

AgDevCo^o

THE IMPACT OF AFRIMAC'S SUPPLY CHAIN

Impact Assessment Summary Report



1. CONTEXT

1.1 AGDEVCO

AgDevCo is an impact investor supporting the development of agribusinesses in sub-Saharan Africa.

The company provides working capital and patient capital in the form of debt and/or equity to African-based companies that have the potential to achieve far-reaching development impact.

We support these investments with Technical Assistance programmes. Our vision is a thriving commercial agriculture sector which benefits both people and the planet. We contribute to this by investing in and supporting early stage agribusinesses to create jobs, produce and process food and link suppliers to markets. We help build sustainability and bankability in these businesses as we work with them during our investment. AgDevCo's current portfolio has \$135m of committed funds into 50 companies.

To date, AgDevCo's investments and technical assistance (current and exited investments) have engaged 516,000 (37% women) small-scale suppliers and created or sustained 15,000 jobs (22% women).

1.2 AGDEVCO'S INVESTMENT IN AFRIMAC

In 2019, AgDevCo provided a syndicated working capital facility¹ to a consortium of Kenyan macadamia processing companies to fund macadamia purchases from smallholder suppliers and cooperatives. The facility was renewed and increased for 2020².

The consortium companies include AfriMac Nut Company; Sagana Nuts; The Village Nut Company, Batian Nut, and Jumbo Nuts ("the AfriMac companies"). Each business purchases nuts from networks of smallholder suppliers surrounding the processing facility, collectively purchasing from >30,000 suppliers.

Nuts are weighed electronically and purchased directly in the field. Information is uploaded in real-time which allows payments to be made within 24 hours via mobile money.

The AfriMac companies process the nuts into shelled and graded kernels for export. AgDevCo supports AfriMac companies because of their strong relationships both with their global buyers as well as their suppliers, to whom they provide macadamia and avocado seedlings as well as supplier training and extension. Kenya is the third largest producer of macadamia nuts after Australia and South Africa. The AfriMac consortium accounts for about an eighth of the Kenyan industry.



1 The \$5.0m syndicated facility is managed by Root Capital.

2 In 2020, new lenders Oiko Credit, Rabo Rural Fund and Global Partnerships joined the syndication for a total facility of \$11.0m.

This study explores the AfriMac companies' impact on the suppliers in their supply chain through interviews with nearly 500 suppliers. Key insights from the study are highlighted below.

1



The AfriMac companies bring access to services that suppliers did not have before and would find hard to replace. 63% of suppliers report first time access and the average supplier relies on the AfriMac companies for 40-50% of their household income.

2



Suppliers with 20+ months of engagement with AfriMac companies report higher aggregate impact than peers with shorter engagement. Longer periods of work with AfriMac companies also lead to higher supplier engagement and satisfaction, this could be linked to AfriMac companies' reliability and extension work.

3



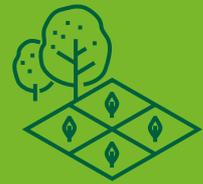
The AfriMac companies' small-scale suppliers suggested some operational fixes to enhance their experience.

4



Women suppliers tend to have less land, a smaller number of trees, and lower seasonal income than men.

5



It is important when gathering data for macadamia production to assess the number and maturity of trees rather than land size as suppliers' tree crops are generally not uniformly planted.

2. METHOD

The data used for the study was collected and analysed by 60 Decibels, an impact measurement company known for its Lean Data approach, and was based primarily on interviews with 466 (127 women) suppliers to Sagana Nuts, Batian Nut and Jumbo Nuts, located across 8 counties in central Kenya.

The sample was randomized from a list of supplier phone numbers provided by the company. These suppliers had worked with the company within the last 12 months. The proportion of women respondents was 27%, though this may not represent the proportion of AfriMac companies' suppliers which are women because the sample was not drawn from phone numbers for every supplier. Therefore, the insights from this study are not reflective necessarily of the preferences by gender of all AfriMac companies' suppliers at large.

The study took place between December 2019 and January 2020 and was conducted through phone interviews by a local team of surveyors trained by 60 Decibels.

The survey included qualitative and quantitative questions to understand who the AfriMac companies' suppliers are, their satisfaction and loyalty towards AfriMac companies, and the changes their interaction with AfriMac companies has made on their farming livelihoods and overall wellbeing.

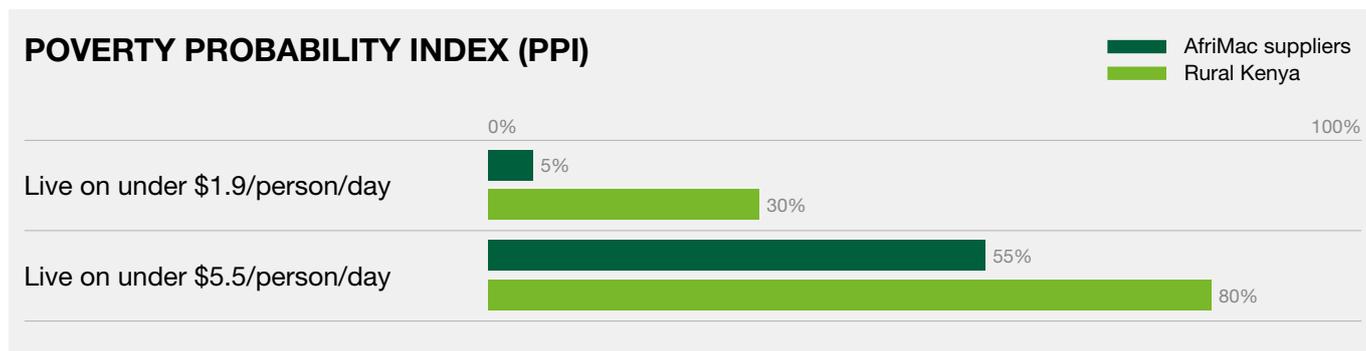
3. WHO ARE AFRIMAC'S SUPPLIERS?

The typical supplier we spoke to was roughly 50 years old with a household size of 5 members and 2.5 acres of farm land.

Using the Poverty Probability Index (PPI) developed by Innovation for Poverty Action, we can understand how AfriMac's suppliers compare to Kenya's rural income distribution. 5% of AfriMac suppliers live on under \$1.9/person/day and 55% live on under \$5.5/person/day compared to the rural Kenyan average of 30% and 80%. It is evident that AfriMac's typical supplier is somewhat better off than the typical rural Kenyan. There was little difference in income distribution on the basis of gender among this group of suppliers, but the larger landowners (including area under cultivation) were likely to be slightly wealthier than others. These findings need to be interpreted whilst considering that because the group of suppliers that responded to this survey are those who had access to mobile phones. Therefore, the high probability of wealth may be partially a function of the sample design.

To understand household disability profiles, we used the Washington Group questions. Overall, we found that the suppliers we spoke to across the three companies have a disability prevalence of 6%; most often challenges with sight or mobility. To put this into context, according to the 2009 Kenyan Housing and Population Census, 3.5% of the national Kenyan population have a disability. Based on these stats this group of suppliers is more likely to be disabled than the average Kenyan, however this may be due to the older age of suppliers.

Insight from other similar AgDevCo investments is that tree crops are more likely to be grown by older suppliers with more capital relative to other farmers around where they live. This is because of the upfront capital required to grow tree crops and wait for them to mature before generating revenue.



4. PRODUCTION

The average supplier in this sample sold ~647kgs nut in shell (“NIS”) at ~KES 152 (\$1.40) per kg³ in the last season. 50% of surveyed suppliers sell all their produce to AfriMac companies and the rest sell some nuts to another buyer or consume the nuts at home.

On average, we found that although female suppliers tend to produce less macadamia nuts than their male peers, the proportion of their produce that they sell to the AfriMac companies is often higher (81% of their produce vs. male suppliers selling 78% of their produce).

This could be linked to the relative number of trees and land size; women had an average 2.0 acres of land, whereas men had an average of 2.4 acres.

We found that the suppliers' yields of nut in shell was around 10% lower than targets for commercial growers in comparable growing areas. However, kernel recovery was less than 50% of expected commercial levels. Kernel recovery mainly depends on timing of harvest, quality, and species. This may represent an area where supplier yields could be optimised through further capacity building and outgrower support.

Based on an estimated 18 productive trees per supplier this would equate to an average yield of 36kg NIS / tree, which is slightly below commercial yields of >40kg NIS / tree but significantly lower on a kernel recovery basis of c. 5kg kernel / tree, which is well below commercial levels of around 12kg kernel / tree.

5. MONEY EARNED

63% of these suppliers say they have never had access to the services they get from AfriMac before.

To understand how the companies are impacting suppliers' incomes, we asked how their earnings from macadamia sales had changed due to the company.

On average, 31% of the suppliers felt their money earned had very much improved due to AfriMac's portfolio companies and 76% said their earnings had somewhat improved.

These results were similar for men and women, but a closer look at earnings shows that the women we spoke to earn about 12 KES (\$0.11) more per kilogram than men. However, over the course of the harvest season they earn less than men on average because their volumes are lower on average.

Suppliers with one to two acres of cultivated land were marginally more likely to have improved their earnings because of AfriMac in comparison to suppliers with larger plot sizes. Suppliers who had worked with AfriMac companies for longer (20 months or more) were more likely to say their earnings had very much improved because of AfriMac in comparison to suppliers who have been with them for a shorter period of time (less than 10 months). This could be because of the reliability of, and extension work provided by, the AfriMac companies. AfriMac thinks this is also because it is still expanding its sourcing base and reach, while striving to source all raw material from small-scale suppliers.

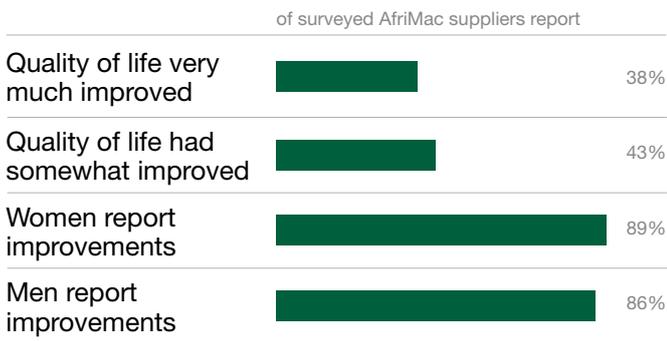


³ Prices in 2019 were regulated by the Macadamia Suppliers Association of Kenya after a meeting with officials of Nuts Directorate at the Agriculture Food Authority (AFA).

6. QUALITY OF LIFE

To gauge the depth of impact, we asked suppliers whether their quality of life had changed because of the AfriMac companies.

38% of surveyed AfriMac suppliers report that their quality of life has very much improved, and 43% said that their quality of life had somewhat improved. Among this sample, women were slightly more likely to report improvements (89%) compared to their male counterparts (86%).



The main improvements reported were increased monetary returns, an improved ability to pay for school fees, and more stable and reliable income.



7. SATISFACTION AND CHALLENGES

We tested suppliers' satisfaction and loyalty to AfriMac using Bain's Net Promoter Score (NPS) methodology⁴.

A score above 50 is considered excellent and a negative score is considered poor. The average score across all three companies was 24. Batian Nuts significantly outperforms both the portfolio average and the 60 Decibels agriculture supplier benchmark. Batian and Sagana Nut suppliers said they were satisfied because they valued the high prices they got. Jumbo Nuts suppliers appreciated the timely payments but asked for specific improvements on customer service. When asked directly about the competitiveness of the company's price, just under half of suppliers in specific regions said they found the price to be "the same" as other buyers, and 29% said it was "worse".

84% of this sample of AfriMac's portfolio reported no challenges with the company. This outperforms the 60 Decibels supplier benchmark for similar models.

The reason why so few suppliers are reporting challenges when the NPS is on the lower side is because the low NPS is driven by almost 40% of the suppliers being passive supporters. This group is generally satisfied with their company. They are just not actively promoting it, yet.



4 More information [here](#)

8. CAPITALISING ON THE FINDINGS FROM THE STUDY



Our study demonstrates that AfriMac is helping suppliers earn a more stable income that they use to pay for school fees, food, clothing, and farming inputs.

The reliable income source allows suppliers to save money, apply for loans, plan for future expenses and invest into other areas of their farms. The results provide valuable insights for AfriMac on how to sustainably source raw materials from suppliers and also encourage suppliers to increase their macadamia tree count and crack-out rate. The survey also highlights a few areas where there is an opportunity to respond to feedback from suppliers, thereby improving the relationship and strengthening AfriMac's impact even further.

We found that price really matters to the suppliers, so some companies need to strengthen their competitive advantage in price or diversify their value proposition to increase supplier loyalty. Suggestions from the study include quicker nut collection, guidance and information on farming macadamia, and to become more transparent around bonuses to avoid confusion.

Suppliers believe that they have the potential to improve their yields if they had access to buy quality seedlings, fertilizer and other inputs. AfriMac will investigate what inputs it is feasible to help suppliers gain access to. In 2020 they increased provision of seedlings by 20%.

AgDevCo has renewed its WC facility with AfriMac for 2020 and will work with the companies to progress their relationship with their suppliers in order to increase revenue and income.

FURTHER INFORMATION

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