



# FOOD SAFETY AFRICA Magazine

COVER STORY

## FOOD SAFETY CULTURE

INCULCATING FOOD  
SAFETY CULTURE IN  
FOOD BUSINESSES  
IN AFRICA

OLIVADO  
Taste & Freshness

COMPANY PROFILE

## OLIVADO

LEADING THE PACK  
ON SUSTAINABLE  
AVOCADO PRODUCTS  
FOR INTERNATIONAL  
MARKETS

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CGCSA

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Artcaffe Coffee & Bakery

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## FRESH PRODUCE

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## **OLIVADO:** Leading the pack on sustainable growing, packaging and processing of avocados for international markets

*Based in Muranga county, Kenya, Olivado EPZ Ltd is the leading packer of fresh avocado fruits and avocado oil for export markets around the World. In this feature, we talk to Peter Mwangi, the General Manager of the company and Judith Okumu, the Packhouse Manager, as they give us an extensive insight into how they build capacity of small-holder farmers, manage food safety and quality and the sustainable way they run their business*





By **Catherine Odhiambo**

**R**ight at the onset of the 21st century, in a small New Zealand town known as Kerikeri, Gary Hannam and others pioneered cold-pressed extraction method for extra virgin avocado oil, resulting in the healthiest, tastiest, and purest oil on the market - giving rise to Olivado.

With the expansion of the company came about the demand for more avocados, the chief raw material, putting a strain on New Zealand's production capacity. This saw the company start searching for newer grounds and eventually the company's CEO Gary Hannam, made a bold move of setting up a new branch in a foreign country, Kenya, in 2007.

Olivado set up the first plant in Nairobi's Mombasa Road but later shifted to an Export Processing Zone (EPZ) in Murang'a county, Kenya's leading avocado producer, near Nairobi - Olivado moved closer to the farmers, marking the birth of Olivado EPZ Ltd (OEPZ).

Olivado is one of the world's largest suppliers of organic fair-trade extra virgin avocado oil. The company sells its unique products to 33 countries in the World - operating a social impact value chain that integrates smallholder farmers who benefit from the company's extensive value chain.

#### **COMPANY OPERATIONS IN KENYA**

Olivado has a database of around 5000 farmers, with about 3500 being active now. It operates in 12 counties in Kenya that are the key agro-ecological zones that predominantly grow avocados. Central Kenya, comprising of Kiambu, Nyeri, Murang'a and Embu counties, accounts for more than 60% of the country's total avocado production. However, the company has also ventured into other counties like Bungoma, Bomet, Trans Nzoia and currently eyeing other western Kenya counties.

The company's Murang'a location has two plants: a fresh produce pack house which can handle 6 tonnes of fresh avocados per hour and an oil extraction facility, which processes 4 tonnes of fruit per hour. "This means that the company can receive 150 tonnes in a day. However, when it comes to fruits for oil extraction, ripening must be done. The fruit has to be stored in special ripening rooms," says Peter Mwangi, General Manager.

To this end, the company has invested

in ripening rooms that are the backbone to getting quality avocados for high quality extra virgin oil. The company's cold rooms and ripening facilities can accommodate 400 metric tonnes of fruits at a time.

Smooth seas have never made perfect sailors, and as with every journey, Olivado has had its fair share of snowballs thrown at it. The demand for avocado has been rising over the years, with more export orders both for the oil and fresh fruit, thus creating a snag in terms of sourcing quality fruit to meet the rising demand.

Mwangi informed Food Safety Africa that avocados in Kenya have two key annual harvesting seasons: March to July, which is the main crop and the shorter crop season that runs from November to December depending on the off and on season. To mitigate the seasonal availability of the produce, the company has decided to broaden its geographical coverage to have some fruits coming in slightly earlier than the present and others later - to provide an extended processing time of about 6 months in the year.

The company has also faced challenges regarding the quality of the fresh fruits, as some farmers lack information on how to manage the avocado trees. The fresh avocado market has specific standards outlined for export of the fruits into the European market, which most farmers fail to comply with. An example is the GLOBALG.A.P. which as a company, Olivado must ensure its contracted farmers adhere to.

Olivado runs one of the most modern fresh produce and oil extraction factories in the region. At the packhouse, the avocados undergo a water-less cleaning process that removes any extraneous matter. The use of brushing equipment, as opposed to utilizing water, ensures that the final product is maintained in its natural state to meet the stringent organic standards.

The fruits then enter the automatic grading tunnel, where each fruit is graded in terms of size and weight automatically as they roll within the tunnel, with each grade of fruits getting selected into their specific sections. Packaging into the carton boxes is done by hand by the employees - who also monitor the fruits for visual conformity. At the avocado oil processing section, the ripe fruits are sorted and then undergo washing, destoning and pulping steps. The pulp then goes through

## COMPANY PROFILE: Olivado EPZ Ltd

gentle heating to release the oil from the pulp. The separated oil goes through decanting and polishing to produce cold pressed oil.

Quality control at the packhouse include testing for dry matter content for each batch of avocado fruits received. The team also checks for several observable physical defects such as late wind damage, lenticel damage, sun burn and insect and mechanical damages.

According to Judith Okumu, the company's Packhouse Manager, traceability is a critical requirement for their certifications, with each carton having details such as the type of fruit, whether the fruits are conventional or organic, date of harvest, year and month, batch number and the size and weight of the fruit. The fresh fruits are packaged in 4 kg and 10 kg packages, with fruit size ranging from size 12 to 32.

### ENSURING FARM TO FORK QUALITY

As the leading avocado processor and packer, Mwangi acknowledges that what separates out Olivado from the rest of the players in the country is the extensive quality and food safety system they have in place that ensures that the produce meets the firm's quality requirements – while having a collaborative approach to the way they work with farmers to build their capacity and knowledge.

"At Olivado, we are proud of our food safety and quality management system, as it is the key driver of our operations, allowing us to trade with customers around the World. By working with smallholder farmers right from the field to build their capacity, to ensuring that operations in the factory and the entire value chain are as per international standards, our customers are assured of safe, nutritious and high-quality avocado fruits and oils every time they eat or use our products," says Judith.

To recruit farmers, the company's team of agronomists/technical officers identify farmers in the growing areas, followed by a training exercise on organic farming, GLOBALG.A.P. and Fair for Life standards. Fair for Life standard is a social accountability standard that ensures the value chain complies to fair and legal operations focusing on worker's needs.

The company trains the farmers on organic practices to control weeds, deal with pests and diseases. It also shows them how to carry out pruning, which opens the trees and reduces disease infestation. Among the field team, the



company has field liaison officers who stay within the farming community to make follow ups on all the farm activities.

To seal the deal, Olivado signs contracts with the individual farmers and later carries out verification of the status of the farms to ensure compliance. The verifications are done by third parties for organic farming and GLOBALG.A.P., who send their auditors. Each farmer gets a GLOBALG.A.P number or Organic certification number.

As the harvesting season approaches, Olivado prepares to take in the fruit, beginning by assessing the fruit's maturity by taking samples from various locations. The company uses the Decision Support Tool (DST), which predicts with accuracy, of fruit maturity, depending on the geographical location. Results from the DST exercise is supplemented by field teams that take samples to verify dry matter content through physical tests at the factory.

"During harvesting we have pickers, gatherers and weighers. The pickers are

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The management team of Olivado

trained on how to pick the correct fruit with the correct dry matter content. We train them on the visual features that meet quality requirements for the export market. We also train the gatherers on how to handle and then weigh the fruit,” explains the Packhouse Manager.

The company uses color coded crates to enable traceability and trains relevant personnel on how to decode them. To curb post-harvest losses, the fruit is picked in a highly controlled, hygienic manner and transported in safe and secure trucks, which must be inspected before leaving the premises. Harvesting poles are used during picking to minimize bruising. Farmers are issued with a delivery note and the fruits loaded straight onto the truck after taking the weights, with real time weights registered into the company’s server.

Once the trucks arrive at the factory, the weight is verified, each delivery forms a specific Control Number – a unique number that is used to track and trace fruits from a

particular farmer or location.

### CERTIFICATIONS TO QUENCH MARKET DEMANDS

The GM reveals that to meet the stringent customer requirements for the export market, the company has got several certifications to accommodate the diverse requirements of the markets it serves. One such certification is the Sedex Members Ethical Trade Audit (SMETA), a globally recognized and pioneering standard for the improvement of ethical practices throughout the supply chain.

The company has also acquired the British Retail Consortium (BRC) Certification, meant for the UK market and focuses on food safety issues in the factory. Germany and the other countries use the International Food Standards (IFS), while the GLOBALG.A.P. standards have a broader view of the agricultural practices in terms of the chemicals being used. Organic certification is by Ecocert, focusing on organic practices. The other certifications include FFL Kosher and Halal. All these standards are sustained through internal audits and external audits by third parties. “We can go the extra mile of getting certified to more standards, depending on the customer requirement,” informs Judith.

Mwangi informs us that with the confluence of increasing trend of westernization of food patterns and acceptance of different cuisines, along with burgeoning middle-class population, the consumption of avocado is rising across the globe. The nutritional and health benefits associated with the consumption of avocado is also driving its demand.

Avocado, is termed as a super fruit, is rich in oleic acid, its known to reduce cholesterol, improves heart health, acts as an antioxidant, improves the skin, enhances wound healing and neutralizes free radicals associated with cancers. Olivado’s products are exported into over 33 countries globally, with the key markets being Europe, USA and the UK.

He revealed that the US market alone consumes about 50% of the world’s avocados, with Europe taking 40% and the rest of the world sharing the 10%. “In the next 5 years, there will be a reversal of market trends. The US will still take 50%, but due to the population increase in Asia, the region will move from 10% to 40%, an immense increase. We’re seeing a shift in demand and more

### KEY NUMBERS

10%

THE AMOUNT OF EXTRA VIRGIN AVOCADO OIL RECOVERED AFTER EXTRACTION.



uptake of avocados in Asia, as we get more and more enlightened about this key market,” he comments.

#### **CHALLENGES HINDER KENYAN AVOCADO CROP**

Mwangi reveals that Kenya’s major international competitor in the export of avocado in the world is Peru. The avocados season in both countries are similar, considering that both countries straddle the equator. However, he is saddened that Peruvian avocado produce is preferred to the Kenyan one in the export markets due to better quality attributes on taste and physical aesthetics.

“Peruvian farmers harvest better matured fruits, they ripen properly and have fewer incidences of rotting after harvesting, thanks to the stringent controls on their value chain by the stakeholders and government agencies in the country, as opposed to Kenya. In Kenya we lack adequate control and enforcement of the rules set by the Horticulture Crops Directorate (HCD) under the Agriculture & Food Authority (AFA). We have good laws and

regulations under the Crops Act No. 16 of 2013 and HCD regulations 2020 but we have failed to follow them.”

He explains that maturity in avocados is measured by checking on the dry matter content, which also reflects on the oil content of the fruit - an immature fruit has low oil content and doesn’t ripen well, but rots and if it does, has an off-taste, he explains.

He calls for the intervention by the regulatory bodies and all stake holders to mitigate the quality challenges in the avocado sector, adding that the regulatory bodies must mandate the harvesting time, which impacts the quality of fruit. “The agencies should stop the harvesting of immature fruit and withhold export permits if the quality is poor. The minimum dry matter should be at 23% instead of the current 20% for fresh exports for the Hass variety.”

Mwangi says that the other challenge to the sector is the rampant theft of fruit at the farms. “This is posing a serious threat to the industry, as farmers and plantations are losing tonnes of fruit to thieves. We estimate that this year alone our farmers lost 25% of their

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**With this program, we are offering professional and technical assistance to potential starters or ongoing productive avocado orchards in Kenya.**”



**Olivado has two digesters that can process 3000 m3 of biogas per day**

potential income due to theft, which translates to close to KSH. 2 billion (US\$ 20 million). This loss on investments, if not eliminated, will lead to a collapse of the avocado value chain in the country,” the GM warns.

To mitigate this issue, he advises that HCD should enforce traceability of fruits and improve accountability at all the packhouse operations in the country. The authority should also regulate all buyers to ensure they each operates within HCD guidelines as regards licensing and proof of purchase of fruits, while county governments should step in and regulate the transporters and operation of packhouses.

Amidst all these downsides, Mwangi is confident that there’s light at the end of the tunnel for Kenya, as the exporters are working together through various forums and with the government to solve the two major issues. “Kenya is at an advantage as our small-scale farmers can practice organic farming, which our major competitors, such as Peru, cannot do effectively. We can work on this strength and dominate this niche market segment and take advantage of the organic avocado

market which is growing at double digits per year because people have realized the health benefits in organic consumption.

To further enhance the growth of the sector, Olivado has a thriving avocado seedlings nursery at its factory. The nursery produces high health certified seedlings which the firm sells to its farmers at subsidized rates.

“We train the farmers on how to plant and manage the young trees till production. This forms the key starting point to ensuring that we have a reliable supply chain. We have seen a lot of road-side seedlings from nurseries that provide diseased seedlings infected with *Phytophthora Cinnamoni*, a root rot that can destroy the entire plantation. There is also the big risk of getting off type seedlings or non-true to type Hass variety avocados from other nurseries.”

Olivado has noted a significant gap in the knowledge of how to establish and manage avocado orchards for large scale investors and has filled the gap by providing bespoke special training and exposure to potential farmers who are entering the sector in droves.

“With this program, we are offering professional and technical assistance to potential starters or ongoing productive avocado orchards in Kenya. Through this initiative, we reduce the risk or the anxiety for those engaging in the venture. We further guarantee offtakes for all the avocados produced at the orchards that we manage,” reports Mwangi.

Olivado has made a lot of strides in Central Kenya, where it started its journey and is making big strides in Western Kenya, for example in Bungoma, Kakamega, Kisii and Trans Nzoia, with intentions to grow further into the entire western and lake regions.

#### **INIMITABLE WASTE MANAGEMENT STRATEGY**

Conventionally, a company’s waste is usually a minute part of the raw materials received. Well, when it comes to avocado extra virgin oil processing, a whole 90% of the fruit turns out as waste. Only the pulp is processed into oil, the skin and the stone are discarded. Well, with the unrelenting drive to break the status quo and develop anew where few have dared to go, Olivado is leading the way in the avocado industry with their approach to regeneration, sustainability and embracing waste-to-energy technology.

**“We can go the extra mile of getting certified to more standards, depending on the customer requirement.”**

## COMPANY PROFILE: Olivado EPZ Ltd

“Once the fruits are ripe and ready for oil extraction, we only recover 10% as extra virgin oil, meaning that 90% is not being used. That poses a very big challenge, and we must deal with the 90% waste,” Mwangi notifies Food Safety Africa. The skin, the residue pulp and black water from the oil extraction, contain plenty of organic matter, which the company converts into biogas. It has 2 digesters with capacity to process about 3000 m3 of biogas. “We are self-reliant in terms of our factory’s power requirements by our 450 KW gas generators. That takes care of our waste, and the waste takes care of us,” voices the GM.

He explained that the stone is also crushed and mixed with the pulp to generate biogas, but the company takes it a step further to use it as a bio-fertilizer termed ‘Avogrow’. Avogrow is a mixture of the crushed stones with rock phosphate to form an organic fertilizer. The company sells the bio-fertilizer back to the farmers at subsidized prices. Indeed, necessity is the mother of invention. “The Avogrow is a good soil conditioner as it has organic content in it. Avogrow rejuvenates soil that has been continually cultivated, aiding further fertilizer application to give better crop quality,” he says.

Mwangi informs that at the biogas digester, they have a waste stream that releases about 30,000 cubic litres in a day. The company is in the process of installing a drier to separate the digestate and obtain high quality organic fertilizer. The liquid produced will be used as an organic foliar feed at the farming communities it works with.

Further, the company has kicked off plans to adopt the use of biogas trucks, with the aim of achieving 100% transition to renewable power source for all its fruit collection vehicles, to be fueled by natural gas - filled with the excess methane gas produced from the biogas plant. He explains that biogas is a perfect solution for treating the organic waste from the factory, as it offers a renewable substitute to costly and unreliable grid electricity. “In this way we are actually carbon positive and the first player in the avocado sector in Kenya that has achieved a circular economy value chain,” says Mwangi.

When the biogas plant generators are fully running, the plant produces 475 KW of power. The firm has also installed two gas stream generators, one has a capacity of 350 KW and the other one 125 KW, meeting all their power



requirements.

### HELPING FARMERS TO THRIVE

Olivado has bolstered the livelihoods among its contracted farmers through increased income from avocado production, which has enabled them to construct decent residential houses, purchase and maintain livestock such as dairy cows, educate their children and increase their acreage under production through the purchase of extra land for avocados and other crops.

The firm pays advance payment to its farmers, helping them meet their immediate needs and emergencies such as hospital bills and school fees – schools open when farmers have no income, with many risking failing to take their children to school.

Mwangi adds that Olivado works hand in hand with their field teams to solve the farmers knowledge gaps on crop management. They alert the farmers when

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**Olivado's Packhouse utilises latest technology to clean and grade the avocado fruits in an efficient and safe manner**

**KEY NUMBERS**  
 .....  
**23%**  
 MINIMUM DRY MATTER CONTENT REQUIRED FOR FRESH AVOCADO EXPORTS.

to carry out all crop management activities to ensure high yielding, disease-free crops. They also give accident insurance cover to loyal farmers who have supplied the company with their full harvest. Given that the age limit for most insurance companies is below 70 years, Olivado has negotiated with insurance companies to permit farmers above this bracket to be insured, setting itself apart from other companies.

Food Safety Africa talked with one of the farmers, Elias Kimani Guchu, who has worked with Olivado for the past 13 years. He expressed his satisfaction in working with the company citing, that Olivado pays them well and on time. "Olivado has field officers who come up to the grassroot level to train us on how to farm using manure from our household waste. The company offers us advance payments, which enable us to weed our avocado farms," says Elias.

### **ALL STAKEHOLDERS MUST ENSURE QUALITY**

The GM believes that every avocado industry player should play by the same rules and be judged by the same standards. He stated that the government and exporters have an obligation to the farmers to put in place stringent regulations that will impede entry of every Tom, Dick and Harry into the sector.

"We must get our act together as exporters and the government agencies because we need to regulate the industry. We need to create rules that will ensure that we don't have premature fruits going out of this country at all. Once done, we can assure you that the farmer will benefit from better prices. Let us have measures of traceability so that as a container leaves this country, we should be knowing where the fruit has come from," he utters.

He urged Kenya to adopt the Peruvian way, where avocados not meeting export standards leads to a revoke of an exporter's license.

### **MIRRORING INTO THE FUTURE**

Peter foresees a bright future for the avocado industry in Kenya and the broader region. He informs Food Safety Africa that he hopes to see Olivado having a greater impact on the farmers through its investments and work in the sector.

"What moves us and gives us that feel good feeling is when a farmer stands up and says, 'Were it not for Olivado, I couldn't have educated my children. Were it not for Olivado, I wouldn't have built this house!' It gives us a very good feeling when we hear satisfied farmers because they have been with us through the years."

The company looks forward to cutting down production costs, with the savings ploughed back to the farmers. The company's ambition has seen it venture into the mango market in Embu and Tharaka Nithi as it seeks to complement the avocado season. It is further exploring setting up a mango processing unit for drying the pulp into powder that can be used in confectionery or ready-made drinks. On the avocado side, the company has been part of developing avocado growing in the western Kenya region, where they plan to set up a packhouse soon.

So, as production expands and mouths around the world need feeding, the Olivado EPZ story looks set to continue well into the future.