



2023 EDITION

Agri-Finance Digest

A publication of Agricultural Finance Corporation



AFC's transformative financing models

From Chief Administrator to Agricultural Entrepreneur

AFC finances dairy goats breeding project in Vihiga County



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AGRICULTURAL FINANCE CORPORATION



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AFC also provides technical and advisory services to players in the agricultural value chains at affordable rates

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Stimulating investment through agriculture

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How To
Avocado farming

AFC's transformative financing models

By Harun Njaga



Managing Director, George Kubai giving his speech

The Corporation has identified four new lending models to support the agricultural sector. These models include wholesale lending through partnerships with SACCOs, MFIs, banks, anchor clients, and Fintechs, Warehouse Receipt financing model that allows farmers to use their produce as collateral to access credit, Credit guarantee Scheme financing that involves providing credit to farmers through a guarantee scheme that reduces risk for financial institutions and the agricultural mechanization financing model which aims to improve smallholders' access to modern agricultural machinery.

These models are aimed at bringing together key partners to discuss challenges in the agricultural sector and explore ways to implement these lending models to bridge the funding gap.

The Corporation receives loan applications totaling over Ksh.15 billion annually but can only avail about KSh4 billion due to resource constraints.

The Managing Director, George Kubai emphasized the Corporation's mandate to provide affordable credit to the agricultural sector, which is distributed through its branch networks across the country.

“Over the years, we have developed transformative business models aimed at effectively channeling agricultural capital and risk tools to value chain actors in the agricultural sector. These new business models are derived from AFC's medium-term strategy, its transformation agenda and the government Bottom-up Transformation Agenda (BETA),” said George Kubai, AFC Managing Director during the Corporation's inaugural investors' engagement conference.



Chief Strategy Business Development and Planning Officer, John Mungai presents the model papers

However, the CEO noted that AFC alone cannot meet the country's agricultural credit demand, which is estimated at Ksh. 40 billion annually, indicating a significant funding gap. To positively impact over Ksh. 2.6 million agri-players, with a special focus on women, youth, smallholders, and agri-MSMEs, AFC estimates that at least Kshs. 100 billion in financing will be required over the next five years.

"The Corporation receives loan applications totaling over Ksh.15 billion annually but can only avail about Ksh.4 billion due to resource constraints." Said Kubai.

In his key-note address, the Principal Secretary at the State Department for Crop Development, Ministry of Agriculture and Livestock Development, Kello Harsama, announced that the government plans to utilize more than 500 acres of idle land in its institutions for food production.

Institutions such as KALRO, National Youth Service (NYS), Kenya Prisons, and Agricultural Development Corporation (ADC) will be targeted for crop farming, with the government providing loans and support for cultivation.

"We have been having a shortage of maize and to seal this gap, one of the options is to use these huge tracks of land owned by these organisations to farm. We have already mapped out and isolated 500 acres of land for commercial utilization



Principal Secretary, State Department for Crops, Kello Harsama gives his key note speech

which will be leased to individuals, Corporations and Organisations,” the Ps said

The Corporation's Board Chairman, Eng. John Mruttu acknowledged the Corporation's strategic direction of adopting innovative approaches to serve a larger percentage of agri-players. The Chairman also praised the partnership between AFC, AGRA, and FSD, emphasizing the great support received from them in developing these lending models.



AFC Board Chairman, Eng. John Mruttu gives his remarks



Chief Executive Officer, FSD-Kenya, Ms. Tamara Cook

Representatives from FSD Kenya and AGRA expressed their commitment to working closely with AFC and other partners to develop financial solutions that address the challenges faced by low-income households, micro and small enterprises, as well as underserved groups like women and youth.

Hedwig Siewertsen, AGRA's Head of Inclusive Finance, highlighted the success of the Profit

program in providing access to capital and technical assistance to small-scale rural enterprises and farmers.

Siewertsen emphasized that enhancing credit guarantee schemes and expanding insurance options with appropriate technical assistance is an effective way to de-risk agriculture and optimize the use of limited public financial resources.



Head, Inclusive Finance, AGRA, Ms. Hedwig Siewertsen

Tamara Cook, CEO FSD Kenya, stated that FSD will continue to work closely with AFC, and other partners to develop financial solutions that better address the real-world challenges that low-income households, micro and small enterprises, and underserved groups such as women and youth face.



Team Leader, Women Economic Empowerment, UN Women, Mrs. Elizabeth Obanda gives her views during the panel discussion

Picture speak



Head of Corporate Communications, Pauline Kathambana and Corporate Communications Officer, Harun Njago



Marketing Officer, Marylyne Rono and Customer Service Officer, Janet Ruto



Ag. Branch Manager Ngong, Maureen Paswa and Head of Audit and Quality Assurance Andrew Wanga



Apprentices, Eugene Kainga, Corporate Communications Department, Makena Kamenchu and Cliff Mburu of Business Development Department



ICT Officer, Clare Abuga and Credit Officer Junetapeline Karimi



AFC Board Member, Julius Mutethia

Various speakers who made the Investors Conference a success



Senior Projects Officer, AGRA, Ezra Anyango



Senior Economic Advisor, Office of the President, Dr. Dominic Menjo



Senior Deputy Director Financial and Sectoral Affairs/Credit Guarantee Scheme Manager, The National Treasury, Credit Guarantee Scheme Mr. Ronald Inyangala



Ag. Chief Executive Officer, Warehouse Receipt System Council Lucy Komen who have partnered with the Corporation to develop a Warehouse Receipt Financing product



Director, Yammie Fresh Limited, Zachariah Kuria who is a beneficiary of the Wholesale lending model



Chief Finance Officer, Juhudi Kilimo, Adrian Safari who are beneficiaries of the Wholesale lending model

Picture speak



AFC Choir entertaining guests



The AFC Conference Secretariat



Makena Kamenchu of BDD welcomes Chief Executive Officer BDO Consulting Mr. Khapre Sandeep to the forum. Looking on are Winnie Too Risk and Evaluation Officer together with Financial Inclusion, enterprise development and Agri-value chains Consultant and Practitioner, Johnson Kithendu



Permanent Secretary, State Department for Crops Mr. Kello Harsama, receiving his name tag from Accountant, Veronicah Aoko



Ruth Okatch, Marketing Officer giving vote of thanks



AFC Board Members from left: Dr. Zablon Ayiera, Ms. Winnie Molonko, Jon Kabutha, Project Coordinator RK-FINFA, Eng. Muriuki Karue (4th) and Mr. Julius Mutethia

Picture speak



Chief Executive Officer, FSD-Kenya, Ms. Tamara Cook with the MC of the day Johnson Kithendu



Partners in attendance



Stakeholders following the proceedings



From left: Team leader, Women Economic Empowerment, UN Women, Mrs. Elizabeth Obanda, Deputy Chief Party, ACIDI/VOCA, Venny Magaka



Various Media House representatives



Participants follow the activities of the day

Picture speak



Board Chairman, Eng. John Mruttu and Ms. Dena Okeyo Program Director, African Financial & Technical Assistance (AFTA)



From left: Board Chairman, Eng. John Mruttu, Managing Director, George Kubai and Head, Inclusive Finance, AGRA, Ms. Hedwig Siewertsen



Chief Strategy Business Development & Planning Officer, John Mungai interacts with Financial Inclusion, enterprise development and Agri-value chains Consultant and Practitioner, Johnson Kithendu



Managing Director, George Kubai, engages with Joseph Kimotho Senior Program Coordinator -Access to Finance INT-GIZ



From left: Head of Training and Human Capital, Godrick Itur, Chief Risk and Compliance Officer, Jackson Echoka, Sylvia Wafula of European Investment Bank and Head of Loan Recoveries Anastacia Wachira



Marketing Officer, Ruth Okatch gives her opinion to Corporation Secretary Ms. Jacqueline Odundo (left) and Finance and Warehouse Receipt Transactions, Cecilia Muthoni of Warehouse Receipt System Council



Addressing challenges for smallholder farmers



Managing Director, George Kubaj briefs Mombasa County Governor H.E Abdulswamad Shariff Nassir on Warehouse Receipt Finance product

By Harun Njago

When Atieno Otieno harvested her one ton of rice from her piece of land in Ahero Irrigation Scheme in Kisumu County, she was just like any other farmer rightly elated and looking forward to positive returns after toiling in the farm for 5 months.

However, as she was delivering the produce to the National Irrigation Authority, a middleman offered her Kshs 41,500 in cash instead of waiting for Kshs 50,000 from the authority.

As that was happening, at Mwana Mwinga Trading Center in Kaloleni, Kilifi County, a cashew nut farmer Mrs. Chausiku was having a heated argument with two middlemen over the

price of her 15 bags of cashew nuts, which they wanted to buy at Kshs 850 per 50kg bag.

Unfortunately, Chausiku gave in to pressure and sold her produce to the middlemen who bought them in extended bag and later repackaged them into 50 kilograms bags before transporting to Nairobi and other markets.

Down in Kaptembwa, Nakuru County, another farmer Ndungu Mwangi has been visiting the Pyrethrum Processing Company located in Nakuru's industrial area, hoping to be paid his dues after delivering dry pyrethrum flowers but all that effort was in vain, and is now contemplating uprooting the lucrative cash crop.



Marketing Officer, Ruth Okatch in a discussion with Deputy Governor Kisumu County, Dr. Mathew Owili, on Warehouse Receipt Financing product

"I'm missing the good old days when I was paid my dues without having to visit the company to inquire about my payments. I'm now spending money to chase my dues, of which I'm not sure when I will be paid. I'm now thinking of uprooting the crop from my half-acre plot and planting potatoes," says Ndungu.

These are just a few cases of what many smallholder farmers have been going through after toiling in their farms and their tribulations being replicated across the country.

This may be a thing of the past as Agricultural Finance Corporation, in partnership with the Alliance for Green Revolution in Africa (AGRA) and BDO East Africa-Kenya, have stepped up activities to fast-track the design of a warehouse receipt product following the launch of the Warehouse Receipt System (WRS) facility in July 2020.

With the facility, the government has committed itself to creating an enabling environment for smallholder farmers by establishing the Warehouse Receipt System Council (WRSC).

The Council is mandated to develop and regulate a Warehouse Receipt System for agricultural commodities in Kenya.

With a grant from AGRA, Agricultural Finance Corporation is now developing a warehouse receipt financial product to help actualize it and to achieve this, the Corporation commissioned a five-day field study and stakeholder engagement in 17 counties to establish the need for a Warehouse Receipt Financing product.

The exercise was aimed at obtaining feedback from stakeholders, mapping out warehouse resources in the target market and how they are managed.

Additionally, the exercise helped in the identification of gaps for warehouse financing product, estimation of potential risks, suggestions on mitigation measures as well as the documentation of key government offices and stakeholders vital to the thriving of the WR product.

When fully developed, the product is expected to solve the challenges smallholder farmers face in relation to inefficiencies brought about by a lack of a transparent and structured market. Producers or dealers will deposit their commodities in certified warehouses and will be issued a warehouse receipt as proof of ownership. They will have the option of using the receipts issued as collateral to secure credit facilities from financial institutions like AFC.



Othaya Farm Cooperative Society, Nyeri County



Osirua Milling Company, Narok County

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AFC awards and recognition



ICT Officer, Savio Sunkuli receives the award certificate from the organizers. Looking on is Chief ICT Officer, Daniel Olilio

By Priscilla Angwenyi

Agricultural Finance Corporation has been applauded and awarded for its efforts in innovation and digital transformation for being the best government institution utilizing ICT in service delivery.

The Corporation won Connected Innovation Award, The dx100 Public Sector Award and The Gold Mark Award during the Connected Summit 2022 at Leisure Lodge Resort in Diani, Kwale County.

In November, 2022, the government owned lender also bagged the DX100 Award by dx5 (formerly CIO Africa) in the Digital Transformations Awards.

The latter event sought to reward & recognize institutions that have implemented solutions derived from innovation to drive business.

Reputed to be the Oscars of the tech world, The Digital Transformation Awards recognizes 100 organizations in Africa using technology in interesting, innovative ways that add business value.

The shortlisted organizations are drawn from a pool of over 350 nominees and the Corporation ranked first in the Top 100 digitally transformative organizations in Africa in the Public Sector Award.

The Corporation was also awarded the Gold Mark of Excellence for its continuous efforts in Digital Transformation and the adoption of the technologies which has seen improvements in service delivery and efficiencies in business processes.

AFC awards and recognition



Mr. Kubai displays the certificate and plaque won by the Corporation



Chief ICT Officer, Daniel Olilo (right) hands over the Golden Mark Certificate to the Managing Director, George Kubai.



From left: Chief ICT Officer, Daniel Olilo, Managing Director, George Kubai, ICT Officer, Savio Sunkuli and Senior ICT Officer, James Mwangi display the certificate and plaque won during the year



From Chief Administrator to Agricultural Entrepreneur



Caroline Mwangi, the founder and Director of Kimplanter Seedlings and Nurseries, holding tomato seedlings at her farm

By Priscilla Angwenyi

When we imagine the route to entrepreneurship, we often envision a linear track: quit your job and start a business.

However, 33-year-old Caroline Mwangi started her business as a hobby and built it over time before leaving her job to grow it further.

While working as the Chief Administrator at a Japanese construction company based in Nairobi, Caroline Mwangi felt she needed to have some evening hobby after work and to break monotony.

She started farming passion fruits at their family home in Ruiru which she would then harvest, squeeze and sell juice concentrate.

Her neighbors wondered why a young educated woman would venture into farming in an urban setup. One day, she posted her juice on her social media pages which brought good attention but also in a risky way.

“Companies wanted the fruits, but I was growing them on small scale,” says Ms Mwangi, the founder of Kimplanter Seedlings and Nurseries, a Ruiru-based commercial seedlings Propagation Company.

With her small-scale farming thriving, other farmers soon started asking for the seedlings.

“I started the business, though not fully committed since I had a salary. I was a bit naive

since I had not understood the concept well,” she adds.

In 2014, she did her first spinach seedlings, which failed spectacularly because one kilogramme of seeds gave her very few seedlings. This failure was her first trigger. She searched online for more information on ways of making nursery seedlings. Armed with adequate information, she made the second batch which sold out.

“I made money and saw the business was good and constructed the first wooden seedlings greenhouse,” Caroline recalls.

Starting Small

She started small because all she had were her savings. Similarly, her father's disapproval of the project made her cautious. According to him, she had a lot of money to waste.

“The business picked its first external financing

of Kshs. 300,000 from a church Sacco in 2017 with myself, my mum, my sister and our family farmhand as the only employees,” she recalls.

In 2015, the business had generated substantial profits and customers wanted to meet the person they were dealing with. Ms Mwangi realised that people usually do not buy a product but rather the person.

“People want to find you there, put your face to the name or the service they are receiving and the discussion you have had,” added Caroline.

In June 2016, Caroline resigned from her lucrative employment even though her employers were reluctant to let her go.

“Initially, I had concerns about giving up the perks that accompanied my job, especially after completing my CPA. However, my mother encouraged me by highlighting that I would always wonder why I hadn't taken the leap.



One of the employees attending to the tree seedlings



Caroline Mwangi, explains to Cliff Mokuia, Customer Care Representative at AFC Head Office more about the tree seedlings

On the other hand, my father was against my decision to resign. Presently, I am much happier and have experienced personal growth in various aspects of my life compared to when I was employed.”

By 2017, the company had grown and needed to expand.

With the Sh300,000 sacco loan and Sh1.4 million funding from Kenya Climate Innovation Centre, they switched from the wooden greenhouse to a metallic greenhouse and acquired a seedling planting machine.

Asset heavy

With the Ruiru site fully established with limited space for expansion, Caroline's next step was to set up another site in Makuyu, Muranga County and allow the business to grow organically.

“KIMPLANTER has invested heavily on assets in all our propagation units. To find balance between asset heavy and cash flow, we use 40% of our revenue on assets, cost of production materials takes 37% while the remaining percentage covers general expenses,” she explains.

The entrepreneur adds that she took advantage of their monopoly to invest in assets and build the brand and partnerships.

“Any company starting seedlings propagation business now is going to struggle because we are many.” Says Carol.

Secrets to success.

Ms. Mwangi says that allowing the company to grow organically without a 'forced strategy' like her competitors has worked well for her.

“We grew according to the market demand because right now, there is hype and once one sees a need in seedlings, they run and start doing seedlings without understanding where KIMPLANTER sells their seedlings,” she affirms.

She adds that most startups fail because they do not do proper market research, preferring to copy-paste solutions, and neither do they allow themselves time to learn the market.

The agripreneur takes pride in employing 24 youths, up from the two family members she began with.

“We have really grown having started selling 360 seedlings to 1.2 million seedlings per month presently but we have a long journey still,” adds Caroline.

Getting a reality check

In her quest to serve tomato and onion farmers with quality seedlings back in her rural home in Loitokotok, Caroline thought of setting up a branch in that area but struggled to get a piece of land for 2 months because nobody was willing to lease land to a young woman.

“I’ve never experienced such culture shock in my life. A young lady is not allowed to own or even lease land. It dawned on me that I was born a girl child, something I had never realized before and that being a woman in agriculture is a problem,” she recalls.

She finally leased a piece of land for five years, set up the green houses but six months later, strong winds destroyed everything forcing her to retreat. Despite the setback, Caroline went back and established branches in Rombo and Mwea alongside the Ruiru and Makuyu units.



Employees of Kimplanter checking if all the tomato seedlings have germinated



Trophies won by Kimplanter Company

“The challenge we have in Ruiru is limited space and being an urban set up, no one is willing to sell and neither can we afford it. People know your location, you have the product but you cannot expand due to resource constraints,” she clarifies.

In Makuyu, being a semi-arid area, she could not get enough water for the 10 greenhouses so she opted to drill a borehole, but due to lack of funds it took her one year and four months to drill the borehole.

“Another challenge is market competition – the government has allowed well-funded foreign companies to come and do what your local people can do,” says Caroline.

She decries that these companies engage in price undercutting, something they never experienced before.

“Why are we competing with foreigners to sell *sukuma wiki* seedlings to farmers? They should set up processing factories to offtake farmers produce” she poses.

Lessons picked along the way and future plans
The entrepreneur explains that one of the

lessons she has picked is to speak out especially when farmers are being taken for granted and creating space for youth in agriculture.

“In investment, don't bite more than you can chew, plan well even for good things and know when to diversify even as you specialize,” states Caroline.

On her growth strategy, Caroline says KIMPLANTER is already exploring markets outside Kenya like Rwanda while taking all the good and bad lessons.

“East Africa and Sub-Saharan Africa is definitely the playground with better strategy than we currently have. We have also diversified to capsicum production in our 14 acre land in Kimana,” she clarifies.

Ms. Mwangi advises that any entrepreneur should take advantage of partnerships and invitations that relate to one's industry.

“Agriculture is very unique and that's why every financier talks of focusing on financing the sector but their interest rates are as high as 14 percent and as a woman am in agriculture, what sets you apart from the rest?” she asks.

Ms. Mwangi concludes that she is open to working with other partners who can bring more value other than just money to enable the business grow.

To her, that's what sets AFC apart from the other financiers to the agricultural sector because they give them a grace period of about 3 months.

“You can pay quarterly unlike others who demand monthly repayments but AFC waits for harvest to pay, banks can't give you that kind of understand,” she adds

Always go for anything that has government in.

“I have never failed to pay and they also focus on you as an industry player in the agriculture space, so they relate to your problem, and understand your problem unlike the banks. I am really very particular on how I handle my customers and so am very particular how you handle me when I come to your place,” she points out.

"After a friend had mentioned AFC to me, I went to their Thika Branch offices to inquire about a loan where the speed, explanation and approach was very good and I was exited as a youth that I was able to get an agribusiness loans." said Caroline

To her, it felt so good to be a youth in agriculture because many people don't believe in the youth because they don't have assets. Even before they know I own a cup of my own, they were already welcoming me to their office and within a week, they were doing rounds.

"After viewing my Makuyu unit and seeing the

green houses, they did my monthly repayment calculation and I found it affordable despite being given the option to pay quarterly.' She adds.

"AFC is so welcoming, they push you beyond your vision and there is no hidden information on the loan processing," she concludes.

Ms. Mwangi says she looks forward to working together with other partners who bring more value other than money to the business to grow.



Certificate awarded to Carol Mwangi



Spurring aquaculture industry in Kakamega County

By Samuel Ochieng



Branch Manager, Kakamega, Samuel Ochieng witnesses fish feeding done by Mr. and Mrs. Agoi at their farm

In the year 2022, the Corporation actively engaged in promoting and supporting aquaculture initiatives within Kakamega County.

Kakamega County has a well-developed fish farming sector mainly utilising ponds which were started through Economic Stimulus Program (ESP) in 2005, and intensified by the County Government of Kakamega from 2013.

This has resulted in the existence of 15,000 ponds in the twelve (12) sub - counties out of which about 9,000 ponds are active.

The branch, in partnership with the Lake Basin Economic Block (LREB) and Aquaculture Business Development Program (ABDP), spearheaded mapping out fish farmers with ponds across the country and providing support in terms of capacity building.

In the many engagements that the Corporation has had with the fish farmers and other stakeholders, three challenges were identified as barriers to the fisher folks – poor quality fingerlings, inadequate feeds, and market for harvested fish.

Due to this, AFC was identified as a key player that could finance the fish farmers in a bid to resolve the said challenges.

So far, the Corporation has already funded farmers who are in the value chain to help in resolving the challenges.

Laban Mwanzo is one of the large scale fish breeder who was funded by the Corporation from the initial stages and is now a major fingerlings supplier to ABDP which supports fish pond farmers in the counties of Kakamega, Busia, Siaya, Kisumu, and Homa Bay.

The farm has a state of the art fingerlings hatchery which are distributed to farmers at two months old.

With 20 well trained staff and support from two Fisheries Officers from the County Government of Kakamega, the farm plays a critical role in the value chain by ensuring supply of quality fingerlings.

Another beneficiary is Mr. William Shihemi from Busiangala area of Ikolomani Sub County, a retired Economist who currently has ten catfish and tilapia fish ponds.

In Marama North Location of Butere Sub County, Mr. and Mrs. Agoi also have 8 tilapia fish ponds with nets supplied by ABDP to ward off predator Kingfisher birds.

The fish farmers in Marama North location have formed a social media forums for marketing purposes.

These are just a few examples of the Corporation contribution towards the growth of this sector in Kakamega County.



Branch Manager, Kakamega, Samuel Ochieng with Laban Mwanzo inside the fish incubation facility



Scaling Up Maize Farming and Overcoming Challenges for Success



Jacinta Mburu poses in front of her maize bags

By Priscilla Angwenyi

In 2002, Jacinta began her maize farming venture in Kitale town, Trans-Nzoia County with just one acre piece of land.

Initially, she was selling one bag of maize at a time, but over time, she expanded her operations by increasing the acreage and purchasing maize from other farmers.

“To finance maize purchase from other farmers, I used profits from my maize proceeds. I had less than Kshs. 50,000 which was a modest amount considering the low price of maize at that time. I relied solely on the income from my operations,” says Jacinta.

As the business grew, she scaled up to buying 20 to 30 bags of maize at a time and continued into purchasing more maize and was able to cover her daily expenses.

Her venture has witnessed steady growth to an extent that she is now doing over 10,000 sacks of maize per year and farming approximately 200 acres of maize.

“Farming has become more expensive, but I have gained valuable knowledge and now have the option to approach banks for loans to purchase maize, increase my stock, and engage in simultaneous buying and selling,” adds Jacinta.

To finance and scale up her business, Jacinta says she took a loan from one of the commercial banks which helped her to increase stock hence she now supplies to millers and commercial kitchens.

However, there are several challenges in the sector which include erratic rainfall, pests and diseases, and instances where planted crops fail to sprout, resulting in financial setbacks, especially when borrowed funds are utilized.

"In 2018, I encountered challenges when I obtained a loan from a bank to supply maize to the National Cereals and Produce Board. I prompted to explore alternative financing options, leading me to approach the Agricultural Finance Corporation (AFC). Unlike commercial banks, AFC provides farming loans at more affordable interest rate," she recalls.

Looking ahead, she says her future plans involve expanding her maize farming to more acreage and increase her storage capacity.

"At present, my daughter and I manage a farming operation spanning 200 acres. However, I have plans to expand the acreage further," says Jacinta

Jacinta recently obtained a loan from the Agricultural Finance Corporation to support her maize farming operations.

The retired civil servant currently has four trucks, and a total of 20 employees, a storage facility with a capacity of 10,000 bags of maize, a drying unit that can accommodate 3,000 bags.

She also gives farmers fertilizer on credit which she recovers after harvest.

"We act as a small-scale AFC, assisting farmers who lack borrowing capabilities to access inputs and providing storage services as they wait for favorable market prices and despite the challenges, farming remains an excellent venture, and I am committed to expanding and improving my maize farming business in the years to come," she concludes.



Credit Officer, Kitale Branch, Solomon Ogallo together with Jacinta Mburu at the maize drying and loading site



Transforming farming through innovation and diversification



From left: Farmer, Pius Mutie, Branch Manager, Mpeketoni, Daniel Ohanda and Elizavan Wayu, Customer Representative

By Daniel Ochiara

Pius Mutie started his farming project while working for GIZ, a German development agency in Mpeketoni, Lamu County thirteen years ago. After settling into a newly acquired government-owned house that initially had a single banana stool, Mr. Mutie took the initiative to clear the surrounding area and added six more banana plants. Within a year, the results of this effort were remarkable as he counted over 300 fingers on a single banana bunch, signifying a significant increase in production.

"My farming journey started with a thought which involved planting 100 banana seedlings in our family 10 acre land with an aim of establishing how much I could produce and make in a year," opens Mutie.

As a spontaneous activity which he had not planned to do commercially, he decided to add add tomatoes and green pepper to the banana plantation and as he progressed, the concept of conservation agriculture emerged which he adopted. inside the banana plantation as well as green pepper and green maize for local market and as he progressed, the concept of conservation agriculture emerged which he adopted.

The Mechanical Engineer began with one acre and has so far progressed over the years to six acres.



Pius Mutie with one of his employees pumping water to the farm

One valuable lesson Mr. Mutie learned and applied in conservation agriculture is the concept of "you cannot manage what you cannot count." Unlike the common practice of measuring land in terms of acreages, he adopted a different approach. Mutie focuses on counting the number of plants as a key metric for effective management. This concept has helped him develop a more precise and detailed understanding of his farming operations.

The farmer has broken down his farm into a $\frac{1}{8}$ of an acre plots and has planted 1,200 plants in each. In 2022, he recorded the highest harvest of 1000kg of tomatoes in $\frac{1}{4}$ acre daily and every week, he was harvesting over 20 tons of tomatoes from a $\frac{1}{4}$ an acre.

Mutie, currently harvests 108 banana stools. However, his goal is to increase his plantation to a total of 306 banana stools. His target is to harvest at least one stool per day, allowing him to manage the workload effectively. Each of these stools has the potential to produce between 10 to 12 banana bunches annually, with each bunch containing approximately 200 fingers.

Mutie's aspirations demonstrate his

commitment to expanding his banana farming operation and maximizing the potential yield from each stool.

With each finger fetching Kshs. 5/=-, each stool will produce between Ksh 10,000 to Kshs 12,000.

"With success in bananas, I decided to quit my job for fulltime farming. Of course I have gone through financial challenges over time as I found myself not having the necessary resources," he explains.

One important lesson he has learned is that success in farming is not solely determined by the amount of money one has, but rather by effective planning. Through his experience, he has observed that many farmers are solely focused on cultivating large acreages without proper planning.

"Before a farmer engages in business, you find that his/her interest is on the market but he /she is not asking himse how much to spend on inputs because there is quite an amount of input cost involved," he advises.

Mutie does not look at fertilizer as major input in the horticultural production but rather the cost of watering the produce.

"I water my farm every three days hence my electricity bill is high, chemicals have gone up so



One of the pawpaw trees at the farm



Daniel Ochanda, Branch Manager, Mpeketoni and Pius Mutie display some of the Passion fruits planted at the farm. Looking on is Elizabeth Ways, Customer Representative

what i have done as a farmer is to make sure am are able to circumvent all those challenges by investing in what I can manage.”

Mutie has also diversified to green maize, sweet potatoes, capsicum, pawpaw and yellow passion fruits production to avoid over reliance on one product to sustain production.

Expensive credit and other challenges

Availability of resources is the biggest challenge he has to cope with which has forced him to solicit for loans.

“Farmers have been trapped in paying expansive loans but if you look at loans from AFC, they are very reasonable,” he points out.

He adds that sometimes it is the farmers who turn out to be bad clients due to late repayments of loans but for AFC, they call you to discuss and you explain yourself, the charges are not

exorbitant hence the reason he has stuck with AFC.

“For the past 17 years, i have been practising conservation agriculture by planting in the same location. As a result of this sustainable farming method, i have observed several positive changes in my farm. The soil has become soft and crumbly, allowing for better root penetration and nutrient absorption by the plants.” says Mutie

One notable improvement is the presence of channels created by the previous crops. These channels serve as pathways for water infiltration, preventing surface runoff and allowing moisture to reach deeper layers of the soil.

This helps to maintain optimal soil moisture levels for plant growth and reduces the risk of erosion. Additionally, the incorporation of

legumes in my crop rotation has contributed to the enrichment of the soil.

Legumes have a unique ability to form a symbiotic relationship with nitrogen-fixing bacteria, which enables them to convert atmospheric nitrogen into a usable form for plants. As a result, the soil has experienced a natural increase in nitrogen content, acting as a natural fertilizer for subsequent crops. The conservation agriculture practices, including reduced tillage, residue retention, and diversified crop rotation, have played a crucial role in improving soil health and fertility over time. By minimizing soil disturbance, we have preserved the soil structure and increased its organic matter content. This, in turn, promotes the development of beneficial soil organisms and enhances the soil's capacity to store oxygen, allowing for better root respiration and nutrient uptake by plants.

With mulching, it helps in conserving soil moisture instead of watering three to four times a week, watering just once a week.

Future plans

Taking his diversification drive further, Mutie is moving to animal husbandry particularly sheep.

"I've come to understand the remarkable efficiency in feed consumption among livestock. For instance, while a single cow requires approximately 20kg of feed daily, this very same amount can sustain a group of 20 sheep. The sheep also exhibit impressive weight gain, making animal husbandry an appealing venture, particularly in the realm of meat production. This newfound insight has sparked my interest in pursuing this field further," He adds



Daniel Ochanda, Branch Manager, Mpeketoni taking down notes regarding the farm activities at Mr. Mutie farm. With them is Elizavan Wayu, Customer Representative

He aims to take advantage of the new Lamu Port which handles export of live animals to countries like Oman. Again with the export of live animals, he projects milk and meat supply will reduce tremendously thus taking advantage of that.

His farm has created employment opportunity for 8 people.

Advice to fellow entrepreneurs

With 17 years' experience in farming, Mutie has a few words of advice to his fellow farmers - "before you venture into the business, ask yourself if you are fit for self-employment because entrepreneurship is very demanding and whether you love the activity.

Secondly, do you have enough knowledge before venturing into it because farming is a science and is not for people who didn't go to school because many a times people look at it as

an activity for those who failed in school. It's like any other business and you need to carry out market survey to know where you are going to sell," he further advises.

The other point he advises on is your sources of funding and how much funding you need for the project and if it's sufficient.

Getting to know AFC

At a young age, Mutie had this old friend who owned a tractor that he said was acquired using a loan from AFC.

"He introduced me to Kilifi branch where they created awareness of what AFC really does, took me through the loan process and finally advanced me a loan." adds Mutie.

He is currently on his third loan and will go for another loan once he is done servicing it.



Pius Mutie poses with sheep he bought from South Africa



AFC finances dairy goats breeding project in Vihiga County



Branch Manager, Kakamega, Samuel Ochieng with Alex Adala at his goat farm

By Samuel Ochieng

Goats are mostly known for meat production especially in social joints for the juicy 'Mbuzi choma' as it's commonly known by consumers.

However, goats have more potential for milk production which is more beneficial to our bodies due to its excellent source of protein, calcium, potassium, phosphorous, magnesium and vitamin A.

Dairy goat production is an alternative livestock enterprise suitable for many small-scale or part-

time livestock keepers. Some dairy goat producers have been successful in pasteurizing goat milk and building on-farm jugging business, while others have ventured into processed milk products for retail distribution, especially specialty cheeses, yogurt, soap, and lotions. The potential also exists for selling milk to processors, usually on a regional basis.

The Corporation being the leading agricultural financier recognizes unique agricultural projects that are likely to add value in terms of food security, nutritional health and that are commercially viable to create wealth to the farmers.

It's against this backdrop that the Corporation in June 2021, funded Mr. Alex Omwela Adala, to undertake an Exotic Goats Breeding Project with the aim of increasing goat milk production in his farm in Owandwaye Village, Luanda Sub County within Vihiga County and in the country at large.

The farmer currently has over 200 goats mainly for breeding consisting of Saanen goats, a Swiss breed which produces up to 6 liters of milk per goat, German Alpine Goats and Toggenburg Goats which can produce up to 5 and 3 liters of milk per day respectively.

As a former livestock officer in the county government, he knew the benefits of exotic goats rearing in terms of milk quality and income.

Alongside the milk, the farmer also sells manure to various organic farming farmer groups that are supported by Agricultural Sector Development Program (ASDP) in Vihiga County.

Implementing these business model requires substantial capital investment and a significant level of technical expertise. It is lucrative as one Saneen goat is sold at an average price of Kshs 25,000 while the German Alpine and Toggenburgs averages at Kshs.18,000.



Mr. Ochieng checking on the animal feed



The Farmer's Notebook



Source: GIZ

Introduction

The avocado, which originated from South America, has been grown in Kenya for many years since the Portuguese introduced it between 16th and 18th centuries. Fruits are of various shapes, sizes and color. They are 7-20 cm long and can weigh up between 100-1,000g and have a large central seed which is 5 – 6.4 cm long depending on variety. The fruits are nutritious, with high protein and oil content.

Kenya provides an ideal environment for avocados especially due to the subtropical climates. African avocados have gained recognition globally, with the majority of exported avocado varieties being from South

Africa and Kenya.

According to data from AFA, Kenya exported 67,148,817.80 kilograms of avocado valued at Kshs 10,889,542,714.47 million between January and July 2021.

Hass and Fuerte are the most exported varieties from Kenya.

a) Hass avocados

The skin of hass avocado becomes dark when ripe. The ripeness can be determined by a gentle squeeze. They are served when the inside is white-green. This variety has an intense flavor and creamy



flesh making it suitable for making guacamole. Hass avocado takes lesser time to mature and produce more yields.



b) Fuerte avocados

This variety has a characteristic elongated form with glossy and thin skin. They have a bright green, loose, textured skin that is easy to peel. They do not soften and hence hard to determine when they are ripe. They have a low-fat content and calorie count compared to hass avocados. They are mainly used to make salads since they can be easily sliced and diced.



c) Kienyeji Avocados

Compared to hass avocado, local avocados are larger in size and have a low-fat content. For instance, 3 slices of *kienyeji* avocado contain about 3 grams of fat while hass avocado contains 4.6 grams. They take a couple of years to mature and some can even take a decade.

Why hass avocado is preferred

The demand of hass avocado in the local and international markets has been increasing over the years. There are various reasons why hass avocado is preferred. These include:

I) Greater yield

The hass plant is far much preferred for its long harvest season and greater yield and produces greater yield and hence more revenue to the farmers.

II) Long shelf life

The fruits have a tough skin which helps in minimizing damaging of fruits during transportation. Compared to other varieties, they have a longer shelf life and can last up to 3 weeks from the time of harvest thus makes shipment and handling convenient.

III) Health benefits

Unlike other varieties, they have more health benefits. For instance, they contain oleic acid which helps in fighting inflammation in the body and protects against diabetes and heart diseases. Also, they contain antioxidants and important minerals such as carotenoids, copper, and vitamin K.

USES

Avocado is mainly grown for fresh market but there is an increasing demand from pharmaceutical, cosmetic and vegetable oil industries. The protein and mineral contents are highest of any fruit and is an excellent source of vitamins A and B with traces of C, D and E

Rootstock varieties

Root stocks are mysterious. They do their work hidden, underground. Yet, their influence on the trees above ground is real and measurable. Some of the recommended are Puebla, Fuerte, G6, G7 and Duke can also be used.

Ecological requirements

- Avocados do well in lower midland to lower highland zones. Altitudes of 1,200 to 2,200 m are ideal.
- Some varieties are adopted to warm low-altitude areas of 0 to 1,200m above sea level.
- Temperatures should be in the range of 16 to 24°C
- High temperatures (>30°C) and direct sunshine can sunburn and damage exposed fruit.

Rainfall

- 1,200 mm of annual rainfall is optimal for good production; a minimum of 750 to 1000 mm is necessary
- Climatic conditions with altering dry and rainy seasons are best.

Soils

- Soils should be at least 1.2 deep and be high in oxygen content
- They should be well drained
- Heavy or waterlogged soils are unsuitable because avocado plants are sensitive to excessive soil moisture and high salinity.

Cultural practices

- Remove the brownish peel from the seeds, as it can be contaminated with fungus
- Cut off approximately the top ¼ of the seed to make it germinate faster
- To avoid fungus infections, dip seeds in 50 °C warm water for 5 minutes or dip in systematic fungicide solution.
- Plant seed in containers. Grow the rootstock directly in the container. Common container size is 7 x 9 inches (18 x 23 cm). Fill the container to 2/3 with soil mixture, put in the prepared seed, and cover with soil. Seed germinates in 2 to 3 weeks.
- Seeds can also be planted directly on the farm and grafted later.
- Cleft grafting with scion of an improved cultivator is the most common method. Grafting is done from January to March, before mother trees flower, and at any time of the years as long as desired scions are available. With good management graft in May to June, and you can then plant with the October rains.
- Sources for scions are farms with established, well – managed trees of the desired cultivars or farms with mother tree blocks.
- In a hot climate, pluck off all the leaf petioles and tie the grafting tape up to the top of the scion, leaving only the tip buds open. This method prevents the scion from drying. It is not common to cover avocado scion with a cap

- Shade and water the grafted avocado trees frequently
- The trees are ready to plant about 4 months after grafting.
- If you do not have irrigation, plant in the October – November short rains or the April – May long rains.

Planting improved avocado trees on the farm

- Size of planting hole (length x width x depth): 60 x 60 x 60 cm (2 x 2 x 2feet)
- Common spacing:
 - For extensive management 9 x 9 m (plant to plant x row to row)
 - For intensive management 7 x 7 m (plant to plant x row to row)
- The grafting union should be 30cm (1ft) above ground level. Plant the tree the same level as it was in the container.
- Fill planting hole completely with soil if you plant during the rainy season. Do not leave space in the hole, as heavy rains will damage the tree and cover it with soil.
- Establish micro water catchments after the rainy season has ended. Watering is necessary during the dry season for 2-3 years.
- Mulch in areas without termites, but keep the stem free of mulch
- Weed in a ring under the tree according to the diameter of the tree canopy.

Formative pruning of young trees

- Maintain a single stem up to 75 cm.
- Remove all the side shoots below that height, using a secateurs or sharp knife.
- Do not leave any sprouts below the graft union
- Pinch the leader (break the top branch) at a height of 90 cm (3ft). This is to induce the formation of lateral shoots (side branches)

- Allow 3 to 5 shoots (side branches) to develop
- Maintain 3 to 4 of the shoots equally spaced around the single stem, cutting off the weak ones.
- Force the shootings to grow in the desired directions by using sticks or strings to hold them away from the center. This forms the scaffold branches (main branches) that are the supporting framework for the growing tree.
- Ensure an open scaffold system of growth (open crown)

Managing established trees

- Remove dead and diseased branches.
- Maintain the scaffold branches (main branches and open crown).

Common pests

- Mites
- Purple scale
- Mealybug

Common diseases

- Root rot
- Fruit rot
- Anthracnose

Fertilizer application

Fertilizer treatments in avocado farms are determined by soil and leaf analysis results. In less fertile soils, farmers may need to supplement their plants with nutrients that are not in the soil. Adding fertilizers immediately after planting is not recommended since it can burn the roots of the young tree. Some of the nutrients that are required by avocado plants include Nitrogen, Calcium, Boron, and Zinc. The soil pH also plays an important role and should also be taken into consideration.

Nitrogen speeds up vegetative growth and encourages canopy health. Fertilizers containing boron and calcium should be added to enhance flowering, fruit set, and to improve the fruit quality. The soil pH can be regulated by using lime.

Irrigation

Avocado plants require adequate water supply throughout the year. Too much water and little water can have adverse effects on the plants.

When the plants don't get enough water;

1. Plants experience stress which results in early flowering and poor fruit set.
2. Increased flower and fruit abortion
3. Poor quality fruits and reduced fruit size

Too much water results to;

1. Nutrient imbalances
2. Promotes root rot
3. Reduced tree vigor.

Harvesting

- Usually begins in the third year of tree growth
- The harvesting period varies between timelines.
- Fuerte and Hass are in season between March and September, depending on the location.
- Indications of maturity for Fuerte include glossiness, skin color and texture change. The skin is usually smooth on the blossom end.
- Hass variety changes color from green to purple and the skin gets rougher with corklike spots on the peel.

Yield

- Yield per tree varies from 250 to 300 kg of fruit per year
- This means that 8-10 tons per hectare per season can be realized.
- Yields of up to 18 tons per hectare have been obtained under good management.



Post – harvesting handling




- Mature fruits are ripe when they change color
- Pick fruits by hand, using a knife. Never pull or pluck them from the tree.
- Leave a section of the stalk 1 to 1.5 cm long attached to the fruit.
- Reach fruits high on the tree with a ladder or a picking device consisting of a string-operated pair of knives and a collection bag.
- Use cotton gloves when harvesting to avoid bruising the fruit.
- Do not allow the fruit to roll around or rub against each other.

- Sort the fruits and remove any debris.
- Discard all misshapen, diseased and bruised fruits.
- Wash fruits with clean water to remove any dirt.
- Grade fruits according to size and stage of ripening.
- Store and transport the fruits in padded plastic or wooden containers.
- Keep the containers with fruits in the shades at all times.

Avocado pests



Pests are not serious constraints to avocado production at present. The most common insects found on avocado are:

Pest Description	Damage	Pest Management
<p>Thrips</p> 	<ul style="list-style-type: none"> • A very active tiny, slender insect with two pairs of wings and sucks on from plant tissues particularly on leaves and fruits • Tiny black spots, caused by excreta are observed on the fruit and leaf surface • Damaged fruit has pale brown discoloration of the fruit skin with visible black spots 	<ul style="list-style-type: none"> • Control measures are rarely needed • Use chemicals only during heavy infestations.
<p>Soft and armored scales</p> 	<ul style="list-style-type: none"> • Adult scales are motionless, brownish insects. They suck sap from the leaves • Soft scales secrete large quantities of honeydew, which leads to the development of sooty mold on the plant 	<ul style="list-style-type: none"> • Natural enemies such as parasitic wasps and predatory ladybird beetles and lacewings normally keep scales under control

Pest Description	Damage	Pest Management
<p>Coconut bug</p> 	<ul style="list-style-type: none"> •On avocado, this bug feeds on young and mature fruits. •It causes a bruise-like bruise visible two days after feeding and becomes depressed. •This depression could be green, brown or black •A hard lump develops, which can easily be removed when the ripe fruit is peeled. 	<ul style="list-style-type: none"> •This insect is biologically controlled by wasps and weaver ants.
<p>Mealy bugs</p> 	<ul style="list-style-type: none"> •These are insects with soft bodies and covered with a waxy secretion. •They suck sap from the plant and secrete honeydew, which leaves to the development of sooty mold blackening of the leaves 	<ul style="list-style-type: none"> •Are effectively controlled by natural enemies. •As with scales their natural enemies should be protected.
<p>Mealy bugsFalse codling moth</p> 	<ul style="list-style-type: none"> •Eggs are laid through a small hole in the skin •A small feeding tunnel is made the skin but large larvae are seldom found, particularly if fruits are attacked at an early stage of development. •The larvae complete development when the fruits approach maturity after infestation. 	<ul style="list-style-type: none"> •Remove infested fruits regularly. •Bury all fallen fruits at least 50 cm in the ground or dump in a drum filled with water mixed with used oil.

Avocado diseases

Disease	Symptoms	Disease Management
<p>Root: (Plate 1)</p> 	<ul style="list-style-type: none"> •An infected tree assumes a sparse appearance •Leaves are smaller and paler in color, turn yellow, wilt and then drop •Retards tree growth and fruits remain small and may be sunburned due to sparse foliage. •Seeds infection may occur if the fruit is allowed to remain for several days on soil infested with the fungus. 	<ul style="list-style-type: none"> •Site nursery well away from old avocado orchards •Use seed from fruit picked from the tree. •Use clean soil for container-grown plants and the containers should be raised above ground level. •Use <i>phytophthora</i> – tolerant rootstocks such as Duke 7, G 6 or Martin Grande. Purchase seedlings a good, registered, disease – free nursery. •Avocado orchards should not be established in water logged areas. •Avoid planting on land that was previously under <i>acacia</i>, <i>camella</i>, <i>casuarina</i>, <i>Cyprus</i>, <i>eucalyptus</i> <i>grevillea</i>, <i>papaya</i>, <i>passion fruit</i> and <i>macadamia</i>. •Remove severely infected trees to prevent movement of soil or water from infected areas to other areas. •Equipment should be washed and dried after use in the diseased area. ☒ Newly infected trees could be treated with approved chemicals.

Disease	Symptoms	Disease Management
<p>Fruit rot (Anthracnose) (Plate 2)</p> 	<ul style="list-style-type: none"> •This is a pre- and post-harvest problem. •The disease attacks flowers, leaves, twigs and fruits. •Fruits infection is most economically serious. •Black depressed pots appear on the fruits •They penetrate deep into the fruit flesh. •In wet weather, the spots are slimy and salmon pink in color •Infected young fruit drop immaturity. The disease normally manifests as the fruit approaches maturity. 	<ul style="list-style-type: none"> •Remove fallen rotten fruits and dead leaves from the orchards. •Prune regularly dead twigs from affected trees. Wet weather favors disease development. ☒Chemical control is rarely justified unless the disease is regularly observed to cause serious fruit losses. Use only chemicals that are registered for avocado and strictly observe pre-harvest intervals indicated on the labels.
<p>Scab (Plate 3 & 4)</p> 	<ul style="list-style-type: none"> •Spots on young fruits are small and slightly raised. •The spots enlarge as the fruits enlarge to form shining dark brown patches surrounded by a narrow grey area. •The patches may coalesce to and causes cracks, providing a point of entry for the anthracnose fungus. 	<ul style="list-style-type: none"> •Fruits are only susceptible from flowering until about half size development. •In severe cases, spray with recommended chemical •Use only products registered for avocado and observe pre-harvest interval indicated on the label.

Principals of harvesting and post- harvesting handling

Harvesting and post – harvesting are most important for maintaining quality and shelf life of the fruits. The requirements depends strongly on market standards, which differ according to the final market destination.

Harvesting

The time of harvesting at different stages of fruit maturity is largely dictated by:

- The final market destination
- The market purpose, whether for fresh consumption or processing
- How long it takes the product to reach the consumer
 - ✓ For local market, harvest when the fruit is ripe or about to ripen
 - ✓ For the export market, consider maturity as an index, that is, harvest when fruits are mature but yet ripe
 - ✓ For processing, the external appearance is less important, but there are quality standards as well, regarding, for example, water, sugar and acid content of the fruit.

General recommendations for harvesting and handling

- Arrange for transport facilities before you start harvesting.
- Arrange for packing material before you start harvesting. Packaging depends on the markets, for example, for supermarkets the fruits are packed in boxes, for local markets fruits often are transported in sack, baskets or bags.
- For specific markets and clients, coordinate with the customers before harvesting. Inform the customer about harvesting date, quality as indicated by your cultivars and the size of fruits, and expected quality of produce. Ask for client preferences, such as packaging requirements.

- Fruits should be free of any disease and pest symptoms and of any debris
- Handpick the fruit to avoid bruising. Do not shake the braches to make the fruits fall down.
- If it seems unavoidable to shake the branches or use a harvesting stick, let the fruits drop on a soft surface, such as a net above ground level or a layer of soft weeds or leaves. This method is applicable mainly for fruits harvested for processing.
- For export markets or long transport, leave a portion of the stalk on avocado and mango.
- Use a ladder if fruits are not within close reach to avoid damaging the fruits.
- Do not throw fruits out during harvest.
- To avoid field heat effectively, harvest in the early morning or late afternoon.
- During the harvesting do the first grading according to market destination.
- Place your fruits on a well – aerated surface or in containers that are not made of rough surfaces.
- The less you touch each fruit, the better. It is best to pack the fruits as soon as possible in the final transport box or container.
- Fruits for the export market often have to be cooled.



Go green, plant trees



AFC Staff team with Kenya Forest representatives plant trees at Gathiuri forest in Laikipia County

By Priscilla Angwenyi

Kenya is currently experiencing its worst drought in 40 years, resulting in devastating consequences. With 2.5 million livestock already lost and 4 million people adversely affected, the country is also witnessing significant nature and biodiversity loss. Furthermore, the socio-economic impact has led to a 3-5% loss of GDP. Recognizing the crucial role of trees in conserving and restoring forests, as well as their contribution to biodiversity and climate regulation, President William Ruto launched a nationwide tree planting campaign on December 21, 2022. The objective of this campaign is to raise Kenya's tree cover to 30% by 2032, with the aim of mitigating the effects of climate change.

The campaign aims to plant 15 billion trees by 2032, with each individual encouraged to plant

30 trees per year. Currently, Kenya's tree cover stands at 12.3% out of the targeted 30%. These efforts are in alignment with the Sustainable Development Goals (SDGs), particularly SDG 15, which focuses on protecting, restoring, and promoting the sustainable use of terrestrial ecosystems, including forests.

To demonstrate its commitment to environmental sustainability, the Agricultural Finance Corporation actively participates in tree planting. By promoting tree planting and conservation, the Corporation contributes to the protection of ecosystems, climate action, poverty reduction, and sustainable development both within Kenya and on a global scale.

To achieve its objectives, the Corporation collaborates with various stakeholders, including



Nyanza/Western region staff members with a team of Kenya Forest members ready to plant trees at Migori Forest

the Kenya Forest Service, Community Forest associations, Schools, Churches, Women and youth groups, farmers' groups, and local communities.

In the 2022/2023 Financial Year, the Corporation successfully planted over 12,000 tree seedlings across the country through its Regional Offices. These efforts were coordinated through the Corporation's six regional offices, which oversee the implementation of tree planting initiatives to increase forest coverage.

The trees planted encompass a variety of indigenous, exotic, and fruit trees which provide nutritional benefits to the communities. The Corporation encourages farmers to plant trees

on their farms, emphasizing that even small plots of land can accommodate a few trees. Moreover, the Corporation highlights the significance of tree maintenance, including pruning, weeding, watering, applying fertilizer, and fencing to protect the trees from animal damage.

AFC encourages communities to actively participate in tree planting and emphasize the long-term benefits, while leaving a lasting legacy. These efforts will greatly support the government in achieving its tree cover goal, while also promoting environmental sustainability and sustainable development in Kenya and beyond.



Food Safety



Source: syndicate

The subject of food safety or lack thereof is a major blot on Africa's quest to feed its growing and fast urbanizing population.

Recently, the Food and Agriculture Organization (FAO) together with the World Health Organization (WHO) unveiled "Food standards save lives" as the theme for the 2023 World Food Safety day which is aimed at recognizing the importance of food standards across the world in keeping consumers safe, and in underpinning equitable trade in food.

A report from the Global Food Safety Partnership in 2019, highlighted the need for targeted investments to promote food safety at domestic levels across Africa, where foodborne illnesses claim an estimated 137,000 lives a year, according to figures from the WHO, thereby levying a public health burden similar to malaria, HIV/ AIDS and tuberculosis, combined.

The report also revealed that unsafe food consumed cause human capital losses of an estimated U\$16.7 billion a year in Africa, and yet

an analysis of more than 500 projects and activities in sub-Saharan Africa since 2010 found that most of them focused on food safety for export markets, leaving out specific health risks, such as bacterial contamination that local consumers face when purchasing from local, informal food markets.

"The future of the food system is critical to the long-term well-being of Africa and its people, and for the global food system to be a successful provider, food must be safe for everyone. With growing populations and changing diets, now is the time to take stock of the current food safety landscape in Africa and for new efforts to address old challenges", said Juergen Voegelé, Senior Director for Food and Agriculture Global Practice at the World Bank.

Some of the basic tenets FAO and WHO are advocating for include; 'There is no food security without food safety', 'Food safety has a direct impact on health', 'Science is key to sound food safety management', 'Food safety impacts positively on economies and livelihoods', 'Food standards protect consumers', 'Food standards

help producers', 'Science underpins food standards', and 'Everyone is a risk manager.'

Bedrock of Trust

WHO also estimates that around 420,000 people around the world die every year after consuming contaminated food, while children under 5 years of age carry 40% of the foodborne disease burden, with 125,000 deaths every year. Moreover, contaminated food hinders the growth of many middle and lower-income economies, which suffer losses of about US\$110 billion due to incapacity, serious illnesses, or even early death.

It is on this background that FAO and WHO came together to establish the Joint FAO/WHO Food Standards Programme and the Codex Alimentarius Commission in 1963. The Commission was established to steer the development of international food standards, guidelines, and codes of practice to protect the health of consumers and ensure fair practices in the food trade.

The Commission also promotes the coordination of all food standards work undertaken by international governmental and non-governmental organizations. Codex food safety standards, guidelines, and recommendations are recognized as the reference for food safety in the World Trade Organization Sanitary and Phytosanitary (WTO SPS) Agreement.

Codex standards are also taken into account as international standards in the implementation of the WTO Technical Barriers to Trade (TBT) agreement.

Food standards help to guarantee the safety and quality of food. They offer guidance to farmers and food processors on how to handle food in a hygienic manner. They specify the maximum levels of additives, contaminants, residues of pesticides, and veterinary drugs that can safely be consumed by all. Standards also outline how food should be measured, packaged, and transported safely. Consumers can determine whether the product is good for them thanks to the implementation of standards for things like nutrition and allergen labeling.

As Dr. Maria Neira, Assistant Director General, Universal Health Coverage/Healthier Populations at WHO puts it "Food safety standards protect everyone's life. They are key to ensuring safety and quality. That's why the WHO together with FAO leads global expert groups and provides scientific advice to develop international food safety standards to protect consumers' health."

Like their African counterparts, Kenyan consumers face numerous food safety threats such as contaminated vegetables grown along sewer lines, fresh meat with toxic chemicals, and peanut butter and maize flour brands containing aflatoxin, a naturally occurring fungus that is harmful to humans and animals.

A 2014 study by the International Livestock Research Institute shows Kenya is among the world's hotspots for aflatoxins and has recorded two major illness outbreaks, including in 2004, which resulted in 100 deaths and more than 300 cases of poisoning.

Along with often-dire health consequences, contaminated food has severe economic repercussions. A 2018 World Bank report revealed that unsafe food costs low- and middle-income economies US\$110 billion in lost productivity and medical expenses each year.

To counter those threats, there is need for partnerships among the relevant stakeholders to address this menace and improve their food safety standards.

So yes, "if it's not safe, it's not food."



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