its mountainous terrain and high population density make agriculture difficult, and farmers generally cultivate very small plots of land.

OPPORTUNITIES IN AGRICULTURE

Burundi needs more educated people to take up professions in agricultural development, Aurélien says. He draws inspiration from the challenges his country faces—since so many people are employed in agriculture, working to improve the sector is the best way to impact the entire economy. The country also has a lot of good things going for it, with a tropical climate and two rainy seasons that allow farmers to harvest crops twice per year.

“It is inconceivable how a country like ours can have a population living in a famine,” Aurélien says. “So it was always my passion to work with farmers and share my knowledge. It is

exciting to show them that this isn’t theoretical. There are real, simple ways to achieve better harvests.”

Aurélien decided to join One Acre Fund in 2016, after starting his career at another nonprofit, because it gave him the opportunity to work directly with farmers. He was also impressed with the organization’s impact. One Acre Fund clients in Burundi saw a 39 percent increase in income in 2017, relative to non-client comparison farmers.

BENEFITING THE ENVIRONMENT

Now, Aurélien is working on several innovations trials, in addition to researching intercropping and monocultures. One exciting new project is evaluating how clients can prevent erosion. Burundi has a rugged landscape, and many farmers plant on steep hillsides at risk of landslides. Aurélien is conducting small-scale trials building progressive terraces. The trials involve shaping the land into a series of stairsteps, slopes, and ditches, and then planting alternating strips of trees, grasses, and crops that absorb rainwater and slow its movement downhill.

It’s still early in the process, but if the trial is successful, it could have a permanent, positive impact on both harvests and climate change resiliency. Aurélien is excited to tackle this new challenge, but whatever the outcome, he knows that he’s already making a difference.

“I have been lucky that One Acre Fund gave me this opportunity to work with farmers and improve their standard of living,” he says. “If we keep intervening in this sector, farmers will eventually have better harvests, enough to eat, and surpluses to sell on the market.” 🌿



Aurélien Sasagara greets Consolate Mudasingana during a visit to her farm in Bitare, Burundi.

Meet the Team



“ We are all here to serve smallholder farmers and help families not have to choose between buying food and sending their children to school.

SIEGLINDER MGHENYI >> *Internal Consulting Team, Kenya*

“ I love how the organization has an exciting and vibrant culture and promotes a lot of creative thinking.

SITHEMBILE MKANDAWIRE
Field Operations, Malawi



“Working with One Acre Fund has been a great experience. For the months that I have been working here, I see my career growing every day. Trainings, reviews, and feedback on my skills are really helpful.”

DORCAS TINGA
Communications, Tanzania



“One Acre Fund has mentored me in so many ways. I joined as a farmer, but I have been able to rise to the position that I’m in right now because One Acre Fund invested in my career.”

PHOEBE SIKETI
Senior Field Director, Kenya

“ I LOVE ONE ACRE FUND BECAUSE IT SERVES FARMERS, PEOPLE WHO ARE OFTEN NEGLECTED IN BURUNDI.

MELISSA GAPPASONI
Monitoring & Evaluation, Burundi



“The opportunity to work on challenging projects that directly impact the organization and serve farmers provides an extreme sense of accomplishment and joy.

BRIAN WAMALA >> *People Division, Uganda*

POTENTIAL BURIED

in the

SOIL

A scientist wearing a dark lab coat and a white face mask is working in a laboratory. The room is filled with wooden shelves containing numerous brown paper bags, likely soil samples. The scientist is leaning over a wooden table, handling a sample. On the table, there are several more brown paper bags, some with labels, and a white plastic bottle with a tube. A wooden tray in the foreground contains several brown paper bags, some with labels that include 'HE' and '1112 Co'. The background shows more shelves and a sign that reads 'SELECTED SAMPLES'.

»» WELCOME to the laboratory where One Acre Fund scientists are unlocking a wealth of knowledge hidden in farmers' soils.

It's delivery day at One Acre Fund's soil analytics laboratory in Kakamega, Kenya, and there's a flurry of activity. A shipment of almost 3,000 soil samples has just arrived by bus from Rwanda, and the staff needs to process the order before another big batch arrives next week. There are nine or 10 lab assistants dressed in long blue coats, protective masks, hats, and rubber gloves working furiously in the yard and an adjacent outbuilding. The place has the look of a crime scene or the opening shots of a disaster movie. There is, in fact, a quarantine sign on the outside gate, but it's meant to protect the soil samples from being contaminated by visitors, and not the other way around.

All of the soil samples from Rwanda have arrived in separate, sealed paper bags, each labeled with the name and location of the individual farm where it came from. The technicians at the laboratory will first dry the soil, crush it into a powder, and run it through a sieve to remove any foreign particles. After that, a portion of each sample will be placed into a petri dish for analysis. Eventually, the samples will be taken inside and run through a mid-infrared spectrometer, an instrument that can determine the exact makeup of the soil, down to a single element.

With this data, we can evaluate One Acre Fund's impact on clients' soil health. In the future, we also hope to tailor recommendations for individual farmers, helping them determine the best seed varieties, fertilizer mixes, and agronomic practices for their land. Ultimately, these high-precision recommendations should lead to additional increases in food production and incomes.

"The science we're doing here helps us know exactly what is in the soil," says Chrispinus Shibachi, a supervisor who's trained in analytical chemistry and has been working at the laboratory since shortly after it opened in late 2015. "When farmers get the right information and do the right things, they can put enough food on the table."

Healthy soil is one of the most crucial elements needed for agriculture, and sustainable farming is impossible without it. The work at One Acre Fund's laboratory is part of a larger initiative to promote

healthy soils and find out more about how farming can impact the land. We are in the process of conducting a longitudinal study to evaluate the effects of our operations on soil health. We're also running a number of trials on potentially impactful soil-health products, and using laboratory results to guide us. One successful trial product that we started offering at full scale to

Kenyan farmers in 2017 is agricultural lime, a soil additive often made from pulverized limestone or chalk. Soils in many parts of East Africa are severely degraded and highly acidic, and lime is one solution to help make farmland more productive.

We also offer a number of training programs to farmers on how to care for soils, including sessions on composting, crop rotation, and planting trees.

Samwel Wanjala, who farms one and a half acres of land with his wife Rosemary near Sango village in Western Kenya, says these techniques have made his soil healthier and better able to hold water, even in dry periods such as the 2016 drought. Since enrolling, Samwel's harvest has more than doubled, and he's cut fertilizer use in half, thanks to training on how to apply fertilizer in smaller microdoses.

"Every year since we joined One Acre Fund, including this year, we have had enough food," Samwel says. "There is no more hunger in our home." 🌱

“
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Step 1
Dry the soil



Step 2
Crush into powder



Step 3
Run through a sieve



Step 4
Place in a petri dish



Step 5
Run through a mid-
infrared spectrometer to
determine soil make up



ROSE NIMBONA, BURUNDI

“ After enrolling, because of the trainings I received, I began to open my mind. I began to understand that I could keep my maize until later in the year and make more money for it then. It’s been with this expanded way of thinking that I decided to start investing my money in projects that return money and in buying and reselling maize.

— FARMER PHELESIA NYARANGA, KENYA



Farmers First