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The Leading Floriculture Magazine

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Yesterday and Tomorrow



As always, I take this time to look back at the year behind us and the year ahead, with great anticipation as to what will come. I carry the lessons of the past with me and look confidently forward, as I always do, secure in the knowledge that growers can do anything to which they set their minds.

Together, we demonstrate our confidence in the future and our solidarity as a sector. Each day brings new challenges and we meet these challenges with grit and zeal and thus overcome them with ease.

And so as we begin a new year, we do so with confidence. This year like every other, will bring obstacles and opportunities. Each challenge brings us together and each accomplishment makes us stronger. Growers are mighty and their optimism boundless. They can indeed achieve anything that they put their minds to as they work together to lift the sector to ever greater heights. I am certain that this coming year will only bring greater glory to the sector.

Exporting quality roses is not a small achievement; it is definitely worth commemorating. All of the management positions in flower business contribute to the overall success. Perhaps none has a more direct hand in the ultimate quality than the Head Grower. It's a position that has evolved over time from skilled plantsman to grower, trainer, communicator, business manager and leader. In this issue we examine The State of the Head Grower.

Our foreign Correspondent narrates The Journey of the Rose. Roses travel a considerable distance before they take pride of place on a Dutch flower stall or continue their onward journey across the world. A recent study of the cut flower supply chain exposed a host of minor and major bottlenecks and inefficiencies – and kick-starts sector-wide involvement in setting new industry standards for quality, cost efficiency and sustainability.

In the same issue we will reflect on Powdery Mildew. Growers who have suffered severe losses from powdery mildew have learned to carefully watch the weather and will not greet overcast days with a smile. But Kenyan growers have all reasons to smile. Olij Farm has opened a solar-powered greenhouse as a demonstration site for harnessing the sun to run the high energy consuming flower business.

So, as this New Year begins, let us congratulate each other and wish each other love and happiness in the coming year.

Let all our 2014 dreams come true.

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More Kenyan Beans and Flowers to US



The United States are buying more horticultural crops from Kenya after suspending imports from Egypt, due to the continuing unrest in that country. The Horticultural Crop Development Authority (HCDA) has therefore asked farmers to increase their production.

Since there are no direct flights from Kenya to the US, the fresh produce will be transported through The Netherlands. "The US is buying horticultural products like French beans and flowers from Kenya, because our products are chemical-free and of high quality", says HCDA's managing director Alfred Serem.

The instability in Egypt is a blessing in disguise for Kenya, according to Serem, because the North-African country was a

major traditional supplier of horticultural products to the US, a position that is likely to be taken over by Kenya.

Serem has therefore urged farmers to capitalise on the situation to earn the country billions of extra shillings from the US-exports. The horticultural sector is expected to earn the country this year 920 million euro's in foreign exchange.

Serem: "The HCDA, national and county governments will soon roll out major programmes to boost production because demand for crops from Kenya is rising by the day, in not only the US but also in Europe."

Floriculture Industry Under the Devolved Governments

The horticulture and floriculture growers have taken the initiative to engage county governments and the National government to mitigate against unfavorable business environment under the county and national government systems of governance. So far over 21 flower farms from across the country have participated directly or through proxy since October 12, 2013.

The team has held meetings in Naivasha to discuss the agriculture Produce cess and other pertinent issues coming with the devolution at the county level. The industry will continue to engage with the relevant stakeholders for a common solution on issues of

industry regulation, coordination and taxation. An Industry position on cess has been established and documented in an Industry position paper.

This activity requires participation by all growers within and without the membership associations. As such farmers agreed to support this project by making an initial contribution of Kshs 20,000.

Growers are encouraged to participate in this initiative by contributing towards the project. The Kenya flower Council will keep you updated on the progress of the whole process.



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Water volume:	1000 litres
Frequency of application:	Apply 10-14 day intervals

Directions of use:

1. Always shake container before use.
2. Fill half the required amount of water in the spray tank.
3. Measure the required amount of **hyK** and add to tank. Maintain constant agitation.
4. Add remaining water to correct dilution.
5. Spray and ensure full coverage.
6. The product should always be used with a compatible wetter/sticker (not a buffer).

Tank Mixing Compatibility

Although it is compatible with most, but not all pesticides, growth regulators and micro-nutrients, it is advisable to use **hyK** on it's own in a tank mix with a compatible wetter only (not a buffer). Always carry out a phytotoxicity test on a small area before large scale application.

Liability cannot be accepted for any loss or damage as not all pesticides and fertilisers have been tested for compatibility. Efficacy of any mix will depend upon crop type and growth stage, pesticide concerned, climatic conditions, water volumes and various other factors.

Storage & Shelf life

Store in a cool dry place away from the heat and sunlight with optimum storage range between 5-40°C.

Although **hyK** is low in toxicity, it can cause eye and skin irritation in concentrated form. It is non-hazardous and non-flammable. However, when handling the concentrate, protective gear should be used such as gloves and face shield.

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Growers Meeting in Ethiopia

MPS recently held a growers meeting in the Hilton Hotel in Addis Ababa, Ethiopia. During this meeting of approximately 30 participants, a number of topics were discussed, including the history of the Ethiopian floriculture market. MPS started up in Ethiopia in 2005 with 5 growers. This has now expanded to 26 growers with almost 800 hectares. Since 2005, growers have shown great improvement in crop protection, waste processing and safety, etc.

Theo de Groot (director of MPS) gave a presentation on market developments in the sector and the MPS concepts. Marcel Bongaards (Manager Service & Support team/ coordinators) gave a presentation on the Service & Support Team, statistics about Ethiopia & Africa and practical aspects of MPS certificates. Roos Silkens (Coordinator Ethiopia) discussed the challenges in Ethiopia in detail, the most important points being waste management, legislation governing crop protections and the lack of a horticultural collective labour agreement.

Sustainability Awards were awarded for the first time. These awards symbolise sustainability and

how companies can differentiate themselves in this respect. Aspects that have been included from MPS-ABC and MPS-SQ: average MPS-ABC points from previous years, punctuality, collaboration, improvement management, timely implementation of corrective measures and what companies do for society.

AQ Roses was awarded 1st place. This quote emerged from the speech made by Frank Ammerlaan (AQ Roses): "As a company, we want to continue to be good to people and the environment. That is the key to our success. Furthermore, certification and sustainability is an ongoing (continuous) process."

The 2nd award went to Linssen Roses and 3rd award was won by ET Highland Flora.

The Incentive Award was granted to Dugda Floriculture Development. Dugda Floriculture is a company that is burning to achieve the highest achievable level of sustainability. They still have a number of challenges to overcome but they are certainly on the right path and have the absolute drive to get there. It was great to sit around the table with the growers in Ethiopia; we learned a lot from one another and hope to repeat this in the future.

Netherlands – Kenya /VGB and KFC on GreenCHAINge: Convincing Dutch Minister Ploumen with promising results

Coordinated by Union Fleurs members VGB (the Dutch Association of Wholesalers in Floricultural Products) and KFC (Kenya Flower Council) as well as other Dutch and international key players, the multi-stakeholder collaborative project GreenCHAINge was presented on Thursday 31 October 2013 to Lillianne Ploumen, Dutch Minister of Foreign Trade and Development Cooperation at the occasion of her trade mission to Kenya.

One of the aims of GreenCHAINge is to develop a pilot scheme demonstrating the feasibility of long-distance transport by water, consequently reducing CO2 emissions by 87%.

As the Dutch delegation visited the Kenyan port of Mombasa, a demonstration shipping container filled with flowers was specially put in place to show how the project effectively works and to illustrate the potential leading role that the Netherlands could play in making the transport chain for floriculture products more sustainable.

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For more information please contact our local DFG colleagues in Kenya, tel. +254 20 660800



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colourful*

Supply Chain Challenges In Horticulture



Local cooperation, global success

Dutch Flower Group (DFG), presented in the latest May-June issue of Floriculture, is represented in Kenya by local companies for the sourcing, handling and supply chain management of cut flowers.

These companies are DFG Kenya (existing of Flower Sourcing Africa/FSA and Progress) and flower handling company Airflo. The local Kenyan sourcing teams will contact growers for the production of cut flowers to the needs of the customers of the DFG marketing companies in Europe. They supply the importing wholesalers who supply florists and also the multiple retailers.

It should not be a surprise that the requirements of the multiple retailers (e.g. supermarkets) are high. Not only on sustainable sourcing, but also on the standards for quality and certifications. To enable to sell the best product to the consumer, the DFG companies cooperate in a narrow way with the growers in Kenya, but of course also in other countries in Africa.

Cooperating to use each other's best practices, exchange know-how and to discuss the best ways to fulfill the needs and requirements of the customers abroad. This involves amongst others annual production planning, selection of varieties (together with the marketing companies and their customers), cooperation on conditioning the flowers, conduct vase life testing and of course: to develop the right packaging, packing method and transportation specifications to enable the flowers to travel in the best conditions by air. "For this, we need to pressure to aim and maintain a 5 degrees Celsius cold chain on airfreight", Conrad Archer, responsible for the activities of DFG in Kenya.

Flowers by sea container

Flowers also travel by sea container. Dutch Flower Group is already working on other means of transportation for cut flowers for many years. Currently chrysanthemums are shipped for the UK market by sea container from Colombia and projects have been conducted with growers in Kenya to also develop this logistic alternative for the supply chain Kenya – Holland.

Conrad Archer: "recently the GreenCHAINge project, under supervision of the Dutch sector organization for the wholesale trade in floricultural products (VGB) has set up trails with container shipments.

Also participating, next to DFG and other wholesalers, are Wageningen University, FlowerWatch, KFC and Maersk lines. This project will enable the sector to get close to the most ideal working method for shipping cut flowers by seafreight. The results so far have been positive".

In this, the supply chain from grower to handling facility and from handling to the freighter and from them to the importing company who will then process the flowers to make them 'consumer-ready' is of utmost importance.

For this, the DFG Kenya team cooperates with all parties in the chain as this will again make for all of us the difference in near future: greener, more sustainable and less expensive transport modes for the chain between Kenya and Holland, as well as other European destinations.

More information: www.dfg.nl

The Journey

A Dutch government-funded study of the Kenyan-Dutch cut flower supply chain exposes a host of minor and major bottlenecks and inefficiencies – and kick-starts sector-wide involvement in setting new industry standards for quality, cost efficiency and sustainability.

of the rose

Roses have already travelled a considerable distance before they take pride of place on a Dutch flower stall or continue their onward journey across the world. That journey mostly begins in Kenya, where many rose growers are located.

Businesses operating in the Kenyan-Dutch cut flower supply chain will continue meeting with government agencies and trade promotion specialists from the two countries in the next few months to tackle a host of minor and major inefficiencies and bottlenecks hindering further growth. These so-called Platform Discussions, initiated by the Dutch Ministry of Economic Affairs, Agriculture and Innovation, are the result of a recent in-depth study of this supply chain. The aim of both the study and the meetings is to lift the Kenyan-Dutch cut flower supply chain to a higher level, setting new standards for the entire horticultural sector. The result, if the plan succeeds, will be reduced supply chain costs, a longer vase life for flowers and therefore increased value-for-money for consumers, and increased sustainability in terms of a lighter carbon footprint and reduced product and packaging wastage.

Kenya, a horticultural trailblazer

Already a trailblazer in global horticulture, Kenya has achieved tremendous export growth over the last two decades. Horticulture – with fresh-cut flowers holding first place in export volumes – has become one of the country's biggest earners, providing many thousands of Kenyans with jobs and income. Kenya has become the leading producer of roses for the European market and a major supplier of other varieties.

Exporting largely to the Netherlands, Europe's principal point of entry for flowers (taking 67% of Kenya's tonnage and over 55% of its export value), Kenyan players have joined forces with Dutch players in creating one of the industry's most highly developed supply chains.

With volumes steadily increasing and the horticultural product range widening, Kenya's Jomo Kenyatta International Airport became the biggest cargo hub of Africa in 2011, overtaking even Johannesburg and Cairo.



Facing dramatic change

This rapid growth, however, has put increasing pressure on the supply chain. While production continues to flourish, Western Europe's cut flower markets are showing signs of saturation, with annual growth settling at a moderate 2 to 4%. A major shift in purchasing power – from wholesalers and the Dutch auction system towards large and demanding mass-market retailers – is also contributing to the general sense that the industry is facing dramatic change.

A study commissioned by the Dutch Ministry of Economic Affairs, Agriculture and Innovation and performed by leading Dutch expertise centres Hortiwise and FlowerWatch, has shown that these combined factors are not only placing severe pressure on margins, but also changing the playing rules in the flower industry. The industry, the study shows, is evolving towards lean and transparent supply chains characterized by consolidation and vertical integration.

'The overall conclusion of the study,' says Jeroen van der Hulst, Director of FlowerWatch, 'is that the Kenyan-Dutch supply chain has

reached the point at which it is struggling with the weight of its own success. The many bottlenecks and inefficiencies exposed in our study have to be dealt with; it's a do-or-die situation. Moving forward to new levels of quality, cost efficiency and sustainability will require a major overhaul involving every link in the entire supply chain.'

Minor problems and major ones

The study, conducted between January and May of 2012, exposed a surprising amount of room for improvement throughout the entire chain, says Milco Rikken, Managing Director of Hortiwise. 'One thing that struck us is the number of workarounds that have evolved all down the chain, with recognized problems being bypassed through solutions that are far from optimal.' One example is the re-cooling of flowers at the Kenyan airport through inefficient and relatively costly measures that would be superfluous if the flowers' were delivered at the airport at the correct temperature in the first place.

'Many minor issues came into view that in view of margin pressure clearly need resolving,' says Rikken. 'The good news is that many

can be resolved without much effort. Just tackling the easy issues will cause a noticeable improvement in flower quality, cost efficiency and sustainability.'

Other issues will be a lot tougher to deal with," he adds. Some will require players across the chain, both Kenyan and Dutch, to muster up far more trust and commitment than they have done so far. Comments Rikken: 'One thing that stands out from this study is that in the flower supply chain, neglect by one player typically leads to costs for somebody else. Bringing all these parties together may well prove to be the greatest challenge of all in realizing the changes this chain so badly needs.'

The study identifies eight trouble spots in which minor and major problems are holding the sector back:

1. Cold chain management
2. Transport and logistics
3. Packaging
4. Information and communication
5. The relatively weak position of SME growers
6. Handler performance
7. The integration of the flower sector with mass-market retailers
8. Sector-wide teamwork

In order to maintain their competitive edge over competitors both near and far in the global flower industry, Kenya and the Netherlands can deal with these trouble spots by focusing on five improvement themes, the study suggests:

Cold chain and packaging standards and protocols

The absence of adequate standards and protocols in the cold chain, most notably, directly affects the quality and vase life of flowers. Temperatures right down the supply chain vary substantially and are often far higher than necessary, both in Kenya and



in the Netherlands. The absence of clear agreements regarding temperature, as well as timing and quality of handling services (service levels), also negatively impacts flower quality.

Another area in need of solid standards and protocols to improve quality and cost efficiency is packaging. Currently, the supply chain lacks standard procedures for ordering, storing and erecting boxes, while packaging requirements related to storage, cooling and transport, are often contradictory. Also, loading practices and shipments are often inefficient, with over- and under-packing resulting in volume inconsistencies, unnecessary expenses and damage to flowers.

Education on cold chain management and packaging

Cold chain management and packaging are also begging attention when it comes to education. Farm staffs, transporters, handlers, airlines and importers alike are not as aware as they should be of the basic requirements in these areas, nor how to meet them. Retailers are another group in need of education on how to handle fresh-cut flowers, as their knowledge and experience with this product lag behind their increasingly dominant market position. Particularly at the retail level, product and packaging wastage figures are astonishingly high.

Synchronisation of (electronic) information

A more effective exchange of (electronic) information throughout the supply chain will reduce time-to market and handling expenses, increasing supply chain efficiency. Electronic systems, such as CLIENT (a Dutch system for phytosanitary checks), KePHIS' electronic service for phytosanitary issuance and E-freight (electronic messaging in the air cargo supply chain), need to be developed and implemented on wider scale.



Current flower shipments often lack uniform documentation and labelling, while some of the parties involved in clearing shipments are not available 24/7.

Supply chain innovation

Strategic, technological and structural innovations, as well as supply chain performance improvements, are vital if the Kenyan-Dutch supply chain wishes to move forward successfully. Sea transportation options need further investigation and packaging innovations geared to direct sales are conspicuous by their absence.

Sector involvement in the carbon footprint debate is crucial for realizing acceptable sustainability standards. The CO2 impact of specific industry activities needs further research. There is also a need for programmes aimed at improved use of natural resources, waste reduction and a better environmental performance.

Platform

The Platform Discussions for the Kenyan-Dutch Horticultural supply chain initiated in the framework of this study must become a fixed part of the chain's agenda in order for the

sector to move forward.

Communication and knowledge sharing can also be improved by means of sector- and supply chain- specific websites, training programmes and other forms of direct collaboration between key stakeholders, including associations and government bodies in both countries.

Concrete and practical

'The Kenyan-Dutch flower supply chain has a lot of room for improvement in big and small ways,' says Rikken. 'We believe this study offers plenty of concrete and practical points of connection for every player in the chain eager to raise the standard and take the lead in the industry. Interest in the Platform Discussions so far has been encouraging.

All but a few of the players in the chain seem eager to participate. Discussing change and actually realizing it are obviously two different things, but we're confident that by tying in with existing initiatives both in Kenya and The Netherlands, we can make a real difference. It's up to the supply chain itself to make it happen.'





Roses Need Protection From Ethylene

Post-harvest measures boost colour, opening and vase life of some cultivars, Dutch study shows

By Stephen Teeuwen

Several rose varieties sold by European retailers suffer significant and unnecessary quality loss as a result of exposure to ethylene, a recent Dutch study has shown. With a few preventive measures, the post-harvest performance of these roses can be greatly improved. An alternative is to develop ethylene-resistant varieties. Either way, retailers will be able to offer consumers flowers with improved colour and opening and a vase life up to five days longer than today's average.

The study of the effects of ethylene on roses was carried out in December 2012 and January 2013 by FlowerWatch, a leading Dutch centre for supply chain expertise, monitoring and development, and commissioned by Chrysal Netherlands, a specialist in flower care solutions. In the study, FlowerWatch followed a range of 25 rose cultivars exported to European retail destinations by two Kenyan growers. The researchers monitored the ethylene concentrations to which the flowers were exposed throughout their post-harvest journey from grower to consumer. They looked at the flowers' sensitivity to ethylene

as well as to ethylene inhibitor AVB, a post-harvest conditioner developed by Chrysal.

An important discovery

The most important outcome of the survey is that at least four of the 25 cultivars – all of which are common European retail products – showed significant sensitivity to ethylene. 'This is an important discovery, as roses are not commonly considered to be ethylene-sensitive,' says FlowerWatch's Jeroen van der Hulst. 'Everyone knows carnations and lilies are, but no rose trader monitors ethylene concentrations in the transport, storage and sales environment. These outcome are remarkable and definitely warrant further investigation.'

Ripe fruit and combustion engines
Ethylene often comes from external sources; for instance, it can be produced by ripe fruit and combustion engines. In an enclosed area or under the influence of higher temperatures, concentrations can increase. Allowing trucks or other vehicles into rose storage areas thus is a major threat to sensitive rose varieties. Storing, transporting or even selling the flowers

near fruit – say, in a supermarket – can also have a disastrous effect on their quality. Inadequate cold chain management is another quality killer. However, ethylene can also be produced internally by flowers, particularly in response to temperature fluctuations and water stress. Says Van der Hulst, 'In several rose boxes, we found ethylene concentrations up to 2.6 ppm. We believe this ethylene did not come from external sources, but was produced by the roses themselves. Our measurements were not extensive enough for scientific qualification, but they clearly must be taken seriously.'

Poor opening, wilting, discolouring

The survey proves beyond doubt that ethylene is a factor rose traders must start taking into account. The most sensitive cultivars tested by FlowerWatch – Marie-Claire, Mariyo, Inka and Viva – suffered major quality loss even when exposed to relatively low concentrations of ethylene. Exposure had the following effects on the cultivars in question:

- Poor opening (some flowers opened in the shape of a star, while others failed to



open at all);

- Wilting (ethylene exposure led to premature wilting);
- (Purple) discolouring and loss of colour;
- Reduced vase life.

Vase life extended by 5 days

By contrast, roses protected against ethylene by preventive measures did not show any of these problems. Most importantly, their vase life increased by as much as five days. 'Our conclusion is that protection against ethylene simply means fewer consumers will be disappointed in their purchase and the ornamental value of the roses in question will go up,' says Van der Hulst. 'We believe this is an important discovery for the rose market. Recent research in the USA has shown similar outcomes, but none of the American studies involved European rose cultivars. This report has the highest relevance for the European market.'

An ethylene-free supply chain

FlowerWatch and Chrysal list the following measures for ensuring an ethylene-free supply chain:

- Keep roses away from fruit and foliage and from areas in which these have recently been stored;
- Keep trucks and other gasoline-fuelled vehicles out of rose storage facilities and auction halls;
- Do not use combustion engines or gas heating in rose cultivation or storage facilities;
- Ensure adequate and consistent cold chain management (avoiding warming);
- Subject sensitive roses to post-harvest treatment with an ethylene inhibitor, such as Chrysal AVB;
- Reduce the risk of internal ethylene production by ensuring the utmost care in handling and packaging flowers (minimise touching).

'The inclusion of AVB in the study is a significant detail, as different cultivars may respond differently to inhibitors,' says Van der Hulst. 'Its protective effects on carnations and lilies are widely known, but its effect on roses had never been



researched until now. Our study shows that conditioners like AVB are a viable option for rose traders. The active ingredient in AVB is silver thio sulfate. To reduce the negative environmental and health impact of silver, Chrysal has developed a neutralisation method by which most of the silver can be recovered prior to the disposal of any waste solution. 'If these products are used the way they are supposed to be, they are environmentally sound,' says Jeanet de Zeeuw, a technical consultant at Chrysal International BV. 'AVB is commercially available and registered as an approved post-harvest treatment product in Kenya. This means that, like other registered products, it is accepted within the MPS quality certification scheme for flower growers.'

Resistance and prevention

Overall, FlowerWatch draws two main conclusions from its research. Says Van der Hulst, 'First, the fact that some rose cultivars are sensitive to ethylene while others are not, means breeding and promoting resistant varieties makes good commercial sense. Second, as long as ethylene-sensitive varieties remain on the market, post-harvest handlers must take preventive measures to reduce damage and boost quality, vase life and overall flower value.'

Ethylene, a natural hormone

Ethylene is a hydrocarbon and a colourless, flammable gas with a faintly sweet smell. It is produced as a natural hormone by many different plants to regulate internal processes, such as ripening. Chemically manufactured ethylene is used in agriculture to accelerate ripening. Ripe fruit, in particular, produces a lot of ethylene and its production is increased if the fruit is damaged or stored in unfavourable conditions. For instance, high temperatures stimulate ethylene production, shortening the storage life of the fruit or plant in question.

As ethylene is a gas, its easily spreads from its source.

This means that adequate management of ethylene levels throughout the post-harvest life of roses, or other flowers and plants, will result in fresher, longer lasting products. Different plant species produce different levels of ethylene under different conditions. Research into these effects is ongoing in many areas of horticulture.

Web links: www.flowerwatch.com
www.chrysal.nl

Plant Breeding and Plant Breeders' Rights

Plant breeding is the art and science of developing new, better performing and valuable plant varieties using existing ones. Novelty may include properties such as yield, quality, resistance to biotic and abiotic stresses, as well as attractive appearance as in ornamental crops among other desired traits. A breeder records progress if the material provided by plant genetic resources varies from the one he/she succeeds in selecting. Alternatively, the breeder must create this variation through cross breeding or genetic manipulation (for examples genetic engineering).

The plant Breeders Rights give the breeder the monopoly, as far as propagating material of his variety is concerned, to:

- a) Produce or reproduce (multiplication)
- b) Conditioning for the purpose of selling propagation materials
- c) Offering for sale
- d) Selling or other marketing activities
- e) Exporting
- f) Importing

No one is allowed to carry out any of the above activities without the express authorization subject to conditions and limitations. This authorization is normally given in instruments like licensing agreements and contracts to produce or market the variety. The agreements can either be a one-payment on purchase of planting material, or royalty is paid for example per unit of production such as per hectare, or per harvested material.

Every breeder will choose his preferred method. It should be pointed out that it is an offence to commercially exploit a variety without the express permission of the breeder. There are, however, exceptions to the Breeders Rights.

The rights do not extend to:

- a) Acts done privately and for non-commercial purposes.
- b) Acts for experimental purposes and
- c) Acts for the purpose of breeding other varieties.

Protected varieties are therefore available for breeding other varieties, so long as the resultant variety is distinct from the protected variety. These exceptions ensure that breeding is not hampered by protection. The non-commercial utilization

of the variety allows the so called 'farmers rights' which permit farmers to use or saving planting material of the protected variety. It must, however, be stressed that this is strictly for non-commercial utilization only.

Compulsory Licensing

Award of the Plant Breeders Rights is a contract between the breeders and users that the variety will be provided in adequate quantities. In a way, the State guarantees this through the grant. If the breeder fails to provide the variety in adequate quantities, then there is a possibility of authorizing a third party to undertake to provide this material through what is known as a "compulsory" licence, so long as the breeder's interest is taken care of.

A compulsory licence is only given if the breeder despite having been informed of the shortfall still does not correct it after a given period of time. The breeder is then adequately remunerated for use of his variety by the holder of the compulsory licence.

Additionally, any breeder awarded a grant of rights is required to maintain the variety in the true form as originally protected, at all times. Failure to do this can result in the revocation of the grant. Infringing the Breeders Rights is actionable at the suit of the holder of rights. He will be entitled to all such relief by way of damages, injunction and interdict or otherwise as available for other proprietary rights.

The role of the regulatory body is to provide evidence to the effect that the variety is duly protected and can be identified as the subject of infringement. It

is also a requirement that all applications for plant breeders rights, award of grant, cancellation or withdrawal of grants for rights, change in name among others, are published to bring to the attention of the public such information.

This allows for comments and objections to any of these acts, by the public or other interested parties. All stakeholders are therefore encouraged to examine the contents of such publications and make comments.

State of Plant Variety Protection in Kenya

The Plant Variety Protection Office was established in Kenya in 1997, and is governed by the Seeds and Plant Varieties Act, of 1972 (Cap 326) of the Laws of Kenya. This Act was revised in 1991, while the official regulations to guide the Variety Protection Services were gazetted in 1994. Given developments in plant breeding and the importance of agriculture in world trade, it is necessary to revise the Act to be in line with the present situation.

Since operationalization of the plant variety protection office, a number of applications had been received. Applications by local breeders constitute close to 45 per cent (mainly food and industrial crops) while the foreign applications (55 per cent) are mainly horticultural. Ornamental crops (floricultural) constitute the majority of all applications.

To-date, many grants have already been issued and more will be issued after some outstanding legal issues have been sorted out. The high number of local applications corresponded to increased awareness creation amongst the breeders.

Amiran Kenya And Sineria Industries Ltd Partner To Introduce A New Approach To Modern Pest Management Through An Efficient

'Biopesticide Range'



Amiran Bio-pesticide range of flowers

Through the years, Amiran has offered complete solutions that ensure farmers experience the best possible harvest and this year the company is partnering with EU company- Sineria Industries Ltd to introduce into the Kenyan floricultural and horticultural industry a range of effective, safe generation products under the Biochemical pesticides namely; Levo 2.4SL, SAF-T-Side, BotaniGard ES and Bio T Plus WP.

The bio-pesticidal range are IPM Compliant product; an approved input by major supermarkets in Europe as a pest control product which can be used on fresh produce such as various fresh herbs, ornamentals and vegetables imported to Europe from East Africa.

Levo 2.4SL, offers a broad spectrum activity on Diamond Back Moth, Aphids, Thrips, Spidermites, White Flies and Lepidopteran pests on ornamentals and Vegetables. Levo 2.4SL is produced from wild medicinal plant. It has an outstanding mode of action producing prosuler oxymatrine which is a stomach poison insecticide having antifeeding and repelling activity on pests. The Prosuler Oxymatrine could in most occurrences also stimulate growth of the plant. By using the product, farmers can expect to note a reduction of pests with a single application, no residual on the crop, effective prevention of pest occurrence, decrease in pest resistance risk, and better their yields all to which contribute in the improvement of the harvested crop. The product gives farmers the value for their money by reducing the chances of loss caused by destruction of pest.

SAF-T- Side is highly refined and low aromatic oil that provides effective pest control in

a broad range of crops and ornamentals. SAF-T-Side acts as a suffocating agent with its small particles that penetrate the insects and mites respiratory system thus blocking the air ducts (trachea) and depriving them the necessary oxygen for their survival. The top quality oil is proven to interfere with the pest's cuticle through a detergent effect. The unique formula in SAF-T-Side that dissolves the soft segment makes the Amiran distributed product more effective in killing insects by blocking normal exchange gaseous of the eggs through the external membrane wall, hardening the same wall thus affecting hatching and general interference of normal embryonic development. SAF- T-Side dilutes with both hard and soft water easier and more thoroughly than conventional spray oils, while ensuring that the application is consistent from the beginning of application to the end. Its small oil droplets ensure a uniform foliar coverage, providing the widest spectrum of control on all development stages of soft body insects and mites.

BotaniGard ES is in a class of its own and cannot be compared with any other Beauveria bassiana based in the market. Based on the GHA strain, its novel and unique formulation (CDS), high spore concentration (2x 10¹² UFC/Quart), stability (2year shelf life at room temperature), viability and proven performance, makes the product more than just a mycoinsecticide (a preparation of entomopathogenic fungi used to kill insects). BotaniGard has been tested against a large number of pest with trials demonstrating its effectiveness on adults and larval stages of target pests. Significant decrease in pest population is often seen one week after initiating application programme. Amiran and Sineria advice that if a farmer has a heavy infestation, one can combine BotaniGard with a chemical adulticide to get an initial knockdown or increase spray frequency to a 3 to 5 day cycle.

Bio T Plus is a biological insecticide formulated from a strain of Bacillus Thuringiensis var Kurstaki which controls thrips and caterpillars in beans. The product is sprayed 1-3 times during the growing period



Amiran Bio-pesticide range of Vegetables.

of the crop especially during flowering and fruiting. Bio T Plus should be applied after detecting eggs of Lepidoptera pests during scouting. Application should be done in the evening for optimum efficiency.

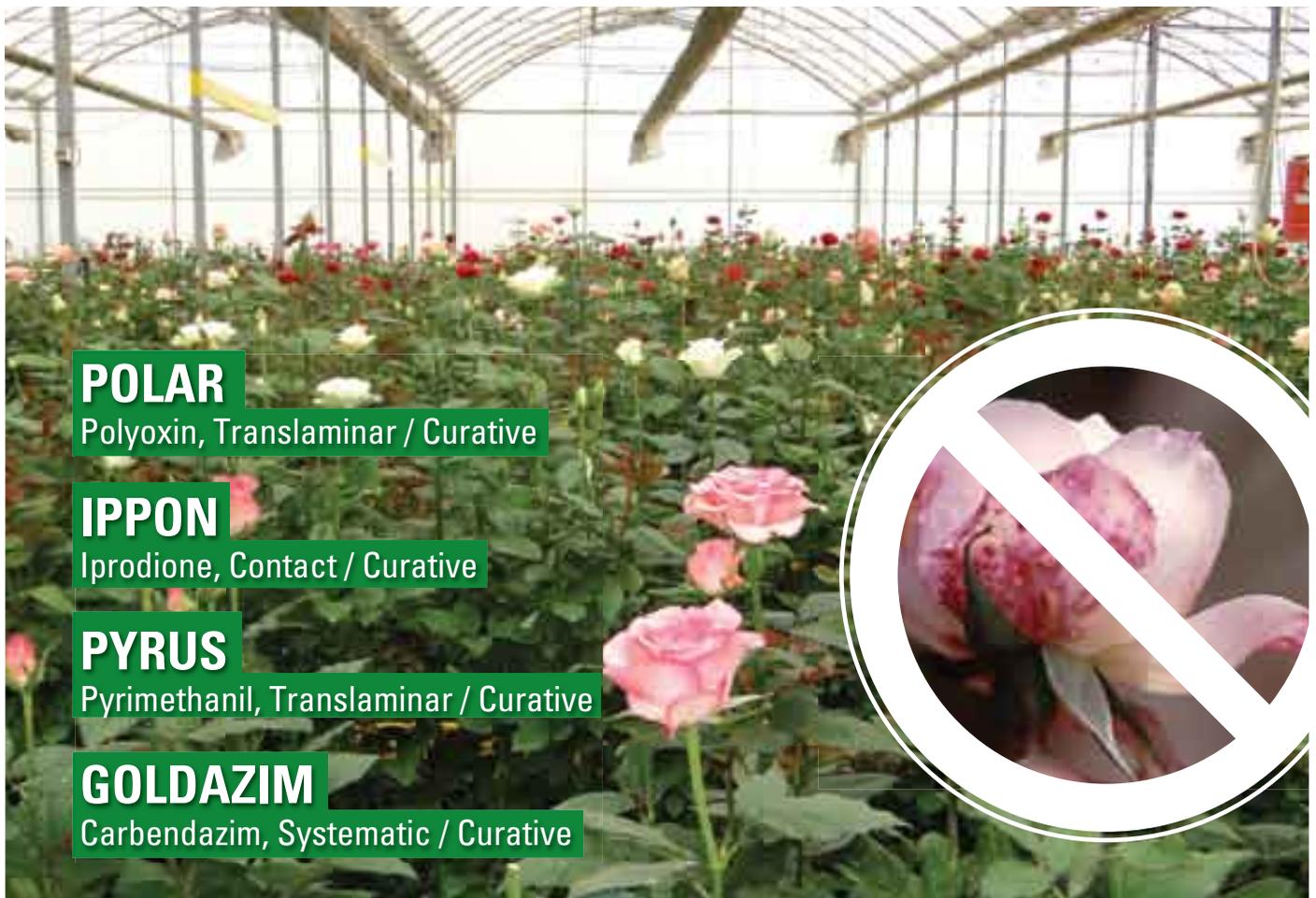
Speaking on how to effectively use of the Biopesticidal range, Sineria Industry Kenya Country Manager, Paul Kamote explains that Sineria Ltd has within the company a wealth of technical expertise to actively support all the products development and if necessary registration. Kamote adds that the technical team is in constant contact with various department and institution of Agriculture in EU, USA and other parts of the world, to ensure products being developed meets government approval, are environmentally safe and fits into a world standard.

We take great consideration that most of the emerging pest like Thrips, Mealybugs and Aphids especially in floriculture and use of Biologicals parasites call for highly compatible products that will guarantee control and preservation of the predators. These products from Amiran/Sineria offer the Kenyan farmers that flexibility.

Amiran's Head of the Agro-Division, Aviv Levi reveals that for plants to grow to their full potential there is need for farmers to invest in products that protect their crops. Levi states that as trade between Kenya and European countries expands, the floricultural sector has been challenged to grow more produce and still maintain the high international quality standards. This and more has been part of the reason why Amiran and Sineria Industry have come together to make farming a profitable and enjoyable experience for farmers through crop protection.



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The State of the Head Grower

All of the management positions in flower business contribute to the overall success of the operation. Perhaps none has a more direct hand in the ultimate quality of the company's product, however, than the head grower. It's a position that has evolved over time from skilled plantsman to grower, trainer, communicator, business manager and leader.

In a very casual way Florinews engaged four Grower's independently in one of the many cocktails hosted by agrochemical companies— Ken Mwenda, Kisima Flowers; Attanus Mutiso, Baraka Flowers; Ajay Singh, Kabuku Farm; and Peter Mutinda, Karen Roses — for their opinions on what the job is today, how growers can improve and how prospective head growers can prepare for the position.

Florinews: **What is the job of the head grower today? How has it changed over the years?**

Ken: In its simplest form, the head grower's responsibility is to finish a crop or set of crops according to schedule and to a set of harvest specifications. Those might be generated internally, externally or both. The head grower ensures customer expectations are met in terms of overall crop quality and quantity, often within a narrow time frame.

Attanus: I think it's a very broad prospect today. It includes not only growing but also crop modeling, production, scheduling and interaction with people. In my case I have 80 people reporting to me. So I don't only grow plants. I interact with people and I teach and train. Most importantly, I give them freedom to decide. In a big place like ours, you cannot do it all. You rely on the people on your team to come up with the ideas and come up with the execution. It is more guiding, nourishing, advising and leading them in the right direction rather than telling them hour to hour and day to day how to do their job.

Ajay: Apart from these core responsibilities, the head grower can be heavily involved in new product development, line extensions, employee development, operations management and strategic planning. As a head grower, I might be walking crops with section growers, facilitating cross-functional meetings around a specific topic, space and crop planning, and visiting with various suppliers and plant breeders.

Florinews: **Are there special skill sets that help make a good head grower?**

Ken: A good head grower has to have an openness to possibilities and an ability to be flexible and adaptable. He or she has to be a good listener and observant and proactive to situations as they develop. You need to be organized and a thorough and realistic thinker. A problem solver.

Attanus: Attention to detail is obviously important. You need to be an advocate for responsible change and continuous improvement. You need to be a solid communicator and have a willingness to learn from and listen to others.

Mutinda: I am extremely flexible. I am very willing to try new things. Each one of us has to have leadership skills. I have worked on a couple of continents and have learned to interact with different cultures and nationalities. That really helped me.

Ajay: You have to be able to get along with a lot of different personalities. You're dealing with truck drivers, salespeople, administrative people, offshore labor from different countries. You have to be able to interact with all of those people because at the end of the day you have to be able to grow good quality and deliver good quality flowers to your customer.

You can be the best grower in the world, but if you can't communicate with people you're not going to get anywhere. You'll get pigeonholed as somebody who's only good for holding a hose and watering plants because nobody can stand him. You have to be a people person as much as a plant person.

Florinews: **How much should a head grower be involved with the overall business beyond just focusing on growing a great crop?**

Ken: I believe strongly that the head grower should interact with all segments of the business and understand how their role and the decisions they make impact the overall organization. Flower Farms produce flowers, so it makes sense for the head grower to have a strong voice within the larger organization.

Attanus: The head grower should be an integral part of the operating team. Head growers today should have more and closer contact with sales and ownership, and more emphasis on customer contact and relationships — more involvement with the company's big picture needs and plans.

Ajay: I think it's imperative. It has to be a partnership. If a head grower isn't heavily invested in the company in all areas, it's not going to work. I have the best interest of the company in mind all the time. Everything is so linked to how we can grow flowers. You

have to be involved in labor decisions and looking at labor requirements. If you don't have enough people, things don't get done. You have to be working with people who purchase the pots and the tags because it can affect how things are grown. If someone buys a pot that doesn't have the right holes in the bottom, it can affect my crop.

Mutinda : Growing, scheduling, production, sales, labor — all those pieces need to become one. It makes a huge difference. All of my peers are up to speed on what the other departments are doing. I need to know what they're doing in order to get my job done. We have regular meetings with all the department heads. We are there to advise and to take the information and make it work for us.

Florinews : **How much of your day is spent training and communicating with your team as opposed to spending time in your crop?**

Ken : Sometimes you get people who come to work in the greenhouse and they say, "I love flowers." I always worry a little when I hear that. At the end of the day, we're a flower factory. To an owner, every one of these flowers on the floor is cash. You have to enjoy plants and enjoy growing them but you have to realize, the owner has invested in these flowers and you're managing his investment. It's my job to make sure everyone recognizes what's on the line. It's a big responsibility. I hate losing money. Every flower that dies, it's like you're just throwing away money.

Attanus: You do have to learn to work with people. It takes more than just knowing plants. Those are the people who are going to take your vision and execute it. It's very important. I would say it's 50-50 now. Before, if you knew how to grow plants you were fine. Now if you know how to grow the plants but you don't communicate with the rest of the team, or if you don't teach and coach, it just does not work.

Ajay : Apart from technical growing skills, it's critical that head growers understand how to relate to their employees in a positive and constructive way. Wherever possible, the head grower should challenge their employees, listen to their needs and concerns, and trust that they can make important crop-related decisions without direct oversight. Like other managers, they should spend a considerable amount of time on employee development and leadership. A confident, motivated and appreciated employee is one of the greatest assets that any company can possess.

Florinews : **How do you keep up with your own training and education? How do you get better at your job?**

Ken: In the old way of doing things, a grower would be in his crops and spend all day looking at his plants. Now, our industry has changed so much and there's so much to learn, you have to spend a decent amount of time behind a computer researching and eMailing back and forth with other growers to stay on top of things. I think that's equally important to being out in your crop. If you're not reading up on this kind of stuff, you're going to get behind.

Attanus: Some of my most important training has come through visiting with other growers and seeing how they handle similar challenges. I would encourage other growers to get out as often as possible to trade shows and to other nurseries, particularly those that are willing to share ideas and answer questions.

Ajay : There is so much you can do. Speak to various groups. Give presentations to customers and industry members to develop your speaking skills and comfort level. Write training manuals, care guides and articles. Attend trade talks and seminars. Get to know and learn from people more experienced and possibly smarter than you. Study cost accounting and business strategies. Travel with owners or sales people to meet and learn from others and their operations. Observe and listen to people in other areas of your company. Get the best understanding possible of what your company stands for and is trying to accomplish.

Florinews : **What advice would you have to help someone develop as a great head grower?**

Ken: Don't be afraid to ask for help or say, "I don't know." Be a "we" person and not a self promoter. Measure your success through the success of the company and others. Strive to do your very best but accept failures and learn from them. Be open, honest, fair and consistent with your thoughts, actions and words.

Attanus: You have to put in time. You can't just walk into a greenhouse with a horticulture degree and say, "I am qualified to be a head grower." I think you learn about 20 percent more every year. It's probably five years before you're capable of taking care of an area by yourself without any help. It may be 10 years before someone is fully qualified to be a head grower.

Ajay : You have to love your job. It is a very difficult position. You have to have the passion for growing and to figure out issues and challenges.

You cannot linger. With plants, you only have one shot. You cannot say, "Tomorrow is another day and I'll figure it out next week." With our market, everything has to be precisely timed and delivered on a specific day because of ads and requirements from the stores. You don't have much time to react. You have to be proactive. And work on management skills and working with people. Your team is the one that will deliver. It will not be you. Florinews.



Retail Division Director Quits DFG

particularly supermarkets and DIY centres.

His successor will be announced early next year. DFG will be adapting its organisation at the same time, after which the current Board of Directors (Marco van Zijverden, CEO, and Harry Brockhoff, CFO) will be running the company together with an Executive Committee. This committee will consist of Marco Vermeulen (Director Wholesale), Marcel Zandvliet (Director Marketing) and a Director Retail, still to be appointed.

After his departure in March, Salome has expressed the desire to focus more on his family and consultancy activities and to expand his volunteer work.

The Board of Directors is extremely

grateful to Henk Salome for his important contribution to the growth of the Dutch Flower Group companies and strengthening the horticultural sector in the Netherlands.

Dutch Flower Group is a worldwide family of 30 trading companies. Together they lead the import, export, trade and market development of cut flowers, bouquets, decorative greens and plants. They supply to both specialist traders (florists) via wholesalers and multiple retailers (supermarkets, DIY stores and garden centres).

Together with its 2000 employees, Dutch Flower Group achieved a turnover of € 1,2 billion in 2013, exporting to 60 countries worldwide.

After a 30-year career within Van Duyn Group and later Dutch Flower Group (DFG), Henk Salome, will be resigning from his position at the end of March 2014. Salome, 59, is currently Retail Division Director within DFG and is responsible for the eight companies in the Netherlands and UK that focus on large-scale retail,



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Arysta LifeScience



Arysta LifeScience

Holds Seminar for Growers.

If you ask Arysta LifeScience management what is the main difference between their company's business model and that of most other players in the market for Agrochemicals, they will answer "While the traditional business model in this market is product driven and supply-pushed, ours is the exact opposite: Customer-driven, demand-pulled". While Arysta LifeScience is certainly not the only company to have such business model, it is true that this is their business model, reflected in their strategy and moves in the market. With a focus on emerging countries and niche markets, Arysta LifeScience manages a portfolio of more than 200 active ingredients.

In a well attended seminar on their products, this was well seen. Speaking to the growers, Mr. Hildo Brilleman, Managing Director - Arysta East Africa, said, "Arysta LifeScience Corporation is focused on helping its customers cultivate business growth through the development, marketing and distribution of innovative, high quality chemical and non-chemical solutions for today's dynamic agrosience and health & nutrition science marketplace".

The start of the seminar focused on two trusted fungal control products that have been in the Kenyan ornamental market for some time. Mr. Brilleman highlighted that Domark (tetraconazole) is one of the few triazoles without the stunting effect while delivering excellent powdery mildew control. Bellkute was highlighted as a strong tool in control and resistance management of botrytis and powdery mildew.

In addition to this trusted fungicides, Mr. Brilleman said, the company has recently moved into Biostimulants and Value Added Nutrients to better reflect their focus in marketing products that can generate higher crop yield and marketable quality through metabolism stimulation, nutritional optimization and other noticeable effects such as resistance to abiotic stress that could improve crop profitability. Arysta has a significant position on the global market for Biostimulants and Value-added Nutrients and is now introducing three of their leading products into the Kenyan market: Pilatus for root establishment, Foltron for vegetative growth stimulation and Biozyme for flowering and fruit setting.

The guest speaker Mr. Fred Okinda took us through BIOZYME, a unique formulation developed to influence plant nutrient uptake that enhances fruit set, fruit numbers, fruit quality and general crop performance. BIOZYME was developed for the demanding high yielding crop system that requires better quality and higher yield. In ornamentals, Biozyme has a consistent track record to improve number of stems, stem length and bud size.

BIOZYME is a bio-stimulant that combines the power of natural plant extracts and naturally occurring macro and micronutrients to enhance crop performance and physiological processes in crops and plants. It provides better and more uniform fruit and flower development under high crop demanding situations. It also enhances fruit quality parameters in vegetables and fruit crops such as total soluble solid content (Brix level), carbohydrate content, increases sugar and flavor, and increase antioxidant and vitamins levels. Its balanced-composition gives its unique and innovative properties that propel and stimulate plant growth, plant nutrition uptake, fruit development and consequently better yield performance. Biozyme has been extensively tested and has been a research target in more than 50 peer reviewed, scientific studies. Its consistent track record sets Biozyme apart in the Biostimulant market.

BIOZYME can be applied before and/or during flowering, fruit setting and fruit growth as a foliar spray. It is a safe-to-use product and is not phytotoxic. The application ensures required plant nutrients that optimize fruit setting and activates the growth of bigger and tender fruits. In roses, it has proven its performance at 2 times 1 lts/ha applied at 14 days after flush and then repeated 14 days after the first application.

BIOZYME increases the capacity of the plant to uptake essential nutrients resulting in increasing number of flower buds and improves flower setting, total number of fruits per plant enhancing the size, uniformity and quality of fruits.

Speaking during the seminar, Mr. Aviv Levi of Amiran Kenya Ltd, Arysta's distribution partner said that the Biostimulant range of Arysta LifeScience is a great addition to range of Ag inputs Amiran carries to satisfy the needs of its customers to continuously improve the yield and quality of their crops.

Crop Protection

Growers who have suffered severe losses from powdery mildew will have learned to carefully watch the weather and will not greet overcast days with a smile. powdery mildew is the most devastating disease of roses, as it seems to develop into epidemic proportions almost overnight, with, with huge economic impact. Epidemic of this kind, however, are a result of poor control in the past; it is not only systemic, but can also remain dormant on crop debris and on the stems of rose plants during periods when the weather is not conducive to disease expression. This is why it is possible to predict where powdery mildew can begin again.

By Peter Mutinda.

Production Manager Karen Roses

Powdery Mildew Blues

The farmers' constant nuisance Powdery mildew has since time immemorial wrecked havoc to the farmers and still with the modern science continues to be an headache among farming communities, dare ask a Rose grower, cucumber, mango, strawberry to name but a few, which disease consumes their time, labor and resources more, surely he/she will not forget powdery mildew.

Description

Powdery mildew refers to the grayish white powder like mart that form on plant surface tissues. It is rated as one of the most widespread fungal problem both in green house and outdoor crops. Floriculture farmers fight the disease all year round. The disease in roses affects leaves, stems, flower buds, sepals, petals and young shoots however new shoots being more susceptible to infection and weak areas such as the flower neck.. Older leaves may not be affected but purplish blotches are observed underneath. Young leaves, buds become distorted and may easily drop or severely get deformed.

Cause

A pathogenic fungus called *Sphaerotheca pannosa* var. *rosae* is responsible for the disease in roses. In green house inoculums exists as conidia's formed on conidiophores. Once conditions are favorable conidia will germinate on leave surface and send a feeding structure called haustoria in to the epidermal cells and extract nutrition. When conditions are not favorable powdery spores survive as structures called cleistothecia on old pant debris, stem junctions thorn base, buds etc, on getting slight moisture cleistothecia crack releasing ascus with ascospores that float in their causing infection.

When is the disease more prevalent?

Powdery attacks are common when cloudy night conditions are precede by warm dry days however it is a serious problem in crop undergoing water stress. Farmers refer it as a disease of the dry season since less moisture is required to trigger spore germination.

The best conditions for production, maturation, release spread, germination and infection of Conidiospores in the green house is repeated alternation of warm day temperatures (21-28) degrees, Relative humidity (40-70%), and cool (6-17) degrees and humid nights (90-99%).

Management

Powdery mildew management is a bit tricky especially when growing particularly roses in a location that frequently experiences the right disease development conditions. Various methods are employed; however experience plays a role in every particular environment.



Crop Protection



Powdery Mildew on roses

A proper understanding of the disease cycle is never an option but a must, when and how the weather changes in the that region, Varieties grown and their sensitivity to the disease, the growing structure and orientation, thorough technical knowledge of various chemical products available for intervention and their mode of action.

Crop nutrition.

Proper feeding is the beginning of powdery mildew control. All plant nutrients being fully availed in the right quantities and proportions. Calcium being necessary for structural formation (cell walls) is very important for resistance to disease entry.

Soil reaction (PH) being the key to nutrient availability, for roses should remain 5.5-6.5, enough water in concomitant with nutrients should ensure no stress experienced.

Proper planting and spacing is necessary for free air circulation hence no dead air pockets may occur at night under all cost, wetting foliage should be avoided as this reduces leaf cuticle hence making it prone to infection.

What are the Challenges

Powdery mildew has been and continues to pose a great challenge to the rose flower grower because of

many factors,

- Nearly all rose growing areas in Kenya and the tropics experience windy conditions throughout the year, a vital tool for spread of the inoculums especially the low altitude zones and plateaus.
- Market demand of varieties that are less resistant to the disease pushing farmers to plant and tap the premium prices offered.
- High cost of hiring well trained personnel, some farmers end up hiring illiterate or semi illiterate teams to bring down the cost of labor and hence compromise the whole issue.
- Improper feeding resulting from use of cheap, poor quality fertilizers leading to insufficient nutrients.
- Good quality fungicides in the market being beyond the reach of most farmers thus force new growers to end up using inferior products whose efficacy is wanting.
- Green house structure. Most structures used for growing are poorly build with no provision for climate control causing drought and hence exacerbating the spread.
- Pressure from the various market organizations demanding on exclusion some of the best fungicide molecules narrowing the range of alternatives.



Powdery Mildew on cucumber leaf

Powdery Mildew Conquered at Last

Kenya's rose growers for pesticide residues on imported flowers. They are now demanding a proactive strategy to reduce pesticide residues.

Fungicides are the most commonly used chemicals on flower crops. An effective IPM programme for diseases will meet the demands of European supermarkets for a reduction in residues.

Powdery mildew is one of the grower's most serious problems. This is as a result of Powdery mildew developing resistance to a number of chemical fungicides hence becoming a year round problem! It would be good to have a crop protection programme that sorts out this problem.

Real IPM (Kenya) Ltd has a lasting Solution with the new bio-fungicide, Real Bacillus subtilis, which is PCPB Registered for the control of powdery mildew in roses. Industry leaders, who have tested Real Bacillus subtilis, can confirm significant improvements in powdery mildew control and suppression of Botrytis too.

The Real IPM powdery mildew programme, rotates Real Bacillus subtilis with conventional fungicides.

This will reduce fungicide applications by up to fifty percent, since every other spray will be a Real Bacillus subtilis spray.

Real Bacillus subtilis is a beneficial Kenyan microbe, which competes with a range of fungal pathogens, including powdery mildew. It is also a bio-fertiliser.

It is sprayed on the crop in the same way as any chemical pesticide and can even be tank-mixed with either insecticides or fungicides, so very easy to use.

Resistance Management Workshops

Real IPM provides training, eligible for the Directorate of Industrial Training rebates, in Resistance Management. This 2-day course enables growers to design a resistance management programme for pesticides by using a predominantly biological crop protection programme and careful integration of pesticides from alternating IRAC or FRAC groups.

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Manager of the Month



Mr. Wilfred Muthamia

Briefly discuss Wilfred Muthamia (background and chief agronomist Amiran Kenya Ltd)

I was brought up in a farming community and had keen interest in Agriculture since my early childhood. For instance I headed the 4K club (Kungana, kufanya, kusaidia Kenya) where we practiced vegetable growing and rabbit keeping.

In secondary school I was the treasurer of the Young farmers club. We grew and sold cabbages to our School. Later on, I joined The University of Nairobi where I studied and graduated with BSc in Agriculture and MSc in Horticulture.

Due to my strong passion for teaching Agriculture, I proceeded to Egerton University and

graduated with Post Graduate Diploma in Education (PGDE) in 1996. I briefly taught at Kenya Polytechnic (Currently Kenya Polytechnic University College) and Jomo Kenyatta University of Agriculture and Technology. After this I developed interest in Agrochemicals and quit formal teaching for venture into sales and product development at Farmchem Ltd.

In 2003 I joined Twiga Uganda Ltd as the Agriculture Manager, where I worked for 4 years and later on came back to Kenya and joined Amiran (K) Ltd as the chief Agronomist, the post I hold to date.

How would you describe your time as the Chief Agronomist/ Business Development Manager at Amiran? Are you passionate about what you do?

It is very interesting! Am very passionate working with farmers. My greatest satisfaction is satisfying our customer needs. Almost every day there are myriad of technical issues which land on my desk. Amiran is a one stop shop for all technical queries, even regarding other companies product land here and we have to assist all our customers regardless of which product they want.

I spend 50% of my time in the office and 50% in the field. This is so because I believe you should never tell anybody to do something which you yourself you can't do. So I have to lead from the front when it comes to farm demonstrations, farm visits and trainings, stockiest trainings etc.

Time wise, I'm always constrained and have to work extra hours.

What is your vision for Amiran Kenya Ltd? What are your top priorities?

My vision for Amiran Kenya Ltd is to have the company operate/ assist all farmers all over the Region. Previously our interest was only in high agricultural potential areas but of late with the introduction of Amiran Farmers kit (AFK) we are all over the country and our kits will be seen as far as Garissa, Wajir, Mandera and even in Turkana. Currently we are exporting tunnels to Uganda, Tanzania, West African states and South African states such as Lesotho which means that we are no longer a local company but a Global one.

In short my priorities are: to have Amiran operating all over the country in all the crop segments and shape the Kenyan crop market the same way we did with floriculture while at the same making sure that our environment is protected.

In a nutshell describe Amiran Kenya Ltd products and services to the farmer

Amiran (k) Ltd is a one stop shop for farmers. This means that one will get virtually anything that is required in farming ranging from Seeds, Agrochemicals, fertilizers, Green houses, Irrigation equipments, Shade nets, Plastic covers to Pruning saws and secateurs.

All these are backed up by a team of very technically qualified staff. We have a work force of more than 100 personnel in the field who are in constant touch with our farmers advising them what to do, which chemical or fertilizer to apply and at what stage. At the same time we have a team of equally qualified staff in the office that is charged with all technical issues. We also have a very efficient customer service department that disperses the order within 24 hrs after its receipt. Our trucks are always on the road, no wonder when we were starting small scale business, wherever we asked farmers who Amiran is, they responded that it is a transporting company just like Roy transporters.

To sum it up 'we offer complete solution for the best crop production'

Briefly discuss the Amiran Kenya Ltd team?

Effective. Amiran (k) is a large family. Just as I mentioned above we have office and field staff who are grouped in the following Departments: Chemicals, Fertilizers and Seeds, Green Houses, Irrigation Equipments, Communication and Amiran Farmers Kit. All these departments work in tandem with each other so as to ensure maximum efficiency in our service delivery.

For the last one year we have seen a more aggressive Amiran Kenya Ltd launching more products, what can you attribute this to?

This can be attributed to hard work of the Technical department whose core responsibility is product sourcing and registration. We are in constant touch with manufacturers and suppliers all over the world and that is how we manage to roll out new products all the time. Recently, we launched new products namely Sphinx Extra, Rimon Supra, Saf-T-side and very soon we will be launching our new powdery fungicide Cyflamid, in conjunction with Mura Agroconsultancy among very many other products.

In our last discussion you hinted that you're looking to expand into Biologicals and Seeds, what are the factors that you're considering in making that choice?

The Agrochemical business is very fluid; it's always changing all the time. New requirements are being demanded by the market. For instance the Maximum Residue Levels (MRL's) and consequently Pre- Harvest Intervals (PHI) and Re- Entry Intervals (REI) have posed a big challenge in the way we have been operating. As the saying goes 'when the going gets tough the tough gets going' we have to keep on going and thus how we are re-engineering ourselves with modern, safe and very effective biological products such as Levo, Phytoprotect, Botanigard and Bio-T. Our seeds department was very small but of late it has grown tremendously. We have added a lot of hybrid seeds from Hazera Genetics, Israel and whoever is in melon knows Amiran by the name Lahart F1, sweet melon Garlia F1, Onions Sivan F1, RougeF1 and Russet F1 not forgetting cabbage Landini F1 and Taurus F1.



Where do you think the most significant growth will occur in the company in the next few years? What new competition are you expecting then?

Our most significant growth in future is expected in biological products and vegetable seeds. In the small scale business we are opening the market by building training centres like the ones in Oloitoktok and Meru to train farmers on best practices in crop production.

Ethical competition is always a key driver of business. Thus we expect challenges from the current existing companies and upcoming ones. The solution is to keep a head of competition through creating/ developing new products, continuous modification and keep on improving and run our SWOT analysis all the time.

What's the biggest challenge YOU feel your company faces, and how do you inspire your colleagues to meet it head on?

The biggest challenge is how to handle the shrinking market. Currently the number of products being registered is growing rapidly. The area under farming is more or less constant, sometimes even declining wherever there is a drought. Our strategy in Amiran is to spread in arid and semi- arid areas with modern irrigation technology and not to rely on rain fed agriculture.

Where do you see the agrochemical sector globally in the next 5 and 10 years from now? How are you prepared for this change in the industry?

Over the last two decades patented products contributed more than 60% of agrochemicals sold in the country. However with the opening of Far East markets, Generic products have entered the market with a loud bang. Thus in the next 5-10 years I expect the tables to turn upside down and generic products will contribute over 60% and original, proprietary products will be less than 40%.

That means enormous price reductions are expected in the market and the worst price wars are set to come in. Thus although the consumption of Agrochemicals is set to go up due to new areas that will be opened I don't expect huge growth in Kenyan market on overall monetary values.

What is your personal work ethic, and how does this affect the company culture?

My work ethics is very simple and clear i.e. 'Never ever tell anyone to do what you can't do'. In other word I have to lead from the front. I believe this is the mother of team work because everybody is encouraged to participate. In other words we work like colleagues and not boss versus juniors.

What decisions have you made in your career that you look back on feel where mistakes?

Slow progress in registering products earlier on and late entry into the small scale market. Now the rules have become tougher and it requires more resources, time and energy to register a product. The small scale business has also become more competitive hence more investments are needed.

What have you learned from them?

The earlier bad catches the worm but it is better late than never.

What are the 3 most pivotal moments in your career that you either learned from and/or that got you where you are?

My first industry employment, work ethics were inculcated in one being. The key thing being speed, precision and integrity in all aspects of life.

My visit to Israel enlightened me on the need for technological change and determination to excel in very difficult environments.

My post in Uganda was a learning experience for it was a totally new environment and everything was completely different from t Kenya. I learnt how to cope with new environments and learned international trade, right from imports, sales, collections, credit managements etc.

Describe your ordinary day? Do you still have enough personal time?

Very busy and Monday to Friday is very hectic. Personal time usually over the weekends.

Give your final comments.

One needs to strive to excel. The success should not be measured by the profits made by one or a company but the impact made on mankind. Let's all strive to make Kenya a food sufficient country and have excess to export. Let's make Kenya a good country to live in.



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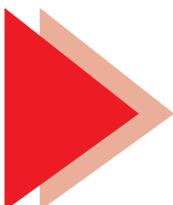


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Solar Powered Greenhouse Project At Olij Farm, Naivasha.

The Kenya unit is a model to train and develop similar projects in Ethiopia, Tanzania and Uganda to put Eastern Africa under solar energy.

The new greenhouse solar energy model enables collection and storage of power in batteries for continued supply for heating and lighting. The project is expected to reduce reliance on the costly hydro power and drive the flower industry towards sustainability at a time when the world is increasingly leaning on green energy to mop up carbon emissions to reduce global warming.

November 4, 2013. A solar-powered greenhouse was opened in Kenya as a demonstration site for harnessing the sun to run the high energy consuming flower business. According to the Dutch Minister for Foreign Trade and Development Cooperation, Lilianne Ploumen who commissioned the project at Olij farm in Naivasha, the development is expected to reduce reliance on the costly hydro power and drive the flower industry towards sustainability at a time when the world is increasingly leaning on green energy to mop up carbon emissions to reduce global warming.

The programme, an initiative of a consortium of Dutch agriculture technology companies under the umbrella of Green Farming initiative came a month after the launch of the Carbon Reduction and Opportunities Toolkit (CaRROT), a mechanism that enables growers to capture data on how much energy and water is used in the production process to monitor emissions.

The Kenya Flower Council CEO Jane Ngige said using solar to power greenhouses falls within the CaRROT programme

and will enhance the saleability of the country's flowers as the sector seeks markets sustainability through profiling its produce as grown in a low carbon emitting environment. "This data proves that our flowers, despite being air freighted emit less carbon than those produced in Europe and this is useful for markets sustainability and better prices", she said.

Unlike the earlier greenhouse solar energy project at Bilashaka flower farm, the new one has been constructed with the latest technology that enables collection and storage of power in batteries for continued supply for heating and lighting according to Martin Helmich, export director of Hoogendoorn, the firm that has constructed the project.

The Kenya unit is a model to train and develop similar projects in Ethiopia, Tanzania and Uganda to put Eastern Africa under solar energy. He said unlike in the past when costly panels discouraged adoption of solar energy, the new technology is cheaper and pays back in about two years. In addition, since the power so generated is off the national grid, farms are spared the pain of frequent power outages while saving on utility bills, estimated at 40 per cent (savings).

Other green energy powered farms in the country include the geothermal greenhouse at Oserian and flower waste energy projects at Simbi Roses in Thika and PJ Dave in Isinya, Kajiado. The latter have been developed with the Ministry of Energy on a pilot basis and results released four months ago indicated that flower waste can generate clean energy.

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How to do a Good Spray Programme

Informing, advising and debating in order to improve the quality productivity of our floriculture sector in the region. That is the aim of Floriculture Magazine. With new molecules been registered into the country yearly and the agrochemical market in full swing, growers are taking a renewed interest in crop protection. To quench your thirst on safe and effective use of agrochemicals, meet EVA PAMBA. She will be running a column christened the Plant Doctor. In this issue she has picked a key area and will talk direct to the people who draw spray programs in your farms.

Briefly discuss the choice of a good, safe and effective insecticide in a spray program.

Be sure to use suitable chemicals rather than just familiar ones. When choosing a chemical several factors are important – not just price alone. Is it effective against that pest/disease? Its mode of action? WHO classification? MPS/Kenya flower council coding? Will the with-holding period or other safety issues fit with your harvesting schedule? Can it cause any damage to the crop? Will it kill beneficial insects you are trying to protect? Do you know how to use the chemical to its full effectiveness? Do you have the right equipment and application methods for that chemical? Is it legal to use it on your crop?

How do you handle the different chemical groups?

Rotate products basing on chemical group /target sites in case in the same chemical group but no cross resistance known. Check with FRAC /IRAC the comments on resistance (High, medium or Low resistance risk). Rotation of the Chemical Groups should be done every 2-3 sprays. This will manage the threat of insecticide resistance. These procedures will help to reduce the risk of increasing the level of resistant insects in the pest populations. You must have a chemical group rotation plan which you must follow religiously. You must also ensure that the chemical is correctly mixed and used under the right conditions (additives (+/-), temperature, pest threshold level etc.). When spraying, Make sure that you get good coverage to get the maximum kill and do not spray more often than you need to. Spray interval range from 3-7 days depending on the level of infection and infestation which is a function of weather.

When do you spray?

The grower must spray when Pest/Disease pressure is not too high. In this, you must follow all requirements of effective insecticide application, taking careful note of the different application requirements of some chemicals. Crop monitoring and insect scouting will inform you when the pests have reached a level where spraying is required. To reap maximum profit, the grower must follow the requirements of effective insecticide application. The grower must select an insecticide from the right chemical group according to the chemical rotation plan.

When spraying one should follow all important legal and safety requirements (e.g. protective gear, re-entry time and with-holding period from spray to next pick). For maximum benefits the grower should examine and closely follow all guidelines for effective use

of the chemical (e.g. use of a wetting agent if required, avoidance of high temperatures etc.), ensure mixing of the correct rate and volume for the crop and pest. One should avoid using any other additives in the tank mix unless certain that it is a safe and effective combination. Application must be done promptly and at the best time of day for a good kill - usually morning or late afternoon. Head of sprays must check pH of the mixture before adding the chemical to make sure it is between 6.0 and 8.0 (6.5 is best) and also find out how long it should take the chemical to work (minutes or days).

The grower must apply the chemical to achieve good coverage by making sure the spray equipment is calibrated to deliver the correct volume for the crop area and growth stage and that the jets and pressure setting are delivering the right droplet size and penetration to get good coverage. The movement of the spray nozzles must achieve good coverage from top to bottom, between plants and under leaves. The sprayer must avoid run off with most chemicals as this often leads to leaf burn and can actually leave less chemical on the leaf for insects! General rule is from 6.30 to 10 am and 2 to 3.30 pm depending on the weather condition. Make sure there is ample time for crop foliage to dry before night to avoid outbreak of foliar diseases. Thrips, caterpillars, aphids should be sprayed between 8-10.30 when they are active.

What should I consider when spraying?

Grower must take into consideration the weather Pattern. Disease / Pest Cycles are a times linked to the ecological prevailing weather conditions. Incorporation of protective measures is a key factor to delay or lower the Disease/Insect pressures. Cultural Practices should also be incorporated like proper Hygiene, crop rotation etc. Target pest/disease and Spray Volume is a key factor. Spray volume/Crop canopy ie: 3000lit mites, 1500lit Powdery Mildew, 800lit Botrytis, 1500lit Downy Mildew, Insects 2000-2500lit/Ha. The grower should also consider drift effect. In case you are spraying Herbicides make sure that the adjacent crops are safe to avoid damage.

What precautions should I take after spraying?

The grower must check plants after spraying to confirm the effectiveness of the spray application. This is done by comparing before and after spray pest numbers. You also need to check fruit, leaves and flowers for a comparison of pest numbers in 1-3 days depending on how long the chemical takes to work. Then finally check sticky traps twice over the next week for pest build up (at 2 and 5 days). Re-entry interval is also a key element.

Nitrogen Can Improve Production in Africa

Horticultural farmers in Africa should use fertilisers like nitrogen to enhance yields, say scientists. Declining soil fertility and dwindling farmlands are at the moment limiting production and export of crops in Africa.

The scientists were speaking at an agricultural research symposium of the International Nitrogen Initiative (INI) in Uganda. Researchers at the School of Agriculture and Environmental Sciences of Makerere University are particularly promoting the use of rhizobia as part of a nitrogen fixation process on farms to increase crop production.

According to Dr John Steven Waswa of Makerere University, scientists have been producing rhizobia which is sold to farmers interested in improving soil nutrients. The fertiliser does well with crops like beans, peas, ground nuts and

green grams among others. "We have also supplied the product to farmers in Western Kenya and Rwanda where we sell packets to use for one acre of land," Dr Wassawa said. The chairperson of INI, Mr Mark Sutton, stressed the importance of scientists discussing challenges faced by African farmers arising from lack of soil nutrients, so they can be addressed.

According to Komayombi Bulegeya, commissioner for crop protection of the Ugandan Ministry of Agriculture, about 87 per cent of Uganda's soil nutrients are lost every year through soil erosion and other mechanisms that degrade the environment.

"Our farmers use less than one kilogramme of fertilisers per hectare every year which is far below the recommended nine kilogrammes", he said.

Courtesy: HortiBiz

Neonicotinoids(NNI) Repeive

The Kenya/Global horticultural industry has got a reprieve concerning the EU intended ban on neonicotinoids(NNI). This has now been downgraded to a restriction, whereby the use of NNI shall be monitored and impacts evaluated with effect from November 1, 2013 for the next two years. These initially was to affect three molecules, namely Clothianidin (A metabolite of Thiamethoxam) ,Imidacloprid and Thiamethoxam.

The summary of the notice is as below:

1. Directive 9/414/EEC affects three NNI , namely Clothianidin,Imidacloprid and Thiamethoxam, because of their perceived potential impact on bees(CCD).
2. Foliar or soil treatment for greenhouse crops is not prohibited.
3. Foliar and soil treatment is prohibited for crops and cereals attractive to bees but this excludes greenhouse crops and winter cereals.
4. Crops harvested before flowering are considered not attractive to bees.
5. However, seeds treatment with the three NNI is prohibited for crops that are attractive to bees except for winter cereals and seeds to be used in greenhouses

Retailers are Consciously Opting for Sustainable Products

Transparency throughout the chain is constantly becoming more important. Consumers, who are becoming increasingly verbal, will not hesitate to express their dissatisfaction if a product fails to meet expectations. This requires an adequate and active attitude from producers. As chain stores and the retail trade often want written guarantees that vegetables and fruit are safe and are cultivated with respect to the environment. This enables them to take responsibility towards their own customers. MPS Fruit & Vegetables is the solution to this and helps the producer to demonstrate their consciousness concerning sustainability to the supplier.

Triple-A label

In particular, sustainability, reliability, hygiene and transparency are central to MPS Fruit & Vegetables. And that is something unique in the vegetables and fruit sector. These aspects have not previously been brought together.

Does a nursery achieve the highest scores for the use of crop protection agents, fertilisers, energy and the processing of waste? If so, the company becomes eligible for 'Vita Certa', the MPS Fruit & Vegetables Triple-A label. And does the grower only use agents allowed for ECO and organic crops to combat diseases and plagues? If so, the nursery will be given consent to use the 'Vita Certa Natural Protected'.

Legislation governing edible plants

Currently, the demand for MPS Fruit & Vegetables is really taking off. In particular growers who cultivate pot-grown herbs are showing interest, including those from countries such as Spain and Italy. Currently, edible plants are traded freely but this will in due course be governed by rules. This is because edible plants or plants with edible components can ultimately be seen as vegetables and fruit. A group of growers, auction hall FloraHolland, The Association of Wholesale Trade in Horticultural Products (VGB) and three buyers recently decided to establish (legally enforceable) requirements. As soon as there is more information available on this subject, we will let you know.

Panda Flowers Ltd, Passionate about Naivasha

At heart, panda flowers ltd. Their are the ideas and a mentality to create an environment for all to share. Whether this new approach to farm management in Kenya will work? Panda flowers ltd. Management are to prove the contrary. At the breaking hour many Kenyan companies, tens of employees are walking home with mattresses on their heads, metres away four others are trying their new bicycles.

Several metres from them stands a posho mill which I later learn is owned by the employees. In truth the image may sound a little more imaginative than reality. However, a visit to panda flowers Ltd. In Naivasha may single out one flower farm that cares for its employees. "The most important investment is your human resources. You can make acquire more by investing in your employees than any other investment," says Mr. Egal Elfzouty, the

Managing Director, panda flowers ltd. Adding, "Every year I take lower cadre employees to Holland"

As though to prove him right, we are shown hectares of high quality roses "we have maintained a high quality product, market share, and exacting international trade for the past three years. In addition to a friendly atmosphere with neighbours, no industrial unrests, committed to a responsible and comprehensive environmental protection and contribution towards charity and community based projects," commended Mr. Egal. I couldn't wait to be answered the million dollar question; so what makes panda flowers ltd compared to most of other farms I have visited?

Background

Panda Flowers is situated in the Flower

Business Park in the Great Rift Valley in Naivasha, Kenya about 90 Km from Nairobi, the capital of Kenya on the main National Highway. It is growing roses in 53 Hectares of Green Houses using latest Technology which are exported to Europe.

It has an in-house Propagation, Harvesting, Grading and Packaging facilities. Panda Flowers aligned itself with market realities with competitiveness through careful selection of the latest technologies

whilst maintaining economic advantage through strategic alliances. In June 2005 Panda Flowers was awarded a Certificate of best Grower at Kenya Flower Day by Kenya Flower Council and FloraHolland with Average Grade Product and Comments 'Uniform, Good Assortment, A1 without comments'.

Corporate Social Responsibility

The company has invested a lot in CSR. Some of the main projects include; health (providing medical equipments and supporting vaccination and awareness campaigns), education (providing bursaries and equipments), orphanages and children homes, provision of housing for their staff etc. Some of the institutions who have benefited include, Mji wa Neema children shelter, Secondary and primary schools around Naivasha, Farm Clinic, housing projects at Kayole Estate, Naivasha, Naivasha women hospital, Upendo village, dispensaries around and the GK Prison Nursery school among others.

Panda Self Help Group

The organisation's is to improve living standards of Panda Self Help Group and surrounding communities. With a Mission is to empower Panda Self Help Group and surrounding communities to initiate and implement sustainable development projects. The company sells Fairtrade certified roses and the premium derived there in is used to support Panda Self Help Group projects. The premium is remitted directly to Panda Self Help Group bank accounts.

Formed in 2003 after Panda Flowers Ltd was certified by Fairtrade Labeling Organization (FLO), it has uplifted the living standard of Panda Flowers workers and surrounding community. Since when it was certified, PSHG has successively completed more than 40 major projects which among them are bursaries to secondary school students, housing project, posho mill and Daycare centre among others.

Naivasha Childrens Shelter

NCS was founded to help with the growing problem of street kids in Naivasha. Initially launched as a feeding and teaching day-care



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private group of volunteers: Friends of Naivasha, USA, and the Kenya government and health care workers: Naivasha District Hospital.

DEG, member of KfW Bankengruppe (KfW banking group), finances investments of private companies in developing and transition countries. As one of Europe's largest development finance institutions, it promotes private business structures to contribute to sustainable economic growth and improved living conditions. As a direct result of the commercial relationship between DEG and Panda Flowers, DEG was approached in 2006 with regard to the possible co funding of the NWHCC, with specific reference to HIV education and Womens healthcare issues.

In addition to improving the living standards of their employees, Panda Flowers endeavors to empower the surrounding communities to initiate and implement sustainable development projects for a Rosy Future. By not draining water from Lake Naivasha and following the MPS and NEMA regulations, the company cares for the environment we operate on.

Environment

On environment, the company has initiated a tree Nursery and tree planting program. In addition, it has phased out WHO Class 1 chemicals and replacing them with softer chemicals and biological controls. It also Monitors fertiliser usage through regular soil and water analysis and MPS regulations.

The company is Lining drainage systems to reduce soil erosion in addition to planting of soil cover on open areas to reduce wind and water erosion. It is also harvesting Rain Water and bore-hole recharging.

Panda Flowers has also invested in conservation of natural forest within the farm in addition to making compost from the flower waste and use in landscaping. It has also made paved roads to reduce dust pollution.

Labels and Certificates

The company subscribes to Flower Label Programme (FLP) based in Germany, MaxHavelaar Foundation Switzerland, Fairtrade Labeling Organization International (FLO) in Bonn, Germany, EUREGAP based in Germany. MPS Based in Holland, Ethical Trade Initiative (ETI) among others.



programme in 1999, it now has a residential site with children between the ages of four and seventeen.

Panda Flowers have been supporting Naivasha Children's Shelter since the project started in 1999 through contributions as a result of fund-raising events, donation of 10 acres of land, the borehole, drip line irrigation for the vegetable garden and giving work opportunities to the graduates.

The shelter is their home, their school and their career agency. Its aim is to rehabilitate the children and enable them to integrate fully into the local community. Its success is measured through the number of children who get jobs, by minimal return to the streets and by the sense of belonging that they feel, not just while they are at the shelter but even after they have left and gone on to become independent.

The shelter is and will always be their family.

Naivasha Womens Health Care Centre

The Naivasha Women's Health Care Centre (NWHCC) in Kenya was designed with the assistance of medical professionals in the USA and local architects. Under the guidance of the Friends of Naivasha Self Help Group, and is run using the same tariffs as the current Naivasha District Hospital, the facility will be an inexpensive and effective way of catering to the needs of the women who do not have access to private medical care.

It was after considerable discussions that DEG decided to partner with Panda flowers in the form of a PPP (Public Private Partnership) in which DEG pledged to donate a maximum of € 200,000 towards the project. Panda Flowers in turn agreed to match these funds in materials, supervision, and personnel. This project would not have taken off without the assistance of DEG, and their forward to continued support from them.

The partners in this endeavor to construct and equip this new hospital include private enterprise: the flower farms of Panda and Oserian, DEG,



New Coffee Growing Frontiers Hope For Kenya's Dwindling Fortunes

By Nelson Maina

News by coffee researchers in the country that new zones had been identified as the next production frontiers is not only music to the ears of the farmers in those areas but also to the country and a major economic boost. This as coffee touted as Kenya's black gold continue recording dismal production especially in traditionally active areas like Central Kenya which have now been swarmed by real estate growth.

And with the vagaries of the weather which have been particularly capricious in recent times with new pests and diseases, and allowing traditional ones to develop immunity against conventional pesticides, measures to arrest the situation before it spirals out of control should be a matter of when not if.

The Kenyan coffee sector is projected to earn the country \$217million in 2013 a dismal amount compared to tea and horticulture which each contribute over \$900 million dollars annually.

Yet it has been a painful venture for the world's second most traded commodity which has been on a free fall in terms of production and earnings in the country over the years. From a crop that was associated with wealth and opulence in the 80's and 90's, to the crop associated with despair the numbers tell it all with coffee growing currently standing at 0.4 acres per year as farmers look for alternatives.

The volatile prices in the international markets haven't done any good either. A severe drop in earnings last experienced in 2007 and attributed to increased global supplies has meant that farmers may not recover the production costs. About 95 per cent of the locally made coffee is exported while the remaining five per cent is consumed in the country

which complicates matters further.

Such challenges mean that Kenya is an insignificant player in the world coffee markets in terms of volumes. The country averages about 800,000 bags per year while Ethiopia does six million bags, Colombia 12 million, and Brazil almost 30 million. However despite the fluctuations in world coffee prices in recent years, overall demand for coffee is increasing.

But the biggest challenge is in the farm, where farmers are grappling with tending to the coffee varieties from flowering. The setbacks in the farm are a matter of grave concern which calls for immediate intervention because it is at this stage that the Kenyan coffee admired worldwide for its unparalleled quality and aroma is made.

Unsure of whether they are going to get their money back, never mind make a profit, several farmers have been reticent to invest in the fertilisers, pesticides, and manpower required to make their coffee trees flourish. This creates a vicious cycle as production levels plummet and farmers do not earn the revenue required to reinvest in their crops. This difficult situation has made coffee growing unattractive to the younger generation.

But agro input companies in the country like Elgon Kenya have been actively involved in bringing to farmers' doorsteps new and improved pesticides that are not only environmental friendly but tried and tested across the globe to ensure that farmers farming practices adhere with the internationally accepted standards. Such pesticides like Tricel and Silwet that deals with coffee insects, Cupravit and Cabrio fungicides and herbicides like Glycel have been hailed by world's leading coffee producing states as their most trusted brands in insulating their coffee from pest and diseases.

Make Employees Better at Their Jobs

Of course there is no reason to give employees a voice if you aren't willing to listen, so if you decide to try something like "CEO For a Day" (and why wouldn't you?), respond.

You've been there. You've stared at a blank document as you struggled to come up with incredible words of wisdom that will inspire and motivate your employees.

So has your neighbour, CEO of a fast growing ornamental growing company, which has over three farms nationally is one of the largest in the world. "I was sitting in front of my computer, trying to come up with something I could tell all these smart people in my company that would help them do their job better," He says, "and I realized that what I really should be doing is asking them what I should do."

Make them CEO

The ground rules were simple: Yesterday you were a regional manager. Today you're the CEO. What would you do to make the company better? He says many of the answers related to the person's job, but some related to broader issues.

And regardless of the answer, employees were able to indirectly express their emotions out without offending anyone. "Overall I loved the feedback," He says, "but it was also depressing because a number of people said, 'I would do whatever I could to bring back the family atmosphere we used to have in the company.'"

Those responses made me feel like such a fraud. Every day I was talking about how our business is a family and about really knowing our employees.... and that's not how employees in the field felt.

"We have farms in three different locations and people across the country," he continued. "It was hard for all of our employees to feel like they are part of the family. I hadn't recognized that."

I still saw us as a mom and pop, but they saw us as a giant bureaucratic company. So I immediately changed my mind set from growing the company to fixing who we are." Keep in mind He is used to listening to employees.

His parents started the company, and they put him through a rigorous training process that required him to work in more than 10 positions throughout the company—from customer

service to sales to propagation and production, spraying and scouting, harvesting and post harvest handling, delivery truck driver to accounting.

"Everyone asks me if that was hard," he says. "I thought it was easy. I didn't have anything to hide and treated the task at hand as the task at hand instead of dwelling on what I would do next. I just stepped into every job and worked hard."

I learned a lot, but I also earned the respect of our employees... something I didn't realize I was doing until it was done." At age 30, He took over the company reins from his father. Since then revenue has grown 239%.

Get Rid of What Makes Them Unhappy

"By getting to know our employees and their jobs," He says, "I could eliminate things that made them unhappy and kept them from doing a better job. Sometimes it's not spreadsheets—it's company morale."

Feedback also convinced him to open satellite departments so the company could recruit better talent. "Most of our new hires were commuting from up to an hour a day," he says.

"To have someone outside my normal circle tell me we needed to go where the talent is was huge."

Of course there is no reason to give employees a voice if you aren't willing to listen, so if you decide to try something like "CEO For a Day" (and why wouldn't you?), respond.

Tell each employee what you think about their ideas and input. Be as open and honest as possible. Provide a thoughtful response: yes or no, and most importantly why.

"My secret to success is to be the same person at work that you are when you're having a great day with your best friend," He says. "You listen to your friends, right? So listen to your employees."

"Then just be that person, each and every day. If you are brave, honest, forthcoming, and transparent you don't have to try to be a leader. You can be yourself"

FLOWER & VEGETABLE FARMS IN KENYA

FARM NAME	LOCATION	PRODUCT	CONTACT PERSON	TELEPHONE	E-MAIL
AAA Growers	Rimuruti	Roses	Mr. George Hopf	0733-746737	george@aaagrowers.co.ke
AAA Growers-Chestnut	Naromoru	Vegetables	Mr. Mark Kirimi		nanyuki@aaagrowers.com
AAA Growers Ltd.	Thika	Vegetables	Mr. Steve		
AAA Growers-Turi	Nanyuki	Vegetables	Mr. Japheth		japheth@aaagrowers.co.ke
Africallas	Limuru	Zantedeschia	Mr. Robert Holtrop	066-76084	rob@sande.co.ke
Afri-organics (K) Ltd	Timau	Herbs	Mr. John Harris		ohn@afriorganic.co.ke
Aquila Flowers	Naivasha	Roses	Mr. Yogesh	0715 -817369	gm@aquilaflowers.com
Baraka Flowers	Ngorika	Roses	Mr. Wanjiru Mahihu	0722-517701	info@barakaroses.com
Batian Flowers Ltd	Timau	Roses			
Beauty Line Ltd	Naivasha	Cut Flowers	Catherine Wanjohi	0727-589862	catherine@beautyli.com
Bigot Flowers	Naivasha	Roses	Mr. Jagtap Kakaseheb	0722-205271	jagtap.kt@bigotflwes.co.ke
Bila Shaka	Naivasha	Roses	Mr. Joost Zuurbier	0711-898689	bilashaka.flowers@zuurbier.com
Black Petals	Limuru	Roses	Mr. Nirzar Jundre	0722-848560	nj@blackpetals.co.ke
Bliss Flora Ltd	Njoro	T-Single head cut flowers	Mr. Shivaji Wagh	0789-101060	shivaniyet@yahoo.com
Bluesky	Naivasha	Gypsophila,Roses	Mr. Mike	0720-005294	blue-sky@africaonline.co.ke
Buds \$ Blooms -Blis flora	Nakuru	Roses	Mr. Sarchil Appachu	0720-804784	
Buds \$ Blooms -Town	Nakuru	Roses	Mr. Shivaji wagh	0720-895911	shivaniyet@yahoo.com
Carnations Plants	Athi River	Carnations	Mr. Amir	045-22242	cpl@exoticfields.com
Carzan Flowers (K) Ltd	Kipipiri	Carnations & summer flowers	Mr. Zaien Manji	0722-764697	zaien@carzankenya.com
					info@carzankenya.com
Celinico Flowers	Limuru	Roses,Summer flowers	Mr. Chris Shaw	066-72170	celinico@nbinet.co.ke
Charm Flowers	Kitengela	Roses	Mr. Ashok Patel	020 2222433	info@charmflowers.co.ke
Colour Crops	Bahati	Hypericum, Ammi	Mr. K. Marigoma	020 2313859	
Colour Crops	Timau	Summer flowers	Mr. Simon Baker		simon@siluba.co.ke
Colour Crops.	Naivasha	Veronica,fillers	Mr. Geoffrey Mwaura	0724-083111	nva@coulourcrops.com
Colour Vision Roses Ltd	Naivasha	Roses breeders	Mr. Peter van der Meer	(0)50 50 310	petervandermeer@terrannigra.com
Countrywide Connections	Nanyuki	Eryngiums	Mr. Richard	062-31023/6	production@countrywide.co.ke
Credible blooms	Nairobi	Roses	Mr. Eliud Njenga	0722-382859	info@pegionblooms.com
De Ruiters	Naivasha	Roses	Mr. Sebasten Alix	0720-601600	info@drea.co.ke
Desire flora (K) Ltd	Isinya	Roses	Mr. Rajat Chaohan	0724-264653	rajatchaohan@hotmail.com
E.A. Growers - Jessy	Mweiga	Vegetables	Mr. Antony M.		antonym@eaga.co.ke
Elbur Flora / Kimman Exports Ltd	Elburgon	Roses	Mr. Daniel Moge Maina	0721-734104	kimmanexp@gmail.com
Enkasiti Rose	Thika	Roses	Mr. Tambe	067-44222/3	enkasiti@form-net.com
Equinox Horticulture Ltd	Timau	Roses	Mr. John Mwangi		john@equinoxflowers.co.ke
Everest Enterprises -Chulu	Timau	Vegetables	Mr. Anthony Muiruri		
Everest Enterprises - Lusoi	Naromoru	Vegetables	Mr. Robert Mbutia		robert.mbutia@everest.co.ke
Everes Enterprises - Njumbi	Naromoru	Vegetables	Mr. Robert Mbutia		robert.mbutia@everest.co.ke
Everest Enterprises - Woodland	Mweiga	Vegetables	Mr. George Machariah		george.macharia@everest.co.ke
Everflora Ltd	Juja	Roses	Mr. Bipin Patel	0716-066305	everflora@dmbgroup.com
Fides(K) Ltd	Embu	Roses, Cuttings	Mr. Francis Mwangi	068-30776	info@fideskenya.com
Finlays-Chemirel	Kericho	Roses	Mr. Aggrey Simiyu	0722-601639	
Finlays Tarakwet	Kericho	Roses	Mr. John Magara	0722-873539	john.magara@finlays.net
Finlays Flamingo	Naivasha	Roses/Fillers	Mr. Peter mwangi	0722-204505	peter.mwangi@finlays.net
Finlays-Kingfisher	Naivasha	Roses	Mr. Charles Njuki	0724 -391288	charles.njuki@finlays.net
Finlays-Kingfisher	Naivasha	Carnations/ Fillers	Mr. Jacob Wanyonyi	0722-773560	jacob.wanyonyi@finlays.net
Finlays - Vegetables	Naivasha	Vegetables	Mr. Daniel Kiboi	0722-206627	
Finlays-Siraji	Timau	Carnations/Roses	Mr. Paul Salim		paul.salim@finlays.net
Finlays-Sirimon	Timau	Lilies	Ms. Purity Thigira		purity.thigira@finlays.net
Finlays Lemotit	Londiani	Carnations	Mr. Richard Siele	0721-486313	richard.siele@finlays.net
Flora ola	-	-	-	-	-
Flora delight	Limuru	Summer	Mr. Hosea	0724-373532	hosndai@yahoo.com
Florema (K) Limited.	Naivasha	Begonia	Mr. Peter Maina	050-2021072	info@floremakenya.co.ke
Florensis	Naivasha	Cuttings	Mr. Eddy Verbeek	050-50010	florensis@florensis.co.ke
Flower Connection Ltd	Londiani	Roses	Mr. Arun Mishra	0710-625484	arun@eaga.co.ke
Fontana Ltd - Mau Narok Ayiapa	Nakuru	Roses	Mr. Gideon maina	0721-178974	gideon@fontana.co.ke
Fontana Ltd - Njoro farm Akina	Nakuru	Roses	Mr. Arffhan	0722-728441	Arffhan@fontana.co.ke
Fontana Ltd - Salgaa	Nakuru	Roses	Mr. Kimani	0733-605219	production@fontana.co.ke
Foxton Agriculture	Naivasha	Vegetables	Mr. Foxton Asanya.		

FLOWER & VEGETABLE FARMS IN KENYA

FARM NAME	LOCATION	PRODUCT	CONTACT PERSON	TELEPHONE	E-MAIL
Gatoka Roses	Thika	Roses	Mr. Chris	0715-215840	gatoka@swiftkenya.com
Goldsmith Seeds	Naivasha	Lisianthus	Mrs. Lynette S.		
Goodwood	Nyaururu	Hypericum	Mr. Bernard	0701-166466	
Goodwood Properties	Nyeri	Vegetables	Mr. Kahiga		dwagacha@qfp.co.ke
Greystones Farm			Mr. Silas Mbaabu	0722-312316	silas.mbaabu@greystones.co.ke
Groove	Naivasha	Roses			groovekenya@gmail.com
Hamwe Ltd	Naivasha	Hypericum	Mr. Peter Kamwaro		hamwe.production@kariuki.biz
Harvest Ltd	Athi River	Roses	Mr. Farai Madziva	0722-849329	harvest@harvestflowers.com
Highlands Plants	Olkalau	Outdoors			
Hummer	Naivasha	Carnation, cuttings	Mr. Annemaria		
Indu Farm	Naivasha	French beans	Mr. James		
Interplant roses	Naivasha	Breeders	Mr. Geoffrey Kanyari	0712-215419	geoffrey@interplant.co.ke
Isinya roses	Isinya	Roses	Mr. Yash Dave	0700-797849	info@isinyaroses.com
James Finlays	Kericho/Londiani	Roses	Mr. Richard Siele		flowers@finlay.co.ke
K.H.E.	Nanyuki	Vegetables	Mr. Elijah Mutiso		mutiso@khekenya.com
K.P.P. Plant Production (K) Ltd	Juja	Cuttings	Mr. Wilson Kipketer	020-352557	w.keter@selectakpp.com
Kabuku Farm	Thika	Roses, Fruits & Veggies	Mr. Ajay Singh	0754-444641	kabukufm@eaga.co.ke
Kalka	Isinya	Roses	Mr. Shivah	0715-356540	production@kalkaflowers.com
Karen Roses.	Nairobi	Roses	Mr. Rober Kotut	020-884429	bob@karenroses.com
Kariki Ltd.	Juja	Hypericums	Mr. Samwel Kamau	0722-337579	kariki.fm@kariki.biz
Karuturi flowers	Naivasha	Roses	Mr. Sylvester Saruni	0722-873560	saruni@karuturi.co.ke
Kenfloraa Ltd	Kiambu	Roses	Mr. Aleem Abdul	0722 -311 468	info@kenfloraa.com
Kenya Cuttings Ltd.	Thika	Cuttings	Mr. Careml Ekarat	060 2030280/1	info.kenyacuttings@syngenta.com
Kisima Farm	Timau	Roses	Mr. Kenneth	0722-475758	flowers@kisima.co.ke
Kongoni Gorge farm (Vegpro)	Naivasha	Roses,vegs	Anand		
Kongoni Star Flowers(Vegpro)	Naivasha	Roses	Mr. Shailesh	0722-203750	sailesh@vegpro-group.com
Kreative Roses	Naivasha	Roses	Mr. Julias Kinyanjui	0734-505431	info@kreative-roses.com
Kudenga Flowers	Molo	Hypericum, Eringium	Mr. Juma/Rotich	0725-643942	kudenga.production@kariki.biz
Larmona/Hamcop	Naivasha	Roses	Mr. Peter Mureithi	0722-238474	lamonaaccounts@africaonline.co.ke
Lathyflora	Limuru	Beddings	Mr. Silvester	0721-336887	
Lauren international	Thika	Roses	Mr. Peter Mwangi		laurenflowers@access.co.ke
Lex + Blomming oasis	Naivasha	Roses	Mr. Thomas Nyaribo	020-20612/21260	lex@lex-ea.com
Live Wire Limited	Naivasha	Hypericum,Lilies	Mr. John Gitonga.	050-50371	
Lobelia Farm /Sunland Roses Ltd	Timau	Roses	Mr. Peter Viljoen	0721-632877	info@sunlandroses.com
Longonot Horticulture	Naivasha	Roses, vegetables	Mr. Shando Rai	050-50173/4	longonot@vegpro-group.com
Maasai flowers	Kitengela	Roses	Mr. Clement Ng'etich		
Magana Flowers (K) Ltd.	Kiambu	Roses	-	020-2017651-3	info@maganaflores.co.ke
Mahee flowers	Olkalau	Roses & Carnations	Mr. Vijay Kumar	0733-607907	vijay@eaga.co.ke
Maridadi	Naivasha	Roses	Mr. Jack	0733-333289	jack@maridadiflowers.com
Maua Agritech	Isinya	Roses	Mr. Madayi		gm@mauaagritech.com
Mboga Tuu	Isinya	Vegetables	Mr. Dan Agao		
Migotiyo	Nakuru				
Molo River Roses Ltd	Nakuru	Roses	Mr. Andrew Wambua	0724-256592	awambua@moloriverroses.co.ke
Molly flowers	Limuru	Summer flowers	Elizabeth		
Morop Flowers	Bahati		Mr. Wesley Tanui	0720-983945	
Mosi Ltd.	Thika	Roses	Mr. Anthony Wahome	0722-204911	mwaiwahome@mosiflowers.co.ke
Mt. Elgon Orchards	Kitale	Roses	Mr. Bob Andersen	0734-333095	info@mtelgon.com
Mweiga blooms	Mweiga	Roses	Mr. Daniel Vilnersson	0733-741203	sales@mweigablooms.com
New Hollands Flowers	Olkalau	Roses	Mr. Francis	0700-718570	guna@bth.co.ke
Nini farm	Naivasha	Roses	Mr. Fred Okinda	0720-611623	growing@niniLtd.com
Nirp E.A	Naivasha	Rose Breeder	Mr. Michael Gathare		
Ol Njorowa	Naivasha	Roses	Mr. David, Charles	020-574011	mbegafarm@icconnect.co.ke

FLOWER & VEGETABLE FARMS IN KENYA

FARM NAME	LOCATION	PRODUCT	CONTACT PERSON	TELEPHONE	E-MAIL
Oserian Dev Company	Naivasha	Roses,Fillers,statice	Mr. Ruri Tsakiris		
Panocal International	Kitale	Roses	Mr. Paul Wekesa	054-2030916/7	paul.wekesa@panacol.co.ke
Panda Flowers Ltd	Naivasha	Roses	Mr. Paul W. Kariuki	050-50046	wanderi@pandaflowers.co.ke
Pangot	Naivasha	Roses Cutting	Mr. Mwangi		
Penta Flowers Ltd.	Thika	Roses	Mr. Tom Ochieng	0733 -625 297	tom@pentaflowers.co.ke
PJ Flora	Isinya	Roses	Mr. Kizito Mudogo		pjdaveflowers@wananchi.com
PJ Dave Flowers	Isinya	Roses	Mr. Hitesh Dave	045-21381/2	pjdaveflowers@wananchi.com
PJ Dave	Timau	Roses	Mr. Israel	0712-184433	pjdavetimau@pjdaveepz.com
Plantations Plants.	Naivasha	Geraniums	Mr. William Momany	050-2021031	pplants@kenyaweb.com
Pollen	Ruiru	Cuttings/Seedlings	Mr. Patrick Chege		patrick.chege@syngenta.com
Porini	Keringet	Roses	Petinber	0738-374403	
Pressman Kenya Ltd	Nakuru	Roses	Mr. Jelle Posthumus	297-382200	preesman@preesman.com
Primarosa	Nyahururu	Roses	Mr. Santosh Kurkani	0712-030610	santosh@primarosaflovers.com
Primarosa Flowers Ltd	Athi River	Roses	Mr. Dilip Barge	0733 -618 354	dilip@primarosaflovers.com
Protea Farm	Timau	Roses	Mr. Philip		info@lobelia.co.ke
Ravine Roses	Eldamaravine	Roses	Mr. Kamuren		
Receme	Naivasha	Gypsopilla/vegs	Mr. Boni	0721-938109	bonny@kenyaweb.com
Redlands II	Kiambu	Roses	Aldric Spindler	0733-609795	aidric@redlandsroses.co.ke
Redlands Roses	Ruiru	Roses	Aldric Spindler	0733- 609795	aidric@redlandsroses.co.ke
Rift valley Roses	Naivasha	Roses	Mr. Peterson Muchiri	0721-216026	rwr@livewire.co.ke
Rift valley vegetables	Naivasha	Vegetables	Mr. Nicholas		
Rimi Flora Ltd	Naivasha	Cut Flowers	Mr. Richard Mutuku	0722-357678	info@rimiflora.com
Riverdale Blooms Ltd	Yatta	Roses	Mr. Anthony Mutungi	0722-584874	rdale@swiftkenya.com
Rose plant	Kitengela	Roses	Mr. Atenus		
Roseto Ltd -Salgaa	Nakuru	Roses	Mr. Annan	074-848560	gm.roseto@megaspingroup.com
Roseto Flowers	Nakuru	Roses	Mr. Vijay	0717-617969	gm.roseto@megaspingroup.com
Rozzical garden	Naivasha	Vegetables	Mr. Robert		
Rozzika Garden Centre Ltd	Mweiga	Vegetables	Mr. Kinuthia		eunice@rozzika.co.ke
Savanah plants	Naivasha	Geraniums	lukulu		
Shade Horticulture	Isinya	Roses	Mr. Mishra Ashutosh	0722-792018	mishra@shadeshorticulture.com
-Shalimar Farm	Naivasha	Roses	Mr. Vijay Kumar	0733-607907	vijay@eaga.co.ke
Selecta Flora		Roses	Mrs. Mary Mwangi	0725-075569	sales@floratrends.co.ke
Sian Flowers- Agriflora	Nakuru	Roses/ Lilies	Mr. Koima	0722-203630	info@sianroses.co.ke
Sian Flowers -Equator	Eldoret	Roses	Mr. Nehemiah Kangogo	0722-848910	nehemiah@equator.sianroses.co.ke
Sian Flowers- Maji Mazuri	Mois Bridge	Roses	Mr. Wilfred Munyao		
Sian Winchester	Nairobi	Roses	Mr. R. Mulinge	0725-848909	rmulinge@sianroses.co.ke
Sierra Roses	Nakuru	Roses	Mr. Shariff	0787-243952	
Simbi Roses Ltd.	Thika	Roses	Ms. Pauline Nyachae	020-4448230	simbi@sansora.co.ke
Sirgoek Flowers	Eldoret	Roses	Mr. Andrew	0725-946429	sirgoek@africaonline.co.ke
Solo Plant (K) Ltd.	Kiambu	Roses	Mr. Haggai Horwitz	0732-439942	hagai@soloplant.co.ke
Stockman Rozen Kenya Ltd	Naivasha	propagator	Mrs. Sarah Tham	0720-603994	sarah@srk.co.ke
Subati Ltd	Subukia	Roses	Mr. Naren/Ravi	0736-347777	production@subatiflowers.com
Subati (former Olij)	Naivasha	Roses	Mr. Ravi	0736-347777	production@subatiflowers.com
Suera Flowers	Nyahururu	Roses	Mr. Joseph Mureithi		suerafarm@suerafarm.sgc.co.ke
Sunland Roses	Timau	Roses	Mr. Peter Viljoen	0721-632877	peter@sunlandroses.com
Sunripe	Nanyuki	Vegetables	Mr. James Muhoho		
Sunripe savanah	Naivasha	vegetables	Mr. George		
Tamalu	Timau	zante	Mr. David N.	0722-764759	nzomahd@gmail.com
Tambuzi Flowers	Naromoru	Roses		062 3101917	info@tambuzi.co.ke
Terrasol	Limuru	Cuttings	Eva	0722-455996	info@terrasol.com
Timaflo Ltd	Timau	Roses	Mr. Bryan Allen	062-41263	brian.allen@timafloLtd.com
Timau flair	Timau	Roses	Mr. Philip Ayiecha	0723-383736	
Transebel Ltd.	Thika	Roses	Mr. David Muchiri		admin@transbel.co.ke
Tropiflora (K) Ltd.	Limuru	Carnations, Astroemeria	Mr. N.Krasensky	0722-783280	tropiflora@tropiflora.net
Trodding Africa Flowers	Njambini	Summer Flowers	Margaret Muthoni	0720-267004	leekement@gmail.com

FARM NAME

LOCATION

PRODUCT

CONTACT PERSON

TELEPHONE

E-MAIL

FLOWER & VEGETABLE FARMS IN KENYA

Tulaga	Naivasha	Roses	Mr. Denis Wedds	0724-465427	denis.weds@africaonline.co.ke
Uhuru Flowers	Timau	Roses	Mr. Ivan Freeman	0722-863252	ivan@uhuruflowers.co.ke
Valentine Kibubuti	Kiambu	Roses	Mr. Simon	020-3542466	info@valentineflora.com
Van den berg roses	Naivasha	Roses	Johan Remeus	050-5050439	johan@roseskenya.com
Van Kleef Kenya Ltd			Mrs. Judith Zuurbier		roses@vankleef.nl
Vegpro (k) Ltd - Kitawi	Naromoru	Vegetables	Das		
Vegpro (k) Ltd - Likii River	Nanyuki	Roses	Mr. Madhav Patel		madhav@vegpro_group.com
Vegpro (k) Ltd- Kongoni	Timau	Roses	Vivek Sharma		vivek@vegpro_group.com
Waridi Ltd	Athi River	Roses	Mr. P.D. Kadlag	0724-407889	kadlag@waridifarm.com
Wiham Veg Mwanzi	Nyahururu		Madadi	0721-491633	
Wildfire flower	Naivasha	Roses, Hypericum			
Windsor Flowers Ltd	Thika	Rose	Mr. Vikash Singh	020 -2029216	farm@windsor-flowers.com
Xpression Ltd -Africa Blooms	Salgaa	Roses	Mr. Inder Nain	0719-748175	flowers@xflora.net
Xpression Ltd -Elburgon	Njoro	Roses	Mr. Inder Nain / Ketan	0719-748175	flowers@xflora.net
Zena roses - Asai	Eldoret	Roses			
Zena Roses	Thika	Roses	Mr. Peter Ochami	0712-006323	productionthika@zenaroses.co.ke
Zena Roses - Sosiani	Eldoret	Roses/Carnations	Mr. Fanael O.	0724-631299	

FLOWER FARMS IN UGANDA

TYPE	FARM NAME	CONTACT PERSON	LOCATION	PHONE NUMBERS	E-MAIL
Roses	Rosebud	Ravi Kumar	Wakiso	0752 711 781	ravi.kumar@rosebudlimited.com
Roses	Maiye Estates	Premal	Kikwenda wakiso		premal@maiye.co.ug
Roses	Jambo flowers	Patrick Mutoro	Nakawuka Sisia Wakiso	(254) 726549791	pmutoro80@yahoo.co.uk
Roses	Pearl Flowers	Raghib Sandhu	Ntemagalo Wakiso	0772 72 55 67	pearl@utlonline.co.ug
Roses	Aurum flowers	Kunal Lodhia Shiva	Bulega, Katabi Wakiso	0752 733 578	kunal@ucil.biz
Roses	X-pressions	Ali Droiya	Katabi Wakiso	0712 787788	xpressions@utlonline.co.ug
Roses	Eruma roses	Kazibwe Lawrence	Mukono	0776 049987	kazibwe@erumaroses.com
Roses	Uga rose	Grace Mugisha	Katabi Wakiso	0772 452 425	ugarose@infocom.co.ug
Roses	Kajjansi	K.K rai	Kitende Wakiso	0752 722 128	kkrai@kajjansi-roses.com
Roses	Uganda Hortech	M.D hedge	Lugazi Mukono	0703 666 301	mdhedge@mehtagroup.com
Roses	Melissa Flowers	Tobby Maddison	Katabi Wakiso	0755 722 262	toby.maddison@melisa-flowers.com
Chrysanthemums	Fiduga	Jacques Schrier	Kiringente , Mpingi	0772 765 555	j.schrier@fiduga.com
Chrysanthemums	Royal Van Zanten	Jabber Abdul	Namaiba Mukono	0759 330 350	j.Abdul@royalvanzanten.com
Impatiens, poinsetia	Wagagai	Olav Boenders	Iwaka Bufulu Wakiso	0712 727377	olav@wagagai.com
Chrysanthemums	xclusive cuttings	Peter Benders	Gayaza- Zirowber rd	0757 777 700	pbenders@xclusiveuganda.com

FLOWER FARMS IN TANZANIA

TYPE	FARM NAME	CONTACT PERSON	LOCATION	PHONE NUMBERS	E-MAIL
Roses	Kili flora	Jerome Bruins	Arusha	255 27-25536 33	jbruins@habari.co.tz
Roses	Mt. Meru	Heikki Niskala	Arusha	255 27 2553385	office@mtmount-meru-flowers.com
Roses	Tengeru Flowers	Mark Ngalo	Arusha Tanzania	255 27 255 3834	teflo@africaonline.co.tz
Roses	Hortanzi	Mr Micheal Owen	Arusha	255 784 200 827	hortanziagm@cybernet.co.tz
Roses	La fleur de Afrique	Greysom Mrema	Arusha	0784 363 570	fda@ars.bol.co.tz
Hypericums	Kilimanjaro flair	Greg Emmanuel	Arusha	255 784 392 716	greg@kilimanjaroflair.com
Crysenhemums	Multi flower Ltd	Tjerk Scheltema	Arusha	255 27 250 1990	tjerk@arushacutting.com
Crysenhemums	Fides	Greg Emmanuel	Arusha	255 27 255 3148	fides@habari.co.tz
Crysenhemums	Dekker Bruins	Lucas Gerit	Arusha	255 27 255 3138	info@tfl.co.tz
Crysenhemums	Arusha cuttings	Tjerk Scheltema	Arusha	255 27 250 1990	tjerk@arushacutting.com

FLOWER FARMS IN ETHIOPIA

TYPE	FARM NAME	CONTACT PERSON	LOCATION	PHONE NUMBERS	E-MAIL
Roses	Linsen flowers	Peter Linsen	Holeta		Elinsenroset@ethionet.et
Roses	Karuturi Farm/Ethiopia meadows	Peter Pardoen	Holeta	0922 750602	Peter.Pardoen@karuturi.com
Roses	Alliance flowers	Navale	Holeta		navele@nehainternational.com
Roses	Ethio dream Rishi	Holeta	Ethiopia	011 23 72335	holeta@jittuhorticulture.com
Roses	Holeta Roses Navale	Holeta	Ethiopia		navale@nehainternational.com
Roses	Arsi Agricultural Mecahanization		Holeta		arsiflower@ethionet.et
Roses	Supra Flowers	Kaka Shinde	Holeta	0911 353187	kakashind@rediffmail.com
Roses	Agriflora	M. Asokan	Holeta	0922 397760	flowers@ethionet.et
Roses	KAF Flowers	Baker Elkadi	Holeta	251 913 202 460	baker-elkadi@yahoo.com
Roses	Rose Ethiopia	Betemarian Kiflu	Holeta	0911 91 22 81	betemariankiflu@yahoo.com
Roses	Ethio- Agricerft	Alazar	Holeta	0910 922 312	alazar@yahoo.com
Roses	Flowerama	Admin manager	Holeta	0912, 9311 81	flowerama@ethionet.et,
Roses	Dire flowers	Seifu Bededa	Holeta	251-11-5156888	dhf@ethionet.et
Roses	Addisfloracom P.L.C	Kitema Mihret	Holeta	0912 264190	tasfaw@addisflora.com
Roses	Joe flowers	Mihrtu Tafare	Holeta	0911 370519	miheretuta@yahoo.com
Roses	Enyi- Ethio	Teshale	Sebata	0911 464629	enyi@ethionet.et
Roses	Lafto Roses	Andrew Wanjala	Sebata	0922 116 184	irrigation@laftorose.com
Roses	Eden Roses	Vibhav Agarwal	Sebata	0930 011228	vaibhavaggarwal1@hotmail.com
Roses	Ethio-passion	Roshen	Sebata	0911 511 711	roshanmuthappa811@gmail.com
Roses	Golden Rose	Mr. Sunil	Sebata		
Roses	E.T Highlands		Sebata	0 911 50 21 47	bnf2etf@ethionet.et
Roses	Dire flowers 2	Abenet Fiktu	Sebata	0911 149 329	abifiktu@yahoo.com
Roses	Sharon Flowers		Sebata		saronfarm@ethionet.et
Roses	Zagwe roses	Melaku Terefe	Sebata	0912 426635	zagweflora@yahoo.com
Roses	Selam Flowers	Etsegenet Shitaye	Sebata	0913 198440	etstgshita@yahoo.com
Roses	Joy Tech	mulugeta Meles	Debra Zyeit	0911 302804	mulugeta@joytechplc.com
Roses	Dugda floroliculture	sayalfe Adane	Debra Zyeit	0911 50 48 93	general@dugdaflora.com.et
Roses	Minayе flowers	Eyob Kabebe	Debra Zyeit	011-3728667/8/9	minayefarm@ethionet.et
Roses	Bukito Flowers	Anteneh Tesfaye	Debra Zyeit	0911 615571	
Roses	oilij	Bas Van der lee	Debra Zyeit	0911 507 307	b.vanderlee@oilijethiopia.com
Roses	Yassin Flowers	Tesfaye Gidissa	Debra zyeit	0911 89 78 56	kemevision@yahoo.com
Roses	Z. K Flowers	Abebe Mamo	Debra zyeit	0911 52 65 29	abemic/2006@yahoo.com
Roses	Friendship flowers	Alemayehu	Debra zyeit	(251)91 130 49 67	friendship.flowers@yahoo.com
oses	Evergreen farm	Hiwot	Debra zyeit	0912 18 5065	Hiwot.Ayaneh@yahoo.com
Roses	Rainbow colours	Tadessa Kelbessa	Debra zyeit	0911 389 729	rainfarm@yahoo.com
Roses	Sher	Ramesh Patil	Ziway	0912 131940	rmpatilpune@yahoo.com
Roses	Braam farm	Ben Braam	Ziway	0920 7462 70	braam.roses@hotmail.com
Roses	Sher- Koka farm	Alemitu Biru	Ziway	0912 09 78 24	
Roses	Ziway Roses	Ermiyas Solomon	Ziway	0921 094373	ermiasziwayroses@yahoo.com
Roses	Herbug	Hubb	Ziway		hubb@herburgroses.nil
Roses	AQ	Wim	Ziway		wimjr@aqroses.com
Hypericum	Margin par	Hayo Hamster	Holeta	251 911 505 845	marginpar@ethionet.et
Gypsophila	Tal Flowers	Mr. Uri	Sebata		uridago@walla.co.il
Hydragiums	Ewf Flowers	Humphrey	Sebata	0920 35 1931	production-manager@Ewf-flowers.com
pelargoniums	Red fox	Michel Zevenbergen	Ziway	0911 49 00 23	m.zevenberge@ethiopia.redfox.de
Hypericum	Abssinia flowers	Sendafa			ggh_link@ethionet.et
Geraniums	Ethiopia cuttings	Scott Morahan	Koka		scott.moharan@syngenta.com
Budding plants	Florensis Ethiopia	Netsanet Tadasse	Koka		flrensis@ethionet.et
Crysenthemums	Maranque	Mark Drissen	Merjetu	(251) 22 1190750,	md@maranqueplants.com
Freesia & Statice	Freesia Ethiopia	Ronald Vijvrborg	Sebata	(251) 115 156259,	freesia@ethionet.et
Hypericum	Yelcona	Andreas	Sebata	0921 146 930	Andreasndieolens@hotmail.com

Greenlife Crop Protection Africa Ltd (Gcpal)...Your Partner In The Effort Of Making Language Of Love Known!!!

By George Kariuki

Valentine is around the corner. It is obvious the biggest sales day for the world's favorite flower-the rose. As you probably already know, Kenya is one of the biggest exporters of cut flowers in the world. I would be right to declare here that Kenya is central to promoting "issues of the heart; mending broken relationships, encouraging the sick among many.

Yes I captured your imaginations well! Ever thought of how many billions of cut flowers are purchased in say UK, Holland or USA or even in our own Nairobi? The figure could be mind boggling! It has been proven that flowers are a tangible expression of words unspoken; their language is acceptable to all races, religion, tribes and regions. But roses beat all flowers in the game, yes; the language of love is still the rose.

Ever wondered what different rose colors mean?
Although red roses are the color of choice on during this day, other colors are used to send key statements.

Red roses can be really catchy! According to the American Rose Society, they are the modern day expression of the sender's love and respect. In Greek mythology, the red rose represents desire and passion when Aphrodite spills drops of blood onto a white rose while trying to help her wounded lover, Adonis. Throughout ancient Christendom, the red rose symbolizes the blood and agony of the crucifixion of Jesus. In ancient Persian mythology, a nightingale's self-inflicted breast wound turns a white rose red, colors because of the bird's egocentricity.

Pink roses symbolize grace and gentility in modern rose vocabulary. The various tones of pink can mean different things, too. Deep pink roses say thank you by symbolizing gratitude and appreciation, while light pink roses convey admiration and sympathy.

White roses symbolize reverence and humility. In medieval Christian Europe, Mary is represented by a white rose as a symbol of her purity. In Wales, white roses represent innocence and silence, and are often placed on the grave of a young child. In some Native American cultures, the white rose symbolizes security and happiness and, hence, is traditionally worn at weddings.

Yellow roses signify joy, gladness and freedom in the modern rose arrangements.

Orange roses are often a genetic blend of reds and yellows, and therefore represent a blend of symbols -- enthusiasm and desire.

So, what then? This time round, make sure you pass the right
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message. Let a red rose speak for you this Valentine!
GCPAL is at ready to make sure that the Powdery Mildews, Downey Mildews, Botrytis and Thrips that inhabit the dark alleys of farms don't spoil the "party". We will accompany growers till they deliver the roses safely.

Sacrifido 125EC

Is tested and proven, ultimate systemic fungicide for Powdery Mildew.

Sacrifido 125EC contains 2 active ingredients giving enhanced performance as a result of perfect synergy of Myclobutanil 100g/l and Prochloraz 25g/l.

Sacrifido 125EC is highly protective, curative and eradicated fungicide that has immediate action on fungus once applied. Thereafter, the product has long lasting protection.

Fortess Gold 72%WP

Fortess Gold 72%WP is a contact and Systemic fungicide for control of Downey Mildew on Roses. It is both curative and protective, applied by either through drenching or foliar application.

The 2 active ingredients, Cymoxanil 8% + Mancozeb64% present perfect arsenal against oomycetes(water moulds). The curative action is evident by stopping of the pathogen during incubation.

Megaprode Lock 52.5%WP

The fatal kick to Botrytis!
Megaprode Lock 52.5%WP Is a new fungicide with two different modes of action for control of Botrytis on Roses, leaf spots on Carnations. Contact and systemic fungicide containing Iprodione 175g/kg + Carbendazim 350g/kg.

It is highly cost effective, 2 active ingredients is a perfect pair, the synergy of the two.

Taurus 500SP

Taurus 500SP is a highly effective systemic insecticide for control of Thrips, Leaf miners, Whiteflies on a wide range of crops. The active ingredient, Thiocyclam hydrogen oxalate 500g/kg acts mainly by ingestion but has contact activity as well. As said before, you and Greenlife, both of us are in this thing together. We walk together, make every step together.

Your Growth is our Growth!!

By George Kariuki is the Technical Sales Manager-Floriculture and Horticulture, GCPAL- gkariuki@greenlife.co.ke

SACRIFID



Myclobutanil 10% min+ Prochloraz 2.5% min

Effectively Controlling Powdery Mildew in Roses



Protective



Eradicative



Your Growth
Our Concern

Curative



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AMIRAN SYSTEMATIC / CURATIVE SOLUTION FOR CONTROL OF DOWNY MILDEW

SPHINX EXTRA

Dimethomorph + Folpet

PROPLANT

Propamocarb hydrochloride

AGRIPHITE

Dipotassium phosphate

FOSTONIT

Fosetyl

AGRIXYL

Monopotassium phosphite + Metalaxyl



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