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THE LEADING FLORICULTURAL JOURNAL IN THE REGION

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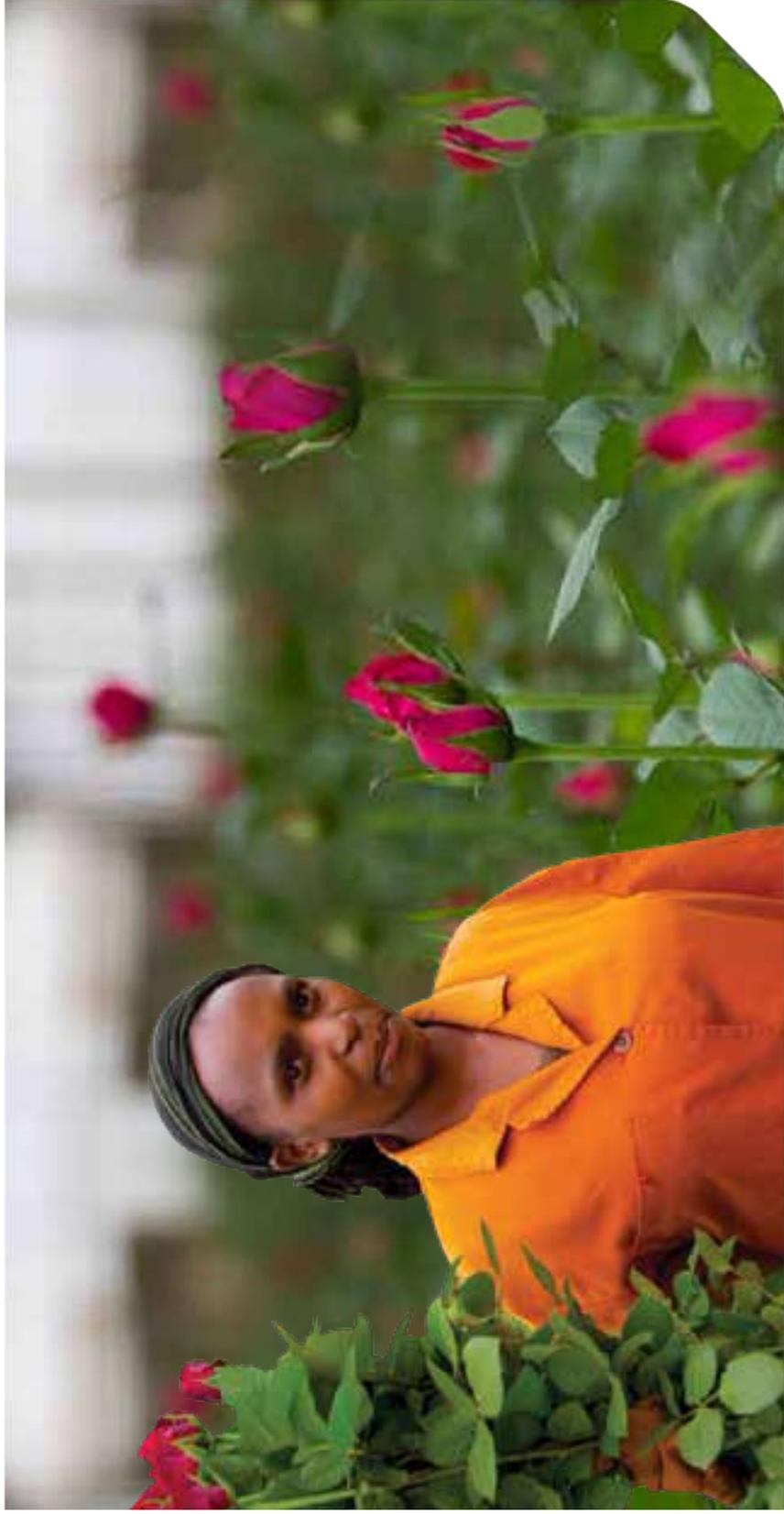


**How COVID  
has Affected the Lives of  
Flower Workers in Kenya**



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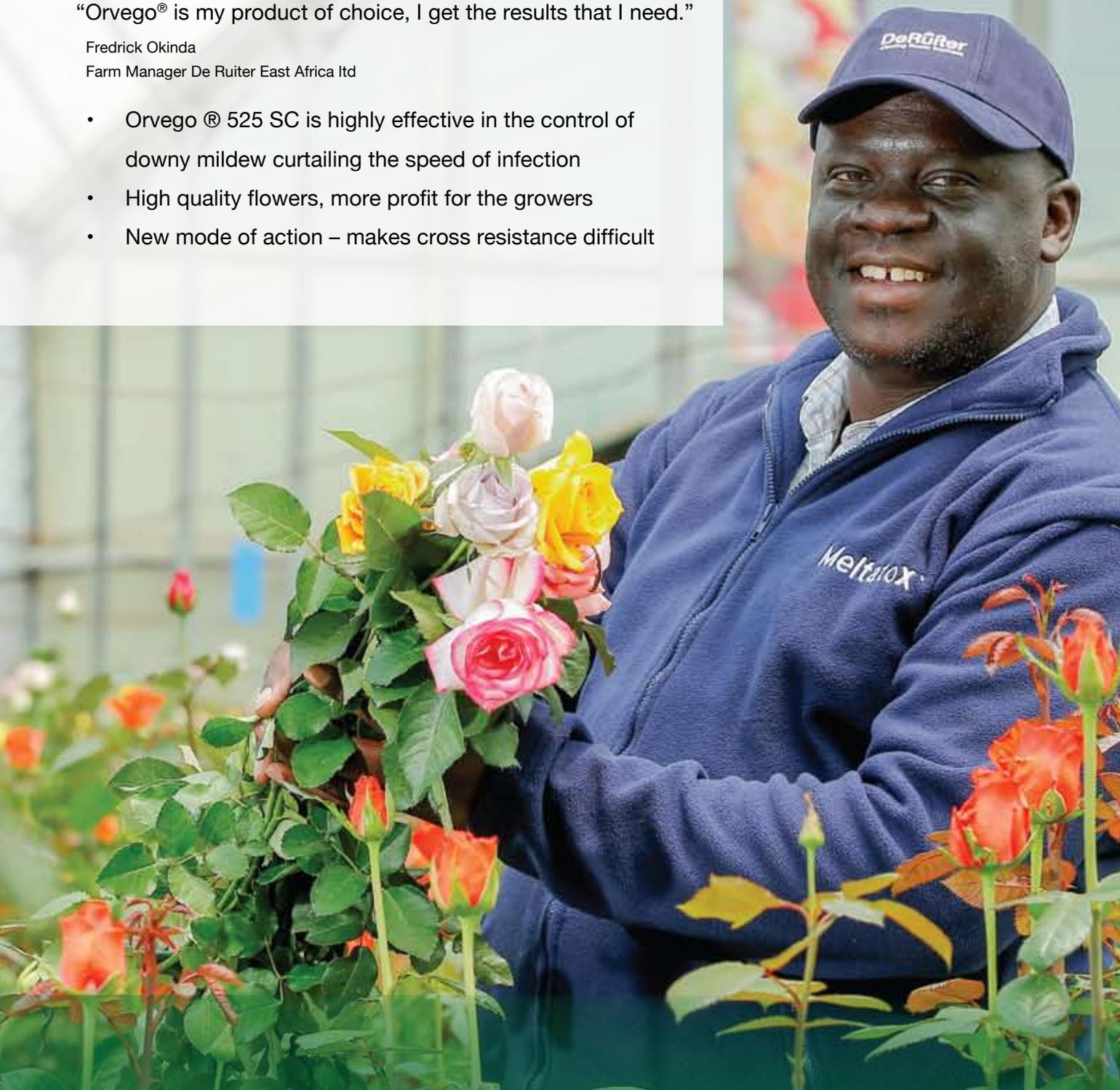
# Orvego®

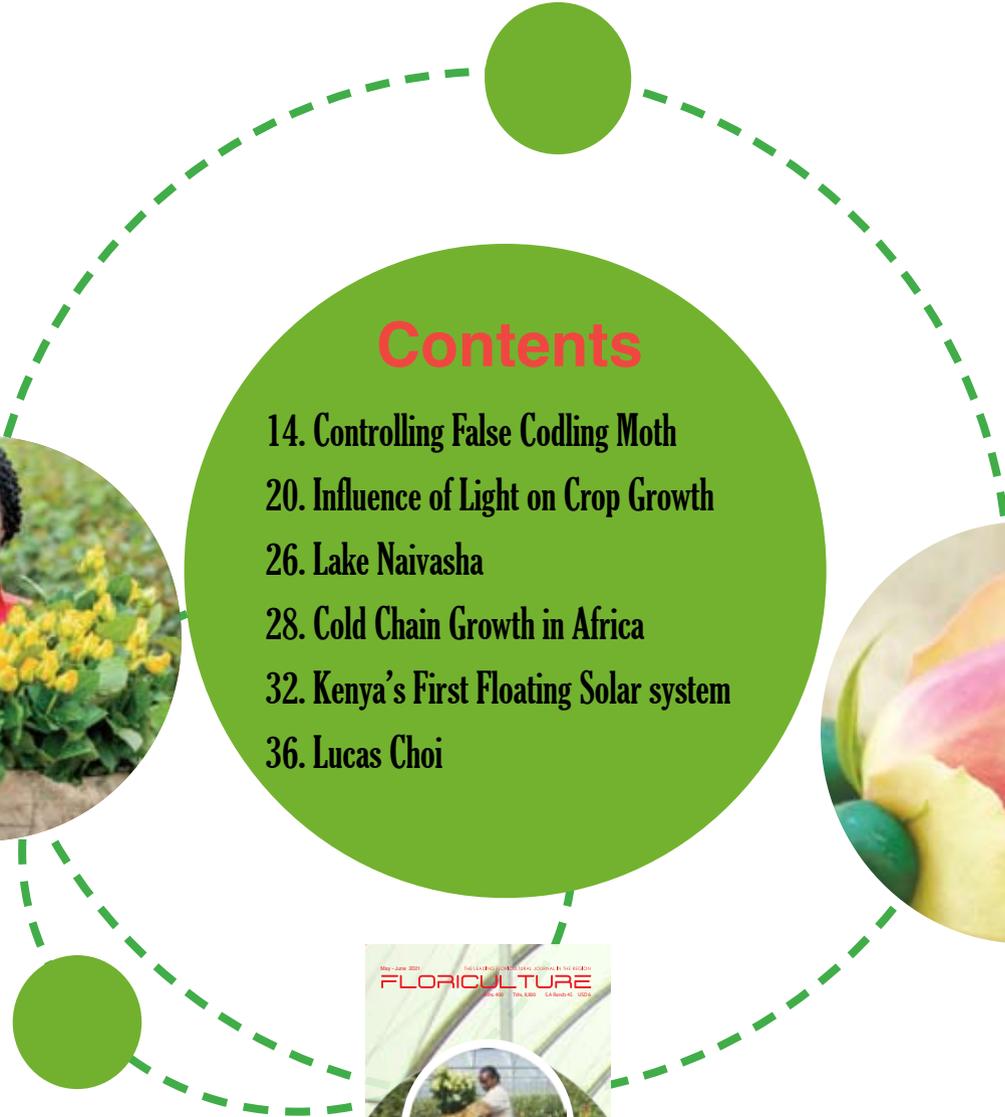
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Fredrick Okinda

Farm Manager De Ruiter East Africa Ltd

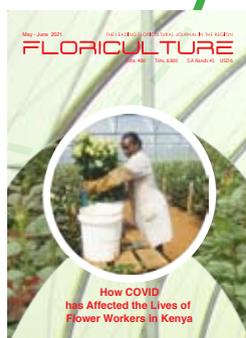
- Orvego® 525 SC is highly effective in the control of downy mildew curtailing the speed of infection
- High quality flowers, more profit for the growers
- New mode of action – makes cross resistance difficult





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## The Leading Floriculture Magazine

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## A Fierce Teacher

*The pandemic is a fierce teacher, but how do we apply the lessons?*

*The consequences of the coronavirus disease (COVID-19) outbreak are unprecedented and felt around the world. The world of work is being profoundly affected by the pandemic. In addition to the threat to public health, the economic and social disruption threatens the long-term livelihoods and wellbeing of millions. The pandemic is heavily affecting labour markets, economies and enterprises, including global supply chains, leading to widespread business disruptions. In this issue **Floriculture Magazine** looks at a survey done on this.*

*We know the COVID-19 pandemic has changed consumer behaviour, attitudes toward office work, and even some views about society itself. But knowing something and knowing what to do about it are two different things. This issue, **Floriculture Magazine** looked across flower sector at how knowledge—increasingly, though not exclusively, generated by advanced-analytics technology—can be used to improve the way we tackle challenges.*

*The pandemic reshaped what consumers buy and how they go about getting it. The challenge for consumer-packaged-flowers is to redesign their supply-chain operating models to be resilient enough to meet new consumer demands. Because each customer is*



*different, key first steps include identifying unique strengths and honing in on the most critical objectives.*

*The pandemic gave many business leaders practice in thinking about an external issue as a core concern.*

**Masila Kanyingi**  
Editor



# MORE BENEFITS TO DELIVER THE BEST

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## Management of Powdery, Botrytis and Dieback in Roses with UAL

Powdery mildew, caused by *Podosphaera pannosa*, is the most widespread and economically important disease in commercial production of cut roses. The disease is easily recognizable as a white to gray powdery growth on leaves and sometimes stems and flowers. It is usually most severe on the top of leaves, but can appear on the undersides as well. In severe cases of powdery mildew, infected leaves may become distorted, discolored, and die prematurely.

*'I am using Shakti Ensure product from United Agrochemicals Limited on my most Powdery Mildew susceptible varieties viz. Topson and Moonwalk regularly, for the both preventive and curative control. I have received a long duration control of up to 15-20 days after the second spray. Since it is an organic fungicide which does not add any residue in the final produce, it is highly beneficial for my export market. Additionally, Shakti Ensure has also helped me to reduce the flower rejection as well as improved the overall growth and vigor of my rose bushes.'*



**PRAMOD CHORAT**  
**PRODUCTION MANAGER, MAHEE FLOWERS (EAGA),**  
**OLKHALAO**

Botrytis is mostly caused by *Botrytis cinerea* in ornamentals. It attacks plants and flowers at any stage, tender new growth and aging or senescent tissues are preferred. The fungus becomes established in flower petals and appears as irregular, enlarged, water-soaked or tan spots that eventually produce fuzzy gray fungal growth. During production, blossom and bud blight often precede and lead to infections on leaves and stems. These less obvious symptoms show as tan colored spots on leaves or cankers on stems that can eventually cause entire branches of plants to wilt, while the rest of the plant appears healthy. During storage and shipping, Botrytis causes blight or blast on leaf and flower buds.

*'Dolphin 260 WDG product has provided me an excellent control against Botrytis on my Pink Arrow and Atomic varieties of roses which are highly susceptible to Botrytis. I confirmed the results after looking at the dried spots of Botrytis on petals which were fresh before spray. I am delighted to accept that I did not find any new growth of Botrytis on flower petals after 3 days of second spray. Currently, I am using this product at commercial level on roses for both preventive and curative control of Botrytis.'*



**JACKSON MBANYA**  
**PRODUCTION MANAGER, ECO ROSES (BTF GROUP),**  
**SALGAA**

Dieback is a condition commonly affecting rose plants where it starts as browning or blackening of the tip of the rose stem or a branch which then travels down toward the graft and may engulf the whole plant causing death. It can either be a branch die back or the main stem dieback towards the graft. The actual agent that causes this die back is the fungus which start multiplying and engulfing the entire plant. They gain entry from any form of physical injury to the plant. The other factors responsible for Dieback are both overwatering and underwatering, poor soil quality with lack of proper nutrients, soil pH problems and high humidity in propagation units.

*'Dieback is a major challenge in my propagation unit which can cause even total rejection of cuttings in severe cases. Therefore, I took the trials of Dolphin 260 WDG against Dieback and, I have received around 90% control after the second spray. Subsequently, the percentage of rejection of cuttings has also gone down significantly in treated area. Dolphin is a highly effective fungicide against Dieback and the propagation units should use it for better results.'*

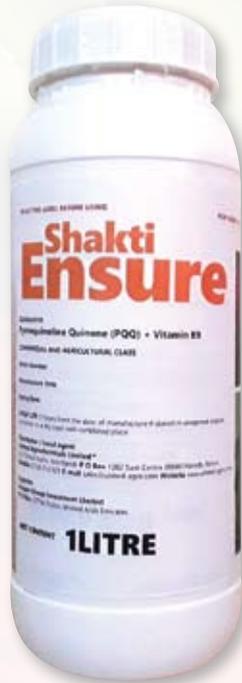


**JAVED PATHAN**  
**ASSISTANT GENERAL MANAGER, ELITE PLANTS (AAA GROWERS),**  
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Powdery Mildew

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Dieback



Botrytis

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On Valentine's Day 2021, Fairtrade launched the FairVoice Report which aims to bring the voice of flower farm workers to the forefront of the supply chain. FairVoice is an innovative qualitative data collection solution which draws insights directly from Kenyan flower workers and their communities about their experiences of the pandemic.

A collaboration between Fairtrade Foundation, Fairtrade Africa and On Our Radar, the FairVoice pilot trained workers at four Fairtrade flower farms to become 'reporters'. The remote training, delivered via audio and online, gave them the tools to safely gather testimonies from their communities.

Over several weeks, 60 reporters fulfilled a series of assignments to explore the impact of Covid-19 on their lives and communities. Supported by local mentors, they collected over 900 reports on issues such as jobs, finances, mental health, children and family life.

#### Impact on the flower farms

Analysis showed that the impact on the supply chain during COVID-19 had both personal and business implications. The changes required of farms to maintain social distancing, the drop in market demand and challenges with transporting orders had repercussions on the farms' operations and for the workers' jobs and finances. "Orders dropped every day, prices at the

# How COVID has Affected the Lives of Flower Workers in Kenya

auction were at their worst ever, and we dumped thousands of roses every day as we didn't have any market. The flight costs went high and the few flights available were first come first serve. With all this mayhem, our clients were affected too and the prices came down for our products too. The company couldn't cope with losses one after another, so they sent workers finally for unpaid leave to be able to cope with the situation".

#### Financial impact

As a result of the impact at farm level, reporters highlighted the negative impact that this had on their jobs and financial situation. Many talked about having to take unpaid leave and the subsequent salary reductions. With such a sudden and dramatic change in finances, this meant many families had to seek alternative strategies, such as returning to rural homes to save costs.

"Financially I was affected the moment our company gave us unpaid leave; I was not able to meet my family expenses because my salary was cut to a half pay. I was forced to adjust and reduce our daily expenditure to half, which is so stressing."

#### Impact for families and relationships

Linked to the financial impact on households, many reporters discussed the social and emotional impact on relationships and family separation, with a number of reports discussing the growing number of divorces. "Listening to my



fellow work mates' opinions and also on my own opinion, we feel heavy-hearted about our families' wellbeing. This is because most of our families are set up in rural areas, where we can't travel to see how they are faring on due to lockdowns in the country. It has been no easy time for any of us."

#### Impact for young people

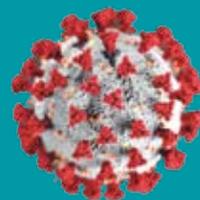
A key trend that emerged from the reporting on the impact of COVID-19 was the closure of schools. Reporters discussed how this was leading to negative outcomes for young people, as well as the additional financial challenges at household level.

"COVID-19 has widened the gap between the rich and the poor, this means that children of the rich will continue with their education after COVID while the poor children's future has been dimmed by COVID since most of them won't be able to go back to school."

"Online studies mean you need either a smartphone or a computer. My question, even though I may like my children to study, without food, how do they? Do we buy airtime charge cards and exorbitant electricity bills instead of food?"

#### Stigma and fear of COVID-19

There was a key trend identified across the reports of a growing stigma in rural communities about COVID-19, with a feeling that those in more urban communities were at



Analysis showed that the impact on the supply chain during COVID-19 had both personal and business implications. The changes required of farms to maintain social distancing, the drop in market demand and challenges with transporting orders had repercussions on the farms' operations and for the workers' jobs and finances.

risk of high transmission.

"COVID-19 crisis led to stigma and discrimination. I went home, to a rural area.

**TO PAGE 10**



## COVER STORY

### FROM PAGE 9

Surprisingly one of my aunts and some neighbours ran away when they saw me since they believe all people from the urban areas are affected.”

#### Impact on mental health

Analysis across the issue of mental health showed that the key areas discussed were financial stress, parental worries, worries and uncertainty about the future, and extreme depression.

“I was fearful about security of my job if the situation remained the same. In fact, I felt like things were falling apart in my life.”

#### Gender

The main gender-related issues emerging were on unemployment, the impact on young girls as a result of school closures, and how some women viewed the financial challenges as a setback to altering perceptions of women in society. Additionally, there were also reports articulating the gendered role of men within the household as the main breadwinner, and the sense of failure

that some men felt at not fulfilling this expected gender role.

“Groups that are already disadvantaged, such as adolescent girls, experience the greatest risks and impacts when their education is interrupted.”

#### Next steps

In light of the specific findings from the FairVoice Report, Fairtrade is taking forward and sharing the valuable lessons about flower workers’ experiences with others in the flower sector. Insights provided in this report will be incorporated directly into the ‘Building Resilience in the Flower Industry Project’, to support flower farms and vulnerable workers in Kenya. This includes awareness campaigns, nutritional gardens, alternative income support and additional trainings.

This will serve as a build up to some of the significant roles that Fairtrade has already played in supporting flower farm workers through the pandemic; In 2020, Fairtrade allowed certified (flower) producers/farms to distribute up to 100 percent of their Fairtrade Premium funds as direct cash distributions to workers. Normally, cash out of the Fairtrade Premium for certified flower farms is a maximum of 20 percent. This has allowed the farms to respond to the crisis very quickly. As a result of these changes, over half a million Euros have been distributed across the Fairtrade certified flower farms that have opted to use this, supporting workers to buy food and health equipment, and helping cushion the reduction of wages during a critical time.

### Way Forward

*East African flower sales were hit hard at the onset of the COVID-19 pandemic. Fairtrade, is committed to bringing worker voice to the front of supply chain conversations, they designed a research pilot to understand how workers were experiencing the crisis.*

FairVoice is an innovative qualitative data collection solution which draws insights directly from workers. The empowering FairVoice methodology trained participants to be ‘reporters’ and share information via their mobile phones. Soon after the COVID-19 crisis hit, they designed and piloted this approach with four Fairtrade flower farms in Kenya. Workers were set a series of assignments to explore the impact that COVID-19 was having in their lives and communities.

Workers reported on the huge loss of flower sales due to reduced orders and challenges accessing air freight, resulting in workers going on compulsory leave and flowers being discarded. With social distancing measures implemented in Kenya, workers were unable to return to work as normal as fewer people could be onsite at any one time.

Loss of income through less (or no) work has caused stress and strain for many households. This was exacerbated by money having to stretch further, as dependants lost jobs and children no longer in school needed resources at home. Local businesses also suffered, with many closing for some months of the year due to the nationwide lockdown early in 2020. Workers on the farm, as well as those who have businesses in the community, have had to turn to loans during this time. This has left many with debts that they must now repay, despite the continued challenges in the economic climate.

These strains have in turn led to negative impacts on mental health, in part due to the anxiety arising from financial



issues. There is also a shame and stigma associated with the disease itself, and a real fear of catching and spreading COVID-19.

Moreover, relationships were tested during the lockdown. Workers report the breaking down of marriages, with some resulting in divorce. For others who migrate to the flower farms and were unable to travel home due to national restrictions, there was a prolonged period of separation from their families. Those workers reported how difficult that was for them.

The research brought to light the challenges associated with the schools being closed. Final-year students were unable to graduate and others lost out on a large part

role of the Fairtrade Premium has been significant. In 2020, worker-run Fairtrade Premium Committees on certified flower farms have been allowed to distribute up to 100 percent of their Fairtrade Premium funds as direct cash distributions to workers. Normally, cash out of the Fairtrade Premium for certified flower farms is a maximum of 20 percent. This has allowed the Fairtrade Premium

Committees to respond to the crisis very quickly. As a result of these changes, over half a million Euros have been distributed across the Fairtrade certified flower farms that have opted to use this, supporting workers to buy food and health equipment, and helping cushion the reduction of wages during a critical time.

through clearly. Extra help for children's education, housing costs, food and health were cited as priorities by workers. They also stated that finance was needed – whether credit or emergency funding.

Other issues mentioned by several reporters included the need for a communication campaign on COVID-19 and healthy living.

#### Next steps

Whilst the challenges faced by the flower sector during COVID-19 have been relatively well documented, the lived experience for workers has been less so. FairVoice has enabled us to fill that gap and identify valuable learnings we can take forward.

Many of the insights provided in this report can be incorporated directly into the 'Building Resilience in the Flower Industry' project, co-funded by the Foreign, Commonwealth and Development Office (FCDO) Vulnerable Supply Chain Facility (VSCF).

The Fairtrade Foundation, together with MM Flowers, received funding from the VSCF, Co-op, M&S and Tesco, to set up this project to support flower farms and vulnerable workers in Kenya. This includes awareness campaigns, nutritional gardens, alternative income support and additional trainings.

As Fairtrade, we will take these learnings from FairVoice and bring them to the market as part of our work to raise awareness. Sourcing and buying Fairtrade flowers is of paramount importance during this time. The Fairtrade Foundation is committed to growing the volume of flowers traded in the UK market as Fairtrade, and FairVoice has provided the insights to help us advocate for action.

We therefore urge all UK shoppers and businesses who can, to source Fairtrade flowers.

of their education.

A shift to online teaching left behind those in families who could not afford this. With schools closed, many reporters commented on the impact for young people, with growing concerns on the long-term effects this may have. Others reported concerns that even as schools reopened, the fees will be a struggle with such little income in 2020.

With regards to support received, the

The reports received through FairVoice conveyed an appreciation of the Fairtrade Premium. The fact that it helped provide food and PPE was clearly extremely valuable to workers and their families.

Farm management and a government scheme also helped with food provision support, and the workers also credited the role that farm management played on raising awareness. However, the workers' need for support going forward came



# FCM: Compliance a Must



## Introduction

Over the years, the EU Standing Committee on Plants, Animals, Food and Feed, Plant Health Section has held several meetings to review the status of Kenya's interception due to FCM. The last two meetings were held in October 2020 and March 2021.

Although KFC, Union Fleurs, COLEACP and KEPHIS has continued to engage the EU providing measures that have been put in place to ensure that non-compliance is reduced, the interception trends show no improvement. In the meeting held in March 2021 by the EU on Kenya's compliance, this was an agenda item.

Specifically discussed was exchange of views and possible revision of the reduced frequency of inspection on roses imported from Kenya.

We are reliably informed that an increase to 25%

inspection levels was on the table. But this decision was deferred to the next assessment in July 2021.

## Consequences of continued or increased levels of interceptions

It will be detrimental if the levels of checks at the EU borders will inevitably be increased. As a result Kenya roses could even be removed altogether from the EU reduced checks system and fall under the default phyto check level of 100%.

Once this happens, it will take a long time for Kenya roses to be re-admitted into the reduced checks system of the EU, if ever a 3-year history of interceptions is used by the EU to regularly update the list of reduced checks

This will change the import conditions as required by the specific measures. It will also see the cost directed to the exporters to meet added personnel and processes at the point of entry into the EU hence extreme delays in movement of produce from the entry into the EU.

## Options Available for Improving Compliance

While the gravity of the situation cannot be overemphasized and appreciating that the industry has invested heavily in the rose production value chain, there is need for us to evaluate the situation and make very critical decisions that will impact the industry.

*Enhance the greenhouse production facilities* It is prudent to improve the

integrity of greenhouses to ensure they are free from pests. This should include the closing of the side opening and roof top vents. Greenhouses should not have the sides opened unless there are insect proof side nets.

Growers should also install double doors system to ensure prevention of the pest into the greenhouse. It is also important to invest in mechanisms for humidity management.

*Enhance FCM management at production* All farms should ensure there is no FCM detected in the greenhouse, packhouse or at the exit point inspected by KEPHIS. This is



through putting in place measures to ensure non-compliances are dealt with, including self-ban on export to allow putting in place measure to control or manage FCM.

Detection of the pest in the farm or at the point of exit should lead to suspension of export for a certain period e.g. 10-30 days. Consolidators should also ensure maximum compliance before export and will also be subjected to suspension due to non-compliance.

**Kill step (dipping):** Several growers have implemented the use of the kill step using an ovicide and larvicide as a postharvest management measure. There is need to include this in the management of the FCM to enhance compliance for rose flower export from Kenya.

**Handling interceptions due to FCM:** Interceptions indicate that systems put in place by growers and exporters are not or working. Companies with repeated interception should be banned from export

until mechanism to ensure non-compliance is not repeated. These measures will also be applied to consolidators.

The timelines for companies to institute proper corrective measures should be increased e.g. 10-30 days.

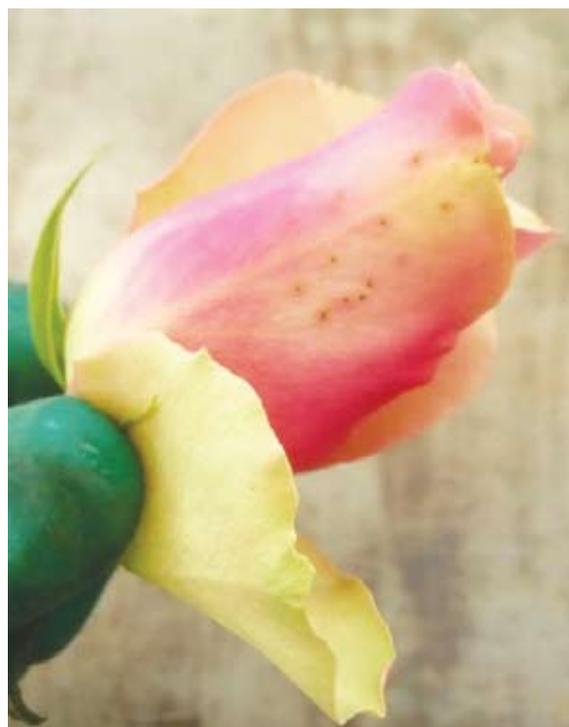
**Sharing of FCM data:** In order to enhance the compliance, there is need for all the companies to share FCM status data with KEPHIS and Associations. The data to be shared weekly or bi weekly should be analysed and the companies advised accordingly.

**Peer training for farms with repeated interception:** There is need for the farm which have not had interception or which can support compliance to openly share their procedures on management of FCM with other farms.

There should be a mandatory implementation by all growers of the joint FCM protocol and monitored by KEPHIS and Associations.

**Capacity building:** There is need for a continuous training and awareness on FCM for all the workers in the farms. Companies should invest in training of their staff on the EU requirements and the identification

on the pest. KEPHIS has prepared a curriculum to support training at a cost. Handholding/coaching of farms with repeated interception to continue with support from COLEACP and associations



technical staff should also be done.

**Fumigation using phosphine gas:** There is need to establish fumigation facilities for rose to enhance compliance due to FCM. Liquid phosphine has been approved for use in Kenya to fumigate. Therefore there is need for experiments on the efficacy and trial shipments to evaluate the effectiveness of the fumigation.



“ It is prudent to improve the integrity of greenhouses to ensure they are free from pests. This should include the closing of the side opening and roof top vents. Greenhouses should not have the sides opened unless there are insect proof side nets.”

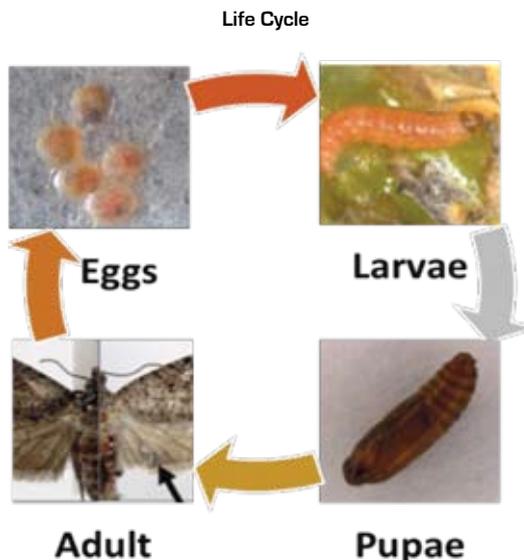
# Controlling False Codling Moth (FCM) With **Delegate 250 WG**

## Introduction

The False Codling Moth, *Thaumatotibia leucotreta*, is a highly polyphagous pest, feeding on more than 50 plant species, mostly crops of economic importance. The pest has been spotted on export crops such as *Capsicum spp*, *Citrus spp* and *Rosa spp*. In the recent past the pest has become an increasingly important pest, necessitating more attention from a pest management point of view.

## Biology of the FCM

False Codling Moth (FCM) is a nocturnal pest with 1.25cm-2cm wings and colour variation. The eggs of FCM are laid singly or in small groups on the surface of the flower buds. Eggs are difficult to detect because they are flat and take same colour with the substrate. The pest has a 30-174 days lifecycle and can produce 2 to 10 generations in a year laying up to 800 eggs. Eggs hatch into larvae in 20-22 days. At maturity, the larvae exit from the fruit and drop on the ground. The stage likely to be detected during inspection is the larva, while in the field adult stages can be detected on traps. Larval stages are internal feeder in flower buds in the case of Roses. The larval stages are visually detected by use of a hand lens, usually done by looking out for symptomatic buds, which when opened small holes are observed in the bud where the larva has penetrated and exited the bud. Frass can also be observed protruding from the hole, larvae may migrate to the centre of the bud. The pupae then undergo a metamorphosis to winged adults and the cycle restarts. On pest management, FCM can be controlled using cultural, biological and chemical methods.



## Delegate 250 WG: Your Registered FCM Control Partner

DELEGATE 250 WG is the first registered FCM product on flowers in the market. The new kid on the block has a long heritage focused on offering complete solutions to the growers. The aim is to enrich the lives of producers and consumers, ensuring progress for generations to come. DELEGATE 250 WG is an insecticide belonging to the Spinosyns class and to Group 5 mode of action classification. DELEGATE 250 WG has improved potency at target site, improved residual control, increased penetration through cuticle, increased activity at the target site and is more stable in sunlight. It provides broad spectrum activity on key pests from Lepidoptera, Thysanoptera, Diptera and Coleoptera and other pests such as Pear Psylla and Asian Citrus Psyllid.

Due to its improved rain-fastness and photo-stability property with no breakdown in sunlight, the product has better weather resilience. It delivers exceptional, fast-acting activity within minutes to hours

with a fast knockdown on contact toxicity. DELEGATE 250 WG is effective through ingestion and contact, which causes paralysis within minutes. It is also effective on Lepidoptera pests, whiteflies nymphs and has ovi-larvicidal activity when sprayed on eggs.

It is a unique product that is highly active at the target site in the pest's nervous system. DELEGATE 250 WG has low impact on beneficial arthropods making it compatible with IPM programs. Its short environmental persistence and greater ingestion versus contact activity minimises impact on natural enemies. It has minimal impact on pollinators once the spray deposit has dried up. It is practically non-toxic to honey bees when spray has dried up. DELEGATE 250 WG is safe with minimal risk (if any) to predatory lacewings, ladybird beetles, predatory mites, and parasitic wasps.

Moreover, it is a valuable tool in resistance management, it has no cross resistance with different IRAC groups."

DELEGATE 250 WG is highly effective when ingested and has translaminar activity. It has a quick knockdown effect, with no phytotoxicity, no varietal sensitivity observed and can be mixed with most adjuvants. The product won Presidential Green Chemistry awards in the USA, as well as AGROW award as Best New Crop Protection Product. It is also classified by EPA as a reduced risk pesticide.

If properly utilised, DELEGATE 250 WG has the potential of further cementing Kenya's position as the leading flower exporter to the European markets.

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# Flower Sector Slowly Recovering

The impact of the pandemic in key international flower markets has a direct impact on the performance of this sector in Kenya. It is against this backdrop that the CBK undertook this survey to assess the extent of impact of the pandemic globally and the pace of recovery of the sector, following the second wave of COVID-19 infections, discovery of variants of the virus and the subsequent imposition of containment measures.



**T**he Central Bank of Kenya (CBK) conducted a survey to assess the extent of recovery in the flower sector, particularly after the resurgence of the third wave of COVID-19 globally and discovery of new variants of the virus in some countries. The survey was a follow-up to an earlier survey that covered the impact of the second wave of the pandemic and continued reopening of economies.

The main areas of focus of the Survey were: the status of operations of flower farms; their levels of employment before and during the COVID-19 pandemic shock; and an assessment of the implications of a third wave of the pandemic on the sector based on the future orders for flowers. In addition, the Survey captures general sentiments by players in the flower sector.

The findings provided important input and information for the MPC in its meeting. This report provides a summary of the findings of the Survey.

The Survey covered major flower farms in Naivasha and Nakuru area. The respondents were people with good knowledge of the activities and performance in the sector. The sampled flower farms included those involved in direct sales, contract sales and breeders. Direct interviews were conducted by CBK staff using a structured questionnaire.

*The Key takeaways from the Survey of flower farms included:*

- All responding flower farms indicated that they have been operating since August, compared to only 56 percent in April and May last year, when the farms closed or scaled back on operations due to

reduced demand from export markets and constrained cargo space;

- Employment in flower farms has recovered and exceeded the pre-COVID-19 levels. It averaged 120 percent in March 2021 up from 113 percent and 97 percent in January and November, respectively, relative to the February 2020 levels;

- Production and export levels of flowers have improved to an average of 93 percent and 97 percent, respectively, of pre-COVID-19 levels (February 2020); and

- Export orders for flowers remain strong despite the uncertainty surrounding the third wave of COVID-19 infections and discovery of variants of the virus. Average orders are about 97 percent of the normal (pre-COVID-19) levels in the next four months (April to July 2021). However, some

farms were concerned about possible cancellation of orders in case of stringent lockdowns due to the third wave of the COVID-19 pandemic.

#### Flower Farms In Operation

Flower farm respondents were asked whether their enterprises were operating in

through the auction markets. In March–July period, some farms indicated that they diversified operations for example by uprooting crops and using them for manure, while some produced food for staff.

#### Employment In Flower Farms

The Survey collected data on changes

of COVID-19 in April most employees were either put on unpaid leave or proceeded on normal leave in adherence to the Ministry of Health protocols for containing the spread of COVID-19.

As the economies reopened, farms started recalling their workers in line with demand for the flowers internationally. Between January and March 2021, farms increased their workforce in line with the rising demand. They also increased the acreage under flowers. In addition, farms have increased their workforce to support replanting of flowers that were due for replacement.

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each of the months from January 2020 to March 2021. All responding flower farms indicated that they have been operating since August, compared to only 56 percent in April and May 2020 when the farms closed or scaled down their operations due to reduced demand from export markets and constrained cargo space.

Respondents indicated that their operations have been supported by the reopening of key export markets and improved cargo space particularly from August. The farms were on high season and they continue to supply the international markets. Furthermore, the farms that were operating in April and May 2020 indicated that they were supported by the Government measures that allowed cargo flights, and direct sales to outlets/supermarkets in Europe and were not reliant on sales

in employment in the flower farms sector. In particular, respondents were requested to indicate the number of active employees engaged by the farms between July 2020 and March 2021. Relative to the employment numbers by the farms in February 2020, the Survey findings show that employment has recovered and exceeded pre-COVID levels, averaging 120 percent in March 2021 compared to 113 percent in January 2021 (relative to the February 2020 levels). Respondents indicated that during the peak



## FROM PAGE 17

### Levels Of Production And Exports By Flower Farms

Flower farms were asked to indicate their levels of operation in terms of production and exports relative to their pre-COVID-19 levels (February 2020 level). Responding flower farms reported that production levels were an average of 93 percent of pre-COVID-19 levels as at March 2021, compared to an average of 48 percent in April 2020. The responding farms indicated that production levels had plummeted in April, 2020 due to unfavourable weather conditions (that included hailstones), infestation of pests during the period and lower exports due to relatively higher freight costs occasioned by limited cargo space on account of the effects of the COVID-19 pandemic in key markets. However, following the reopening of the economies, production has since improved on account of increased demand in the

international market and availability of cargo space after resumption of international flights to key export markets.

Similarly, exports of flowers have recovered to 97 percent of pre-COVID-19 levels, from 53 percent in April following low demand due to lockdowns in Europe, unavailability of cargo space and high cargo space costs. However, foreign sales have increased since January 2021 on account of increased demand for flowers in the international market, especially during the valentine day celebration. Some farms indicated that they had received orders above their contract volume which they could not meet.

Responding flower farms also indicated that their export orders were strong despite the uncertainty on the third wave of COVID-19, discovery of variants of the virus and possibility of consequent lockdowns in key export markets and thereby possible cancellation of orders, especially for the farms that sell their flowers through the Dutch auction. In particular, the average orders for the next four months (April- July 2021) were about 97 percent of the normal (pre- COVID-19) levels. The flower farms under contract sales expect to realize 100 percent of their contract volume in the next

four months.

The respondents noted that this is the peak season for the sector. Specifically, they confirmed to have done good business during the valentine's and women's days and expect to do well during mothers' day. In addition, the rollout of COVID-19 vaccination, especially in the developed countries continue to give hope to the sector.

### General Comments By Flower Farms

Flower farms gave the following general comments with regard to their operations during the COVID-19 pandemic period:

- The flower farms continue to be constrained by the cargo space. This arose from the restrictions of the passenger flights, which they were previously using to transport flowers to their export markets. In addition, the cargo flights are few and usually involve connection through other countries. This has affected their flowers in addition to the high costs involved. This has also impacted on their costs of imported inputs including fertilizer and chemicals.
- The respondents appreciated the role of the Government for quick payment of the



tax refunds during the pandemic noting that it helped them in cash flow management.

- Respondents also observed that the Kenya Flower Council (KFC) has been helpful in providing the necessary information, raising awareness about COVID-19 through staff training, provision of car stickers, and assisting with the processing of permits and exports.

- The responding farms were concerned about the rising operational costs arising from the provision of protection against COVID-19 including sanitizers and hiring of additional buses to transport their workers in line with the social distancing requirements.

- Respondents urged the Government to merge various regulatory bodies that perform almost similar functions but result in increased cost to the farms through inspection, annual membership, and licenses fees.

### Conclusions

The follow-up Survey of flower farms conducted by CBK shows a further recovery of activity in the sector from the COVID-19 disruptions in April and May 2020.

The survey shows that all responding flower farms have been operating since August 2020, compared to only 56 percent in April and May, when farms closed or scaled back on operations due to reduced demand from export markets and constrained cargo space.

Employment in the farms has recovered and exceeded the pre-COVID levels, averaging 120 percent and 113 percent in March and January, respectively, from 69 percent in April, relative to the February 2020 levels.

Production and export levels of flowers have also recovered to an average of 93 percent and 97 percent, respectively, of pre-COVID-19 levels (February 2020) implying continued recovery of the sector.

Export orders for flowers are strong, averaging about 97 percent of the normal (pre-COVID-19) levels for the next four months with concerns remaining over the third wave of COVID-19, discovery of variants of the virus and possibility of lockdowns in key export markets with consequent cancellation of orders. However, the continued vaccinations against COVID-19 globally, continue to give hope for full recovery of the sector.

Cargo space remains a major constraint resulting in high freight costs. This has impact on the cost of their inputs such as fertilizer and chemicals. While conversion of one passenger plane to cargo plane by Kenya Airways, was a step in the right direction, the capacity challenge still remains.

In order to reduce costs to the sector, the respondent flower farms urged the Government to merge various regulatory bodies and reduce taxes and other charges levied by both national and county governments.

# Influence of Light on Crop Growth

*Plants require light for optimum growth and development, but the three different aspects of light, quantity, quality and duration, also have a significant influence on growth.*



A plant under natural conditions receives light from the sun; the amount, quality and duration greatly depend on the season of the year, hour of the day, geographical location and weather.

Below we will further explain the effect of each aspect on plant growth and development.

### Quantity of light

Plants use light as a source of energy for photosynthesis. The term photosynthesis refers to the reaction between carbon dioxide and water in the presence of light to produce carbohydrates and oxygen. The rate of this process is highly dependent on the light quantity; the photosynthesis rate is higher as the Photosynthetic.

### Active Radiation (PAR) increases.

The carbohydrates produced during photosynthesis are stored and used by the plant as a food source. Each plant species starts the process of photosynthesis at different light energy levels, which is called the light compensation point. This point starts when light energy is sufficient for photosynthetic activity to produce more oxygen than is required by the plant for respiration. Likewise, the release of carbon dioxide through respiration by the plant must be less than the total carbon dioxide used by the plant for photosynthesis. In other words, the net photosynthesis (Eq. 1) is zero:

### Net Photosynthesis = Photosynthesis – Respiration

Light saturation point. More light generally equates to higher levels of photosynthesis. However as the light intensity increases, the photosynthetic rate eventually reaches a maximum point. This point where the light intensity does not increase the photosynthesis rate is called the light saturation point. When this point is reached, the photosynthesis rate curve becomes flat (Figure 1).

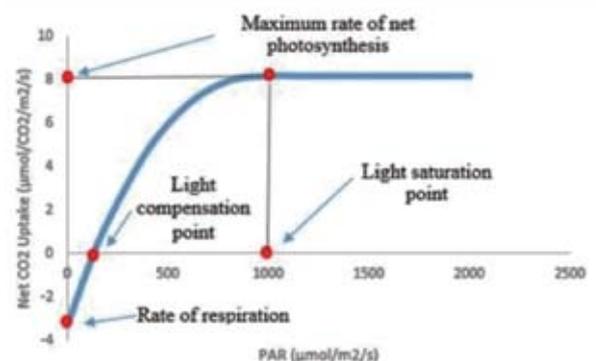


Figure 1. Graph of the light compensation point and the light saturation point.

### Light quality

Light quality refers to the colour or

wavelength. The sun emits wavelengths between 280 and 2800 nm (97% of total spectral distribution). They are divided into three regions: Ultraviolet (100-380 nm), visible light (380-780 nm) and infrared (700-3000 nm). The highest energy corresponds to the lowest wavelengths; ultraviolet has higher energy than red. We as humans see wavelengths between 380-770 nm; this range is called visible light. Visible light is divided into: violet (380-430 nm), blue (430-500 nm), green (500-570 nm), yellow (570-590 nm), orange (590-630 nm) and red (630-770). On the other hand, plants photosynthesize between 400-700 nm; this range is known as Photosynthetic Active Radiation (PAR). Chlorophyll, the green pigment in leaves responsible for absorbing the PAR, has two peaks of absorption: blue and red light. Leaves absorb little green and reflect it back; this is why we see the green color of the leaves.

***In general, different colours have different effects on plants:***

**Ultraviolet Light:** Ultraviolet light causes DNA damage, reduces photosynthesis rate, flowering and pollination decrease, and seed development is affected. Ultraviolet A (a subcategory of ultraviolet light) can cause plant elongation.

**Blue Light:** It corresponds to one of the absorption peaks; therefore, the photosynthetic process is more efficient when there is blue light. Blue light is responsible for vegetative and leaf growth and is important for seedlings and young plants because it helps reduce plant stretching.

**Red Light:** This is the other peak of light absorption by the leaves. Phytochrome (a photoreceptor) within the leaves is more sensitive to and responds to red light. This light is important in the regulation of flowering and fruiting. It also helps increase stem diameter and promotes branching.



***The carbohydrates produced during photosynthesis are stored and used by the plant as a food source. Each plant species starts the process of photosynthesis at different light energy levels, which is called the light compensation point.***



**Far Red Light:** This light can cause plant elongation and trigger flowering in long-day plants.

**Red: Far Red Ratio:** Plant elongation results when this ratio is low. In other words, plants are more exposed to far red than red. In nature, we see this phenomenon when plants are shaded by neighbouring plants; the shaded plants receive a higher ratio of far red light and tend to grow taller to reach more light. This can become a problem with greenhouse crops that are shaded by overhead baskets or are planted too close together.

### **Light Duration or Photoperiod**

The number of hours of day light per day directly impacts flowering. Plants can be divided into three categories based on the required day length needed to trigger flowering:

**Short-day plants:** These plants flower only when the day length is shorter than the night. When the day length exceeds a critical time, plants stop flowering and go into vegetative growth. Examples include: chrysanthemum.

**Long-day plants:** These plants flower when the day length is longer than the night. When the day length is shorter than a critical time, plants stop flowering and go into vegetative growth. Examples include: carnation.

**Day-neutral plants:** These plants flower regardless of the day length. Instead, they usually flower after reaching certain stages of development. Examples include: tomato.

In summary, the most important process triggered by light in plants is photosynthesis. Photosynthesis is a process used by the plant to produce food to help build more plant material. The faster the photosynthetic rate, the faster the plant grows. The rate of photosynthesis is impacted mostly by the light intensity and quality. When it comes to flowering, the length of the day is important to know as it directly impacts the timing of flowering for many ornamental crops. For example it is impossible to cause a short-day plant like poinsettia to bloom in the summer under natural conditions.



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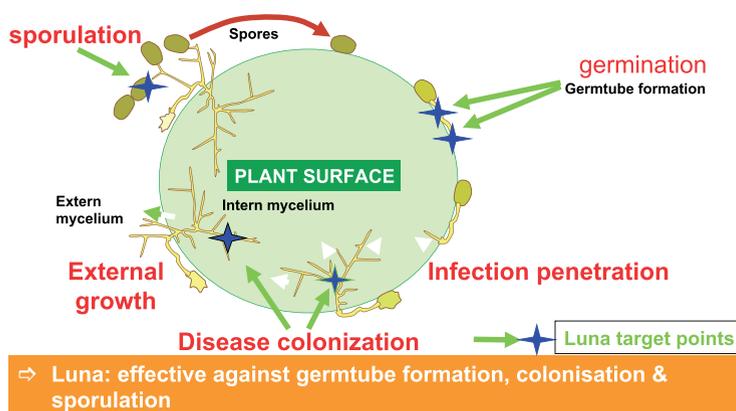
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# Fertilizer Rates and Impact on Root Diseases

While over watering may enhance disease development it is not the sole factor. For any disease to attack a plant, three conditions must be present; first, the pathogen must be present. Second the environment must allow for growth of the disease organism and finally, there must be a host plant that is susceptible to an attack by the pathogen. While over watering is a major contributing factor providing a favourable environment for root rot disease development, it cannot cause damage to the plant unless the plant is in a weakened condition and therefore susceptible to attack. Anything that contributes to “less than optimal growth” can result in a weakened plant, which is then more susceptible to disease organisms. Two commonly overlooked factors to poor growth performance are under and over fertilization.

## What Are The Signs of Under Fertilization?

Under fertilized plants not only exhibit slow growth, but are weak in general and are at an increased risk of both diseases and insect attacks. Once attacked, plants will use additional nutrients in its attempt to fight off the disease. If plant nutrition is not quickly corrected, it can lead to compounding of damage. Under fertilization can be easily corrected by the application of water-soluble



Example of fertilizer application for Pansy. Adequate fertilizer application (left) and under fertilized pansies (right).

fertilizer which provides nutrients that are immediately available for plants to use.

## How to Fix Over Fertilization?

Over fertilization on the other hand can be much harder to correct, especially if the over fertilization is the result of high applications of Controlled Release Fertilizer (CRF). Over fertilization damages plants in several different ways. It often results in very “leggy”, soft growth of plants and high salt levels from fertilizers can burn delicate root tips. Both of these compromised conditions will result in weakened plants and increased susceptibility to disease attacks. If the cause of over fertilization is from elevated levels of water-soluble fertilizer, the situation can be corrected by leaching the growing medium with water to



Example of over fertilization of ivy geranium from excessive CRF fertilizer. Note the chlorosis and necrosis of older leaves from excessive fertilizer uptake.

remove excess nutrients and then adjusting the rate of future fertilizer applications to meet the needs of the plants. Over fertilization when using CRFs can result from either the presence of too much fertilizer or the fertilizer releasing faster than expected because of high temperatures. In either case, there is no quick solution to removing the excess nutrients. The grower must leach with water on a regular basis to remove the excessive fertilizer as it is released from the fertilizer prill. In general, it is best to apply CRFs at a medium rate for the crop and supplement with water soluble

fertilizer if additional nutrition is needed.

Disease organisms are microscopic and are often undetected until the damage has occurred, so preventive monitoring is highly recommended. The most effective method of reducing the incidence of root rot in plants weakened by nutrient issues is to



Example of Pythium in garden mum (center) as a result of over fertilization and disease pressure.

keep the crop healthy in the first place by monitoring soil EC and making the necessary modifications to the nutritional program before the plant is weakened and exhibits growth related problems.

## Fertilizer Application Rates

To avoid problems with fertilizer application rates, it is recommended to check injector flow and application rate with EC meters on a regular basis to be sure fertilizer application rate is correct. For control release fertilizers, use lower rates and supplement with water soluble fertilizer, if crops require additional fertilizer. Leach crops regularly to be sure to reduce salt build up from fertilizers. Manage fertilizer application rate for crop requirements by periodically testing growing medium EC, pH and nutrient content. Media sampling can be matched with plant tissue samples to determine the elemental content of plant tissue. From this information, you can fine tune fertilizer applications to minimize plant stress for healthier plants to lessen chances of disease occurrence.

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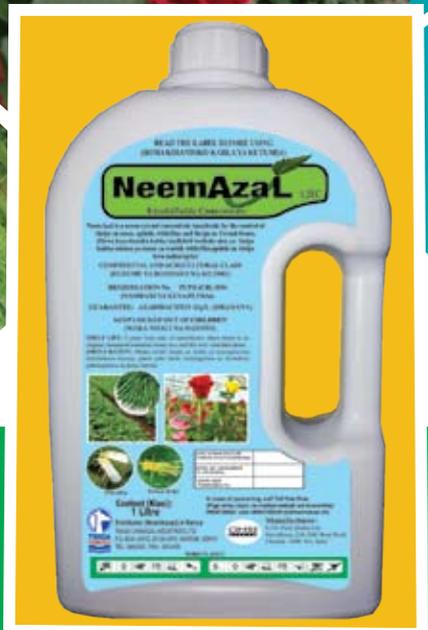
- ✓ Multiple biological modes of action
- ✓ Insect pests, mites, nematodes control

## Residue Management

- ✓ Zero PHI
- ✓ Short REI (Re-Entry Interval)
- ✓ MRL exempted
- ✓ Approved for organic use
- ✓ Safe to beneficials when used as directed

## Resistance Management

- ✓ Ideal for IPM
- ✓ Multiple modes of action



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## The long-term average annual water balance of Lake Naivasha Basin

**S**ustainability of the water footprint related to the production of horticultural and other crops, domestic and industrial water uses in Lake Naivasha Basin can be assessed by comparing the blue water footprint with the available blue water resources. The available blue water for human use is the difference between the annual runoff (R) and the environmental flow requirements (EFR), which is set at 80 % of runoff. For the Lake Naivasha Basin the total blue water footprint is about 13 % of the annual average runoff, which leaves 87 % of the runoff for meeting environmental flow requirement. When we take the blue and grey water footprint together, they make 19 % of the annual average runoff.

Comparing the blue-grey water footprint with the blue water available for human use

at annual basis hides the seasonal variation, which is relevant particularly in basins with highly variable flow regimes. Therefore, it is quite important to do the comparison on a monthly basis. The long-term average monthly runoff and environmental flow requirement and the monthly blue-grey water footprint within the Lake Naivasha Basin are presented. The long-term average monthly runoff data for the basin for the period February 1932 to June 1981 was obtained from the ITC Naivasha database. The monthly blue-grey water footprints were derived from the current study, taking into account the growth seasons of the various crops. In the dry period Jan-March, the blue plus grey water footprint is double the blue water availability, which means that twice the blue water availability is appropriated for either consumptive water use or assimilation of pollution. In

November and December, the blue plus grey water footprint slightly exceeds the environmental flow requirement. There is no violation of the environmental flow requirements in the period April–October.

A fluctuating lake level is a natural phenomenon for Lake Naivasha and a necessity for the functioning of the ecosystem. The climate, physical attributes and geographic context set the background for a hydrological cycle that results in natural lake level variability reaching above 12 meters over the last 100 years. However, Becht and Harper and Becht show that the more recent decline in the lake level coincides with and can be explained by the commencement of horticulture crops in the area in 1982. Becht and Harper show that in late 1998, the lake was 3.5 meters lower than it would have been had it followed



mainly through surface runoff, while for the riparian agriculture nutrient transport is mainly through leaching to the groundwater.

There is a big and well-founded concern as to whether the lake can sustain a continued increase in irrigation water demand. The long-term protection of the lake ecosystem and the economic and social benefits that depend on the lake require a sustainable use of Lake Naivasha and its catchment. The most pressing issue

in the upper catchment. The sedimentation problem is aggravated due to the loss of riparian vegetation that could have acted as a buffer in trapping sediments and increasing infiltration. An urgent and coordinated action is needed to stop the destruction of vegetation along the river banks and lake caused by cultivation and overgrazing. Therefore, prohibition of cultivation in the riparian areas is important.

Long-term gains from a sustainable and



Although the recent reduction in the lake's water level can be attributed mainly to the commercial farms around the lake, the deterioration of the lake water quality as a result of the inflow of nutrients is due to both the commercial farms and the farm activities in the upper catchment.

the hydrological records. On the other hand, according to Harper and Mavuti, the current level of water abstraction has not led to a greater lake level fluctuation than as was recorded in the past, and there is no evidence that lake level fluctuations themselves risk biodiversity losses. Becht suggested that at a constant rate of water abstraction the lake will establish a new equilibrium lake level. He goes further by arguing that the question as to how much a drop in the lake level is acceptable is a societal and political one.

Although the recent reduction in the lake's water level can be attributed mainly to the commercial farms around the lake, the deterioration of the lake water quality as a result of the inflow of nutrients is due to both the commercial farms and the farm activities in the upper catchment. This finding is supported by Kitaka and Gitachi, who also showed that a large amount of nutrient load to the lake originates from the upper catchments and municipal sewage through surface runoff. The nutrient transport from the upper catchments is

is the unsustainable water abstraction for horticulture crops and domestic water use which has led to a decline in the lake level. There is further the concern about eutrophication of the lake due to an increase in agricultural nutrients inflow both from the commercial farms and from the upper catchment. The increase in nutrients is probably the combined effect of the loss of riparian vegetation, which acts as a buffer to trap sediments, an increase in the sediment flow from the catchment and an increase in fertilisers leaching and running off to the water system. The situation got worse by the increase in subsistence farming even on steep slopes right down to the river edge which destroyed the riparian zone.

There is a need to reduce the flow of sediments and agricultural nutrients to the lake both from the commercial farms around the lake and subsistence farmers

wise use of water require a coordinated action at the catchment scale. There is a need to define the maximum allowable water abstraction level at the basin scale. Although equitable allocation of water is required, decisions should also take into account the difference in economic water productivity among different crops. Cut flowers generate more economic return than the low-value fodder crops and grasses. Indoor flowers are more efficient compared to outdoor flowers; therefore greenhouse cultivation should be encouraged. The use of blue water for the production of water-intensive products such as beans and low-value products such as grass and fodder should be discouraged. Wise use of rainwater, in particular in the upper catchment, for growing fodder and grass needs to be encouraged. Controlling of unlicensed and illegal water abstraction through legal means and community involvement is quite essential.



## Broadening access to finance for unlocking cold chain growth in Africa

**T**hey brought to light the challenges and the importance of investing and financing cold chain solutions for agribusinesses, especially those in the first mile of distribution of fresh produce supply chains. As well as highlighted alternatives and opportunities for increasing, improving, and innovating the financial agricultural cold chain sector in the following key points:

### 1. Challenges in cold chain development and investment

The cold chain supply chain encompasses various actors for a successful harvest. It brings together farmers, small holder farmer, processors, exporters, importers etc. The type of investment differs depending on who you

are working with and it is critical to know what is right for each type of donor.

Amanda Brondy started off the panelists speaking on the challenges in cold chain development and investment on donor development financing. She emphasized on proving the need of a cold chain as compared to the actual demand that exists.

She stated that, “when we look at cold chain investments, we are often looking at it in a private sector lens meaning, we want to be sustainable whether the business can continue on. This will not happen if there is no market to buy. If the consumer cannot buy, then the business is not sustainable.”

One of her stated challenges was on the lack of coordination between different donors. She confirmed that there has been a strong increase in the cold chain donor community and together, they bring different ideas to grow the sector in terms of building businesses, conducting trainings, and developing infrastructure.

“The more collaborative effort goes into openly sharing different aspects, the more we can do to build more integrated cold chain

developments in Africa,” she said.

Lastly, a lack of funding going into getting innovations to the next level in the sector was considered to be a setback for cold chain developments.

“It takes a long time for people to uptake technologies. This is a persistent and ongoing challenge that does not disappear overnight. It’s not just about innovating but working with those businesses to help get their information across and is a sustained effort that takes a lot of time,” Amanda concluded.

### 2. Financing of cold chain developments.

Andrew gave more insight on what they look for when financing cold chain developments which were:

- The range of tools and stakeholders involved to provide access to finance to support cold chain assets.
- The technical aid coming from various sources to ensure sustainable quality and quantity of a product.
- The market system access and the willingness to pay to offset various needed costs in the supply chain.
- Sustainable qualities and quantities that justify your investment throughout the year.

- The credit worthiness of a company interested in investing in a cold chain.

Andrew concluded by saying that, “it is crucial to look long at the market system starting at the producer and input supply side to comprehensively provide a financing structure in place. This ensures that the ecosystem using that asset is capable of providing products that are of quality and quantity while enabling systemic access to the markets, justifying the throughput through those assets and cold chain linkages.”

### 3. Gaps and opportunities for asset finance of cold chain developments

Productivity of an agricultural product or the productivity of an agricultural farm in Africa is a large topic. Rim narrowed down the challenges so far in financial innovation within cold chain developments that were scaling, standardization and long-term sustainability.

As lenders, Rim stated that it is important not to overburden borrowers by providing financial tools that do not suit their needs. “We are seeing this segment of market and the need of financing grow that will bring a lot of efficiency in the way that we provide our loans,” she said.

The standardisation of products in the cold chain can also be difficult however possible. The process and requirements for different produce requires different measurements in cooling and packing. A vast majority of time should go into the technicality and the fine tuning of every single unit or asset. Therefore, Rim said that there is a financing need that has to be tagged to those specific cash flows from the specific farm.

Rim concluded by reiterating Amanda’s sentiments on long term sustainability saying that, “all this takes time to bare fruits and

for the end users to understand the benefits overall for donors and lenders. It also takes time for the community to see that this is something that could have a massive impact on the continent.”

### 4. Success factors to consider scaling up cold chain finances in Africa.

With the certification of cold chain developments, customers have experienced tangible positive effects as stated by Mina during the webinar. Here she mentioned three success factors on how asset finance has unlocked opportunities for agribusinesses.

Firstly, reduced rejection is seen to be a significant success factor from customers, be



it in the export or local markets that add up the monetary value of their business.

She also confirmed that cold chain facilities helped in the reduction of Post-Harvest Losses (PHL) saying that instead of driving to the closest cold storage, on-farm cold storage has reduced the PHL in the first mile which have caused positive financial effects for agribusinesses and small holder farmers.

Lastly, agribusinesses and farmers invest in cold chain solutions to increase the volume

of their produce. These factors enable the agribusiness, in many cases, to pay for the cold storage units under finance.

“Agribusinesses have a strain of the cash flows due to seasonality and therefore, Farms does not request any additional collateral. It’s really about creating an investment in a productive asset that will pay for itself overtime,” she concluded.

### 5. Asset finance innovations in cold chain developments

There is not a great deal of innovation around financing according to Jim however, he sees an opportunity in finding new ways of providing financing through digital payments and assets that are controlled and managed from IoT and other remote management tools.

This changes the picture on how lending institutions or how investors can look at an asset and potentially provide financing for that asset.

He went on to say that, “typical project financing can take a lot of time and money for the legal process to come through.

That means that only large-scale loans or financing is possible. With the innovation in digitization, we have seen a shift on how that could be done.”

He emphasized on shortening the time of analysis used in lending to people at scale that do not have the typical collateral or balance sheets.

Other factors were that, through digital lending, one could significantly reduce the administrative costs of providing financing while reducing long term burden and default risk. This therefore, will provide access to more borrowers instead of focusing simply on larger institutions or companies.

# 9 Successful Business Leaders

## Reveal Their Top Tips for Selling Anything to Anyone

*Be passionate, listen, and build rapport, say Hint Water founder Kara Goldin and other top entrepreneurs.*

**N**othing happens without a sale. Believe it or not, you're a salesperson — whether you're convincing your kids to do their homework, putting your best foot forward for a job interview, or running a business. We asked these sales ninjas and Advisors how to become the best salesperson alive. Here's what they said:

**Kara Goldin:** *Be passionate about what you're selling.*

I believe the best salespeople have a true passion for what they're selling. It's really on you to tap into and deliver an authentic and persuasive narrative that becomes second nature. If you can make an emotional connection with the buyer and take the time to know who they are and what they want, an initial sale becomes a long-term customer.

**Dan Lok:** *Sell with your ears, not your mouth.*

The No. 1 mistake salespeople make; They talk too much. Don't sell with your mouth — sell with your ears. It's about listening, not talking. The less you talk, the more you make. Ask questions to begin a conversation that will help you discover your prospect's needs. What are their motivations and pain points?

Many salespeople push things on you, but a master closer doesn't push — they pull. They don't sell; they make you want to buy. They uncover your problem and present the

solution, so the sale is a natural conclusion. At the end of the conversation, your prospect should be thanking you.

**Katrina Ruth:** *Focus on your mindset and beliefs.*

In my experience building a business to multiple seven figures, success is 100 percent mindset and beliefs. You need strategy too, but that follows. Cultivate the belief that you can sell anything to anyone. Decide that you only sell with integrity, knowing that what you're selling is of great service and value. Then do the work to bring that belief to life.

Messaging is my primary form of marketing. Your message should connect people to what they believe and what matters to them. When we hear something true from another person's soul, we have an emotional response. So, believe that you can sell anything to anyone, that you should, and that it's the right thing to do. Then follow through with aligned action. It's more effective and fun this way!

**Andres Pira:** *Practice affirmation and visualization.*

When I first started sales, I would scribble messages on my palms. When driving to the office, I would look at my hands on the steering wheel and see "BS," meaning "best salesperson." I'd then repeat to myself, "I'm the best salesperson."

Think of all the things you do each day without conscious thought. Your mind is

mostly a subconscious machine. Daily affirmations program your mind with the right thoughts and behaviors to achieve your goals. Create small cues to reaffirm those positive thoughts throughout your day.

It's also important to visualize your goals in vivid detail using clear mental images. Picture your success in full-color detail with the people, things, and places. Tap into that feeling. Over time, you'll create your best reality.

**Keri Shull:** *Ask the right questions*

Being an exceptional salesperson is about asking the right questions, followed by more of the right questions. It's that simple. You must care about how your potential customer feels about themselves and the world. Only then can you improve their lives with whatever you're selling — and that's what sales is all about.

**Dottie Herman:** *Be the seller you would buy from.*

The greatest salespeople aren't born that way; they become great. They don't just sell their product or service either; they sell themselves. If someone doesn't like and trust you, they won't buy from you.

A great salesperson understands who they are selling to. They anticipate their client's needs and do whatever it takes to meet them. They offer something of value, underpromise, and overdeliver. Be the seller you would buy from — flexible,

accommodating, and tough but fair. Both the buyer and seller should walk away feeling good about the transaction. If you handle a sale professionally and with integrity, you'll earn more than money; you will gain trust, friendship, and future business.

**Patch Baker: Take advantage of video**

You don't always need to negotiate a million-dollar contract in person, but you shouldn't do it over the phone. My secret: video calls. I've closed deals worthy millions over Skype. When you can see the other person's demeanor, gestures, and facial expressions, you can be more open and clear than you could be over the phone. I can see if they're taking notes, confused, or distracted; if so, I'll pause and make sure they're ready to continue. Video calls help build a relationship when you can't meet face-to-face.

You have to win friends and influence people quickly, but don't force it. If I resonate with the person, great. But if I don't feel comfortable with them on a video chat, I won't work with

**Jeremy Harbour: Build rapport.**

Focusing on the buyer's

motivation is the key to sales. Invest in building rapport with them, then find their itch and scratch it. I started selling watches for 99 cents in a market stall, then sold amusement machines for thousands, then telecommunications contracts for tens of thousands, and small businesses for hundreds of thousands. Now I sell companies for tens of millions — and the process and rapport are basically the same. The effort required to sell a company isn't so different from selling a telecommunications contract.

**Mark Bloom: Create urgency and practice daily**

To master any skill, you must practice it daily; so review your closing skills every chance you get. Learn how to legitimately

convey or create a sense of urgency. The more urgency a buyer has, the more imperative it is that you close quickly.

When people believe they have time to act, they will almost always take it. Show them the downside of wasted time and that there is limited supply. Educate them on the demand in the market.



# Kenya's First Floating Solar system

**B**erlin-based company Ecoligo, which implements solar projects in emerging markets, announced the commissioning of Kenya's first ever floating solar plant. The 69 kWp system provides clean and affordable energy to the sustainable flower farm Rift Valley Roses. What makes it special: The solar plant floats on one of the farm's water reservoirs, saving space and providing many other benefits in addition to renewable energy.

## The advantages of floating solar systems

Electricity costs in emerging markets like Kenya are enormously high, which is a struggle for many businesses. They see low-cost solar power as a good alternative, also with regard to environmental protection. Most solar systems are still installed on roofs or on open spaces. The use of floating solar systems, for example on reservoirs or other bodies of water, can not only save an enormous amount

of space, but also reduce problems such as water evaporation or algae blooms. In addition, the cooling effect of the water increases the efficiency of the systems. The use of this technology has been gaining momentum for several years and promises to make an important contribution to the global energy transition.

## Electricity and CO2 savings for the rose farm

Rift Valley Roses has been pursuing the goal of sustainable, environmentally friendly production for years. In addition to rainwater catchment basins to reduce water consumption and biogas plants, the company has decided to switch to renewable energy. The floating solar panels are complemented by a second solar plant with a capacity of 75 kWp, which has already been installed on the roof of the farm in 2019. Thanks to the two installations, Rift Valley Roses will be able to meet 60 percent of the farm's electricity needs through solar energy. Annually, the system will thus save around 136 tons of CO<sub>2</sub> emissions. When solar irradiation is too low, the farm continues to draw on electricity from the national grid.

Stuart Miller, owner of Rift Valley Roses, is thrilled, "We've been big fans of the technology since installing our first solar system in 2019 and have been able to significantly reduce our reliance on the local electricity utility since then. We're proud to have this innovative system installed on our reservoir and hope to inspire other businesses to switch to this fantastic way of generating electricity as well."

## Ecoligo's business model enables solar projects

Although the benefits of solar energy are obvious for sunny regions and companies like Rift Valley Roses, most solar projects are not realised due to a financing gap. Ecoligo overcomes this hurdle by financing the projects via crowd investing. This gives private investors the chance to invest their money in sustainable projects, do something good for the environment and even profit from it with a return of up to 7 percent per year. So far, 62 solar projects have been financed by German investors via [ecoligo.investments](https://www.ecoligo.investments).

Quality is an all-important factor in ensuring that the solar plants are as efficient, low-maintenance and durable as possible. In order to be able to realize the projects on-site according to the highest standards, ecoligo relies on a strong partner network. Here too, the Berlin-based company is keen to promote the local economy





for water environments such as industrial water ponds, irrigation reservoirs, dams or natural water bodies. Its unique and patented high-quality floating technology enables the coverage of a partial or entire water surface, solving space problems in particular while providing reduced logistics and installation costs. We are very pleased to be a part of Kenya's first floating solar system."

Martin Baart, CEO of Ecoligo, adds, "Through our approach, we have already enabled many flower farms in Kenya to easily switch to solar power and benefit from day one. We believe that renewable energy can fundamentally change the industry by promoting sustainable growth and creating new jobs. We are proud to be a reliable partner for this."



and therefore works almost exclusively with local companies like Technoelectric, who installed the system.

In addition to the companies Luxor (panels), KACO (inverters) and meteocontrol (technical remote monitoring system), the Spanish company Isigenere, which is developing the world's first water-capable solar panels, has also contributed to the success of Kenya's first floating solar plant. Andrés Franco, CEO of Isigenere: "Our product Isifloating is a floating structure for photovoltaic panels specifically designed



# Integrated Pest Management Driving Sustainability



Developing and implementing a rigorous and robust Integrated Pest Management (IPM) program into flower production businesses is critical to ensure business continuity and sustainability amidst changing environmental and market conditions.

That's the philosophy of many Kenyan flower farms. Putting customer confidence and environmental sustainability front and centre of their business model, most farms place a high priority on employing best practice plant protection techniques.

"We see it as our responsibility as a business, to have these best practice measures in place to ensure a high-quality product is delivered to market and that we're supplying quality plants that are suitable for immediate point of sale at retail," Mr. Gathage said

Through having an existing structured monitoring and surveillance system in place, going through the accreditation process give the business the opportunity to compare current practices against best management practice and have them externally audited.

Now, most farms are looking to further bolster their plant protection and biosecurity practices on-farm, most farms are participating in programs that seek to provide farms with a cost-benefit analysis on the implementation of IPM practices and elements.

Led by professional associations, member farms are implementing best-practice plant protection elements and practices that form a strong foundation for effective IPM. This includes Procedures for: 'site surveillance', 'crop monitoring', 'plant material import inspections', 'other production input inspections' and dispatch inspections.

Employing a rigorous IPM program informs growers of the pest status within their crops at any given time, allowing for better decision making when selecting the most appropriate IPM management method.

To assist and ensure effective implementation of the IPM elements through the program, external consultants from Biological companies are engaged to provide technical expertise on-farm by performing regular structured crop monitoring. Biological companies make recommendations to farms in the areas of: pests



and disease identification, crop lifecycle, population thresholds and methods for management.

“The consultant regularly assesses the crop monitoring program implemented and overlays a randomised pattern to ensure that we rigorously cover the entire site,” Mr Gathage said.

“As we had an existing pest management and monitoring system in place, we’ve been able to directly utilise the recorded information to assess chemical use and plant stock losses and discards over time, allowing the business to seamlessly incorporate requirements of the IPM program.

“Having an expert consultant out at the farm, has also provided a great opportunity for our business to train employees in crop monitoring, demonstrating and educating our staff on best-practice techniques covering observation techniques, handling techniques and release patterns. This training has boosted the capability of the two full time staff members working on the plant protection team.

“Crop monitoring is an integral component to IPM, which if done correctly, is likely to detect a pest infestation at a rate as low as five per cent within a crop or area of the farm.

“Though the initial costs and requirements associated with establishing best-practice plant protection systems requires investment, businesses can reap long-term benefits by mitigating incursion risk and bolstering customer confidence.”

Biological Services providers should be able to collate data providing a glimpse into the cost range of managing plant pests across the sector, including:

- Average cost of chemical spraying per year/ per hectare (inclusive of labour and chemical costs)
- Average cost of biological controls per year/per hectare (inclusive of labour and biological organism cost)
- Average lost revenue attributed to pest and disease per hectare per year.

“I’ve always seen great value in industry comparisons, to help us take stock of

where we’re at by benchmarking where the business sits in the market against our peers,” Mr Gathage said.

“A business may not succeed or fail based purely on the existence of a robust IPM program, but it’s a highly effective management tool to mitigate risk of pests and disease, minimise costs, and help ensure “Most farms operate in an agricultural area and with residential real estate established nearby, it’s imperative that we are adhering to stringent pest and disease and environmental sustainability measures to ensure continued business viability.

“Generally in flowers, there is a very mature market. If we’re able to make incremental improvements over time, whether that is two per cent year on year, then we’ll be able to consolidate our market position and remain competitive and sustainable.

“Undertaking a cost-benefit analysis on the implementation of IPM elements will be critical to future planning and ensuring continued improvements in efficiency and productivity.”

At the conclusion of the project, the project team should compare data collected around the level of pest and disease management by each business, providing a cost-benefit analysis on the implementation of structured IPM programs in farms.

“Demonstrating less chemical impact is a top priority and goal for our business, not just for cost reductions, but because we’re concerned about the environmental impact on our irrigation water,” Mr Gathage said.

“This data will demonstrate the financial and environmental benefits of IPM and provide an evidence-based database for better decision-making within the business – helping us predict and better prepare for what’s ahead.”

# Lucas Choi: Growing a Bold Dream

*Lucas Choi, a robust man with a robust swagger, sauntered into the other side of the camera for the Zoom call. This was just after everything shut down under Public Order Number Two and I could not travel to Nakuru for the arranged physical meeting and Interview.*

*He is the Farm Manager-Roses Flora Ola. Zoom is a great location to meet him seeing as he loves personal touch.*

*Mr Choi, articulate and poised, has had stints at Oserian, Redlands, Sierra and Subati where he held different position raising from electrical technician and sprayer at Oserian to Production Manager at Subati.*

*Now hunched with age, and maybe the weight of his responsibilities, he hulks swiftly as he settles for the interview. One thing kept coming out all through, his passion for flowers.*

## **What are you most passionate about?**

Executing things correctly. I like to see flowers grow to the end. Am passionate about quality and quantity of flowers. Am passionate about growing.

## **How is it coming from Ritembu primary School and rising to where you are?**

I came from a very humble beginning. My dad was working in the private sector and my mom a stay-at-home mom. She was a small scale farmer. My dad's dream was for me to be a priest.

After my secondary education, I joined the then Kenya Polytechnic and did electrical engineering. After completion, I joined a project that was in Oserian where I worked as an electrical engineer.

When the electrical contract came to completion, a friend convinced me to join growing. I was enrolled as a sprayer. Oserian advertised a position in Scouting, I applied and was picked. After sometime, I was transferred to be the head sprayer and the rest is history.



I also joined University of Nairobi for a course in Horticulture.

I joined Redlands for a month, then moved to Subati in subukia as a foreman. I was transferred to their Naivasha farm as a production manager. I worked with Subati flowers for 5 years then joined Sierra Flowers as a production manager for 3 years.

I then joined Flora Ola where have been the Farm Manager-Flowers for the last 6 years. On joining the farm, it was 4ha and have seen it grow to its current 30ha and still growing. I oversee the technical department, crop protection, crop nutrition and general crop management.

**Was there any sort of pressure when growing up from parents or others on your future career? Did you ever have conflict of profession? Unable to decide what next**

As stated earlier there was some subtle academic pressure. I was a little bit luckier because I excelled intellectually. However, the pressure to join priesthood was still loud. But from onset I had passion in agriculture.

**Most children grow up thinking of white collar jobs. Growing up, did you ever imagine you would come to farming as a career?**

My mum was a small scale farmer. The impact this had on me as I grew up so close to her and farming as my daily routine was huge. I felt like I was born up to soil my hands. I grew a passion in Agriculture at a tender age. I saw farming as a discipline.



**As you rise the ladder as a grower, I suppose you start physical farming less, do you miss it?**

Yeah! You feel you want to do it. But of course, you also find joy in managing and seeing the product come out through. However, sometimes you feel like going to the farm to grow. But then it means you don't rise in the career because if you're doing everything, then you're constrained.

But as a grower, growing is not something that you can avoid. You still add details and as you brief somebody, you show practically.

**What drew you to being a grower and what's your favourite part of it? Which part of your career is most challenging?**

There is the natural way flowers grow. My desire to see them grow with minimal external interference. The most challenging part is to feed and protect them, then you watch them grow. That science make me like growing.

**What are you most conscious about in flower growing?**

I'm conscious about how I relate with my staff and the values that I teach them. Being a farm manager, I model professionalism on them. That's also very important, trying to be clear to them as much as possible, without compromising on standards. I am conscious about how I relate to the market and ensure I export the best. I'm conscious about the health of my flowers. The quality and quantity I export.

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## PERSONAL PROFILE

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**What are you learning, in this moment of Covid-19, as a flower grower? What are you learning about yourself as a person at this point in life?**

The best-laid plans can go out of the window. Things can change instantly.

The strategy laid previous year, in some ways, can change instantly. The needs and demands of customers can change drastically.

Before it was convenient to order your flowers and you get them without any hitch. Now the flowers can be ordered and you miss a cargo flight.

Growers may also need to spread their risks. It is important to add spray roses and summer flowers to the already popular standard roses.

We have learnt a lot about human psychology and we are still learning. We are trying to adapt our lifestyles to this ever-changing landscape. Parents need to save and invest outside their normal work place. Both companies and individuals may need some fund to cushion their operations at times like this.

**Of all the things you've done in your life, what are you most proud of?**

It's harder to single out something. But being a farm manager at Flora Ola and overseeing the growth of the company from 4ha to 30ha is something I can be proud of. Am proud of my able team and a very supportive board of directors.

We have managed to build a reputable farm with a good name in the entire production chain to the market place.

**Do you subscribe to the quality or quantity of time when it comes to spending time as a grower?**

Quality time because the quantity is often

really not possible given my schedule. The time I need with my staff, directors and even market must be as short as possible but as constructive as possible. This is to give them humble time to do their other works.

As a family what we've agreed is to have dinners together as much as we can. We talk about our day together. We also have enough time together.

**What do you want people especially those you are mentoring to remember about you?**

If I'm remembered I should be remembered for what people think is important and not what I think is important.

I'm an honest hard worker with integrity. I





believe ethics and professionalism in my daily work is well pronounced.

For the upcoming professionals I always inform them, in farming, you must combine your great academic achievements with soiling your hands. Farming is practical, you must come down to the ground and learn practically.

Have kept telling my three children there is no short cut in life. The longest route is the only route to riches.

**Talk of philosophies, what's your philosophy of success?**

My God! (Pause) You ask odd questions. (Laughs). I think when you are young you think money is success because we are judged by it and in the beginning you fall

into that track. Money is important to be comfortable, but ask people who have it if they can hold their heads high if they think of how they made it. However, when you act with integrity in everything that you do, eventually you will succeed. It may be a little bit harder, but eventually that philosophy will succeed.

**What is happiness? On a scale of 1 to 10, how happy are you?**

(Laughs) Hmm. (Long pause) Happiness is a mental state. I know that's a boring answer but I have been doing meditation recently and reading on it. It has made me realize how important our mental state is.

How do we look at the emotions that make us feel unhappy, for instance? Most times it only takes a different mental outlook and

self-awareness to correct a state like that.

A 10. I have so much to be grateful for. I'm lucky I get out of bed every morning and I'm healthy gearing to go and do what I love most. I have a very supportive family. That's pretty lucky. [Chuckles]

**What would you be doing if you weren't a grower?**

A farmer. Maybe a small scale farmer. I like farming. I developed a very keen interest in farming at a very early age. So if you ask what else I'll do, maybe I'll tell you I'll do farming.





# FLOWER & VEGETABLE FARMS IN KENYA

FARM NAME	PRODUCT	LOCATION	CONTACT PERSON	TELEPHONE	E-MAIL
AAA- Flowers-Rumuruti	Roses	Rumuruti	Anil	-	-
AAA- Flowers -Chui Farm	Roses	Timau	Phanuel Ochungu	07522506026	-
AAA-Simba Farm	Roses	Rumuruti	Eliud Wachiya	0727258218	-
Fairy Flowers	cutings	Limuru	Kennedy Kamau	0712204894	kenreal07@gmail.com
Farm-Sunripe		Naivasha	Antony	0711827785	naivasha@sunripe.co.ke
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	0780314387	ramnath.sarbande@xflora.net
Afriscan Kenya Ltd	Hypericum	Naivasha	Charles Mwangi	-	-
Aquila Development Co	Roses	Naivasha	Abhay Marathe	0729776656	gm@aquilaflowers.com
Balaji Flowers	Roses	Olkalou	Ra0 Venkatesh	0726337266	-
Baraka Farm	Roses	Ngorika	Lucy Yinda	-	lucy@barakaroses.com
Batian Flowers	Roses	Nanyuki	-	-	-
Beautyline	Flowers	Naivasha	Peter Gathiaka	0721392559	peter@beautyli.com
Big Flowers	Roses	Timau	Gideon Waweru	0721178974	-
Bigot Flowers	Flowers	Naivasha	Kakasaheb Jagtap	0722205271	jagtap.kt@bigotflowers.co.ke
Bila Shaka Flowers	Roses	Naivasha	Joost Zuurbier	0722204489	bilashaka.flowers@zuurbier.com
Black Petals	Roses	Limuru	Nirzar Jundre	0722848560	nj@blackpetals.co.ke
Bliss Flora Ltd	Roses	Njoro	Appachu Sachin	0789101060	appachu7@yahoo.com
Blue Sky	Gypsophilla	Naivasha	Patel Sushant	0725622333	info@blueskykenya.com
Bloom Valley		Salgaa	Karani	0733529666	-
Blooming Dale Roses Kenya Ltd	Roses	Nanyuki	Sunil	0718991182	info@bloomingdaleroses.com
Buds and Blooms	Roses	Nakuru	Shivaji Wagh	0720895911	shivjaniket@yahoo.com
Carzan (K) Ltd KS	Summer flowers	Salgaa	Stanley Rotich	0721931710	stanley@carzankenya.com
Carzan (K) Ltd ST	Hypericum, solidago		Adung'o	0716019094	adung'o@carzankenya.com
Carzan - Molo	Carnations	Molo	Charles Chelule	0728784081	charles.chelule@carzankenya.com
Charm Flowers	Flowers	Athiriver	Ashok Patel	020 352583	ashki@charmflowers.com
Chestnut	Flowers	Mt. Kenya	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	kipkirui89@gmail.com
Colour crops Naivasha	Flowers	Naivasha	Geoffrey Mwaura	0722200972	nva@colourcrops.com
Credible Blooms	Flowers	Rumuruti	Eliud Njenga	0722382859	eliud@pigeonblooms.com
Dale Flora	Roses	Mogotio	Ajay Sutar	0711102266	ajay.sutar24@gmail.com
Desire Flowers	Flowers	Isinya	Rajat Chaohan	0724264653	rajatchaohan@hotmail.com
De ruiters	Breeder Roses	Naivasha	Fred Okinda	0722579204	Fred.okinda@deruiter.com
Double Dutch	Cuttings	-	Pharis Wainaina	0728207661	-
Dummen Orange	Flowers Breeders	Naivasha	Steve Outram	0733 609863	s.outram@dummenorange.com
Eco Flora	Roses	Salgaa	Jackson Mbanya	0723565630	production@fontana.co.ke
Elbur flora- kimman	Roses	Nakuru	Daniel Moge	0721734104	kimmanexp@gmail.com
Enkasiti Thika	Flowers	Thika	Tambe	0734256798	enkasiti@gmail.com
Equinox	Flowers	Nanyuki	Harry Kruger	0707266956	harry@equinoxflowers.com
Everest Flowers Ltd	Flowers	Mt. Kenya	-	-	-
Everflora Ltd.	Flowers	Thika	Bipin Patel	0735873798	everflora@dmbgroup.com
Evergreen Crops		Nairobi	Arun Singh	0721941009	arun@evergreencrops.com
Exotic Peninah	Roses/ Carnations	Athiriver	Dan	0734626942	dan@exoticfields.com
Fairy Flowers	Flowers	Limuru	Sylvester	0753444237	sylvesterkahoro@yahoo.com
Fides Kenya Ltd	Cuttings	Embu	Bernard Marindany	0726 366 752	B.Marindany@DummenOrange.com
Finlays- Lemotit	Flowers	Kericho	Japhet Langat	0722 863527	japhet.Langat@finlays.co.ke
Fontana Ltd - Akina farm	Roses	Njoro	Mahindra Patil	0798254199	--
Fontana Ltd - Ayana Farm	Roses	Mau Narok	Osman	-	-
Flamingo Holdings Farm	Flowers	Naivasha	Peter Mwangi	0722204505	peter.mwangi@flamingo.net
Flamingo Holdings-Kingfisher Farm	Flowers	Naivasha	Mr. Isaac Karanja	0720473502	kingfishercarnations@flamingo.net
Flamingo Holdings- Kingfisher Farm	Flowers	Naivasha	Jacob Wanyonyi	0722773560	jacob.wanyonyi@flamingo.net
Flamingo Holdings-Siraji Farm	Carnations, Roses	Nanyuki	Peris Muturi	-	-
Flamingo Flora	Roses	Njoro	Sam Nyoro	0721993857	s.ivor@flamingoflora.co.ke
Flora ola	Roses	Solai-Nakuru	Lucas Choi	0721832710	lucas.floraola@gmail.com
Flora Delight	Summer flowers	Kiambu/ Limuru	Marco	0710802065	marcovansandijk@yahoo.com
Florensis Ltd	Cuttings	Naivasha	Anne Marie		annemarie@florensis.co.ke
Florenza Ltd	Roses	Solai	Yogeesh	0737453768	farm.florenza@megaspingroup.com



# FLOWER & VEGETABLE FARMS IN KENYA

FARM NAME	PRODUCT	LOCATION	CONTACT PERSON	TELEPHONE	E-MAIL
Fresh Gold Flowers Ltd	Flowers	Mt. Kenya	John Karimi	0721622294	karimi@freshgoldkenya.co.ke
Gatoka Roses	Roses	Thika	Herman Njuguna	0728 854 844	info@gatokaflowers.com
Golden Tulip	Roses	Olkalao	Umesh Choudhery	0739729658	umesh@bth.co.ke
Groove	Flowers	Naivasha	John Ngoni	0724448601	groovekenya@gmail.com
Hanna Roses Ltd	Roses	Thika	Kadlag Palaji	0723149968	kadlag.paraji@hannaroses.com
Harvest Ltd	Roses	Murungaru	Julius Oloo	0721465853	oloo@harvestflowers.com
Harvest Ltd	Roses	Athiriver	Julius Oloo	0721465853	oloo@harvestflowers.com
Harvest Ltd	Roses	Olkalou	Julius Oloo	0721465853	oloo@harvestflowers.com
Heritage Flowers Ltd	Roses	Rumuruti	Shailesh Kumar	0722203750	hfl.srk@gmail.com
Highland plantations	Cuttings & Herbs	Olkalou			production@highlandplants.co.ke
Imani Flowers	Summer Flowers	Nakuru	Raphael Otieno	0792302466	raphael@imaniflowers.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	-	production@kariki.co.ke
Kariki Ltd - Nanyuki	Eryngiums	Nanyuki	Richard Fernandes	062-31023/6	bondet.production@karik.biz
Kariki Ltd - Naivasha	Summer	Naivasha	Glory Gatwiri	0718328382	hamwe.production@kariki.biz
Kariki Ltd - Molo	Fowers	Molo	James Oluoch	0716333717	jame.oluoch@kariki.biz
Kariki - Hamwe	Hypericum	-	Benjamin Ribai	0723721748	hamwe.fm@kariki.biz
Kenflora Limited		Kiambu/ Limuru	Abdul Aleem	0722311468	info@kenflora.com
Kentalya	Cuttings	Naivasha	Lynet	0733549773	lynette@kentalya.com
Kikwetu		Mt. Kenya	Rathan	0787266007	
Kisima Farm Ltd	Roses	Timau	Craig Oulton	0722205828	craig@kisima.co.ke
Kordes Roses	Roses- Breeders	Karen	Luce	0735995566	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	Oppaso Bandgar	07120070053	oppasobandgar@vegpro-group.com
Kongoni River Farm - Bemack	Flowers	Timau	Mangesh	0797 874583	
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	Roses	Naivasha	Mureithi	0722238474	admin@lamornaflowers.com
Lathyflora		Limuru	Mbauni John	0753888126	info@lathyflora.com
Lauren International	Flowers	Thika	Dilip	0720796629	laurenflowers@accesskenya.co.ke
Laurel Investment	Roses	Nakuru	Rajendra Jadhav	0738359459	rajendra.laurel@bht.co.ke
Livewire	Hypericum	Naivasha	Esau Onyango	0728606878	management@livewire.co.ke
Lolomarik	Roses	Nanyuki	Topper Murry	0715 727991	topper@lolomarik.com
Mahee Flowers	Roses	Olkalao	Natarajan	0738999149	natarajan@eaga.co.ke
Maridadi Flowers	Flowers	Naivasha	Jack Kneppers	0733333289	jack@maridadiflowers.com
Maua Agritech	Flowers	Isinya	-	-	-
Mau Flora	Roses	Molo	Mahesh	0787765684	mahesh@mauflora.co.ke
Milenium Growers	Summer Flowers	-	Sushant Wankara	0731316000	sushant@marvelgreens.com
Molo Greens	Solidago, carnations	-	Justus Metho	0722755396	justus@mologreens.com
Mt. Elgon Flowers	Roses	Eldoret	Bob Anderson	0735329395,	bob@mtelgon.com
Mwanzi Flowers Ltd	Roses	Rumuruti	Ram	0722265845	-
Mzuurie Flowers - Maji Mazuri	Roses	Eldoret	Mark Juma	0727471034	mjuma@majimazuri.co.ke
Mzuurie Flowers - Molo River Roses	Flowers	Kilelwa	Andrew Wambua	0724256592	awambua@moloriverroses.co.ke
Mzuurie Flowers - Winchester Farm	Roses	Karen		0725848909	
Mzuurie Flowers - Winchester Farm	Flowers	Bahati		0725848909	
Nini Farms	Roses	Naivasha	Philip Kuria	0720611623	production@ninitd.com
Nirp East Africa	Roses	Naivasha	Danielle Spinks	0702685581	danielles@nirpinternational.com
Ol Njorowa	Roses	Naivasha	Charles Kinyanjui	0723986467	mbegufarm@icconnect.co.ke
Oserian	Flowers	Naivasha	-	-	-
Panda Flowers	Roses	Naivasha	Vivek Sharma	0731040498	gm@pandaflowers.co.ke
Panocol International	Roses	Eldoret	Mr. Paul Wekesa	0722748298	paul.wekesa@panocal.co.ke
Penta	Flowers	Thika	Tom Ochieng	0723904006	tom@pentaflowers.co.ke
Pendekeza	Roses	Nanyuki	Richard Siele	0722716158	tambuzi.sales@tambuzi.co.ke
PJ Dave Flowers	Flowers	Isinya	Sanjiv Dogra	0737576966	pjdaveflowers@wananchi.com



# FLOWER & VEGETABLE FARMS IN KENYA

FARM NAME	PRODUCT	LOCATION	CONTACT PERSON	TELEPHONE	E-MAIL
PJ Flora	Roses	Isinya	Santos Kulkarni	0738990521	santosh@pjdave.com
Plantech Kenya Ltd	Propagators	Naivasha	Idan Salvy	0702187105	idan@plantechkenya.com
Porini Flowers	Roses	Molo	Shakti	0739676998	gm@poriniflowers.com
Primarosa Flowers Ltd	Roses	Oljororok	Peter G. Njagi	0718342381	production.mp2@primarosaflores.com
Rain Forest Farmlands Ltd	Roses	Naivasha	Boniface Kiama	0718925040	longere@fleurafrica.com
Ravine Roses Flowers	Flowers	Nakuru	Peter Kamuren	0722780811	bkiama@fleurafrica.com
Redland Roses	Flowers	Thika	Aldric Spindler	0733603572	aldric@redlandsroses.co.ke
Redwing Flowers	Flowers	Nakuru	Simon Sayer	0722227278	sayer@redwingltd.co.ke
Rift Valley Roses (K) Ltd	Flowers	Naivasha	Peterson Muchiri	0721216026	fm@riftvalleyroses.co.ke
Rimiflora Ltd	Hypericum	Njoro	Richard Mutua	0722357678	richard@rimiflora.com
Riverdale Blooms Ltd	Flowers	Thika	Antony Mutugi	0202095901	rdale@swiftkenya.com
Roseto	Roses	Roseto	Aravind	0786157344	gm.roseto@megaspingroup.com
Savannah international	Geranium	Naivasha	Ignatius lukulu	0728424902	i.lukulu@savanna-international.com
Selecta Kenya		Thika	Robert Khamala	0727 467 464	r.khamala@selectakenya.com
Sojanmi Spring Fields	Roses	Njoro	Ashesh Mishra	0792217088	ashesh@xflora.net
Schreus	Roses	Naivasha	Haiko Backer	-	-
Shades Horticulture	Flowers	Isinya	Ashutosh Mishra	0722972018	info@shadeshorticulture.com
Shalimar Flowers	Flowers	Naivasha	Dinkar Wandhekar	0702418174	dinkar@eaga.co.ke
Sian Roses - Maasai Flowers	Flowers	Isinya	Anthony Kipng'eno	-	-
Sian Roses - Agriflora (K) Ltd	Roses	Nakuru	Charles Mulemba	-	cmulemba@sianroses.co.ke
Sian Roses - Equator Roses	Roses	Eldoret	Nehemiah Kangogo	0725848910	nkangogo@sianroses.co.ke
Sierra flora	Roses	Njoro	Pravin Yadhav	0735741774	farm.sierra@megaspingroup.com
Simbi Roses	Roses	Thika	Karue Jefferson	067 44292	simbi@sansora.co.ke
Sirgoek Flowers	Flowers	Eldoret	Andrew Keittany	0725 946429	sirgoek@africaonline.co.ke
Solai Milmet/Tindress	Flowers	Nakuru	Shantaram	0740212816	solairoses@gmail.com
Subati Flowers	Roses	Subukia	Naren Patel	0712 584124	naren@subatiflowers.com
Subati Flowers	Roses	Naivasha	Naren Patel	0712 584124	naren@subatiflowers.com
Suera Flowers Ltd	Roses	Nyahururu	George Kimathi	0724622638	gkbuuri@gmail.com
Sunfloritech	Roses	Naivasha	A Duzairajan	0794572232	farmmgr.tulaga@btfgroup.com
Sunland Timau Flair	Roses	Timau	Ken Mwiti	-	info@lobelia.co.ke
Stockman rozen	Roses	Naivasha	Julius muchiri	0708220408	julius@srk.co.ke
Syngenta Flowers - Kenya Cuttings	Flowers	Thika	Kavosi Philip	0721225540	philip.munyoki@syngenta.com
Syngenta Flowers - Pollen	Flowers	Thika	Joseph Ayieko	0733552500	joseph.ayieko@syngenta.com
Tambuzi	Roses	Nanyuki	Richard Siele	0722716158	tambuzi.sales@tambuzi.co.ke
Terrasol	Cuttings	Limuru	Benard Adwarh	0753444230	adwarh@terrasolkenya.com
Timaflo Ltd	Flowers	Nanyuki	Simon van de Berg	0724443262	info@timaflo.com
Top Harvest	Roses	-	Pius Kimani	0721747623	pius.kimani@gmail.com
Transebel	Flowers	Thika	David Muchiri	0724646810	davidmuchiri@transebel.co.ke
Uhuru Flowers	Flowers	Nanyuki	Ivan Freeman	0713889574	ivan@uhuruflores.co.ke
Utee Estate	Chrysanthemums	Nairobi	Appaso Mane	0737 513 844	mane.uel@btfgroup.com
United Selections	Roses -Breeder	Nakuru	Fred Kisumo	0720107691	fkisumo@united-selections.com
V.D.Berg Roses	Flowers	Naivasha	Johan Remeeus	0721868312	johan@roseskenya.com
Valentine Ltd		Kiambu/Limuru	Joseph Kariuki	0728 093 379	joseph.kariuki@valentinerosers.com
Van Kleef Kenya Ltd	Roses		Judith Zuurbier		roses@vankleef.nl
Van Kleef Ltd	Roses	Njoro	Karan Mandanna	078500460	karan@vankleef.nl
WAC International	Breeder	Naivasha	Richard Mc Gonnell	0722810968	richard@wac-international.com
Waridi Ltd		Athi River	Julius Ruto	-	farmmanager@waridi.com
Wilham Kabuku	-	Nairobi	Natarajan	0735 792 063	natarajan@eaga.co.ke
Wildfire	Roses/summer	Naivasha	Eliud Kimani	0727598349	roses@wildfire-flowers.com
Wilfay Flowers	Gypsophila/hypericum	Subukia	Makori	0723358644	makoriwilfay@gmail.com
Wilmar Agro Ltd	Summer Flowers	Thika	Alice Muiruri	0722 321203	alice.muiruri@wilmar.co.ke
Windsor		Thika	Pradeep Bodumalla	0736 586 059	farm@windsor-flowers.com
Xpressions Flora	Roses	Njoro	Brijesh Patel	0715469732	brijesh.patel@xflora.net
Zena - Asai Farm	Roses	Eldoret	Japheth Chelal	0721770597	-
Zena Roses - Sosiani Farm	Roses	Eldoret	Jackson Mbanya	-	-
Sololo Agriculture	-	-	Andrew Tubei	-	-

## Building a Better Brand: Modern Floral Marketing



**T**hese days, customers have many options when it comes to purchasing flowers—from grocery stores to boutique flower shops to wholesalers, the choices are endless. As a floral business in the modern world, it is up to you to stand out among an array of competitors. One buzzword associated with modern marketing is “brand.” When a company’s brand is clearly defined, clients are more likely to understand what that business stands for and what they can expect from the business. Simply put, your brand is your promise to your customer. Below are some foolproof ways to strengthen your floral company’s image, helping to increase revenue and attract new clientele.

### 1. Clearly define your marketing goals.

Before moving forward, ask yourself what you want to achieve from your marketing. Some simple answers might be “to attract and engage customers” or “to create brand visibility”—that is, becoming the flower shop everyone knows and recommends. Some other useful goals include educating the public on the products and services you offer and simply promoting these offerings.

It’s a good idea to set aside one day a month to review your marketing strategy for the upcoming weeks.

### 2. Invest in marketing merchandise.

Calendars, pens, t-shirts—these are all great branded items to give your clients. Not only will your customers think of your business every time they see that calendar or use that pen, but other folks around town will learn about your business as well. It’s free marketing! Consider giving away these items with every purchase. Other possible items include bags, mousepads, jackets, and water bottles. You can start by recommending that your own employees wear these around the shop as well, as marketing should always start in-house.

### 3. Build relationships in your community.

By partnering with local businesses, you can work together to cross promote each other and increase visibility across the board. Think of companies that could benefit from a partnership with a floral company—for example, an event or wedding planner or a banquet hall. Other great ideas include teaming up with local high schools or dance schools, hair salons

and makeup artists, photographers, limo/party bus companies, and entertainment or DJ companies.

### 4. Activate your social media handles.

It goes without saying that social media is a priceless, affordable way to spread the word about your business. Pick two of your favourite handles—say, Instagram and Facebook—and regularly update them with engaging and original content. There are great platforms like Hootsuite that link all your social media outlets under one roof, making it easy for you to pre-plan posts and manage them all at once. No one likes a dead social media handle!

### 5. Tap into the power of online reviews.

Nowadays, online reviews can make or break a business. It is crucial to sign up for Google Business, which allows customers to easily find you in a Google search and rate your business. Similarly, Yelp is an indispensable tool for creating trust in your business. It is practical for potential clients to “check Yelp” before visiting any business, so create incentives for your customers to leave good reviews. On the flip side, if an unhappy customer leaves a negative review (which is almost unavoidable—you can’t please everyone), it is a great opportunity to showcase your customer service by publically replying to the negative review and apologize/offer to resolve the client’s complaint.

## BRIEFS

### Agriculture Sector Network ASNET welcomes UK-Kenya Free Trade Agreement

**K**enya agriculture sector umbrella body, The Agriculture Sector Network, ASNET, has lauded the recently ratified Economic Partnership Agreement between Kenya and UK saying it will go a long way in boosting economic development and job creation.

The trade deal allows tariff-free market access for Kenyan top agricultural exports to UK including vegetables, fruits, flowers, coffee and tea. Kenyan vegetable exports enjoy 43 per cent market share in UK while cut flowers command 9 per cent share.

The trade pact also guarantees tariff free access for UK exports to Kenya among them electronics, technical equipment and machinery. "We thank the Ministry of Industrialization, Trade and Enterprise Development for acceding players in the agriculture sector the opportunity to present its views on the UK –Kenya Free Trade Agreement. We acknowledge the importance of Public Private Partnerships in driving the Kenyan economy and also enabling a conducive business environment," said Bimal Kantaria the ASNET chairman.

Agriculture plays a leading role in Kenya's economy and is a critical pillar to the country's development strategy. It is estimated that more than 75 percent of Kenyans' livelihoods depend on the sector, contributes about 33% per cent of the Gross Domestic Product (GDP) and employs more than 40 % of the total population. This calls for facilitation in all the key areas to enable the sector to thrive.

"The milestones achieved with the agreement will facilitate the continued duty and quota-free access of Kenya exports to the UK as they do in the EU market bloc, and secure foreign exchange earnings. The sector acknowledges the agreement will enhance competitiveness of Kenya's leading agricultural exports namely cut flowers, fresh produce, coffee and tea even as we look forward to the expansion of the list to include other products," Mr. Kantaria added.

Since the vast majority of Kenya's poor depend on smallholder agriculture increasing their productivity can contribute immensely to improving food security, increasing rural incomes, lowering poverty levels and growing the economy.

## BioAtlantis and Lentera Launch SuperFifty Prime in Kenya



*Jacob Masai of BioAtlantis Kenya inspecting Super Prime roses trials at Oserian Farm Naivasha*

**B**ioAtlantis Ireland and Lentera Africa launched SuperFifty Prime advanced biostimulant in Kenya at a well-attended virtual event.

Founded in 2004 in Tralee County, Ireland, BioAtlantis entered the crop biostimulant market in 2007 with stress mitigation as a central strategy. Stress is now recognised worldwide as affecting most life forms. It can be split into two main categories, abiotic and biological stress. Extensive research into both crops and animals has provided BioAtlantis with the knowledge base to develop compounds that may be used to mitigate or prevent abiotic and biological stress issues occurring. Lentera Africa is a Kenyan based Agriculture technology company that enables farmers to adapt to climate change through climate smart inputs, precision agriculture and market linkages.

BioAtlantis' relentless focus on science and technology has culminated in the development of a cutting-edge technology platform known as AgriPrime®. Using this proprietary technology platform, the company is able to isolate a range of naturally derived compounds that are functionally active in priming agricultural crops. Priming can modulate a range of biological processes in treated crops.

SuperFifty® Prime is a ground-breaking product developed under the AgriPrime® technology platform.

Hosted by BioAtlantis, Lentera Africa and the Embassy of Ireland in Kenya, the event presented results of trials done on roses and summer flowers in Kenya and answered questions from growers about this new technology. In her keynote address, the Irish Ambassador to Kenya, Honourable Ambassador Finnoula Quinlan emphasized the long history between Kenya and Ireland going back to the early missionaries and their contribution to education and sports. In his address, John T. O'Sullivan emphasized the research behind SuperFifty Prime that makes it "a proven brand to mitigate abiotic stress problems in flowering plants. In his remarks, Moses Kimani, CEO of Lentera Africa highlighted that Kenyan flower growers now have access to the cutting edge SuperFifty® Prime technology and that early adopters are already reaping the benefits."

*For more information contact [info@lenterafrica.com](mailto:info@lenterafrica.com) or 0743162357*

**WHEN THE REST ARE SANITIZING AND STAYING AT HOME  
YOU ARE BUSY ENSURING THEIR STOMACHS REMAIN FULL**

*Thank You Farmers*





**KORDES** roses

