November- December 2020

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The Leading Floriculture Magazine

Floriculture is published six times a year and circulated to personnel in the Horticulture Industry, foreign missions and Kenyan Embassies abroad, Flower Growers, Exporters and Consumers, extension officers in the Ministry of Agriculture and counties, research offices and suppliers of agricultural inputs in Kenya.

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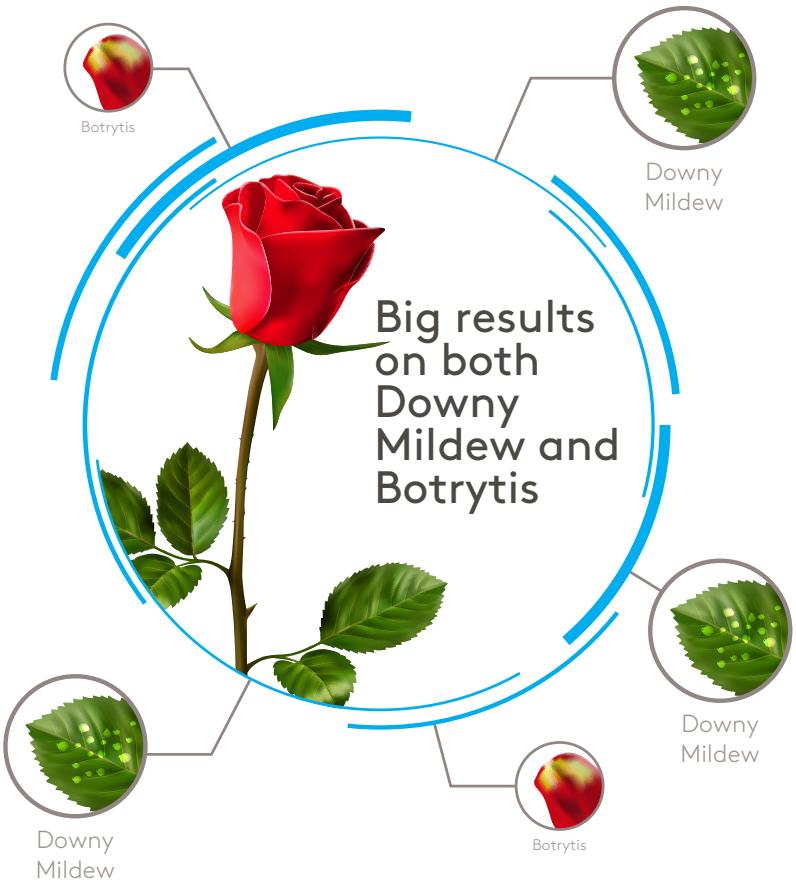

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Editorial

Silence Not A Weapon

In the life of a person or a group of people, moments come when one feels that one's silence may be the 'guilty Silence' . The situation of people, whose lives you share is so absurd, so unjust, so oppressive and agonizing that you are forced to ask yourself whether keeping silent on what your eyes see is tantamount to connivance if not complicit, with those who cause and perpetuate that very situation.

Reading about the drama at Kakuzi, their staff, the community, Sunday times and the british law firm as it unfolds. I liken it to the never- ending war on activist Lawyers and NGOs Vs horticulture farmers. Am not holding brief for anyone but my silence in this such situation is a tragedy.

So sharing with these activist NGOs and lawyers, am left wondering, where do they live? Don't their places of work need improvement? None is a perfectionist. As one of our correspondents has put it clearly, the Kenyan flower sector has evolved.

They feed so many people including the Activists. So why cut the hand that feeds you? Rushing to the market place to shout will not help us. But we will die to live another day and the cycle continues. Let us sit on a round table and discuss. Make things better.

Lastly, I have come back to our call, always carrying in the 'genes' of the founder's. Let us reason together and make our working conditions better. Hoping to be a reasonable open –air pulpit for their cry.

Enjoy your reading
Masila Kanyingi

FLORINEWS

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Floriculture Team

Covid-19 Lockdown in France Deals a Blow to Kenya's Flower Sub-Sector

Thousands of farm workers are on the verge of losing their jobs due to closure on sell of 'non-essential' items by supermarkets and florists during the lockdown in France, Kenya Flower Council reports.

Second lockdown in France

France began its second lockdown in just seven months in a nationwide effort to curb the country's renewed surge in Covid-19 cases. The lockdown is expected to last until at least December 1, and comes on the heels of a recent rise in French Covid-19 cases, which had totalled almost 1.3 million since the start of the pandemic. While the French are – similarly to the first lockdown - urged to stay as isolated in their homes as possible during this period, there are also differences.

Florists deemed as 'non-essential'

Prime Minister Jean Castex announced on Sunday that supermarkets would be ordered to close sections that sell 'non-essential' items during lockdown. The PM ordered that clothes shops, florists, toy shops and jewellers which are deemed 'non-essential', will no longer be on sale in supermarkets.

France is one of the main markets for Kenyan fresh produce

The European Union is Kenya's principal market in horticultural export produce with the UK, Netherlands and France being the main markets with the UK and France being the primary markets for fresh produce from the country, according to the Horticultural Crops Directorate (HCD). In terms of proportions, Kenya exports the larger volumes of its cut flowers to the Netherlands, then the United Kingdom, Germany, and France respectively.

Kenya's exports of cut flowers and buds to France was €$6.36 million during 2018, according to the United Nations COMTRADE database on international trade.

Kenyan flower industry employs over 200,000 directly

In 2016, the two countries signed Sh28.7bn (€250 million) deals covering infrastructure projects to encourage French importers to work closely with Kenyan exporters to boost Kenyan exports to France. The flower export industry ranks among the top for foreign exchange earners for Kenya and employs over 200,000 directly on the flower farms, while over 1 million people benefit indirectly from this industry.

Affects first lockdown

The industry was adversely affected by the first lockdown in Europe between March and August. Demand for flowers dropped as flower shops around the globe shut. Millions of stems were destroyed at the farm which resulted in a huge loss for the growers. Consequently, farms reduced salaries and manpower, used minimum spray and fertigation, and put some plants and varieties on rest for weeks till the demand picked up.

Now: Traders already reduced orders, auction prices down 20%

As countries have in the last four months gradually lifted the lockdowns and eased restrictions, demand for cut-flowers has been picking up in most destinations. However, the ongoing second lockdown in Europe will definitely erode gains made by the sub-sector as set it back downhill. Traders have already reduced their orders and prices on the auction have dropped by 20%.

Urge to lift restrictions

The flower industry urges the Kenyan government to urgently engage the French government to lift these restrictions to safeguard jobs for thousands of workers who are likely to be the first casualties. The Kenya Flower Council represents the interests of growers, exporters and others actors in the cut-flower and ornamentals supply chain.

Diagnosing Plant Disease

Laboratories use a variety of techniques to identify the problem

Plant disease diagnosis is a necessary step in solving plant problems by identifying a disease early. Plant disease diagnosis is better understood when some basic terms are defined. A plant disease may be defined as ***"any disturbance that prevents the normal development of a plant and reduces its economic or aesthetic value".***

Diseases are caused by living agents as microorganisms and parasitic plants, and also by nonliving agents as environmental factors, unbalanced nutrition, and chemical substances. The living agents are called pathogens or biotic agents and the nonliving agents are called abiotic agents.

Most of the biotic diseases are caused by fungi, bacteria, viruses, viroids, nematodes and parasitic plants. Abiotic diseases can be caused by temperature and moisture extremes, low or high soil pH, fertilizer excesses or deficiencies, pesticide damage, pollution effects, or weather/soil problems. Some diseases can have both pathogens and abiotic agents involved.

A plant disease develops over a period of time, whereas an injury that may be caused by an insect feeding on a plant or damage from equipment or machinery occurs immediately or over a relatively short period of time.

Plants should be initially examined in the field, landscape, greenhouse, or garden setting, and the site, plant, and the problem history should be recorded. If the plant disease or other problem cannot be diagnosed at the site location, collect a plant sample and ship it to a diagnostics laboratory or plant disease clinic in fresh condition.

Make sure the sample includes enough symptomatic tissue for examination and testing, and it must represent the problem.

Diagnosis of plant diseases may be done in private or, state supported, laboratories. Laboratories use a variety of techniques to identify the problem. Many labs charge for services that consist of the diagnosis and disease control recommendations.

Visual study, use of references, soil pH analysis, soluble salt analysis and microscopy are all techniques that may be used initially for a diagnosis. The use of additional specialized procedures including culture work, serology, and molecular testing depends upon the disease suspected, the values of the crop, and the client. A diagnosis is typically based upon more than one technique.

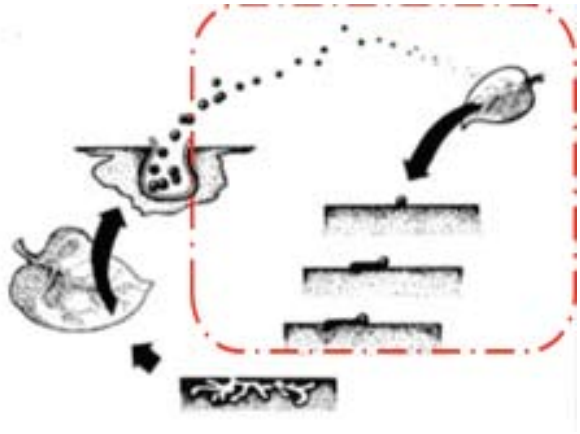
Historically, the process of disease diagnosis has existed in some form since plant diseases were first recognized. For instance, the actual cause of the rust diseases was not known and not even studied until after the development of the microscope around 1590.

A procedure, known as Proof of Pathogenicity, is still used today for diagnosing and describing a new disease.

Proof of Pathogenicity is performed infrequently in most diagnostic labs today unless the disease agent is suspected to be new and previously unreported. Some pathogens, however, such as the fungus, Fusarium, and the bacterium, Pseudomonas, can be frequently isolated but are not actually causing the disease, so a proof of pathogenicity test is needed to actually know if the identified organism is causing the disease.

Diagnosis actually begins at the site of the diseased plants. Careful observation of symptoms, distribution, environmental conditions, and records of pesticide applications are all involved in the diagnosis process.

Knowledge of the normal appearance of the plants in question and their growth requirements are very important. Site history, fertilization, lime and pesticide applications, and recent weather conditions add to the assessment of the problem. If the problem can be accurately diagnosed by observations on site, then lab confirmation may not be necessary. However, many problems do need the expertise of a plant pathologist diagnostician so then samples will need



to be collected and submitted to a plant disease clinic or diagnostics lab.

Collecting, packaging, and shipping samples:

When diagnosis is not possible at the site location, then samples need to be collected and submitted to a lab. Important points to remember are:

- Make sure the sample is representative of the problem.
- Keep the sample fresh. If it cannot be collected the day it is shipped, then refrigerate until shipping. Overnight shipment is preferable since degradation in shipment can be an obstacle to accurate diagnosis.
- Make sure the sample is adequate in size. If the problem is a leaf spot, then 20 leaves exhibiting the spots will be suitable. This number of leaves is needed for the following procedures: microscopy, moist chambers, cultures, and possible virus testing.
- Whole plants are needed for most problems.
- Never collect dead samples. Also include some healthy plants with moderately and severely diseased plants.
- Follow precisely the shipping instructions issued by the lab since they are designed to meet the requirements of the country permits under which the lab operates.

Overall operation of a plant disease diagnostics laboratory:

Diagnostics labs may be private, state supported, or land-grant-university supported. Private diagnostic clinics usually receive samples from farmers and commercial operations.

In many diagnostic clinics, about 50 percent of the disease samples are diagnosed with biotic diseases, and the remaining samples are found to have problems caused by abiotic factors.

These percentages vary from year to year and from clinic to clinic depending on the weather conditions. In more typical years, about 80 percent of the biotic diseases seen in these clinics are caused by fungal pathogens.

Bacteria and viruses together comprise about 15 percent or more. Plant parasitic nematode problems account for less than five percent of the plant problems submitted for diagnosis.

The response to the client consists of the diagnosis and the control recommendation. The name of the disease and the name of the pathogen are provided. The name of the disease may or may not include the name of the pathogen so the scientific name of the pathogen is included for specific identification. Control recommendations vary with the disease, the disease severity, and the cropping situation.

Diagnostics methods used in clinics:

Initial diagnostics procedures generally follow the order listed:

1. Visual examination for symptoms and signs
2. Review of information sent with the sample
3. Consultation of plant disease compendia and/or host indices
4. Microscopic examination with stereoscope
5. Microscopic examination with compound light microscope
6. Possible further consultation with reference books or websites
7. Soil pH determination

For Your Valentine Flush

Kill Nematodes, Eradicate thrips, Protect Downy Mildew and Botrytis then Balance your Nutrition

Occasionally, the horticultural industry uses terms on instructions that can confuse the average gardener. Flowering flush is one of those terms. This is not a commonly used phrase outside of the industry, but once you know what it is, it makes perfect sense.

Flushing during flowering refers to a point in the flowering plant cycle where a plant is in full bloom. A plant's flowering will typically have a predictable pattern. Roses will have all of their blossoms open at the same time and afterwards will have one or only a few blossoms open sporadically throughout the season.

It is early December, you have had a successful year. Your mind is now set to next year. For any grower, success starts with good valentine. For a successful valentine, you must have both quality and quantity production. This is the time to encourage a flush of flowers by using a technique called deadheading. It is time to snip off the spent blooms immediately. Time to cut back your crop when deadheading. This should coax the plant's flowering. It will give you a good crop.

Take a Minute and think of Nematodes

Health crop will always give you a good harvest. Before cutting your crop or pruning think about feeding. For you to get a good harvest, you must feed your crop well. But can you feed a sick crop? No. Root health is of paramount importance. For any experienced grower, Root Health starts with Nematodes.

So as you prepare for a good crop during valentine, think about Nematodes. Ideally,

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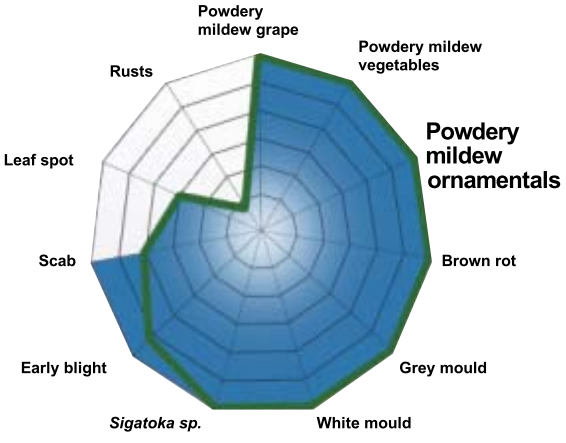

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growers must apply a nematicide or use any other means to kill nematodes first before cutting their crop. Once you kill the nematodes, you can now cut back your crop and encourage a valentine flush. But that is not all, depending on the product you use, you can come up with another spray to make sure you are safe. Now feed your crop and protect it from pests and diseases. Come February it is your turn to laugh all the way to the bank.

Understanding Nematodes

Symptoms of nematodes can be difficult to detect, and may be confused with symptoms of nutrient deficiency. Meloidogyne hapla Chitwood, a type of root- knot nematode is a serious pest on roses. The galls it induces on the roots constrict the vascular system blocking the transport of water and nutrients through the plant to the extent that heavily infested plants are often dwarfed with smaller leaves and appear paler than normal. They may wilt and die when exposed to water and nutrient stresses.

Most plant-parasitic nematodes are as a result of infested soil or infested transplants. Root knot nematodes enter the roots as larvae, causing the plant roots to form galls or knots, and there may be excessive root branching. The nematode larvae mature in the roots, where they mate. The female adults enlarge, remain in the roots, and lay eggs into an egg sac that exudes into the soil. The eggs hatch and the young larvae go on to infect more roots. Nematode feeding sites in the roots can also provide entrance for other disease-causing organism leading to more plant damage.

Growers are advised to inspect the roots of transplants planting them even though they originate from a reputable breeder. By doing this you will prevent further infestation since successive growth of plants that host the nematodes will lead to an increase in their population.

Management

Once root-knot nematode has been diagnosed, it is safe to assume that it will persist in the soil for many years. Nematode populations in the soil can fluctuate from year to year, but rarely disappear altogether.

Chemical Control

Low production, poor quality of stems and reduced stem length are realized due to damages caused by nematodes if not eradicated early enough. Crop protection companies offers nematicides with nematicidal and nematostatic activity by killing both nematodes in roots swiftly and inhibiting infestation and development for a long duration.

- Prepare new planting sites properly.
- Solarize the soil.
- Replace infested (contaminated) soil.
- Practice sanitation.
- Use resistant or tolerant varieties.
- Select plants that are well adapted to the site.
- Maintain plants properly.

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Thrips !!! Beware

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

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

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

Feeding on petals may result in petals streaked with silvery-white or brown as well as petals with browning edges.

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

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

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Downy Mildew and Botrytis Outbreaks

Botrytis

Forecasts for clouds and rain favor Botrytis blight. Cultural practices and correct fungicides will help until the sun shines.

Listening to the continuity announcer, she announced weather forecast for the next five days as cloudy, cool and rainy weather conditions. These low light, humid conditions combined with a near full greenhouse floral crops meant Botrytis blight outbreaks. My crop was especially vulnerable now since they had a full flower canopy filled to the maximum allowable space.

Immediately, my Production Manager called me, “we are in danger of contracting Botrytis”, he started. “Botrytis is a fungal disease that can cause leaf spots, petiole blighting and stem cankers on our crop. It will produce large masses of “fuzzy looking” spores that are most often called “gray mold.” These spores or conidia will be spread on wind currents and can readily travel from infected to uninfected plants in that manner. The spores can survive for upwards of 21 to 24 days before they germinate on a plant”, he concluded.

“Am listening”, I said after a short interval of silence. “I suggest cultural control practices that will reduce the conditions that favour Botrytis infections: reducing the relative humidity in the greenhouse below 85 percent; making sure plants do not remain wet for six or more hours in a 24-hour period; and if possible, heat and vent on mornings and evenings for at least a half-hour or more to reduce humidity thus removing the humid, warm air allowing for plant surfaces to dry”, he said.

“Do we have any seriously infected plants”, I asked.

“Not of now”, he said. “However, if plants are seriously infected and need to be removed from the growing area, I will not just remove the plants and throw them on the compost pile out behind the greenhouse range as the spores can blow back into the facilities on wind currents.

Instead, I will bag up infested plants where they were growing, seal the bags and remove them from the facilities, thus reducing the risk of spores dislodging and infecting other plants in the greenhouse. I will also use the same process when cleaning plants to remove dead foliage. I will bag it and remove the spent blooms or leaves as quick as possible so the spores are not released in a clean greenhouse” he concluded.

Downy Mildew

Downy mildew, like powdery mildew obtains nutrients from the host plant. The disease grows locally and systemically in plants and can escape detection until the conditions are right for sporulation

Downy mildew in roses is caused by an obligate biotrophic oomycete in the family peronosporacea namely Peronospora sparsa. As the scientific name indicates, the production of spores is sparse and therefore this disease is difficult to diagnose and control. It attacks all types of roses both in the greenhouse, nursery and the landscape from potted miniatures to landscape-size roses and even shrub roses. It causes destruction of leaves, stems, and flowers of the infected plant. The pathogen produces zoospores that have flagella they use to “swim” to ideal infection sites. That is why wet plant surfaces make the disease much more prevalent.

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The fungus overwinters in or on plant parts as a vegetative mycelium or in fallen plant debris as hardy Oospores. The pathogen has short development cycles under optimum conditions, produces high quantities of spores and causes an irreversible damage to the crop.

Reproduction

They reproduce by forming sporangiophores and sporangia that develops and grow out of the undersurfaces of the infected leaves. Downy mildew (Oomycete fungi) are referred to as a high risk pathogens because of the following factors;

- Oomycetes fungi are able to spread in an explosive manner under favorable conditions.
- Short development cycle (8-10 days under optimum conditions)
- High potential for reproduction (high quantities of spores)
- Wide propagation by water and wind
- Damage is not reversible: The damaged tissues die in general leading quickly to substantial losses at harvest
- High genetic variability: Rapid appearance of strains less sensitive to specifically acting fungicides possible.

Predisposing factors for the Diseases Development.

The optimal conditions for the appearance of Downy Mildew are constant high humidity (RH 85-100%) low night temperatures and moisture on the leaves. The optimal temperatures for spore germination is between 10°C and 18°C no germination take place at temperatures below 5°C and the spores are killed at temperatures above 30°C.

The spores germinate within 4 hours in water, enter the leaves, and reproduce in three days. Spores survive on dried fallen leaves for as long as one month. Wet leaves and high humidity will trigger sporulation overnight. When the sun comes up, leaves start to dry, and spores are released. Most spores spread by wind and infect new leaves before noon. Six hours of constant leaf wetness is enough for spores of downy mildew fungi.

These can be summarised as:

1.

Susceptible host or varieties.

2. Virulent pathogen thathas ability to infect.

3. Conducive environmental conditions
4. Period that the conducive environmental condition prevails.

Source of infection:

a) Infected leaves, sepals, flower buds and stems produce oospores
b) Dormant mycelia in stems c) Sporangia production d) Dried fallen leaves
For many Downy mildew species, the sporangia are produced in the evening and released into the air in the morning. They are then spread within the green houses via moist air currents, fingers, contaminated tools or equipments and clothings.

The factors which favour the downy mildew and its quick spread are:

- Type of greenhouse
- Crop type and density
- Drip irrigation
- Nutrition status
- Human activity; pruning, scouting, spraying, harvesting etc.

Symptoms

Downy mildew symptoms on rose include lesions on the leaves, stems, and flowers. Leaves have reddish black spots that are angular, tan spots with a very small amount of white crystalline sporulation on leaf underside. The leaves develop purplish red to dark brown irregular spots or blotches, which might be mistaken for spray burns or possibly black spot. Advanced infections will have yellowing of leaves with brown necrotic areas and noticeable leaf abscission. Severe defoliation may occur as a result of infection. The symptoms are suggestive of chemical injury or possibly nutrient stress. The downy mildew fungus forms a downy mass of spores on the underside of leaf lesions.

Management:

1. Cultural
2. Sanitation
3. Chemical control

Choosing the most effective fungicides to prevent or eradicate rose downy mildew can be tough.

Downy mildew requires a well-managed chemical spray program starting early with a rotation of chemicals for prevention. Fungicides for use against downy mildew can be categorized as preventive, early or late curative products. The disease also overwinters in the crop that was infected in the previous season.

The fungus may overwinter in stems as dormant mycelia without oospores as shown alongside. This is the primary inoculum of the disease and upon reaching the favourable conditions, the disease infects new stems. This can be

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controlled through early drenching of

Summary

- Chemical compounds can only prevent spread to other plants
- Damage to the infected plants cannot be reversed and must partially or completely be removed and destroyed
- Consider mode of action to fit with integrated resistance management (IRM)
- Combine protectant and curative activity.

How balanced mineral nutrition can prevent disease infestation for rose plants

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

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

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

As soil pH, soil type, ionic forms of nutrients and their availability contributes the utilization and uptake of nutrients, a proper and balanced fertigation program can help the growers to achieve adequate disease control to a great extent.

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

As it is known also that nutrient uptake greatly influenced by the prevailing weather condition, media pH, soil type (this determines the interval between irrigations), crop stage and variety, it is important to note that these factors to be kept in mind while composing stock solution and its discharge per certain volume of water. As it is well known that a balanced nutritional feeding makes the plants develop resistance by strengthening the cell wall forming mechanical barrier which makes the fungus difficult to penetrate the plant body, in addition to that, this also enables plant to produce defense or anti- fungal compounds.

There are many nutrients like Calcium and other elements when utilized in optimum level and in proper ratio the plant cell becomes stronger which makes the fungus difficult to penetrate plant body and there are other nutrients like Manganese, Copper and others which activate the enzymic activity to produce antifungal compounds. Potash plays an important role in metabolic activity of the plant as well in reducing the sensitivity of the disease. Sulphur as nutrient play a great role in reducing and inhibiting the disease directly or indirectly both in media and foliar disease as well.

An authentic and genuine water and media analysis should be done and studied thoroughly in terms of chemical composition and other aspects in order to decide on the amendment to be applied to make them suitable for plant growth and development and this in turn enables the plant to utilize the nutrients by increasing their availability if plants are receiving balanced fertigation program.

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

Kenya Declares War on FCM as it Threatens the EU flower Market

The Kenyan government and agricultural industry are launching an urgent offensive against a moth that has infested 70 types of crops, from roses to citrus fruits and capsicums, prompting a surge in Kenyan export rejections by the European Union (EU), and an EU review that could now see a growing proportion of the country's flower and horticultural trade fail.

The EU defines the False Coddling Moth (FCM) as a quarantine pest, meaning that fresh produce containing the moth cannot be allowed into the European market. However, random checks of fresh imports from Kenya have found increasing numbers to be FCM-infested, with rose exports, in particular, driving a sharp increase in rejected consignments.

As a result, the EU, which in January 2018 began checking one in every 20 rose consignments from Kenya for infestation by the moth, last year lifted that checking rate to one in every 10 consignments. This year's review of the checking rate may maintain this rate or may now increase it to one in every four consignments, or even to one in two, or a 50 per cent checking rate by January 2021.

This would see Kenya move to the same regime as Tanzania, where the prevalence of the moth on its roses saw EU import checks increased from 15 per cent in 2018 to 50 per cent last year.

The potential losses for Kenya could amount to as much as 40 per cent of cut flower sales, estimate experts, prompting a crisis meeting last week of agricultural industry players, the State Department of Trade, and the Ministry of Foreign Affairs, on ways of tackling the infestation.

"FCM is now present on more than 70 host plant crops. However, we are working with the Kenya Plant Health Inspectorate Services, Pest Control Products Board, and the Netherlands government to address the issue. Active ingredients have now been identified to contain the pest and the Pest Control Products Board (PCPB) is carrying out more tests. We cannot afford to loose the market," says Clement Tulezi, the Kenya Flower Council CEO.

According to Europhyt Interceptions, the moth has caused a jump in rejected imports since then, predominantly of roses, peppers and Gypsophila. Altogether, the total number of interceptions by the EU of infested Kenyan fresh produce imports increased from 59 in 2017, to 89 in 2018, and 97 in 2019. In the first six months of 2020, a further 53 consignments were stopped, showing a continuing acceleration in the trade rejections.

In this, the FCM is the biggest factor. Of the 97 interceptions in 2019, 52 were stopped due to FCM, of which 40 were of roses, 11 of capsicum, and one was of Gypsophila flowers. A further 23 Kenyan consignments of roses have since been stopped due to the moth from January to June 2020. With the EU technical group visiting Kenya to assess the methods being used to contain FCM, a combined government and industry working group has now developed a series of chemical applications and controls to enable farmers to meet the EU requirements.

"We have achieved key registrations with the Pest Control Products Board (PCPB) for active ingredients that eradicate the moth, and all products that have the ingredients to contain the pest are now being fast-tracked," said Eric Kimunguyi the CEO, Agrochemicals Association of Kenya. The PCPB has listed the active ingredients that can be used to control the False Codling Moth as Spinetoram, Acephate, Acetamiprid and Abamectin for roses, and Lufenuron, Chlorantraniliprole, Indoxacarb, and Abamectin for capsicums.

"We are urging all growers to now work with KEPHIS to identify and eradicate the moth before it does irrevocable damage to our flower and horticultural industry, at a time when the sector is already beset with competition and market strains during the COVID-19 pandemic. The decline underway as this moth gains ground now needs to be urgently stopped," says Eric.

The Horticulture Industry: Conquest of Fear

The horticulture industry in Kenya is optimistic of quick recovery as global space slowly opens after the Covid-19 disruption.

Export earnings hit KSh72 billion between January and May 2020, up from KSh65 billion for the same period last year, translating to an 11% increase. The good earnings are largely attributed to the country's ability to ship out produce during the pandemic, serving a rising demand for food.

For the flower sector however, it was a tough call for the exporters who had to balance between maintaining a market presence, destroying beautiful flowers, sending workers home, keeping plants breathing and protecting their farms from the virus.

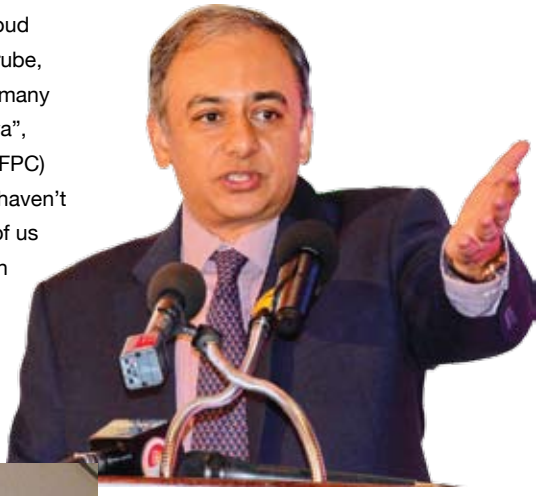
Market presence meant selling flowers, not to make money but to maintain a presence for Kenya, according to Trish Patel, head of marketing at PJ Dave, whose 80 per cent of orders were cancelled. "We continued shipping the little orders coming through to secure future markets for Kenya", he said.

Oserian Development Company Administration Director Mary Kinyua says the farm exports fell from 1 million stems per day to about 350,000 throwing the company, like many others, into a financial strain. "The markets are opening up slowly and barring any other disruptions we should be back to full business by end of the year," she said adding that it will however take longer to recover from the losses.

"March 15 is a day I will not forget in my life", said Craig Oulton, General Manager, Floriculture, Kisima Farm based in Timau. The date is etched in the minds of many, being the day President Uhuru Kenyatta declared no entry no exit from Nairobi, the distribution center for fresh produce exports. The following week international flights were grounded and for a week no

produce was shipped out of the country. Nairobi hosts the Jomo Kenyatta International Airport (JKIA) through which fresh produce flies out daily to the various destinations across the world. The 'lockdown' came as the industry was grappling with cancellation of orders at a critical season (March-May) covering Mothers Day, International Womens Day, UK Mother's Day and the Easter holidays. Tonnes of flowers were already harvested ready for Mother's Day, arguably the second most important sales day for flowers after Valentines. Exporters say this year lover's day was the best in five years and they looked forward to a blossoming 2020. Then Covid-19 hit. Flights were grounded as many markets shut but there were spot orders requiring to be supplied. Avocados especially were in high demand, and Kenya was the only country with the fruits in season.

To accord fresh produce clearance, farms and firms staff required access documents. 'The coordination of the movement of produce from farms to the airport in a pandemic challenge remains a proud moment for Kenya", says Dr Marube, whose sentiments are echoed by many in the industry. "We did it for Kenya", adds Fresh Produce Consortium (FPC) CEO Okisegere Ojepat adding, "I haven't encountered a situation when all of us worked in a seamless coordination to ensure our produce got to the markets that have in turn rewarded the country. We were in the shelves when nobody else was resulting in increased orders and attraction of new buyers", he said.



The Kenya Flower Council, aware that restrictions would be affected had a week earlier alerted its members to take steps to ensure trucks got cleared at the roadblocks.

"The KFC did a great job", said Mr Oulton, reflecting the sentiments of many flower exporters who laud the council for obtaining the necessary documents with speed. Mr Oulton adds, "I am very proud of the Kenya government and private sector associations for the cooperation between the various agencies to ensure our flowers reached the markets.

The market presence for Kenya was reinforced through the Kenya Private Sector Alliance led Caravan of Hope initiative that saw flowers flown through KQ to the UK for donation to hospitals, an effort that didn't go unnoticed when President Uhuru Kenyatta recognized Elgon Kenya Managing Director Bimal Kantaria, who chaired the caravan, among Covid-19 heroes on Madaraka day. Said Mr Kantaria; UK is a big market for Kenya and we needed to support them in the hope when markets opened they would continue buying flowers from Kenya.

East African Growers, exporters of fruits, vegetables and flowers say orders from the UK never stopped because of the logistical support all in the chain accorded the industry. The company says it was not making money but market presence was important, and they kept supplying to secure future orders.

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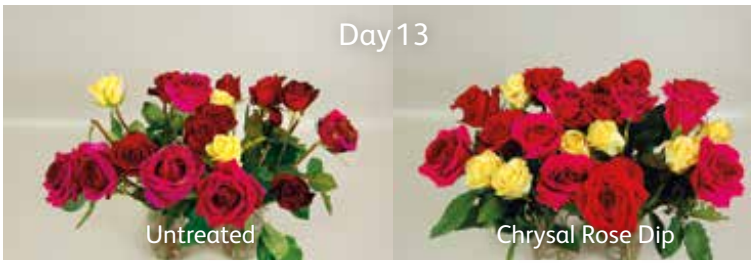

Combination of registered ingredients

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CHRYSAL

Kenya's Flower Sector.
Let us Separate Facts from Opinions

Before I start my speech I would like to tell you a bit about myself, my interests and my family. There are five members in my family: my two parents, my two younger brothers and me. My father works with the government, my mother is a teacher and my two brothers are in the military. We are lucky that everybody has a job. I like to reading. But at this moment, my most important interest is that you get to know more about the people who are working on farms. Because they have been certified by FLP (Flower Label Program), MPS Social Qualified (SQ) Certification Scheme, Business Social Compliance Initiative (BSCI) Code of Conduct, Fair Trade International Hired Labour Starndard, Ethical Trading Initiative Base Code/ SMETA, Social Accountability International SA8000 Standard, Sustainable Agriculture Network-Rainforest Alliance Certificate, Kenya Flower Council Silver Standard. EHPEA Code of Practice for Sustainable Flower Production SIilver Leve, Florverde® Sustainable Flowers Standard, MPS-GAP Certificate Scheme, BOPP (British Ornamental Plants Producers) Grower Standard, Global G.A.P. Floriculture Standard, EU Organic Farming, USDA National Organic Program, these farms have improved their standards tremendously.

I work on a Kenyan Farm, which is located at Naivasha, about one and half hours from Nairobi. The farm is about 20 years old. There are a lot of farms located in this area. It has been certified by the FLP for the last five years. I work in the greenhouses, within flower growing or production. Basically, my job is to harvest the flowers and prepare them for export. My duties include making sure that there are no wild shoots on the rose stems and other work that helps improve the growth of the plants. My favourite job is grafting the plants, because we always do this work as a group-and to work together with my colleagues is always a lot of fun. The job I like the least is 'aerating' the plants: We have to lift the soil in order to give the plants more oxygen.

It is very hard work but when we do it as a group then this job is much easier and more fun.

I started working on rose farms early 1990s. In the first years, the work was really hard. We rarely had a full day off, which made it difficult to plan my spare time. We never knew when we had to work. Because I did not have one whole day off, I could not study or plan my private time. Further, when we had to work extra hours we were not always paid for them. There were no concerns about our health or about our safety at work, nor was a lot of thought given to the correct use of chemicals.

Today the farm where I work is FLP-certified and very different from those early years. Now we have one-and a half days off each week. During this time I can learn about cosmetology, something I have always wanted to do. Sometimes we work overtime and while that is not always great, we also like to earn extra money. And we always know we will be paid for this time.

During my first years of working on farms, there were no doctors or medicines if we needed them. Today, we have all these things. On our farm there is a doctor who is available each day and he usually has the correct medicine, which we get at no extra charge. If some of my family members are sick and needed to consult a doctor, they too are entitled to visit this doctor, and get the appropriate care for free. During inception we also did not have any uniform, gloves or masks. People worked in their own clothes. Because the farm is now certified by the FLP, we are provided with uniforms. We also get new gloves and masks every second week. As for the people who do the spraying, they are provided with new equipment almost every week. We really feel safe working on the farm.

Also, in the past, there was a lot of discrimination against pregnant women. They would definitely not be employed and if they already were employed and became pregnant, they were expected to do the same work, no matter how hard. Like everyone else, they were exposed to contamination by harmful pesticides.

> “Today women are not afraid of the repercussions of being pregnant. They know they will be supported by their supervisor and that they will not have to do the same level of physical work as other workers. .”

Pregnant women also feared that the boss would find out and fire them, so they went to great lengths to hide it as long as possible.

Today women are not afraid of the repercussions of being pregnant. They know they will be supported by their supervisor and that they will not have to do the same level of physical work as other workers. Furthermore they know that they will be able to get time off to have regular maternity check-ups. If there are difficulties with the pregnancy, then women can take 15 days off to recover. Once she has given birth, the mother is entitled to three months of paid maternity leave; when she comes back from maternity leave, she is allowed to work two hours less each day in order to breastfeed her child. As a woman I feel very good about this. The farm also provides training on issues like family planning and how to deal with alcohol and drug use. This helps us plan and organize our private family lives.

In the past we did not have showers or clean toilets, nor did we have a place to change our clothes. Today, we have all these things. For many people (myself included) who have no running water or a shower at home, it is extremely refreshing to take a shower after work.

However, I feel the biggest change is that management is constantly looking for ways to improve things, not only in the production area but also on a personal level for the workers. We really feel that we receive the respect from our supervisors and management that we deserve. One way we are respected is that we are allowed to create workers’ commissions. We also have the facilities to hold meetings and to talk about work-related issues. I have been elected as a representative of our worker’s group. I meet with representatives from other working areas on a regular basis to talk about things that could be improved upon, for us as well as for the production process. For example, we talk about how to improve the quality of our gloves or whether or not we need more medicine in our medicine cabinet.

Conditions have improved, that is for sure. And there are still more things to improve: For instance, the FLP could help us sell certified flowers at a better price. This could improve the entire sales system and again the production conditions could be improved on various farms. I hope that you who are listening today have a chance to help promote these flowers even more and that you will do what you can to make sure more consumers buy certified flowers.

Through my work I have made many friends. There are 13 people (12 workers and one supervisor) in my area on the farm. We all get along very well. The supervisor, Victor, is not only a supervisor, he is also a good friend. We can talk about things that are related to work as well as personal matters. Each day we all work together doing a job that is not always very easy. But our days are not all work: sometimes there is a birthday that we celebrate together-sometimes we are even allowed to do this during working hours. When we receive our salaries, my group often meets and goes out to enjoy some good food or to have fun in the nearest town.

When I talk to my friends, I realize just how much Kenyan farms have done to improve their social and working conditions on the farm. It also makes me realize that there is much more to be done on many farms in Kenya.

What's Selling? Collaboration!
Retailers on Floral:
What's Changed?

It's been a very bumpy ride for floral since COVID-19 turned the world upside down, but retailers believe and data shows sales moved to the positive starting in May 2020. Though sales took a significant hit early in the pandemic, Mother's Day seemed to be the turning point, and sales trends now were positive for some key items through summer 2020.

During a recent PMA Floral Roundtable and subsequent online interviews, we asked floral retailers their thoughts on the current situation and the future of floral retail marketing. Optimistic voices noted the desire for healthier homes, celebration opportunities, and general well-being and happiness as reasons for the turn. Here's what they had to say:

Data Speaks

PMA survey data from IRI confirms: It's been a very bumpy ride for floral, but we are on the positive side now. Though sales took a significant hit early in the pandemic, Mother's Day seems to be the turning point as sales have risen above last year's and that trend is projected to continue.

Year-over-year data shows the plunge in March and April, culminating with a low point of 45% below 2019 numbers the week of April 19. Floral sales topped 2019 sales by 4% and 3% the weeks of May 3 and May 10. Except for a couple of small dips, sales remained above 2019 through the end of June.

Changes at Retail Consensus: We are not going back to any type of 'old' normal, and the 'new' normal will incorporate many of the changes we've seen during the initial months of the pandemic. Retailers are shifting strategies to meet new consumer demands and behaviors. COVID-19's significant impact has forced retailers to change or adjust their product lines, price points, online purchasing direction, and more.

Not just for weekends anymore. Weekend sales are picking up after a drop, but weekday sales are holding strong as well, which will affect how we look at merchandising and promotion tactics going forward. Early week delivery has become important as sales have strengthened on those days. Now it's important to have merchandise in the stores every day.

Labor needs shift. Changing shopping patterns affect labor as well. Pandemic customer shopping patterns have changed, and retailers have had to adjust in-store associate coverage for floral.

Using social media to spur purchases. Often an impulse buy, floral marketing is showing an increasing online presence. Retailers noted huge opportunities to grow demand and connect with consumers through social media.

• Top-quality images are important – suppliers may be able to help

• Highly visual media like Instagram are especially suited to floral. Merchandising stories are everything to sales when shoppers are in the store. Retailers agree they must tell their story on social media – starting with Instagram.

• Suggesting ideas through social channels can help drive both shoppers' imaginations and sales. Helping shoppers with ideas builds their confidence in using these products as at-home DIY continues to grow

• Stay relevant, constant and consistent. Keep it fresh.

Ecommerce is here to stay. Retailers must consider how to create the impulse sale online, which will be especially important through the late-year holidays and into 2021. Some retailers' websites offer an array of custom floral designs as well as some of the most popular blooming bunches.

Delivery vehicles were not designed for floral. The shift to online purchases (especially for delivery) has caused retailers to put even more items in online systems. But delivery can be a challenge as delivery vehicles

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were designed with groceries in mind and don't easily allow for large-ticket items like arrangements.

Circulars are almost a thing of the past. Although retailers are still sending them out, some are seeing more sales on text deals as well as digital media deals.

What's selling?

Consensus: Most categories are seeing growth. Value items are particularly popular. And retailers report significant growth in home decor, potted plants, foliage, and balloons.

Celebrations continue, but they are different, often smaller. People are looking for reasons to celebrate, and floral is a great fit for milestone events or everyday celebrations. Self-care is rising. More people working from home is driving plant sales as consumers strive for a healthy and happy work environment at home. This also spurs home décor sales and bouquets. Floral does bring happiness, and shoppers want that in their home and work environment, especially when those are the same place.

Home beautification is important for stay-at-home and work-at-home shoppers.

• Sales of lawn and foliage products have exploded, and potted foliage and succulent sales have been strong.

• As we move into fall, some retailers believe lawn-type products will give way to more indoor items.

• Home décor is vital to overall floral sales, though this category is not one that every retailer offers. Textiles, baskets, candles and frames can easily be incorporated into any floral department. With other type of retailers shutting down there's been a great opportunity to capture sales in this area.

Get-in, get-out is important for many shoppers trying to minimize contact with others at the store. Grab-and-go for bouquets is important in this context.

Shopper economic considerations should figure into the product mix. Having items in lower price points is key, as are hardy items that last. Millions of consumers have lost jobs, and for some, the outlook is not rosy. But they still want beauty in their lives, and affordable floral items can fill the bill.

Fall opportunities: The next few months will present a need for fall items – all those porches will need new punches of color.

Collaboration

Consensus: Close relationships with suppliers are key.

Trends shift and industry must pay attention. Retailers agree they must pay close attention to consumer trends, which may vary by area, and share this with suppliers to develop supply-chain-wide solutions. This will be especially important moving into end-of-year holidays.

Sometimes there is very little time to react, so it's great when suppliers are ready for quick-turn requests. One retailer had the opportunity to offer a special bouquet online and the offer came on the last day. They needed a high-resolution photo that could immediately be added to the website. The supplier got them the photo within an hour.

Working with suppliers to find ways to offer arrangements has been key to staying in front of customers for an add-on to their shopping list. Retailers are looking at packaging, shipping and many other areas to find solutions.

Retailers expect bigger-than-normal fall and Christmas indoor decorating – fall gourds and other decorative items will be big.

End-of-year celebrations, from Thanksgiving to New Year's, will be smaller as group sizes will likely still be limited. So we may see a shift from some traditional, larger items to less-traditional arrangements for the home. The need for more fresh-cut or consumer bunches may rise (in fall colors, of course) so we'll need to collaborate to fill the need.

Integrated Marketing Communication strategy to boost Kenya's horticultural exports

Kenya has developed a one-year marketing strategy for its horticulture products targeting the European Union, United Kingdom, Australia, United Arab Emirates, Russia and United States of America towards achieving a 10% export growth in 2020/2021.

This was done during a three-day workshop held in Rift Valley Lodge, Naivasha that was hosted by the Kenya Export Promotion and Branding Agency (KEPBA) in collaboration with the Kenya Flower Council (KFC), Fresh Produce Consortium of Kenya (FPC – Kenya), Kenya Airways and the Fresh Produce Exporters Association of Kenya (FPEA).

The Integrated Marketing Communication Strategy (IMC) between the Agency and the horticultural sector is hailed as the first of its kind and is expected to work towards achieving a coordinated communication programme that is customer focused and consistent towards achieving a competitive advantage for the horticultural produce. Speaking during the opening of the three-day workshop, The Agency's Board Committee Chair of Strategy Marketing, Communication and Quality Assurance, Ms Kathleen Kihanya said Kenya is well positioned and has a basket of God's natural blessings which include excellent weather and close proximity to the Equator, resulting in the high quality of horticulture products, that give Kenya a competitive edge.

"It is encouraging to see all horticulture sector players joining hands and corporately developing an integrated marketing strategy that will ensure that the story of our unique, good quality products is effectively communicated globally," she said.

The Kenya Export Promotion and Branding Agency CEO Dr. Wilfred Marube, said the multisectoral collaboration with key players in the horticultural sector in developing the strategy will ensure all the producers in the horticultural industry are holistically engaged for maximizing results. “As an Agency, we can only rely on the producers since our role is to facilitate exports growth in the targeted and emerging markets,” he opined.

The Horticultural sector remains among Kenya’s top four foreign exchange earners for the country. In 2019, the horticultural sector accounted for 19% of Kenya’s total exports. This was made up of floriculture at 11%, fruits and vegetables at 4% each. In the same year, Kenya’s key destinations for the horticultural exports included Netherlands (Kshs. 39.1 billion), United Kingdom (Kshs. 23.9 billion), United Arab Emirates (Kshs. 5.7 billion), and United States of America (Kshs. 5.4 billion and Germany (Kshs. 5.2 billion).

These leading five markets accounted for 13% of Kenya’s total exports and 72% of Kenya’s exports on horticulture respectively. In the first quarter of the year 2020, Kenya registered horticultural exports worth Kshs. 33.9 billion, up by Kshs. 0.2 billion compared with the Kshs. 33.7 billion registered in the same period in 2019. In the second quarter of 2020, a lower export value of horticulture amounting to Kshs. 23.9 billion was registered compared to Kshs. 27.2 billion registered in the same period in 2019.

Generally, Kenya’s half-year exports of horticulture decreased by Kshs. 3 billion from Kshs. 60.9 billion in 2019 to Kshs. 57.9 billion in the same period in 2020. The decrease

is attributable to the emergence of COVID -19 and the measures to control its spread which saw nations closing their borders, thus hindering exports.

Some of the outlined strategies include combined horticultural events planning, advocacy on common issues, public relations activities, digital marketing and compelling storytelling campaigns.
The three Chief Executives from the horticultural sector were all in support of the IMC initiative.

“While Kenya produces some of the best fresh produce sold at the international markets, we haven’t fully exploited this potential. It is therefore timely that we develop a strategy to communicate deliberately on our offering. As a sector, we are delighted to be part of this very

important process of determining the trajectory of enhancing the exports of Kenya’s horticulture produce,” said Hosea Michuki the CEO, FPEAK.

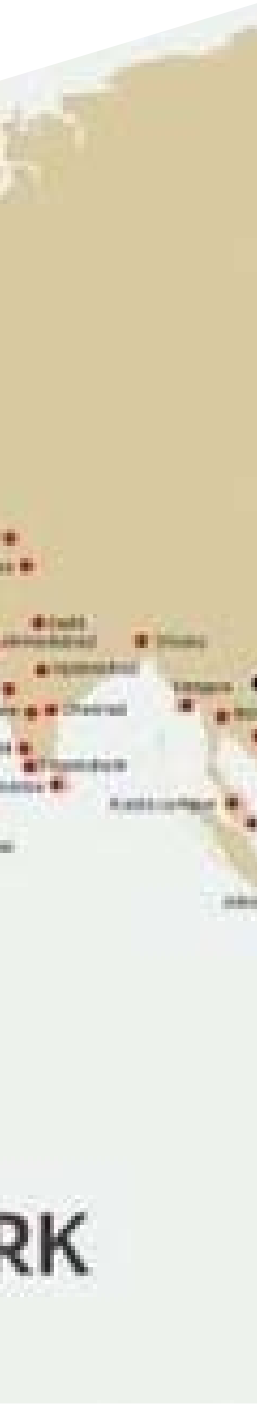
“It’s the beginning of a process that the horticultural industry has longed for. A joint push and collaboration of Government and private sector to create a concrete brand for horticulture products in the export market. For the industry, we must demonstrate to the market our niche and differentiation of Kenya’s products so we can be competitive. We believe we have products that can be on top of the world and dominate the market, but a lot still needs to be done to make consumers make informed decisions. This is where the IMC sits,” opined Mr. Clement Tulezi of KFC.

“This partnership between The Kenya Export Promotion and Branding Agency and the horticulture industry is the best thing that has happened. We are looking forward to the sustainable growth of the fresh produce sector as we focus on taking the lead in the fresh produce exporters,” said Okisegere Ojepat of FPC-Kenya. In support of the IMC approach, the Kenya Airways representatives attending the workshop reiterated that the implementation of this strategy will contribute to the sustainable growth of the horticultural industry in Kenya and work towards making Kenya Airways become the top 5 horticultural airline carrier in the World.

Etihad Cargo launches direct flight between Nairobi and Amsterdam As Emirates Sky Cargo keeps the perishables supply chain Going During Covid-19

Etihad Airways is the second-largest airline and flag carrier of the UAE, after Emirates. Its head office is in Khalifa City, Abu Dhabi, near Abu Dhabi's International Airport. The company commenced operations in November 2003. Etihad Cargo has launched its direct flight between Nairobi and Amsterdam carrying more than 91,000 kg of perishable items, largely consisting of flowers and vegetables.

The new flight is part of the carrier's latest global network update, which now includes Dammam, Jeddah and Muscat, in addition to increased frequencies to key destinations across Africa and Asia



Emirates' 10 weekly flights in October 2020 from Nairobi airport transport, among other commodities, fresh fruits and vegetables such as green beans, pineapples, mangoes and avocadoes. The produce arrives in Dubai and then gets distributed to other regional markets in the Middle East and onwards to Europe.

Consumers across the world have integrated international ingredients and produce into their daily diets for taste and nutritional reasons. Members of international diaspora also look for comfort food offerings from their home countries in supermarket shelves.

The growth of export markets over the last decade has also provided a boost to farming communities and agriculture in the various production markets. Emirates SkyCargo's flights provide a quick and direct connection for farmers and exporters of food items to their international end customers, thereby supporting their livelihoods and the local economy.

With every new destination, Emirates SkyCargo opens up one more potential trade lane for food products across the world. As an example, Emirates SkyCargo, through its direct flights, helped create a market for tropical fruits from Vietnam in the Middle East and exports of these products increased nearly five-fold in just one year in 2017.

With Covid-19 and the disruption to international passenger aviation, the supply chain for food products was put into risk of disruption. However, Emirates SkyCargo worked very quickly to restore its international cargo connectivity, growing its network from just around 35 destinations on its freighter aircraft at the end of March to more than 130 destinations by early October on its freighter as well as passenger aircraft. Currently around 500 tonnes of food items are transported every day in the cargo hold of Emirates aircraft across the world.

As a socially responsible carrier, Emirates SkyCargo has ensured that adequate cargo capacity remains available on its wide body aircraft during the Covid-19 pandemic for the transport of urgent medical supplies as well as food items. By doing this, the air cargo carrier is able to help countries and supermarkets maintain their food supplies and at the same time help farmers reliant on food exports continue to make their livelihoods in these challenging times.

Macadamia
Farming Value Chain

Macadamia farming offers an important source of income for producers worldwide and especially for smallholder farmers in Kenya. Kenya is currently the third top macadamia producer, with a global market share of 13 percent (7,750 tonnes on kernel basis). The role of macadamia as a cash crop for foreign exchange earnings has steadily increased in recent years. In 2018, exports of macadamia kernel had a value of KES 1,380 per kilo, making it one of the most lucrative cash crops in Kenya after tea. The bulk of Kenyan macadamia is produced by about 200,000 smallholder farmers. Kenya's macadamia production increased rapidly during the last decade, from around 11,000 tonnes nut-in-shell (NIS) production in 2009 to 42,500 tonnes in 2018. Kenya's Agriculture and Food Authority (AFA) estimates that, with increased acreage under the crop, production will reach 60,000 tonnes NIS by 2022. That would constitute an increase by around 40 percent from the production achieved in 2018.

Moreover, only a few processors export cashew nuts in addition to macadamia. According to processors, the reason for this is that cashew trees are very old in Kenya and have not been replaced. Kenya currently produces less than 45,000 tonnes of cashew.

Export market and VC competitiveness

Between 90 and 95 percent of Kenya's macadamia is produced for export. Key export destinations for Kenyan macadamia are the U.S., the EU, Japan, China, Hong Kong and Canada. Direct imports of Kenyan macadamia enter the EU mainly through the Netherlands and Germany, accounting for a combined share of around 98 percent of the imports in 2018; small volumes also go to Spain, the UK and Italy. Europe's importance as an export market for Kenyan macadamia shows an increasing trend, with imports growing from 1,268 tonnes in 2014 to 1,654 in 2018. The growing EU demand for macadamia, and especially organic macadamia, is rooted in a greater interest among EU consumers in food products with superior health benefits as well as natural cosmetics. An estimated 80 percent of macadamia nuts are consumed as snacks on the EU market; the remaining 20 percent are used as ingredients, for example in cookies or ice cream. Looking at average prices for macadamia kernel imports to Europe, Kenyan nuts used to achieve lower prices than imports from top producers Australia and South Africa. However, average prices almost caught up with other key origins in 2018, although quality issues at origin prevail.

Despite the increasing trends, both globally and in Europe, it is generally not expected that the demand for macadamia will compete with the more dominant nut varieties like walnuts or peanuts anytime soon. This is partially because consumers are not familiar with the product, but notably also because of its comparatively high price. Macadamia is expected to remain a niche product in the nut sector, albeit with a growing market base.

Structure, governance and sustainability of the VC

The Kenyan macadamia value chain (VC) comprises producers (smallholders and macadamia processors' plantations), aggregators (traders and associations), processors (who also export), influencers and supporting organisations. Main influencers in Kenya's macadamia value chain are AFA, the Nuts and Oil Crops Directorate (NOCD), the Kenya Bureau of Standards and county governments. Other stakeholders influence the macadamia value chain one way or another, including the Kenya Plant Health Inspectorate Service and the Ministry of Industry, Trade and Cooperatives.

The Kenyan government, through AFA and the NOCD, is at the centre of governance of the macadamia sector in the country. The sector is regulated through 2 main instruments – the Kenyan Crops Act 2013 and the Kenya Agriculture and Livestock Research Act (particularly Section 43, which prohibits NIS exports). AFA and the NOCD are the primary institutions responsible for leading the sector and implementing the development strategy and directive. Despite the existence of a dedicated governmental body for nuts (the NOCD), the consensus among Kenyan macadamia stakeholders is that these two main regulatory instruments have so far insufficiently championed progress for the sector. This is in part due to obstacles in the value chain.

Obstacles and opportunities in the VC

Some of the main obstacles and areas of opportunities in the VC include:

Low productivity: Factors causing low productivity in Kenya's macadamia sector include the effects of climate change, the impact of pests and diseases, poor Good Agricultural Practices (GAP), lack of access to inputs, use of unsuitable or old macadamia varieties and immature harvesting. The main opportunity for yield improvement lies with supporting extension service providers (such as KALRO and AFA) to increase their capacities and to multiply and disseminate high-yielding macadamia seedlings that are suited to the different macadamia growing regions of Kenya.

Low-quality nuts: Immature harvesting is the main driver of low-quality nuts. Also, an uneven supply of hard and soft-shell macadamia nuts together with inadequate processing machinery reduces the capability of the sector to supply the international market with A-grade nuts. There are two main areas of intervention for quality improvement. The first involves supporting processors who wish to obtain loans to buy crops in advance, thereby addressing farmer' need for quick cash. The second is the implementation of region-relevant harvesting moratoria.

Traceability: Upstream traceability of Kenyan macadamia is severely challenged by the large number of smallholder farmers and independent buying agents. Adopting traceability systems (some of which are part of mobile cash applications) could help in addressing this problem. Moreover, support should go the creation of a registry of farmers (including data such as landholding size and age, number of macadamia trees and macadamia varieties) and traders. This registry should be governed and accessed by members of sectors associations and AFA;

Insufficient stakeholder collaboration: communication and dialogue among macadamia stakeholders is lacking. Often, conflicting interests among actors lead to attitudes of rivalry. To address this, sector associations should establish, adopt and enforce codes of conduct to regulate the practices of sector players. Dialogue and transparency should be the ruling principles of this code of conduct. Moreover, all actors should discuss a multi-stakeholder strategy to address the challenges facing the macadamia sector.

Poor EU market access: Although some processors have links to European markets, the notion prevails among EU buyers that Kenyan macadamia is of inferior quality. Moreover, processors regard the EU market regulations as more stringent than those of the U.S. To address poor EU market access, the creation and marketing of a Kenyan macadamia brand should be explored. This brand, together with a revamped image of Kenya as a macadamia producer, could be launched during the 9th International Macadamia Symposium to be held in Nairobi in 2021.

Sian Introduces Summer Flowers From New Farm

Sian has been in the cut flower business for well over 2 decades and over the years they have been able to expand tremendously. Their flagship product has been roses that they export globally and now, they introduce summer flowers from their new farm Agriculture Ltd which is finally in commercial production. This brings Sian's total acreage to 136 hectares by end of 2020. On October 23rd, the first flowers were auctioned at the Royal FloraHolland auction and the farm was pleased with the results.

New summer flower farm

Sololo Agriculture Ltd is located in Eldoret, in the highlands of the Rift Valley, nestled at a location overlooking the scenic Sergoit Hills and few kilometers from the Kerio Valley home to the world renowned Elite world champion athletes. The farm lies at a high altitude (2,250m), cool nights, ideal climatic conditions for cut flower production.

"Due to the proximity to the Equator our flowers enjoy 12 hours of sunshine throughout the year guaranteeing our customers high quality products with big heads, thick stems, intense tones and long vase life. We have spread our production cycles to guarantee supplies throughout the year," says the chairman of Sololo Agriculture Ltd, Micah Cheserem.

Strategic decision - Diverse product portfolio

Sian used to be focused on rose production, but several years ago, they made a strategic decision to evolve from focusing on rose production to offering a wider range of ornamental products, hence the expansion into production of summer flowers. "We are fully committed to creating a diverse product portfolio that meets all our esteemed customer needs including packed at source bouquets."

The product portfolio from their new farm has many kinds of summer flowers, currently they have 19 varieties of summer flowers in their assortment. "The assortment is vast with trendy assortments that includes tinted flowers." The very first flowers have been officially launched and have commenced sales at the Dutch flower auction, Royal






FloraHolland. According to Yvonne Tirop, marketing & Business Development Manager at Sian, the results were positive. "We had been doing a lot of awareness prior to the launch and so buyers were eagerly waiting to buy the products. We heard that the buyers were happy with the product portfolio. Some of the products that we sold included craspedia, gypsophila, veronica, and according to them, they were looking good. The auctioneers told us that the products were impressive and that Sololo has a good chance to compete with other products in the market."

Building a farm during a pandemic

The farm is in commercial production, but not finished yet. By the end of 2021, the 20ha will be filled with flowers. But how was (and still is) it to built a farm during the pandemic? "Despite the farm coming into commercial production right in the middle of the current pandemic, we have been able to wither the storm of covid-19 and we have continued to expand as we had planned. All thanks to the tireless efforts of the dedicated staff who have exhibited good teamwork despite stringent covid-19 protocols characterized by social distancing," says Andrew Tubei the General Manager of the new farm.

Future

"We are proud of our achievements so far and enthusiastic about our future. We look forward to continuing our success alongside each of our partners which includes our esteemed customers, breeders and other stakeholders who we collaborate with," says Chris Kulei, the director at Sian Roses.

"Forging forward, we remain dedicated, always putting our customers first and keep creating value as we focus on quality, reliability and responsibility."

Cut Flowers Sector Concerns Over Proposed UK Border Controls Highlighted

The adverse effects of shortcoming in the UK's approach to establishing border controls on goods entering from the territory of the EU on the cut flower trade has been highlighted. Information essential to the future conduct of this trade is still not available. Shortcomings in the design of administrative requirements and a general lack of business preparedness have also been highlighted. What is more, multiple freight issues arising from the creation of the new UK/EU border are also likely to severely impact the cut flower sector, with these posing particular problems for the triangular supply chains ACP exporters' work through. Solutions to facilitate the continued smooth functioning of cut flower triangular supply chains are urgently needed. The outlines of such solutions are now emerging. They need to be actively pushed for by the concerned ACP governments and exporters, in association with Dutch cut flower industry in a context where there is limited 'band-width' in the UK and EC for dealing with triangular supply chain issues.

The Fresh Produce Consortium CEO Nigel Jenney has called on the UK government to change its plans for future UK/EU border controls, so as to avoid shortages and increased prices in the UK plant and cut flower sector. While the UK government is calling on businesses to prepare for new border controls CEO Jenney posed the question: how can an industry prepare when it lacks essential information?

Against this background, amongst other issues faced CEO Jenney highlighted the need for the UK government to clarify:

- Which plants for planting are 'controlled' or 'high risk' and therefore need pre-notification and checks.
- Where consignments requiring checks will have their goods cleared.
- Whether the proposed inland inspection facilities 'will be resourced properly to avoid delays and increased costs'.

CEO Jenney further highlighted how 'UK importers of cut flowers and plants from the Netherlands need a realistic timeframe which is less than 24 hours in which to pre-notify imports of cut flowers coming in via roro ports.' He argued it was 'vital that traders have

a simple and efficient process to follow to pre-notify consignments and clear customs, as well as covering plant health requirements.' He further highlighted the need for UK government trade management systems to be 'integrated so traders don't have to make

multiple entries across different systems'.

Particular problems are seen as likely for 'businesses which have only ever traded with the EU' and hence have no experience of customs procedures or of working with customs intermediaries.

FPC CEO Jenney sought to place the challenges facing the cut flower sector in the context of the 'massive hit' the sector has taken from the necessary policy response to the Covid-19 pandemic, the effects of which are still being felt to varying degrees.

The major fear is the entry into force of new UK/EU border controls will coincide with a new winter wave of Covid-19 infections, compounding what is already likely to be a difficult situation.

Overall CEO Jenney expressed the view the 'Border Operating Model for trading between the EU and GB as it stands will be

unworkable for many businesses unless the UK Government listens to us and makes changes now'.

However this is just the tip of the iceberg of Brexit related problems for ACP cut flower exporters. The Dutch auction houses play a major role in supplying the UK market with cut flowers. ACP cut flower exporters have one of the highest levels of dependence on triangular supply chains in serving the UK market. In this context the issues the UK's withdrawal from the EU customs union and single market gives rise to in the haulage industry are of particular concern.

The issues identified by FPC CEO Jenney are just the tip of the iceberg of challenges faced by ACP cut flower producers, exporting to the UK via initial ports of landing in EU member states. Ways and means need to be found of side stepping the border clearance challenge issues which the UK's departure from the EU customs union and single market will inevitably give rise.These challenges can in part be addressed at the policy level and through the incorporation of ACP concerns into border preparations and border clearance systems currently being designed and shortly to be implemented. For example, where ACP cut flower exports:

a) enjoy duty free-quota free access to both the EU and UK market;
b) proof of origin documentation has been pre-submitted;
c) goods have recently undergone phytosanitary import controls on entry to the EU;
d) goods have undergone security and safety declaration checks upon entry to the EU27; there would appear to be no objective need for further border controls on cut flowers entering the UK market, since the phytosanitary and safety and security risk level would be low, given checks had so recently been conducted on these products when entering the EU.

The adoption of such a policy approach would not involve any loss of UK sovereignty since the setting of phytosanitary and security and safety inspection requirements at zero would be based on an objective risk assessment, linked to the immediate prior conduct of EU controls.

If this was agreed at the policy level, then the UK's proposed Smart Freight Service app traffic light system could be applied, in extended form, to the automatic electronic clearance of ACP cargoes meeting the criteria set out above. Under this border clearance traffic light system 'Green Light' goods would be permitted expedited embarkation, disembarkation and border clearance arrangements.

The introduction of such a system would allow the continued smooth flow of ACP cut flowers along existing triangular supply chains.

Against this background, the most affected ACP governments need to make representations to the UK and EU authorities for the establishment of such a 'Green Light' system of border clearance readiness approvals, so as to avoid further undermining triangular cut flower supply chains which are already facing major challenges as a result of Covid-19 linked air passenger flight based freight service disruptions.

However, this would require a range of complementary initiatives at private sector level, particularly in regard to the 'Groupage' issue. Since decisions related to the 'Groupage' of cargoes for onward shipment to the UK will largely lie with the agent or trade partner in the EU27 member state, ACP cut flower exporters trading into the UK via the Dutch flower auctions will need to urgently ascertain:

- Whether their existing trade partners are considering 'Groupage' issues in their logistical planning for trading with the UK in 2021.

- What concrete steps trade partners in the Netherlands are taking to deal with the 'Groupage' issue.

- What the cost implications will be of revising the current methods of onward shipment used in serving the UK market.

FLOWER & VEGETABLE FARMS IN KENYA

FARM NAME	PRODUCT	LOCATION	CONTACT PERSON	TELEPHONE	E-MAIL
AAA- Flowers-Rumuruti	Roses	Rumuruti	.	-	-
AAA- Flowers -Chui Farm	Roses	Timau	Ravi Kumar	0759 500403	ravikumar@aaagrowers.co.ke
Farm-Sunripe		Naivasha	Antony	0711827785	naivasha@sunripe.co.ke
Across Agriculture Ltd	Herbs	-	Emily Chepkemoi	0729080186	chep28@gmail.com
Africalla Kenya Ltd	Cuttings	Eldoret	Meindert	-	meindert@africalla.com
Africa Blooms	Roses	Salagaa	Ramnath Sarbande	0780314387	ramnath.sarbande@xflora.net
Afriscan Kenya Ltd	Hypericum	Naivasha	Charles Mwangi	-	-
Aquila Development Co	Roses	Naivasha	Abhay Marathe	0729776656	gm@aquilaflowers.com
Balaji Flowers	Roses	Olkalou	Ra0 Venkatesh	0726337266	-
Baraka Farm	Roses	Ngorika	Lucy Yinda	-	lucy@barakaroses.com
Batian Flowers	Roses	Nanyuki	-	-	-
Beautyline	Flowers	Naivasha	Peter Gathiaka	0721392559	peter@beautyli.com
Big Flowers	Roses	Timau	Simon Blinco	0723234927	simon@mauflora.co.ke
Bigot Flowers	Flowers	Naivasha	Kakasaheb Jagtap	0722205271	jagtap.kt@bigotflowers.co.ke
Bila Shaka Flowers	Roses	Naivasha	Joost Zuurbier	0722204489	bilashaka.flowers@zuurbier.com
Black Petals	Roses	Limuru	Nirzar Jundre	0722848560	nj@blackpetals.co.ke
Bliss Flora Ltd	Roses	Njoro	Appachu Sachin	0789101060	appachu7@yahoo.com
Blue Sky	Gypsophilla	Naivasha	Patel Sushant	0725622333	info@blueskykenya.com
Bloom Valley		Salgaa	Ramnath Sarbande	0780314387	ramnath.sarbande@xflora.net
Blooming Dale Roses Kenya Ltd	Roses	Nanyuki	Sunil	0718991182	info@bloomingdaleroses.com
Buds and Blooms	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	adung'o@carzankenya.com
Carzan - Molo	Carnations	Molo	Charles Chelule	0728784081	charles.chelule@carzankenya.com
Charm Flowers	Flowers	Athiriver	Ashok Patel	020 352583	ashki@charnflowers.com
Chestnut	Flowers	Mt. Kenya	Gabriel Kiai	-	gabriel.kiai@aaagrowers.co.ke
Colour Crops	Hypericum	Nanyuki	Kennedy Wanyama	0716389472	colourcrops@tmu.com
Colour crops	Summer Flowers-	Bahati	Patrick Kipkurui	0727806184	kipkirui89@gmail.com
Colour crops Naivasha	Flowers	Naivasha	Geoffrey Mwaura	0722200972	nva@colourcrops.com
Credible Blooms	Flowers	Rumuruti	Eliud Njenga	0722382859	eliud@pigeonblooms.com
Credible Blooms	Flowers	Ngong	Eliud Njenga	0722382859	eliud@pigeonblooms.com
Dale Flora	Roses	Mogotio	Ajay Sutar	0711102266	ajay.sutar24@gmail.com
Desire Flowers	Flowers	Isinya	Rajat Chaohan	0724264653	rajatchaohan@hotmail.com
De ruiters	Breeder Roses	Naivasha	Fred Okinda	0722579204	Fred.okinda@deruiter.com
Double Dutch	Cuttings	-	Pharis Wainaina	0728207661	
Dummen Orange	Flowers Breeders	Naivasha	Steve Outram	0733 609863	s.outram@dummenorange.com
Eco Flora	Roses	Salgaa	Kimani	0733605219	production@fontana.co.ke
Elbur flora- kimman	Roses	Nakuru	Daniel Moge	0721734104	kimmanexp@gmail.com
Enkasiti Thika	Flowers	Thika	Tambe	0734256798	enkasiti@gmail.com
Equinox	Flowers	Nanyuki	Harry Kruger	0707266956	harry@equinoxflowers.com
Everest Flowers Ltd	Flowers	Mt. Kenya	-	-	-
Everflora Ltd.	Flowers	Thika	Bipin Patel	0735873798	everflora@dmblgroup.com
Evergreen Crops		Nairobi	Arun Singh	0721941009	arun@evergreencrops.com
Exotic Peninah	Roses/ Carnations	Athiriver	Dan	0734626942	dan@exoticfields.com
Fairy Flowers	Flowers	Limuru	Sylivester	0753444237	sylvesterkahoro@yahoo.com
Fides Kenya Ltd	Cuttings	Embu	Bernard Marindany	0726 366 752	B.Marindany@DummenOrange.com
Finlays -Tarakwet	Flowers	Kericho	Lelon Chepkwony		
Finlays Chemirel	Flowers	Kericho	Aggrey Simiyu	0722601639	aggrey.simiyu@finlays.co.ke
Finlays- Lemotit	Flowers	Kericho	Japhet Langat	0722 863527	japhet.Langat@finlays.co.ke
Fontana Ltd - Akina farm	Roses	Njoro	Mahindra Patil	0798254199	--
Fontana Ltd - Ayana Farm	Roses	Mau Narok	Aiyappa		aiyapa@fontana.co.ke
Flamingo Holdings Farm	Flowers	Naivasha	Peter Mwangi	0722204505	peter.mwangi@flamingo.net
Flamingo Holdings-Kingfisher Farm	Flowers	Naivasha	Mr. Isaac Karanja	0720473502	kingfishercarnations@flamingo.net
Flamingo Holdings- Kingfisher Farm	Flowers	Naivasha	Jacob Wanyonyi	0722773560	jacob.wanyonyi@flamingo.net
Flamingo Holdings-Siraji Farm	Carnations, Roses	Nanyuki	Peris Muturi	-	-
Flamingo Flora	Roses	Njoro	Sam Nyoro	0721993857	s.ivor@flamingoflora.co.ke
Flora ola	Roses	Solai-Nakuru	Lucas Choi	0721832710	lucas.floraola@gmail.com
Flora Delight	Summer flowers	Kiambu/ Limuru	Marco	0710802065	marcovansandijk@yahoo.com
Florensis Ltd	Cuttings	Naivasha	Anne Marie		annemarie@florensis.co.ke

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	Thika	Kadlag Palaji	0723149968	kadlag.paraji@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	Rumuruti	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
Isinya	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		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	
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		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	0728606878	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	0733333289	jack@maridadiflowers.com
Maua Agritech	Flowers	Isinya	-	-	-
Mau Flora	Roses	Molo	Mahesh	0787765684	mahesh@mauflora.co.ke
Milenium Growers	Summer Flowers	-	Sushant Wankara	0731316000	sushant@marvelgreens.com
Molo Greens	Solidago, carnations	-	Justus Metho	0722755396	justus@mologreens.com
Mt. Elgon Flowers	Roses	Eldoret	Bob Anderson	0735329395,	bob@mtelgon.com
Mwanzi Flowers Ltd	Roses	Rumuruti	Ram	0722265845	-
Mzuurie Flowers - Maji Mazuri	Roses	Eldoret	Mark Juma	0727471034	mjuma@majimazuri.co.ke
Mzuurie Flowers - Molo River Roses	Flowers	Kilelwa	Andrew Wambua	0724256592	awambua@moloriverroses.co.ke
Mzuurie Flowers - Winchester Farm	Roses	Karen	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	-	-	-
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
Pendekeza	Roses	Nanyuki	Richard Siele	0722716158	tambuzi.sales@tambuzi.co.ke
PJ Dave Flowers	Flowers	Isinya	Sanjiv Dogra	0737576966	pjdaveflowers@wananchi.com

FLOWER & VEGETABLE FARMS IN KENYA

FARM NAME	PRODUCT	LOCATION	CONTACT PERSON	TELEPHONE	E-MAIL
PJ Flora	Roses	Isinya	Santos Kulkarni	0738990521	santosh@pjdave.com
Plantech Kenya Ltd	Propagators	Naivasha	Idan Salvy	0702187105	idan@plantechkenya.com
Porini Flowers	Roses	Molo	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
Wildfire	Roses/summer	Naivasha	Eliud Kimani	0727598349	roses@wildfire-flowers.com
Wilfay Flowers	Gypsophila/hypericum	Subukia	Makori	0723358644	makoriwilfay@gmail.com
Wilmar Agro Ltd	Summer Flowers	Thika	Alice Muiruri	0722 321203	alice.muiruri@wilmar.co.ke
Windsor		Thika	Pradeep Bodumalla	0736 586 059	farm@windsor-flowers.com
Xpressions Flora	Roses	Njoro	Brijesh Patel	0715469732	brijesh.patel@xflora.net
Zena - Asai Farm	Roses	Eldoret	Phanuel Ochunga	0722506026	pochunga@zenaroses.com
Zena Roses - Sosiani Farm	Roses	Eldoret	Jackson Mbanya	-	-

CIOPORA Video Release: Understand Essentially Derived Variety Concept in 90 Seconds

CIOPORA has released a short explanatory video on the Essentially Derived Variety (EDV) concept. With the 90-second video, CIOPORA, who is co-leading the green industry effort on clarifying the EDV concept at the UPOV level, aims at providing a condensed and clear-cut explanation for the complex legal concept to all players of the horticultural value chain.

"The EDV concept is one of the cornerstones of the UPOV system and one of CIOPORA's immediate advocacy goals is to clarify the concept in UPOV," - says CIOPORA Secretary General Dr Edgar Krieger. "With the newly released video, we would like to break the barrier of the legal complexity and explain to the green sector at large why everyone involved in horticulture should be informed about and concerned with the issue of EDV."
On October 30, 2019, at its 76th meeting, the UPOV Administrative and Legal Committee (CAJ) voted to open the UPOV Explanatory Notes (ExN) on Essentially Derived Varieties (EDV) for revision. The move, highly anticipated by the breeding sector, came months after an alliance of breeder organizations, including CIOPORA, CropLife, ISF, Euroseeds, APSA, AFSTA, and SAA, had raised concerns about the narrow EDV concept interpretation in the UPOV ExN. In alliance's view, the narrow EDV
interpretation may "... greatly endanger the breeding incentive and could possibly lead to a diminution of (...) breeding effort...".
The main goal of the advocacy effort is to achieve a sufficiently broad EDV concept at the UPOV level that will provide clear and unambiguous rules for the establishment of dependency between an EDV and its Initial Variety. The revised UPOV ExN on EDV should affirm EDV's predominant derivation from its initial variety and that important modifications in the characteristics of an initial variety do not exempt a new variety from its EDV status.

The video "Understanding Essentially Derived Varieties" is available for sharing and embedding from CIOPORA's Vimeo, Youtube and its social media channels.

Implementation of Image Auctioning and Clock Presales

The implementation of image auctioning in Eelde is a success, according to Royal FloraHolland. Buyers in Eelde now trade through Remote buying (KOA) only. A life-size projection of all the trolleys can now be seen in the auction room. Specially for Eelde, the company developed a photo corridor where they photograph each trolley before auction. They will soon, in conjunction with buyers, evaluate the use of the photo corridor to determine whether any further development is needed.

They are currently providing support to buyers who need help with the new auction method, both in the auction room and beyond. It has been positively received.

Clock presales (KVV) have also been available since last week, and the auction can see that several transactions are already taking place.
'The Future Starts in Eelde'

The Royal FloraHolland location in Eelde is to become the main auction and logistics centre for the north of the Netherlands and north-western Germany. That is why, over the past year, they have worked closely with buyers and growers to ensure that the new services with regard to auctioning and logistics meet customers' needs. In order to make this possible, the location has been fully connected and integrated with Royal FloraHolland's corporate systems. The link with the digital trading platform Floriday will make it possible to further digitise and expand services in the future. Thanks to the preparations they have made over the past few months, including an adapted layout of the building, Eelde has now become a modern hub.

Source: Royal FloraHolland

The Village Burge

The mention of December reminds me of Joe. This is not the popular Joe the plumber, but Joe the father of Jesus. This is the only man who saw it fit to walk out of town with a pregnant wife. He is the man who decided a cow shed is the only Pumwani he can afford. And since am a great follower of his son, come this time am on my way to the village. Last year was not a great season because of what will remain unmentioned… But this year am set to enjoy the local Bunge.

Those who may be new in my life should be aware that am an occasional visitor to the local Bunge held at a local Pub where the most expensive stuff is *Muatine* the traditional Kamba beer. The Bunge is so popular that any urbanite must visit it. To give you a fair idea of the proceedings, I dug into the Hansard of the sessions.

As members gossiped and criss-crossed the floor, Ilali (the colloquial village dialect for Hilary) the village speaker with full knowledge of the weight the motion carried, took his chair puffing *Kilaiku* (crashed tobacco leaves) and a Calabash of Muatine in his hand. Beside him was the sergeant at arms enjoying his *Mukuka* (Miraa) with a packet of *Gomba* in his right hand. The speaker declared the session officially opened by calling on Dr Itila (colloquial dialect for Hitler) the village finance minister to read the years budget.

Dr. (Debtor) Itila the village bully, a graduate of M P C (mad people's combination) but a victim of university expulsion before his PHD (Permanent Head Damage) from UON (university of nowhere) had been drinking all long. He stood with his trade mark; a kiko on his left side of the mouth looked at his audience and sipped a glass of water.

Honourable speaker, the village elders, all dignitaries, in attendance and fellow members of the Bunge. I take this opportunity to thank you for giving me yet another chance to present the year's Budget (cleared his throat).

"When things fell apart, they were no longer at ease and the son of woman from Mombasa, had to stay three days on the cross after the Betrayal in the city," he started. (Sipped a mouthful of *muatine* and cleared his throat once more).

Respected members of the September house, this financial year was the toughest ever. If your memories serve you well, it is the year World Buda (World Bank) and his brother Imekuwa Muthokoi Forever (IMF) threatened to introduce their Shika Adabu Pole pole Sasa (SAPS). The two not only threatened to introduce but also had an upper hand in requesting for freezing of AID (Ask Insist Demand).We have been forced to look east. This has thrown the village into a bottomless economical pit.

Members of the September house (he puffed his kiko), allow me to start by touching on the domestic taxes. First allow me to introduce the Family Maintenance Kit (FMK). Comrades, if you remember very well, during the last financial year, wife battery and divorces increased in a very alarming rate. To cut this down (interruption from female members clapping and foot thumping). Mr. Speaker I beg to continue.

My ministry has lifted a ban on traditional beer, and extend throat greasing hours to past midnight. Members, you will concur with me that after oiling your throats to that extend, you will go home fighting with soil and lie down on the sofa like a deflated condom. I also propose a goat tax payable by all members of the Ketepa club every month. (A mixture of clapping, foot thumping and murmuring from members).

Honourable speaker, I beg to continue, members of the September house, if you remember very well, during the last financial year, the village faced a 25% increase in birth rate. I now ask the house to allow me introduce a PZGD (Permanent Zero Grazing Days). With the blessings of the house I introduce a 2% increase on kesha days (Overnight Prayers) and a separate tax return on members' day and ladies night. Members if you allow me to elaborate a bit, you find that villagers will only have Sundays and Mondays to enjoy a nightfull.

Members you will also agree with me that during the last financial year, we had a series of away games. This resulted to an increment in girls' school drop outs, births out of wedlock, abortions and an increase in STD's. Due to the above, I know ask for your blessings to increase Viagra Adjustment Taxes (V.A.T) by 20% members this will increase the price of Cassavas, kukumanga, Kahawa Chungu, mukhombero and other local Viagras.

Members allow me to introduce a registered pension or provident fund for all the girls who will abstain from sex out of wedlock. Members I also request for the approval for an increment of Private Pregnancy Investment (PPI).
My ministry is requesting for a raise of the minimum penalty for Zero Grazing Defaulters (ZGD) from two heads of cattle to five heads of cattle.

Members, allow me to make few adjustments on import and export business. You will all agree with me that last financial year saw a lot of women dumping in our village. My ministry is proposing an increment of dumping duty from 20% to 50%. The above translated will see to it that anybody wife importation shall attract a penalty of between 40-50% based on age. I also request this honourable house to approve a 50% compensation fee for all women exports from the village. The above translated shall increase in-village marriage and women export.

Mr. Speaker sir, allow me to rest my case and request this honourable house to debate and find it honourable to pass the budget as it is. (picks his *Muatine* calabash and walks back to his seat on the front bench).

Members of my profession, this is what I miss as I try to depreciate my fingers in the city. But come December I must join the only democratic and sensible house in the country.

Congratulations!

The Board of Directors, Management

and Staff of Florinews Limited

Wish you a Prosperous 2021.

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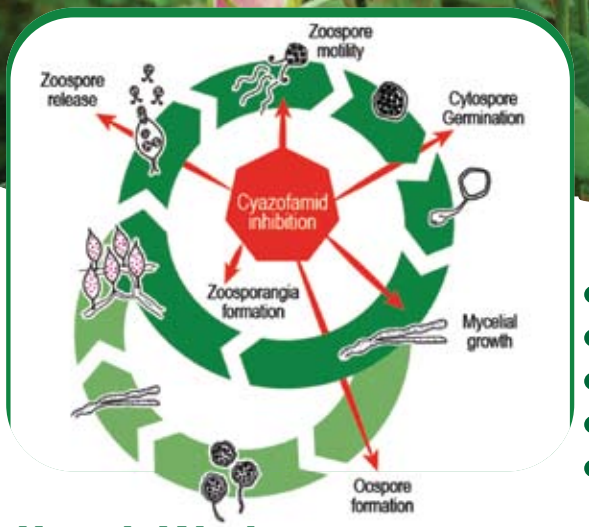

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- Protects newly developing leaves.
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