

Growing Communities, Responsible Value Chains



# Macadamia farming



# Overview

**M**acadamia is a core strategic crop at Kakuzi PLC, and in 2021 it occupied 1,032 hectares. The Company only processes and supplies macadamia nuts from its orchards since they are within its control, making it easy to collect, monitor and keep relevant data.

Kakuzi PLC believes in the “Farm to Fork” concept, with traceability at its core. The Company traces the movement of its macadamia through steps in the organisational chain, from farm to consumer, and vice versa.

Being one of the flagship products, macadamia nuts are both exported and sold locally to MSMEs for processing into other by-products. Kakuzi PLC has invested in state-of-the-art machinery to process and sell assorted macadamia products to the local market via retailers.



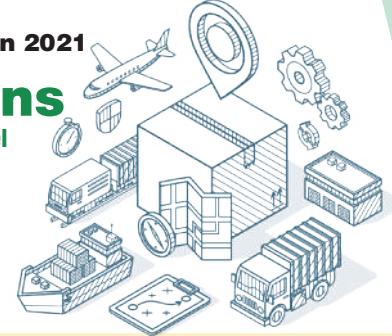
## Macadamia output (production) in 2021

<b>NIH</b> (Nut in Husk) 4,533,165.9kgs	<b>SKR</b> (Saleable Kernel Recovery) 492,440kgs
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## Macadamia nuts exported in 2021

**47,803 cartons**  
A carton contains 11.34kgs of kernel



## Export markets

**USA, Germany, Middle East and Japan**

## Macadamia products sold in the local market

**Commercial grades i.e. - commercial whole, commercial half, industrial whole and industrial half, as well as the insect damaged, chicken feed, powder and wrinkled immature.**

# At the farm

## Fertiliser management

Fertiliser is applied based on leaf and soil analysis results, and minimal tillage is applied. The soils in the macadamia orchards are only ‘touched’ during planting and weeding to ensure they eliminate soil erosion. The orchards have grass which provides natural crop cover to minimise evaporation. This enables the Company to carry out less irrigation.

The macadamia husks which constitute 50 percent of weight of harvested nuts are composted and once ready, they are taken back to the orchards as organic matter, contributing to soil health and helping retain moisture.

## Irrigation management

A macadamia tree can grow naturally without irrigation. The only reason Kakuzi PLC does irrigation is because once a macadamia tree is irrigated, it produces more yields by over 10 percent which is good for the business.

The irrigation requirements are calculated based on evaporation, rainfall and soil moisture data. A

combination of data (daily tensiometer readings, weekly average evaporation and daily rainfall records) are used to determine the frequency and the volume of irrigation to be applied to the macadamia plant. Micro-sprinklers are used to deliver water to all macadamia trees.

The Company has 19 dams divided into holding and irrigation dams with a total of approximately 12 million cubic metres to harness rainwater for future use in the farm’s orchards.

## Macadamia farmers under contact programme in 2021

The Company has an ongoing macadamia community project dubbed ‘Let’s grow macadamia together’, where managers from Kakuzi’s macadamia division provide guidance to contact farmers. In 2021, there were 10 contact farmers.

The farmers were given free seedlings to plant, and the managers have been helping them manage as well giving them technical information that they require in order to benefit from macadamia farming.



**The company has 19 dams divided into holding and irrigation dams with a total of approximately 12 million cubic metres to harness harvesting for future use in the farm’s orchards.**

# The Journey of a Macadamia nut, from Kakuzi hills to markets



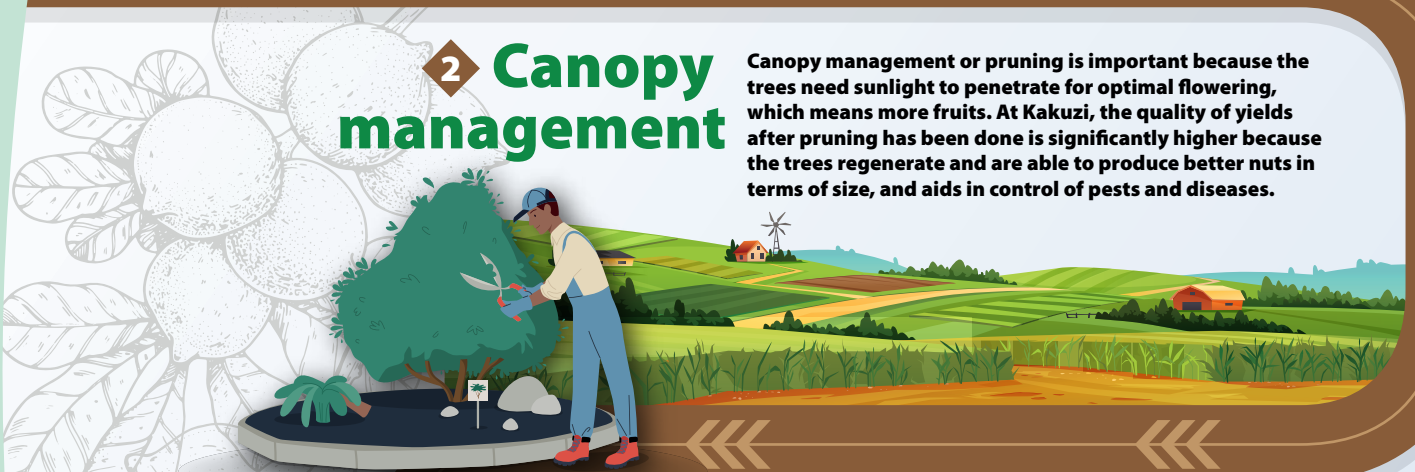
## 1 Planting

Since 2007, Kakuzi has planted macadamia orchards on more than 1,000 hectares in the Kakuzi Hills. Production reached 454 tonnes in 2020 against 290 tonnes in 2021.



## 2 Canopy management

Canopy management or pruning is important because the trees need sunlight to penetrate for optimal flowering, which means more fruits. At Kakuzi, the quality of yields after pruning has been done is significantly higher because the trees regenerate and are able to produce better nuts in terms of size, and aids in control of pests and diseases.



## 3 Pest and Disease Control

Pests are a great risk and at the same time, we need to adhere to the regulations on controlling them. The Integrated Pest Management (IPM) method we use ensures that we are able to meet these two objectives.



## 4 Fertility Management

Fertilisers are applied based on leaf and soil analysis results. This ensures that we feed the soil to feed the plant.



## 7 Export

Packed nuts are placed in controlled rooms in preparation for shipping in specific containers.



## 6 Quality Assurance

The nut in husk has a moisture content of about 25%, and it has to be dried and cured to reduce its moisture content to about 1.5%. Drying is done in nut in shell drying bins, and curing is accomplished by heating the nuts to 104-122° F (40-50° C). Quality control is essential in the orchard to produce nut clusters and collect them in a timely manner (and as cost effective as possible). During processing, machines are essential to remove both the husks and the hard shells, but observation is provided throughout by quality inspectors.



## 5 Harvesting

Macadamia nuts are harvested by hand and fallen nuts picked. The harvested nuts are fed into large hoppers and then into a dehusker made of double rollers that strip the outer husk away.

QUALITY  
KUZU  
PRODUCTS

