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Digital training benefits farmers and agricultural institutions

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Arifu is a digital advisor with a mission to provide information and opportunities to all. Arifu Insights is a knowledge product that informs partners about Arifu's value proposition across sectors, business strategy and future partnerships to drive our mission.

Farmers constitute 52% of learners in the Arifu platform. This in line with the proportion of individuals employed by agriculture in Sub-Saharan Africa at 53%. Engagement with Arifu's agricultural trainings is largely driven by the gaps of information that exist coupled with free access to content that is offered by Arifu platform. The agricultural trainings offered are on multiple crop and livestock value chains such as maize, poultry, vegetables, potatoes, tomatoes, dairy, and cross-cutting content on agribusiness, Financial Education, and weather advisory.

This brief will showcase how Arifu's agricultural content has increased farmers productivity and income, has fostered improvement in farming practices, and led to better input utilization.

Arifu's Impact

Below are some of the results we have observed across projects highlighting a strong demand for knowledge through Arifu's platform, impact on Learners of Arifu, and commercial returns experienced by partners.

70 - 89%

Adopted farming practices. (IFDC, FiBL) ^{1,2}

96%

Improved farm productivity with an average of 13 sacks of potatoes. (KCB Mobigrow) ³

65 - 75%

Increased expenditure on farm inputs. (KCB Mobigrow) ³

80-86%

Accessed content like Arifu's for the first time. (60 Decibels) ⁴

The outcome measures given above provide a snapshot of the full database of results available at Arifu. To learn more visit our [Impact Dashboard](#) and [Key Insights](#) documents that showcase our results in more depth.

Arifu's Value Proposition

Arifu's digital extension service showcases strong impact on farmers, off-takers, and input providers in the agricultural sector. In summary, our value-proposition is as follows:



Fostering Behavior Change and Adoption of Good Farming Practices

Public or private agricultural institutions looking to incorporate new training content into their networks can use Arifu's platform to improve practices on an ongoing basis.



Improved Production

Increase in farm production improves the output quality and quantity, and creates market value for institutions, consumers, and farmers. It can further facilitate investment in new farming technologies as well as crop diversification.



Better Input Utilization

Arifu's content has shown to improve appropriate investments in farming inputs. Increased expenditure and increased productivity for low cost trainings can create a virtuous cycle of aggregate output growth.



Cost Effectiveness and Convenience

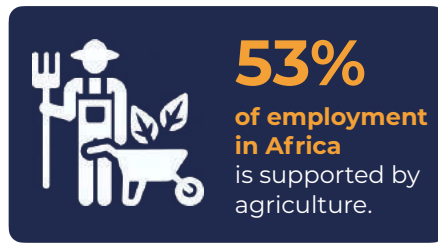
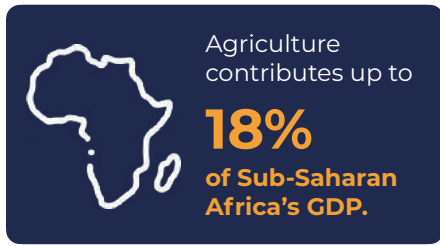
Arifu's training costs \$2 per learner. We have observed knowledge retention, improved farming outcomes, and market value creation. This is complemented with the convenience of learning any time, through any available channel, and the ability to layer on new trainings with ease.

"Before I just used to plant potatoes because people in my area plant potatoes, but we did not have any information or skills on best practices. I engaged with Arifu and followed all the instructions about crop farming from land preparation, seed selection to harvesting and storage. Now I harvest 32 sacks of potatoes on my half acre land yet before I used to harvest 20 sacks. Arifu has truly been beneficial to me."

Male Farmer, 29 years, Nakuru County

Digital Extension Services Strengthens Farmers

Agriculture's economic and social footprint is a significant driver of economic development in Africa ⁵.



Smallholder farming accounts for 80% of the food consumed in Sub-Saharan Africa ⁶. In effect, smallholder farmer contribution to agricultural production, food security, and as a driver for income generation is substantial. However, 70% of farmers are producing at a subsistence level and not well equipped to meet the complex demands of commercialized agriculture ⁷. In addition, farmers experience limited access to quality information, bargaining power in markets, cost-effective inputs, uncertainty in soil or weather information, and training services. All these factors and more combine to create a low productivity environment.

Consequently, there is a need for policy and programs to address these challenges. Extension and advisory services have proven to improve productivity and impart knowledge and skills required by farmers to improve practices in Sub-Saharan Africa. Traditional in-person extension services, however, remain inaccessible to most farmers:



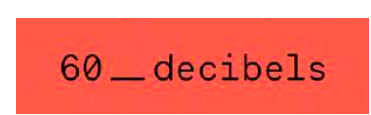
Arifu's digitally delivered agricultural content is more effective in advising farmers given the high cost of delivery and low accessibility of alternative forms of skills and information provision. In the following sections, we will share cases of how our content can improve outcomes within value-chains as well as with content that cuts across value-chains.

Improved Farm Productivity



Arifu's potato and maize content and associated impacts on input utilization, production and farmers quality of life

The cases below show that providing agricultural training on best farming practices in specific value chains improves productivity and income of the farmers.





Short term impact on production

81%

In 2019, within a project in partnership with KCB, a study implemented by 60 Decibels on farmers engaging with Arifu revealed that Arifu's potato content has a significant impact on potato farmer livelihoods. Arifu has notably improved production, farm income, and quality of life of the farmers who engage with the content with 80% of farmers accessing information like Arifu for the first time.



Improvement in Quality of Life

63%

Farmers that reported an increase in quality-of-life cited the ability to pay for household bills and school fees and being able to invest in other businesses as ways in which the quality of life improved. Moreover, 80% of farmers highlighted a boost in their confidence to grow and sell potatoes as ways in which their outcomes have improved. It is imperative to note that among those who did not experience a quality-of-life improvement, 79% stated it was because they hadn't had the chance to harvest or sell their crop.



In 2020, Arifu reached out to a sub-sample of learners surveyed by 60 Decibels to measure sustainability of the impact of Arifu and determine the impact on learners who had not harvested or sold their crop earlier.

Better utilisation of inputs

65-75%

Increased expenditure on farm inputs.

Input expenditure

\$21-54

Average increase in input expenditure.

Long term impact on production

96%

Increased production with an average of 13 sacks.

The evidence of increased production after learning with Arifu as well as appropriate increases in input utilization makes a strong commercial proposition for input providers and agricultural off-takers.



Similarly in another project, Syngenta partnered with Arifu to deliver high yield maize and potato trainings on planting, pest control, and soil protection to smallholder farmers in Kenya with the aim of increasing their yields and income.

Impact on production

97%

reported increased farming yields.

Impact on production

55%

average yield increase reported by farmers.

Impact on income

\$187

average increase in net income for farmers.

Findings from the partnership revealed increased production and income for farmers showcasing market value creation for growers and off-takers in tandem.



Arifu's impact is further seen from a partnership with IFDC to provide quality potato content on proper application of inputs, disease and pest management, and harvesting to potato farmers in Nyandarua, Kenya showed that Arifu helps adopt better farming practices. Evidence from this study proves Arifu's ability to foster good farming practices and highlights Arifu's potential especially for agricultural organisations whose objective is to improve their farmers' practices

Adoption of good farming practices

45%

adopted clean seeds after engaging with Arifu. Out of these, 72% attribute the change to Arifu.

58%

switched to better fertilizers after learning with Arifu. Out of these, 72% attribute the change to Arifu.

70%

reported that they have changed their ploughing measurements after learning with Arifu.

The studies above showcase Arifu's impact on farming outcomes and quality of life which as a result has been able to establish trust and goodwill among farmers with 77% of the farmers continued telling on average 5-8 other farmers each about Arifu even after two years of engagement.

Impact of Arifu's Agribusiness and organic farming content on adoption of farming practices and farming outcomes



60 _ decibels

As we have seen from the cases above, Arifu's value chain specific training is effective at improving farming practices. However, we have observed that cross cutting content which are partly independent of value-chain such as weather advisory, financial education, learning how to farm as a business, and organic farming create value to farmers as well. This is intuitive as multiple forms of information are often required to tackle multiple information needs

Within a project in partnership with Google.org, a study conducted by 60 Decibels on behalf of Arifu to measure the impact of Arifu's agribusiness content showed that the content promotes adoption of good farming practices, improved farm productivity, and revenue. Arifu's agribusiness content is a non value chain specific content stream that covers lessons on how to manage a farm like a business, record keeping, selling farm produce, and managing farm losses.

Impact on production

61%

Reported an increase in farm production.

Impact on income

51%

Reported an increase in farm revenue.

Adoption of farming practices

82%

Reported an improvement in the way they farm due to Arifu.

With 86% of the farmers accessing a service like Arifu for the first time, Arifu has improved the farmers quality of life. Farmers expressed improved ability to pay for food and education and making investments in livestock as ways in which their lives have improved due to Arifu. Consequently, farmers are highly satisfied with the service provided giving Arifu an NPS of 65 and 80% reporting that they did not experience any challenges when accessing the content.

"I use the right pesticides especially on tomatoes and watermelon, that has led to increase on my production"

Arifu Farmer

"I learnt about crop rotation and I have been doing that, so far I am able to plant different crops within a season"

Arifu Farmer



FiBL

Arifu further partnered with FiBL in 2020 to provide high-quality training on organic farming to farmers in Kenya. In order to create relevant and useful training on organic farming, Arifu started by conducting a qualitative study to understand the key challenges and information needs of farmers. 78% of the farmers reported a willingness to adapt organic farming and cited lack of information on best farming practices and pest and disease control as the most prevalent challenges they face.

To help address the key challenges and tap into the existing demand, Arifu curated training content on topics surrounding pest and disease control, soil fertility management and organic farming best practices. In-depth analysis of the impact of this content showed positive impact on adoption of good farming practices that resulted in improved production and income. However, even with the impact witnessed in the study, we believe additional training lessons on customer identification and markets could further improve the outcomes for commercial farmers.

Adoption of good farming practices

89%

Reported an increase in farm production.

Impact on production

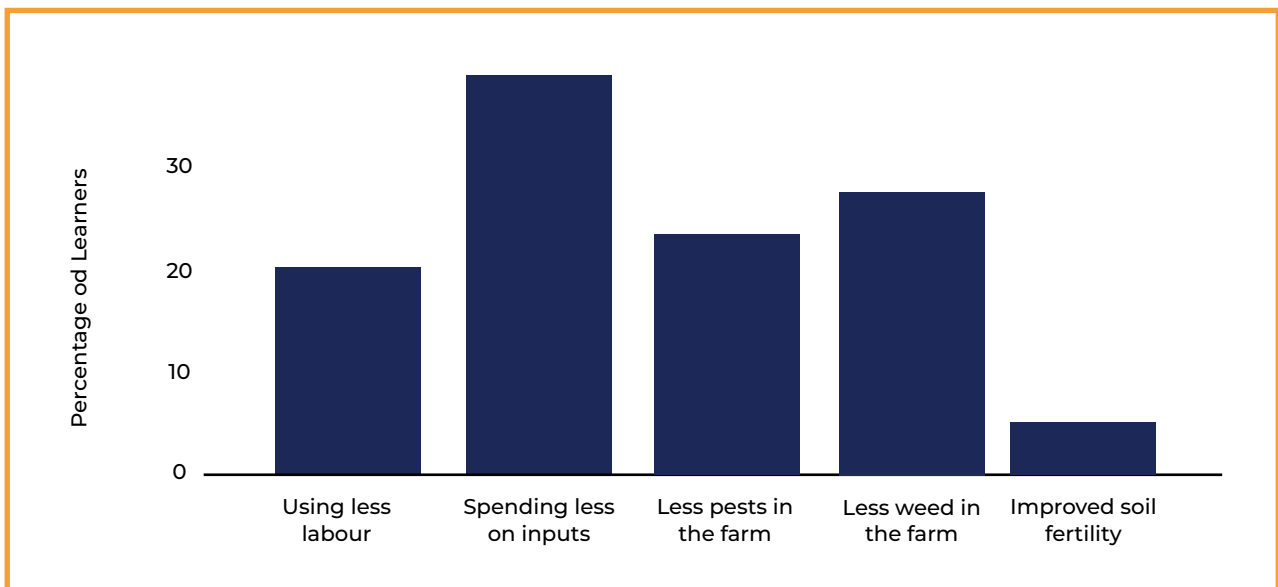
90%

Reported improvement in their organic farming yield.

Impact on income

69%

Reported an increase in their farm income.



Active Initiatives and Partnerships



Globally expanding reach and impact



Arifu has partnered with International Finance Corporation and EthioChicken to provide Agribusiness Leadership Program training to EthioChicken's network of poultry agents. The study seeks to upskill small agricultural organizations and individual farmers in applying best practices in agricultural operations, such as managing cooperatives, marketing their products, finance, inventory, and other aspects of their businesses, to build capacity to engage with large businesses that purchase their products. Findings from this study will be released in Q1'2022.



Evidence generation



Arifu has partnered with Google.org on a project aimed at fostering adoption of better farming and agribusiness practices for smallholder farmers in Kenya. The project focuses on measuring the relative value and effectiveness of digital and blended training (digital paired with in-person training) models. Arifu will work with Community Based Organizations (CBOs) and local farmer groups in 2022 to identify and reach farmers who will receive digital or blended training to measure the impact on a variety of farming performance indicators including knowledge and skills, productivity, and income.

Please confirm your county is Kiambu and ward is Githunguri

1. Yes
2. No

Your area's rainfall forecast for the next 4 days: High likelihood of light rains tomorrow, High likelihood of light rains in 2 days, High likelihood of drizzles in 3-4 days. Check weather daily for more accurate info! Continue

1

Weather Advisory

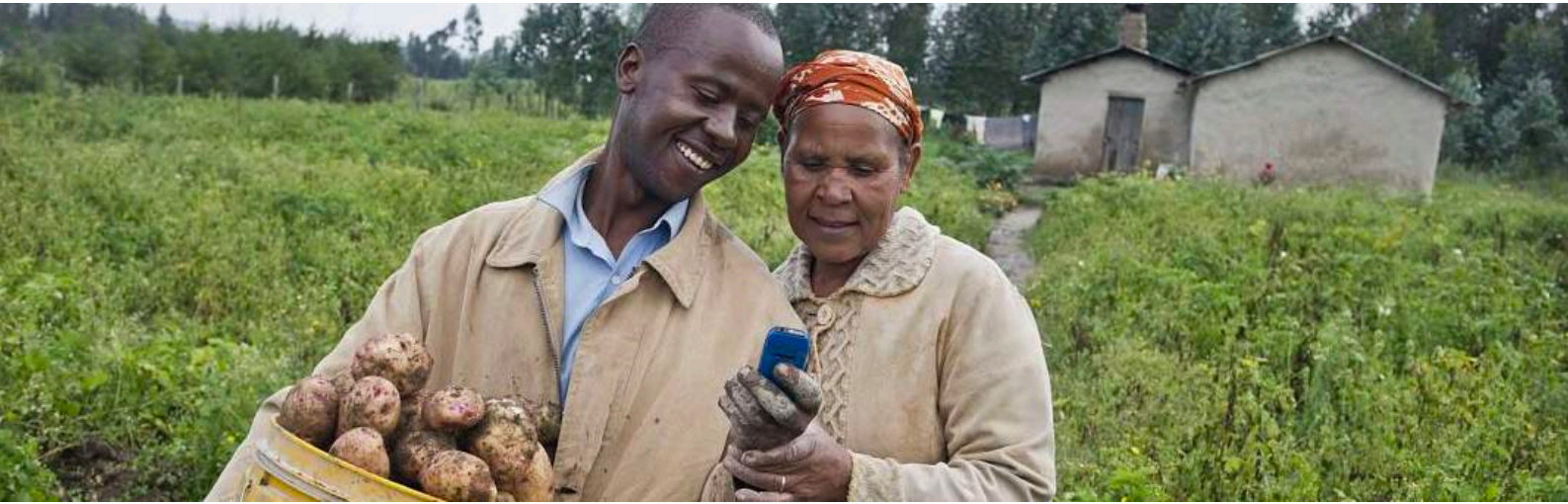


The weather advisory extension is a tool within the Arifu platform that provides farmers with a four day forecast for free. The tool can be accessed at any time and the information is tailored to the geographical area (county, ward, or nearby school) of the farmer.

Digital services can provide an effective way to flexibly deliver large scale training at a low cost to farmers. Additionally, they can be integrated in existing trainings for farmers and used as complements in these initiatives. Importantly, they offer an opportunity to easily layer additional content as and when needed creating a one-stop space for accessing information and opportunities to tackle multiple problems, whether its agricultural, financial, warning systems, or advisory, through one information source freely available for learners..

Impact of Arifu's content on farming practices:

The cases show the need and benefit of equipping farmers with knowledge on managing their agribusiness and leveraging organic farming to increase their yields and income. Therefore, combining value chain specific content such as potato and maize, and cross cutting content such as organic farming, financial education and agribusiness management can prove to be beneficial in improving farming outcomes.



Call for Partnerships

The low cost of delivering digital extension services to farmers and their associated impact on farming outcomes makes a strong case for driving farming productivity and return on investment for input producers and agricultural firms in general. In addition, digital extension services have proven to improve household livelihoods by increasing their ability to cater for basic needs such as investing in education and food security, and expanding sources of income through improved revenue and production.

Arifu is expanding its reach and impact on farming households by increasing the depth and breadth of content through our content marketplace platform. Through free to access information provision, we have generated significant impact on smallholders across our countries of operations and achieved commercial and non-commercial goals for our partners. We continue to build out new features, product innovations for precision agriculture, financial education, and data products to ensure we are creating value for farmers on our system as well as our partners.

In order to achieve this, we seek partnerships with innovative public and private sector groups to improve agricultural training access, linkages to products and services, and drive the growth of agricultural sector in Africa.

Please reach out to us at info@arifu.com to discuss how digital extension services can be adapted and deployed for your audiences and for your goals.



Acknowledgements

The Arifu team are grateful to the organizations that have believed in our mission and partnered with us in the various projects mentioned in this brief. These include, though are not limited to, our partners at Google.org, MercyCorps AgriFin Accelerate, 60 Decibels, aWhere, Research Institute of Organic Agriculture (FiBL), Kenya Commercial Bank, the World Bank, International Finance Corporation, EthioChicken, International Fertilizer Development Center(IFDC), and Syngenta.



Learn about entrepreneurship, agriculture, financial management, or nutrition. Our expertly-crafted content is designed to meet the unique needs of each individual.

Arifu is available for free on:



SMS



Telegram



WhatsApp



Interactive Voice Response (IVR)



Facebook

References

While the reports and papers below are the ones utilized for this edition of Arifu insights, our teams scan through a large number of global research papers to identify useful insights to inform our operations. All Arifu reports listed below are available upon request.

1. Arifu (2021). IFDC Report. Internal Arifu Report.
2. Arifu (2020). FiBL Organic Farming Insights. Internal Arifu Report.
3. Arifu (2021). KCB Report. Internal Arifu Report.
4. Arifu (2015). Syngenta Final Report. Internal Arifu Report.
5. Arifu (2020). Arifu Follow-up Survey. Internal Arifu Report. Arifu (2019). 60DB Lean Data Survey. Internal Arifu Report.
6. The World Bank (2021). Agriculture, forestry, and fishing, value added (% of GDP) - Sub-Saharan Africa.
7. IFAD (2011). Smallholders can feed the world.
8. IAASTD Agriculture at a Crossroads report, vol. V
9. National Agricultural Sector Extension Policy (Nasep) 2012
10. Blattman.C.,Ralston.L.(2015).Generating employment in poor and fragile states: Evidence from labor market and entrepreneurship programs. In addition, based on Arifu's experience, we have seen community-based agriculture training programs cost \$15 per learner per day. For a twenty day training program that is approximately \$600 per learner.