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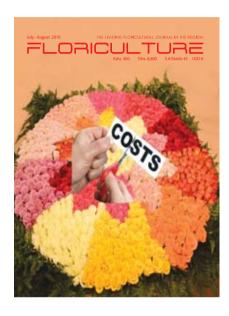
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# The Leading Floriculture Magazine

Contributions to Floriculture are welcome. Although every effort will be made to return manuscripts and photographs, these are submitted at owners' risk. Opinion expressed by contributors are not necessarily the views of Floriculture.

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# **Editorial**

# Willpower Alone isn't Enough

Kenyan growers are used to thinking they grow quality flowers; but that is before the entry of Ethiopia and other fast emerging flower producers. Things have fallen apart now with more production and shrinking market.

Marketing is now a vital function of any flower farm. A flower farm in which marketing is absent or marketing is incidental is not a business.

With more and more countries taking up flower growing and expanding production capabilities, many of them eating into our markets. This is the beginning of the sales era of marketing our flowers.

Voluminous production is important for marketing evolution. With the onset of quality production, better transportation, and more efficient technology, flowers will be grown in large volume and marketed at optimum prices. This is the production era of marketing.

The truth is competition is growing and supply outstripping demand, our farms must create full time serious marketing departments to conduct consumer research and advise the management on how to price, distribute and promote our flowers. This is the onset of the marketing department era when research is used to determine consumer needs. When we add up all those [...] inches, that's what makes the difference between winning and losing". This point is



applicable throughout life too – it's the people who go the extra mile who tend to find success more often than not.

And sometimes, you won't notice it at first, it's the sum of all the small parts which lead you to victory.

Have a victorious day

Masila Kanyingi

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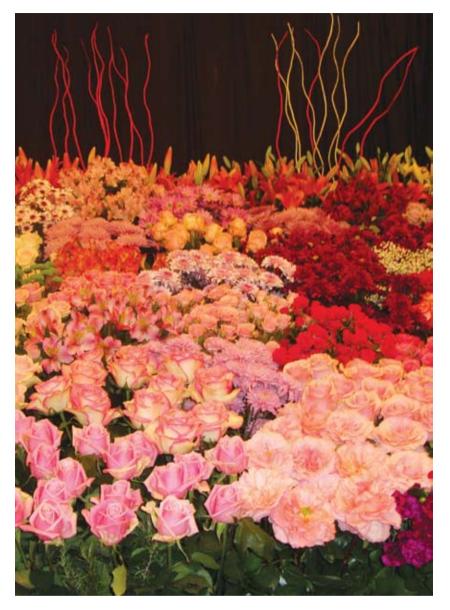


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# WHY ARE FLOWERS SO EXPENSIVE?

There's a lot going on behind the scenes in the flower industry that directly affects your wallet.

# By Bryan Lufkin

ground cost so much?

There are several reasons: flowers are delicate,

ny does something you could just pluck out of the

high maintenance, perishable, difficult to grow, often imported and can cross continents as they make their way from field to florist.

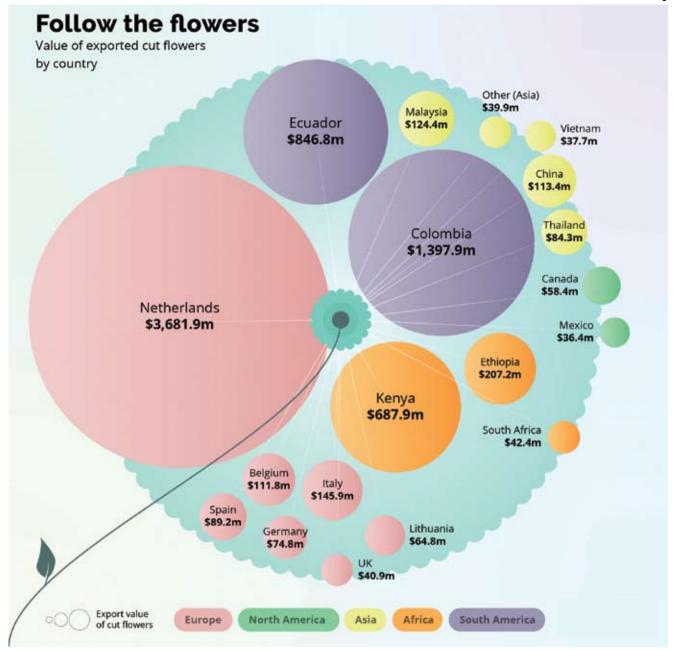
So as 12 May approaches – Mother's Day in nearly 100 countries – you may find yourself grumbling about how much a bouquet costs. But that price tag has to account for the house-of-cards nature of the product: the time and money farmers spend to hit holiday deadlines and the pressure for florists to match supply to demand, or lose out.

Mother's Day and Valentine's Day tend to be big flower holidays, pressuring growers and florists to hire extra help - thus bumping up the price tag.

# High-risk peaks

Perfect blooms are extremely fragile – both physically and from a business perspective.

And when it comes to flowers grown to hit holiday peaks, both farmers and florists face higher labour costs and financial risks. A big driver behind this is the fact that so many countries import their flowers.



According to research from Comtrade, the United Nations' international trade database, global exports of cut flowers were worth \$8.48bn in 2017, a 46% increase from 1995. ("Cut flowers" refers to flowers presented in bouquets, like roses, lilies, tulips

and pansies.) The
Netherlands was the
top exporter, followed
by developing countries
like Colombia, Ecuador,
Kenya and Ethiopia.

In developed countries there are greenhouses with automated technology like sophisticated watering machines or robot transplanters and harvesters, where fewer workers are needed. But in poorer nations with cheaper labour, there's less use of technology.

Ecuador and Colombia exported the most roses and carnations in 2018, Thailand topped the orchid trade while Colombia dominated with lilies and chrysanthemums.

Top importers are almost exclusively developed countries: the US,

Germany, the UK, the Netherlands and Russia. Amy Stewart, author of Flower Confidential, a behind-the-curtain look at the industry, says almost all the blooms bought in the developed world are imported.

"They're moving across continents and since they're perishable, they have to be refrigerated as they travel, which is expensive. For florists, it can be risky, because they

may order 10,000 tulips in hopes of selling them for a lone event on the calendar, like Mother's Day. But if they don't sell them all, the leftovers quickly die and become worthless. Part of what consumers are paying for is that risk."

To page 8

# **Main Story**

# From page 7

#### Labour surges

Hitting those peaks requires precision and skill. The flowers must be grown in such a way that they don't develop diseases or pests, which could potentially spread through entire crops. Mr. Raphael Mulinge, who has been growing flowers for 20 years in Kenya, points to insect damage as a big challenge, saying there's a "zero tolerance" policy: "It is through constant vigilance and the use of integrated pest management that we keep the little buggers from getting the best of our crops," he says.

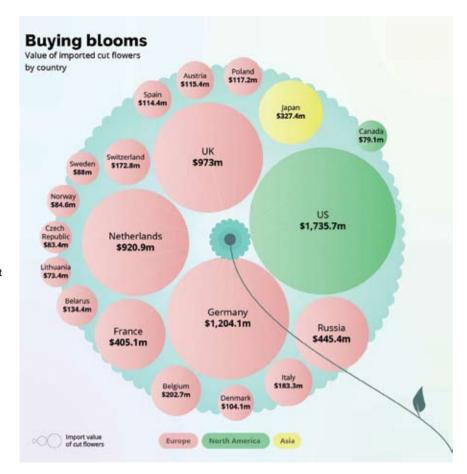
Then the flowers have to bloom on schedule. In the case of valentine's Day roses have to bloom by early february in time to be picked and shipped.

The big reason cut flowers can be so expensive is because they go through so many delicate stages on the supply chain.

Labour costs are already high contract and hired labour accounted for 10% of total agricultural operating expenses, but that number is soaring to 40% for greenhouse and floriculture production because of a tighter farm labour market and rising wages. Then you add extra costs for peaks.

Most farms hire extra hands during peak periods but says cutting flowers "requires experience and cannot be done by just any part-time employee". Chris Drummond, a Philadelphia-based florist, says wages average around \$13.25 (£10.16) per hour in the US. "In order to ramp up production to meet holiday demand, growers are required to pay far above that average," he says.

In developed countries like the Netherlands or Germany, Stewart says that there are greenhouses with automated technology like sophisticated watering machines or robot transplanters and harvesters, where fewer workers are needed. But in poorer nations with cheaper labour, there's less use of technology.



Then it's time for shipping. While flowers are waiting on the runway or in the back of a lorry, temperatures can't be too cold (for Valentine's Day) or too hot (for Mother's Day). When they arrive at the wholesaler, they must look perfect. That means no bug bites, no missing petals, no dead buds. Otherwise, they get thrown away. "It has to be flawless," Stewart says.

Besides many being shipped from continents away in refrigeration, flowers must be devoid of even tiny flaws, like small bug bites or discolourations.

# **Complicated logistics**

Chris Drummond, the florist, estimates that the holiday volume "is usually nearly 20 times the everyday volume". He says many farmers nurture flowers all year long to ensure enough blooms for the handful of holidays. During the other months on the farm, he says, flowers are sold at cost, below cost or discarded and turned into mulch.

"So, of course farm price increases as demand increases," he says. "Consumers are paying a premium to make sure that grower is compensated for their expense and effort to maintain the plants yearround, thus ensuring the wide variety of flowers is available at each holiday." He highlights costs across the supply chain, saying industry participants must "rent temporary space, pay fuel surcharges, find space on airlines, hire independent drivers, find more refrigerated trucks, pay overtime to staff" and more. Roses flown from Nairobi to Amsterdam are hit withextra fees to clear the extra expenses. Domestic refrigerated transport can vary, but that's extra fees per rose. It also depends on what kind of flower you're shipping a grower says 300 carnations can fit into the same box as 150 roses, so the transport price per stem is halved. Transit time from field to florist can be up to a week (though it can wildly vary depending on where the flowers are coming from), and the blooms must be carefully handled every step of the way.



Mr. Craig is a cut flower grower in Kenya and has been growing since 1980s. His biggest challenge? "Time. There is never enough time," he says. "Between seeding, planting, harvesting, marketing, selling and accounting this job is basically five full-time jobs rolled into one low-paying job."

He points to the fickle nature of what's in fashion as an additional challenge: "Flower popularity is a lot like fashion as colour, shapes, textures change almost on the whim. Keeping up on social media and growing forums is must to understand it all. Roses are extremely popular at the moment as it photographs so well, and they have so many colours and shapes."

Finally, it's time to order that bouquet – but again this can ratchet up the price tag, because florists who are often highly trained will work their magic to deliver a professional, personalised display that will keep the customer coming back. Stewart has a tip – don't set out what you want in

the bouquet but give the florist room to excel, and you'll end up with better value for money. "It's a far better thing to say, 'You know, I want to get some flowers for my mum. She loves Italy, she goes to Tuscany all the time – I want something that looks like it came out of the Italian countryside," she says.

The big reason cut flowers can be so expensive is because they go through so many delicate stages on the supply chain.

## Origin stories

Given the challenges, logistical demands and skill levels needed across the supply chain, it's no wonder flowers cost as much as they do. But some within the industry say it's a matter of getting consumers to realise the amount of work that goes into one bouquet.

Debra Prinzing, a former home and garden journalist in Seattle who's an advocate

for growing and selling local flowers, says shifts in the flower industry mirror the evolution of the food industry a few decades back. She gives the example of a chef sharing a colourful story about where the truffles in a particular dish came from; she wants people to prize flowers and their origin stories in the same way rather than

seeing them as simple consumables.

"I think flowers have incredible value
when you have that connection to a
human farmer who grew them," she
says. And learning how to appreciate
just how much time, effort and risk go
into that special bouquet could help
you better digest the cost.

"Those flowers have passed through more hands, maybe travelled through more countries, might have been talked about in more languages, might have been haggled over in more currencies, and are better traveled than you on your last summer vacation," Stewart says. "It is so incredibly complex behind the scenes."



# Alstroemeria: sparkling colours and enduring friendship

A special flower that's available in many sparkling colours.

When you see the freshly cut flower, the Alstroemeria hides it beauty in the bud. But when it opens it surprises you with many sparkling colours. The six to eight flowers on the stem become visible, often in some form of tiger print, combining sparkling colours of white, yellow, red, orange, purple or pink. Another characteristic is the stem with beautiful twisted leaves.

# **Symbolic**

A great reason to use this flower in bouquets is its symbolic meaning of enduring friendship. All six of the Alstroemeria petals are very important. They stand for understanding, humour, patience, empathy, commitment and respect. Your customers can decide for themselves which petal represents which quality. All the more reason that these should be enjoyed as long as possible in the vase!

# Post-harvest treatment

The right treatment to keep your Alstroemeria's beautiful after harvesting is Chrysal

BVB (0,15 ml/l). It prevents the yellowing of the leaf and ensures that the buds open fully. When you combine the treatment of Chrysal BVB with Chrysal AVB (0,5 ml/l), the Alstroemeria is also protected from ethylene. It prevents the dropping of buds and premature aging of the flowers.





**Chrysal AVB** prevents dropping of buds and premature aging. **Chrysal BVB** ensures buds open fully and prevents leaf yellowing.





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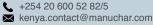
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Overproduction, low demand, high cost of inputs, VAT that isn't refunded by the government in time, unfavourable exchange rates, volumetric freight costing, high cost of labour and entrance of new players. When talking with the exhibitors at the IFTEX, it's the combination of these factors that contribute to the challenges that small holder growers are facing.

Over the past two years a lot of acquisitions have been witnessed in the flower sector. This has been heavily attributed to huge cost of operations, shrinking market and freight charges; combining these issues; small-holder growers find themselves in murky waters which forces them to be bought out by the big fish. However, during a one on one interview with the Craig Oulton General Manager. Floriculture (Kisima) he pointed out small-holder growers can still manage to attract revenue and run their farms successfully when they innovate on ways to cut their costs, while practicing socially and environmentally sustainable kind of farming.

# How can small-holder growers cut their costs of operations in a bid to maximise their revenue?

There are three areas which takes a lot of money from the growers; inputs, freights charges and labour. The prices of these three entities continue to escalate every year with the market prices remaining constant. This becomes difficult to survive in the industry unless you innovate ways of lowering your expenditures on inputs, freight and labour without compromising the quality of your flowers in return.

## Inputs

Never compromise on your chemicals or fertiliser; give your crops what they need in the right quantities at all times. To curb the challenge of rising costs of inputs though, as a grower you have to get involved, pay attention to each and every process in the farm. First, ensure your fertilisers and chemicals are from a reliable source and are of the right quality.

Implement a scouting system which will enable you to record any pests and diseases detected on specific areas of the farm; this enables you to respond timely in spraying the affected parts but not the entire farm. Integrated pest management (IPM) is also another solution to dealing with pests and diseases, it is cost efficient and it provides consistency and what makes it special is that the program can last long; which of course can lower your costs by a larger percentage.

When it comes to your fertilisers, there is only one trick; understanding your soil. Study your soil, embrace a soil sampling program from time to time, identify the nutrients lacking in your soils. When you do this, you will give back the right nutrients required by your soil. As a grower this is the first step if you want to get it right in the flower growing business. The best way of giving back to your soils is to have a compost project in your farm; organic fertilisers are rich in nutrients and can fully rehabilitate your soil.

Additionally, institute a soil monitoring system in your farm where you regularly monitor water capacity.







Deficiency of water in the soils affects uptake of fertilisers, it is advisable to constantly monitor the water levels to prevent any leaching.

# Freight

You cannot cut much from this entity but even a shilling or two will still count in this business. There is only one way of innovating in this stage; understanding your packaging mechanisms.

You need to pay close attention to details by ensuring that you purchase the right box for the right variety. Freight charging system shifted to volumetric weight so this means you are charges includes the box itself. Therefore, you should choose a box with the right dimensions which will accumulate at least 250 stems and above.

#### Labour

Labour is a challenging entity because cutting costs at this might cause any compromises in quality or affect production. Nevertheless, you can creatively lower costs of labour without altering the quality of flowers or compromising the rate of production. Never embrace overtime, because it affects the quality of work administered by the workforce. Measure your labour by efficiencies; be sure to reward these efficiencies with incentives. For instance, have set target of flower stems every worker has to pack once he/she supersedes this, start paying them bonuses for extra stems packed. This way you will get more from your workforce without any additional hiring.

However, to get such a system working the top management level should never micromanage their employees, allow them to grow, allow them to innovate and be there with them. Lead by example; be the first to get in and the last to get out; inspire your team to deliver value at all times.

# Give any additional comments and your final remarks

There are other farming and business ethics to integrate into your farm, which can bolster success in your farming quests. Apart from innovating on cutting costs 'of production, it is necessary to continuously create and innovate the way you operate in the farm, times changes so should you, do not cling to the old forms of managing your workforce, approaching the market or packaging. Variety selection is a critical factor, you will have this variety with you for 5-7 years; so you need to do due diligence, conduct your research; consult widely before settling for a variety. When you get it right in selecting a variety, then definitely you will have it easy in the market.

As a small-holder grower, discipline yourself to practice a socially and environmentally sustainable farming, give back to your soils, give back to your people and those surrounding your project. This way you will create a good culture for the organization to be emulated by the future generations. Finally be in constant communication with your market, open your ears wide open, listen to your customers, understand what they want and strive to provide for them, strive to satisfy their needs consistently. Invest in self-promotion and brand awareness campaigns; being in business without any marketing and advertising strategies is like operating in a dark world, get out there, talk to your customers and tell them what you offer.

For small-holder growers, the only way to survival in this business is to do things differently, you cannot afford to be ordinary and expect to survive for the next two or three years. You have to go the extra mile, create and consistently innovate. Remember cutting costs is an innovation and we should design ways to do that in order to increase our revenue.



# Kenya Leads The Way on Sustainability





Clement Tulezi, CEO Kenya Flower Council

everaging cutting-edge technology, the floriculture industry in Kenya provides direct employment to an estimated 150,000 people, majority women, and overall, creates employment for more than a million people indirectly, impacting in excess of 6 million lives.

Kenya is home to the world's best producers of flowers making a huge contribution to the economy. Globally, Kenya is among the top four countries in the production of flowers, writes Clement Tulezi, CEO Kenya Flower Council.

Export earnings from cut flowers grew by 37.7 per cent from Kshs. 82 billion in 2017 to Kshs 113.2 billion in 2018, according to figures from government's Horticultural Crops Directorate. The industry thus contributes significantly to the achievement of Kenya's Vision 2030 and the Governments Big 4 agenda.

Kenya continues to diversify, and today, Kenya exports to over 60 destinations. Looking ahead with more opportunities in Japan, China, India, Australia, Canada, the United States and Eastern Europe, Kenya's flower industry is in good shape. KFC currently holds the presidency of Union Fleurs – the International Flower Trade Association whose main purpose is to represent and promote the interests of traders of cut flowers, cut foliage and pot plants.

Since 1996, Kenya Flower Council (KFC) has promoted sustainable floriculture in Kenya. KFC represents the majority of the industry. Moreover, it has established an internationally benchmarked standard through the EU-based Floriculture Sustainability Initiative (FSI) for sustainable social and environmental practice. KFC Silver standard, officially known as the Flowers and Ornamentals Sustainability Standard (F.O.S.S) meets both social and environmental requirements set by FSI.

In May 2019, F.O.S.S was accepted as compliant with the enhanced environmental criteria through the transition period to the end of 2020. After 2020, sustainable production under FSI will be defined according to the combined benchmarks on agricultural, social and environmental practice.

The International Floriculture Trade Expo (IFTEX) in Nairobi is the leading floriculture exhibition in Africa, bringing together growers, the market, breeders and the entire supply chain. KFC is delighted to be working with HPP International Group B.V. to support sustainable floriculture in Kenya. IFTEX offers a platform for actors in the supply chain to establish and maintain business relations and an opportunity to adjust current production, logistics and marketing strategies.



# Good News Growers!! Meet PickApp

The most recent farmers' challenges have shed light on the plight of farmers and the need to rethink things, and come up with new directions. They need to figure out how to streamline their farms, examine ways of reducing expenses, create joint marketing endeavors and in general, find ways of streamlining the work process in

time, allowing to track and locate quality and quantity irregulars. By that allowing the farm managers to react to those problems immediately.

This modern solution offers a simple and inexpensive solution that saves on manpower without the need for either dedicated hardware or software operators.

order to increase revenue.

Times like
this call for a
solution such
as PickApp,
a product
from Amiran
Kenya
that can
significantly
cuts down
on farmers'
labor costs,
which



The graph shows individual daily output among a team of workers during the picking season.

account for between 30% to 40% of their total expenses, and thereby improve their farms' profitability.

PickApp, works by simply measuring and monitoring the work that gets done. The system measures the rate and quality of the harvest, as well as other daily farm activities. This is done by streaming data in real time, and that simplifies farm management, increases worker efficiency and enables basic comparisons and development of better management skills. In this field, knowledge is power.

The system collects data from the field in real

A dramatic improvement of 20% to 35% in the harvesting capacity of the various workers can be seen over a period of 15 harvest days.

Amiran and PickApp seek to increase the profitability of farmers through technology and streamlining. The vision is for every farmer to use the system in order to improve harvest yields and the quality of work and produce through use of a control and monitoring platform for simple and efficient employee management.

PickApp is already working in several farms in Kenya and the solution is tailor made to the needs and working method of each farm.







Higher Revenues Lower Costs



# **Using PickApp** Farm efficiency Made simple

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66 PickApp helps you identify where exactly are your problems and focus on them 99





## Improve productivity

66 Since we started using PickApp, the productivity increased by 15%-20%...From my experience this is a MUST 99

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# Traceability

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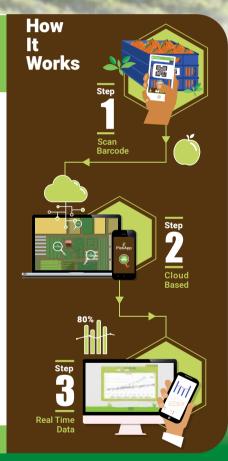
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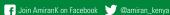
We believe that what cannot

PickApp measures worker's output by use of a simple application which collects data, analyze it, and allows the managers to react



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# Opportunities For Improving Irrigation In Flower Farms

Fertilization is probably the highest expense per hectare in the rose industry. The high cost of fungicides and other pesticides for the control of downy mildew and botrytis also has a toll on farm economics writes Jacopo Parigiani.

Fertilization in flower farms goes hand in hand with irrigation: every time there is an irrigation event, fertilizer is applied (fertigation), except in those few occasions when the system is flushed with water in order to clean out the drip lines.

Three things required by roots for a healthy plant: nutrients, water and oxygen

But how are farmers managing their irrigation? Surely the amount of water applied is calculated based on the amount of water present in the soil and the amount of water that is absorbed by the plant? Irrigation, however, is not only the management of soil water but it is also, and just as important, the management of soil oxygen. There are three things required by all roots: nutrients, water and oxygen. Any of these missing, then it becomes the limiting factor and the roots will suffer and as a result the plant itself will suffer too.

# **Saving On Irrigation Water**

There is a tendency on Kenyan flower farms to apply a lot of water on a daily basis. Irrigation management is pretty much based on feeling: today it's very cloudy; I need to give a small amount of water. Today it's very sunny; I need to give a lot more. Not really very scientific. Not very precise either.

Other ways farm managers check whether it's time to irrigate, is by rolling up their

- sleeves, digging into the soil and "feeling" the wetness of the soil. This is actually a great way to assess soil moisture. A soil at optimal moisture content, at field capacity, is easily identified by touch. There are various problems with this technique though.
- How many times in a day can the farm manager check the soil for moisture?

- How many different locations per greenhouse can the farm manager check daily?
- How many different soil depths per location can the farm manager check with this method?

It's easy to see that the farm manager will never have the time to do this more than once per greenhouse, unless someone is specifically employed. It's also easy to see that in order to "cover more area" the soil depth which will be checked will only be the first 20cm. Which as it happens is actually the layer most exposed to the atmosphere due to the way flower beds are constructed and thus the layer that dries





quickest. This technique, however great, is not sustainable.

## The Cons of Over-Irrigating

Actually, throughout Kenya farms (and probably even beyond Kenya) there is a tendency to over-irrigate.

- The negative effects of over irrigation are numerous. For one, when applying water above the water holding capacity of the soil, the water, with its nutrients dissolved in it, leaches straight through the soil. Think of it as pouring water in a glass that is already full to the brim: it cannot hold anymore water. It is exactly the same. Both fertilizer and water are wasted through deep water leaching and, moreover, they end up back in the water table polluting downstream water sources.
- Too much water in the soil porosity displaces the oxygen from the
  pores creating an anaerobic environment in the root zone, meaning
  that roots get starved for oxygen. The roots will therefore tend to
  concentrate where there is oxygen, close to the surface.
- Oxygen is not only required by roots but by worms and other beneficial aerobic soil fauna which are also suffocated by the anaerobic conditions created by saturation.
- The "need" of farm managers to irrigate each and every greenhouse everyday means that irrigation goes on from morning till dawn.

  Greenhouses that are irrigated in the late afternoon do not have enough time to dry (transpiration stops at night) meaning that, at night, through evaporation there is a build up of atmospheric humidity right above the

soil surface, creating the ideal conditions for fungal infections: downy mildew and botrytis.

• Not to mention the negative effects that the weight of water (or a wet soil) has on the sub soil: compaction.

#### **Aquacheck Probes**

The negative effects of over irrigation are many and costly. Over the past two years we at Cropnuts have been installing Aquacheck soil moisture probes in flower farms across Kenya with incredible results. The Aquacheck probes provide continuous soil moisture data down to 60cm and more. They are installed permanently in the ground in a location that best represent the greenhouse. They record soil moisture data and automatically upload it to an online software that can be accessed by phone, tablet or computer anywhere with an available internet connection. Aquacheck has given farm managers the ability to "feel" the soil moisture instantaneously and continuously from the comfort of their desk.

With over 20 farms across Kenya using Aquacheck we have realized that irrigation is quickly changing from the simple switching on and off of a button dictated by cloud cover, to a real art form of manipulating irrigation volumes and timings

variably not only from farm to farm but from greenhouse to greenhouse. Aquacheck has provided the soil with a voice that can tell farm managers the exact quantity of water they require and down to what depth.

Aquacheck has reduced fertilizer use by 30%. Leaching is no longer an issue, meaning that there is no more wasting of fertilizers nor of water. The irrigation systems are no longer stressed meaning that irrigation can finish before 12:00 giving the greenhouse enough time to dry so as to reduce incidents of botrytis and downy. In one farm the reduction of fungal disease incidents has been by 80%. The great thing of all these benefits is that the plants are now healthier, producing more and bigger stems.

Irrigation management is not only about managing water. It is the management of water, oxygen, fertilizer and also pests and disease.

# **About Jacopo**

After two years in southern Tanzania planting trees and sequestering carbon from the atmosphere, Jacopo returned to his country of adoption and joined Cropnuts back in October 2012 to dig the Kenyan soils and conserve her waters. A graduate from Wageningen University (the Netherlands) in Land and Water Management, he has extensive expertise in irrigation management and precision agriculture (PA) technologies. The times he is in the office, you can find him crunching numbers, making colourful variable rate fertilizer prescription maps and feeding lots of data to a smoking computer!

# **KEPHIS**

# In Drive to Secure International Horticultural Markets Through Management of Quarantine Pests

By KNA

he Kenya Plant Health Inspectorate Service (KEPHIS) is working with over 200 horticultural produce exporters to the European Union (EU) and Australian markets to formulate strategies to curb False Codling Moth (Thaumatotibia leucotreta) pest which has led to some rejection of the country's products at international markets.

The Inspectorate's Managing Director ((MD), Dr. Esther Kimani says the False Codling Moth (FCM) is classified by the EU as a 'quarantine pest', meaning farms invaded by the pest are never allowed to sell their agricultural produce to the lucrative market.

"This is a major pest, because the larvae of the moth feed on a wide range of crops such as rose flowers, peppers, cotton, capsicum, macadamia nuts and citrus. The brown insect Africa, but has also been detected in Europe and the US. It thrives under warm and humid conditions and can produce up to five generations annually. Although it has been around, FCM in now classified as an emerging pest because it is affecting chilli export from Kenya. The pest has also shifted to rose flowers causing major losses to growers" states Dr. Kimani.

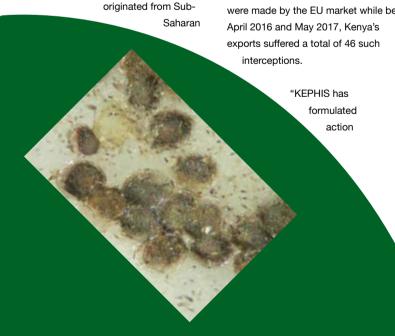
Kenya is among the largest exporters of roses in the world accounting for 38 per cent market share of the EU market which includes Netherlands, France, Germany, and Norway. From the total horticultural export in 2018, cut flower earnings grew to 73 per cent from 71 per cent in 2017.

According to Horticultural Crops
Development Authority (HCDA) last year
reports, 29 fresh produce (including chilli)
export interceptions affected by the moth
were made by the EU market while between
April 2016 and May 2017, Kenya's
exports suffered a total of 46 such

points for the Australian market and these include registration of farms accredited to Australia, consolidators to provide a list of the farms they source from and provide a detailed report for each farm. We have also come up with a compliance datasheet to be filled and signed by exporters committing themselves that cut flowers delivered at JKIA for exit inspection meet the threshold of the Standards and Market Access Programme, which is implemented jointly by United Nations Industrial Development Organization, Kenya Plant Health Inspectorate Services (Kephis), and Kenya Bureau of Standards, among other stakeholders" states the Kephis head.

She says data will be developed to capture the number of consignments inspected and pests detected as a way of preserving Kenya's international markets quota.

Crop protection experts say that over the last two years, the pest incidence has increased



due to the changing weather patterns. It is now infesting feeds more than 100 host plants, flowers, vegetables, fruit trees, field crops and other plants.

Different studies and trials conducted in the country by KEPHIS and its research partners have shown that False Codling Moth is widespread across the country with Kirinyaga, Murang'a, parts of Kiambu and Nakuru, Machakos and Kajiado counties recording high prevalence rates.

Demand by market to reduce pesticide use on cut flowers leaves growers with limited options for moth control. The moth has been observed to cause damage on the flower bud where the larva enters into the bud causing extensive damage. The most challenging bit with FCM is that most of the time the farmer does not know whether the pest is present in the greenhouse.

"They are most active during the night and once the larvae enter the fruit, they are difficult to detect. Due to the fact that the eggs are very small and difficult to detect by visual inspection of the crop, use of monitoring tools is key to early d etection of the pest," says Dr. Kimani.

Kenya Biologics has been helping growers make out detection of the pest through use of a new technology dubbed CRYTRACK.

This product whose strategy enables to determine the presence of FCM and also manage pest population by holding captive male FCM through continued mass trapping, has been noted to reduce the pest by over 70% in chillies.

The pest can also be controlled biologically by using a new and uniquely formulated insecticide that multiplies bacteria on the False Coding Moth body thus eliminating it.

EVALUATION IDENTIFICATION

ACTION MONITORING

Another method is the use of the sterile insect technique (SIT). This involves releasing large numbers of sterile males into the land and on mating with females there would be no offspring.

Although effective in controlling small populations, SIT is ineffective against large,

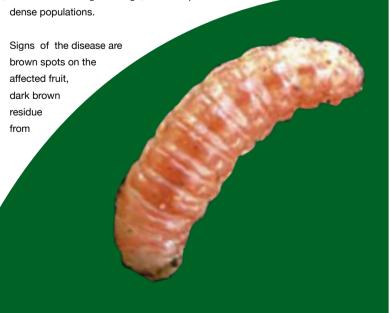
the larvae and molds. Premature ripening and dropping of fruits also occur with infestations. However, infestations can be difficult to detect in peaches when fruit is still firm and on the tree. This poses a threat to industry because potentially infested fruit could be sold without prior knowledge of its presence.

Growing international trade and tourism has increased the risk of introduction of this pest. According to the International Centre for Insect Physiology and Ecology (ICIPE) False Codling Moth can survive in climates described as tropical, dry or temperate. It is estimated that approximately 50 percent of the global environment may be suitable habitat for FCM.

"Do not export fresh produce unless KEPHIS or other government inspectors have cleared them first if you have any doubts. Never remove fresh produce from your farm if your area is under False Codling Moth quarantine," warns Dr. Kimani.

To maintain Kenya's International horticultural produce markets the Kephis MD urges all farmers to cooperate with all quarantine restrictions or rules that might be imposed and allow authorized KEPHIS or other government inspectors access to their farms to install and inspect insect-monitoring





traps.

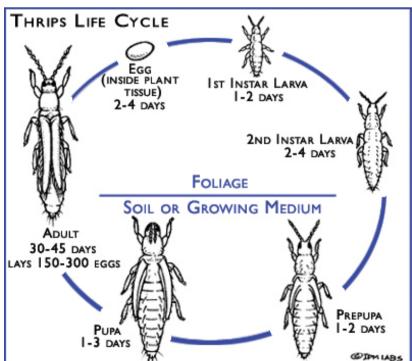
# **Critters Down Under: Thrips**

Thrips are a common insect pest that most growers have had difficulty controlling due to their small size and ability to hide in plant parts, writes Troiy Buechel.

Although this is not an insect associated with growing media, most species of thrips spend part of their lifecycle in the growing medium or soil. Thus, the question arises whether they can come from unused, packaged growing media. The simple answer is that it is very unlikely. To understand why, we will address the life cycle of thrips and the common issues associated with them.

feed on fungi while living in leaf litter or decomposing wood, but some of these species feed on live plants. Although there are some variations among each species, there are 6 stages in their life cycle, as seen in Figure 1. The length of the lifecycle is greatly influenced by temperature: the warmer the temperature, the faster the life cycle. Common thrips species that attack greenhouse crops are tiny, typically 1-2 mm in

length, and are active in a temperature range of 50-90°F (10-32°C), but their optimal range is 80-85°F (27-30°C). Thrips do not develop at temperatures below 50°F (10°C).



"Figure 1. General life cycle of thrips. Source: https://www.ipmlabs.com/ thrips-damage/"

Female adults lay eggs in live plant tissue through their ovipositor. The eggs hatch within 2-4 days, thus beginning the first of two larval stages (see Table 1). The first instar stage lasts 1-2 days, then after molting begins the second instar stage, which lasts 2-4 days. While in these two stages, thrips are voracious eaters by using a mandible to punch a hole into a plant cell and insert a stylet which draws out the contents of the cell. Depending

on the species, they feed on the base of flower petals, pollen, young fruit and / or new tender leaves in the terminal ends of stems. They are very hard to see as they are well hidden and

### Lifecycle

There are about 5,000 different thrips species in the world and those that have wings are the smallest winged insects. Most



smaller than adults.

"Table 1. Duration of each stage of a thrips' lifecycle. \*These are general guidelines that apply to most thrip species."

At the end of the second instar stage, thrips relocate

pads. This stage lasts 1-2 days. The next stage is the pupal stage in which the wings develop, consisting of long sparse hairs giving a feather-like appearance. The pupal stage lasts 1-3 days until the wings are fully developed, and then they emerge from the growing medium as adults. During the prepupal and pupal

Stage	Approximate Duration at 68- 98°F (20-37°C)	Location*	Plant Damage?
Egg	2-4 days	Young leaves, flowers	No
First Instar	1-2 days	Young leaves, flowers, fruit	Yes
Second Instar	2-4 days	Young leaves, flowers, fruit	Yes
Prepupal Stage	1-2 days	Soil / growing media	No
Pupal Stage	1-2 days	Soil / growing media	No
Adult	30-45 days	Young leaves, flowers, fruit	Yes

to the growing medium. While there, thrips go through a prepupal stage where they start to develop wing

stages in the growing medium, thrips are inactive and do not feed or cause plant damage.

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# From page 25



Emerging adults fly from the growing medium to feed on flowers, young leaves, pollen and / or developing young fruit. Adults live for 30-45 days, causing damage to the plant parts they feed from, and females deposit eggs within plant tissues. The lifecycle of a thrips is 21 days or less, if the temperatures are hot. Females can lay up to 150-300 eggs, depending on the species. Once the weather gets cold. some thrips can hibernate as eggs in leaf litter or soil outside or under benches in the greenhouse. Some thrips can also migrate from southern tropical regions into the United States and Canada during the spring months.

# **Common Thrips in Greenhouse Crops**

The most common and destructive thrips species that infest greenhouse crops is Western Flower thrips (Frankliniella tritici). The adults are light yellow to brown in color and when their wings are folded on their back, there is a dark stripe down the middle. Other common thrips species include:

- Flower thrips (Frankliniella occidentalis)
- Chilli thrips (Scirtothrips dorsalis): Are pale green to yellow with dark wings, and smaller than the other thrips.

- Banded greenhouse thrips (Hercinothrips femoralis): Pupae in plant tissue, not the soil or growing medium.
- Echinothrips (Echinothrips americanus):
   Also pupae in plant tissue, and are dark brown with a white band on the back at the base of the wings. They typically feed only on foliage.
- Onion thrips (Thrips tabaci): Have a uniform yellowish-brown color.

## Damage caused

Because thrips typically feed on the contents of individual cells, these empty cells collapse, causing silver speckling or streaking on tissue surfaces (Figure 3). If feeding continues, it can lead to deformed flowers, leaves and shoots. On fruit, it can cause a small dimple followed by a white halo surrounding the dimple. In some fruit, feeding can eventually lead to scarring and "corky" tissue.

Perhaps of greater concern is the transmission of viruses while feeding. For example, Western flower thrips transmit two highly destructive tospoviruses: impatiens necrotic spot virus and tomato spotted wilt virus. These two viruses are known to affect over 600 plant species, especially

Although this is not an insect associated with growing media, most species of thrips spend part of their lifecycle in the growing medium or soil.

begonia, cineraria, cyclamen, exacum, gloxinia, impatiens, New Guinea impatiens, primula and ranunculus. Onion thrips and chilli thrips are also known to vector viruses.

## Sources of Thrips

Thrips are hard to control and can be found on crops, pet plants or weeds in a greenhouse. Thrips can be brought into a greenhouse on plugs, cuttings, liners, prefinished crops and work clothes, or come in from the outdoors from late spring through fall. Weeds or field crops near a greenhouse can have high populations of thrips, especially those in flower. This is especially a concern if crops are being harvested or flowering weeds are cut down as thrips search for new plant hosts.

Although many thrips species that infest greenhouse crops spend part of their lifecycle in the soil or growing media, this does not mean that the growing medium is the source of thrips. In fact, it is very unlikely for thrips to occur in unused, packaged growing media. However, if thrips were somehow introduced to unused growing media in the prepupal and pupal stages (which last 2-4 days), the emerging adults would not have a food source and would die. If there were eggs, warm storage temperatures would stimulate hatching and the nymphs again would not have a food source inside the packaging and would die

# NATURAL POWER

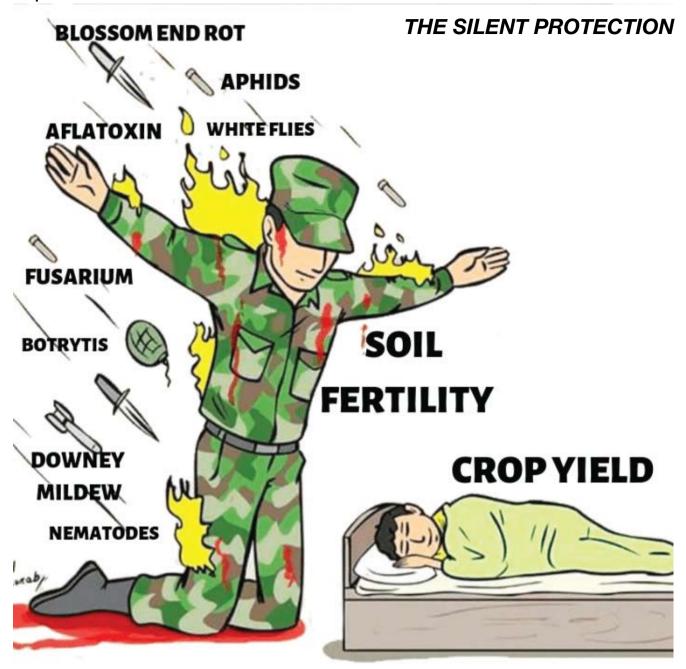
Contribute to your customers' happiness by consistently using Hicure® on your ornamental crops.

Hicure® is a powerful biostimulant that has been proven to mitigate stress in plants resulting in more vigorous, healthy and high quality flowers with a longer shelf life.









# Why Soil Fertility is the #1 Defense Against Crop Pests & Disease

Fertilizers are responsible for over half of global food production, but there are areas in world with nutrient deficiency and other areas of nutrient excess. Managing soil fertility requires careful application of science and skill to meet production, environmental, and social goals. Writes By Dr. Rob Mikkelsen, Ph.D. (Soil Science)

etting crops off to a good start is critical for achieving high yields.

During this early stage of growth, seedlings are especially vulnerable to many environmental and biological stresses.

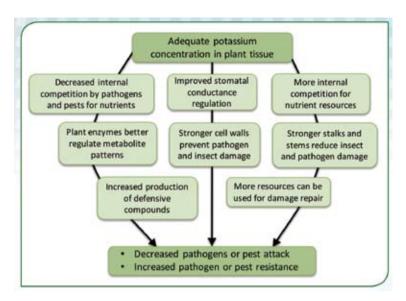
Protecting plants from stress and disease begins with providing balanced nutrition from

planting through harvest.

The critical link between plant nutrition and disease resistance has become apparent as the frontiers of plant health are better understood. A few of these examples are explained here:

### Potassium

Potassium plays an essential role in many well-recognized metabolic processes for plants. Potassium's contribution to sustaining high yielding crops with top quality is well understood. However, the role of potassium



How potassium protects plants; Wang, M. et al. 2013.

in plant stress resistance is less known and appreciated. Potassium is unique among the essential mineral nutrients in its role for plant survival against environmental stress, pests, and diseases.

Supplying adequate potassium to crops through proper fertilization is a simple way to lower the requirement for pest-control treatments that may be costly, time-consuming, and troublesome. The frequently observed benefits of potassium on plant health were reviewed by Wang et al. (2013), which summarizes many recent scientific studies.

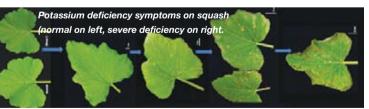
When there is a lack of sufficient potassium in plants, low molecular weight compounds begin to accumulate. This build-up of soluble

defensive compounds (such as phenols) which are an important component in plant pest resistance.

An adequate potassium concentration within the plant decreases the internal competition with various pests and pathogens for resources. This results in more resources available for hardening cell walls and tissues to better resist penetration of pathogens and insect pests, and to repair any damaged tissue. Air-borne pathogens are more rapidly shut out from stomatal invasion when adequate potassium is present.

### **Phosphorus**

The link between adequate phosphorus and plant health is also well known, but



nitrogen-containing compounds (such as amino acids and asparagine) and sugars (such as sucrose) makes a particularly favorable environment for numerous pathogens and insects. For example, aphids are severely nitrogen limited, making potassium-stressed plants an attractive host as an abundant nitrogen source. The presence of sufficient potassium also promotes the production of

understood than the association with potassium. Phosphorus is involved in the synthesis of many

perhaps less

organic molecules and complex metabolic functions within plants. Crop growth and yields will be significantly reduced when phosphorus is deficient in soil or when plant roots cannot access it.

A shortage of phosphorus frequently leads to more disease for many crops. Some of the protective response occurs because healthy plants with sufficient phosphorus have vigorous root growth which allows them to outgrow and escape disease. More specifically, an adequate phosphorus supply has been linked with decreased incidence of Pythium root rot for wheat, leaf blight for rice, numerous tobacco diseases, blight in



soybean, and many other diseases. Foliar application of phosphorus-containing sprays is reported to induce protection against powdery mildew.

## Chloride

The important role of chloride as a nutrient is often overlooked, especially in regions



where soil salinity is a concern. However in many areas, the addition of chloride results in increased plant vigor and disease resistance. The occurrence and severity of a number of plant diseases have been documented to be reduced following the application of chloride. This includes take-all, stripe rust, and Septoria in wheat, and stalk rot in corn.

Promoting plant health clearly includes a solid foundation in proper nutrition. Strong and vigorous crops are able to produce abundant yields of high quality, while better resisting diseases and pests.

Dr. Rob Mikkelsen is a soil scientist with interest in managing plant nutrients in the best way possible. Follow him on Twitter @ IPNImikkelsen

# Corteva Sponsors Sian Group Sports Day



he Sian annual Sports Day event was held on friday 14th June 2019 at Sian Agriflora in Njoro, Nakuru County.

The event brought together hundreds of Sian employees to compete in Netball, Football, Relay races, Sprint races and Tug of War amongst other sporting activities. The footbal teams looked spectacular in Corteva branded gear.

The Sian Agriflora Sports Day 2019 was the first grassroot interaction project in many more events in pipeline for Corteva Agrisciences in their endeavor to enrich lives.

Speaking exclusively to Floriculture Magazine during the event, Doris Kinyua Business Development Manager ESCA, Corteva Agriscience said, "Men are born for sports." Nothing else. Every child knows that play is nobler than work. He knows too that the worth or merit of a game in not inherent in the game itself but rather in value of that which is put at hazard". Adding, "games of sport involve the skill and strength of the opponents and the humiliation of defeat and the pride of victory are in themselves sufficient stake because they inhere in the worth of the principals and define them". These are the principles of business hence prepares the farms for competitive business.

The Corteva sponsored sports day fostered team building and familiarity for the larger Sian family. This ranged from executives to ground level flower farmers.

Sports has been praised for its numerous benefits which include: bridging the cultural and ethnic divides, improving on health and fitness, creating opportunities for employments and businesses to flourish, fostering teamwork and fair competition, contributing to the cross cultural dialogue and ensuring peaceful-coexistence. This year, Corteva Agriscience ensured this was well pronounced by sponsoring the Sian Group sports day.

"Registration is not restrictive, teams are allowed to participate in the competition as long as they meet the terms which include having the correct sports regalia", said Charles Mulemba, General Manager Sian Agriflora.

"Our approach to the sports day initially was to just sponsor a sports team. However, we ended up making friends and creating relations



with the entire Sian community, said Francis Karanja, Sales Manager ESCA, Corteva Agriscience.

It was a privilege for Corteva Agriscience to sponsor the overall winning team's trophy and

present it to Masai Farm, the proud winners of the day. In addition, they also sponsored three teams with football jerseys and balls.

The reception from the Sian community was overwhelming as Mr. Karanja took them through the brand's journey highlighting the 100 year celebrations, the merger and finally the New York Stock listing.

"Our approach to community events is to interact with the community organically at the ground level. Sporting events and other special occasions foster an environment that allows us to share our offerings with our potential and existing customers. After all, enriching lives and nurturing growth are among our founding pillars, Mr Karanja concluded.

While thanking corteva group for their sponsorship, Caroline Tiony, HR Business Partner Sian Roses called on the employees to practice the teamwork they showed during the event.





# **Delegate** 250WG

# Why Delegate 250WG?

- · Unique mode of action
- · Effective at low use rates
- · Short preharvest interval (3 days)
- · Valuable rotation partner with other chemistries
- Minimal impact on beneficial insects & predatory mites







# **How to Use Social Media Before, During and After Your Trade Show**

trade show is a big investment of time, money and energy, and you may be asking yourself: is it even worth it? With the rise of digital and online events, YouTube and social sharing, traditional trade shows can feel outdated and inefficient.

However, trade shows are still the one of the best ways to make an impression with a relevant audience. According to the 2017 report from the Content Marketing Institute, 68% of B2B marketers utilize in-person events as part of their marketing strategy, and 36% of them say the events are effective. While trade shows may no longer be top dog for B2B marketers, they are still one of the five most critical tactics for content marketing success and are a major part of many B2B marketing plans.

Get the most out of your trade show by building a comprehensive B2B digital marketing plan to support it.

Even though the emphasis on these types of events has dropped since 2016, social media has skyrocketed to the forefront of content marketing. 83% of B2B marketers say they use social media as part of their overall strategy, making it the most widely used form of content marketing.

The prevalence of social media and an increased emphasis on visual content have changed the landscape of event marketing strategy, and should be considered at every stage of your trade show planning. Read on to learn about how you can leverage social media tools before, during and after your next big trade show event:

Full Spectrum Social Engagement:

Leverage Twitter Hashtags and Moments,



# Follow Up with LinkedIn Connections and Engage Event Attendees

# Before the Trade Show

Certain trade shows and conferences will offer your organization a contact list of attendees depending on your own participation level in the event. For instance, if you are a sponsor/ exhibitor, you may be more likely to receive a comprehensive list of attendees, key speakers or partners.

Leverage your attendee list by following them on Twitter and creating a Twitter List to help you organize them into one, dedicated

Twitter stream. Utilize social listening tactics to gain insights into what topics attendees are most interested in or what sessions, keynotes and presentations they are planning to attend.

Additionally, most events start using their official hashtag to tweet content, promotions, live chats or sneak peeks of the event lineup weeks or even months before the big day. Increase your engagement with the audience by using the hashtag in your tweets as you promote your participation in the event. The earlier you start building relationships with other key players, the better chance you will have of increasing visibility, credibility and anticipation before the event begins. Feeling extra creative? Develop a company-specific hashtag to use alongside the event's promotional hashtag.

### **During the Trade Show**

Live tweet, live tweet! Remember those hashtags you created for your



company? Put them to work by having employees and booth visitors snap photos, shoot video or post a tweet on your behalf and have them include your company-specific hashtag and Twitter handle.

Want to shake up your live tweeting game? Here are a few ideas:

- If there are panels or speakers at the event, tweet quotes and mention the speakers in your tweets with the "@" symbol.
- Take pictures of booth visitors interacting with your product and tweet them out with fun captions or "first-impressions" quotes.
- Host a live tweet "scavenger hunt" for show attendees by hiding promotional materials around your booth or trade show arena; winners claim their prize by tweeting a photo

and reconnect with the people you met while onsite. Have your Marketing and/or Sales team follow up with them via InMail with a short message telling them it was nice to meet them and that you'd like to stay in touch. Consider sharing a piece of gated content that will be useful for them, refer them to a company blog post or invite them to an upcoming webinar or other event.

Looking for an easy way to repurpose your event tweets? Twitter Moments allow you to compile a list of tweets, add videos and photos and write a short post, then turns the "Moment" into its own page.

Simply open the "Moments" tab in your Twitter feed, click "Create a New Moment" and then select the photos, videos and tweets you want



Before the Trade Show

While livestreaming can be used for off-the-

cuff improvisational content, pre-planning your

livestream content ensures that you can make

What are your goals for the livestream? Do you want the audience to engage with you by asking questions or requesting short demos? Do you want to direct people to a landing

page during and/or after the stream? What takeaway do you want them to remember



once the livestream ends? What value will the livestream provide for remote audiences who are viewing, but not at the trade show?

Asking yourself these questions and seeing how the livestream can fit into your trade show strategy (and marketing strategy as a whole) gives you a better chance at creating a more comprehensive experience with a message that meets your goals.

Don't wait until the event itself to get the hang of the livestream interface. Whether you're planning on using Facebook Live, Instagram Live or streaming live on YouTube, do some trial runs of livestream features to make sure everything goes smoothly.

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of their finds using your company hashtag.

• Think you'll be too busy to tweet during the show? If you have a social media management tool, schedule some "live" tweets beforehand that you can supplement with in-the-moment posts when you have time.

# After the Trade Show

You met a lot of great new potential leads and got their contact information: now what? Event follow-up is just as important-if not more important-than event planning.

While LinkedIn is hard to use in the moment at events, it's the perfect channel to reach out to add to the moment. Then, you'll be able to tweet the link to your "Moment" out to your followers.

Compile your live tweets and mentions using the company trade show hashtag to create a quick and easy event recap. You can also create "Moments" as you go during the trade show, creating day-by-day recaps or summaries of events, panels or talks. For a step-by-step guide on setting up your first Twitter Moment, refer to this guide.

Plan Livestream Activities like Product **Demos and Giveaways to Engage Digital** Audiences

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## **During the Trade Show**

Now that you've planned your content and practiced using the interface, be open to spontaneous opportunities! Stick to your livestream schedule but also be ready to whip your phone out if something unexpected pops up.

A booth visitor is especially engaged and impressed with your product? Ask if you can livestream your conversation as a nice quote/ testimonial. You realized your booth backdrop makes the perfect background for interviews? Stream your team members talking about

why they believe in your company's product.

Ultimately, livestreaming is a way to lift geographic restrictions and brings the trade show experience to people who may not be at the event. Instead of limiting your booth experience to the people attending the show, livestreaming leverages your trade show investment with a wider audience and gets more eyes and ears on

the messages, products and experience you developed.

# After the Trade Show

Save your livestream videos and edit them together to create an event recap highlighting your company's overall presence.

Repurposing content should be at the forefront of every B2B marketer's mind, even with content like livestream video that is meant to expire. While your livestream video may not be relevant forever, it can be leveraged in the days and weeks following the event to touch base with the audience you made an impression with the first time around.

Use Snapchat and Instagram Stories to

# Create Authentic, Spontaneous Video Content

### Before the Trade Show

Spend some time researching social media platforms that have "Story" features to determine which one(s) you want to utilize. While Snapchat is the original 24-hr video platform, Instagram (and now Facebook) have added and, arguably, improved upon Snapchat's interface.

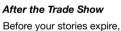
Once you've narrowed down your platform(s) of choice, decide how you want to use their features

Instagram Stories and Snapchat are meant

to different team members. If there is a dedicated device or two, there will 1) be less of a chance that team members will mix up their personal social accounts on their phones with the corporate account and 2) be more opportunities for different people to take turns filming and posting.

Not sure what to put in your Instagram or Snapchat story? Try out these suggestions:

- Use Boomerang, an app built in to the Instagram camera, to shoot short, looping videos: think product teasers, booth panoramas, behind-the-scenes shots and more.
  - Does the conference have a Snapchat geofilter?
     An Instagram location?
     Tag them in your posts so other people can find your content.
  - Put the link to your landing page in your Instagram profile and use Stories to direct people there; if your account is "verified," you can add links directly to your Story!



take a peek at the viewers to see if any potential partners or leads watched your story. Consider following them on the channel, or reaching out through direct messaging.

If you want to repurpose your Snapchats or Instagram Stories, you can save the posts directly to your phone and utilize them elsewhere. Consider using the multiple-photo feature on Instagram posts to make a short, fun and easy event recap: don't forget to use hashtags!

If you want more quick, easy ways to use social media for your trade show, check out this blog post with 14 more ideas to make your trade show social media activities work for you.



to be more casual, personalized and brief, so this is a good chance to experiment with new things that you may not want to live permanently on your social feeds, blog or website.

Do you want to be funny? Silly? Trendy? Or do you want to keep things polished and professional?

However you decide to use the "Story" feature at the trade show, it's a good idea to have a game plan before the event so that everyone on your team is on the same page.

## **During the Trade Show**

Consider bringing a separate device—like a phone or tablet—that can be passed around

### FSI Basket of Standards: New Environmental Scope

timulating and reflecting good practices in floriculture, the FSI Basket of standards is evolving and including additional environmental benchmarking criteria with an emphasis on reliable data and record-keeping.

### Supporting mainstreaming of good practices

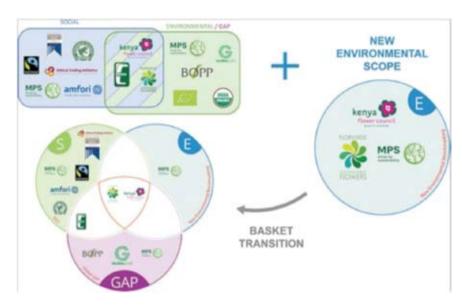
The additional environmental benchmarking is not a new standard nor replacing current benchmarks. It is a set of benchmarking criteria supporting the mainstreaming of environmental principles across compliance standards, strengthening the FSI basket as international reference for sustainable practices.

The environmental scope is open to standards that are already in the basket as well as other standards who comply with the criteria. The Standards in the current FSI Basket have all been informed and invited to consider the inclusion of these criteria into their certification schemes.

After 2020, sustainable production under FSI will be defined according to the combined benchmarks on Agricultural, Social and Environmental practice.

### Three standards already included in the new environmental scope

On a voluntary basis, the first 3 scheme owners have already signed the policy agreement working towards adherence to the 2020 criteria for benchmarking. Kenya Flower Council Silver Standard, Florverde Sustainable Flowers, MPS GAP and MPS-ABC have been admitted and recognized for the environmental scope of the FSI Basket of Standards, agreeing to comply with the environmental criteria with a transition period until end of 2020.



Standards adopting the new criteria contribute to pro-actively preparing growers and the sector for relevant market demands through:

- 1. The adoption of standardized record keeping on key inputs;
- 2. The assurance of quality performance of standards and audits;
- 3. Transparency and the comparison of performance over time and space

### The Australian Flower Industry at a Glance

The flower industry is a significant contributor to Australian horticulture.

It is currently valued at approximately \$2.4 billion and employs up to 25,000 people across 1,651 production businesses.

The flower industry continues to grow and thrive, as does its contribution to the nation's economic, environmental and social wellbeing.

Growers operate from all corners of Australia and produce a variety of greenlife:

> from ornamentals, trees and shrubs, as well as starter plants for fruit and vegetable production and stock for landscaping, forestry and revegetation.

The latest results from the flower Industry Statistics project show the value of the nursery industry grew by approximately 5% over the past two years, due to increased demand for greenlife and strong grower confidence.



### Kenya Government Apologizes to Flower Industry for Delayed Fertilizer Clearance Process

The Kenya flower industry heads have lauded the government's move to expedite clearance of fertilizer at the port of Mombasa by reducing the number of clearing agents to four, ensuring that the agricultural inputs get to market in time.

his, following complaints from the industry last year after the government introduced new regulations to have all imported fertilizer reinspected at the port of entry as it sought to tame counterfeits proliferation.

The directive saw a lengthy clearance process that ran for up to two months before the consignment could be released created an unprecedented shortage. Fertilizer suppliers were incurring up to Sh2 million shillings daily in demurrage.

The latest directive is among measures the government has introduced to support the flower industry that has continued to defy harsh economic and weather trends to record sustained earnings and growth.

Dr. Chris Kiptoo, Principal Secretary, State Department of Trade while speaking at the seventh edition of the International Flower Trade Expo apologized to the floriculture industry for the inconveniences the delays had caused to the industry and promised to streamline government's investments and commitments to the sector.

"I take this opportunity to apologize to the sector for the great loss it suffered occasioned by the delays at the port of Mombasa. Following consultations between the government and the industry players we have reduced the inspection of the fertilizer process and left that to four agencies to fast-track clearance," Dr. Kiptoo said.

Magana Flowers a grower and exporter has welcomed the government's decision saying it will go a long way in boosting the grower's earnings and allowing

uninterrupted production.

"It is a landmark directive that has boosted our operations. For us, the cost of fertilizer went up by 39 percent. This cost, unfortunately, is absorbed by growers as it cannot be passed to our buyers due to the risk of pushing our produce to uncompetitive prices leading to loss of markets. We operate in a business that thrives on reliability and a little deviation due to challenges here at home can easily jeopardize client loyalty", said Mr. Nicholas Ambanya the CEO of Magana Flowers.

Elgon Kenya, an agro-input company has also hailed the government's latest move which it says has allowed the industry to recoup its earnings and ensure farmers are able to get the input in time.

"We thank the president for the directive he gave allowing faster clearance of the fertilizer. It has allowed us to calm market jitters and reach more farmers in time avoiding a looming food shortage," Mr. Bimal Kantaria the CEO of Elgon Kenya said.

Last year the flower industry surpassed the target set by the government by 38 percent under the export strategy where each sector was given specified milestones to accomplish. It is now the second largest foreign exchange earner after tea.

"The flower earnings

of the

country continue to impress due to shows like IFTEX which brings buyers from over 60 destinations where our country exports flowers to, to meet with flowers under one roof. In this show numerous deals are made," said Dr. Kiptoo.

Dick van Raamsdonk, the CEO of HPP International Exhibition Group added that IFTEX continued to position itself as a crucial link between buyers and sellers further asserting that having a sustained attendance for seven years is a testament to the place and space of Kenyan flowers in the global market. "This is an indicator that the interest of (inter) national companies to keep on investing in Kenya remains stable, promising IFTEX to be once again an attractive platform for growers, exporters, breeders, cargo agencies, airlines and various production related technical suppliers of Kenya's floriculture industry," he said.

The theme of this year's show was Supporting Sustainable Floriculture in Kenya a focus Kenya Flower Council said was timely at a time when the quality of Kenyan flowers matters as the country looks to grow its export destinations from the current 60 destinations. It is now targeting markets in Japan, China, India, Australia, Canada, the United States and Eastern Europe.

Export earnings from cut flowers grew by 37.7 percent from Kshs. 82 billion in 2017 to

Kshs 113.2 billion in 2018, according to figures from government's

Horticultural Crops

Directorate.

### Floriforum is Back in 2019, Focusing on Customer Dynamics.

Union Fleurs, the International Flower
Trade Association, is pleased to announce
that the Floriforum will be back by
popular demand for a second edition. It
will take place on Tuesday 5 November
2019 (14h-17h) at the IFTF Auditorium
in Expo Haarlemmermeer, Vijfhuizen,
the Netherlands. Focusing this year on
customer dynamics, the conversation will
aim to explore how the global floriculture
supply-chain can adapt and thrive in an
environment of shifting paradigms.

On the eve of the opening of IFTF, the world's most important trade exhibition for international flower growers and buyers, Union Fleurs - the International Flower Trade Association is organising the Floriforum for the second year in a row, offering a space where the international floriculture industry meets for an open conversation on changes and challenges.

With a shorter and catchier name, the second edition of Floriforum will be powered to be again a truly international event where current and future dynamics in and around the floriculture industry are discussed.

"Global issues for the industry need to be discussed in a global forum & addressed globally", acknowledged one of the participants to the 2018 Floriforum, where 5 high-level speakers engaged in a conversation with an international audience of 250 attendees from 38 countries on the topics of international trade,

logistics and product innovation.

It is at the core of Union Fleurs' mission as the International Flower Trade Association to create such a global platform to facilitate an exchange of views on the various changes and challenges that the floriculture industry is facing. For the second edition, the focus will be on customer dynamics and the conversation will aim to explore how the global floriculture supply-chain can adapt and thrive in an environment of shifting paradigms.

We believe that moving the industry forward is best done collectively. To stimulate this, we provide forward-thinking professionals from floriculture businesses with an international forum to:

- Stimulate exchange of views and share ideas:
- Challenge the traditional state of play and perspectives on the industry by confronting views on relevant ongoing and future developments either within the industry or at global level;
- And create opportunities for attendees to network with peers as well as (prospective) clients and suppliers.

Don't miss out!

Make sure
to mark 5
November
2019 14h-17h
in your diary
and to join the
conversation!

open in July 2019. More information on the programme and speakers' line-up will follow. In the meantime, check out our dedicated website www.floriforum.com regularly for updates.

Floriforum is organised by Union Fleurs, the International Flower Trade Association, and sponsored by HPP Exhibitions.



## Bayer East Africa Collaborates With Kenyatta National Hospital

Bayer East Africa collaborates with Kenyatta National Hospital to Refurbish the Public Water point with the aim of curbing water-borne diseases and infections.

Bayer East Africa has today unveiled the newly refurbished clean water point situated at the Kenyatta National Hospital in a bid to improve sanitation, and prevent water borne diseases and infections.

Speaking during the unveil ceremony, Bayer East Africa Managing Director Eric Bureau emphasized on the importance of handwashing.

"The importance of hand washing cannot be underestimated. Regular hand washing with soap and clean running water, particularly before and after various activities, is one of the best ways to remove germs, avoid getting sick, and prevent the spread of germs to others. It is a vaccine to reduce the spread of many diseases and

conditions such as diarrhea and respiratory illness so that we can all stay healthy. Hand washing is a win for everyone, except the germs", said Mr Bureau.

Officiating the ceremony, Dr Evanson Kamuri, Kenyatta National Hospital CEO expressed his appreciation for the partnership with Bayer East Africa. "We cannot over-emphasize the importance of private and public partnerships in order to improve sanitation, and hence to work towards reducing the spread infections and water related illnesses in the country. Kenyatta National Hospital receives an estimated 2,000 people daily and hence makes it a high risk area in terms of the spread of diseases, especially those related to sanitation. We truly appreciate this

initiative by Bayer to refurbish and maintain the water points which have provided access to clean water for the public", said Dr Kamuri.

According to the World Health Organization, water borne diseases related to unsafe water and sanitation are a big part of the disease burden in the world. It is estimated that Waterborne diarrhea diseases are responsible for 2 million deaths each year, with the majority occurring in children under 5. However, proper household water and sanitation practices can increase resilience to waterborne disease risks.

This water facility was first launched in 2015 following the outbreak of Ebola reported in Africa and parts of Kenya.



(From L-R) - Bayer East Africa Managing Director Mr Eric Bureau and Kenyatta National Hospital CEO, Dr Evanson Kamuri after unveiling the newly refurbished clean water point at the Kenyatta National Hospital. The water point was put up to help fight waterborne diseases and infections.



(From R-L) - Kenyatta National Hospital CEO, Dr Evanson Kamuri and Bayer East Africa Managing Director Mr Eric Bureau unveil the newly refurbished clean water point at the Kenyatta National Hospital. The water point was put up to help fight water-borne diseases and infections.

# Recent Changes In EU Maximum Residue Levels [April 2019 Update]

number of changes to regulation EC 396/2005 have been published affecting Pesticide Maximum Residue Levels (MRLs) . The first regulation has already been active since the first of January 2019. The other changes will become active in July and August of 2019. These changes include both reductions as increases of the MRLs.

Regulation EC 2019/38 is an amendment to annexes II and V of regulation EC 396/2005, and describes changes in maximum residue levels for iprodione, in or on certain fresh produce. This regulation will become active on the 31st of July 2019.

Regulation EC 2019/50 is an amendment to annexes II, III and IV of regulation EC 396/2005 and describes changes in maximum residue levels for chlorantraniliprole, clomazone, cyclaniliprole, fenazaquin, fenpicoxamid, fluoxastrobin, lambda-cyhalothrin, mepiquat, onion oil, thiacloprid and valifenalate in or on certain fresh produce. This regulation is



already active since the first of January 2019. Regulation EC 2019/58 is an amendment to annexes II, III and V of regulation EC 396/2005 and describes changes in maximum residue levels for Linuron in or on certain fresh produce. This regulation becomes active on the 4th of August 2019.

Regulation EC 2019/88 is an amendment to annex II of regulation EC 396/2005 and describes changes in maximum residue levels for acetamipirid in or on certain fresh produce. This regulation becomes active on the 13th of August 2019.

Regulation EC 2019/89 is an amendment to annexes II, III and V of regulation EC 396/2005 and describes changes in maximum residue levels for bromadiolone, etofenprox, paclobutrazole and penconazole in or on certain fresh produce. This regulation becomes active on the 13th of August 2019.

Regulation EC 2019/90 is an amendment to annexes II, III and V of regulation EC 396/2005 and describes changes in maximum residue levels for bromuconazole, carboxin, fenbutatin oxide, fenpyrazamine and pyridaben in or on certain fresh produce. This regulation becomes active on the 13th of August 2019.

Regulation EC 2019/91 is an amendment to annexes II, III and V of regulation EC 396/2005 and describes changes in maximum residue levels for buprofezin, diflubenzuron, ethoxy sulfuron, ioxynil, molinate, picoxystrobin and tepraloxydim in or on certain fresh produce. This regulation becomes active on the 13th of August 2019.

For the latest MRLs, check the EU Pesticides Database.

### Kenya: Foreign investment survey 2018

enya has continued to make impressive progress in strengthening the investment climate, with the objective of making the country a regional industrial and financial hub. The country improved significantly in its ranking in the World Bank Doing Business 2019 Indicators moving 19 places to position 61 from 80 out of 190 countries in the 2017. Investments have

expanded in the country, principally in the finance and insurance; trade; manufacturing, communication and education industries.

In order to support economic policy making and to monitor risks that may arise from these investments, the collection of reliable and timely data is important. Results from the foreign investment surveys will be integrated into the Balance of Payments and International

Investment Position (IIP) statistics. The Foreign Investment Survey (FIS) 2018 is the fifth in the series since the launch of the surveys in 2010. The survey captured data on foreign capital stocks and flows for the period 2016 and 2017. A total of 740 enterprises were targeted during FIS 2018, with a response rate of 74.6 per cent compared to 72.8 per cent recorded in the FIS 2016.

# Nancy Kurgat Sian's Flower Farm Manager

A great team start with a great leader. This involves setting goals for the team, communicating the mission, setting proper systems and standards and leading by example, Team motivation-Simple recognition of your team's efforts and celebrating their achievement can go a long way.



Describe yourself as concisely as you may. Nancy Kurgat is the production and technical manager, Sian Agriflora. She is also a team leader and has over 15 years experience in the floriculture sector. She has a training in Horticulture (Egerton University), Business & strategic management (Moi University) and several in job trainings on supervisory and leadership among others. Over the years, she has grown and progressed through the ranks from supervisory level to management level.

Ladies have a natural affinity for the world of flowers, and show much greater appreciation

for it than men do. Even then, very few go about establishing their careers in the flower production industry, like you have done. What spurred you to do so? Any role model or someone who inspired you?

My role model in the industry is Mr Andrew Wambua, the General Manager of Molo River who was my boss when I first joined the industry at Equator flowers. I attribute a lot of my success to the first trainings and mentorship I attained from him. I cannot forget our Chairman Mr. Micah Cheserem whose leadership really inspired and geared me to another level of leadership and creativity. I have not words to express my gratitude other than a big thank you.

In addition, it has been noticed by men of all ages is the affinity of women towards flowers; the freshness, gorgeousness and the innocent blooms have always been a dire favourite of women. Even with this love for flowers women perceived the career as hard for to pursue because of the associated obstacles for instance, growing is tasking and needs a lot of commitment in terms of time. Most women will wish for careers that ensure they are home early and over the weekends to take care of the family.

I joined the industry immediately after I cleared my studies and I must say that I also had the same reservations but after working for some time I realized that I enjoyed more than I thought! I cheered myself that, "YES, I CAN, and will be, a significant part of the floriculture industry in spite of all the obstacles."

How long have you been working in the sector, kindly take us through your journey to your current position.

My work experience in the sector is 15 years. After I cleared college, I secured a position in Sian roses, Equator flowers as a production supervisor in charge of 10ha, I was promoted to integrated pest management as IPM officer and tasked with the responsibility of ensuring the production and application of Phytoseiulus in the entire field which I did before I returned back to production as Production Officer (assistant to the production & technical manager). This is where I build my career base. I gained a lot of experience on the job and leadership. Ten years down the line, I was promoted to my current position of production and technical manager in Agriflora (k) ltd, a sister company to Equator flowers where I have served for the past 5 years.

Briefly discuss the challenges you go through daily? What would you point out as your strongest attribute that has made you succeed? How do you rise up to the greatest challenge that your job presents?

There are many challenges in growing, ranging from challenges which are technical in nature and require technical solutions to weather challenges which impact the production either positively or negatively and Market challenges among others.



To me the critical challenge is the human resource. Managing employees on day to day basis is critical to the success of any company. It is actually the resource number one, without the right people you have no company.

The behaviour of the employees at work will determine how they will work, their attitudes and feelings about the organization. This will determine their level of commitments towards ensuring the overall goal of the organization.

When you have highly motivated team, the level of commitment is high and vice versa. Many things we do as management to ensure that the employee is HAPPY, this is not limited to constant communication with the team, motivation, proper leadership etc.

You have quite a lot of people looking up to you as a manager. Describe how you manage expectations, as well as go about goal-setting for your staff.

Many times we know what we expect from employees, but we fail to know what they expect from us! It is good to also try and find out what employees really expect from the management. As an Employee I also expect to be treated with respect, to trust and be trusted by the people I work with, I need assurance in terms of job security and to be given opportunity to use my skills and abilities to work and deliver.

So with this in mind as a leader I should be empathetic, treat people the way I would wish to be treated by my bosses. It is as simple as that. Also by holding frequent meetings and involving them in addressing any arising issue, employees will feel much appreciated. I don't also forget the fact that I should communicate, communicate and communicate. Communication is two way and feedback is the breakfast of champions.

As a woman in a position of leadership, have you felt that at times, the scrutiny was much more intense during tougher times, just by virtue of being a woman? How do you respond to this? Also, do describe the challenges that you face as a woman in leadership.

Not really, and may be because I have only worked in one organization. I don't know!



"I recognize the best employees and whenever a vacancy arises I promote the outstanding employees and this has really been taken positively by the team. I encourage the culture of learning and creativity- A highly knowledgeable team is highly motivated, so through frequent in-house trainings this has really gone a long way in boosting morale and building confidence."

In Sian roses there are equal opportunities for both men and women and the amount of scrutiny depend on your performance as an individual, it is not affected by gender.

A person's leadership abilities depend on the individual strengths and personality traits and not on their gender. We give credit to our top management and directors since the ratio of men to women in leadership is almost at 50%.

Through your own personal filter, what is the "best" decision you feel you ever made? Along the same lanes, which one qualifies as your

### worst?

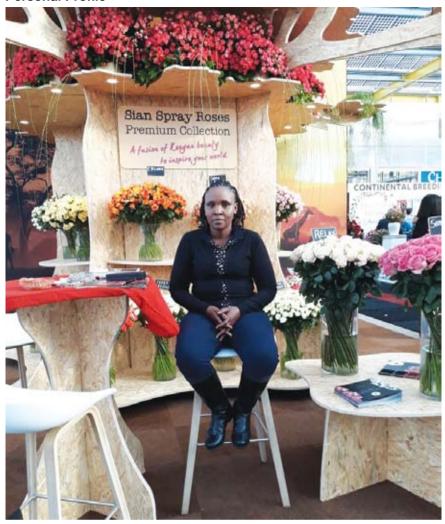
One time I was to quit working in Sian Roses for the perceived greener pastures in one of the flower farms in Kenya, by then I was still in supervisory level, I strongly doubt if I would have reached my current level.

Kenya is a major player in the global flower industry, what are the most prevalent challenges that get in the way of building the flower sector?

Floriculture is one of Kenya's top foreign

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### **Personal Profile**



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exchange earners. However, flower farmers face many challenges that affect their competitiveness. They include; stringent market requirements, the ever rising cost of production, numerous taxation by the government, change in weather caused by global warming, water security crisis, competition and unstable price in the market among others

Despite the country being a major player in the global flower industry, do you get the notion that at times, the Kenyan government does not accord the industry with the requisite seriousness that an industry of its size and profitability should command? If so, what can the government do to improve and offer sufficient support?

The country's flower target is to achieve the best efficiency in production and the whole value chain at large with a consistent better quality for sustainability. With the advent of globalization, there is an increasing need for Kenya to improve the competitiveness in line with the rising demand for more product diversification and sophistication amid the constantly changing consumer preferences. Support from the national and county governments on policies that create ease of investment and doing business, for instance on taxation, provision of essential services such as energy, water, land etc., infrastructure, investments, institutional coordination, innovation and human capital among others will spur more growth of the industry. The industry will also benefit from support on trade by the government in existing and emerging markets.

What makes your farm's produce unique, and separates it from the rest?

Sian Roses farms are located in 3 different locations; Eldoret, Nakuru and Kitengela with different altitudes, we have both high and low altitude farms. They total 117ha. We therefore

produce assortment of varieties with top class quality ranging from intermediates to Premium of both standard and Spray Roses.

What are some of your choice teamworkenhancing strategies that you apply, as a team leader?

"Coming together is the beginning. Keeping together is progress. Working together is success."- Henry Ford. My team enhancing strategies include but are not limited to the following; Effective communication-Communication within a team is like blood in human system, so as a team we communicate all the time using any available means like meetings, WhatsApp group chats etc. I communicate clear instructions and expectations to the team and again as a team player I must listen what the team has to say. It is two way. Effective leadership- A great team start with a great leader. This involves setting goals for the team, communicating the mission, setting proper systems and standards and leading by example, Team motivation- Simple recognition of the team's efforts and celebrating their achievement can go a long way. There are many ways to reward which can either be financial or non-financial. I recognize the best employees



and whenever a vacancy arises I promote the outstanding employees and this has really been taken positively by the team. I encourage the culture of learning and creativity- A highly knowledgeable team is highly motivated, so through frequent in-house trainings this has really gone a long way in boosting morale and building confidence. Proper Planning- I note employees enjoy working SMART than working hard.

Five, ten years from now, how do you see the flower sector doing? Do you have any personal projections that you would like to share?

The market is dynamic I must say, it is about fashion and over the years I have seen a lot of changes in market trends. I remember when I joined the industry, standard roses were almost dominant, and there came the spray roses which are almost flooded in the market now. Iam projecting change of trend towards more value added bouquets and special flowers like the garden shape and laces.

What is, in your informed opinion, the most potent challenge that the flower farmer faces today? How should he/she go about mitigating this particular challenge?

The new market rules that faces the export to

l bala

Australia, the zero tolerance to any crawling insect pest including even the beneficial insects. Kenya is staring at a possible loss of the multibillion shilling Australian flower market.

At the moment it is very difficult to comply with this requirement given that there is no infrastructure in place. The new regulation require that Kenyan exporters fumigate their flowers at the point of origin.

There are some flower farms that insist on gender equality, with regard to employment opportunities, and this is perhaps easier to apply seeing as how women have a natural affinity for the flower world. Do you have a similar dynamic in place?

Why not, Men and women should be given equal opportunities especially in management level, but for the lower lever you have to consider the nature of the work. Women are not allowed by law to work in spray department. However more women can be deployed in pack houses and field.

What is your preferred style of working or management? Does it in any way empower or affect the daily output of your team

I balance between all the management styles

depending on the prevailing situation but mostly it is consultative; we set and agree on our goals as a team where the objectives are clearly communicated to the team, I motivate the team and also reprimand them when necessary. I believe in nurturing and mentoring my team because management is not about systems and theories. Management is about people, managing people is critical and by the way people are tricky because they know the rules and when to break them, they know when to be flexible and when not. So I have to be very tactful in my leadership. However, sometimes the autocratic leadership has to prevail this mostly applies when I want to keep on top of situation.

Laissez fair is not my cup of tea simply because nature doesn't allow vacuum! If you don't provide leadership somehow a 'leader' will emerge from the group.

Briefly detail how you maintain balance in your life, with regards to work versus personal living, especially as a holder of what must be, at the very least, an occasionally stressful position

Have you ever wondered how our traditional mothers used to balance their cores at home? You could see a mother performing many tasks at once like taking care of the baby(s), cooking and planning other work at the same time? (just an example)

Apparently women are very good and natural multitaskers and they were blessed with the ability to decisively respond to simultaneous and different tasks or problems at the same time. This is God given and a critical component to successful leadership. However, with proper planning you can always achieve your business goals as well as your personal wellbeing

A few words of advice to young girls, and basically youths at large, who desire to eventually hold positions of leadership similar to yours when they become career people.

Girls are just as qualified as boys! What a man can do, a woman can do better. Therefore I urge young girls and women to wake up and compete equally as men in leadership positions. Nothing is hard, be determined, have self-confidence and above all believe in yourself. Believe that you can and you will.

### What legacy do you want to leave behind in the agricultural sector?

I want to be remembered as one of the significant and successful women leaders in the flower industry.

### Give your final comments

Leadership is a calling; effective leaders don't lead for personal gains, if you do so you miss the bigger picture. There is nothing wrong in accomplishing personal goals, but you may end up killing morale. Do not only focus on results, take care of the people and they will take care of the organization. A happy employee is a happy organization.

### IFTEX SHOW: Supporting Sustainable Floriculture in Kenya

For the 8th year in a row, Kenya hosted the International Flower Trade Expo (IFTEX) at the Oshwal Centre, Parklands Nairobi.



Kenya's PS for trade Mr. Chris Kiptoo and RFH CEO Mr. Steven Van Schilfgrade officially opening the show

FTEX which was launched in 2012 has grown tremendously to be a renowned exhibition brand worldwide. Currently it attracts more than 250 both national and international exhibitors ranging from; growers, buyers, breeders, suppliers, regulatory and compliance institutions and logistics. Over time IFTEX has contributed to promotion of Kenyan cut flowers which its demand continues to rise in world market. This action has enabled the Kenyan flowers to compete well with other giants like Ecuador, Colombia and also Ethiopia who are coming up well.

This year's IFTEX show kicked off on 5th June 2019 with the chairman of HPP international exhibition group inviting exhibitors, buyers and all other participants to the event; "it is with great pleasure to welcome you the 8th edition of Kenya's trade fair for the floriculture industry, it is without doubt the most important international trade fair for fresh flower trade" said Dick Van Raamsdonk.

The growth of IFTEX over the years has been boosted by its unique approach of reversing the culture of exhibitions across the globe. IFTEX brings buyers and growers under one roof, which makes it so special. "It is a place where you meet buyers and growers together, it is a business platform, international buyers source flowers directly from the Kenyan growers, this makes IFTEX so different "reiterated Dick Van Raamsdonk.

The show welcomed exhibitors from Zimbabwe, Ecuador and Ethiopia who were exhibiting for the first time. Principal Secretary of Ministry of Agriculture Dr. Chris

Kiptoo has grown fond of the exhibition as he was the chief guest for the official opening of this year's show.

Dr. Chris Kiptoo noted milestones achieved by the flower sector the past few years in terms of revenue and employment opportunities to our nation and he attributed this to continuous commitments by the ministry, kephis, Kenya flower council, Kenya Bureau of Standards, pest control board and other stakeholders who work tirelessly to uphold compliance of our Kenyan cut flowers to both local and international standards.

"Europe remains our main market which accounts for 70% of earnings and we are working to permanently secure this market through enhancing exhaustive compliance to avoid any trade barriers even as we commit to pursuing other markets" asserted Dr.Chris Kiptoo. He went



further to assure growers that they are working closely with the UK to formulate a neutral ground in order to mitigate the risks of Brexit, securing of Japan, China, Turkey, USA and Canada markets which require much deliberations on issues of compliance and trade tariffs. "We are aware of these challenges and we are following these issues closely to ensure that we increase market access to grow the flower sector and increase revenue" Promised Dr. Chris Kiptoo.

IFTEX has become a brand, a business platform and a form of medium where Kenyan flowers gets show cased to the world. The show contributes immensely to the industry and for this IFTEX continues to be a preferred exhibition for every Kenyan grower. This year's show came at a time when Kenyan growers are battling and feeling the pinch of escalating costs of inputs, freights charges and decline or market prices stagnating. Amid all these, the show took place at a time Kenyan growers needed it to learn the best ways to innovate on cutting costs, expansion of markets and promotion of the Kenyan flowers.

IFTEX has come a long way and we must pause for a moment and appreciate what the show has done to the sector consistently for the past 8 years. We have created networks, promoted our flowers, made deals and expanded our market reach through the show. However, it is easier said than done, as an exhibitor design a holistic strategy to guide you through the show and after the show to ensure you get the best out of the event. Until next year, let's keep on growing and producing quality flowers sustainably while being mindful of our environment both physically and socially.



One of the winners presented with a trophy



Audience at the opening ceremony







he International Floriculture Trade Fair (IFTF) will be held for the 10th time this year in November. Having its home base at Expo Haarlemmermeer in Vijfhuizen in Holland since it was held for the first time, the fair grew considerably throughout the years. With the extension of the venue from 15.000 to 25.000 m2's 2 years ago, IFTF finally got the chance to grow, which it did and can continue to do so now in the future.

Every year more and especially international growers decide to join and exhibit at what has become the biggest and most important trade fair for the world floriculture industry. Until now, every year new countries could be added to the list of exhibiting flower and plant producing nations and the list keeps

on growing. The fair that is held annually in the first week of November has become a must-attend event, if you are growing. trading or supplying to this industry. With almost 300 exhibitors from over 30 countries and more than 25.000 trade visitors from over 100 countries, a platform where the best and newest available products can be found, and latest developments and trends are being discussed.



In less than 5 months

Expo Haarlemmermeer in

Vijfhuizen will be opening its doors again for the next edition of IFTF. With the summer holidays around the corner, it's time to book your flight and hotel in advance as you prepare to attend the show.

### SIZA Joins The FSI Basket for Social

n Monday, 20 May 2019, the FSI Board approved the addition of SIZA, the South African Standard for Sustainable Agriculture to the FSI Basket of Standards for Social.

SIZA has previously completed the benchmarking process against the Global Social Compliance Programme (GSCP), the FSI benchmarking partner for Social. As a compliant scheme on criteria as well as audit methodology and audit process, it is eligible to the FSI Basket for Social. This recognises that growers who have obtained the SIZA social audit certificate cultivate their products under socially acceptable conditions.

SIZA is the 15th standard joining the FSI Basket, and a great example of how local scheme owners can gain visibility and trust within the international market through benchmarking, a reward for transparency and comparability.

### Who is SIZA?

The Sustainability Initiative of South Africa (SIZA), a membership based free standing, non-profit company, designed to assist growers with ethical labour and environmental practice compliance whilst minimizing costs. It is a South African standard, developed, owned and operated in South Africa but aligned to global best practices. SIZA aims to have a cost-effective approach for growers by supplying one standard and one audit no matter which market a producer supplies.

### What is the FSI Basket of Standards?

The FSI Basket of Standards is an instrument developed by the Floriculture Sustainability Initiative (FSI) to mainstream and promote responsible sourcing of flowers & plants in the areas of environmental and social practices.

The FSI Basket enhances transparency on standards criteria, identifies responsible sources through independent benchmarking, avoiding duplication of costs and audit fatigue in the supply chain.

The FSI members use the Basket to identify the products responsibly produced and to measure the progress towards the goal of 90% responsible flowers and plants by 2020.



### **IFTEX 2019 Photos**

### **Kisima Farm:** Leading the way in Sustainable Farming

It is noteworthy to assert that Kisima is setting a good example of sustainable farming and innovative ways of cutting the cost of production without compromising quality and quantity in production. These practices are worth emulating as they deliver results based on what Kisima has achieved from these strategies.

"We want to be remembered as the farm which integrated their farming systems to enable sustainability both environmentally and socially to conserve soils for the future generations while improving livelihoods of people in the community" asserted Craig General Manager Kisima Floriculture Kisima which sits at an altitude of 2400M produces large headed premium roses which are sold through the auction. They export over 20 million stems annually, being a smallholder grower with less than 30ha to survive in the sector of big giants; you have to design a unique way of operations. For this, Kisima believes in two major unique ways; cutting cost innovatively and practicing environmentally and socially sustainable farming.

Kisima's commitment to environmentally and socially sustainable farming has not only enabled them to manage their farm operations successfully but it has also attracted notable accolades for them both locally and internationally. Kisima emerged victorious for the best imported rose in the recently concluded Keukenhof awards with Rosa Hurricane has their headlining variety. They managed to get this award after growing Rosa Hurricane for one year. Rosa Hurricane variety is owned by select breeding.

The judges at Keukenhof awards based their judgment on head shape, the opening of the head, the vividness of color, health of foliage, strength of the stems, distribution of thorns and vase life. Rosa Hurricane successfully

checked every box to enable Kisima to claim the award.

Kisima also managed to claim a gold award from National farmers' competition scheme, which is managed collaboratively by Elgon Kenya and the Ministry of Agriculture. Under the new category (Floriculture) which was introduced this year, Kisima managed to scoop a gold award in the category of growers under 30 ha. The decisions were based on the management philosophy of the farm; in terms of farming practices and sustainability.

### Sustainability

Kisima has embraced sustainable



environmental practices through integrated pest management and agronomic best practices. "I am a firm believer in organic fertilizer because it feeds the soil with the right nutrients," said Craig. He believes the best way to get the best out of your soils without damaging and negatively impacting the environment is to give back to your soils consistently. Kisima prides themselves in harvesting rainwater from their greenhouses and channeling them to their special lined reservoirs.

Kisima recycles their water through the use of hydroponics systems used in some of the greenhouses. Kisima is also one of the few





Kisima's commitment to environmentally and socially sustainable farming has not only enabled them to manage their farm operations successfully but it has also attracted notable accolades for them both locally and internationally.

farms in Kenya which do not use borehole water in their floriculture operations, thus safeguarding the aquifer. Any wastewater generated from our packhouse and canteen is put through a natural wetland process to purify the water.

#### **Personnel**

Kisima is an equal employer; they employ over 400 people within the community and this involves people with disabilities. They are also committed to promoting gender equality in their workplace. Through numerous in-house and outsourced workshops, Kisima is very committed in the continuous development of its employees to build an impeccable team



whilst scaling up the growth of the farm.

#### **Environmental**

Kisima's commitment towards the environment is heavily evident from various projects they have invested in. Their water conservation programs, carbon offset, and responsible farming ensure Kisima's environmental footprint is positive. The farm also hosts a wide range of wildlife, as well as the Mt. Kenya – Ngare Ndare Elephant Corridor. The

infrastructure development, feeding, and bursaries. The Gundua Secondary School, initiated and built by Kisima, has become the leading day secondary school in Meru County. Kisima developed and supports the Gundua Health Centre and Maternity Unit in Ex-Lewa, which serves as the primary health care provider in the area.

Recognizing the need to share leading agricultural expertise with adjacent farming



corridor provides for the free movement of elephant and other wildlife between Mt. Kenya and rangelands to the north and represents a critical link for the Lewa world heritage site, and adjacent Borana Conservancy, with the mountain. Additionally, Kisima actively supports the following conservation organizations; Borana Ranch, Mount Kenya trust, Ngare Ndare forest trust, and Lewa Conservancy.

#### **Corporate Social Responsibility**

Kisima, through its dedicated Foundation, is recognized as a primary driver of community development in Buuri Sub-County, supporting education, healthcare, water development, and agricultural extension.

Kisima supports seven primary schools and two secondary schools in the vicinity, with

communities, Kisima hosts an agricultural demonstration site, and two major field days per year, each attended by well over 1000 farmers. Kisima is proud to serve as a catalyst for enhanced small scale farming systems across the area through agricultural extension and seed potato production.

Kisima plays a pivotal role in the management and protection of the Kisima spring, which feeds the Ngare Nything River – and in supporting the Ngare Nything / Sirgon Water Resource Users Association ensures a sustainable supply of water to well over 20,000 people in adjacent areas.

Kisima believes that in a give and take situation both socially and environmentally. This philosophy has enabled growth and smooth running of farm operations.



### FLOWER & VEGETABLE FARMS IN KENYA

AAA- Flowers - Chui Farm Farm-Sunripe Across Agriculture Ltd Africalla Kenya Ltd Africa Blooms Afriscan Kenya Ltd Aquila Development Co Balaji Flowers Baraka Farm Batian Flowers Beautyline Big Flowers Figor Flowers Bigot Flowers Fila Shaka Flowers	Roses Roses Herbs Cuttings Roses Hypericum Roses Roses Roses Roses Flowers Roses Flowers Roses Roses Roses Flowers Roses	Rumuruti Timau Naivasha - Eldoret Salagaa Naivasha Olkalou Ngorika Nanyuki Naivasha Timau Naivasha Naivasha Limuru	Charles Njuki Ravi Kumar Antony Emily Chepkemoi Meindert Ramnath Sarbande Charles Mwangi Abhay Marathe Ra0 Venkatesh Lucy Yinda Dirk Looj Peter Gathiaka Simon Blinco Kakasaheb Jagtap	0724 391 288 0759 500403 0711827785 0729080186 - 0780314387 - 0729776656 0726337266 - 0720102237 0721392559 0723234927	charles.njuki@aaagrowers.co.ke ravikumar@aaagrowers.co.ke naivasha@sunripe.co.ke chep28@gmail.com meindert@africalla.com ramnath.sarbande@xflora.net - gm@aquilaflowers.com - lucy@barakaroses.com dirk@batianflowers.com peter@beautyli.com simon@mauflora.co.ke
Farm-Sunripe Across Agriculture Ltd Africalla Kenya Ltd Africa Blooms Afriscan Kenya Ltd Aquila Development Co Balaji Flowers Baraka Farm Batian Flowers Beautyline Big Flowers Bigot Flowers Bila Shaka Flowers Black Petals Bliss Flora Ltd Blue Sky	Herbs Cuttings Roses Hypericum Roses Roses Roses Roses Roses Flowers Roses Flowers Roses	Naivasha	Ravi Kumar Antony Emily Chepkemoi Meindert Ramnath Sarbande Charles Mwangi Abhay Marathe Ra0 Venkatesh Lucy Yinda Dirk Looj Peter Gathiaka Simon Blinco Kakasaheb Jagtap	0711827785 0729080186 - 0780314387 - 0729776656 0726337266 - 0720102237 0721392559 0723234927	ravikumar@aaagrowers.co.ke naivasha@sunripe.co.ke chep28@gmail.com meindert@africalla.com ramnath.sarbande@xflora.net - gm@aquilaflowers.com - lucy@barakaroses.com dirk@batianflowers.com peter@beautyli.com
Across Agriculture Ltd  Africalla Kenya Ltd  Africa Blooms  Afriscan Kenya Ltd  Aquila Development Co  Balaji Flowers  Baraka Farm  Batian Flowers  Beautyline  Big Flowers  Bigot Flowers  Bila Shaka Flowers  Black Petals  Bliss Flora Ltd  Blue Sky	Cuttings Roses Hypericum Roses Roses Roses Roses Roses Flowers Roses Roses Roses Roses Roses Roses Roses Roses	- Eldoret Salagaa Naivasha Naivasha Olkalou Ngorika Nanyuki Naivasha Timau Naivasha Naivasha	Emily Chepkemoi Meindert Ramnath Sarbande Charles Mwangi Abhay Marathe Ra0 Venkatesh Lucy Yinda Dirk Looj Peter Gathiaka Simon Blinco Kakasaheb Jagtap	0729080186 - 0780314387 - 0729776656 0726337266 - 0720102237 0721392559 0723234927	chep28@gmail.com meindert@africalla.com ramnath.sarbande@xflora.net - gm@aquilaflowers.com - lucy@barakaroses.com dirk@batianflowers.com peter@beautyli.com
Africalla Kenya Ltd  Africa Blooms  Afriscan Kenya Ltd  Aquila Development Co  Balaji Flowers  Baraka Farm  Batian Flowers  Beautyline  Big Flowers  Bigot Flowers  Bila Shaka Flowers  Black Petals  Bliss Flora Ltd  Blue Sky	Cuttings Roses Hypericum Roses Roses Roses Roses Roses Flowers Roses Roses Roses Roses Roses Roses Roses Roses	Salagaa Naivasha Naivasha Olkalou Ngorika Nanyuki Naivasha Timau Naivasha Naivasha	Meindert Ramnath Sarbande Charles Mwangi Abhay Marathe Ra0 Venkatesh Lucy Yinda Dirk Looj Peter Gathiaka Simon Blinco Kakasaheb Jagtap	- 0780314387 - 0729776656 0726337266 - 0720102237 0721392559 0723234927	meindert@africalla.com ramnath.sarbande@xflora.net - gm@aquilaflowers.com - lucy@barakaroses.com dirk@batianflowers.com peter@beautyli.com
Africa Blooms  Afriscan Kenya Ltd  Aquila Development Co  Balaji Flowers  Baraka Farm  Batian Flowers  Beautyline  Big Flowers  Bigot Flowers  Bila Shaka Flowers  Black Petals  Bliss Flora Ltd  Blue Sky	Roses Hypericum Roses Roses Roses Roses Roses Flowers Roses Flowers Roses Roses Roses Roses Roses Roses	Salagaa Naivasha Naivasha Olkalou Ngorika Nanyuki Naivasha Timau Naivasha Naivasha	Ramnath Sarbande Charles Mwangi Abhay Marathe Ra0 Venkatesh Lucy Yinda Dirk Looj Peter Gathiaka Simon Blinco Kakasaheb Jagtap	0780314387 - 0729776656 0726337266 - 0720102237 0721392559 0723234927	ramnath.sarbande@xflora.net - gm@aquilaflowers.com - lucy@barakaroses.com dirk@batianflowers.com peter@beautyli.com
Afriscan Kenya Ltd Aquila Development Co Balaji Flowers Baraka Farm Batian Flowers Beautyline Big Flowers Bigot Flowers Bila Shaka Flowers Black Petals Bliss Flora Ltd Blue Sky	Hypericum Roses Roses Roses Roses Flowers Roses Flowers Roses Roses Roses Roses Roses Roses	Naivasha Naivasha Olkalou Ngorika Nanyuki Naivasha Timau Naivasha Naivasha	Charles Mwangi Abhay Marathe Ra0 Venkatesh Lucy Yinda Dirk Looj Peter Gathiaka Simon Blinco Kakasaheb Jagtap	- 0729776656 0726337266 - 0720102237 0721392559 0723234927	- gm@aquilaflowers.com - lucy@barakaroses.com dirk@batianflowers.com peter@beautyli.com
Aquila Development Co  Balaji Flowers  Baraka Farm  Batian Flowers  Beautyline  Big Flowers  Bigot Flowers  Bila Shaka Flowers  Black Petals  Bliss Flora Ltd  Blue Sky	Roses Roses Roses Roses Flowers Roses Flowers Roses Roses Roses Roses Roses Roses	Naivasha Olkalou Ngorika Nanyuki Naivasha Timau Naivasha Naivasha Naivasha	Abhay Marathe Ra0 Venkatesh Lucy Yinda Dirk Looj Peter Gathiaka Simon Blinco Kakasaheb Jagtap	0729776656 0726337266 - 0720102237 0721392559 0723234927	lucy@barakaroses.com dirk@batianflowers.com peter@beautyli.com
Balaji Flowers F Baraka Farm F Batian Flowers F Beautyline F Big Flowers F Bigot Flowers F Bila Shaka Flowers F Black Petals F Bliss Flora Ltd F Blue Sky	Roses Roses Flowers Roses Flowers Roses Roses Roses Roses Roses Roses Roses	Olkalou Ngorika Nanyuki Naivasha Timau Naivasha Naivasha	RaO Venkatesh Lucy Yinda Dirk Looj Peter Gathiaka Simon Blinco Kakasaheb Jagtap	0726337266 - 0720102237 0721392559 0723234927	lucy@barakaroses.com dirk@batianflowers.com peter@beautyli.com
Baraka Farm f Batian Flowers f Beautyline f Big Flowers f Bigot Flowers f Bila Shaka Flowers f Black Petals f Bliss Flora Ltd f Blue Sky	Roses Roses Flowers Roses Flowers Roses Roses Roses Roses Roses	Ngorika Nanyuki Naivasha Timau Naivasha Naivasha	Lucy Yinda Dirk Looj Peter Gathiaka Simon Blinco Kakasaheb Jagtap	- 0720102237 0721392559 0723234927	dirk@batianflowers.com peter@beautyli.com
Batian Flowers F Beautyline F Big Flowers F Bigot Flowers F Bila Shaka Flowers F Black Petals F Bliss Flora Ltd F Blue Sky	Roses Flowers Roses Flowers Roses Roses Roses	Nanyuki Naivasha Timau Naivasha Naivasha	Dirk Looj Peter Gathiaka Simon Blinco Kakasaheb Jagtap	0721392559 0723234927	dirk@batianflowers.com peter@beautyli.com
Beautyline F Big Flowers F Bigot Flowers F Bila Shaka Flowers F Black Petals F Bliss Flora Ltd F Blue Sky	Flowers Roses Flowers Roses Roses Roses Roses	Naivasha Timau Naivasha Naivasha	Peter Gathiaka Simon Blinco Kakasaheb Jagtap	0721392559 0723234927	peter@beautyli.com
Big Flowers F Bigot Flowers F Bila Shaka Flowers F Black Petals F Bliss Flora Ltd F Blue Sky	Roses Flowers Roses Roses Roses	Timau Naivasha Naivasha	Simon Blinco Kakasaheb Jagtap	0723234927	
Bigot Flowers F Bila Shaka Flowers F Black Petals F Bliss Flora Ltd F Blue Sky	Flowers Roses Roses Roses	Naivasha Naivasha	Kakasaheb Jagtap		simon@mauflora.co.ke
Bila Shaka Flowers F Black Petals F Bliss Flora Ltd F Blue Sky (	Roses Roses	Naivasha			
Black Petals F Bliss Flora Ltd F Blue Sky C	Roses Roses		1 1.	0722205271	jagtap.kt@bigotflowers.co.ke
Bliss Flora Ltd F Blue Sky (	Roses	Limuru	Joost Zuurbier	0722204489	bilashaka.flowers@zuurbier.com
Blue Sky (		LIIIIuIu	Nirzar Jundre	0722848560	nj@blackpetals.co.ke
	Gypsophilla	Njoro	Appachu Sachin	0789101060	appachu7@yahoo.com
Bloom Valley	-71 E	Naivasha	Patel Sushant	0725622333	info@blueskykenya.com
		Salgaa	Ramnath Sarbande	0780314387	ramnath.sarbande@xflora.net
Blooming Dale Roses Kenya Ltd   F	Roses	Nanyuki	Sunil	0718991182	info@bloomingdaleroses.com
	Roses	Nakuru	Shivaji Wagh	0720895911	shivaniket@yahoo.com
Carzan (K) Ltd KS	Summer flowers	Salgaa	Stanley Rotich	0721931710	stanley@carzankenya.com
Carzan (K) Ltd ST	Hypericum, solidago		Adung'o	0716019094	adungʻo@carzankenya.com
	Carnations	Molo	Charles Chelule	0728784081	charles.chelule@carzankenya.com
Charm Flowers F	Flowers	Athiriver	Ashok Patel	020 352583	ashki@charnflowers.com
Chestnut F	Flowers	Mt. Kenya	Gabriel Kiai	-	gabriel.kiai@aaagrowers.co.ke
Colour Crops I	Hypericum	Nanyuki	Kennedy Wanyama	0716389472	colourcrops@tmu.com
Colour crops S	Summer Flowers-	Bahati	Patrick Kipkurui	0727806184	kipkirui89@gmail.com
Colour crops Naivasha F	Flowers	Naivasha	Geoffrey Mwaura	0722200972	nva@colourcrops.com
<u> </u>	Flowers	Rumuruti	Eliud Njenga	0722382859	eliud@pigeonblooms.com
Credible Blooms F	Flowers	Ngong	Eliud Njenga	0722382859	eliud@pigeonblooms.com
Dale Flora f	Roses	Mogotio	Ajay Sutar	0711102266	ajay.sutar24@gmail.com
Desire Flowers F	Flowers	Isinya	Rajat Chaohan	0724264653	rajatchaohan@hotmail.com
De ruiters E	Breeder Roses	Naivasha	Fred Okinda	0722579204	Fred.okinda@deruiter.com
Double Dutch (	Cuttings	-	Pharis Wainaina	0728207661	
	Flowers Breeders	Naivasha	Steve Outram	0733 609863	s.outram@dummenorange.com
	Roses	Salgaa	Kimani	0733605219	production@fontana.co.ke
	Roses	Nakuru	Daniel Moge	0721734104	kimmanexp@gmail.com
Enkasiti Thika F	Flowers	Thika	Tambe	0734256798	enkasiti@gmail.com
	Flowers	Nanyuki	Harry Kruger	0707266956	harry@equinoxflowers.com
•	Flowers	Mt. Kenya	-	-	-
	Flowers	Thika	Bipin Patel	0735873798	everflora@dmblgroup.com
Evergreen Crops		Nairobi	Arun Singh	0721941009	arun@evergreencrops.com
•	Roses/ Carnations	Athiriver	Dan	0734626942	dan@exoticfields.com
	Flowers	Limuru	Sylivester	0753444237	sylvesterkahoro@yahoo.com
-	Cuttings	Embu	Bernard Marindany	0726 366 752	B.Marindany@DummenOrange.con
	Flowers	Kericho	Lelon Chepkwony		
· ·	Flowers	Kericho	Aggrey Simiyu	0722601639	aggrey.simiyu@finlays.co.ke
•	Flowers	Kericho	Japhet Langat	0722 863527	japhet.Langat@finlays.co.ke
•			Mahindra Patil	0798254199	Japhiet.Langat@iiiiays.co.ke
	Roses	Njoro Mau Narok		0/70234133	ajyana@fantana.co.ka
,	Roses	Mau Narok	Aiyappa Potor Mwangi	0722204505	aiyapa@fontana.co.ke
3 3	Flowers	Naivasha	Peter Mwangi	0722204505	peter.mwangi@flamingo.net
3 3 3	Flowers	Naivasha	Mr. Isaac Karanja	0720473502	kingfishercarnations@flamingo.net
, , ,	Flowers	Naivasha	Jacob Wanyonyi	0722773560	jacob.wanyonyi@flamingo.net
	Carnations, Roses	Nanyuki	Peris Muturi	-	-
	Roses	Njoro	Sam Nyoro	0721993857	s.ivor@flamingoflora.co.ke
	Roses	Solai-Nakuru	Lucas Choi	0721832710	lucas.floraola@gmail.com
Flora Delight	Summer flowers	Kiambu/ Limuru	Marco	0710802065	marcovansandijk@yahoo.com



### FLOWER & VEGETABLE FARMS IN KENYA

FARM NAME	PRODUCT	LOCATION	CONTACT PERSON	TELEPHONE	E-MAIL
Florenza Ltd	Roses	Solai	Yogeesh	0737453768	farm.florenza@megaspingroup.com
Fresh Gold Flowers Ltd	Flowers	Mt. Kenya	John Karimi	0721622294	karimi@freshgolgkenya.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	-	Kadlag Palaji	0723149968	kadlag@hannaroses.com
Harvest Flowers Group	Roses	Murungaru	Paul Salim	0722 470 717	paul.salim@harvestflowers.com
Harvest Ltd	Roses	Athiriver	Paul Salim	0722 470 717	paul.salim@harvestflowers.com
Heritage Flowers Ltd	Roses		Shailesh Kumar	0722203750	hfl.srk@gmail.com
Highland plantations	Cuttings & Herbs	Olkalau			production@highlandplants.co.ke
Imani Flowers	Summer Flowers	Nakuru	Raphael Otieno	0792302466	raphael@imaniflowers.co.ke
Interplant Roses	Roses	Naivasha	Gavin Mourittzen	0733220333	info@interplantea.co.ke
lsinya	Flowers	Isinya	Rajesh	-	pm@isinyaroses.com
Karen Roses	Flowers	Nairobi	Peter Mutinda	0723353414	pmutinda@karenroses.com
Kariki Ltd- Thika	Flowers	Thika	Mirium	-	production@kariki.co.ke
Kariki Ltd - Nanyuki	Eryngiums	Nanyuki	Richard Fernandes	062-31023/6	bondet.production@karik.biz
Kariki Ltd - Naivasha	Hypericum	Naivasha	Peter Kamwaro	0721758644	hamwe.fm@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	71	Kiambu/ Limuru	Abdul Aleem	0722311468	info@kenfloraa.com
Kentalya	Cuttings	Naivasha	Linnet	0733549773	lynette@kentalya.com
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	Flowers	Naivasha	Prabhakaran. M	0743078733	prabhakaran@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	oppusobunugun@vegpro group.com
Kongoni River Farm - Galaxy	Roses	Naivasha	Kiran Nangare	0787787544	kiran@vegpro-group.com
Kongoni River Farm- Longonot	Roses	Naivasha	Rakesh Kuttaiah	0724631299	rakesh.kuttaiah@vegpro-group.com
Lamorna Ltd	Roses	Naivasha	Mureithi	0722238474	admin@lamornaflowers.com
Lathyflora	1103C3	Limuru	Mbauni John	0753888126	info@lathyflora.com
Lauren International	Flowers	Thika	Chris Ogutu/Carlos	0722783598	laurenflowers@accesskenya.co.ke
Laurel Investment	Roses	Nakuru	Rajendra Jadhav	0738359459	rajendra.laurel@bht.co.ke
Livewire	Hypericum	Naivasha	Esau Onyango	0738606878	management@livewire.co.ke
Lolomarik	Roses	Nanyuki	Topper Murry	0715 727991	topper@lolomarik.com
Magana	Roses	Nairobi	Geoffrey Suguvi	0720806239	assistantntproduction
Mahee Flowers	Roses	Olkalao	Natarajan	0738999149	natarajan@eaga.co.ke
Maridadi Flowers	Flowers	Naivasha	Jack Kneppers	07333333289	jack@maridadiflowers.com
Maua Agritech	Flowers	Isinya	Madan Chavan	073333289	production@mauaagritech.com
Mau Flora	Roses	Molo	Mahesh	0787765684	mahesh@mauflora.co.ke
Milenium Growers	Summer Flowers	-	Sushant Wankara	07373316000	sushant@marvelgreens.com
Molo Greens	Solidago, carnations	-	Justus Metho	0731310000	justus@mologreens.com
Mt. Elgon Flowers	Roses	Eldoret	Bob Anderson	0735329395,	bob@mtelgon.com
Mwanzi Flowers Ltd	Roses	Rumuruti	Ram	0733329393,	bob@intergon.com
Mzuurie Flowers - Maji Mazuri	Roses	Eldoret	Mark Juma	0727471034	mjuma@majimazuri.co.ke
Mzuurie Flowers - Maji Mazuri Mzuurie Flowers - Molo River Roses	Flowers	Kilelwa	Andrew Wambua	0724256592	awambua@moloriverroses.co.ke
Mzuurie Flowers - Winchester Farm	Roses	Karen	Raphael Mulinge	0725848909	rmulinge@winchester.co.ke
Mzuurie Flowers - Winchester Farm	Flowers	Bahati	Raphael Mulinge	0725848909	rmulinge@winchester.co.ke
Nini Farms	Roses	Naivasha	Philip Kuria	0720611623	production@niniltd.com
Nirp East Africa	Roses	Naivasha	Danielle Spinks	0702685581	danielles@nirpinternational.com
Ol Njorowa	Roses	Naivasha	Charles Kinyanjui	0723986467	mbegufarm@iconnect.co.ke
Oserian	Flowers	Naivasha	Christine Karambu	0702350689	christine.karambu@oserian.com
Panda Flowers	Roses	Naivasha	Geofrey Kanyari	0712215419	farm.manager@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
		Nanyuki	Richard Siele	0722716158	tambuzi.sales@tambuzi.co.ke
Pendekeza	Roses	Nanyuki	Kicilata Siele	0/22/10130	tallibuzi.salesi@tallibuzi.co.ke



### 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	ldan Salvy	0702187105	idan@plantechkenya.com
Porini Flowers	Roses	Molo	Vivek Sharma	0731040498	gm@poriniflowers.com
Primarosa Flowers Ltd	Roses	Olnjororok	Jai Prakash	0780785603	production.mp2@primarosaflowers.com
Rain Forest Farmlands Ltd	Roses	Naivasha	Lucas Onena Ongere	0718925040	longere@fleurafrica.com
Ravine Roses Flowers	Flowers	Nakuru	Peter Kamuren	0722205657	pkamuren@karenroses.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	Sharieff	0787243952	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	Jagtap	0733996202	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	-	Peter Wekesa	0729163607	-
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	-	Nairobi	Jacques	0705 519 633	jacques@pvdhaak.nl
Timaflor Ltd	Flowers	Nanyuki	Simon van de Berg	0724443262	info@timaflor.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@uhuruflowers.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@valentinegrowers.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
	- D/		,		
Wildfire Wilfay Flowers	Roses/summer Gypsophila/hypericum	Naivasha Subukia	Eliud Kimani Makori	0727598349	roses@wildfire-flowers.com
Wilfay Flowers				0723358644	makoriwilfay@gmail.com
Wilmar Agro Ltd	Summer Flowers	Thika	Alice Muiruri	0722 321203	alice.muiruri@wilmar.co.ke
Windsor	Danas	Thika	Pradeep Bodumalla	0736 586 059	farm@windsor-flowers.com
V	Roses	Njoro	Brijesh Patel	0715469732	brijesh.patel@xflora.net
Xpressions Flora		ř	Dhamada	0722507227	
Xpressions Flora Zena - Asai Farm Zena Roses - Sosiani Farm	Roses Roses	Eldoret Eldoret	Phanuel Ochunga Jackson Mbanya	0722506026	pochunga@zenaroses.com







- High Performance
- Quality Assured
- Savings on Freight
- Reduce Loss of Produce







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A powerful and effective formulation for the control of Downy Mildew, Alternaria and Phytophthora diseases



### **BENEFITS OF AGRIXYL 407**

- Provides effective control of Downy Mildew and Phytophthora diseases on a wide range of crops
- Is formulated from a non-toxic potassium phosphite base with added Metalaxyl
- Systemic action provides complete translocation throughout the plant to ensure effective control to all diseased plant parts. Protective action to limit reinfection.
- @ Can be applied with a wide range of other agricultural chemicals, reducing the number of spray applications needed
- Compatible with Integrated pest management programs
- When used as directed the risk to non-target organisms in terrestrial and aquatic environments is very low
- Minimal cross resistance effect due to unique formulation of metalaxyl and phosphite

### MODE OF ACTION

The potassium phosphite in AGRIXYL 407 is absorbed by the plant and translocated via the xylem and phloem to all parts of the plant. It is directly fungistatic - ie: it slows the growth of the disease pathogen and inhibits the formation of spores.

Disease invasion and prevention in the presence of

- 1. Pathogen is affected by phosphite
- 3. Recognition of disease by plant cell
- 4. Phosphite encourages defensive molecules, such as phytoalexlexins and PR proteins, to attack the disease directly; and
- 5. Defensive molecules send "alarm signals" to cells that have not yet been attached, then
- 6. Polysaccharides strengthen the cell wall adding additional protection
- 7. Disease is limited or killed by plant response.





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