Planting Trees for Resilience Campaign

2024 Progress Report to Donors

Farmers First July 2024

Baraka Msemwa, a Tanzanian nursery operator for One Acre Fund's agroforestry program.

Focusing Philanthropy's multi-year tree planting partnership with One Acre Fund reached a significant milestone this April – the 250 millionth tree was planted by a farmer in Kenya. The experience gained and the investments in capacity building since 2019 have laid the groundwork to achieve this milestone on the path to planting one billion trees. The lessons learned have resulted in program improvements and efficiency gains that are now being applied across all the countries in the program and give us confidence in the trajectory leading to the planting of the one billionth tree by 2030.

We are pleased to share this latest update. As in prior years, the report begins with some brief, overarching comments about the motivations behind the program and the overall results being achieved. Because of the geographic diversity and local character of much of One Acre Fund's work, it takes time to assemble, evaluate and apply the data that is included in this substantive report. That is why the information provided here (in mid-2024) describes program results as of the end of 2023. We also provide some forward-looking comments where we can do so with sufficient confidence.

Of course, the tree planting program does not operate in isolation. It is built on the platform of a decade of prior investment in a core One Acre Fund program that assists smallholder farmers increase the productivity of their annual crops (primarily maize).

These introductory comments are from, and in the voice of, Focusing Philanthropy. What follows was prepared collaboratively by One Acre Fund and Focusing Philanthropy. It reflects intensive involvement, stress-testing, and refinement by Focusing Philanthropy but the underlying data collection, analysis and (of course) program execution is the responsibility of One Acre Fund. The hard work rests with them, and more substantially, with the farmers themselves. We want to acknowledge them here. And we gratefully acknowledge the confidence you have shown in One Acre Fund and Focusing Philanthropy in supporting this ambitious program. Without you, none of this is possible.

This Report includes the following sections:

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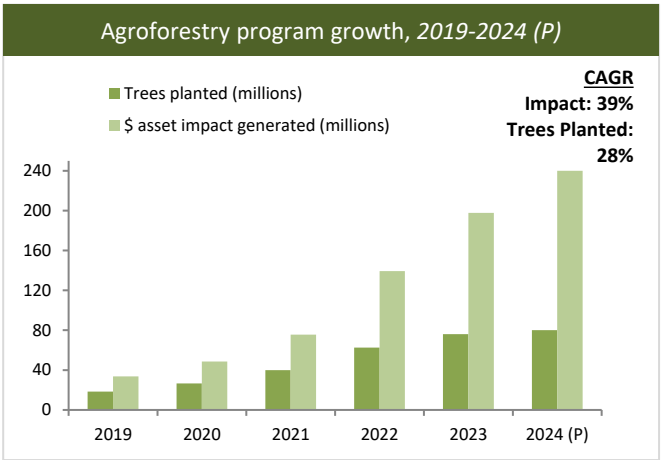
I. Program Goals and Overall Progress

Smallholder agroforestry arguably represents one of humanity's most powerful tools in the fight against extreme poverty and climate change. With proper management, trees can offer smallholder farmers – the world's largest, most climate vulnerable group of poor people – a long-term, climate-smart asset base, increasing exponentially in value over time. Farm-level tree-planting simultaneously unlocks powerful environmental impact, sequestering carbon, improving soil fertility, and enhancing agrobiodiversity, helping smallholders realize their potential as vital stewards of their lands.

For over a decade, One Acre Fund, the world's leading organization serving African farm families, has pioneered a highly scalable approach to smallholder agroforestry, generating tangible results for rural communities across nine countries. Since 2019, Focusing Philanthropy has anchored One Acre Fund's effort to catalyze the reach and impact of its tree-planting work, with the ambitious goal of planting a cumulative 1 billion trees by 2030. We are pleased to share that we have now successfully concluded Phase 1 of this effort, planting a cumulative 250 million trees. This powerful accomplishment has generated over $500 million in new assets for 3 million families, and, over the lifetime of planted trees, will sequester 52 million tons of CO2. While the primary focus of this report is on 2023 accomplishments from Phase 1, Section II details our shift to Phase 2 of the 1 billion tree initiative: planting 750 million trees from 2024-2030.

One Acre Fund's latest estimates show that this partnership supported the planting of over 76 million trees in 2023 (2.1 million above target from the 2023 reforecast), generating an estimated $197.87 million of total asset impact ($7.5 million above target), with a social return on investment (SROI, or impact per dollar invested) of 14 (vs. the target of 13). After years of laying the groundwork to launch strong, country-tailored tree programs, these figures reflect One Acre Fund's rapid expansion of agroforestry across nearly all markets. In 2023, One Acre Fund's agroforestry program achieved particularly robust rates of growth in the ultra-poor and climate vulnerable market of Malawi, and in One Acre Fund's newest country of operation: Nigeria.



As detailed below, 2023's results underscored the continued success of One Acre Fund's innovative decentralized nursery model, now adopted across all country programs. The vast bulk of trees planted in 2023 were sourced from 3,500+ small-scale outgrowers, dramatically improving the efficiency of One Acre Fund's tree distribution while creating new opportunities for income generation among participating rural entrepreneurs.

Last year also saw a substantial increase in One Acre Fund's engagement with community institutions as a key focal point for seedling distribution. One Acre Fund distributed roughly 24 million seedlings to schools, churches, and other community-based organizations across six countries last year. While the bulk of these seedlings were beyond the focus of this partnership (as they were planted on institutions' land, rather than on private farms), internal analyses revealed that an estimated 4.2 million seedlings were ultimately distributed to individual farmers via institutions in 2023; these trees have thus been included in this report's results.[1] As outlined in Appendix IV, teams are exploring such "institutional distributions" for a range of reasons, from cost-efficient program marketing, to protection of local tree markets in the face of surplus seedling production; several programs are now further developing their related strategies in 2024.

[1] As described in Appendix IV, One Acre Fund has used a highly conservative approach for estimating the scale and impact of these institutional distributions to private farmers, and their Measurement, Evaluation, and Learning team plans to undertake further analyses in 2024 and 2025.

One Acre Fund has built on the strong momentum of their agroforestry program in 2024 to date. As described in Section II, this year marks a pivotal one for our partnership as we successfully conclude the 250 million tree phase (Phase 1) of the 1 billion tree initiative and shift focus to supporting One Acre Fund in planting an additional 750 million trees by the end of this decade. We are pleased to share overall performance metrics and country-level updates on One Acre Fund's 2023 and initial 2024 performance below.

One Acre Fund's agroforestry program saw strong continued growth in 2023. The organization surpassed its scale target, supporting some of Africa's poorest communities in planting *a cumulative 76+ million trees across the continent's most degraded lands, unlocking nearly $200 million in impact with a powerful SROI of 14.* These results have placed One Acre Fund in a strong position to advance to its next phase of agroforestry work: supporting the planting of an additional 750 million trees by the end of the decade.

On behalf of the more than 2 million farmers directly impacted by this work in 2023 – including Pascal Uwamukijije, whose story is shared below – thank you for your support.

Human Impact Story

Pascal Uwamukijije is a farmer and a father from Karongi district, Rwanda. He mainly grows beans, maize, and bananas on an acre of land. He has farmed with One Acre Fund for over a decade, joining in 2013 after hearing from a field officer that the organization would provide him with access to farm inputs on credit, and training in modern agricultural practices.

In 2019, Pascal also started growing trees through One Acre Fund. The grevillea trees he received from the organization have since grown tall, and Pascal plans to harvest them next year to fund his children's education. Pascal has steadily increased his tree crop over the years, sharing with the One Acre Fund team, "I now have enough food to feed my family, which is great. But I also need to think of the future of my family. I know that a tree can be an asset that I can provide."

In addition to grevillea trees, Pascal recently planted a dozen seedlings of a new tree variety called maesopsis. Adoption of the tree has been supported by the Rwandan government to prevent erosion and enhance the health of nearby waterways, which Pascal appreciates. He notes "The world is facing climate change, and it has affected my region. Sometimes we face drought, which I think is caused by the deforestation that is happening everywhere. We as farmers need to plant trees to ensure we can return to our green world."

II. Looking Back and Ahead

We are thrilled to share that last month, One Acre Fund met the key milestone in our agroforestry collaboration, supporting the planting of the organization's 250 millionth tree. This achievement, which took place in Kenya, would not have been possible without the resources provided by the supporters of this campaign. Over the past 5 years, this campaign has transformed One Acre Fund's agroforestry work from a promising "add-on" product in Kenya and Rwanda into a true pillar of organizational impact: Africa's largest, most efficient farmer-led tree-planting initiative, supporting the planting of nearly 75 million trees annually across nine markets. This effort builds a scalable asset base for millions of rural farm families while generating powerful environmental impacts, including improved soil fertility, CO^2 sequestration, and avoided deforestation.

In honor of this special milestone, One Acre Fund has prepared this video commemorating Phase 1 of the "Planting Trees for Resilience" Initiative. Within, One Acre Fund's Kenya Country Tree Lead, Benard Kibet, speaks with nursery owner Belina Wanjiru and One Acre Fund farmer Esther Wangari, who grew and planted the 250 millionth tree. Esther's story of enriching her soils, supporting her children's schooling, and improving her housing underscores the holistic impact of the trees campaign.

Farmers attending One Acre Fund's "Native Tree Festival" in Nyaruguru, Rwanda. The event was designed to bolster adoption of impactful indigenous tree varieties.

With the continued partnership of Focusing Philanthropy, One Acre Fund has now commenced Phase 2 of its 1 billion tree initiative. To continue to strengthen its trajectory for this ambitious effort, the organization is advancing work along several cross-cutting priorities in 2024:

- Program digitization: Over the past several years, One Acre Fund has greatly expanded their use of digital tools to enhance the organization's efficiency, reach, and impact, including in their agroforestry programming. One Acre Fund's tree teams and Global Technology department are dedicating significant resources to revamp the technological infrastructure underpinning the organization's tree production, distribution, and tracking, aiming to address data challenges (such as those highlighted in the Kenya and Rwanda updates above) and improve decision-making around species mix, expansion, and more. Agroforestry programs in nearly all countries[2] have now shifted to tablet-based data collection, and in Kenya, One Acre Fund is currently implementing a new digital point of sale system (Odoo) that promises to strengthen tracking of all seedlings distributed across the country's 330 nurseries. Related investments are underway across several countries this year, including Nigeria, where One Acre Fund's agroforestry team is shifting entirely to digital systems (via the Kobo360 platform) for internal communications and business analytics (e.g., analyses of key agroforestry performance indicators and expansion surveys).
- Species portfolio: As noted throughout the country updates, One Acre Fund aims to continue refining its species portfolio to maximize impact, and address possible saturation and adoption fatigue in more established regions. Given robust farmer demand and impact potential (including in terms of household nutrition), fruit tree distributions are poised to increase across most country programs over the coming year; the Global Agroforestry department will play a key role in supporting country teams in developing their fruit production capacity, leveraging best practices gleaned from work to date, especially in Rwanda.
- Tree survival: Preliminary estimates suggest that One Acre Fund achieved a tree survival rate of approximately 47% across all programs in 2023. Based on analyses of all available data from other agroforestry programs, and while acknowledging that most do not even track survival rates, One Acre Fund believes that average tree survival rates above 30% represent a better than average outcome across approximate peer campaigns. However, they are strongly incentivized to continue working toward improvement on this metric as it represents

[2] The one exception is Burundi, the least developed context in which One Acre Fund operates. However, One Acre Fund's team there is now laying the groundwork to fully move away from paper-based systems by the end of 2024.

one of the organization's most effective levers for increasing the scale, impact, and SROI of their tree-planting work.

- The country programs and the overall agroforestry team are dedicating substantial resources to better understanding and improving seedling survival rates, both in nurseries and farmers' fields. This priority has led to extensive analyses of different species' germination rates, improved systems for seed procurement and seedling distribution, and revamped farmer training approaches. The Global Agroforestry and Monitoring, Evaluation, and Learning (MEL) teams are also reviewing methodologies for measuring tree survival across country programs to solidify best practices and harmonize data organization-wide. Through such initiatives, One Acre Fund does expect to achieve further improvement in survival rates across the program, with most of the gain coming in countries currently reporting the lowest numbers.

- Seed sourcing: Seed quality and availability are key challenges across several agroforestry programs. Because national governments are often intensely involved in the regulation, and often even the distribution of seeds, solutions require engagement between One Acre Fund and host countries. Examples of the approaches being pursued in multiple countries, in 2024, One Acre Fund aims to conclude agreements with the Rwanda Forest Authority to increase seed supplies and varieties in the country. In Kenya, the organization is seeking to secure the seed supply chain by supporting nursery managers and farmers in seed collection. The Global Agroforestry team is also improving each countries' seed procurement and quality control processes, with the Agroforestry Technical Lead prioritizing analysis of seed supply challenges.

Appendix I: *Key Campaign Performance Metrics*

Metric	2022 Actual	2023 Proj.[1]	2023 Actual	Description
Scale				
# Farmers eligible to receive trees (000s)	**4,485**	**5,368**	**5,429**	One Acre Fund increased their total number of trees planted by an above-target 22% relative to 2022. An estimated 4 million of these trees were redistributed to individuals through institutional partners (e.g., local schools, community-based organizations); Appendix IV provides more detail on this estimate, and One Acre Fund's rationale for increasing such distributions. The shortfall in adoption targets is complex, and primarily relates to updated measurement methodologies and deliberate shifts in programmatic strategy, rather than decreased farmer demand. For instance, as described in the Country-Level Updates, the Rwanda program significantly lowered its adoption rate in light of improved farmer tracking, leading to a miss against target; meanwhile, the Ethiopia program was forced to contract its service territory in the face of worsening conflict in the Amhara region. One Acre Fund has adjusted their average adoption targets downward for 2024 yet ultimately remain on track to meet the campaign's related target of impacting 3 million unique adopters between 2019-2024; the organization expects to reach *an additional 3 million unique adopters* in the next phase of the 1 billion tree initiative.
Adoption rate / Adopters (000s)	**63% / 2,817**	**62% / 3,347**	**39% / 2,124**	
Trees planted per adopter / total (000s)	**22 / 62,427**	**22 / 73,911**	**36 / 76,071**	
Trees surviving per adopter / total (000s)	**11 / 29,887**	**11 / 35,490**	**16 / 35,091**	
Incremental trees per adopter / total (000s)[2]	**9 / 24,447**	**9 / 29,298**	**14 / 29,451**	
# Tree species distributed (including trials)	**42**	**No target set**	**40**	Despite remaining a top priority, the total number of supported tree species declined slightly due primarily to the Tanzania program's strategic refocusing on a narrower range of species in 2023. One Acre Fund tentatively expects this figure to increase in 2024 as the organization continues trialing new diverse varieties across other markets.
Impact				
Operating deficit per adopter / per tree[3]	**$2.3 / $0.11**	**$2.4 / $0.11**	**$4.0 / $0.11**	One Acre Fund met their key goal for deficit per tree, however, the year's below-target number of agroforestry adopters led to a higher-than-expected deficit per farmer participant. The organization aims to decrease this figure to $3.5 or below in 2024 via continued economies of scale and efficiency initiatives (e.g., program digitization).
Impact per adopter / per tree[4]	**$49 / $2.23**	**$50 / $2.25**	**$93 / $2.6**	One Acre Fund significantly surpassed its 2023 agroforestry impact targets, with particularly strong results in its largest country programs (Kenya and Rwanda). As described in the country updates, the results also reflect enhancements to countries' underlying impact models, prompted by new internal analyses (including more accurate findings from veteran tree adopters). Such periodic methodological enhancements reflect the rigorous approach that One Acre Fund dedicates toward evaluating its agroforestry impact. One Acre Fund ultimately realized a nearly 90% increase in its estimated agroforestry impact per adopter relative to 2022.
Social Return on Investment, SROI (farmer impact per donor dollar)	**14**	**13**	**14**	One Acre Fund projects that, despite a higher-than-expected deficit per adopter, the strong impact results noted above led to an SROI of 14 last year, meaning that every $1 invested in this work by donors generated $14 for participating farm families – one of the most cost-efficient interventions in the organization's history.
Total CO2 sequestered from annual trees planted[5]	**10.37 million MT**	**No target set**	**11.88 million MT**	Trees planted across One Acre Fund's network in 2023 will sequester a cumulative 11.88 million MT of CO2 in their lifetimes (with 5.85 million MT expected to be permanently sequestered). As discussed in Appendix III , select One Acre Fund country programs are continuing to advance agroforestry 'carbon pilots' to formalize such sequestration via certified carbon offsets, unlocking a key new potential revenue stream for further agroforestry scale-up.

[1] Projections correspond to the data originally shared in One Acre Fund's 2023 Campaign Reforecast.
[2] Incremental trees refers to the estimated number of additional trees planted by One Acre Fund farmers compared to a control group (informed by extensive internal research and periodic RCTs).
[3] Operating deficit per tree includes production, distribution, and staffing costs, net of revenue; fully loaded deficit per tree includes in-country support expenditures (e.g., MEL, R&D), but excludes 'global' costs (i.e., org-wide overheads such as legal and audit). One Acre Fund's 2023 fully loaded deficit per tree was $0.20; including global overheads raises the 2023 deficit to $0.27 per tree.
[4] Impact per tree reflects financial value only, informed by rigorous species- and country-specific models developed (and regularly updated) by surveying thousands of farmers and market actors (e.g., tree traders). Value represents the NPV of tree harvest revenues over time, less labor and land opportunity costs; impact per adopter multiplies this by the number of incremental trees per adopter.
[5] This estimate only considers incremental trees (keeping with the carbon certification concept of additionality). Figures are for trees' lifetimes and include carbon sequestered temporarily (in trees that will likely be harvested within the next 30 years) as well as carbon sequestered "permanently" (trees to remain indefinitely).

Appendix II: *Country-Level Updates*

One Acre Fund's tree-planting activities are tailored to the unique conditions of eight distinct countries.[3] The chart below provides a high-level snapshot of the agroforestry models advanced across each country program last year.

Country	Species offered (Primary use: timber; soil improver; horticultural/medicinal)	Production Seedlings (via local purchase, centralized nurseries, or decentralized nurseries)	Distribution Core program, extension network, or decentralized nurseries (attached to core sites unless otherwise specified)	Enrollment and training Field Officers, extension agents, or duka staff
Burundi	**At scale**: grevillea; markhamia; macadamia; avocado; calliandra; maesopsis; cedrella; Japanese plum **Trialing**: banana	**At scale:** Decentralized nurseries; centralized nursery (for higher-value trees)	**At scale**: Decentralized nurseries **Trialing**: Gov't partnership to restore degraded communal land	**At scale**: Field Officers; decentralized nursery operators
Ethiopia	**At scale**: grevillea; decurrens; gesho; wanza; moringa; papaya; coffee; eucalyptus; sesbania **Trialing**: avocado; koso	**At scale:** Decentralized nurseries	**At scale**: Decentralized nurseries **Trialing:** Extension agents	**At scale**: Extension agents
Kenya	**At scale**: grevillea; markhamia; eucalyptus; cypress; c. Africana; pine; avocado; macadamia; papaya; moringa; casuarina **Trialing**: calliandra; cedar; bottle brush	**At scale:** Decentralized nurseries attached to dukas	**At scale**: Decentralized nurseries attached to dukas	**At scale**: Duka staff; seasonal enrollment and training agents
Malawi	**At scale**: cassia; f. albida; a. lebbeck; senna **Trialing:** avocado; mango	**At scale:** Decentralized nurseries	**At scale**: Core program; decentralized nurseries	**At scale:** Field Officers; decentralized nursery operators; seasonal enrollment and training agents
Nigeria	**At scale**: a. lebbeck; p. biglobosa **Trialing**: orange; cashew	**At scale:** Decentralized nurseries; centralized nursery (for higher-value trees)	**At scale**: Decentralized nurseries	**At scale:** Field Officers; volunteer Tree Group Leaders
Rwanda	**At scale**: grevillea; markhamia avocado; calliandra; croton; f. albida; maesopsis; jacaranda; senna; leucaena; cedrella; alnus **Trialing:** mango; coffee; macadamia	**At scale:** Decentralized nurseries; centralized nursery (for higher-value trees)	**At scale**: Government extension network; decentralized nurseries **Trialing**: fruit tree sales to local coops	**At scale**: Extension agents; decentralized nursery operators **Trialing**: Field Officers
Tanzania	**At scale**: grevillea; eucalyptus; avocado; f. albida; gliricidia; sesbania; casuarina; acrocarpus; acacia; pine; dovyalis caffra; moringa **Trialing:** papaya; mango; banana; lemon	**At scale:** Decentralized nurseries attached to dukas, supplemented by centralized nurseries and locally purchased seedlings as needed	**At scale**: Core program; seasonal training agents **Trialing**: Decentralized nurseries attached to dukas	**At scale**: Field Officers; seasonal enrollment and training agents **Trialing:** Duka staff
Uganda	**At scale**: grevillea **Trialing**: macadamia	**At scale:** Decentralized nurseries	**At scale**: Decentralized nurseries	**At scale**: Seasonal enrollment and training agents; decentralized nursery operators

[3] This table does not include information related to One Acre Fund's carbon pilots, currently underway in Zambia, Tanzania, Malawi, and Rwanda. An update on this work is provided in Appendix III.

Burundi

Bukuru and Sibomana Suavis have planted soil improving tree species to mitigate erosion on their land.

2023: In Burundi – the world's poorest country in terms of GDP per capita – One Acre Fund once again surpassed its tree planting targets for the year, supporting the planting of over 6 million trees by roughly 180,000 adopters (versus the 3.5 million trees projected in the 2023 reforecast by 223,000 farmers). This performance was driven by strong production across roughly 615 decentralized nurseries (up from 530 nurseries in 2022) and continued demand for a scalable asset base among the country's extremely poor farmers. Separately, the Burundi program distributed an additional 150,000 grevillea seedlings to select government sites and communal lands last year, further benefiting communities in highly deforested areas while bolstering the organization's relationship with key government entities (a vital driver of program continuity in this country).

With an average impact per farmer of $51 and an average fully-loaded deficit per farmer of $2.50 (and an operating deficit of just $0.50 per farmer), the Burundi program achieved an SROI of 21 last year. This figure is modestly below earlier SROI projections of 27 due to higher-than-expected support costs (largely due to higher-than-expected inflation) yet it nonetheless represents an extremely high degree of cost-efficiency, on par with One Acre Fund's most mature agroforestry programs of Kenya and Rwanda.

While grevillea still comprised the majority of Burundi's 2023 trees, One Acre Fund made progress in diversifying the country's agroforestry offerings last year, distributing 7 distinct species. This included high-value fruit trees, resulting in the planting of over 75,000 seedlings of 3 fruit tree species (avocado, macadamia, and Japanese plum). Such trees not only represent profitable investments for adopting farmers, but they can also help address widespread malnutrition in the areas One Acre Fund serves – especially in light of the fact that over half of all children in Burundi are stunted due to malnutrition and micronutrient deficiencies.

2024: **One Acre Fund expects to support nearly 370,000 Burundian farmers in planting 6.4 million trees this year**. The Burundi team is currently orchestrating an expansion to 800 nurseries in advance of tree distribution in October and November. After deliberately pausing expansion between 2022 and 2023 to focus on improvements to seedling production and survival, in the 2024 season, the team is shifting their distribution strategy to include nursery access to farmers beyond One Acre Fund's core program, thereby significantly increasing the anticipated number of adopters. While maintaining its strong average impact from 2023, the team aims to significantly drive down its already low operating deficit through a focus on reducing support costs, which experienced a one-time increase in 2023 due to depreciation of the local currency. In doing so, One Acre Fund tentatively expects the program to surpass its organization-leading 2023 SROI-level of 21 in 2024.

While continuing its expansion, the Burundi program will focus on species diversification in 2024, with plans to advance a new mix of 6 tree species. Among other offerings, One Acre Fund will introduce two new native timber species in Burundi: cordia africana and croton, both of which have historically performed well for the organization in similar agro-ecological zones (e.g., Rwanda). This year, the Burundi team is also assessing its fruit tree offerings with an eye toward better filling hunger and nutrient gaps. As described in greater detail in the Malawi country update, this is part of a concerted strategy across multiple country programs to develop locally adapted food tree portfolios that can measurably improve adopters' nutrition outcomes.

One Acre Fund's Burundi program remains on track to meaningfully surpass its original Phase 1 campaign targets, with a cumulative 22.2 million trees expected to be planted through 2024 (versus 17.76 million total trees projected in the June 2023 Reforecast). Looking ahead, Burundi is positioned to serve as one of the fastest scaling countries in

Phase 2 of the 1 billion tree initiative, and One Acre Fund tentatively expects to support the planting of over 22 million trees in the country annually by 2030.

Ethiopia

Farmers attend a tree-planting training in Amhara, Ethiopia

2023: One Acre Fund's Ethiopia program, which operates in partnership with the country's government, supported approximately 165,000 farmers in planting over 15 million trees last year. This is below the targets for the year (206,000 farmers planting 17.28 million trees), with the shortfall being largely attributed to escalating regional conflict that interrupted One Acre Fund operations, as discussed in more detail below. In addition to standard distributions via over 400 nurseries, an estimated 1.57 million of these trees were initially distributed to local organizations (e.g., community-based organizations) who redistributed them to members, and/or planted on farmer-owned communal lands and watersheds, generating additional scale and impact. Along with Kenya (described below), Ethiopia was One Acre fund's primary market for such "institutional" tree distributions; the team's decision was primarily motivated by the potential to benefit the large number of Ethiopian farmers who utilize communal lands, which are often highly degraded (such distributions also serve to strengthen the program's relationship with local government actors). Appendix IV provides greater detail on programs' varied motivations for such "institutional" tree distributions, alongside an overview of One Acre Fund's approach to estimating the number of farmers ultimately reached through this emerging channel.

After promising progress early in the year, the Ethiopia program began to experience meaningful security challenges in August of last year, as tensions between the national army and a local paramilitary group (known as Fano) escalated to open conflict. Most of Amhara, One Acre Fund's base of operations in Ethiopia, has since encountered active fighting, with a still-active State of Emergency limiting internet and phone connectivity as well as basic freedom of movement. To ensure the safety of One Acre Fund staff and the farmers they serve, the program rapidly made major changes to its operating protocols, which unfortunately necessitated a premature end to the season's distribution period. Ultimately, despite its shortfall, Ethiopia continued to represent one of One Acre Fund's most important countries for agroforestry in 2023, behind only Kenya and Rwanda in its total number of trees planted.

With an average impact per farmer of $172 and an average deficit per farmer of roughly $18, the Ethiopia program achieved an SROI of 10 last year. As in prior years, Ethiopia's strong per farmer impact result (second only to Kenya), was driven by the program's large number of trees per adopter, with the average Ethiopian One Acre Fund farmer planting an above-target 91 trees in 2023 (this was achieved at a lower-than-expected cost per farmer, ultimately resulting in the program's strong SROI figure). Last year, the program also increased its average tree survival rate to roughly 33% – a nearly 20% year-over-year improvement. While still below One Acre Fund's organizational average, the Ethiopia team nonetheless views this outcome as a positive sign that its concerted focus on tree survival (including enhancements to seed QC processes, improved seedling health monitoring, and more) are starting to achieve positive results, with meaningful potential for further upside.

2024: **The 2024 season in Ethiopia is now underway, with distribution planned for June; One Acre Fund now expects to support the planting of 6+ million seedlings country-wide this year (versus the 2023 Reforecast projection of 20.2 million seedlings).** Ongoing security challenges have forced One Acre Fund to pause operations in over a third of its Ethiopia program areas and roughly half of nurseries; nonetheless, the organization ultimately considers any degree of program continuity in this extremely difficult environment to be a meaningful success. This year's seedlings will comprise 7 species, with a heavy emphasis on native species with higher survival rates (e.g., gesho and wanza) and fruit trees, including the new species of guava and lemon.

Despite its reduced scale, in 2024, One Acre Fund's Ethiopia program is continuing to concentrate on key success drivers, particularly tree survival. This year, the team is advancing a multi-pronged strategy to further improve survival, leveraging key insights from prior seasons:

- Addressing animal damage: One Acre Fund's 2023 tree survival survey identified animal damage as the primary cause of seedling death in Ethiopia, largely because farmers often lack the resources to build effective fences. This year, One Acre Fund plans to conduct field visits to well-fenced planting locations across its areas of operation, compiling recommendations for cost- and time-efficient fence construction.
- Support for nursery operators: One Acre Fund is trialing a range of interventions to further enhance nursery operations, including seedling irrigation methods, new types of storage bags, and improved seed processing methods. The organization is also distributing a new pictorial nursery guide to increase nursery operators' survival-related knowledge and practices.
- Direct support to farmers: One Acre Fund will send tree survival SMS messages to mass numbers of farmers. Simultaneously the organization will train volunteer farmer group leaders on tree planting and survival techniques, providing them with small incentives to train up to 40 farmers each.

Looking ahead, given strong continued demand from farmers, the Ethiopia team plans to resume program expansion in 2025 by assessing the feasibility of broadening operations beyond Amhara. Entering a new region will not only support the tree program's growth trajectory in Ethiopia but will also strengthen overall program continuity by reducing reliance on a single region's political stability. The team is finalizing analyses to identify a new region in the south of the country for scouting later this year, with the goal of launching a pilot program for 2025 (pending economic, demographic, and security data). Ultimately, One Acre Fund is committed to supporting tree-planting in Ethiopia over the long-term and aims to increase its scale to over 10 million trees annually in this high-need country by 2030; there is significant upside to this figure if the country's security situation stabilizes, allowing growth to proceed in Amhara as well as the new southern expansion region.

Kenya

Farmer John Joseph Mungai with a portion of his 2023 avocado harvest.

2023: **Kenya, home to One Acre Fund's most mature tree program, supported over 405,000 farmers in planting 22.2 million trees last year (above the 20.1 million trees expected by 757,000 farmers in the 2023 Campaign Reforecast).**

The program exceeded its overall target for the number of trees planted although it did fall short of its 2023 farmer adopter target, with various factors contributing to a below-target adopter rate. The biggest factor was an error in the initial adopter projection of 757,000 farmers for 2023. This estimate was based on an erroneous count of 2022 actual farmer adopters, which was overstated by approximately 34% (480,000 vs 358,000 actual). This, in turn, was the result of several data collection and measurement errors that have since been identified and corrected, but which contributed to an unrealistic target for 2023. In addition, the Kenya program worked to drive greater impact by increasing its per farmer distribution and planting rates (including through a continued emphasis on species diversification); this strategy ultimately resulted in an improved species offering and a greater number of trees being planted, by a growing number of adopters, though fewer adopters than forecast. The shortfall was also partially attributed to the decision to eliminate the "Short Rain" distribution (i.e. the second tree distribution that occurs during the second / shorter rainy season in Kenya) in light of the lower ROI experienced from Short Rain season planting versus the results during the traditional Long Rain planting season during the 2022 trial period. Despite missing the adopter scale target for 2023, the Kenya program continues to experience significant year over year adopter growth using actual / corrected data:

- 2021: 120,000 adopters
- 2022: 358,000 adopters
- 2023: 405,000 adopters

- 2024 projection: 554,000 adopters

In addition to standard distributions facilitated by the country's 217 nurseries, an estimated 2.47 million of the Kenya program's 2023 trees were initially distributed to local organizations (such as community-based organizations and churches) and subsequently redistributed to their members across rural communities. While several countries undertook such "institutional tree distributions" in 2023 (as described in greater detail in Appendix IV), Kenya reached more farmers than any other program through this approach. This is partly due to the country's significant 2023 seedling surplus, in turn driven by favorable weather and strong seed stock sourced from new suppliers. Although the primary purpose of Kenya's 2023's institutional distribution was to distribute excess seedlings without affecting tree sales[4], the Kenya team is increasingly viewing local institutions as an avenue for further agroforestry scale-up, and potential revenue generation (given their capacity to purchase seedlings in bulk).

With an average impact per farmer of $196 and an average deficit per farmer of $8.15, the Kenya program achieved an SROI of 24 in 2023 (vs 21 target). This overall result surpasses the program's strong 2022 figure (21), which itself had represented a doubling in year-over-year impact-efficiency compared to 2021 – the last year before the Kenya program fully shifted to highly cost-efficient decentralized nurseries. Crucially, an increase in average seedling production costs last year (partly driven by 2023's inflationary environment) was more than covered by Kenya's meaningful increase in impact per farmer, which resulted from two main factors:

- In 2023, One Acre Fund enhanced their impact models to better capture trees' long-term benefits (including by shifting to a Key Informant Survey that collects more comprehensive revenue data from veteran farmers). This shift helped raise Kenya's average impact per tree from roughly $3 in 2022 to $3.5 in 2023.
- Further, with an eye toward improving impact, the Kenya program began to encourage farmers to adopt larger numbers of trees in 2023, increasing the average planting rate from 31 to 55 trees per farmer. Species diversification continued to play an important role in the Kenya program's efforts to increase scale and impact last year, with the program increasing the number of varieties in its portfolio from 9 to 15 species year over year. The program also significantly increased the scale of its fruit and nut tree distribution last year, selling nearly 75,000 such seedlings (up from 7,000 seedlings in 2022).

2024: One Acre Fund's tree planting program is on track for continued rapid growth in Kenya this year, supporting over 554,000 farmers in planting 27.9 million trees. This season's seedlings have been cultivated across 330 nurseries, up from 217 nurseries in 2023, with 22 different species being distributed. Fruit trees represent one of the program's notable expanded offerings this year, with plans to support the planting of approximately 640,000 seedlings from 7 different fruit species (primarily avocado and papaya). This distribution reflects the program's increased success rates in grafting fruit species, with a strong 95% of grafted seedlings surviving to be planted by farmers.

That said, the year is off to a somewhat challenging start in Kenya, as heavy rainfall across One Acre Fund's program areas has affected nursery accessibility and farmer attendance. Eighteen nurseries have been badly affected by flooding, causing losses of approximately 280,000 seedlings, with damage assessments ongoing.

The Kenya team is now advancing multiple strategies to accelerate its pace of distribution in the 2024 Long Rains season. In particular, the program is doubling its number of tree marketing agents per duka (from two to four) to enhance farmer mobilization. The program has also launched a multipronged outreach campaign, including text messages to volunteer farmer Group Leaders, and radio and social media advertisements. The program is also once again engaging local institutions in scale-up, for instance, working with schools to give 5 free seedlings to students and encouraging their parents to collect more trees from local nurseries. Ultimately, through such efforts, One Acre Fund remains confident that the Kenya program will overcome initial headwinds to support the planting of 27.9

[4] While the vast majority of Kenya's (and One Acre Fund's) trees are distributed for free, farmers pay for seedlings beyond a set threshold (20+), and likewise must purchase higher value seedlings (e.g., macadamia). The Kenya program sold 4 million seedlings last year.

million trees in 2024, resulting in a significantly above target 75 million cumulative trees planted during the 2019 to mid-2024 Phase 1 campaign period.
Looking forward to phase two of the 1 billion tree initiative, preliminary projections suggest that Kenya will largely maintain its 2024 scale from 2025 onward, supporting the planting of a cumulative 145 million trees during the 750 million tree phase.

Malawi

Farmers attend a training for One Acre Fund's Malawi agroforestry carbon pilot.

2023: Malawi continued to be one of One Acre Fund's fastest growing countries for tree planting in 2023, surpassing its annual target to support the planting of over 9 million trees (versus its June 2023 reforecast target of 7.5 million trees). The program reached over 450,000 farmers (on target) through a combination of its core program distribution and broader 'whole market' distribution (which includes non-clients) via 1,000+ decentralized nurseries. 8.4 million trees, the vast majority of the country's 2023 distribution occurred through the whole market approach.

Malawi's above-target 2023 performance was primarily driven by strong farmer demand and an above target farmer planting rate, which more than compensated for initial delays in the season's distribution due to the late onset of rains. Last year, the program distributed seedlings from 5 different timber and soil improving species. Separate from its main tree distribution, the program also advanced its early-stage agroforestry carbon pilot, designed to connect farmers to revenues from formal carbon markets – the progress of this pilot is summarized in Appendix III.

In 2023, the Malawi tree program achieved an on-target average SROI of 5, with an average impact of $20 and average deficit of $4.60 per adopter. While the program saw a modest improvement in its average tree planting rate compared to 2022, it did not improve its survival rate, which at roughly 30%, remains below One Acre Fund's organization-wide average. Nonetheless, tree survival remained a focus area for the Malawi program in 2023, with One Acre Fund's Global Agroforestry Team providing technical support to address factors that have previously been identified as key drivers of the challenge, including distribution timelines (i.e., modifying the program calendar to better align with rainfall trends), species mix, and approach to farmer engagement (i.e., post-distribution follow-ups around seedling care). Following 2023's design phase, the Malawi team plans to implement these modifications in 2024, aiming to improve its average tree survival rate.

2024: **This year, Malawi expects to support 578,000 farmers in planting 11.78 million trees, with seedlings produced and distributed exclusively through the country's 2,100 decentralized nurseries**. Consolidating Malawi's tree distribution around the decentralized nursery channel promises to better support continued improvements to the program's efficiency and scalability while enabling more focused oversight and performance management.

Species diversification remains a key aspect of the Malawi team's efforts to improve its average impact and SROI, and the program is taking a concerted focus on introducing fruit trees in 2024:

- The program is trialing high-demand fruit tree species in 2024, including avocado and mango. These trials will be set up across four decentralized nurseries and will focus on the technical aspects of fruit tree procurement and production, as well as farmer price points for future scaling.
- With support from One Acre Fund's Nutrition team, the Malawi program is working to develop a fruit tree portfolio that ensures that at least one food species is available for harvest in each month of the year. This involves identifying gaps in farmers' staple crop harvests that can be addressed via ecologically suitable fruit tree species. The eventual goal of this approach is to offer farmers a bundle of several fruit tree species that can help ensure year-round harvests. Malawi is the first One Acre Fund program to more explicitly examine

farmer nutrition in its fruit tree strategy, and related learnings and recommendations will be shared across other programs in 2024 and beyond.

- Maximizing farmer profit is another priority for Malawi's fruit tree work, and in 2024, the team is advancing a market access partnership with Malawi Mangoes – a leading local buyer and exporter of the crop. The 'community orchard trial' aims to group participating farmers' land into 1-hectare plots to plant mangoes, with guaranteed uptake from Malawi Mangoes. The team aims to formalize the partnership by year-end, though specific scale and impact projections remain in flux.

This year, the Malawi program is also undertaking rigorous analyses to support its long-term expansion. With support from One Acre Fund's Global Agroforestry team, the program is compiling village-level population data that can inform site expansion and farmer adoption targets through 2030. Preliminary evidence suggests that the program may be able to achieve an adoption rate of 30-40 seedlings per farmer by 2025, compared to current projections of 20-25 seedlings per farmer; in 2024, the team will pilot offering 40+ seedlings per farmer in at least five districts. While the Malawi team believes that such efforts can present a potential pathway for more rapid agroforestry growth in the country, specific program decisions will depend on the results of related 2024 analyses.

Nigeria

One Acre Fund farmers receiving tree seedlings in Niger state.

2023: Last year saw significant growth in One Acre Fund's newest full country program in Nigeria, where the organization supported 111,000 farmers in planting nearly 2.7 million trees (surpassing the 2023 Campaign Reforecast projection of 100,000 farmers planting 2.4 million trees). These results translate to a year-over-year scale increase of *nearly 300% compared to 2022.*
This rapid expansion reflects One Acre Fund's concerted focus on developing Nigeria's underlying agroforestry infrastructure, including the program's expansion from 72 nurseries in 2022 to 181 nurseries in 2023. Last year, the team also doubled its number of field managers (to 20) and introduced new systems for optimizing and standardizing staff training and performance management. The Nigeria team also expanded its investments in program digitization, extending digital processes beyond farmer enrollment (which was rolled out program-wide in 2022) to cover all internal communications and data analysis (e.g., agroforestry key performance indicators and data from geographic expansion surveys).

In 2023, the Nigeria program achieved an average impact per farmer of $44 and an average deficit per farmer of $4.19, resulting in an SROI of 11, well above its target for the year (3), and a major improvement from 2022's SROI of 3. This improvement was driven by the program's growing impact, in turn due to a sharp increase in the number of trees adopted per farmer, reflecting strong demand and the program's efforts to support species diversification. For instance, the Nigeria team expanded distribution beyond albizia lebbeck to include parkia biglobosa (a similarly used timber species), distributed across roughly a quarter of all nurseries. Impact was also bolstered by major improvement in tree survival (from 45% to 65%), which the Nigeria team attributes to recent improvements in seed and material sourcing (including shifting to procurement from more established vendors) and seed quality control.

2024: **One Acre Fund expects to continue its rapid growth trajectory in Nigeria this year, supporting 220,000 farmers in planting over 5.6 million trees**. Last year's investments and key learnings have prepared the team for this significant jump, which will involve scaling to 346 nurseries, and two new states (beyond its base in Niger state): Nasarawa state and Kwara state. Marketing and farmer registration are currently underway and will continue through June, with distributions planned through late August.

Species diversification remains an important component of the Nigeria program's growth. After pausing sales of high-value fruit trees in 2023 to refine its strategy, the program will resume its 'economic tree' trials in 2024,

distributing 12,000 orange trees and 8,000 cashew trees with a focus on testing production requirements, farmer demand, and pricing strategy to support sales. The program will also scale up parkia biglobosa seedlings to other sites to address potential farmer fatigue with albizia lebbeck, supporting the planting of 500,000 seedlings of this species. Finally, with support from the Global Agroforestry team, the Nigeria program is undertaking a site species matching exercise to continue identifying new species to distribute in 2025 and beyond.

Looking ahead, Nigeria remains one of One Acre Fund's most promising countries for scaling agroforestry, and the organization aims to support the planting of nearly 27 million trees country-wide annually by 2030. To support this goal, the Global Agroforestry team is supporting Nigeria in developing a long-term expansion plan, identifying key expansion metrics and data collection methods to inform decision-making. Particular attention will be given to assessing 2024's performance in newer regions outside of Niger state, as well as to staffing and operational considerations with increased scale and distance (including a continued focus on program digitization).

Rwanda

An aerial view of seedling distribution at a decentralized nursery in Nyamagabe, Rwanda.

<u>2023</u>: One Acre Fund's Rwanda program supported 771,000 farmers in planting over 18.3 million trees last year, below the 2023 Campaign reforecast of 1.5 million farmers planting 19.5 million trees. That said, the significant gap between forecast and actual farmer participation is substantially the result of recently discovered (and corrected) data gathering and reporting, not the result of actual program under-performance. An estimated 146,000 of these trees were planted by 37,000 farmers who received them via institutions (beyond the program's main distribution partnership with the Rwanda Agriculture Board and the Rwanda Forestry Authority).

Rwanda's scale shortfall in fact reflects a somewhat complex methodological challenge related to the country's tracking of tree adopters:

- The One Acre Fund Rwanda program has always rigorously measured the number of trees leaving its nurseries, and through follow-up surveys, the number of those trees that survive post-planting. This data collection is ultimately what drives the key metrics for the tree program (number of trees planted, impact per tree, and cost per tree). However, it has historically been more difficult for the program to track the number of farmers who take these trees, largely given its distribution partnership with government extension agents (plus One Acre Fund's interest in providing trees to any farmers who stop by nurseries to receive them).
- Based on a significant quality control review last year, One Acre Fund discovered that their Rwanda field staff and government partners were unintentionally recording a higher number of registered farmers taking trees (by assuming that essentially all farmers who had expressed interest in receiving trees during marketing had followed through with adoption)[5]. As of the 2023 season, One Acre Fund has now shifted to an improved methodology which more accurately captures data on farmer tree collection in the country (including confirmation of adopters' identification documents and extensive backchecks by One Acre Fund staff). Distribution data is also now more reliably tracked using digital tools, with further improvements in the program's technological infrastructure planned in 2024. Forecasts prior to 2024 and actuals through 2022 were based on the prior, inaccurate methodology, resulting in a large gap between the 2023 forecast (based on old data sets) and actual (based on corrected data gathering).
- Ultimately, the Rwanda program's new methodology has decreased the country's farmer adoption rate/number of adopters by roughly 50% relative to earlier estimates. While the methodology immediately

[5] Importantly, we believe that this challenge was unique to the Rwanda program because of the key role that non-One Acre Fund staff (government extension agents) play in tree marketing and distribution. We are now providing multiple layers of oversight to tracking tree adoption in the country and expect more accurate data moving forward.

led to a significant increase in Rwanda's corresponding number of trees per farmer (to 24 trees, versus 12 trees as originally planned), ensuing analyses by One Acre Fund's MEL team did reveal a somewhat lower planting rate for trees distributed and planted in 2023, resulting in the program's shortfall of 1.3 million trees against target.

- One Acre Fund places significant emphasis on accurate, rigorously validated data, and they view the identification and resolution of this challenge as a meaningful program improvement. The Rwanda team is also confident that this methodological shift will provide a stronger understanding of the program's pathway to meeting future targets. The team can now better assess the potential for scaling agroforestry in the country. Whereas One Acre Fund originally believed that they were approaching the ceiling for their scale of distribution in Rwanda, they now recognize that they have significant potential for deeper penetration in the areas they serve. The Rwanda team is now updating their adopter projections for 2024 and beyond accordingly.

With an average impact per farmer of $83 (slightly above target after adjusting for the adopter remeasurement issue noted above) and an average deficit per farmer of $3.70, the Rwanda program achieved an SROI of 23 last year, maintaining its 2022 result. Like Kenya, the Rwanda program enhanced its impact model last year to better capture trees' long-term benefits (including via updated market surveys). This shift helped increase Rwanda's average impact per tree from $3.1 in 2022 to $3.5 in 2023.

Rigorous impact measurement remains a top priority for the agroforestry program, and last year One Acre Fund's Monitoring, Evaluation, and Learning team contracted Laterite (a leading social impact research firm in Africa) to conduct a randomized control trial (RCT) of the Rwanda tree program. The RCT design and sampling strategy has now been finalized, and in 2024 Laterite is gathering rigorous data on incremental trees planted, survival rates, and farmer agroforestry income.. This data will then allow One Acre Fund to validate or improve their current internal measurement methodology. This is the second external evaluation that One Acre Fund has undertaken for its agroforestry work, and combined with the organization's own internal measurement, we believe that One Acre Fund's tree program is one of the most strongly validated of any in the African smallholder context.

Last year, Rwanda distributed 15 distinct tree varieties at scale, including over 320,000 seedlings of high-value horticultural species (primarily avocado). All trees were produced via 1,841 highly efficient, small-scale decentralized nurseries (up from 1,121 nurseries in 2022), except for horticultural trees, which were produced at 4 centralized nurseries managed by One Acre Fund; nonetheless, last year One Acre Fund began trailing fruit tree production via decentralized nurseries and achieved promising results, with an above target 70% success rate of grafted seedlings.

Separate from its main tree program, the Rwanda team launched its first-ever carbon pilot in 2023. In partnership with the government, this pilot centers on a unique agroforestry model to support landscape restoration, aiming to achieve key environmental outcomes while generating farmer revenues through payments for ecosystem services (more details on pilot performance are provided in Appendix III).

2024: This year, the Rwanda program expects to support the planting of 19.69 million trees by over 840,000 adopters, closing the gap from 2023's shortfall to meet the country's Phase 1 target. The program has now achieved truly country-wide scale, with roughly 2,000 nurseries producing seedlings across 27 districts in all four of Rwanda's provinces (not counting Kigali Province, home to the capital city). One Acre Fund is currently procuring tree seeds from the Rwanda Forest Authority; while this has been a major bottleneck in prior seasons, the team is reporting that a promising 90% of seed has now been procured (a major improvement from this point in 2022, when only 20% of the seed order was received).

This year, Rwanda's tree portfolio includes 18 species, including 7 native species which are expected to comprise 20% of the country's total seedlings distributed. High-value horticultural trees remain a priority, with plans to distribute nearly 800,000 fruit seedlings in 2024. This goal is supported by further year over year improvement in the survival rate of avocados cultivated at decentralized nurseries (from 70% to 85%), which is simultaneously

improving the scale and cost-efficiency of this in-demand species. Recognizing the Rwanda program's success in this area, One Acre Fund's Global Agroforestry team is now working with the Rwanda team in developing a comprehensive toolkit for avocado production that will be used to shape fruit production best practices across the organization.

Looking ahead to 2030, the Rwanda program is poised to continue its large scale of distribution, planting of over 19.5 million trees by more than 840,000 farmers on an annual basis from 2025 onward. Moreover, as noted above, the team is now reassessing its long-term targets in light of its updated farmer adoption and planting rates, with the possibility of pursuing additional expansion in 2025 and beyond.

Tanzania

One Acre Fund farmer Edmerk Mwenzegule receiving seedlings in Iringa, Tanzania.

<u>2023</u>: Last year, One Acre Fund's Tanzania program supported 11,000 farmers in planting 2.27 million trees (below the 30,000 farmers and 3.1 million planted tree targets in the 2023 Campaign Reforecast). After several seasons of seedling supply challenges, the Tanzania team made the strategic decision to contract the program's size in 2023 to focus on pivoting toward a more sustainable growth model, namely shifting from third-party vendors toward production and distribution via One Acre Fund's decentralized nursery model. Approximately 70% of the seedlings distributed by the Tanzania program last year were produced by a One Acre Fund-supported network of 139 entrepreneur-run nurseries, while the remaining 30% (mainly fruit and timber species) were procured through third-party vendors, and via two One Acre Fund-run 'centralized nurseries.' While Tanzania's shift to decentralized nurseries was generally successful, the program nonetheless experienced shortfalls in its number of adopters and total scale of trees planted due to several factors.

One Acre Fund initially anticipated that the Tanzania program would maintain its 2022 adopter number (of 27,000 farmers) while undertaking 2023's transition to decentralized nurseries with the associated adjustment in species mix while continuing to source higher value species at scale from third party vendors. The Tanzania team ultimately decided to more substantially revise the program's species mix for 2023 heavily prioritizing dovyalis and sesbania. The positive attributes of these species include that they are relatively easy to cultivate, are strong soil-improvers, mature into hedges which serve as border protectors of farmers' land helping keep out grazing animals and therefore minimizing crop loss, yield plant material useable as fodder, and produce a form of fruit consumed locally. In contrast, the challenges of the higher value fruit and nut species as previously procured from third parties are that these vendors were not consistently reliable in quantity or quality and their prices per seedling required One Acre Fund to provide credit to most of the farmers to make the species economical. While even the fully loaded costs still could yield an economic benefit to the farmer, the total costs to One Acre Fund (including working capital costs for credit provision and administrative costs of being a lender) and to the farmer could not be justified in light of the alternatives.

The result of these decisions were that farmers who were specifically attracted to higher value species, and who had previously benefited from credit in procuring these species, were less attracted to what was offered, contributing to a year-over-year decline in the number of participating farmers. We anticipate a rebound in the number of participating farmers as the species mix is diversified in 2024 and thereafter, leveraging the heightened skill level of the decentralized nursery operators. The greater species varieties are expected to again include the high demand high value species but at a lower cost to the farmer than was the case without the provision of credit. While the reduction in participating farmers in 2023 was disappointing, the species mix did result in a significant increase in Tanzania's number of trees per farmer (from 48 in 2022 to 208 in 2023). This is logical considering the use of the offered species as perimeter hedging.

In light of the foregoing, the Tanzania program is focused in 2024 on:

- Further strengthening the capacity of the substantial, but relatively new, decentralized nursery network
- investing in higher quality seed procurement and quality control to support nursery productivity goals
- increasing farmer demand and awareness by investing in expanded marketing efforts via temporary sales agents, building trust with farmers via community leaders and via improved engagement with local governments,
- optimizing program design to support growing scale targets (adopter and tree planting), specifically with regard to species mix, production systems, and distribution calendars, and
- adding higher value fruit and nut species to the seedling varieties produced by the decentralized nurseries as the skill levels of the nursery operators are refined; this resulting in lower costs and higher quality to farmers than when high value species when seedlings are procured from commercial vendors (the previous source).

One Acre Fund's Tanzania program generated an average of $97 in new asset value per farmer in 2023 (versus a target of $61). One Acre Fund increased the number of trees planted in the country by nearly 75% relative to 2022, driven by a major increase in the average number of trees adopted per farmer (from 48 in 2022 to 208 in 2023), while acknowledging the underperformance in number of adopters.

Beyond its standard tree distribution, the Tanzania program continued to advance its carbon work in 2023, expanding its integrated agroforestry models from 174 to 1,200 farmers across two districts. The results of these models and plans for future scale-up are discussed in the carbon pilots update in Appendix III.

2024: This year, Tanzania aims to recover from 2023's adopter shortfall by supporting 17,000 farmers in planting approximately 3.25 million trees. This growth will be accompanied by outward geographic expansion to 2 new districts, bringing the country's total footprint to 15 districts. Trees will once again be produced through a mix of decentralized and centralized nurseries, with limited procurement from third party vendors only envisioned as a back-up to the country's still early-stage decentralized nursery approach.

The Tanzania team expects to plant a cumulative 8.2 million trees during the 2019 to mid 2024 Phase 1 campaign period. Looking further ahead, the Tanzania team conservatively forecasts the planting of roughly 4 million trees annually in the country by the end of the decade.

Uganda

2023: **Uganda supported 18,000 farmers in planting 525,000 trees last year (above the targets of 16,000 farmers and 494,000 trees expected to be planted in our 2023 Campaign Reforecast).** As in 2022, the program exclusively distributed grevillea via 25 decentralized nurseries across 4 districts in 1 region. However, in an effort to reach more farmers last year, the program also distributed trees via institutions including churches, schools, and the government's Ministry of Environment, accounting for an estimated 42,000 trees.

Grevillea growing at a Ugandan One Acre Fund decentralized nursery.

With an average impact per farmer of $75 and an average deficit per farmer of $28, Uganda achieved an SROI of roughly 3 last year (vs 2 target). Beyond direct distribution, the team also undertook key activities in 2023 to support its long-term program health, including prioritizing efficient staff management to reduce average site costs by 5%, and improving farmer mobilization to achieve a year-over-year retention rate of 90% of tree adopters.

Taking an exclusive focus on grevillea has enabled the Uganda team to prioritize investments in delivery fundamentals since resuming operations following 2020's pause and restructure, successfully supporting steady growth.

However, internal analyses and farmer surveys undertaken over the past year have found growing signals of tree saturation, and further scale-up will likely require that the program adapt to meet farmer demand for additional species (particularly high-value horticultural varieties).

Beyond grevillea (and beyond the focus of the tree campaign), the Uganda program continued to scale and refine its coffee-focused intervention over the past year. In 2023, One Acre Fund enrolled 10,000 farmers into this coffee extension program, supporting the sustainable preservation and management of 1.8 million coffee trees. By 2025, One Acre Fund plans to expand to 55 sites, reaching 30,000 farmers managing 7.2 million coffee trees annually. This intervention enables farmers to increase yields by 30%+ per tree and earn price premiums, driving a strong average impact of $170+ per farmer.

2024: **Uganda expects to maintain its scale this year, supporting the planting of approximately 525,000 trees.** Distributions of grevillea seedlings are largely on track despite initial challenges related to seed quality; during procurement, a supply challenge arose as the Kenyan government bought a significant amount of Uganda's grevillea seed, limiting availability in-country. This led One Acre Fund to pivot to importing seed from a different supplier than in previous seasons; while this supplier ultimately provided the organization with quality seeds, the situation underscored that the country's tree seed stock is generally expensive and unreliable. To mitigate these risks, One Acre Fund plans to start procurement earlier in future seasons and will tentatively rely on Kenyan suppliers to increase Uganda's seed buffer to account for potential quality issues. In response, One Acre Fund's Uganda program has further upgraded its rigorous seed testing and quality control process to better assess the quality of procured seeds.

There appears to be increasing saturation of grevillea in sites where One Acre Fund has operated for several years. Accordingly, this year and next, the Uganda team will conduct farmer trials of additional timber and/or fruit tree species.
The Uganda program projects steady growth through 2030, supporting the planting of 2.2 million trees annually by approximately 80,000 adopters.

Appendix III: Update on One Acre Fund's Carbon Pilots

In One Acre Fund's carbon pilots (which center on intensive agroforestry), eligible farmers plant 150-300 trees annually – several multiples higher than in the traditional tree program. These trees, which include soil-improving and fruit tree varieties, are intended for permanence (incentivized through survival payments in the early years, and later, carbon revenues and other co-benefits such as improved soil fertility/staple crop yields). These programs are specifically designed to qualify for carbon credits, with careful attention given to how farmers are enrolled and how tree growth is monitored. One Acre Fund's goal is that these credits could then be bundled and sold to organizations who either have a regulatory obligation or institutional desire to offset all or part of their carbon footprints by supporting "carbon sink" actions by others.

Carbon certification continues to be a goal for One Acre Fund – both for its direct environmental impact and for the potential of carbon financing to help fund the organization's goal of planting 1 billion cumulative trees. Last year, One Acre Fund expanded its established pilots in Zambia and Tanzania, and initiated pilots in the smaller land size countries of Malawi and Rwanda. It should be underscored that these projects are taking place in a higher-risk context than the traditional tree-planting program. Host country governments are still establishing regulatory and tax regimes that will have a major influence on the viability of these projects, both for One Acre Fund and farmers. And the market structure for qualifying, valuing and trading various forms of carbon credits is still in an early stage of evolution. Country-specific updates are shared below.

Zambia *(Year 3, scaling)*

Model: In their first year of participation, farmers receive a bundle of ~300+ soil-improving *Faidherbia albida* trees that they intercrop with annual crops (e.g., maize, soy). In their second year, farmers receive a second, more diverse mix of boundary/erosion control trees, fruit trees, and replacement *f. albida* trees for those that died in Year 1. Verification takes place via Acorn's satellite data. Farmers receive cash incentive payments for surviving trees in the early years, then, hopefully, carbon credit payments (from formal offset purchases by institutional actors) once sales begin taking place in Year 4.

Update: One Acre Fund is currently in the third year of its Zambia carbon pilot, making it the organization's most advanced carbon program. In 2023, Zambia's alley cropping pilot successfully expanded from approximately 1,000 to over 3,800 farmers. Each farmer planted a mix of 500 trees, cultivated across 50+ decentralized nurseries in an efficient distribution model. Trees include a mix of different species with a variety of long-term uses including soil health, boundary establishment/erosion control, and horticulture/fruit production. Overall, the pilot supported the planting of 1.6 million trees last year, bringing its cumulative number of trees planted since 2021 to 2.25+ million, covering nearly 4,000 hectares (over 9,850 acres).

Last year, One Acre Fund successfully onboarded its first cohort of pilot farmers to Rabobank's Acorn platform, the organization's key partner supporting tree measurement (via remote sensing) and financing; with Acorn's support, the Zambia pilot has also completed its Project Design Document (PDD) and is in the final stages of certification (under Plan Vivo's methodology).

Beyond specific pilot activities, Zambia's regulatory environment for carbon financing remains in flux, and some of the government's initial requirements have been unclear, presenting a potential hurdle for eventually accessing formal carbon financing. Addressing these issues is a key priority for One Acre Fund's Zambian Government Relations team. In March 2024, One Acre Fund presented a carbon policy analysis to the Zambian Parliament, underscoring the importance of clear, harmonized regulations that can benefit the country's smallholder population.

Tanzania *(Year 3, proof of concept)*

***Model*:** One Acre Fund's Tanzania pilot initially followed a sustainable timber harvest model. However, after additional in-field research indicated that this model would not be financially viable in the long term, the program pivoted toward an integrated agroforestry model in 2022. Like Zambia's, this model aims to incentivize permanent planting of tree and shrub species offering co-benefits (e.g., soil fertility; firewood; fodder; fruit crop income).

Update: One Acre Fund's Tanzania carbon pilot has now settled on an integrated agroforestry model wherein farmers intercrop trees with staple crops, receiving incentive payments to keep the trees in the ground (alongside co-benefits). In 2023, One Acre Fund enrolled 1,200 farmers to participate in two near-identical pilots in South Kilolo and Wanging'ombe districts, successfully achieving tenfold growth from 2022.

Last year, the program also kicked off the process of drafting a project design document (PDD[6]) for eventual certification with Plan Vivo. This work is complex and multifaceted, requiring extensive data on measurement methodologies, community safeguards, and more. The PDD is being supported by One Acre Fund's key technical partner in the carbon space, TerraCarbon, and is on track for completion by the end of June.

Unfortunately, in late 2023, the future of the Tanzania carbon pilot became less certain in the face of new carbon regulations introduced by the country's government. These regulations impose an upfront 1% fee on all projected carbon revenues from offset initiatives, threatening to increase farmer enrollment costs to the point where they are unaffordable for One Acre Fund's target demographic of poor smallholders. As the organization continues the Tanzania pilot's certification process, One Acre Fund is now lobbying alongside other carbon stakeholders in the country in the hope of nudging the government to amend the policy. At the same time, they are exploring the possibility of project-level exemptions from this policy, to secure the program in the event that the policy remains in place. One Acre Fund hopes to have more clarity on the viability of future pilot operations in the country soon.

Malawi *(Year 2, proof of concept)*

Model: Malawi, with significantly smaller average land sizes than Zambia or Tanzania, represents a different context for One Acre Fund's exploration of carbon agroforestry. Successes there have the potential to be more widely replicated with smallholders across One Acre Fund's typical areas of operation. The country team is testing two modalities: (1) a mixed agroforestry model similar to the one now being advanced in Tanzania and Zambia (i.e., including soil fertility, firewood, and fodder species) and (2) reforestation (planting trees for sustainable harvest and soil improvement on degraded communal land).

Update: In 2023, the mixed agroforestry model was launched with 600 farmers in two districts, Zomba District (Southern Region) and Dedza District (Central Region), whereas the reforestation program began early testing with 50 farmers in a single community in Zomba. Although the sample size is obviously too small from which to generalize, only 20% of farmers enrolled in these programs were existing One Acre Fund clients, hinting that the pilots are reaching a new demographic of farmers; while related analyses remain underway. Very early feedback may suggest that ultra-poor farmers are drawn to the relative affordability of the carbon agroforestry package (i.e., Malawi's average core program credit size is ~$140, whereas the tree package size is ~$15).

Rwanda *(Year 1, proof of concept)*

Model: Last year, One Acre Fund's Rwanda program launched a new carbon pilot focused on Forest Landscape Restoration (FLR). This model is strongly aligned with government reforestation priorities, which involve increased tree planting activities on smallholder farmer lands. In later years, One Acre Fund plans to

[6] This key document includes details like the project's location, operational approach, and risks. It is a requirement for carbon certification by all major standards (i.e., the document has to be approved to ensure that the project can be externally audited for carbon financing).

expand via partnerships with local governments and farmer co-ops to replant community-managed forests and riparian areas.

Update: In 2023, Rwanda became One Acre Fund's newest country for exploring carbon-focused agroforestry by launching an intensive agroforestry initiative that offers farmers customizable tree packages based on their needs, expected tree benefits, and land size. In this model, now underway with 1,050 farmers in six sectors, farmers enroll for packages in 25-meter increments, tailoring tree planting to their preferences and available land; collectively, the packages include a wide range of tree types, including nitrogen fixing, soil health, timber, fruit, and nutrition-focused species. Results from the pilot's initial season will be essential for testing the underlying assumption that additional flexibility/tailoring increases tree uptake and – most importantly for this purpose - permanence, helping to inform the future trajectory of One Acre Fund's carbon-focused programming.

The potential for the Rwanda experiment to prove a viable path to carbon financing is still highly speculative because the country's long-term carbon finance policy remains at a nascent stage.

Appendix IV: Institutional Tree Distribution Overview

Overview

One Acre Fund's 250 million tree campaign and 1 billion tree initiative are currently exclusively focused on planting impactful tree varieties at the farm level, given the extensive benefits that agroforestry can unlock for individual smallholders, and One Acre Fund's related logistical expertise. Nonetheless, while One Acre Fund distributes the vast majority of trees directly to farmers, in 2023, the organization began expanding their approach to include local institutions such as schools, hospitals, churches, and community-based organizations. While these institutions plant the majority of trees they receive from One Acre Fund on their own grounds, a meaningful minority of trees further distributed by these local organizations and ultimately planted by individual farmers in these communities.

In 2023, One Acre Fund's programs in Kenya, Ethiopia, Uganda, Burundi, and Rwanda distributed approximately 24 million trees to institutions. The organization now estimates that about 4.2 million of these trees (27% of the total) were redistributed to individual farmers via institutional partners;, nearly all of these redistributions took place in Kenya (2.47 million trees distributed to farmers) and Ethiopia (1.86 million trees distributed to farmers). The specific institutions with which One Acre Fund is engaging in these distributions varies by country. For instance, the Kenya team mostly distributed such trees to churches and community-based organizations, whereas the Ethiopia team distributed the bulk of their institutional trees to organizations responsible for management of communal lands.

Rationale for Institutional Distribution

The rationales for increasing their tree distribution to institutional actors vary.

- Surplus management: Engaging institutions to dispose of surplus trees produced by decentralized nurseries allows One Acre Fund to meet farmer demand while maintaining carefully developed pricing models. Surplus trees are also typically more cost-effective for One Acre Fund to distribute through channels beyond the core program or decentralized nurseries.
- Relationship building: Distributing trees to institutions can help improve relationships with other NGOs and government actors, improving the long-term viability of the agroforestry program.
- Marketing: Several teams view this approach as a 'free sample' strategy to market the program's main distributions (e.g., students will receive several seedlings from school to bring home to their parents in advance of larger One Acre Fund distributions).
- Earned revenue potential: One Acre Fund also believes that establishing distribution relationships with institutions could eventually lead to bulk tree purchases, unlocking new agroforestry revenue streams.

Methodological Notes

While countries track their distributions to institutions, *subsequent* deliveries of trees to farmers occur outside of One Acre Fund's standard tree programming and Monitoring, Evaluation, and Learning (MEL) framework. The organization has therefore used a conservative approach to model the number of trees eventually planted by farmers. Country teams have provided key input into this approach, using their local knowledge to specify which institutions received trees, and the share of trees likely planted on farmers' lands; wherever possible, these figures have been validated by institutions themselves or other external actors (e.g., district agricultural officials in Ethiopia). Estimates have then been further adjusted using country-level, institution-level, and campaign-wide discount rates. Figures throughout the 2023 report present a consolidated view of all farmer tree planting (i.e., including via institutional distribution) while also specifying the scale of each respective channel.

Appendix V: Organization Update

The past year was an eventful one for One Acre Fund, marked by meaningful pivots in response to a challenging external environment. Nonetheless, One Acre Fund unlocked record impact for farmers in 2023, and the organization has entered 2024 in a stronger position to weather future headwinds.

- Restructuring in Kenya and Tanzania: In 2023, One Acre Fund streamlined operations in Kenya and Tanzania to adapt to regulatory and market changes and ensure sustainability. In Kenya, the organization consolidated its field, shop, and online channels into a unified network centered on rural retail shops (dukas), responding to reduced demand for fertilizer due to a government subsidy and declining interest in labor-intensive services. The restructured program maintains key services like farm training and ensures robust access to agroforestry via integrated retail and tree nurseries, while expanding One Acre Fund's reach to previously inaccessible rural communities and digitally inclined farmers, especially youth. In Tanzania, after extended challenges with low maize prices and the government's fertilizer subsidy, One Acre Fund phased out its intensive core program, streamlining its focus on agroforestry and the program's growing network of 40 rural retail shops.
- Leadership transition: In 2023, One Acre Fund announced that the organization's first CEO, co-founder Andrew Youn, would transition into a new role as One Acre Fund's President in 2024. As CEO, Andrew oversaw both the external (e.g., partnerships) and internal (e.g., business operations, culture) sides of One Acre Fund; as President, Andrew will now focus primarily on the former; shaping special initiatives together with strategic funding partners. In turn, this will create room for a new CEO to devote significant energy to One Acre Fund's field operations. Following an independent search by One Acre Fund's board, Eric Pohlman, One Acre Fund's original Rwanda Country Director, was selected for the CEO role, commencing his tenure in March of this year.
- Strong impact results: One Acre Fund's final 2023 impact analyses show that the organization's average client generated an additional $143 in new income and assets compared to neighboring control farmers, representing a 35% increase on income from supported activities. This above-target result is enough to sharply reduce hunger for a smallholder family, while enabling new investments in children's education, improved housing, and more. One Acre Fund attributes this strong performance to a combination of favorable factors; clients benefited from adequate rainfall and high maize prices across most regions, while impact also was bolstered by continued emphasis on compliance to One Acre Fund trainings and an increase in agroforestry impact (described below).
- Climate field leadership: Last year also saw One Acre Fund exert growing leadership in global efforts to advance smallholder climate adaptation and mitigation. In October, One Acre Fund's leadership in the climate space was explicitly recognized in their selection for the 2023 Hilton Prize, the world's largest award for humanitarian organizations that have meaningfully alleviated human suffering.