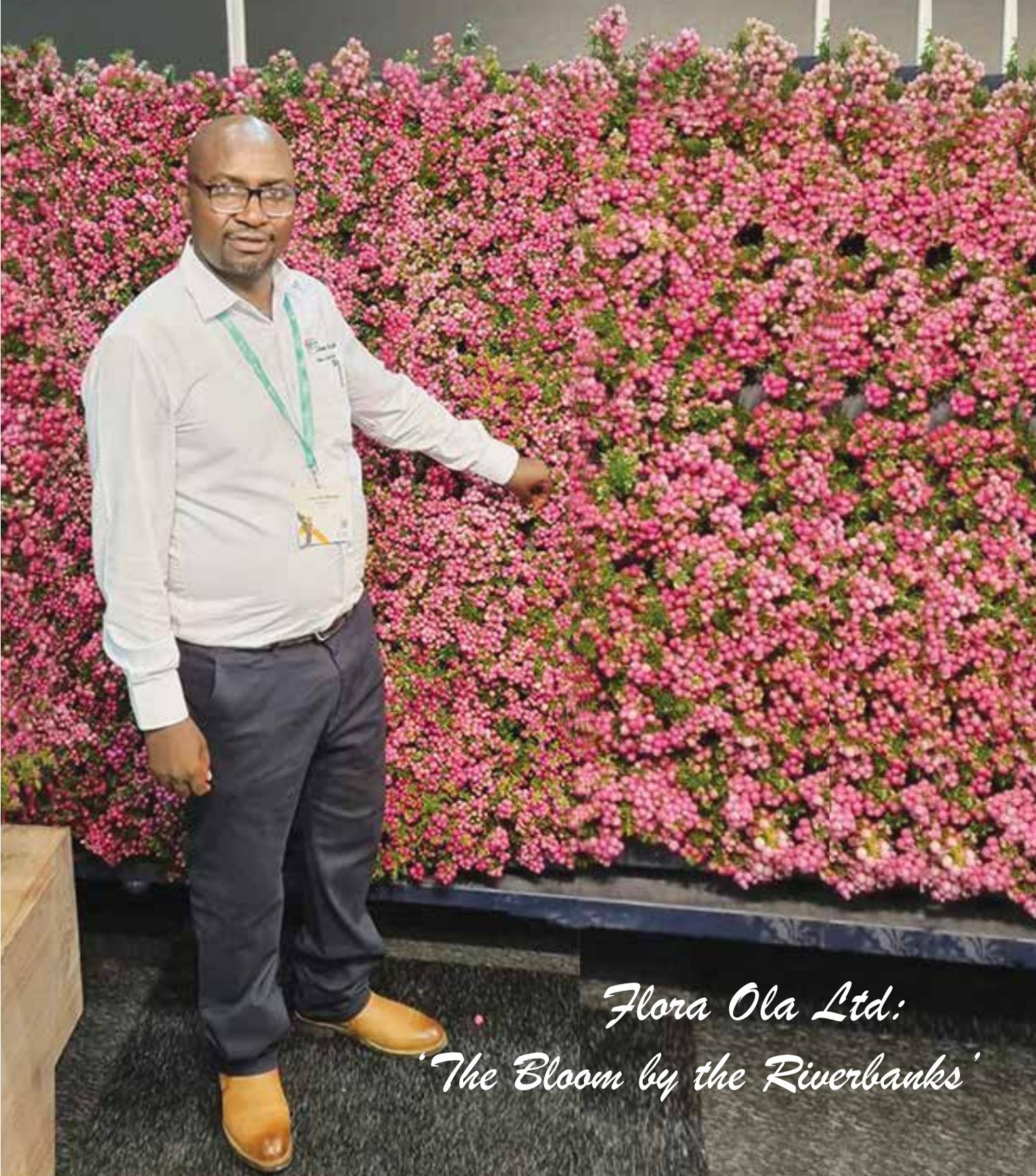


September - October 2023

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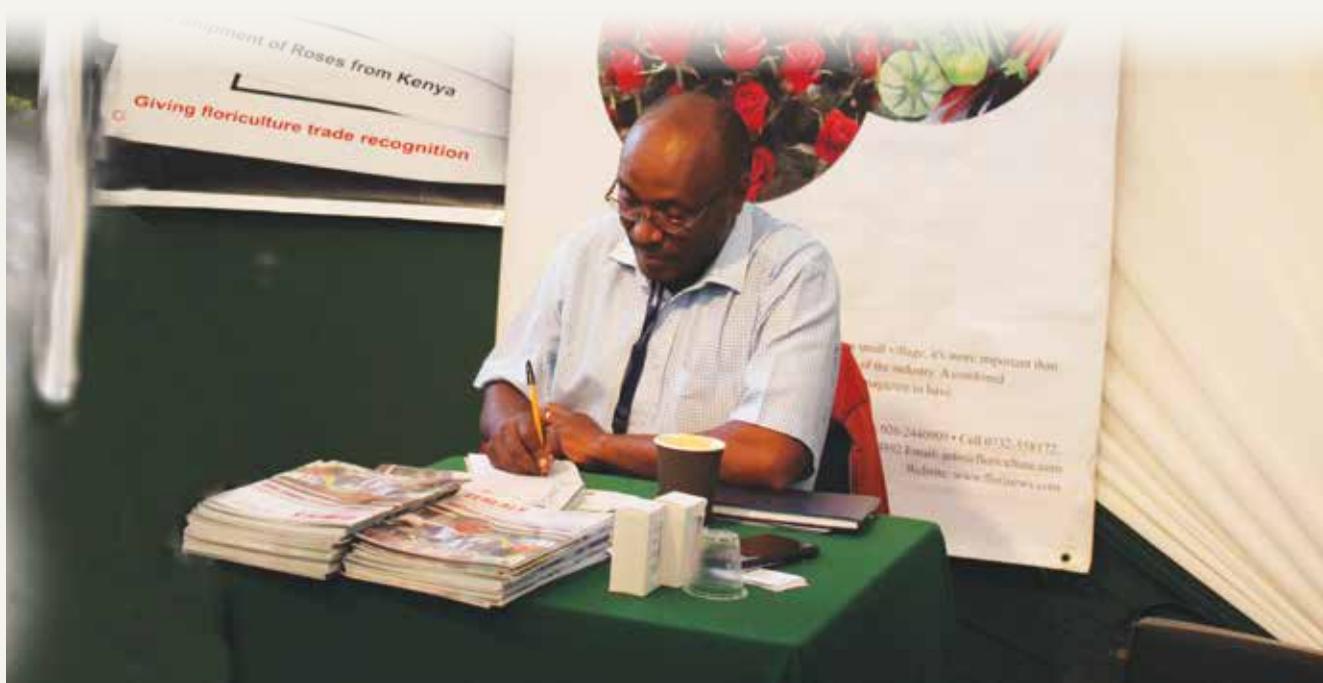
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Be a Change Maker

I wrote an editorial a while ago about spending time in our sphere of influence. The more emotional energy, time and prayer that we put into the people and things that we can influence, the greater our influence grows. But so many of us spend most of our emotional energy obsessing over things over which we have no control. We worry about treaties or bad corporate policies. We worry about politics. We even worry about company politics! And we talk and talk and talk and we miss out on opportunities to build relationships and build character in us and those around us.

When you choose to step outside your comfort zone and participate in something that someone you love enjoys--you change the dynamics in your relationship. God gave you more power and influence than you may believe. So be a Change Maker, and spend your time and energy changing your corner of the world. Kudos Naivasha Horticultural Fair.

Masila Kanyingi.
Editor



Huwa-San ADVANCED WATER HYGIENE

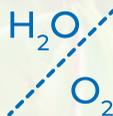
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Naivasha Horticultural Fair

The NHFAIR is run by a small organising committee that operates on an entirely voluntary basis. The Exhibitors and visitors are proud to know that 100% of their donations go to good causes. Every year more and more funds are raised for charity and are dispersed through the NHFAIR Trust.

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Floriculture

September-October
2023

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Naivasha Horticultural Fair 2023 Building Better Lives!

It's yet another season for horticulture stakeholders and its affiliates to come together and give back to the society.



*Mr. Richard McGonnell,
Chairman NHFAIR*

The Naivasha Horticultural Fair will be 21 years old this year. Starting from humble beginnings in 2002, the Naivasha Horticultural Fair has grown to be one of the biggest Horticultural Shows in Africa. From an initially purely horticultural perspective the NHFAIR is branching out into the whole agricultural sector. Every year the number of stands and the number of visitors increases, from 60 stands in 2002 to over 200 stands this year.

The relaxed atmosphere and spacious venue attracts the creme de la creme of the agricultural sector. Many exhibitors take the opportunity to launch new products and innovations at the NHFAIR, so as a visitor you have a one-stop venue that gets you in contact with all your suppliers, and you are also kept informed on all the new market trends – very important in a fast evolving business. Decision makers from both sides of the industry attend, and a lot of business is concluded. There is ample parking, loads of space, a great food hall and a children's entertainment area. So not only can visitors catch up on business, they can combine it with a family day out.

The NHFAIR is run by a small organising committee that operates on an entirely voluntary basis. The Exhibitors and visitors are proud to know that 100% of their donations go to good causes. Every year more and more funds are raised for charity and are dispersed through the NHFAIR Trust. The NHFAIR partners with other donors in order to increase the effective value of donations and to raise the awareness of its projects.

The NHFAIR Trust concentrates on poverty alleviation and improving the lives of woman and children according to their motto '*Building*

better lives'. NHFAIR fully supports Naivasha Safe House (100%). In addition they offer donations to the Naivasha Children's Shelter (giving kids a chance) and NACOHAG (HIV and AIDS and family health). NHFAIR Trust has constructed partially or fully Karagita Maternity Hospital and the Naivasha General Hospital Maternity Wing (reduction of maternal and infant mortality during childbirth) and the Child protection Unit at the police station. They have also supported United Disabled Persons of Naivasha and Club Foot which helps children born with disabled legs get shoes, tank donation to school.

NHFAIR has sponsored education institutions and continue to supply desks, chairs, water tanks, trees, and sanitation blocks to many schools. Recently they constructed additional classes for Nyamari secondary.

In 2011 the NHFAIR launched its most ambitious project yet ADOPT A VILLAGE. The NHFAIR has undertaken to sponsor a whole village, including schools, a clinic, a borehole, power etc.

Over the years millions of shillings have been raised and wisely spent, making a massive difference to people's lives. Most Charities will be represented at the NHFAIR so visitors and exhibitors can see exactly where their money goes, and how much it helps.

Naivasha

Naivasha is more than Flowers, it is the most accessible, and popular of the fresh water lakes of the Great Rift Valley. A special sighting at Naivasha is the Hells Gate and the park is a sanctuary for rare geographical features. It also boasts of the Olkaria geothermal power generating plant. On the drive you can see variety of animals on the open grasslands. A glimpse of a twitching ear can reveal a pride of lions lying in the shade of a small tree.

Dubbed the world's 'greatest bird spectacle' by

renowned ornithologist Roger Peterson, one always expects a great sighting on his first visit - and for sure you will not be disappointed. The moment is, frankly, overwhelming. From the shore, plains of grass reach into forests of fever trees that hug the ridges. Although Lake Naivasha is a haven for activities of all sorts, it's the flower growing that has earned it its fame.



The Cradle of Flower farming

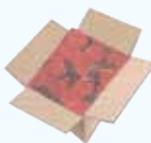
The crown jewel of Kenya's flower growing was Naivasha, then came Athi River and Eldoret. Suddenly all eyes turned on Mt. Kenya. Naivasha, despite been older than the rest, it continued attracting investors as the Kenya's epicentre of the floriculture sector. For long, any discussion on flower growing in Naivasha centred on Oserian (Now Bohemian) and Sulmac (Now Flamingo). Then slowly crept other farms in Moi South Lake. The rest as they say is history.

Believe it or not, Naivasha is the largest floricultural growing region in the country. Starting from the epicentre of the town, new state of the art, and multi- billion greenhouses cannot escape from your eyes. The new structures, decorate areas around Moi North Lake, Moi South Lake, Flower Business Park, Naivasha-Nakuru Rd. and Naivasha- Engineer Rd. The nature of the ornamental projects varies from new projects to expansions of the old farms. Some of the farms have already

been established in other regions of Kenya. Naivasha beats most of the other growing areas due to its Proximity to the Airport, availability of Land and experienced Labour and its Cordial relationship with the surrounding communities. Besides the communities, most farms don't want their farms to be a concern factor for the environment. "Eventually we want to become carbon dioxide neutral, in which we also include the emission from the airfreight", says a grower. Growers ensure no Spilling of waste is done. There are a number of certification standards most popular been GlobalGap, Kenya Flower Council silver and Gold Code of Practice, Fairtrade, MPS, Tesco's Nurture and Fair Flowers Fair Plants among others.

Conclusion

With the special approach towards farming, where efficiency, reducing costs or increasing returns seem to be on the top of the target list for investors, there is one big question remaining. Will Naivasha continue to be the choice of investment for most flower growers? "Yes", as long as getting the highest profit and enjoying what they do, is the goal of every investor, what will stop them from Naivasha?



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Caterpillars, a New Nuisance in Rose Growing

Helicoverpa Armigera (African Bollworm) Caterpillars in Flowers



Winrose J. Maria



Helicoverpa armigera



Damage caused by *Helicoverpa armigera*

Caterpillars are seasonal pests to the flowers but when in season result in major losses to the flower industry as one caterpillar can cause damage to more than one flower. In flowers there are different kinds of caterpillar species which include *helicoverpa armigera* and *spodopteraexigua* and thus it's important to know the exact pest that one has in their crop and out of these two, the *helicoverpa species* is the notorious and listed as a notifiable pest in the European market.

Description

Helicoverpa armigera commonly known as African bollworm is the main caterpillar that infests flowers in green houses and outdoor ones. It is a pest of roses, carnations, hypericum, gypsophilla amongst other flowers. It is a moth with the larval stages referred

to as caterpillar being the destructive stage. It is unique in that the moth lays its eggs singly on the roses and specifically on the softest parts of the crop. In roses the eggs are found on the flower buds and petals. The eggs are small, yellowish-white, ribbed and rather dome shaped. The egg period is two days after which it hatches to a larva- the caterpillar.

The caterpillar eats the eggshell to emerge after which it bolls making circular holes through the petals only to feed from inside the flower.

The colour of the African bollworm caterpillar varies from green to reddish brown; has three dark

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stripes that extend along the dorsal side and one yellow light stripe situated under the spiracles on the lateral side. When the caterpillar is disturbed, it lifts its head and curls it under the front of the body. If even more disturbed, it lets go and drops, rolling into a spiral. There are 6 instars or stages of the caterpillar in a larval period of 16 days and the damage to the crop increases with increase in size of the caterpillar. These caterpillars are cannibalistic.

When a caterpillar matures it drops into the soil or the growth media to pupate. The pupa is shiny brown; about 16mm long with smooth surface and with two short parallel spines at the posterior tip of the body and the pupal period is 10 days at normal temperatures. The pupa is dormant and doesn't feed.

When it rains the pupa emerges into an adult called moth with the male moths being greenish in colour and females being brownish. Generally the adult moth is fleshy, yellowish-brown with a dark speck, greyish irregular lines and a black kidney-shaped mark on the forewings. The hind wings are whitish with a black patch along the outer margin. The moth is about 14 to 18 mm long with a wingspan of 35 to 40 mm. The moths are nocturnal and thus not easily seen unless one has a trapping system like pheromone traps specifically for the *helicoverpa* or light traps or water traps. One female moth can lay around 3000 eggs in a lifespan of 10 days and thus one moth can cause an economically reputable damage to one greenhouse. These moths lay eggs closely soon after the rains start and thus its important to have an alert scouting system.

Why it's a challenge

The fact that the moth is nocturnal and its presence is mostly recognised by the presence of eggs on the flowers or live caterpillars on the flowers is a challenge. There is also insufficient knowledge of this pest as most people just associate the caterpillars to presence of butterflies they see around during the rainy season. Others kill the

eggs by physically crushing them which leaves a chance of some hatching unnoticed and causing damage to the flowers. There is also a recorded incidence of this caterpillar having resistance to chemicals and some of these chemicals are expensive leading to increased cost of production. A pest can be well managed when its lifecycle is known and when the destructive stage is identified and controlled at the right time before the thresholds are reached. Its recommended to apply effective scouting methods like use of traps like pheromone, water or light traps as an early warning system.

A pest can be well managed when its lifecycle is known and when the destructive stage is identified and controlled at the right time before the thresholds are reached. Its recommended to apply effective scouting methods like use of traps like pheromone, water or light traps as an early warning system.

- Growing areas are surrounded by open fields.
- Difficult to control after infestation.
- Resistance development to conventional chemicals.
- Slow complex system of development and adoption of biological products.
- Knowledge on the pest High temperature in the greenhouses.

Pest management

Caterpillars on roses and other crops have been and still are most commonly treated with

synthetic chemical insecticides. While these agents have provided us with effective ways to protect our crops, their indiscriminate use has led to numerous cases of acute poisoning and serious environmental damage. Other means of crop protection, such as biological and microbial control, are being used to a much lesser extent, although there are many examples of highly successful use of predators and parasites. Baculoviruses are usually selective for a few moth species, often specifically infecting one moth but leaving a closely related species completely unaffected. The specific virus for *helicoverpa armigera* is nucleopolyhedrovirus (HearNPV) and it occurs naturally in the field.

PEST ALERT

FALSE CODLING MOTH (FCM)

One of the pest challenges currently facing flower producers in Kenya is the false codling moth (FCM), *Thaumatotibia leucotreta*. Growers have suffered financial losses due to quarantine restrictions and detection of a single larva can result in rejection of an entire consignment.

For proper control of FCM, it is desirable to use the yellow delta traps baited with a pheromone lure to monitor the extent and densities of this invasive moth pest. Visual inspection of plants involves looking out for signs of poor growth or rot; holes in flowers; adults hidden in foliage; and crawling larvae. Once the flower is damaged, it becomes vulnerable to fungal organisms that causes rots. Infestations can be identified by the brown spots and dark brown frass.

Current control of FCM in ornamentals consists of chemical application with Karate Zeon and Match, mating disruption using pheromones and biological control methods.

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*Mr. Lucas Choi,
Farm Manager*



*Mr. Moses Wanyama,
Farm Manager - Grading and Logistics*



Ms. Mercy Kertich, HRO



Mr. Victor Kiptoo, Accounts Incharge



Flora Ola Ltd Accounts Staff



Flora Ola Ltd Management Staff

Flora Ola Ltd
**‘The Bloom by
the Riverbanks’**

By Mary Mwende Mbithi



Grading Hall employees at work



Coldroom workers at work



Packed flowers ready for export



Aerial View of Flora Ola Farm

The farm's main focus is on growing high-quality and exclusive varieties of roses, with 34 hectares dedicated to this endeavor.

Ralph Waldo Emerson, a renowned American essayist, and poet, asserted, "Progress is the activity of today and the assurance of tomorrow." Flora Ola Limited, a farm established in 2011, has undeniably proven this statement with a decade of remarkable achievements in the floriculture industry. The name "Flora Ola" is derived from two words: "Flora," pertaining to plants, and "Ola," the name of the farm situated in Ol-Banata, adjacent to two rivers.

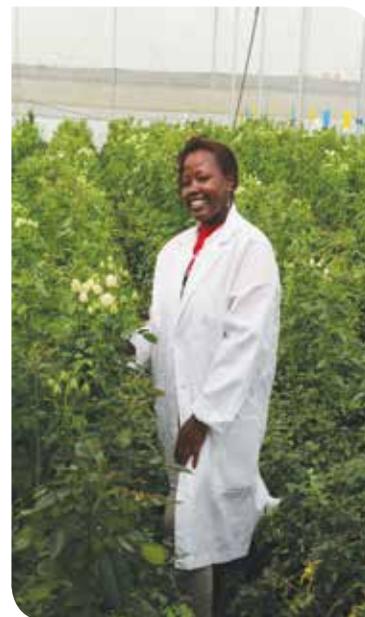
The Flora Ola Ltd farm, situated in Solai, Nakuru County, in the Rift Valley region of Kenya, specializes in growing roses and summer flowers at altitudes ranging between 1850 to 1950 meters above sea level. In 2011, the farm primarily grew summer flowers such as Solidago, Hypericums, and Kangaroo paws. However, following hailstorms, the farm's management made the bold decision to switch to greenhouse farming. Consequently, they started cultivating standard roses on ten hectares of land in 2014, which later expanded

to include spray roses.

The farm's summer flower production has gradually decreased over time, with only four hectares currently being used for this purpose. However, the farm's main focus is on growing high-quality and exclusive varieties of roses, with 34 hectares dedicated to this endeavor. Spray roses occupy 70% of the land, while standard roses occupy the remaining 30%. The farm takes pride in growing all 47 varieties of roses on its soil. Despite facing water challenges, the farm remains determined to expand and reach a size of 50 hectares. With Rainwater harvesting and borehole as the main sources of farm water, in order to curb water issues, the farm has set up four dams capable of holding up to 290 cubic meters of water.

Workers' Interests and Welfare

There are 550 workers on the farm, with 50 of them working in management. Most of the



*Neema Yegon,
Head of Sales & Marketing
at Flora Ola Ltd*

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Flora Ola has implemented an imperative CSR program with the aim of significantly enhancing the socio-economic conditions of not only employees, but also their dependents and the communities in the region where the farm operates.

workers come from the community, with a few from the countryside, and they are transported to and from work via three buses provided by the farm. The management makes sure that the workers are well taken care of by offering them 10 o'clock tea and lunch while they carry out their duties.

The farm recently upgraded its changing facilities for the flower farm workers. These facilities now include lockable cabinets where the workers can safely store their belongings while changing into Personal Protective Gear. Additionally, nursing mothers are permitted to leave work an hour earlier each day to attend to their infants until they reach one year of age. For sprayers who work in pairs, the farm has implemented a three-month work program, followed by a three-month break. During this time, the workers are provided with other allowances, including medical check-ups.

At Flora Ola, worker motivation is a top priority. The farm provides incentives to employees at the end of each year, as well as extensions on loan facilities and tokens for Christmas and Valentine's Day. Additionally, the farm has a medical facility available for all employees, as required by the Kenya Flower Council for farms with more than 500 employees. Flora Ola has

received various certifications, including KFC (Silver) and Global Gap accreditations, and is committed to obtaining more in the future.

Corporate Social Responsibilities (CSR) Programme

Flora Ola has implemented an imperative CSR program with the aim of significantly enhancing the socio-economic conditions of not only employees, but also their dependents and the

communities in the region where the farm operates. The program's unrelenting, laser-focused objective is on education, skill-building, environmental protection, and capacity enhancement.

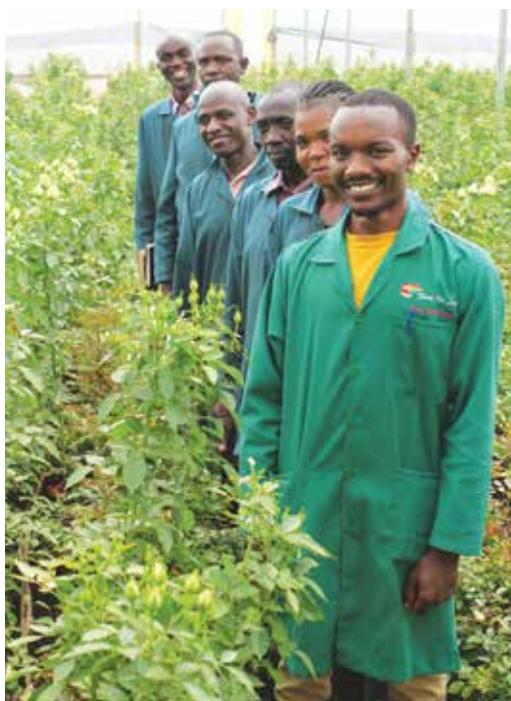
The farm is currently making excellent progress on several ongoing projects. These initiatives include the construction of brand-new classrooms and restrooms for the esteemed Olbanata Primary School. Additionally, they have successfully partnered with one of their clients- a Russian company called 'The Fashion Gardens' to support a children's home in Mombasa. This partnership is facilitated by the generous donation of free flowers straight from their farm with the proceeds going to the orphanage.

The farm actively contributes to the Bahati police station programs and they generously donate flowers to visit the

sick in hospitals. Moreover, they make the community's public holidays more enjoyable by providing them with flowers and refreshing soft drinks. The farm has exciting plans too to initiate and financially support a football club, as revealed by Mr. Lucas Choi. Flora Ola also encourages their clients to partner with them in the case of running beneficial campaigns.

Market

As previously mentioned, Flora Ola cultivates 47 different types of roses with buds ranging in size from 4.5cm to 5cm. The stem lengths vary depending on the type of rose. For spray roses, the stems are approximately 50cm, 60cm, and 70cm in length,



Flora Ola Ltd Production Officers



The Farm's State-of-the-Art Solar System



Grading Supervisors and Quality Controllers

while some varieties can grow up to 80cm. Standard roses have stems around 40cm, 50cm, and 60cm in length. Summer flowers are sold separately but in the same markets as roses. Their stem sizes range between 60cm, 70cm, and 80cm.

Flora Ola utilizes both auction and direct markets to sell its flowers. The auction market makes up 70% of its sales while direct market accounts for 30% of the sales. Europe is the largest client, accounting for about 60% of sales. Approximately 30% of the flowers are sent to the Middle East countries such as UAE, Saudi Arabia, Kuwait, and Jordan. Roughly 3% of the flowers are shipped to Australia, while around 5% are delivered to African nations such as South Africa, Nigeria, Angola, and Congo.

The Production process

Breeding, Trials and Propagation: Flora Ola conducts trials on various types of flowers over a specific period of time. During these trials, they assess productivity, pest and disease resistance, as well as market demand. If a particular variety meets their standards, the farm acquires the rights to plant it by paying royalties to the breeders. Thereafter, they rely on a third-party propagation company to graft their planting materials.

Planting and harvesting: After propagation the young plants are then expertly cultivated within pre-prepared greenhouses, ensuring optimal growth for commercial purposes. The timing of the first harvest is dependent

on the unique variety of the plants.

Pest and Disease Control: The farm uses an Integrated Pest Management (IPM) approach to control insects and spidermites. There are also well-trained pest and disease scouts on location who help in the identification of pests and diseases and provide corresponding scores. The greenhouse attendants have also been trained on pests and diseases and act as the first line of defense.

Again the farm has developed pest and disease threshold levels that guide appropriate actions to be taken. There is also a dedicated spray team on board that applies chemicals to the flowers where the levels of infestation exceed the threshold.

Grading, value addition and logistics:

The grading hall serves as the final quality control point for the flowers' value addition and processing. At the pack house, there are spacious cold rooms for receiving and holding.

Waste Management: At the farm, the ECC team handles the chemical containers while the remains from grading are recycled to make compost manure. The liquid waste is directed to wetlands and soak pits.

Future Plans

The farm is set to expand up to 50 hectares and make the shift towards green energy. The installation of additional solar panels is being considered to supplement the current 30% solar coverage and electricity.



Greenhouse Employee at Work

Packaging Three Decades to the Future...

Writes Mary Mwende

In the 1990s, the Fast Moving Consumer Goods (FMCG) and horticultural industries in East Africa experienced rapid growth and required top-notch packaging materials. To bridge this gap, Allpack Industries Ltd was founded in Kenya. Their core mandate was to produce high-quality packaging for fresh produce, specifically for export markets.

Officially commissioned in 1993, Allpack Industries Ltd was the brainchild of Industrial Promotion Services (IPS) an affiliate of the Aga Khan Fund for Economic Development (AKFED) in Kenya together with other partners in the horticulture sector. Its initial role was to support the group of horticultural exporters with quality cartons manufactured within acceptable lead times to export their produce.



The company started with carton manufacturing in the corrugated sector, which remains its primary area of production. In 1999, Allpack Industries Ltd expanded its packaging solutions by diversifying into polypropylene adding polypropylene woven bags to its portfolio. The division has experienced remarkable growth since its inception and now produces multi-colored prints by manufacturing products from raw materials to the final product.

Due to their commitment to excellence in anticipating, meeting and exceeding the needs of customers in packaging, their position has steadily risen in this highly competitive sector over the last thirty years. They now rank among the leading manufacturers of corrugated cartons in Kenya and the region.

Corrugated Cartons Sector

Flower carton manufacturing occupies a unique and essential niche within the broader packaging sector. Providing a delicate balance between preservation and

presentation, flower cartons serve as the vessel that conveys nature's beauty while ensuring the safe transportation and freshness of flowers.

The industry stands at the crossroads of aesthetics and functionality, catering to the global demand for fresh, fragrant blooms. Flowers hold profound cultural, emotional, and symbolic significance, making their packaging a critical aspect of maintaining their allure and value. Flower cartons not only protect delicate petals during transit but also create a visual experience for recipients, enhancing the joy of receiving and gifting flowers.

Production

Allpack specializes in all types of corrugated cartons for all supply chains. The manufacturing process for corrugated cartons involves several steps to create the strong and versatile packaging material that is commonly used for shipping and storing various products.

With a monthly production capacity of 3500 metric tonnes

including spare capacity, Allpack has established itself as a top producer of corrugated cartons in the East African Region. Their products are highly sought after by various customers in different sectors. By investing in modern machinery, Allpack maintains exceptional productivity and efficiency while adhering to international standards. The company is renowned for its utilization of fingerless technology and state-of-the-art printing machines (four and six-color printers.)

The production is customer-driven in that, they take the product requirements from the customer. Depending on the specifications, the carton will be tailored to the desirable output. Repeat orders take a shorter period to get processed while new orders take a bit longer due to the approval process. The industry caters to the Horticulture sector, floriculture, meat packers, FMCGS, tobacco Dairy, and general commercial industries among others with each carton type guided by various aspects such as cold room use, high stacking, the need to cushion the product being held in the carton, and many other aspects.

Meat cartons are coated during processing to prevent moisture and water buildup in the box that could ruin the product and packaging.



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For supermarket products, the cartons are in most cases conspicuously printed. In the current debate on the weight and strength of flower cartons as far as freight cargo and sea freight are concerned, Allpack has developed flower cartons that are much stronger, more durable and can withstand either shipment. Allpack also makes SFK which is correctly designed to ensure ventilating, securing and cushioning of the product; and any other necessary protective features.

One landmark development in the carton manufacturing of Allpack was a collaboration between Allpack and GOS Ltd that saw the invention of 'XPOL' boxes that were designed for flowers and herbs for export.

The key products include:

Regular slotted cartons – These include glued or stitched cartons mainly used by manufacturing companies.

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Die-cut cartons – used by horticultural and floricultural industries mainly for the export of fruits, vegetables and flowers.

Michel man coated cartons (waxed) – are mainly used by the fish and meat industries.

The Polypropylene Woven bag - with ISO 9002 Standard accreditation in its industry.

Allpack Industries Ltd has an aggressive sales and marketing team that incorporates customer service to address the concerns of their customers immediately they are raised and a packaging development section to lead the way in new packaging developments and work closely with their customers in ensuring that solutions are sought and found for any packaging problem being faced.

Due to their commitment to excellence in anticipating, meeting and exceeding the needs of customers in packaging, their position has steadily risen in this highly competitive sector over the last thirty years. They now rank among the leading manufacturers of corrugated cartons in Kenya and the region.

They have an in-house system known as IPS Excellence System (IES) that helps monitor production efficiencies, customer complaints within the shortest time possible, delivery times as well as customer fulfillment rate.

Allpack's capacity continues to increase as they make new investments in keeping with the market demands. They have a dedicated technical department allied to its production and marketing teams. This supports the client in terms of product improvement, problem solving and technical sales support on cartons and bags.

Human Resource

Creating a safe workplace is a top priority for Allpack, and as such, the company has implemented a comprehensive Health and Safety Programme that adheres to both local and international standards and aims to enhance employees' Physical and Psychosocial well-being. Allpack also boasts of the great financial well-being of its staff by collaborating with insurance entities to provide financial wellness sessions for employees, focusing on budgeting, saving, and retirement planning. The company together with other partners also conducts interactive sessions to create awareness on different topical issues of public interest. The programs are overseen by the management and include wellness information sessions and onsite health camps in partnership with local healthcare providers.

Environment and Sustainability

Allpack embraces the net zero by 2030 initiative, which is an initiative that aims to ensure the organization's emissions are nil or as close as possible to nil. The company has taken a leading role in protecting the environment in the areas in which it operates through the conservation, restoration, and reforestation of trees. Allpack has planted over 3,000 trees annually for the past nine years of which 250 trees are planted in the local area and in the rest in partnership with the Mount Kenya Trust, which plants various tree species in Mount Kenya, Lower Imenti.

Allpack was the first local company to be certified by the Forest Stewardship Council (chain of custody), which promotes responsible management of the world's forests. This certification ensures that the raw materials used by Allpack come from well-managed and sustainable forests.

To reduce waste going to landfills, the company ensures proper waste disposal techniques such as segregation, reusing, and recycling of waste generated at the factory. Moreover, Allpack is committed to enhancing its energy efficiency by replacing the HFO-run boilers with a biomass boiler. The company also monitors and improves its process efficiencies to use water efficiently, aiming to reduce water usage by 20% by 2025.

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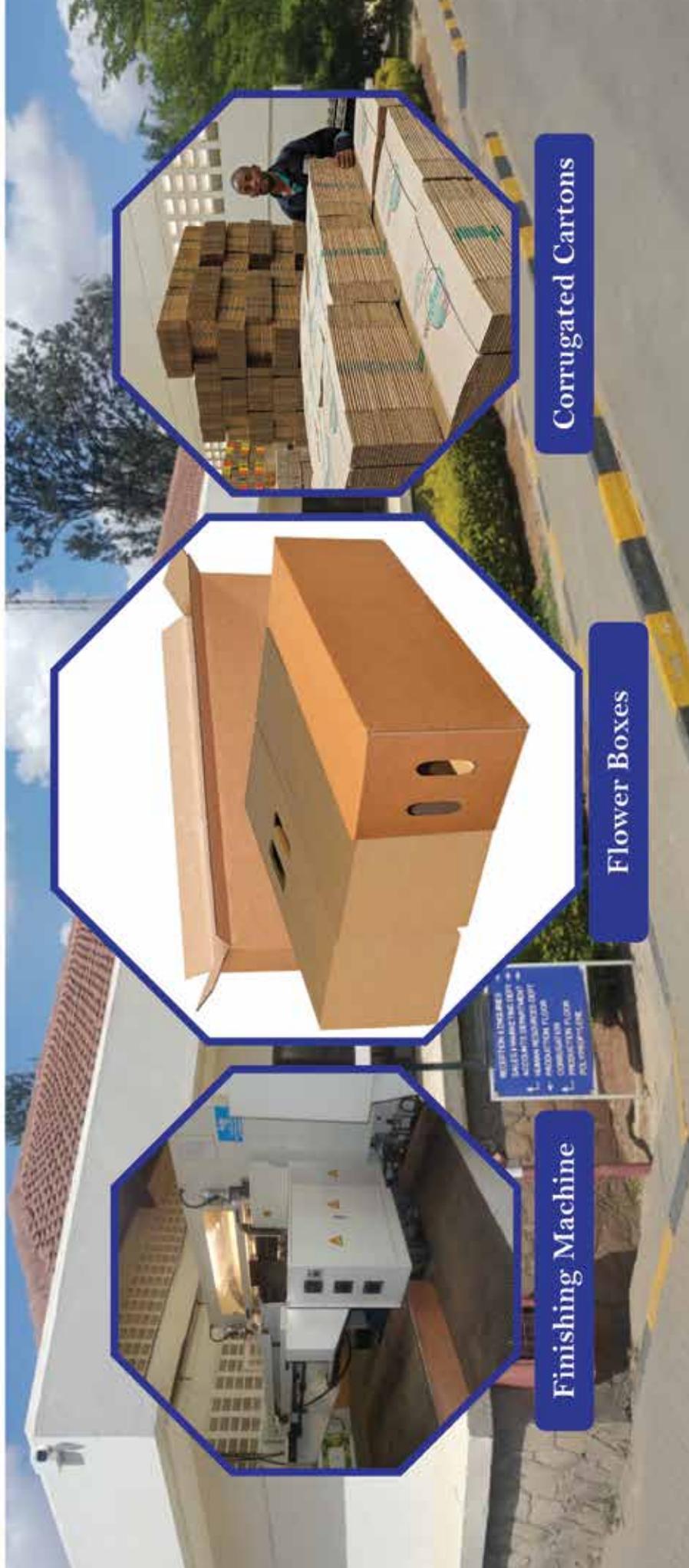
allpack industries ltd

Manufacturers of corrugated cartons and p.p. Woven bags

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Finishing Machine



Flower Boxes



Corrugated Cartons

Your Packaging Solution Provider...!

From Page 18

Allpack has also installed a 550KVA solar power project at the factory, powered by 1400 solar panels. This initiative offsets nearly one-quarter of the plant's energy demand and eliminates a significant amount of CO2 emissions annually. The company has improved its emission monitoring within factory operations (Scope 1) and electricity sources (Scope 2), and has also started monitoring indirect emissions (Scope 3).

Corporate Social Responsibility (CSR)/Allpack Sustainability Program

Allpack is actively involved in supporting the local community through various initiatives. One such initiative is the Adopt a School program, (Mlolongo and Ngwata Primary) where they

the years, the company has provided hundreds of students with internship and attachment opportunities.

As a way of fostering staff bonding through sports, Allpack introduced a table tennis board through its CSR initiative. The board is available during lunch breaks and provides a platform for other sporting activities.

Awards, Certifications and Achievements

Allpack was recognized as the Runner Up for the Thermal Energy Savings Award in the Medium Consumer category. Additionally, the company achieved the distinction of being the first in East Africa to be accredited by the Forestry Stewardship Council (FSC). Allpack is proud to be an all-ISO-certified company, with accreditations including ISO 9000, and ISO 15000 among others.

Setbacks

The unprecedented shocks in the economy have left the manufacturing industries at crossroads and Allpack has not been left out. One of the recent challenges is the 2023 Finance Act, where an excise duty of 25% on imported recycled paper has been introduced. Further import duty has been increased to 35% from 25% on all brown paper irrespective of whether it is available locally. This makes it 60% on importation cost of recycled material, a move that has rendered the packaging industries on the verge of hopelessness.

provide support to schools in the community in areas such as health camps and tree planting.

Allpack also offers a merit-need-based scholarship program that benefits staff students every year. The company sponsors the best student (from non-management staff) each year into high school. Allpack also donates to KENSAP (a non-profit organization) that sends the most vulnerable students from the remotest parts of the country to top universities in USA for further studies.

Moreover, Allpack provides continuous mentorship to students in local schools. Over

All in all, the flower carton manufacturing industries play a crucial role in encapsulating the ephemeral beauty of flowers within a protective and visually appealing package. Its fusion of artistic design and functional engineering ensures that the delicate blooms reach their recipients in pristine condition, elevating the joy and emotions associated with floral exchanges. As the industry continues to innovate and align with sustainability principles, it remains an essential partner in the enchanting world of flowers and therefore, Allpack shares this vision of being the leading, packaging solution provider while focusing on enhancing the supply chain.



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First Line of Defence

Over 20% of the flowers shipped by growers never reach the final consumer in the export market because they are lost or damaged during the various stages of the distribution chain. Losses can be reduced by ensuring more careful handling, better temperature regulation, attention to phytosanitary requirements and the use of suitable preservation agents. Such measures may be inadequate and even fruitless, however, if not combined with appropriate export packaging.



Flowers in an SFK

Because flowers and plants are living and thus developing organisms, they have a limited life span. Suitable methods should therefore be adopted to ensure that the product's evolution is controlled throughout the shipping process. The choice of an export packaging, adapted to the product as well as to the distribution network and the market, is therefore important to export success.

Single Face Kraft (SFK)

Most growers show a lot of keenness when choosing cartons, sleeves or even refrigerated containers. However, little attention is generally given when choosing SFKs yet they are the first line of protection for the flowers. This has resulted in growers losing many stems which should have turned into dollars. This was revealed by a research carried out recently by this periodical.

In Kenya, there is a wide range of SFK's available to growers and exporters from different suppliers. Though the reason for selecting a specific type of SFK are not always clear. Pack rates and cost efficiency seem to be prevailing motives according to our research. The outcome,

however, is not always what would be best for the flowers.

Speaking to different pack house and production managers, they all agree that, you must use SFK's while exporting flowers. They also agree that quality was the main determinant factor while choosing the right SFK. However, very few seemed to understand the characteristics of a SFK to establish whether they are getting the right quality in the first place.

To be correctly designed, SFK should have suitable dimensions; means of ventilating; securing and cushioning the product; and any other necessary protective features. To understand the right choice of an SFK, we asked, what do flowers undergo in the cold chain? The study showed flowers undergo serious mechanical, physical and chemical stresses

Mechanical stress:

This is directly connected with transport handling and warehousing. It includes shocks, drops, compression and vibrations. A distribution chain for flower exports, perhaps several thousand kilometres long, consists not just of one or two transport and handling operations. In most cases the network includes a long series of road, air and sometimes sea or rail transport connections, involving handling before and after each phase, and often with intermediate stages of warehousing or storage.

Consequently the stresses and the risks to which the flowers and their packaging are exposed are multiple. Moreover, the stresses have a cumulative effect, thus

“The SFK is the first foreign contact the flower has so it should be able to absorb humidity released from respiration of flowers, maintain shape and form of the flowers and ensure wrapping works as a protective agency from pressures”.

significantly reducing the mechanical strength of the SFK as the journey proceeds. The SFK must therefore be designed to withstand the sum of those forces.

Physical and chemical stresses:

The life span of flowers varies with the variety, but it is generally short. The SFK design must therefore take into consideration the diverse hazards that the products undergo, to limit their effects.

Characteristics of a Good SFK.

Speaking during the study, Mr. Ken Mwiti of Kisima Flowers said, “The cumulative natures of these stresses on the product have repercussions on the package durability”. Adding, a number of factors namely heat, cold, humidity (water vapour in the air), dampness (water in a liquid state) and desiccation (lack of water or humidity) must be considered before one purchases the right SFK”.

“The long series of road, air and sometimes sea or rail transport connections, involving handling before and after each phase, and often with intermediate stages of warehousing or cold storage should be considered, said Mr. Kiplagat of Karen Roses.

“It would be foolish to invest millions in production only to loose quality from bruised heads due to an SFK made of substandard recycled paper”, says Mr. Andrew Wambua of Molo River farm. Adding, “the SFK is the first foreign contact the flower has so it should be able to absorb humidity released from respiration of flowers, maintain shape and form of the flowers and ensure wrapping works as a protective agency from pressures”.

Each of the supply chains has its own specific requirements regarding SFK according to suppliers. For instance, in the traditional supply chain, the distance is shorter and the SFK is removed by the importer, who places the flowers in buckets of water before they enter the auction process. These may need E-flute. On the opposite end of the supply chain evolution, direct trade has very different requirements. Ideally, the link at

destination (often larger retailers) receives ready-to-use products.

This means fewer handling procedures and the flowers could be sold in the original SFK. In addition, some of the markets like Japan, Russia, and USA are far and they will require higher specifications like C-Flute because of the longer distances to enable better protection. It should be noted that choice of flute (“e” or “c”) only is not sufficient to ensuring the performance of the material. The right paper has to be used as well.

Growers need to understand the different materials used in manufacturing of SFK. In the Kenyan market, E-flute is the smallest pitch with B-flute average and C-Flute with the highest pitch. Secondly, use of virgin paper like kraft will behave far better than recycled paper. Finally, the higher the grammage of paper used results in better SFK performance. However, growers must be careful of some cheaper recycled material SFKs in the market as they are vulnerable to moisture due to their composition.

Before purchasing SFK, growers must put into consideration their markets as they determine the strength. They must also ensure the SFKs have undergone control tests for short term needs and field tests for long term needs. The impacts on the product and the freight costs should also be put into consideration. It is prudent for the grower to make money from the quality of the stems but not quantity (volume) of the export.

Kenyan manufacturers has developed SFK for all types of markets. “For the short distances, they have developed a cost effective SFK made of Kraft liner to replace the commonly used recycled materials. And for the long distance, they have developed a tougher product to protect your flowers all through. The manufacturers also recognize that the SFK is also a marketing medium for the Grower and has developed branded SFK and are researching other features to include in the SFK that may extend the vase life of the flowers.

Last Line of Defence

The quality of a carton is important as it determines the state in which the produce will reach the market. Floriculture Magazine spoke to one of the experts in carton sector.



Packed flowers on transit

Floriculture: For export, Flowers must be packed. Kindly discuss the importance of quality cartons in packaging of flowers?

Expert: The quality of a carton is important as it determines the state in which the produce will reach the market. A good quality box should be able to withstand the harsh conditions in the supply (cool) chain. The primary purpose of a carton is to protect, preserve and ship the produce to the market in top quality sustainably- in as near perfect condition as possible allowing for good returns.

It is pointless to put so much effort in getting a quality produce from the farm only for it to arrive in bad state in the target market due to poor quality packaging fetching low returns and being subject of claims etc.

Floriculture: For a layman, a carton is a carton; briefly discuss factors to consider when choosing the best carton for flowers?

Expert: A box is a box to a layman however you could have two boxes constructed of the same quality material (paper from same sources) but the resulting box could be very different in terms of capability or ability to perform in the hostile conditions that it is subjected to.

A good quality carton depends on quality of paper used and the integrity of the process and processing equipment. Influencing factors in choice of box are;

1. Type of flowers grown and sensitivity
2. Pack rates
3. Cost
4. Logistics- mode of transport, pallets in use in the

supply chain.

5. Volume to cost ratio considerations
6. Weight of box.
7. Target Market and also the preference in the growing region
8. The nature of the growers' cool chain and handling
9. Choice of supplier- a supplier who sustains consistent quality of boxes batch-to-batch, reliability of supplies

Floriculture: Flowers are of different sizes, varieties and types each with it's unique characteristics, do you use the

same cartons for the different stem sizes, head sizes, varieties and types e.g roses, lisianthus etc?

Expert: Cartons come in different sizes and styles. This largely depends on grower preferences but there are special rules for special flowers. For example roses will be packed in either standard, Zim Box, Special Zim, Jumbo box whereas Lisianthus will be packed in an upright whose height will depend on the stem size. Chrysanthemums for this region are packed in smaller sized boxes



Floriculture: What is the universal carton size(s), if not classified you can give the different carton sizes available

Expert: In this region, Eastern Africa, the most common flower boxes are the Standard flower box whose size is 978 x 299 x 196mm and Zim Box whose size is 980 x 438 x 199mm. These are two piece products that is bottom and top (that are Full Depth Telescopic). There are other variants in the FDT boxes such as the Special Zim whose size is 982 x 375 x 209mm, Jumbo box which can take various sizes depending on the grower.

In addition to this we have the coffin (Popular in Israel but



Wrapping of a flower carton

also used locally by a few), an R.S.C style box whose size is 1000 x 512 x 388mm and uses heavy duty paper ideal for heavy haulage- there's a variant to this which uses a slightly lower grammage paper formation and ease of handling.

Floriculture: Kindly discuss the handling of the product during packaging to maintain the quality.

Expert: It is important to understand that boxes are paper products and although paper for making boxes is specialized, prolonged contact with moisture/water contribute to deterioration in strength. This calls for extra care in handling.

To ensure flowers arrive their destination in top quality, handling of the boxes throughout the cool chain is important. It largely depends on how the cooling/pre-cooling process of the grower is structured- the longer the box is subjected to the cool chain the faster it deteriorates, how the boxes are stacked in the cold rooms, during transportation; the process of handling during loading, unloading and building of pallets, storage of boxes. Have the packers been trained on good handling practices, do the packers know how to identify faulty boxes and avoiding to use them? These are all important.

Floriculture: What advice do you give to enable the product maintain it's quality during transport both road and air?

Expert: Adhere to good handling, stacking and packing on trucks utilizing the edge of the boxes where the strength of the box is. At the freight handlers it is important to adhere to good practice and also simple mechanization to enable easy movement of large pallets without having to use a lot of force

on boxes. Use of refrigerated trucks.

Floriculture: What problems if any are you having with growers in handling of your products which they turn to blame on you?

Expert: When there are issues of boxes collapsing, the box maker gets all the criticism.

Floriculture: Are there any specific materials which should be used to manufacture flower cartons for your customers?

Expert: The ideal situation would be to have wet strength paper, semi chemical fluting paper as the components to manufacture flower boxes with. These would allow for use of lighter boxes. However these are expensive and normal kraft paper and waste based fluting are the norm. The kraft paper/fluting has to meet certain stringent strength and water absorption criteria without which there is likely hood of issues during use. There are other methods/processes available to impart water resistant properties to paper and starch which is used as adhesive. These are through use of water resistant coatings on paper and water resistant resins in glue formulation.

Floriculture: Kindly give your final comments?

Expert: Quality is never an accident; it is always the result of high intention, sincere effort and skilful execution. The grower, packaging supplier and freighter should work closely together in ensuring that the produce reaches market in the best possible quality.

Invest in Home Grown Research

Kenya's flower industry has been on impressive highs, having surmounted several lows to remain among the most preferred globally. Changes in weather which have hit Kenya's competitors like Ecuador have worked to the benefit of Kenya. Brazil which is clearing more of traditional flower farms and converting them into real estate has equally given Kenya a competitive edge.



Mr. Nelson Maina

The irony however is that the same factors working for our country are in a few years going to work against us. Already the effects of climate change are being felt particularly in agriculture. Land meant for production, of even flowers, is quickly being subdivided and turned into commercial plots. However the noise to oppose such moves is not loud enough.

This is one of the major problems of our flower farmers. Markets still continue to pose challenges, growing conditions are not quite streamlined, yet the demand keeps coming. Farmers keen to answer their information thirst are turning to international companies because there is no local information.

Trouble with this is that international companies don't know local solutions and are therefore not better placed to give home grown solutions. According to a Horticultural Crop Directorate (HCD) report, there is enormous growth potential in the small-scale flower growers. This needs technical assistance.

The overall enormous growth in value, acreage and volume of Kenya's cut flower industry has been largely attributed to a robust private sector involvement and externally-sourced knowledge and technologies. Kenya has adequate technical and human capacity and skills but this has not been adequately utilized by the industry.

There is a weak interaction between the flower farmers and the local research system causing the floriculture industry to rely on external knowledge to solve the industry's problems. This over-reliance on external knowledge has contributed to the under-utilization of indigenous research capacity in Kenya, even though most of the stakeholders agree that Kenya has adequate skilled and well-trained manpower.

The slow, bureaucratic procedures in the public research institutes undermine their ability to respond to urgent farmers' requests. Most farmers' experiences with public research institutions are heartrending, whereby it takes more time to get results from local laboratories, whereas if they sent samples to laboratories abroad, it would take

them less to get results by email.

Farmers' needs, such as disease outbreaks are usually urgent and require immediate solutions. The delays from the local public research system forces farmers to seek solutions from international research establishments. This underscores the need to improve the interface between and among scientists, researchers, farmers, policy makers and service providers and build the capacity of industry stakeholders to conduct demand-led research.

For any research activity to be useful, it must be sensitive to local needs and priorities as well as allow ownership of its agenda by the intended beneficiaries. In the case of floriculture research, flower growers and exporters are the key stakeholders and their views should help inform research decisions.

Information on market trends demands, tastes and preferences, transactional costs and prices should be easily available and updated. Market access is closely related to phyto-sanitary compliance and proper (pre- and post-harvest) handling of flowers. As yet, there is minimal emphasis on post-harvest handling and training for growers. This constitutes an opportunity for the research and training institutions.

Companies like Elgon Kenya which commands over 80 percent of all flower customers in the country has a wealth of information about market needs, and trends which if turned into documented study would play a key role in providing informed guide to growers and other industry players while making the Kenyan flower competitive in the global arena.

Elgon Kenya's extensive network of agronomists and field officers has enabled them interact with different growers who have shared with them their farming experiences. Such information is key in addressing gaps that stands in the way of profitable and internationally competitive flower production business.

We Must Tackle Graft

My prayer is that we all develop the culture of leveraging data to make decisions. Our analogue methods of monitoring and evaluation have failed and are deceptive given that there are far too many gatekeepers in the chain. In 2016 the current president of the African Development Bank (AFDB), Akinwumi Adesina, sought to focus his attention on five priority areas that in his view were central to accelerating Africa's economic transformation.



Dr. Bitange Ndemo

He coined the word “High 5s” to promote this important agenda: light up and power Africa; feed it; industrialise it; integrate it; and improve the quality of life of its people.

A closer look at these priority areas reveals that they are almost precisely the same as former President Uhuru's Big Four. It has become clear that the five are now the bank's mantra. Yet, there isn't much evidence that member nations know how to utilise the resources from the bank to address their priorities.

Africa's annual food import bill estimated to rise to \$110 billion by 2025, weakens African economies, decimates its agriculture and exports jobs from the continent. This is a tragedy because nothing is changing. The farming methods remain subsistence, land subdivisions continue unabated, post-harvest losses still remain high as the number of tenderpreneurs keep rising.

Trader Mentality

The concept of tenderpreneurs emanates from the trader mentality facilitated by public-sector tendering processes. It is some sort of disease where incubating an idea for the benefit of the majority – which public-sector objectives aim to achieve – does not feature. It is a “me” first and to hell with everybody else. While some call this corruption, others refer to it as unethical behaviour, but in my view it is all the above and a lot more than the public gets to know.

For Adesina to make a dent in their priority areas, they have to fight this scourge first and build a new culture of self-sustenance.

Food Security

First, we will never learn to create the items we import. Second, in the absence of any exports to China, China will always have a huge trade surplus with Africa. In other words, we are not thinking about a sustainable future in the event we have nothing to bring in foreign currency.

But the more critical point is on food security. This sector has the tenderpreneur virus. A few people sit and decide what resonates well with the general public then they proceed to implement. Fertiliser is one such quick deal. Agricultural economists should have warned about the dangers of subsidies for this commodity to subsistent farmers dispersed across the country, as it poses a logistics nightmare. Something the tenderpreneurs love to exploit.

Dependent Country

Kenya will find it difficult to attract serious large-scale investors, especially in maize, which in international lingo is now classified as a political crop. The annual dance-around with subsidies benefits only a few. The government has no business interfering with the sector. Kenya, by shifting to importing food, is increasingly becoming a dependant country. That is a spitting distance to an enslaved continent. If I were the president, I would want daily data on food production.

Data-Driven Policymaking

My prayer is that we all develop the culture of leveraging data to make decisions. Our analogue methods of monitoring and evaluation have failed and are deceptive given that there are far too many gatekeepers in the chain. To succeed in both food security and manufacturing, we must build agricultural parks and industrial parks to enable the free flow of ideas and build local capacity.

Invest in Balanced Mineral Nutrition

Flower production costs in Kenya have increased significantly due to outbreak of diseases like downy mildew, powdery mildew and botrytis and since this has become a limiting factor for production, it has become a concern for the investor.

By Mr. Barnejee

Most growers use high amount of chemicals to control the disease, unaware of the fact that a timely and balanced mineral nutrition can prevent the disease as this enables the plants to develop the resistance against the disease, but in reality most growers result to use of high level of chemicals which not only raises concern on environment and safety but also leaves economic consequences as well.

Essential plant nutrients in proper combination, concentration and ratio depending on the media type and climatic condition make the plants healthy and tolerant or resistant to disease whereas the deficiency of them make the plants susceptible to diseases. As soil pH, soil type, ionic forms of nutrients and their availability contributes the utilization and uptake of nutrients, a proper and balanced fertigation program can help the growers to achieve adequate disease control to a great extent.

This balanced fertigation program involves the composition of fertilizer stock solution in respect to all essential elements and their optimum level for physiological activities of the plant and also importance to be given for proper media management as media influence the nutrients availability to the plant for their utilization and uptake.

As it is known also that nutrient uptake greatly influenced by the prevailing weather condition, media pH, soil type (this determines the interval between irrigations), crop stage and variety, it is important to note that these factors to be kept in mind while

composing stock solution and its discharge per certain volume of water.

As it is well known that a balanced nutritional feeding makes the plants develop resistance by strengthening the cell wall forming mechanical barrier which makes the fungus difficult to penetrate the plant body, in addition to that, this also enables plant to produce defence or anti-fungal compounds.

There are many nutrients like Calcium and other elements when utilized in optimum level and in proper ratio the plant cell becomes stronger which makes the fungus difficult to penetrate plant body and there are other nutrients like Manganese, Copper and others which activate the enzymic activity to produce antifungal compounds. Potash plays an important role in metabolic

activity of the plant as well in reducing the sensitivity of the disease. Sulphur as nutrient play a great role in reducing and inhibiting the disease directly or indirectly both in media and foliar disease as well.

An authentic and genuine water and media analysis should be done and studied thoroughly in terms of chemical composition and other aspects in order to decide on the amendment to be applied to make them suitable for plant growth and development and this in turn enables

the plant to utilize the nutrients by increasing their availability if plants are receiving balanced fertigation program.

Therefore, a proper combination of fertigation program, cultural practices and cautious use of chemicals should be an essential approach for the grower to control diseases and successfully induce systemic acquired resistance to the plant against the disease and increase the productivity of the crop.

About the Author

Mr. Barnejee is a nutrition consultant can be reached through; barnejeesk20002@yahoo.w.in, 254-703114885

Essential plant nutrients in proper combination, concentration and ratio depending on the media type and climatic condition make the plants healthy and tolerant or resistant to disease whereas the deficiency of them make the plants susceptible to diseases.

Thrips Management in Roses

What are thrips?

Thrips are minute, slender insects, usually only a few millimetres long with piercing-sucking-mouthparts and the ability to cause direct damage to flowers making it unmarketable for export.

How do thrips feed?

Thrips have piercing-sucking mouthparts. They use a needle-like structure to puncture plant tissue and a second tube-like structure which is placed into the hole through which plantsap is extracted, subsequently causing direct damage to the crop.

What are the Damage symptoms?

In Flowers there are mainly two types of Thrip species that attack Roses, Carnations and other flowers. The western flower thrips (*Frankliniella occidentalis*) and Thrips *tabaci* also known as Onion thrip. These thrips species mainly feed on both leaves and flower petals with the majority of their damage to roses occurring throughout the growing period of the flowers. Their feeding may result in distorted buds that open only partially or abort prematurely. Feeding on petals may result in petals streaked with silvery-white or brown as well as petals with browning edges. White and light-colored rose blossoms appear to be particularly attractive to thrips. Young leaves may be distorted and flecked with yellow as a result of thrips feeding.

Are all thrip species damaging to Flower?

Not all species of thrips necessarily cause direct damage to crops. Some species are considered to be predators as they feed on other thrips and other insects such as mites, others are known to help with pollination and some species even feed on fungal spores. Unfortunately, several of these species are also known to be plant-feeders and cause economic damage.

How do we Manage thrips?

Thrips are difficult to control. Always use an integrated program that combines the use of good cultural practices, natural enemies, and the most effective IPM-friendly available.

A discussion with your supplier will result to some of the best, and most effective insecticides that fits this profile. As a grower you must ensure the product has fast knockdown capabilities, is UV stable, and has translaminar activity and safe to beneficial insects that are not in contact with the wet spray.

Flower Growing in Naivasha a Boom or Doom



Blooming Flowers inside a greenhouse

Lake Naivasha is a freshwater lake in the Kenyan Rift Valley. It is unique in that it is home to both an internationally renowned environmental treasure as well as a blossoming agriculture industry that exports high value fresh vegetables and cut flowers to European and English markets.

The Lake is currently under intensive scrutiny over concerns about how its environmental integrity can be maintained whilst still supporting a valuable and growing economy and society.

Agricultural activity in the basin has expanded dramatically in terms of both the rural smallholder farmers in the upper catchment and the high value exported commercial horticulture around the Lake and this sector anchors a local economy that supports almost 650 000 people.

The two most valuable crops in the Naivasha basin are cut flowers and vegetables. The vegetables grown in Lake Naivasha contribute approximately KSh6.65 billion (\$95 million) to the Kenyan economy.

Whilst predominantly focused on producing for the local market, smallholders are increasingly able to access high value export markets through their association as “out growers” with the commercial vegetable farms.

Kenya is also one of the world’s largest exporters of cut-flowers and Lake Naivasha is at the heart of the nation’s floriculture industry, accounting to approximately 40% (App 30 billion) of the country’s cut flower exports. The Naivasha basin involves a broad group of stakeholders including large horticulture companies and their employees, the out growers and small holders, local government and basin inhabitants, and those dependent on the broader Kenyan economy and trade.

For an agriculture-based economy that is completely dependent on its water resources for economic production, the social, economic, financial (investment), regulatory and reputational risks associated with a deteriorating biophysical environment are significant. Given its linkages to the national economy and the international export markets, these risks are not localized within the basin but extend through to the rest of Kenya.

One must ask what risks are for each of

In the future, increasing urban - agricultural abstraction and increasing temperature - climate variability, is highly likely to impact on the recurrence and severity of crisis periods. Similarly, the already significant developmental pressures on this area will increase over time, due to population pressure and economic growth in the country as a whole.

these groups and also highlight the commonalities between them, or in other works the shared risks between corporate, government and civil society stakeholders.

In so doing, these stakeholders can recognize the incentive for a common consensus in mapping out a path to achieving improved water resource management in the basin and the future economic and environmental sustainability of Lake Naivasha.

It is important to recognize that the shared risk framework is not linear and does not fall within a conventional quantifiable cost-benefit metric. A reduction in abstraction for commercial farmers has knock effects in terms of employment; export earnings, livelihoods and social tensions. The manifestation of these risks is highly uncertain, but the implications are potentially significant.

Despite past severe droughts, it is unlikely that the water resources situation would cause such severe and sustained physical deterioration that major irrevocable economic impacts will be experienced in the local economy or that individual companies will fail financially, in the short term.

However, it is highly likely that some level of local economic and corporate financial impacts will occur during crisis periods of drought, water quality deterioration and/or wetland degradation.

In the future, increasing urban - agricultural abstraction and increasing temperature - climate variability, is highly likely to impact on the recurrence and severity of crisis periods. Similarly, the already significant developmental pressures on this area will increase over time, due to population pressure and economic growth in the country as a whole.

Lake Naivasha provides an important opportunity to support social and economic development in Kenya in an ecologically sustainable manner, but these opportunities may be squandered without adequate engagement of the risks. Three areas of focus may be identified in responding to these risks and opportunities:

- Risk mitigation requires improved institutional arrangements, to support a clear definition and management of the availability

of water and the rules for its use in the different parts of the catchment.

- Innovative partnerships between government, private sector and/or civil society organisations should be fostered to address problems in and around the lake.

- Progressive horticulture companies should develop Naivasha specific water stewardship standards and gain both competitive distinction and reputational “immunisation” by gaining accreditation by a recognised body.

Cut-flower farming

The flower farms surrounding the Lake growing approximately 1,200 hectares of cut-flower of which approximately 800 are grown in greenhouses. Roses make up about 75% of Naivasha’s annual agricultural production, followed by mixed flowers (8%), hypericums (3%) and carnations (2%). The Naivasha basin accounts for approximately 40% of Kenya’s cut flower exports and generates approximately 9% of Kenya’s total foreign exchange revenue.

It is estimated that 45% of the revenue generated by a typical cut flower farm is spent on production costs at the farm. This would imply that the contribution of the floriculture industry to Lake Naivasha’s local economy is approximately KSh 12.6 billion (\$180 million). It is estimated that the flower industry employs approximately 40,000 people in Naivasha directly and over 350,000 indirectly.

Institutional Arrangements

Through a combination of consumer and buyer pressures, the private sector has made some significant strides in self-regulating water use in commercial farming operations. The Lake Naivasha Growers Group (LNGG) is a commercial farming body that has its own code of practice

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relating to water use and environmental impacts that its members have to follow.

Given the greater consumer awareness in the international markets, many of the supermarkets and buyers make it compulsory for the commercial farmers to follow the requirements of different certifications, which put down certain standards in terms of water use, environmental standards, operational health and safety and labour relations.

However, it is clear that upstream small holder farming has an impact on the hydrology of the basin, which is largely not addressed by these certification processes.

Investment Risk

The increasing public awareness around water has contributed to investors considering water risk in their financing of equity and debt. Carbon Disclosure Project Water Disclosure initiative has been launched.

Some banks and fund managers may start to make investment decisions around water considerations.

The likelihood of this risk is quite high and is not directly linked to periods of crisis (as with the other risks), but is associated with investor perceptions around physical, social and institutional risks.

In view of this, Naivasha is likely to be viewed as high risk in an international context and therefore financial institutions may place a premium on debt and equity associated with companies operating in Naivasha.

Economic-financial Risk

The point has been made above that all of these other risk will eventually have economic consequences at a local economy, national economy or international trade economy level.

Horticulture and small-holder farming is the mainstay of the local economy, which is by far dominated

by the cut flower industry. While Naivasha and the horticulture industry do have a national impact, this is relatively small (<3%). However, it does have a significant (>10%) impact on export earnings and thus the current account.

Any negative consequences for these exports related to the above risk areas, will have direct impacts on the country's foreign exchange, as well as possibly indirect investor perception issues.

From this perspective, the management of risk in Lake Naivasha must be taken seriously at a national political, economic and planning level. Similarly, any negative impacts on horticulture companies' operations associated with the above mentioned risks might have impacts

on their financial position and profitability.

While these companies have made investments in the region, increasing risk may cause them to relocate to other regions with lower risks. This may have significant impacts on the local and national economy. Assessment of the economic risk is a synthesis of all the other risks, which in turn are largely dependent upon the physical risk.

It is unlikely that the current situation would cause such severe and sustained physical deterioration that major irrevocable economic impacts will be experienced in the local economy or that individual companies will fail financially.

However, there is highly likely that some level of local economic and corporate financial impacts will occur during crisis periods, largely associated with reduced crop yields associated with reduced water abstraction and/or higher pumping costs from the farms that are directly dependent upon the lake and its surrounding groundwater.

Conclusion

In conclusion, the shared risk of the private and public sectors around the water resources of Lake Naivasha has been reframed as a shared opportunity for future social and economic development of the basin in the interests of all the people in the region. It is through this lens that the lake is being reclaimed.



Sustainability: Hippos in Lake Naivasha

A Powerful Well Regarded Variety Can Shift The Demand Curve

Varieties are valued at millions, often billion of US dollars. For many successful breeders their varieties represent their most-prized assets. So why are varieties valuable? A powerful well regarded variety can shift the demand curve.

They completely change the consumers' perception. These perceptions affect individuals' attitudes and behaviours, including purchasing decisions, and thus in-turn affects the business success of the breeders. In short, they provide a barrier to competitors by creating an essential competitive advantage.

So, do not allow growers mess up with your variety. Growers are there to perform a specific role, to grow. They will do it for a short time, before moving to another variety or the next challenge. So perhaps it is best not to leave the true value of your variety in the hands of apprentices. Leave it to the professionals. They will make your variety a super brand by giving it the correct vase life in a better cool chain management.

So, who said the grower would like a poor brand. He knows the value of brands because his name is a super brand in the market place. And by any cost it should remain so. Perhaps he even needs professionals more than you, the breeder.

For he knows one thing, the price of a cut flower is determined by its quality at point of sale, not at harvest. Remember, he has invested hugely from selection, propagation, production all through to harvest, so he needs a prime cost. So, it now is clear that both have a common denominator a professional.

It is not gainsaying that benchmarking on the same variety, some farms perform far much better than others. Additionally, picked from the same farm and with everything else constant, some varieties perform better than others. This give both the growers and breeders an overview of their brands.

What can this mean?

Results will be well interpreted and a grower will be able to:

1. Know his own performance.

2. Know variety characteristics e.g. ethylene sensitivity.
3. Know the effect of opening stages on flower life.
4. Benchmark against industry standards.
5. Consistency of his production systems hence set the right systems in the farm and the whole supply chain.
6. Choose the right variety
7. Audit their systems before conclusion of the variety performance
8. Analyse post-harvest characteristics and improve the procedures where necessary.
9. Use the right post harvest treatment.



Growers visiting Kordes Roses for Variety Updates

Retailers

Retailers would like to improve the volumes sold and command respect for their quality supply. So any form of quality reduction will affect them negatively. This has drawn them to demand product specification and supply chain criteria as part of their purchase contract.

This will command more respect if the vase life test has been done by an independent professional and confirm to the consumers they are buying the

right flowers.

Conclusion

Quality production and supply of flowers to the market will impact positively not only to the grower and breeder but also upon other stakeholder groups beyond the consumer.

The very best employees will be attracted to growers with high profile and esteemed brands. In addition, it has been proved that employees working for such brands are considerably more positive about their employers and twice as more likely to recommend them. They are also more likely to feel proud of their end product and tend to be more attached to it.

Sea Freight or Air Freight?



Sea freight

The transportation of flowers is a critical aspect of the global floriculture industry. Ensuring that fresh and high-quality blooms reach international markets is essential for the success of flower exporters. While air freight is often the preferred choice due to its speed, sea freight offers distinct advantages in certain scenarios. By examining factors such as cost-effectiveness, long-distance transportation, stability, environmental considerations, seasonal demand, and planning, we can understand the benefits of sea freight in the flower industry.

Cost-Effectiveness

One of the primary advantages of sea freight over air freight in flower transportation is its cost-effectiveness. Sea freight generally offers lower transportation costs, especially for large-volume shipments. The economies of scale associated with sea freight enable flower exporters to reduce the cost per stem or bouquet significantly.

By utilizing sea freight, exporters can transport a substantial quantity of flowers in a single container, optimizing space utilization and reducing overall transportation expenses. This cost advantage is particularly relevant when time sensitivity is not a critical factor in the shipment. In cases where flowers have a longer shelf life or are less perishable, sea freight becomes an economical option, allowing exporters to save considerably on transportation costs and remain competitive in the global flower market.

Long-Distance Transportation

Sea freight excels in long-distance transportation,

making it an ideal choice for intercontinental shipments. While air freight offers speed, it is not always necessary for flowers that can withstand a longer transit time without compromising their quality. By opting for sea freight, flower exporters can achieve cost savings and still deliver fresh, beautiful blooms to distant destinations.

This is especially true for flowers with a longer shelf life or those that are more tolerant of extended travel periods. With careful planning and appropriate

packaging, including the use of temperature-controlled containers, exporters can ensure that the flowers arrive in excellent condition, even after a prolonged voyage. By leveraging sea freight for long-distance transportation, flower exporters can expand their market reach, cater to international customers, and capitalize on cost-effective shipping options.

Stability and Less Handling

Another advantage of sea freight over air freight in flower transportation is the stability

it provides during transit. Ships offer a more controlled and stable environment, characterized by gentle rocking motion and minimal vibrations. This stable transportation environment minimizes the risk of damage to delicate flowers, preserving their quality throughout the journey. In contrast, air freight involves more frequent loading and unloading processes, which can subject flowers to turbulence and increased handling risks.

By opting for sea freight, flower exporters can reduce the chances of physical stress on the blooms, ensuring that they arrive in optimal condition. Additionally, sea freight involves fewer

By examining factors such as cost-effectiveness, long-distance transportation, stability, environmental considerations, seasonal demand, and planning, we can understand the benefits of sea freight in the flower industry.



Loading of Flower Boxes for Air Freight

transfers, which further reduces the potential for damage and ensures that the flowers remain fresh and intact during transportation.

Environmental Considerations

In an era where sustainability is of increasing importance, sea freight offers environmental advantages over air freight in flower transportation. Ships have lower fuel consumption and emit fewer greenhouse gases per unit of cargo transported compared to airplanes. By opting for sea freight, flower exporters can significantly reduce their carbon footprint and contribute to a greener transportation industry.

This choice aligns with the broader goals of environmental responsibility and sustainability in the flower sector. However, it is crucial to strike a balance between environmental considerations and the freshness of the flowers. Proper packaging, temperature control, and efficient logistics planning are vital to ensure that the flowers maintain their quality while being transported by sea. By implementing sustainable practices and choosing sea freight, flower exporters can demonstrate their commitment

to environmental stewardship and meet the growing consumer demand for eco-friendly products.

Seasonal Demand and Planning

Seasonal demand fluctuations can significantly impact the flower industry. Sea freight provides a valuable solution for managing these fluctuations and optimizing supply chain efficiency. By strategically utilizing sea freight during off-peak seasons, flower exporters can take advantage of lower transportation costs. This allows them to maintain consistent availability throughout the year, even during periods of high demand. By aligning transportation modes with seasonal patterns, exporters can reduce reliance on air freight when prices and capacity may be more volatile. Effective planning and logistics coordination are crucial to ensure that the flowers are transported in a timely manner, maintaining their freshness and marketability. By leveraging the flexibility of sea freight, flower exporters can adapt to seasonal demand variations, optimize their operations, and enhance customer satisfaction.

In conclusion, while air freight remains the preferred choice for time-sensitive and delicate flowers, sea freight offers distinct advantages in flower transportation. The cost-effectiveness, suitability for long-distance shipments, stability, environmental considerations, and flexibility for seasonal demand management make sea freight a compelling option for flower exporters.

You're Not Alone

*Powdery mildew is caused by a fungus called *Sphaerotheca pannosa*, it is one of the most widespread and easily identifiable plant fungal disease. From vegetable gardens to rose gardens, ornamental trees and shrubs, almost no type of plant is immune even though the fungus is host specific.*



*Plant affected by
Powdery mildew*

What to look for: You've likely seen it many times. White or gray powdery spots appear, often times covering most if not the entire leaf surface. It's also found on plant stems and flowers. Fortunately, the symptoms of powdery mildew are usually worse than the actual damage. Rarely is it fatal to the plant.

Advanced stages can cause plant foliage to yellow, curl or turn brown and eventually cause the plant to defoliate prematurely. On flowering plants, the fungus can lead to early bud drop or reduce the flower quality and this kind of loss can be devastating for any grower, large or small.

Epidemiology: In greenhouses, roses and powdery mildew grow continuously. The disease cycle can be as short as 72 to 96 hours. If left uncontrolled, powdery mildew can quickly become epidemic when suitable conditions for disease are present, but especially when rainfall is low or absent, the days are warm and dry, and the nights are cool and damp.

Symptoms: Symptoms first appear on the upper leaf surface. They are irregular, light green to reddish, slightly raised blister like areas shortly followed by the typical dense, powdery white growth (mycelium, conidiophores and spores) of the mildew.

Young leaves become curled or irregularly twisted and are usually covered with enlarged, whitish gray powdery patches of the fungus. Also buds may become infected, initially with the typically flour like symptoms, if this is rubbed off the stems have brown patches but stays firm (this in contrast to botrytis)

Infection Process: Infection starts with spore landing on a leaf (or on the stem or the flower) No water is required for this since the spore consists of 70% water. Germination usually takes place at night in this period the Relative Humidity (RH) is generally higher than during the day. A high RH promotes germination, water drops on the leaves inhibit germination but after drying the leaf is more sensitive

to infection. Dispersal takes place mainly by air movement and to a lesser degree by humans or animals. Sporulation takes place usually by day, around noon. The spores' spread mainly by air movement and to a lesser degree by humans or animals and despite their own high moisture content, the spores do not live long and if they do not germinate on living plant material they may die within 2 or 3 days.

Controlling an existing problem: Powdery mildew is a huge challenge hence the need to explore some ways to keep this fungus from ruining your plants. First and foremost, prevention is key. As the saying goes, "an ounce of prevention is worth a pound of cure". Once it is in your environment it is very difficult to eradicate.

Should you find the need to react to an existing condition of powdery mildew, early detection provides the best way to contain and potentially eliminate the problem. There are many commercial products that are effective at containing the spread. However, eliminating an existing problem is not a given. Most conventional products are made for prevention and control, not elimination of an existing infection. That's why it's important to start a control program before powdery mildew occurs or at least at the earliest sign of detection.

Cultural Practices: Getting rid of powdery mildew on roses can at times be a hard task so being proactive and getting out ahead of it through cultural methods like variety selection, providing good air circulation (bending), to avoid excess use of fertilizers, taking away fallen leaves, maintaining a healthy plant, last but not least to shower the leaves so as to kill the spores, but being careful not to raise the RH when you go into the night.

NEW SQUARE FLOWER BUCKETS!



**10%
OFF**

PROUDLY MADE IN KENYA

Traceability in the Floral Value Chain

The floral industry is a global business that involves the production, distribution, and retail of flowers and ornamental plants. With increasing consumer awareness about the environmental and social impact of products, there is a growing demand for traceability in supply chains, including the floral value chain. Traceability refers to the ability to track and document the journey of a product from its origin to the end consumer, providing transparency and accountability.



Flowers

In the context of the floral industry, traceability plays a crucial role in ensuring sustainable and ethically sourced flowers, meeting consumer expectations, and supporting responsible business practices. This essay explores the significance of traceability in the floral value chain, highlighting its benefits, challenges, and the technologies and initiatives driving its implementation.

Benefits of Traceability in the Floral Value Chain
Consumer Confidence and Demand: Traceability instills confidence in consumers by providing transparent information about the origin, quality, and sustainability of flowers. Consumers increasingly seek products that align with their values, such as environmentally friendly and ethically sourced flowers. Traceability empowers

consumers to make informed purchasing decisions and supports their preferences for responsible and sustainable products.

Supply Chain Transparency: Traceability enhances transparency throughout the floral value chain. It allows stakeholders to track and document key information at each stage, including production practices, handling, transportation, and storage conditions. This transparency helps identify and address potential issues related to quality, safety, or compliance with environmental and social standards.

Quality Assurance: Traceability systems enable better quality control by tracking the handling



Auction: Flowers Need to be traced from the Farm

and storage conditions of flowers. By monitoring factors such as temperature, humidity, and transportation routes, stakeholders can ensure that flowers are maintained in optimal conditions, preserving their freshness, longevity, and quality.

Risk Management: Traceability provides a mechanism to trace back any quality or safety issues that may arise in the floral value chain. In the event of product recalls or contamination incidents, traceability allows for quick and targeted responses, minimizing the impact on consumers and mitigating reputational risks for businesses.

Sustainability and Social Responsibility: Traceability supports sustainability initiatives in the floral industry. It enables the identification and promotion of flowers produced using environmentally friendly practices, such as reduced water and chemical

usage or adherence to sustainable certifications. Traceability also helps ensure compliance with labor and social standards, including fair wages, safe working conditions, and respect for workers' rights.

Challenges and Implementation of Traceability : While the benefits of traceability in the floral value chain are significant, its implementation faces various challenges.

These challenges include:

Complexity of the Supply Chain: The floral value chain often involves multiple stakeholders, including farmers, wholesalers, distributors, retailers, and logistics providers. Coordinating traceability efforts among these diverse actors can be challenging due to differences in infrastructure, technology adoption, and information sharing practices.

Data Collection and Management: Collecting and managing accurate and reliable data throughout the value chain is crucial for effective traceability. However, data collection can be resource-intensive and time-

consuming, particularly for small-scale farmers or businesses with limited technological capabilities. Standardized data formats and protocols are necessary to ensure compatibility and consistency across the supply chain.

Limited Technology Adoption: Traceability systems rely on technology, such as barcode scanning, radio frequency identification (RFID), or blockchain. However, the adoption of these technologies may be limited due to factors such as cost, infrastructure requirements, and technical expertise. Overcoming these barriers and promoting technology uptake across the floral value chain is essential for effective traceability implementation.

Collaboration and Cooperation:

Implementing traceability requires collaboration and cooperation among stakeholders. This can be challenging due to competition, information asymmetry, or reluctance to share proprietary information.

Building trust and establishing partnerships among stakeholders is crucial to foster effective traceability practices.

Despite these challenges, various initiatives and technologies are driving the implementation of traceability in the floral value chain: Certification and Standards: Industry-wide certifications and standards play a crucial role in establishing traceability practices. For example, sustainability certifications like Florverde Sustainable Flowers or Fairtrade provide guidelines and requirements for



Sky train flower transportation from greenhouse to grading hall



Road Transportation of Flowers

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responsible production, ensuring traceability and compliance with environmental and social criteria.

Technology Adoption: Advances in technology have opened new possibilities for traceability in the floral industry. Blockchain technology, for instance, provides an immutable and decentralized ledger that can securely record and share supply chain information. Blockchain enhances transparency, prevents data tampering, and enables real-time access to traceability information.

Digital Platforms and Data Management Systems: Digital platforms and data management systems are emerging to facilitate traceability in the floral value chain. These platforms provide centralized databases or cloud-based solutions for storing and sharing supply chain information. They enable stakeholders to access, verify, and update data, promoting transparency and collaboration.

Data Collection Tools: Innovations in data collection tools, such as mobile applications or Internet of Things (IoT) devices, simplify the gathering of information in the floral value chain. Mobile apps can be used to record data at the farm level,

including production practices or environmental parameters. IoT devices, such as sensors or RFID tags, enable real-time data collection on transportation conditions, ensuring transparency and monitoring quality.

Traceability plays a vital role in the floral value chain by ensuring transparency, accountability, and sustainability. It provides consumers with the information they need to make informed choices, supports responsible business practices, and helps identify and address issues related to quality or compliance. While challenges exist, initiatives such as certifications, technological advancements, and collaborative efforts are driving the implementation of traceability.

By embracing traceability in the floral value chain, stakeholders can enhance consumer confidence, promote sustainable production practices, and contribute to the overall integrity and transparency of the industry. Continued investment in traceability systems, technology adoption, and industry collaboration will be essential to meet evolving consumer expectations and ensure the long-term sustainability of the floral sector.

A Wild Paradise Right in your Backyard

Imagine, plan, explore and become.....

A blind boy sat on the steps of a building with a hat by his feet. He held up a sign which said: "I am blind, please help." There were only a few coins in the hat. A man was walking by. He took a few coins from his pocket and dropped them into the hat. He then took the sign, turned it around, and wrote some words.

He put the sign back so that everyone who walked by would see the new words.

Soon the hat began to fill up. A lot more people were giving money to the blind boy. That afternoon the man who had changed the sign came to see how things were. The boy recognized his footsteps and asked, "Were you the one who changed my sign this morning? What did you write?" The man said, "I only wrote the truth. I said what you said but in a different way." I wrote: "Today is a beautiful day but I cannot see it."

We live in a great country that God created so beautifully with bushes where the wild animals live in harmony, the great beaches where the Indian Ocean rests so peacefully in the coastal region, the snowcapped mountain that is so highly recognized and the great landscapes of the rift valley, beautiful farms with rice, wheat, coffee, tea, fruits and flowers, herds of cows, goats and all the livestock, and most of all the great diversity in the people; Bantu's, Cushites and Nilotes! All blended together to make this great land called Kenya.

But, wait a minute, how many of us in this same country actually have taken time to appreciate what this country has to offer us? We have people coming from all over the world who have in their bucket list – "A trip to Kenya"..... Reasons, they want to unwind, know the unknown, experience the Bush, Beach and City all in one visit. They take time to read, watch documentaries, listen to stories told by those who have visited and this gives them the desire to want to actualize it in their lives.

Just like in the story of the blind boy, he can only imagine how beautiful it is to the world of those who have sight, yet he cannot see that, what about you and me who have been blessed with good sight and yet we seem not to fully utilize this sense? Ever been astonished by some sights of landscape or buildings that leave you mouth wide open? Ever looked at some images and you wonder where in the world they were shot from? Ever heard of people talking about some cultures and you get surprised to know that they exist in Kenya?

We are many of us who have not factored in travel to new destinations locally as an activity that needs to be slotted in our busy calendars. We also have others who know outside Kenya more than they know the country they belong. We can change this if we start looking at travel to the national parks, game reserves, private sanctuaries and conservancies to the beaches and doing excursions like climbing the hills and mountains as a necessity for our own wellbeing. There is need to change routine, get from our comfort zones and spend money in areas we have not spent before just to make our own bodies, soul and mind to be happy. Imagine one afternoon doing a drive in the maasai mara game reserve; where elephants, giraffes, buffaloes, zebras, lions, wildebeest and many more are all you are seeing in their natural habitat going around their business undisturbed by your presence! Or better still, a lion bringing down a zebra for its supper or a leopard taking up its meal on the tree after a successful hunt or a mourning mother impala after losing its baby to a cheetah? No, you really must be the one experiencing this to believe!

Imagine yourself taking this trip to a destination you have not been, figure out what you will experience, plan on what you need to do and take a bold step to get out of your office for 3 days, pack your travel bag, put on casual wear, get your sun glasses, your hat and set out for the safari you have not been before. The northern part of Kenya has great places in Shaba Game Reserve, Buffalo Springs Game Reserve and the Samburu Game Reserve; all three in one-sharing the same ecosystem. Get to the Aberdares area and experience the forest and mountains, get to the rift valley and enjoy the great lakes, hills and valleys and over 400 different bird species that are so beautiful and all have different sounds, get to the south and experience the great plains and if lucky the 8th wonder of the world "Wildebeest Migration", get to the coast and take a dip into the Indian Ocean and walk on the sand under the sun..... it is just amazing.....

When is this time you need to treat yourself, your spouse, children, social group, your employees, colleagues for that well deserved break? Speak to the experts and you can be assured of getting more than you ask. You will carry memories that will keep you yearning for more. Let us use our eyes to see the beauty that lies beyond what we see every day.....

Are you ready? Let's go.....

FLOWER & VEGETABLE FARMS IN KENYA

FARM NAME	PRODUCT	LOCATION	CONTACT PERSON	TELEPHONE	E-MAIL
AAA- Flowers-Simba	Roses	Rumuruti	Sanjeev	0739360050	sanjeev@aaagrowers.co.ke
AAA- Flowers -Chui Farm	Roses	Timau	Phanuel Ochunga	07522506026	fanuel.ochunga@aaagrowers.co.ke
AAA-Simba Farm	Roses	Rumuruti	-	-	-
Across Agriculture Ltd	Herbs	-	Emily Chepkemoi	0729080186	chep28@gmail.com
Africalla Kenya Ltd	Cuttings	Eldoret	Meindert	-	meindert@africalla.com
Africa Blooms	Roses	Salgaa	Ramnath Sarbande	0798190511	ramnath.sarbande@xflora.net
Agriflora (K) Ltd		Nakuru, Njoro	Charles Mulemba	0721311279	cmulemba@sianflowers.co.ke
Aquila Development Co	Roses	Naivasha	Prashant Takate	0799356002	gm@aquilaflowers.com
Baraka Roses/ Mumi Flora	Roses	Ngorika	Paul Salim	0746766638	-
Batian Flowers	Roses	Nanyuki	Rakesh	0724631299	
Beautyline	Flowers	Naivasha	Peter Gathiaka	0721392559	peter@beautyli.com
Big Flowers	Roses	Timau	Gideon Waweru	0721178974	gideon@fontana.co.ke
Bigot Flowers	Flowers	Naivasha	Kakasaheb Jagtap	0722205271	jagtap.kt@bigotflowers.co.ke
Bila Shaka Flowers	Roses	Naivasha	Joost Zuurbier	0722204489	bilashaka.flowers@zuurbier.com
Bohemian	Flowers	Nakuru	Thambe Sabaji	0734 740202	-
Black Petals	Roses	Limuru	Nirzar Jundre	0722848560	nj@blackpetals.co.ke
Black Tulip- Lemotit	Flowers	Kericho	Yogesh	0715817369	-
Bliss Flora Ltd	Roses	Njoro	Appachu Sachin	0789101060	appachu7@yahoo.com
Bloom Valley	Roses	Salgaa	Ramnath Sarbande	0798190511	ramnath.sarbande@xflora.net
Blooming Dale Roses Kenya Ltd	Roses	Nanyuki	Sunil	0718991182	info@bloomingdaleroses.com
Blooming Africa	-	Gilgil	Bert	0722204309	bert@blooming-innovations.com
Buds and Blooms	Roses	Nakuru	Shivaji Wagh	0720895911	shivaniyet@yahoo.com
Carzan (K) Ltd KS	Summer flowers	Salgaa	Stanley Rotich	0721931710	stanley.rotich@marginpar.biz
Carzan (K) Ltd ST	Hypericum, solidago	Sobe	Thaddeus Adung'o	0716019094	thaddeus.adung'o@marginpar.biz
Carzan - Molo	Carnations	Molo	Charles Chelule	0728784081	charles.chelule@marginpar.biz
Chestnut	Vegetables	Naromoru	Gabriel Kiai	-	gabriel.kiai@aaagrowers.co.ke
Colour Crops	Hypericum	Nanyuki	Kennedy Wanyama	0716389472	colourcrops@tmu.com
Colour crops	Summer Flowers-	Bahati	Patrick Kipkurui	0727806184	bahati@colourcrops.com
Colour crops	Flowers	Naivasha	Geoffrey Mwaura	0722200972	nva@colourcrops.com
Credible Blooms	Flowers	Rumuruti	Eliud Njenga	0722382859	eliud@pigeonblooms.com
Dale Flora	Roses	Mogotio	Brijesh	0715469732	-
Desire Flowers	Flowers	Isinya	Rajat Chaohan	0724264653	rajatchaohan@hotmail.com
De ruiters	Breeder Roses	Naivasha	Ethen Chege	0720477717	-
Dummen Orange	Flowers Breeders	Naivasha	Bart Engels	0759069896	b.engels@dummenorange.com
Eco Roses	Roses	Salgaa	Madhukar Bhalerao	0799555440	Mbhalerao.eco@btfgroup.com
Elbur flora- kimman	Roses	Nakuru	Daniel Moge	0721734104	kimmanexp@gmail.com
Enkasiti Thika	Flowers	Thika	Satish	0735270236	enkasiti@gmail.com
Equinox	Flowers	Nanyuki	Harry Kruger	0707266956	harry@equinoxflowers.com
Everest Flowers Ltd	Flowers	Mt. Kenya	Japheth Chelal	0721770597	-
Everflora Ltd.	Flowers	Thika	Ghanshyam Dusang	0721638005	manager1@everflora.co.ke
Evergreen Crops		Nairobi	Arun Singh	0721941009	arun@evergreencrops.com
Exotic	Roses/ Carnations	Athiriver	Peninah Shimon	0737626533	-
Fairy Flowers	Flowers	Limuru	-	-	-
Fides Kenya Ltd	Cuttings	Embu	Jan Molenaar	0733331580	-
Fontana Ltd - Akina farm	Roses	Njoro	Mahendra Patil	0798254199	mahendra@fontana.co.ke
Fontana Ltd - Ayana Farm	Roses	Mau Narok	Osman	0712933710	osman@fontana.co.ke
Flamingo Horticulture Farm	Flowers	Naivasha	Peter Mwangi	0722204505	peter.mwangi@flamingo.net
Flamingo - Kingfisher Farm	Flowers	Naivasha	Jacob Wanyonyi	0722773560	jacob.wanyonyi@flamingo.net
Flamingo - Osprey		Naivasha	Jacob Wanyonyi	0722773560	jacob.wanyonyi@flamingo.net
Flamingo -Siraji Farm	Carnations, Roses	Nanyuki	Peris Muturi	0729050116	Peris.Ndegwa@flamingo.net
Flamingo - Ibis	summer, vegetables	Nanyuki	Abraham Gitonga	0722605942	-
Flamingo - Pioneer	Roses	Nanyuki	Gregory Sunguvi	-	-
Flora ola	Roses	Solai-Nakuru	Lucas Choi	0721832710	lucas.choi@floraola.co.ke
Flora Delight	Summer flowers	Kiambu/ Limuru	Marco	0710802065	marcovansandijk@yahoo.com
Florensis Ltd	Cuttings	Naivasha	Simon Mwangi	0721519470	simon.mwangi@florensis.com
Florenza Ltd 1 & 2	Roses	Solai	Vivek Sharma	0731040498	farm.florenza@megaspingroup.com
Fresh Gold Flowers Ltd	Flowers	Mt. Kenya	John Karimi	0721622294	karimi@freshgolkenya.co.ke
Gatoka Roses	Roses	Thika	Herman Njuguna	0728 854 844	info@gatokaflowers.com
Golden Tulip	Roses	Olkalao	Umesh Choudhery	0739729658	umesh.gftl@btfgroup.com

FLOWER & VEGETABLE FARMS IN KENYA

FARM NAME	PRODUCT	LOCATION	CONTACT PERSON	TELEPHONE	E-MAIL
Groove	Flowers	Naivasha	John Ngoni	0724448601	groovekenya@gmail.com
Hanna Roses Ltd	Roses	Thika	Dinkar Wandhekar	0702418174	dinkar@eaga.co.ke
Heritage Flowers Ltd	Roses	Rumuruti	Sailesh Kumar	0722203750	hfl.srk@gmail.com
Highland plantations	Cuttings & Herbs	Olkalau	Mangoli Dickson	0792847884	production@highlandplants.co.ke
Interplant Roses	Roses	Naivasha	Gavin Mouritzen	0733220333	info@interplantea.co.ke
Isinya	Flowers	Isinya	Rajesh	-	pm@isinyaroses.com
Karen Roses	Flowers	Nairobi	Peter Mutinda	0723353414	pmutinda@karenroses.com
Kariki Ltd- Thika	Flowers	Thika	Miriam	0720674307	kariki.production@kariki.biz
Kariki Ltd - Nanyuki	Eryngiums	Nanyuki	Peterson Thuita	0724786004	bondet.fm@karik.biz
Kariki Ltd - Naivasha	Summer	Naivasha	Esau Onyango	0728606878	hamwe.production@kariki.biz
Kariki Ltd - Molo	Fowers	Molo	James Oluoch	0716333717	jame.oluoch@kariki.biz
Kenflora Limited		Kiambu/ Limuru	Abdul Aleem	0722311468	info@kenfloraa.com
Kentalya	Cuttings	Naivasha	Lynette	0733549773	lynette@kentalya.com
Kikwetu Flowers	Roses	Mt. Kenya	Rathan	0787266007	
Kisima Farm Ltd	Roses	Timau	Craig Oulton	0722205828	craig@kisima.co.ke
Kreative	Roses- Breeders	Naivasha	Bas Smit	0733607755	info@kordes-ea.com
Kongoni River Farm - Gorge Farm	Roses	Naivasha	Anand Patil	0728608785	anand.patil@vegpro-group.com
Kongoni River Farm - Liki River	Flowers	Nanyuki	Madhav Lengare	0722202342	madhav@vegpro-group.com
Kongoni River Farm - Star Flowers	Roses	Naivasha	Jagtap Shahaji	0792547633	japtag@vegpro-group.com
Kongoni River Farm - Kongoni	Flowers	Timau	Kadam	0721274413	--
Kongoni River Farm -Bemack	Flowers	Timau	Balasaheb Ingwale	0717181102	balasaheb@vegpro-group.com
Kongoni River Farm - Galaxy	Roses	Naivasha	Chandrakant Bachche	0724639898	chandrakant.bachche@vegpro-group.com
Kongoni River Farm- Longonot	Roses	Naivasha	Ravi Sathe	0715173603	ravi.sathe@vegpro-group.com
Lamorna Ltd (Herburg Group)	Roses	Naivasha	Vijay	-	admin@lamornaflowers.com
Lathy Flora & Fairy	-	Kiambu	John Mbaoni	0733888126	info@lathyflora.com
Lauren International	Flowers	Thika	-	0706804225	ravipalshikar.lil@btfgroup.com
Laurel Investment	Roses	Olkalou	Ravindra Palshikar	0740569286	ravi.lil@btfgroup.com
Lolomarik	Roses	Nanyuki	Topper Murry	0715 727991	topper@lolomarik.com
Lobelia	Roses	Timau	Ken Mwiti	0722475785	info@lobelia.co.ke
Maridadi Flowers	Flowers	Naivasha	Jack Kneppers	0733333289	jack@maridadiflowers.com
Maua Agritech	Flowers	Isinya	Kori	115355251	kori@mauaagritech.com
Mau Flora	Roses	Nakuru, Turi	Manju	0748254171	manju@mauflora.co.ke
Milenium Growers	Summer Flowers	-	Sushant Wankara	0731316000	sushant@marvelgreens.com
Molo Greens	Solidago, carnations	-			
Mt. Elgon Orchards	Roses	Tran Nzoia	Bob Anderson	0735329395,	bob@mtelgon.com
Mt. Kenya Alstromeria	Alstromeria	Meru	Miriam	0716162671	miriam@mountkenyaalstromerialtd
Mzuurie Group	Roses		Andrew Wambua	0724256592	awambua@moloriverroses.co.ke
Mzuurie Flowers - Maji Mazuri	Roses	Moi's Bridge, Eldoret	Mark Juma	0727471034	mjuma@majimazuri.co.ke
Mzuurie Flowers - Molo River Roses	Flowers	Kilelwa	Paula Koros	072241436	pkoross@moloriverroses.co.ke
Mzuurie Flowers - Winchester Farm	Roses	Karen	Kasoso Joseph	0725696509	-
Mzuurie Flowers - Winchester Farm	Flowers	Bahati	Joseph Kasoso	0725696509	jkasoso@winchester.co.ke
Nini Farms (Herburg Group)	Roses	Naivasha	Vijay Bhosale	0702662297	vijay.bhosale@herburgroses.nl
Nirp East Africa	Roses	Naivasha	Danielle Spinks	0702685581	danielles@nirpinternational.com
Ol Njorowa	Roses	Naivasha	Charles Kinyanjui	0723986467	mbegu@olnjorowa.com
Panda Flowers	Roses	Naivasha	Sundhar	0748436571	farm@pandaflowers.co.ke
Panocol International	Roses	Eldoret	Paul Wekesa	0722748298	paul.wekesa@panocal.co.ke
Penta	Flowers	Thika	Tom Ochieng	0723904006	tom@pentaflowers.co.ke
Pendekeza	Roses	Nanyuki	James Kiiru	0708124381	tambuzi.sales@tambuzi.co.ke
PJ Dave Flowers	Flowers	Isinya	Pravin Yadav	0708920202	gm@pidave.com
PJ Dave	Roses	Timau	Shantaram	0732556256	fmrisingun@pjdave.com
PJ Flora	Roses	Isinya	Santos Kulkarni	0738990521	santosh@pjdaveflora.com
Plantech Kenya Ltd	Propagators	Naivasha	Idan Salvy	0702187105	idan@plantechkenya.com
Porini Flowers	Roses	Molo	Shakti Vanjimithu	0739676998	shakti@poriniflowers.com
Primarosa Flowers Ltd	Roses	Ol njororok	Peter G. Njagi	0723575461	opm@primarosaflowers.com
Rain Forest Farmlands Ltd	Roses	Naivasha	Boniface Kiama	0722780811	bkiama@fleurafrica.com
Ravine Roses Flowers	Flowers	Eldama Ravin	Peter Kamuren	0722205657	pkamuren@karenroses.com
Redland Roses	Flowers	Thika	Kadlag Palaji	0723149968	-
Redwing Flowers	Flowers	Nakuru	Simon Sayer	0722227278	sayer@redwingltd.co.ke

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