

July - August 2017

THE LEADING FLORICULTURAL JOURNAL IN THE REGION

FLORICULTURE

Kshs. 350

Tshs. 3,500

S.A. Rands 35

USD 6



A Passion for Flowers



ELGON KENYA LIMITED



Flower Sleeves

ROTO GRAVURE PRINTING MACHINE



Printed Flower Sleeves

- . 10 Colour gravure printing machine.**
- . Latest computerized technology.**
- . Very precise graphics printing.**
- . Very quick delivery times.**

East Gate Road, Off Mombasa Road, P.O. Box 46826-00100, Nairobi, Kenya

Contact: Yogi Yagnik Cell: 0733-986219.

Wireless: (020) 2399981/3/98 Mobile: 0733-699992, 0722-203089

E-mail: info@elgonkenya.com Website: www.elgonkenya.com

BEYOND NEMATODE CONTROL

TERVIGO™ is a first in class nematicide for ornamental crops.

TERVIGO™ 20 SC has proven long lasting activity against a variety of destructive nematodes in ornamental crops. It has a favourable environmental profile and fits well into Integrated Pest Management Programs. Beyond its excellent nematode control, TERVIGO™ offers crop enhancement benefits due to its unique chelated formulation resulting in vigorous high yielding crops and an excellent return on investments.



BENEFITS BEYOND NEMATODE CONTROL



syngenta.

Tervigo™ is a registered trademark of a Syngenta Group Company. Syngenta East Africa Ltd.,
P.O. Box 30393, 00100 Nairobi, Kenya. M: +254 703 018 000, +254 703 019 000, +254 733 622 778
E-mail: syngenta.east_africa@syngenta.com | www.syngenta.co.ke

TM



Inside

6. Intervention of Nutrient Imbalances
10. Passion for Flowers
15. Caring For People and Nature
16. Sustainable Floriculture Value Chain
18. Standards for Enhanced Sustainability
20. Logistics, Markets and Market Access
22. Nothing Is Easy
28. Reverse Osmosis Systems
30. Understanding KS1758
36. Briefs

The Leading Floriculture Magazine

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

All rights reserved. Reproduction in whole or in part without written permission of the publishers is strictly prohibited. **Floriculture** is published six times a year and circulated to personnel in the Horticulture Industry, foreign missions and Kenyan Embassies abroad, Flower Growers, Exporters and Consumers, extension officers in the Ministry of Agriculture, research offices and suppliers of agricultural inputs in Kenya.



Arysta Biostimulant System



Biozyme[®]



Foltron[®]



Pilatus[®]



Pilatus[®]

- Enhances crop establishment to facilitate fast crop growth at planting or sowing
- Increases utilisation of nutrients
- Promotes greater root volume and root nutrient exchange
- Assists root rejuvenation of perennial crops
- Increases yield and crop quality



Foltron[®]

- Increased utilisation of nutrients
- Assists plants to recover from abiotic stress
- Reactivates the plant's physiology processes
- Helps recovery from harmful effects of stress (like the fall of flowers and fruits)
- Corrects nutritional deficiencies
- Increases crop yield and quality



Biozyme[®]

- Increases leaf area
- Increases number of flowering buds
- Increases fruit set and fruit development
- Extended crop production
- Enhances the size, uniformity and quality of fruits

Distributed by:



Our Knowledge, Your Success

Arysta LifeScience (K) Ltd

Tulip House, 5th Floor, Mombasa Road
P.O. Box 30335-00100 GPO, Nairobi, KENYA

Tel: +254 717 432 174

Email: arysta.kenya@arysta.com



Arysta
LifeScience

True Love

The first rule of advocating for climate change-related legislation is: You do not talk about “climate change.” The term has become so polarizing that its mere mention can cause reasonable people to draw seemingly immutable lines in the political sand.

Recently Kenya Flower Council held the first ever Kenya Flower industry sustainability conference. Speaker after speaker took a step further urging growers and other stakeholders to re-evaluate the current flower sector structure in favour of more sustainable practices in order to secure the resilience of our planet as well as our global economy.

Questioning the conventional world view is a risky business. And the only reason I have done so is for the sake of our generation and for the integrity of Nature herself. This all depends upon us deepening our understanding of the relationship between food, energy, water and economic security, and then creating policies which reward growers who base their farming systems on these principles.

Capitalism depends upon capital, but our capital ultimately depends upon the health of Nature’s capital. Whether we like it or not, the two are in fact inseparable.... We need to include in the bottom line the true costs of food production – the true financial costs and the true costs to the Earth. If we are to make our growing systems (and therefore our economies) resilient in the long term, then we have to design policies in the



sector that bring the true costs of environmental destruction and the depletion of natural capital to the fore and support an ecosystem based approach.

The Conference was an eye opener

*Masila Kanyingi
Editor*



Publishers of Floriculture Magazine

P.O.BOX 79396 - 00200 Nairobi.

Tel: 020-2440909 • Cell 0732-558172,

Fax: 020-2244892

Email: info@floriculture.co.ke

Website: www.florinews.com

Floriculture Team

Editor

Masila Kanyingi

Editorial Assistant

Cornelius Mueke

Contributors

Benson Kibiru

Moses Wasamu

Frank Ammerlaan: †

F.Optimal Connection

Photographers

Jairus Ndani

Graphic Designer

Evelyne Ndiema

Marketing

Beatrice Kariuki

Christine Wanjiku

Wilbur Njemah

Elly Okutoyi

Editorial Consultants

Tom Ochieng - Penta Flowers

Victor Juma - Syngenta EA Ltd

Oscar Shilliebo - Dow Agrosience

Charles Njuki - Flamingo Holdings

Patrick Ngugi - BASF

Daniel Kisongwo - Consultant

Innocent Anunda - Arysta LifeScience

Maurice Koome - Bayer Cropscience



Banjo®

A Protective Fungicide for the Control of Botrytis in Roses



Highly effective
protection
against Botrytis



A non-irritant
formulation



Low resistance risk



Effective at
low dose rates

Distributed by:



Amiran Kenya

Tel: +254 737 590 146

exportagronomy@amirankenya.com

www.amirankenya.com

For further information please contact: Robert Wachira

Tel: +254 713 463 937 info.ea@adama.com

www.adama.com/east-africa

ADAMA



Find us
on Facebook
ADAMA
East Africa



Growers Must Ensure Timely and Accurate Detection and Intervention of Nutrient Imbalances

By Benson Kibiru

The Kenyan floriculture industry has in recent decades grown at an exponential rate. This growth can be characterized by an increase in number of acreage of both indoor and outdoor cut-flowers, direct foreign investment to the industry as well as increased global market share. The flower industry is faced by myriad challenges such as changing climatic conditions, changing market dynamics, pests and disease. Growers therefore need to have relevant technical knowhow to achieve sustainable production.

Working smarter, not harder, to optimize productivity, maximize crop yields with minimal production cost is important. However, this does not happen without diligent efforts to prevent and overcome possible challenges. As a flower producer, how do you exercise the latter? Yield and quality are often considered important parameters to look at in crop production. For these to ensue however, it is important to consider a holistic crop production approach that considers the planting media, irrigation/fertigation water to be used, nutrients that have been absorbed by the plant tissue, crop protection among other parameters.

From an agronomist's point of view, timely and accurate detection and intervention of nutrient imbalances can be achieved through routine soil, substrate, nutritive solutions and water analyses. The routine test results reveal nutrient credits from soil, irrigation/fertigation water and nutrient (stock) solutions. With the latter a good balance between elements in the nutrient

solution can be achieved. For growers, it is worth noting that a better low EC with a good nutrient balance than a high EC with a bad nutrient balance. This is due to the existing complex relationship between elements.

Foliar (tissue) analysis is one among the crucial crop management tools, for example, sometimes media & water analysis alone might not reveal the true picture of what is happening in the root zone. Adding knowledge on nutrient concentrations and ratios of essential elements found in indicator tissue reflect the true nutritional status of the plant. This is therefore very important in developing and correcting nutrient program of a plant. During crop walks, often we encounter poor plant vigor despite a balanced nutrient program being implemented; in this case foliar analysis is one of the tools used to establish the cause among others.

Like any other plant, flowers are susceptible to attack by pest and disease causing pathogens. Economic importance of pests and diseases ranges from yield losses, cost of control, aesthetic losses and even environmental impact in the production areas. It is important to understand and differentiate between the two types of plant diseases; those whose primary causal agents are biotic (infectious) and those that are abiotic (not infectious). This would help understand how to target the diseases. The four major groups of microbial plant pathogens (fall under biotic diseases) are fungi, bacteria, nematodes and viruses which have a destructive effect on crop production. Screening and analysis of the

growing media before planting is advised given the diverse sources and handling of the materials, while in soil previous land use activities are potential sources of the pathogens. Where either of the agents is suspected, screening of the growing media (soil & substrate) and the plant material is recommended and sometimes DNA check conducted as a diagnosis and the right control measures given.

Correct identification and quarantine of potentially harmful species of nematodes is important to the success of flower production. This is mostly in soil, substrate and irrigation water. Plant-parasitic nematodes attack almost every part of the plant including; roots, stem and leaves which in turn affects quality and quantity of crop yield. Symptoms of Nematode infestation include foliar discoloration when above ground, stunted growth, yellowing of leaves and root galling. As a result, nematodes are recognized as one of the greatest threat to crop production – popularly termed as the unforeseen enemy. Worth noting, apart from being parasitic, nematodes are also vectors of plant diseases and therefore timely control of their spread can reduce economic losses significantly.

In conclusion, a timely and well informed but efficient array of the above crop management tools will guarantee the flower growers good returns.

Benson Kibiru is an Agronomist with SGS (K) Ltd



SGS KENYA LIMITED

SGS is the world's leading inspection, verification, testing and certification company. SGS helps ensure integrity of the food value chain by providing services that cover all aspects of the agricultural industry, helping customers manage crops, enhance seed development, conduct soil testing and harvesting, move product through the global supply chain and manage trade inspections at export and import points. Serving all of the major players in the agricultural sector, our services reduce risk, ensure quality and improve productivity.



INSPECTION VERIFICATION TESTING CERTIFICATION TRAINING CONSULTANCY OUTSOURCING

LAB TESTING SERVICES

ISO/IEC 17025:2005

SGS Kenya has ISO 17025 accredited laboratories which demonstrate our effectiveness to properly execute testing methods, reporting practices, inspection routines, data validation and employee competence.

SANAS

Since 30th May 2002 www.sanas.co.za/

TESTS PERFORMED IN FOOD & AGRICULTURE

- Pesticides Residue Analysis (Over 450 compounds)
- Soil, Irrigation water, Plant tissue
- Microbiological tests
- Mycotoxins (Aflatoxins, Ochratoxins)
- Heavy Metals Contaminants
- Food Nutritional Analysis and Labelling Support
- Drug/Antibiotics Residues Analysis
- Vitamins Analysis
- Animal Feed & Dairy Products Analysis

INSPECTION & VERIFICATION

ISO/IEC 17020:2012

Agricultural and Food Services

- Cereals, Pulses, Tea, Coffee, Food Aid etc
- Containers and Truck Inspection
- Warehouse Inspection

KENAS, GAFTA, IFIA, FOSFA approved

www.kenyaaccreditation.org

www.gafta.com

www.ifia-federation.org

www.fosfa.com

SOIL AND PRECISION FARMING SERVICES

- GPS Soil Sampling and Mapping
- Soil and Leaf/Tissue Analysis
- Soil Fertility Correction and Management
- Fertilizer Testing and Field Fertilizer Trials
- Irrigation water testing
- Precision Farming Support
- Consulting

FIELD TRIALS

Fertilizer, Pesticides, Demonstrations

FUMIGATION AND PEST CONTROL SERVICES

- Fumigation of Agricultural Products: Grains, Pulses, Coffee etc
- Treatment of products against insects and mites
- Treatment of bulk and bagged products in stock piles, silos and warehouses
- Fumigation in transit
- Fumigation of commercial, storage, and industrial premises etc

Registered with PCPB



TRAINING ACADEMY

- ISO 22000- Food Safety Management System Training
- GLOBAL GAP- Global Gap Training
- ISO 17025- Laboratory Management System Training
- ISO 9001- Quality Management System Training
- ISO 14001- Environmental Management System Training
- OHSAS 18001- Occupational Health and Safety Training

- SA 8001/ ETI- Social Accountability Courses
- Legal Compliance Courses
- Management, Leadership and Soft Skills Courses

IRCA Approved - www.irca.org
NITA Registered - www.nita.go.ke

Please note it is always important to check the scope of your CABs accreditation!

enquiries.kenya@sgs.com www.sgs.co.ke

SGS Kenya Head Office

Victoria Towers, 2nd Floor
Kilimanjaro Avenue,
Upperhill, Nairobi
P.O Box 72118, 00200
Tel. +254 (0)20 2733690/ 0722329521

SGS Kenya Multilab

SGS House
Ali Punjani Street,
Shimani
P.O Box 90264, 80100
Tel. +254 (0)41 2226677/ 0722202145

WHEN YOU NEED TO BE SURE



A Passion for Flowers

Sustainability is as much about a mind-set that considers the future impact of the daily decisions we make in our businesses as it is about supporting and undertaking projects that contribute to enhance our natural and social environment.



Tell us about Richard Fox

Richard Fox is the Chairman Kenya Flower Council & Sustainability Director for Finlays Horticulture Kenya Ltd. For the past 25 years he has been extensively involved in the Kenyan horticultural sector, and has played a leading role in the promotion of socially and environmentally sustainable business practises in the industry.

In 2011, he was appointed Chairman of Imarisha Naivasha, a multi-stakeholder forum set up by the Kenya Government to oversee a coordinated landscape approach to long term sustainable development in the Naivasha basin, the hub of Kenya's floriculture industry. Richard is a Fellow of the Institution of Civil Engineers, a Fellow of the Institution of Engineers of Kenya and a Fellow of the Chartered Institute of Arbitrators. He is currently Chairman of the Kenya Flower Council and Lake Naivasha Growers Group and a trustee of Imarisha Naivasha. Chairman Kenya Flower Council

Briefly Discuss the Floriculture industry in Kenya

I think we are all familiar with the regularly quoted statistics of what our industry adds to the Kenyan economy. I'm happy to repeat them here because as an industry we should be proud of the contribution we are making.

Floriculture represents almost 10% of all exports and about 50% of agricultural exports and contributes just over 1% of GDP. About 80% of our flower exports go to the EU.

The sector is a major employer impacting on the lives of over 2million Kenyans. Our industry is a leading example of a private sector initiative that has taken a primary product and progressively added value through innovation and marketing. We have a reputation for quality and compete successfully with other producing countries in a highly competitive world market.

We have an ideal climate for all round production but most of all the success of the industry is built upon our human capital, our Kenyan employees who have grasped the opportunity for improvement through education that is made available in Kenya and have proved to be eager to learn and work hard.

How can we Secure and Sustain our Markets

EU remains the main market for us an interesting statistic revealed that 75% of the total consumption of worldwide floricultural production occurs in the EU, Japan and the US. Clearly this demonstrates where the opportunities lie elsewhere in the world. We heard about opportunities in Dubai and China.

China's involvement in our economy is seen everywhere particularly in communication infrastructure and building and is very welcome. Kenya's exports to China amount to about KShs4billion whilst China exports to Kenya are valued at over KShs264billion. This is a massive trade imbalance not assisted from our perspective by imposition of an import duty on flowers of 4%. Clearly China has huge potential for our products but we need the support of government to unlock market access and we can do the rest.

So going forward, with need to work with government to look beyond our traditional markets.

But whilst we can measure success on past performance where is the industry heading and what challenges do we face going forward?

I mentioned that historically our market has mainly been to the EU and I would like to commend the tireless efforts of His Excellency the President and the CS and PS Ministry of Industry, Trade and Cooperatives made to reach agreement

with other EAC countries to sign up to the EPA which offers long term certainty in our trading relationship with the EU and goes much further than providing market access.

Equally I'm proud of the role that KFC and our sister organisation in Brussels Union Fleurs has played to facilitate the eventual signing of the EPA by Kenya and Rwanda in Brussels in September last year. For now Kenya has continued market access to the European Market on a duty free and quota free basis through the MAR but we must continue our joint efforts with government to encourage the remaining three EAC countries to follow Kenya and Rwanda to sign and ratify the EPA that was originally initialled by all EAC partner states in 2016.

You are the Chairman Kenya Flower Council, tell us about it.

The Kenya Flower Council is a voluntary association of independent growers and exporters of cut-flowers and ornamentals, established in 1996, with the aim of fostering responsible and safe production of cut flowers in Kenya with due consideration of workers welfare and protection of the environment.

Against this background the Council has become the focal point for industry representation, promotion, and compliance to pertinent local and international standards deemed necessary to secure, expand and sustain markets. It draws its membership from producer members and associate members.

Kenya Flower Council Membership includes small, medium and large flower growers spanning from 0.25 acres to 230 hectares, in line with our strategic plan to ensure an all-inclusive representation of the floriculture industry.

On behalf of Members, the Council liaises with governments, development

To page 10



Mr. Richard Fox during the Kenya flower sustainability conference

agencies, media, trade bodies, unions, civil society, non-governmental organizations, partners, market organizations and other stakeholders on specific sector issues to create an enabling environment for the floriculture industry locally and abroad.

The Kenya Flower Council Certification Scheme is guided by an Accredited Quality System Regulations that defines the management, auditing and certification process. Producer Members subscribe to the Flowers and Ornamentals Sustainability Standard (F.O.S.S) audited annually.

Producers are awarded either Silver or Gold Certificate after complying with all the requirements of the certification category applied for.

KFC is guided by the values of integrity, transparency, accountability competency and professionalism

KFC represents roughly 70%. How about the other 30%?

Some growers are able to access export markets that don't demand any form of certification. Sadly it is the activities and practices of a handful of these exporters that from time to time have tarnished the reputation of our industry and hindered the promotion of Kenya as a source of quality and sustainably produced flowers to the world markets.

Some may say, why just not maintain the status quo and follow what the markets have required in the past. In response I would say that our industry's interests are best served by an active national trade organisation which has achieved much more than establishing the Silver Standard.

Such activities include trade negotiations, market access, EPA, cess, SPSS issues, and representation of the industry in national and international forums.

Has the KFC Silver standard become international?

Over the last 21 years the Council has continually reviewed the Standard in line with emerging issues, and we are proud to note the standard is now internationally recognized through the FSI and the ITC standards map.

The Kenya flower Council through Union Fleurs has participated in this initiative over the past 4 years and the output from FSI show that the KFC Silver Standard meets



Mr. Richard Fox addressing the Kenya flower industry sustainability conference.

and exceeds to benchmark set by the international floriculture trade. This is extremely good news for Kenya growers who for many years have been forced by the markets to comply with numerous industry standard at significant costs to our businesses.

Now we need to persuade the markets that KFC Silver more than meets their needs.

This is a significant boost for the Kenya flower Council and truly internationalises our standard.

The Kenya Flower Council Silver Standard has been developed over the last 20 years and as you have seen it is now one of only three standards that have been reviewed through the FSI process to meet both the social and environmental benchmark set by by the international floriculture sector.

Already customers are beginning to recognise that the KFC Silver more than meets their certification requirements. Ultimately adoption of KFC Silver as their preferred standard for product from Kenya will avoid duplication and reduce business costs.

Having an internationally recognised industry standard goes a long way to establish a Kenya brand of sustainably produced flowers in a market where our reputation for quality is already highly regarded.

KFC growers and exporters represent about 70% of flowers exported from Kenya.

What has this done for our sector?

We are all aware that over time the markets have imposed their preferred standards, either their own or some other industry standard. This has resulted in many exporters requiring multiple certifications and consequent higher costs of doing business.

Now we have an opportunity to say to the markets, you can compare your traditionally preferred standard with the Kenya Silver Standard and you will find that it is comparable and in many areas exceeds the requirements of your preferred standard.

KEBS has revised KS1758. Briefly Discuss its impact to the industry

There has also been some excellent work done by KFC with Kenya Bureau of Standards supported by USAID to revise and update the national standard for horticulture KS1758. This will be launched in July.

To page 12

From page 11

It will bring into the fold of compliance those exporters who have resisted certification and have found markets that do not demand it. Whilst these few may argue that they do enough to meet their particular market requirements it is not enough to protect Kenya's reputation as a source of quality sustainably produced flowers. We want to present our product as Brand Kenya flowers and all that goes with it. By making compliance to at least KS1758 standard for all exporters a condition for the issue of an export licence.

The industry wants to see compliance with KS1758, established through a comprehensive third party audit, as a mandatory requirement to be issued with an export licence. This will protect the industry as a whole and create uniformity in sustainable practices that we can present to the markets as Brand Kenya product.

I would hope that we can take away a commitment from Government that this is indeed one of the outputs of re-launching KS1758 as our national standard.

And to take this to its logical conclusion we should seek support for KS1758 to be benchmarked through FSI and look forward to it joining the KFC silver standard in the basket of standards meeting internationally benchmarked environmental and social criteria. And just as a final point, KFC Silver Standard members will automatically comply with KS1758.

Why should buyers be assured of quality flowers.

We've heard about the updated national Kenya standard KS1758 and the role that KEPHIS has in ensuring that our products meet the SPSS standards in our markets. We've also seen how the FSI project has formulated an equivalency tool to compare the numerous standards that the international floricultural industry has to grapple with and how our own Silver Standard emerges as one of the leading standards reviewed.

Of course standards are a means to measure sustainable practice through

compliance, provided compliance is established through a comprehensive and independent audit process.

Recently you hosted a sustainability conference, kindly discuss

I think we all know the traditional definition of sustainability that links what we do now to potential negative impacts in the future. Therefore to strive to meet the goal of sustainability we should seek to ensure that our activities have at best a neutral impact on the environment and preferably our activities should contribute to an improvement.

My own view is that sustainability is as much about a mind-set that considers the future impact of the daily decisions we make in our businesses as it is about supporting and undertaking projects that contribute to enhance our natural and social environment. You noticed that the schedule of topics were drawn from the experience and expertise of people engaged in a very



Mr. Richard Fox with other industry stakeholders during IFTEX 2017.

The industry wants to see compliance with KS1758, established through a comprehensive third party audit, as a mandatory requirement to be issued with an export licence.



Mr. Richard Fox with the then Agriculture PS. Mrs Sicily Kariuki.

broad scope of our supply chain.

What is sustainable practice in floriculture

Sustainable practice in our sector is not just about growing. It involves governance, regulation, logistics, human capital, marketing and distribution. Beyond what we do have some influence over, it also extends to involve customer choice and eventually the disposal of what we put all this effort into producing.

How shall we measure success of the conference?

Well I hope that growers will take away with them a wider perspective of the challenges regarding sustainability throughout the supply chain of our industry. In addition I hope it stimulated a view or thought on how your own business or involvement in the floriculture sector might be able to engage to address sustainability. And equally importantly, how through this engagement our industry can be made more efficient

and profitable.

I believe that if the floriculture industry views sustainability as an opportunity rather than a threat to improve profitability and minimise business risks, then it will readily respond to the challenge.

Discuss any Government support to the industry

Whilst the floriculture industry is proud of its performance in the Kenya economy as an example of private sector entrepreneurship, we must not forget that we could not have achieved this without the support of our regulatory organisations from Government.

I've already mentioned KEBS and our Trade Ministry. Equally KEPHIS, HCD and the Ministry of Agriculture have created an enabling environment for us to operate successfully. The relationship with these arms of Government has developed into one of private public sector cooperation which is good for business. We are finding our feet with relationships with the county administrations. Our CEO Jane Ngige has put a great deal of effort into promoting KS1758 and the national traceability system with the county governments and I'm sure as we move into the second cycle of their mandate we will continue to grow their support.

Your Final Comments

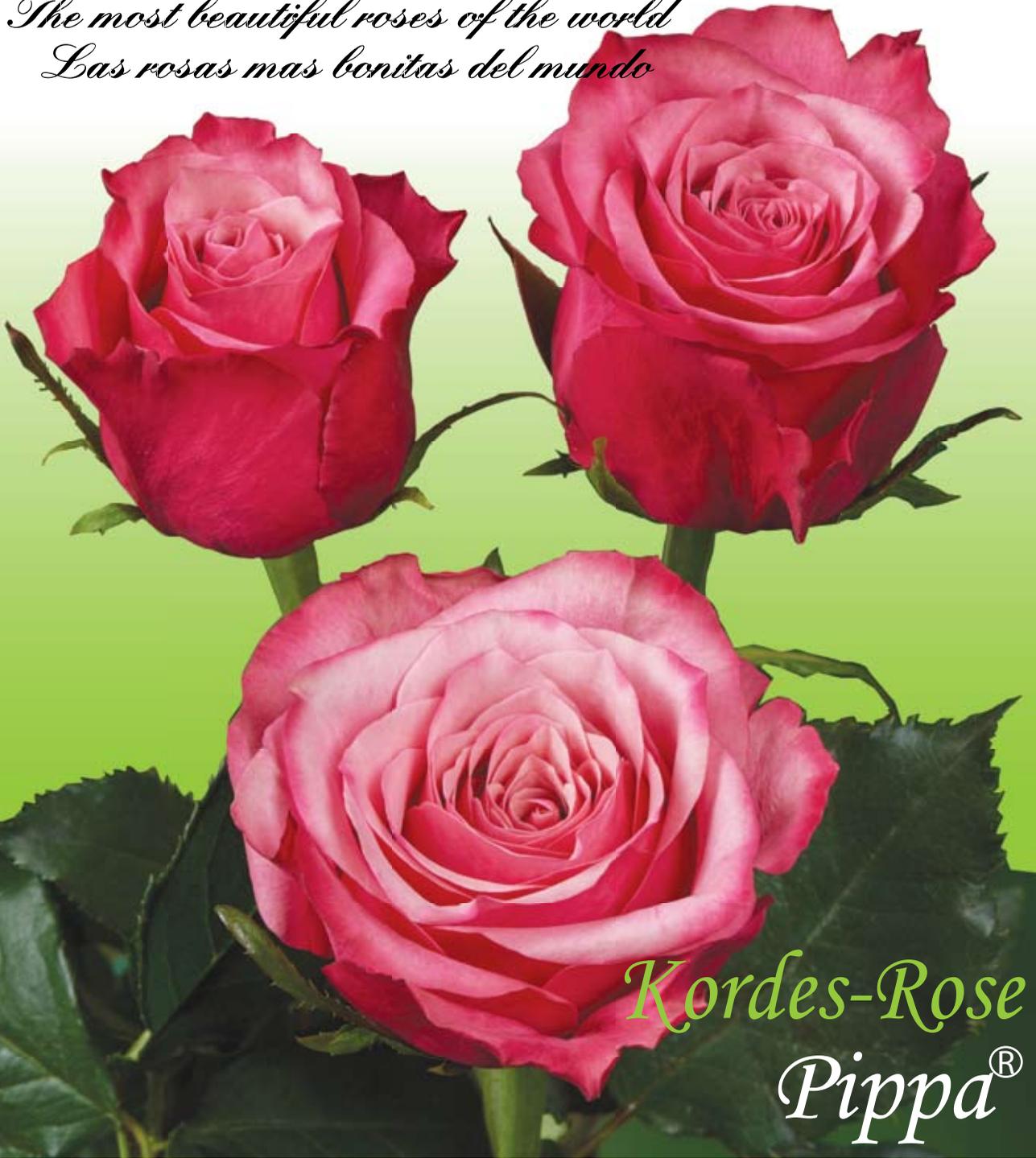
In conclusion, the floriculture industry is in a good place. We have had and will continue to have challenges but we shall meet and overcome them. This industry has changed enormously over the past 25 years or more and we operate in a highly competitive price focussed world market that is particularly sensitive to exchange rate fluctuations and input costs. It is not easy doing business. Recognition of this will enable us to continue to play a leading role in the Kenyan economy, expand and create more jobs.

Seit 1887

W. KORDES' SÖHNE



Die schönsten Rosen der Welt
The most beautiful roses of the world
Las rosas mas bonitas del mundo



Kordes-Rose
Pippa[®]

W. KORDES' SÖHNE

Rosenstrasse 54
D-25365 Sparrieshoop, Germany
Phone: +49 4121 48700
Fax: +49 4121 84745
Internet: <http://www.Kordes-Rosen.com>
Email: Kordes-Rosen@t-online.de

KORDES ROSES EAST AFRICA LTD.

P.O. Box 24581, 00502 Kenya.
Tel: 254-020-2595455, 3008065,
Cellphone: 254-0733-363642, 0722-200643
Fax: 020-2595466
NAIROBI, KENYA
Email: info@kordesroses-ea.com

Floriculture—Caring For People and Nature

Producers should seek to ensure that their activities have at best a neutral impact on the environment and should preferably contribute to an improvement.

The Kenya Flower Council held a conference themed: Floriculture: Caring for People and Nature on 6th June 2017, at Mayfair Hotel in Nairobi. The meeting brought together players in the flower industry and stakeholders from government agencies and the civil society, both local and international. The conference was called to address the challenges in the industry and to review current interventions that could contribute to sustainability in the flower industry. It looked at the aspirations of sustainability at both the global and local level, at the guidelines that the industry has adopted the company standards in place and at initiatives that the industry has developed in partnership with other stakeholders. The forum came up with recommendations to that members could adopt to help them run their businesses successfully.

Mr. Richard Fox, the Chairman of Kenya Flower Council (KFC) said that sustainable practice in the flower sector is much more than growing but also encompasses other issues like governance, regulation, logistics, human capital, marketing and distribution.

He mentioned that more than that, it also involves customer choice and the disposal of what the farmers produce. To meet the goal of sustainability, he said producers should seek to ensure that their activities have at best a neutral impact on the environment and should preferably contribute to an improvement.

He said if the floriculture industry views

sustainability as an opportunity rather than a threat to improve profitability and minimize business risks, then it will readily respond to the challenges that arise.

He said the Kenya Flower Council Silver Standard is now one of only three standards that have been reviewed through the Floriculture Sustainability Initiative (FSI) process to meet both the social and environmental benchmark set by the international floriculture sector. Already customers are beginning to recognize that the KFC Silver more than meets their certification requirements. Ultimately, adoption of KFC Silver as their preferred standard for products from Kenya will avoid duplication and reduce business costs.

Why Invest in Kenya?

Encouraging foreign investors to have trust in Kenya, Mr. Mike Eldon of Depot said that there is extraordinary potential in the country. According to Kenya Private Sector Alliance (KEPSA). Kenya is a preferred business destination. There are, plenty of business opportunities, a well-established and vocal private sector with strong partnership with the government, increased ease of doing business, macroeconomic and political stability, improved governance, its strategic location, EAC is the most integrated economic block in the region, developed social and physical infrastructure, supportive government policies, a skilled workforce and a fully



Mr. Richard Munang Regional Climate Change Co-ordinator-UNEP

liberalized economy. However, in spite of the government's support of the private sector, there are challenges like corruption, and the sector has yet to exploit its full potential.

Unleashing Floriculture for Climate action and Attainment of SDGs

Speaking during the conference, Dr. Richard Munang UN Regional Climate Change Co-ordinator said as Kenya progresses to achieve the UN's Sustainable Development Goals (SDGs), the flower industry stands to play a pivotal role. But this will not materialize if the earning capacity of the industry is not maximized and profitability stabilized. This means minimizing waste by utilizing glut along the supply chain. For example, while post-harvest losses in Kenya's floriculture can be as low as 5%, they can also escalate to as high 60-100% on occasions.

He suggested complementary partnerships to expand product lines through more value addition, and complementary partnerships to influence policy processes. Going forward, he said, policies will be needed to address peculiar issues of the flower industry given its contribution to achievement of the SDGs.

He said collaboration with UN Environment, which is a globally recognized brand in combating climate change, offers an opportunity for the flower industry to legitimize; hence strengthen the market appeal of sustainability efforts.

Improved Sustainability Performance in the Floriculture Value Chain



Mr. Bimal Kantaria, Director, Elgon Kenya and the Chair of Session One

Ruth Vaughan of Crop Nutrition Laboratory Services (CNLS) made the case for identifying the root cause of production deficit, and prescribing corrective actions so as to increase production and to allow sustainable production, which would guarantee the farmer a profit for his activities. Mr. Jeroen van der Hulst of Flower Watch told the conference

that there has been little innovation on supply chain performance over 50 years. However, the situation is now changing because cold chain is measurable. There is improved packaging and improved product and quality handling. For instance, Kenya flowers can now go for over 14 days without getting spoilt. Yet there is still room for improvement in shelf life, more efficiency in handling and new transport modes can be developed. He said with application of available tools the producer can increase his productivity and reduce his losses.

Making a presentation on the wellness and productivity of workers, James Steady, Associate at Business for Social Responsibility enumerated how BSR programmes promote health, financial inclusion, and gender equality in the workplace. He said their programmes have had a positive and long-lasting and meaningful impact for workers, workplaces, and brands involved with their HERproject. This had helped to create sustainable change, and fostered systemic change that continues to deliver dignified work for empowered women in global supply chains. Secondary outcomes from HERhealth programme activities relate to a sense of self, negotiating powers at home and at work, and contributions toward household decision-making. He said that by companies implementing their programmes, there would be enhanced communications in the work place, reduced maintenance costs, reduced compliance violations, increased utilization of employer-provided services, e.g. clinics, and increased worker responsibility.

Mr. Andrew Ondete from HIVOS, said there was a linkage between workers' welfare and their productivity. Workers whose welfare is catered for have more outlay and output, they will not sabotage the organization and will defend the interests of the company. This will lead to less labor movement, little confrontation, and minimal costs in compensation. It guarantees a good name and reputation. The good reputation which in turns brings credit, goodwill from suppliers, the market and consumers. Healthy workers have more output, they absent themselves less and targets are met when they are in tip-top condition.



Speakers of the First Session (From Left): Okisegere Ojepat (FPEAK), Mr. Jeroen Van der Hulst (Flowerwatch), Mr. Andrew Odete (HIVOS), Ms. Ruth Vaughan, (Croprnuts) and Ms. Grace Kyalo (HCD)

Ms. Grace Kyalo from the Horticultural Crop Directorate (HCD) said the directorate encourages compliance of KS 1758 Part I & II, and National Horticulture Traceability System. This will make it easy to regulate, develop and promote the agricultural sector in Kenya. She called growers, exporters and other players in the sector to comply with rules and standards. She said one of the requirements for players, especially exporters, is to ensure that they are registered for their operations, and part of the requirement for this registration is compliance with standards and regulations, either national or international. The plan is to eventually, after all players are sensitized, to make it mandatory for exporters and producers to comply with KS1758 as a basic standard.

The other requirement the directorate plans to implement is on the national traceability system to ensure that all producers or exporters use a traceability mechanism.

Mr. Okisegere Ojepat from the Fresh Producer Exporters Association of Kenya/Kenya Horticultural Council said fruits and vegetable industry in the country is dominated by small-holder farmers operating under FPEAK. He said the players had recently formed an umbrella organization, Kenya Horticultural Council,

which brings together the Kenya Flower Council and Fresh Producer Exporters Association of Kenya, to fight for the interest of the players in the sector while dealing with the government and other development partners. He assured those present that the industry has put things together to engage formally with the regulator and other concerned parties.

Responding to concerns from participants, Ms. Grace Kyalo said the traceability mechanism has been positioned along the whole value chain and it would improve safety, and give confidence to the regulation over the system. Its scope has been expanded so that producers can deliver services more efficiently and to reduce the erosion of profits for the flower industry as a whole.

To deal with issues of sexual harassment, participants suggested the adoption of policies that encourage the development of a culture that bears zero tolerance for sexual harassment in the workplace, through effective training programmes that targets all workers, including managers. The KFC said issues of sexual harassment have reduced drastically over the years and there has been constructive engagement between the Council and the NGOs that defend the rights of workers.



Ms. Sylvie Mamias, Secretary General, Union Fleurs and the Chair of the Second Session.

Standards for Enhanced Sustainability Throughout the Value Chain

Mr. Charles Ongwae from the Kenya Bureau of Standards (KEBS) informed the conference that the role of Kenya Bureau of Standards is to develop standards in commerce and industry and in that regard; KEBS has worked with Kenya Flower Council (KFC), Fresh Producer Exporters Association of Kenya (FPEAK) and other key stakeholders to revise KS1758.



Mr. James Wahome-KEPHIS

He encouraged all producers to implement standards to help them in planning, to improve their operational efficiencies and for cutting down costs. He said KEBS works with flower producers to protect the consumer from exposure to certain chemicals which might be dangerous to their health. He encouraged the producers to embrace KS1758 in order to become more effective and efficient in their businesses.

Mr. James Wahome from the Kenya Plant and Health Inspectorate Service (KEPHIS) told the conference that all standards applied in the country are found in Cap 319 of the Agricultural Export Act of the Kenyan Laws. He reminded participants that different countries have different laws that govern the import of goods into their countries. He urged the sector players to always consult with KEPHIS in order to keep abreast with the standards and the requirements that are necessary. He spoke of challenges that exporters are likely to encounter like interceptions in the international market, and inconsistencies in rules which keep changing, especially in the EU market. He said that market access is a dynamic function that also keeps changing with changes in technology.

He challenged the stakeholders to keep abreast with the ever evolving technology. Market intelligence and changing preferences in different market segments is something they also need to keep updating themselves on. He urged the sharing of information in order to enhance trade in the world market.

Mr. Jeroen Oudheusden of Floriculture Sustainability Initiative (FSI) took growers through 14-baskets of standards that FSI has developed in the area of environmental, social or a combination of both, which they use to help create a sustainable supply chain that meets the demands of consumers.



Mr. Charles Ongwae-KEBS

The standards emphasize on transparency and it is also a competitive market driven initiative that involved many stakeholders in its development. FSI is made up of 35 members who can measure their performance against the standards in FSI.

Mr. Richard Fox from KFC said the Kenya Flower Council Silver standard has become truly internationalized and has emerged as a leading world standard. He urged Kenyan exporters to sell it to their customers since it meets more than the certification requirements of the producers.

Ultimately, he said, adoption of KFC silver as the preferred standard for products from Kenya will avoid duplication and reduce business costs.

He said that having an internationally-recognized industry standard will go a long way to establish a Kenya brand of sustainably-produced flowers in a market where the reputation for quality is highly regarded. He said the industry would like to see compliance with KS1758 established through a comprehensive third-party audit as a mandatory requirement for one to be issued with an export license. This will protect the industry as a whole, and create uniformity and sustainable practices that will make the Kenyan brand to stand out in the market.

Responding to concerns from participants, Mr. Ongwae said that the East African Community countries that produce flowers have harmonized their standards with regard to export from one country to another. He assured the meeting that flowers that are being exported within the region meet the requirements as prescribed by standards and / or technical regulations. KEBS encourages regulators in various sectors to reference standards like KS1758 while developing their



Mr. Jeroen Oudheusden-FSI

technical regulations.

Mr. Fox revealed that most businesses now have committees through which they relay important information to workers, for instance information on standards and other processes that affect workers. He said KFC was working hard to see that KS1758 becomes mandatory before the end of the year. KFC said it is working with BSR to improve the well-being of workers - not just the environment in which they work, but also on their self-esteem, and it encourages them to develop themselves. It says this has already had a lot of positive impact in the work place.

Mr. Jeroen said his organization exists to help users from different environments to comply with market regulations and this differs from place to place and from production to production e.g. in an open-field production or in a closed green house. Jeroen said that because of the imbalance that exists in



policies in different countries, there is need to use a multi-stakeholder approach to deal with the challenges. Ms. Sylvia Mamias from Union Fleurs said there was need for more concerted engagement between the private sector and other stakeholders to secure market access and thus secure the future of businesses.



Mrs Jane Ngige, CEO-KFC, giving the closing Remarks

Sylvie Mamias from Union Fleurs told the conference that her organization is involved in lobbying and advocacy on behalf of flower exporters, especially into the European Union. Her organization has worked with the Kenya Flower Council on the economic partnership agreement with the EU. She talked about the challenges and opportunities that exist for market diversification globally. She mentioned that whereas Kenyan flower producers have a competitive edge over their competitors in the region, there is still a lot of room for diversification. She called for concerted efforts and constant dialogue between the industry players in order to understand the needs and requirements for getting into emerging markets, and the need to optimise the enabling environment for market diversification. She urged players to identify where potential growth markets are and to understand how they can best penetrate them.

Ms. Mercy Achola of Value Connect said Kenya can diversify its market for flowers in the Middle East, especially via Dubai, which is an economic hub and through which exporters can access two thirds of the world within 8 hours, and one third of the world population within four hours. "There are 200 nationalities living and working in Dubai and Dubai is well connected by sea, air and road. It has a population of 52 million people, and it is the gateway to the Middle East. Of the 52 million people, half of them are representatives of an expatriate community, who are high spending consumers and this is an opportunity that Kenyan flower exporters need to take advantage of," she said.

Currently, the challenges exporters face are

Logistics, Markets and Market Access



Mr. J. M. Mandelbaum-Steward Venture

like a long documentation process, little cargo space and abrupt downgrading of aircrafts. She suggested that there needs to be a balance between how fast the documentation can be done and making sure that producers export flowers that meet international standards and quality. The flower industry also needs to approach the airlines as one, especially now that they have the Kenya Horticultural Council to speak for them.

Ms. Matthea Van der Mollen from Royal FloraHolland Kenya spoke about expanded market opportunities that are opening up in China because of its large population of young and working class. This is an opportunity for Kenyan flower exporters to diversify to the Far East. Her organization is helping to build a trade link from Kenya to three cities in China - Shanghai, Beijing and Guangzhou. Shanghai alone has a population of 24 million people, many of them already consuming flowers. Royal FloraHolland has discovered that more Chinese are buying flowers and other items online and this is something that exporters need to keep in mind as they seek to penetrate the Chinese market.

Exporters should focus on women ages 25 to 40, most of whom are the consumers of flowers. Challenges of handling, storage and logistics exist but Royal FloraHolland is



Ms. Mercy Achola-Value Connect

working with other stakeholders to try and overcome these challenges. They estimate that by 2020, 200 million stems from Kenya and Ethiopia will be exported to China.

Mr. J.M Mandelbaum from Steward Ventures told the meeting that it is unfortunate that banks in Kenya ignore biologicals and don't count them as collateral when they consider a farmer's assets. He said that Steward Ventures is developing crop insurance in Kenya for flowers and they are also educating lenders about how they can use the crop insurance and the crop to bring comfortable lending for crop producers. He said they are working with lenders and lawyers in trying to de-risk lenders' experience in cultivation and in trade. He said that de-risking of flower value chain will create sustainability in the industry since it will remove the risks and uncertainties inherent in the flower industry in Kenya.

Mrs. Jane Ngige from KFC said that Kenyan flower producers have done very well in terms of exporting roses, having 40% of the European market share, what is the next crop after the roses in this country?

She added that KFC has cultivated a new working relationship with the government, and with stakeholders in the civil society to make sure that the industry works in a more harmonious and in a sustainable manner.



Ms. Mathea van der Mollen-FloraHolland Kenya



Guests Sign in for the Conference



Mr. Mike Eldon, the Master of Ceremony of the day



Discussion time during tea break



Guests follow the presentations keenly



In a flower country, after a flower presentation, a bouquet is good for the speakers



Reaction from the floor

Ethiopia is Still Africa of Course – Nothing is easy'

Frank Ammerlaan: '

Why did you decide to go to Ethiopia?

"After we'd completed our studies in Business Administration and Plant Sciences respectively, my brother Wim and myself joined our parents in their business, a 3.3-ha rose nursery in Rijsenhout. But rose cultivation was becoming less profitable in the Netherlands, due to the increasing costs and the imports from Africa and South-America. So we decided to start a rose nursery in Ziway, as part of the Sher Ethiopia project. Our greenhouse in Rijsenhout is filled with cut hydrangeas nowadays."



Why Ethiopia?

"In my final year at university, I studied which African country offered the best business opportunities for a rose farm. In those days, the safety in Ethiopia was an important advantage which they had over other countries. Ethiopia has a good climate, there's little to no corruption and the country offers favourable conditions to investors with regards to taxations and loans. The population is proud of their country and wants to collaborate. And the fact that it was relatively easy to start up with Sher Ethiopia through a lease-purchase construction, really helped."

Frank Ammerlaan

How would you describe the country's safety these days, after the riots of 2016?

"It's been calm here for quite a while. The riots were local. Even though there weren't any incidents in our region, everyone's alert now. The Dutch government, the Agricultural Counsellor and various Ethiopian authorities are really on top of it at the moment, but you can't expect 100% safety anywhere of course."

The Ethiopian delegation who spoke at the seminar pointed this out too. By African standards, Ethiopia is still a very safe country. The feeling of freedom still prevails. That's how I feel, too."

How do you like the country as an entrepreneur?

"It's still Africa of course; nothing is easy. You've got to adjust. Lots of things are changing and developing. But the educational system is still behind. The infrastructure isn't as far along as in the Netherlands either, but with all the heavy investments made these days, it's going in the right

direction. All our staff are Ethiopians – 1,200 people, most of them with little education. That isn't always easy. But what we do in our company can actually be considered an excellent form of development work. It's really satisfying when people develop themselves within our farm. Some of them started out as a labourer and have very important functions with the company now. Collaborating and respecting each other, that's essential."

Any plans to expand into the new horticultural area Hawassa?

"There are always plans, but expansion isn't our goal. We currently have 38 hectares in production and ship 100 million roses to Royal FloraHolland's auction and to clients in Japan and Dubai each year. We manage our processing and sales activities in the Netherlands ourselves. We're not a low-cost business. We want to distinguish ourselves through a high level of quality. Expansion doesn't necessarily lead to higher profits. We're currently making a good living."

Greenhouse



CEREALS

The leading journal for field crops

APRIL - JUNE 2017



Meet Monsanto's Everlyn Musyoka
One of the Women Leaders
in Africa's Agriculture

Order Your Copy Now

A Visit to the Flourishing Everflora Flower Farm in Kenya



We had an extensive tour of the farm's green houses, the busy packhouse, interacted with the cheerful farm workers and captured all the moments. Later on we sat down with Everflora MD Mr. Khilan Patel to find out more about the farm.

Production Methods Undertaken

Sitting at an altitude of 1550 meters above the sea level, the farm manager Khilan informs us how this is of great advantage since it allows the farm to flush for specific holidays and thus ensures that the production of flowers remains high per square meter in every harvesting season. Warm days, according to Khilan get to an average of 28 degrees with cool nights getting to 14 degrees Celsius which also makes the area ideal for flower farming.

Green House at Everflora Flower Farm

He further adds that they have placed quality assurance systems that continue to cement Everflora's flowers as not only some of the best but the most sought after by buyers across Europe.

He lists them as:

- Efficient systems of pre-production all through to post production by being very careful when it comes to picking roses that only meet the best standards 6cm heads and with long sturdy stems.
- Flowers at the farm are only grown in steel houses using 100% hydroponics. Ventilation in these green houses is additionally supplemented by fans

After a week of planning, we were set for our next adventure to one of Kenya's most impressive flower growers, Everflora Flower Farm. Following an exciting and eventful journey, we arrived at the farm where we are immediately impressed by the ever welcoming staff and the sight of the expansive farm. The farm which was established in 1995 is one of the leading flower growers in Kenya. Everflora is located in Thika, an area in the Greater Kiambu county regarded as one of the best agricultural regions in Kenya. Production is on 30 hectares, in the region that is known to be ideal for flower farming because of availability of fertile and nutrient rich red soil and good weather.

To page 26



FERRILENE®

THE SOLUTION TO REMOVE CHLOROSIS FROM YOUR PLANTS



FERRILENE® line is a complete range of the best iron chelates (EDDHSA; EDDHA) for various adverse situations, that ensures the fast greening of the plants.



Valagro produces iron chelates thanks to the synthesis plant located in Atessa (Italy). The direct production allows us to guarantee the best quality of the marketed products, including **the packaging that protects the product from photo degradation (light)**.

Valagro®
Where science serves nature

www.valagro.com



Everflora collection of Photos

placed in each of them which allow for better pest and disease control that is unmatched.

Premium Roses Produced by Everflora

“Some of our most prominent varieties include Rhodos, Madam Red and Furiosa. These roses achieve the best demand during peak days which further enhances their popularity in Europe and other markets,” says Khilan.

Staff motivation

Everflora continues to provide essential incentives in its bid to empower and motivate it’s 550 strong work force. Khilan states that the farm has provided free schools for their staff’s children,

social halls for entertainment and games and a medical clinic that offers free healthcare. He also points out that the farm has allowed the workers to form a cooperative Sacco which encourages them to save their earnings and receive loans at affordable interest rates. With a motivated staff, high quality rose production is assured.

Relationship with Flower Optimal Connection

We also wanted to know from Khilan on how Flower Optimal Connection through its many years of experience in offering strategic solutions to flower farms across Kenya has contributed to the farms continued success in the export market. He had nothing but honest praise on

the partnership between Flower Optimal Connection and Everflora which has lasted for many years. He was also quick to acknowledge that with the availability of a large unpacking area, Flower Optimal has given the farm an added advantage of having the ability to export large volumes of premium roses destined for the European market in each season. He also pointed out that Flower Optimal provides many outlets for buyers who have a great appetite for Everflora’s exceptional flowers; what’s more it also offers an added advantage of direct sales across the world thus creating profitable returns.

Maintaining Good Quality Roses Despite Challenges

According to Khilan, Everflora is not immune from some challenges that seem to plague almost all major flower farms across the world. The most notable among these according to his experience is high power costs as a result of Kenya’s dependency on hydro electricity, market price fluctuations and global warming that has brought about adverse climatic changes in the country. Regardless of these challenges, the farms success in producing market leading roses is not in doubt.

Courtesy: Flower Optima Connection





Our Knowledge, Your Success.

Tivag 40SL

It's a registered and commercially available gibberellic acid (GA) for use in ornamental crops. Gibberellic acid GA is a very potent hormone whose occurrence in plants controls their development

Unique Benefits of Tivag

- Overcoming dormancy-treating plants with Tivag will effectively break shoot dormancy in mostly grown summer flowers such as gypsophilla, that require long day photo periods.
- Increased growth and vigour-Tivag treated crops will have enhanced shoot growth,vigour,annulling the negative effects of stunting associated with commonly used triazoles fungicides.
- Post-harvest treatment of Gypsophilla. Will enhance uniform opening of flowers especially in some specific difficult to open varieties.
- Stress tolerance.Tivag treated crops will show tolerance to detrimental abiotic stresses such as frosts,water stress and extreme temperatures.



Old Airport North Rd. - Embakasi
P.O.Box 30327 - 00100, Nairobi, Kenya.
Tel: +254 (0) 719 095 000
Email: exportagonomy@amirankenya.com

A member of the Balton Group of Companies



Reverse Osmosis Systems Enhance Water Quality of East-African Growers



The System

Osmosis is the passing of a liquid through a membrane from a lesser concentration to a greater concentration. Eventually, both liquids would be of equal concentrations. Figure 1, page 48, demonstrates how this reaction takes place. A good example of osmosis is how plants uptake water.

Reverse osmosis (RO) puts pressure on the greater concentrated liquid and forces it through the membrane to the lesser-concentrated liquid, hence the term, reverse osmosis. The membrane traps particles and impurities down to 0.0009 micron, and the effluent or permeate water is very clean and free from impurities. Figure 1 demonstrates how this works. So at its most basic level, reverse osmosis filters impurities from a liquid, namely water.

By starting with water that is free from impurities and minerals, RO water can help make growing more calculable, since the water quality is constant. Nutrients can be better controlled without having to worry about what is in the water source at the beginning of the irrigation process. Contaminants in the water source, such as iron, manganese, calcium, magnesium and chlorine, can react with the nutrients and cause problems with fertilizer mix.

Growing Without Contaminants

Growing with good water and adding nutrients at the grower's discretion make growing more calculable. Not having iron, manganese, calcium or magnesium makes setting up the EC of a nutrient solution easier since the fertilizers are not reacting with the impurities in the water.

The only nutrient minerals that are added to the irrigation water are ones that are an advantage to the plant. Total dissolved solids (TDS) reveals the conductivity of water, but EC measures the actual electrical production of these minerals. Water that is pure will not conduct electricity or have an EC and TDS reading.

Purchasing Tips

The implementation of RO can be quite ambiguous, and cost considerations are the most objectionable. Plus, wastewater is another downside of this technology.

There are two types of membranes that are used in RO designs, and each has their uses and limits. The cellulose triacetate membrane does not offer the rejection rate of thin film composite (TFC) membranes. However, chlorine can break down TFC membranes faster and cause premature failure of the system, so a carbon pretreatment is recommended to remove chlorine.

Pretreatment of the influent water must be considered or the membranes will foul out. Failure to address the pretreatment issue can cause extensive maintenance and labor costs. Without pretreatment, membranes



Roses on display during IFTEX

become clogged and need to be replaced or cleaned sooner than normal. When used with softened water, the membranes last longer, since other minerals are removed before reaching the system. The use of a softener creates more cost and lab or when utilizing RO but must be considered to offset the higher cost of membrane replacement, lab or and downtime of the water treatment system.

Another factor to consider when using RO is the wastewater that is created. In general, depending on pressure and size of the unit, 4 gal. of water are required to produce 1 gal. of RO water. This would not be a good treatment option in areas where water use is restricted. There are newer systems on the market that are more efficient and produce less waste, but for the amount of water a grower needs, these systems have a long way to go before being adopted within the industry.

RO water is very aggressive, since it does not contain any minerals, and can be very corrosive, especially to metal piping. RO water should never be run through galvanized or copper pipes because they will be destroyed by the water's aggressive nature. Pipes, tubing, drippers, misters and foggers must be able to stand up to RO water.

System Sizes and Costs

The size of an RO water system varies greatly from manufacturer to manufacturer. There are a few factors to consider when looking at cost, namely how much water is needed per day. Most systems are rated on

the number of gallons per day (GPD) that the system can produce. Residential systems can produce anywhere from 15-50 GPD without a pressure pump, the cost ranges from \$200-600 and the rejection rates are acceptable. A system with a pressure pump can produce 75-150 GPD for \$800-1,000, but their rejection rates are even greater because of the extra pressure.

Commercial and industrial RO systems escalate in price, but so does the volume of water being produced and the need for high-pressure pumps and large storage tanks. These systems can produce volumes of water ranging from a few thousand gallons per day to more than several hundred thousand per day. The costs vary from application to application and manufacturer to manufacturer. Keep in mind the storage areas for large amounts of processed water need to be addressed, and areas built for tanks increase the cost of the investment.

In Conclusion

Most growers, especially new or inexperienced ones, would benefit from most any type of water treatment that removes impurities. Removal of contaminants that promote microbial growth, such as iron and bacteria, can make a huge difference in growing, and the impact would be seen from reduced root rot problems, such as Pythium or fungal diseases that are introduced by water-borne bacteria. Propagation areas seem to be where most growers target their water treatment strategies, but many are incorporating treatment in other areas as well.

RO would be a great asset to any grower, as nutrient solutions could be controlled and calculated for a variety of crops and duplicated for consistency. RO is usually a hefty initial investment, but if incorporated correctly, it can have a fast return on investment.



Mienis Representative during IFTEX.

Understanding Code of Practice for Fresh Fruits and Vegetables



Mr. Okisegere Ojapat, Director FPEAK and KHC, organisers of the Seminar.

A code of practice is a set of written rules which explains how people working in a particular profession/sector should behave. Kenya has developed the KS1758 Code of Practice for Horticulture Industry: Part 1 deals with Floriculture, and Part 2 deals with Fruits and Vegetables, in line with international standards.

Recently, the fresh produce exporters of Kenya (FPEAK) held a successful Industry which attracted many stakeholders, including growers, suppliers, stakeholders, government agencies, and development agencies, among others. Speaking during the conference Mr. Andrew Edewa of Compliance Kenya Ltd. took participants through the soon to be mandatory for exporters and producers to comply with KS1758 as a basic standard.

But then, why do organizations, industries and professions come up with the codes of conduct and practice? Are they really necessary?

Well, the horticulture industry in Kenya in conjunction with the government too, have developed their own code of practice to guide the players in the industry.

The Code of Practice aims at providing rules for safe and sustainable production and supply of fruits and vegetables in Kenya. It applies to all actors involved in the primary production, processing and marketing of fruits and vegetables in Kenya.

The objectives of KS1758 are to promote good agricultural practices, to protect consumers, to promote social welfare and for conservation of the environment. A glance at the document shows.

Dialogue and knowledge

To come up with an acceptable code of practice and standards required dialogue between growers and buyers on quality and quantity. This helped to facilitate compliance to the requirements.

It also required sharing of knowledge



A Collection of fruits

and information through continuous training of management and other personnel. This required using the services of experts and consultants with regard to soil testing laboratories, irrigation, fertilization and crop protection.

Production Planning and Input Management

At the production planning stage, the code talks about developing a written management plan, undertaking risk assessments of all new sites, and appropriate crop choices and production methods should be considered.

At the input management stage, the use of best quality (certified) seeds and choice of crop variety which is accepted by the market and adapted to local conditions, should be done.

In terms of legal requirements, the code specifies that products should be registered in the country of use and should adhere to legal residue levels in food stuffs. It also specifies residue limits in the country of destination if maximum residue levels (MRL) is not available locally.

When it comes to storage and disposal, the code states that fertilizers and crop protection products must be kept separately; disposal of packaging of crop protection products must be managed responsibly; and personal protective clothing and equipment must be properly maintained and stored separately from crop protection products.

Still under input management, it specifies use of suitable machinery, which are properly maintained and regularly checked for verification of calibration, use of suitable protective clothing/equipment and optimizing use of water by minimizing waste.

Care of Produce and Record Keeping

In caring for produce, the code says when the produce is harvested, care is required to maintain safety and quality, and that only water of drinking quality should be used to clean produce.

Record keeping is a prerequisite for traceability. It consists of records of all agronomic activities on the farm, including choice of variety, sowing conditions, planting dates and quantities. This requires a visual reference system.

Conformity Assessment

The code also deals with compliance with requirements testing by ISO17025 accredited labs. It recommends that proper testing methods should be used for specified parameters.

To demonstrate compliance with requirements, inspections can be carried out by inspectors accredited to ISO 17020 requirements. Again, to demonstrate compliance with requirements, inspections can be carried out by auditors accredited to ISO 17020 to audit the quality management systems in place.

Workers Health, Safety and Social Welfare

The standards also cover issues of worker's health, safety and social welfare. It specifies that workers should have access to water and hygiene facilities, they should undergo periodic health checks and they should operate in healthy and hygienic environments.

In terms of safety measures, there should be respect to occupational health and safety regulations, and health and safety risk assessment done regularly. Workers' welfare should be taken care of by respecting laws on welfare and by taking risk assessment of

workers' welfare.

In addition, players ought to comply with the Employment Act, which specifies minimum wages and staff recruitment and promotions procedures. It also covers the issue of freedom of association and participation for workers, and grievance and disciplinary procedures.

Conserving the Environment

In conserving the environment, it says that Environmental Impact Assessment should be carried out and recommends having an energy policy and use of renewable energy technologies.

The document says that there should be compliance with NEMA requirements and that producers should have a waste and pollution management plan.

In terms of governance and management, it calls for legal compliance, and respect for intellectual property, ownership and transfer, among other management issues.

Growers and potential growers in this industry should therefore familiarize themselves with this code since it will affect their day to day operations.



When the produce is harvested, care is required to maintain safety and quality.

The Success Story of IFTEX

For the sixth year in a row, Kenya is hosting the International Flower Trade Expo (IFTEX) at the Oshwal Centre, Parklands, Nairobi.

This year's show, apart from affirming the strength of Kenya as a leading supplier of flowers in the world came amidst renewed focus in the country following the classification of JKIA to Category A status enabling direct flights to the US from Nairobi. Kenya's flowers are a sensation in the US but until the categorization, it has been costly and lengthy to ship the country's flowers to the world's biggest market after the EU.

Owing to the availability of the flights, we expect more American buyers in Nairobi next month going by confirmed visits and increasing inquiries.

Since IFTEX opened its doors here in 2012, there has been a steady pattern of target visitors. Buyers come here to see the flowers and book supplies. That they keep coming year after year is an indication the show meets their expectations and ultimately. On the other hand, growers have always put their best

mix on show creating a sea of flowers not seen anywhere else under one roof. IFTEX is therefore an international show by any standards and has become a "must do" in the floriculture activity calendar. Despite its being the youngest of global flower shows organized by HPP, IFTEX is now among the top five world's most important industry events.



Although Kenya actively participates in other international flower shows globally, IFTEX offers the largest number of growers sitting together showcasing the unique characteristics of flowers from the country's various growing regions. Big heads, small heads, short stems, long stems as well as different varieties coming from the same country complete the picture of market diversity.



IFTEX 2017 Photo

Kenya's position astride the Equator and varying climatic conditions enables the country to grow flowers that compete with those from the other four countries in the world in the same horizon making the nations the top flower producing spots.

These are Kenya, Ethiopia, Ecuador and Colombia. Kenya has a mix of low and high lands enabling production of the same variety in different region giving different characteristics for the diverse markets. For instance, the same variety grown in Naivasha, Thika and Nanyuki gives three different shades of the same flower going into different markets, and this is unique to Kenya.

This year, over 5,000 visitors and 225 exhibitors (growers, breeders, consolidators, products and service providers) participated in the expo, reaffirming the great importance of this annually held international flower trade exhibition. Last year over 1,500 key qualified trade visitors from over 28 countries visited the show, a big number for buyers.



The biggest representation in the show was the Kenyan flower growers, but producers from other nations presented their products. Growers from Ethiopia, Uganda, Tanzania, Rwanda and South Africa exhibited giving IFTEX a regional fair as well as a show for Africa, staged in Kenya, the continent's leading producer, and the world's third largest.

IFTEX was launched in Nairobi in 2012 and has been held every year since. It has made history, not only as the fastest growing among industry exhibitions organized by HPP but has also the only event that has attracted growers from other continents to showcase their products in a non-consuming country.



The show has grown into a top Kenyan brand, strengthening the country's position as a leader in global markets, while enhancing the image of Nairobi as the home from where 40 per cent of the flowers sold in Europe originate. IFTEX has come at the right time for the Kenya flower industry that is now in the process of market consolidation and retention by positioning its flowers as responsibly grown, and that picture can only be seen at a show of an international magnitude at home.

Currently, IFTEX is at par with other important flower exhibitions organized by HPP which include World Floral Expo (USA), Agriflor (Quito, Ecuador), and the International Floriculture Trade Fair (Vijfhuizen, Holland), all that are key activities in the flower industry calendar.

Ethylene: the invisible killer

Ethylene causes increased ageing symptoms like wilting, bud and leaf drop with flowers and plants.

The plant hormone ethylene stimulates ageing symptoms like leaf drop, flower wilting and fruit ripening on flowers and plants. Ethylene is also being produced in “stress situations” such as during dark transport.

Ethylene is a hydrocarbon and colourless, flammable gas with a faintly sweet smell. Ethylene has, contrary to many other plant hormones, a very simple structure ($\text{CH}_2 = \text{CH}_2$). It is produced as a natural hormone by many different flowers and plants to regulate internal processes, such as ripening. Although it also is released through cigarette smoke and vehicle exhaust fumes. Therefore transportation of flowers on the farm should be careful about which methods are used. Trucks should be turned off while unloading and loading of flowers into the packhouse as well as at cargo areas when shipping and receiving flowers internationally.

Damage

Damage to flowers and plants caused by ethylene results in bud drop, flower drop, leaf drop and the wilting or shrinking of flowers.

The best known product used by growers to protect flowers against the negative effects of ethylene is Silver Thio Sulphate (STS). In the market there are several STS-based post-harvest treatments and Chrysal has **Chrysal AVB**. After harvest, the flowers are put on a solution like AVB which they absorb. When the flowers are treated correctly, they are protected against ethylene and the vase life is extended considerably.

Precautions

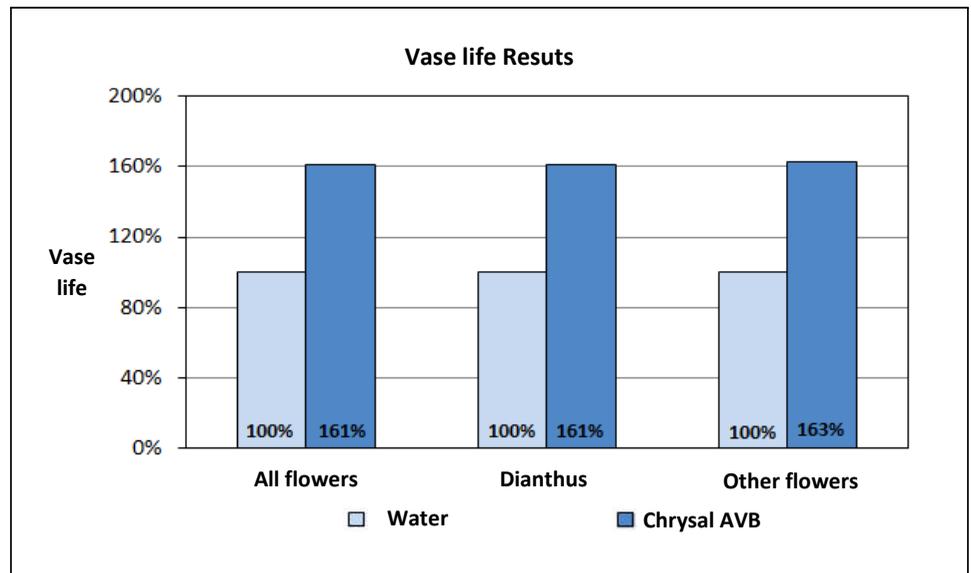
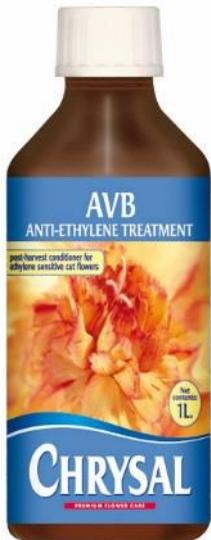
It is very important that growers strictly treat the ethylene sensitive flowers. For example when you notice in your vasselife room that after only a few days your Carnations / Roses shrink, wilt, droop you can take it for granted that they have not been treated correctly.

TIP

- Make sure your packhouse, cold room and vehicles are well ventilated. This way the ethylene gas cannot build up to harmful concentrations which will have a negative effect on the vasselife of the flowers.

Test Results

The following graph shows the effect of Chrysal AVB on the vase life of Dianthus and other flowers compared to water alone.



Vase life Alstroemeria



Treatment: WATER

Total vase life: 13 Days

Photo taken: Day 20



Treatment: Chrysal AVB

Total vase life: 19 Days

Photo taken: Day 20

A New Flight to UK



A new flight from Kenya bringing fresh vegetables and flowers to major UK suppliers has landed at Doncaster Sheffield Airport. A water arch celebrated the arrival of the aircraft in the traditional way – marking DSA's first scheduled flight handling perishable goods. The airport secured a deal with Network Airline Management and the weekly service is from Nairobi. It comes as it celebrates being named the fastest growing in the country, after experiencing 43.1 per cent growth with 1.3m passengers in the year to April. The latest cargo figures also show a new record after a 113 per cent annual increase in 2016.

Dayle Hauxwell, cargo manager for Doncaster Sheffield Airport, said: "We are delighted to be announcing this news so soon after seeing record cargo figures for last year.

Behind the Scenes at Breeders in Kenya

The IFTEX is in full swing and visitors from all over the world took the opportunity to not only attend the show this week, but also visit the growers and breeders at the farms in Kenya.

Nowhere in the world are more roses grown than in Kenya. Unlike Colombia, which is still a solid second, the acreage is still growing as well. Not quite as fast this year though, Haiko Backer of Schreurs tells us, in light of the upcoming elections causing civil unrest. But once that's over with, the will and means to invest are somehow rekindled, and the way

"We'll be working with Network Airline Management to handle a weekly scheduled flight from Nairobi with flowers and vegetables for the UK market. This deal will see some 3,500 tonnes of cargo transported a year. This new scheduled operation also opens up the opportunity for UK export freight. "Our entrance into this new market is further evidence that the cargo operation has established an international reputation as the UK's most freighter friendly airport. And we believe this is just the beginning. "The airport was certified as a port of entry for perishable commodities last year, allowing it to access a significant global market.

With offices across the globe and handling over 70,000 tonnes of cargo annually, the Network Aviation Group heads up a division of cargo companies. Network Airline Management, the freighter division, operates a fleet of B747F and MD11F aircraft on a scheduled and charter basis throughout the world. Andy Walters, commercial director, said: "Doncaster Sheffield Airport offers a 24-hour operation, is very freighter-friendly and considerably less congested than other locations. It also has a very pro-active team. With partners Anglo World Cargo, they work hard to deliver a tailor-made service."

up is found again. It always happens like that, he says, and with 11 years under his belt he knows what he's talking about. There's still room for expansion, and the factors making Kenya such a suitable flower production country are still the same: the equator, the sun, and the altitude. Lake Naivasha, the main source of water, isn't going anywhere fast either, and the political and economical situation are mostly stable. And they know what they're doing here: compared to Colombia, here they produce significantly more stems per meter.

Chrysal Africa 12 Years Strong in East Africa



'Improve the quality of flowers exported out of East Africa.' This has been the goal of Chrysal since they entered this part of the continent 12 years ago. Since the very beginning, they were exhibiting at the IFTEX, which has helped this company to be one of East Africa's largest suppliers of flower food and post-harvest treatment suppliers in East Africa.

Chrysal in Kenya

Chrysal has been present in East Africa for 12 years now. Since 2005 Chrysal has been represented through a distributor channel selling Flower food out of Kenya and working closely with surrounding East African Countries. In a period of 5 years, Chrysal grew, thanks to the interest and support from the region's growers. This support and interest led to the decision for Chrysal to firmly plant its roots in Kenya and in 2009 Chrysal decided to start their own production and manufacturing plant based in Nairobi located 3 km from the capital's airport. Since 2010, Chrysal has grown steadily, to become a leading supplier of Flower Food and Post-Harvest Treatment Suppliers in East Africa; gaining the confidence of the growers, with its innovative and world leading Post-Harvest Treatments and Flower foods products supported by its teams and resources.

Not only has Chrysal become a well-known supplier of grower products, its Technicians are well respected in the industry and called upon to advise the growers on a number of issues from pollution control to product and process management. Though Chrysal is still considered a small multinational company, however we are now also present in Ethiopia, Uganda and Tanzania and have a continuously growing list of clientele in all countries.

Duty Hurts Kenya's Export Plan To China



A four per cent import duty levied on Kenyan flowers has slowed effort to develop an alternative market in China despite a direct aviation link between the two countries.

China, alongside Australia and Japan are among the key markets that Kenyan exporters have been looking to in their efforts to diversify beyond the European Union market.

“The four per cent duty has made our flowers more expensive in China market compared to the EU countries where we sell duty-free,” Kenya Flower Council chief executive Jane

Ngige at this year's International Flower Trade Expo that was opened in Nairobi on Wednesday. About 300 exhibitors and 5000 flower dealers attended the event.

“We are calling upon the Kenyan government to negotiate the removal of the tariff with China the same way flowers from Ethiopia access its market duty free,” Mrs Ngige said.

Flower is a highly perishable good that must be sold two days after harvest. The national carrier, Kenya Airways enjoys a 13-hour direct flight to three Chinese cities — Beijing,

Shanghai and Guangzhou.

On July 1, 2010, China removed tariffs charged on 60 per cent of goods that it imports from Kenya and 32 other developing countries but retained the levy on cut flowers.

The tax has thwarted aggressive marketing effort aimed at penetrating the 1.3 billion-people market. Mrs Ngige said the Kenya Flower Council members and traders visited China and exhibited flower products in bid to establish sale contacts.

“China is an exciting market and we are equally interested in deepening our foot prints in the larger Asian market,” she said.

Last year, Kenya exported flowers worth Sh70.83 billion, majority of it destined to the EU markets where still enjoys a duty and quota-free export arrangement despite delay in concluding the Economic Partnership Agreement. Kenya also has a duty free flower arrangement with Japan.

Mrs Ngige said the industry's export diversification drive also targets markets in other Asia and Far East countries adding that China which produces long flowers would be a favourite for the Kenyan roses.

“Over the years as volumes of flower industry and market grows, regulators should give it ample time. We, for instance, expect the Kenya Plants Health Inspectorate Service (Kephis) to expand its operations by adopting a 24 hours' work cycle,” she said. At the moment, Kephis issues 1000-Psyco-sanitary certificates daily to exporters of fresh produce.

The KFC wants the agency to create more time for issuing certificates, inspecting and verifying destinations before flowers leave airport “as it is discomfoting when one's products have been duly inspected in a hurry, ends in one destination and paper work in another destination.”

Russia's Potential Reflected on Busy Edition of Moscow Greenhouse Expo

From June 14 to 16, suppliers of greenhouse technology, structures, seeds and other horticultural heavyweights gathered in Moscow for the 2017 edition of the Greenhouse Expo. Organized for the first time in a new hall of the VVC All-Russian Exhibition Centre, the trade show provided room for more stands and exhibitors. This growth is in line with the continuously increasing demand for greenhouse technology in Russia. As described before, Russia provides

serious room for more greenhouse acreage and investors are eager to team up with international suppliers to realize this goal. This was also confirmed by trade show visitor Chris Aarts of C&E Holland, a company specialized in the manufacturing of tomato hooks. Chris has seen his exports to Russia increase again over the last year. “The Russian market is continuously in motion, expanding and building new projects. We again exported more tomato hooks to Russia this year.”

Despite Uncertainty Regarding Brexit, More Flowers Sold in the UK

It seems the British are spending more on flowers and plants again. At least, that was evident during Valentine's Day and Mother's Day period according to a market visit of Royal FloraHolland and a number of growers conducted in the spring of 2017 in the UK. During this market visit to the Cash&Carry's and florists near London, it became clear that sales were good around the holidays. Despite the uncertainty associated with Brexit, these companies realised an increase in turnover in the first quarter.

Greatest increase in seasonal flowers

Traditionally, the list of the top 10 cut flowers sold in the UK is headed by roses, chrysanthemums, lilies and carnations, but in the last two years, seasonal flowers like tulips and amaryllis and year-round products like gerbera and lisianthus have become increasingly prominent. Around 50% to 70% is currently ordered and delivered via the Cash & Carry webshop. This has resulted in fewer florists physically coming to the Cash & Carry.

New Covent Garden Market opens at new location

The largest wholesale market in the UK, New Covent Garden, changed its location on 3 April 2017. Royal FloraHolland and a number of growers visited this new, lovely and fresh location. The new wholesale market consists of 25 flower and plant dealers and a few hardware and pottery suppliers. Many dealers confirmed that they had a positive result for the first quarter of 2017 compared with last year.

Outlook of top-segment florist improving

During the market visit, the tour stopped by many top-segment florists in London. These florists are leaders for the market as a whole. Many local, smaller florists look up to them and copy their trends. The various interviews revealed that they had a positive result in the first quarter. This is due particularly to the



currently strengthening economy.

There is little effect of Brexit visible, except for the fluctuations in the exchange rate of the pound. The florists have noted primarily an improvement in the commercial and major events market. Many companies, hotels and catering outlets are again spending money on horticultural products, and the demand for floral subscriptions is increasing according to the dealers. "The British want to be cheered up with flowers in this turbulent time of uncertainty, war and attacks."

Supermarket loses market share to online

The supermarket channel is and will remain the most important sales channel for flowers in the

New FSI Website Live!

FSI proudly announces the launch of the new website at www.fsi2020.com! With a fresh and modern look, the new FSI website supports visitors to understand the approach and commitment to improve sustainability in the floriculture industry.

The re-designed website is fully responsive and gives easy access to useful information about the ambition and approach of FSI. Visitors will find relevant documents and useful links in the new "resources" section, and of course the website content will constantly be updated with helpful information, articles and new results.

UK, 47% of consumers buy flowers via this channel. But in the last year this sales channel seems to have passed its peak, and there is a shift evident towards online and the top-segment florist. The online channel in particular has expanded dramatically in the past 5 years, from 3% to 13% in 2016. The number of companies offering flowers online has exploded, and there is a lot of competition.

There is still plenty of growth possible in the British market despite the approaching Brexit. British consumers love flowers and will keep buying them even in these turbulent times.

Growth is primarily evident in the online segment and the top-segment florist. Consumers are buying more from the online channel, and the demand is increasing for exclusive flowers from florists for the commercial and major events market. Florists are looking for luxurious, exclusive flowers that are unavailable or less likely to be found in the supermarket so they can distinguish themselves from the rest.

Source: Royal FloraHolland



Mr. Jeroen Oudheusden of FSI.

FSI invites everyone to pay a visit online and greatly appreciates any suggestions, feedback or comments, so do not hesitate to send us an email at caroline@fsi2020.com. And why not join our growing network?!

Kenya Fights to Wrestle Back EU Market



Horticultural exports are set for an additional standard from next month in a new development by the country to reverse the dwindling share of her produce in the 28-member European Union. Fresh Produce Exporters Association of Kenya chairman Apollo Owuor said the new standard – KS 1758 (Part Two) – applies on fruits, vegetables and herbs.

The standard, Owuor said, will bring all exporters and handlers under a uniform, standard practice and will be the basis on which export permits will be issued. “This will essentially eliminate the possibility of any rogue practice and lack of proper documentation that has in the past led to expensive interceptions at the market entry in the European Union,” he told said.

FPEAK and Kenya Flower Council, which represents large-scale flower producers, have also partnered to launch the Kenya Horticulture Council in a bid to help the horticulture industry jointly articulate sector concerns. KFC and FPEAK have previously dealt with sub-sector matters separately, leading to delays in responding to arising issues as well as increased costs, the interim chair of the

Kenya Horticulture Council Richard Fox said. Owuor emphasised that the council is not a merger between the two organisations, but a joint entity which will address issues of mutual interest. The new body has been set up with technical and financial support from USAid through the Kenya Agriculture Value Chain Enterprises. Kenyan exporters have since 2012 faced challenges in the EU over excess pesticides and quarantine pests which has cost the country billions of shillings in export losses.

“We have spent the last five years developing systems to ensure that the challenges of excess pesticides and presence of quarantine pests does not haunt the industry again,” Owuor said. Latest data indicates that the sector earned Sh102.5 billion in foreign exchange earnings in 2016, the second largest after tea, with a steady growth of 10 per cent despite the challenges. The sector’s contribution to the country’s gross domestic product – national wealth – is estimated at Sh200 billion.

Uganda: Flower Farms Licensed as Free Zones

Uganda Free Zones Authority (UFZA) has issued two developer’s Licences to M/s Fiduga Limited and M/s Royal Van Zanten Limited. The companies are meant to develop Free Zones in Mukono and Mpigi Districts in Uganda.

A Free Zone is a special designated area where goods introduced into the area are generally regarded, so far as import duties are concerned, as being outside the Customs territory. These include Export Processing Zones or Free Port Zones.

Ms Evelyn Anite, the minister of State for Privatisation and Investment, speaking during a field tour at Nsimbe estates recently, said the two companies that are already in the business of exporting, will further contribute to towards addressing the export gap by investing up to a tune of US\$ 365 million (about Shs1.3 trillion) by 2021. “This feeds into the Government’s Vision as enshrined in the National Development Plan II and Vision 2040 which are Frameworks aimed at ensuring that Uganda attains Middle Income Status,” she said.

Uganda Flower Exporters Association (UFEA)’s executive director, Ms Juliet Musoke, said: “This year we exported more flowers compared to the previous year 2015.” In 2015 the country through UFEA members exported 6,300 tonnes of flowers worth \$27.5 million (Shs99 billion). Ms Musoke also said in the year ending 2016, UFEA exported more than 6,500 tonnes of flowers, 200 tonnes more than what was exported the previous year.

The chairman board of directors of UFZA, Eng Frederick Kiwanuka said: “Licensing these two companies today brings the number of licensed Free Zones in Uganda to five including M/s Arua SEZ Limited which is setting up a Special Economic Zone in Arua District., M/s Uganda Wood Impex Limited in Kalungu District and M/s Nilus Limited in Jinja Municipality.”

THE BENEFITS

M/s Fiduga Limited and Royal Van Zanten Ltd Fiduga Ltd projects are likely to hire 927 workers while Royal van Zanten Ltd anticipates to create 1,625 jobs by 2021, majority Ugandans. This will mean enhancement of the skills of the local community and improving their social economic standards.



FLOWER & VEGETABLE FARMS IN KENYA

FARM NAME	PRODUCT	LOCATION	CONTACT PERSON	TELEPHONE	E-MAIL
AAA-Flowers-Rumuruti	Roses	Rumuruti	Shailesh	0722 203750	shailesh.raiaaagrowers.co.ke
AAA-Flowers -Chui Farm	Roses	Timau	Shailesh	0722 203750	shailesh.raiaaagrowers.co.ke
AAA Growers	Vegetables/Flowers	Nairobi	Musa Sando	0787866022	sando@aaagrowers.co.ke
AAA-Chestnut		Narumoru	Kiai/Sando	0722944030	sando@aaagrowers.co.ke
AAA-Growers		Nakuru	Moses Sando	0787866022	sando@aaagrowers.co.ke
AAA-Hippo		Thika	Steve	0721778736	julius@aaagrowers.co.ke
AAA-Roses		Rumuruti	Julius Ruto	0720330039	turiagronomy@aaagrowers.co.ke
Acacia Farm-Sunripe		Naivasha	Antony	0711827785	naivasha@sunripe.co.ke
Africala		Limuru	-	0721-837968	sales@africala.com
African Blooms	Roses	Nakuru	Ravindra	-	-
Afriscan Kenya Ltd	Hypericum	Naivasha	Charles Mwangi	-	-
Alani Gardens	Roses	Nakuru	Judith Zuurbier	0722 364 943	alani@alani-gardens.com
Aquila Development Co	Roses	Naivasha	Prakash Shinde	0710791746	pm@aquilaflowers.com
Bamboo Farm-Sunripe		Nakuru	Reuben	0723920237	
Balaji	Roses	Olkalou	Paul Mwaniki	-	-
Baraka Farm	Roses	Nakuru	Lucy Yinda	-	lucy@barakaroses.com
Batian Flowers	Roses	Nanyuki	Dirk Looj	0720102237	dirk@batianflowers.com
Beautyline	Flowers	Naivasha	Peter Gathiaka	0722676925	peter@beautyli.com
Bigot Flowers	Flowers	Naivasha	Kakasaheb Jagtap	0722205271	jagtap.kt@bigotflowers.co.ke
Bila Shaka Flowers	Roses	Naivasha	Joost Zuurbier	0722204489	bilashaka.flowers@zuurbier.com
Black Petals	Roses	Limuru	Nirzar Jundre	0722848560	nj@blackpetals.co.ke
Blissflora Ltd	Roses	Nakuru	Apachu Sachin	0789101060	appachu7@yahoo.com
Blue Sky		Naivasha	Mike	0720005294	info@blueskykenya.com
Bloom Valley	Roses	Nakuru	Ravindra		
Blooming Dale Roses Kenya Ltd	Flowers	Nanyuki	Sunil	0718991182	info@bloomingdaleroses.com
Buds and Blooms		Nakuru	Shivaji	0720895911	shivaniket@yahoo.com
Carnation Plants	Roses	Athiriver	Ami R.	0733626941	amir@exoticfields.com
Carzan Rongai	Flowers	Nakuru	Nicholas	0721 844361	rongai.production@carzankenya.com
Charm Flowers	Flowers	Athiriver	Ashok Patel	020 352583	ashki@charmflowers.com
Colour Crops	Hypericum	Nanyuki	Kennedy Wanyama		colourcrops@tmu.com
Colour crops	Flowers	Bahati	Patrick Kipkurui		bahati@colourcrops.com
Colour crops Naivasha	Flowers	Naivasha	Geoffrey Mwaura	0722200972	nva@colourcrops.com
Credible Blooms	Flowers	Rumuruti	Eliud	0722382859	
Credible Blooms	Flowers	Ngong	Eliud	0722382859	
Dale Flora	Flowers	Nakuru	Shivaji	0720895911	shivaniket@yahoo.com
Delemere Pivot	Vegetables	Naivasha	Daniel Ondiek	0720395963	daniel.ondiek@vegpro-group.com
Desire Flowers	Flowers	Isinya	Rajat Chaohan	0724264653	rajatchaohan@hotmail.com
De ruiters	Breeder Roses	Naivasha	Fred Okinda	0722579204	Fred.okinda@deruiter.com
Double Dutch	Cuttings	Naivasha	James Opiyo	0723516172	Opiyojames160@gmail.com
Dummen Orange	Flowers Breeders	Naivasha	Steve Outram	0733 609863	s.outram@dummenorange.com
Elbur flora	Roses	Nakuru	Daniel Moge		
Enkasiti Thika	Flowers	Thika	Tambe	0734256798	enkasiti@gmail.com
Equinox	Flowers	Nanyuki	Harry Kruger		harry@equinoxflowers.com
Everflora Ltd.	Flowers	Thika	Bipin Patel	0735873798	everflora@dmbgroup.com
Fairy Flowers	Flowers	Limuru	Sylvester	0753444237	sylvesterkahoro@yahoo.com
Fides Kenya Ltd	Cuttings	Embu	Francis Mwangi	068-30776	francis.mwangi@dummenorange.com
Flamingo Holdings Farm	Flowers	Naivasha	Peter Mwangi	0722204505	peter.mwangi@flamingo.net
Flamingo Holdings-Kingfisher Farm	Flowers	Naivasha	Charles Njuki	0724391288	charles.njuki@flamingo.net
Flamingo Holdings- Kingfisher Farm	Flowers	Naivasha	Jacob Wanyonyi	0722773560	jacob.wanyonyi@flamingo.net
Flamingo Holdings-Siraji Farm	Carnations, Roses	Nanyuki	John Magara/Peris	0729050116	peris.ndegwa@flamingo.net
Finlays -Kericho	Flowers	Kericho	Elijah Getiro	0722873539	elijah.getiro@finlays.co.ke
Finlays -Tarakwet	Flowers	Kericho	Japheth Langat	0722863527	japheth.langat@finlays.co.ke
Finlays Chemirel	Flowers	Kericho	Aggrey Simiyu	0722601639	aggrey.simiyu@finlays.co.ke
Finlays- Lemotit	Flowers	Kericho	-	-	-
Flamingo flora	Roses	Njoro	Sam Nyoro	0721993857	s.ivor@flamingoflora.co.ke
Flora ola	Roses, Hypericum	Solai-Nakuru	Lucas Choi		floraolaltd@gmail.com
Flora Delight	Summer flowers	Kiambu/ Limuru	Marco	0710802065	marcovansandijk@yahoo.com
Florensis Ltd	Cuttings	Naivasha	Anne Marie		annemarie@florensis.co.ke



FLOWER & VEGETABLE FARMS IN KENYA

FARM NAME	PRODUCT	LOCATION	CONTACT PERSON	TELEPHONE	E-MAIL
Florenza	Roses	Nakuru	Yogesh	0715817369	
Fontana Ltd-Salgaa	Roses	Salgaa	Kimani	0733605219	production@fontana.co.ke
Fontana Ltd - Akina farm	Roses	Njoro	Mahindra Patil	-	-
Fontana Ltd - Ayana Farm	Roses	Mau Narok	Gideon Maina	0721 178974	gideon@fontana.co.ke
Fox Ton Agri		Naivasha	Jim Fox	0722204816	jim@foxtonagri.com
Frigoken K Ltd	Vegetables	Nairobi	Nicholas Kahiga	0722797547	nicholas.kahiga@frigoken.com
Gatoka Roses	Roses	Thika	-	-	-
Gladioli Ltd		Naivasha	Pieriguichi / Claudia	0722206939	torres.palau@yahoo.com
Golden Tulip	Roses	Olkalao	Umesh	-	-
Golden Tulip (Laurel Inter.)	Roses	Nakuru	Rajendra	-	-
Gorge Farm	Roses	Naivasha	Patrick Mulumu	0722498267	pmulumu@vegpro-group.com
Groove	Flowers	Naivasha	John Ngoni	0724448601	grovekenya@gmail.com
Harvest / Manjo Plants	Roses	Naivasha	-	-	-
Harvest Ltd	Roses	Athiriver	Julius Oloo	-	-
Highland plantations	Cuttings & Herbs	Olkalou	Amos Mwaura	0726726392	production@highlandplants.co.ke
Imani Flowers	Flowers	Nakuru	Raphael Otieno		0722977214
Indu Farm		Naivasha	Wesley Koech	0715546908	
Indu -Olerai Farm		Nakuru	Everline Debonja	0723383160	everlyne.adhiambo@indu-farm.com
Interplant Roses	Roses	Naivasha	Gavin Mouritzen	0733220333	info@interplantea.co.ke
Isinya	Flowers	Isinya	Rajesh	-	pm@isinyaroses.com
Jatflora		Naivasha	James Oketch	0724418541	jatflora@gmail.com
Jesse AGA		Mweiga	Thuranira	0754444630	davidt@eaga.co.ke
Karen Roses	Flowers	Nairobi	Peter Mutinda	0723353414	pmutinda@karenroses.com
Kariki Ltd.	Flowers	Thika	Samwel Kamau	0723721748	production@kariki.co.ke
Kariki Ltd - Bondet	Eryngiums	Nanyuki	Richard Fernandes	062-31023/6	bondet.production@karik.biz
Kariki Ltd - Hamwe	Hypericum	Naivasha	Peter Kamwaro	0721758644	hamwe.fm@kariki.biz
Kariki Ltd - Hamwe- Molo	Fowers	Nakuru	Joseph Juma	0725643942	production.fm@kudenga.co.ke
Twiga Flowers	Flowers	Naivasha	pius Kimani	0721747623	pius.kimani@gmail.com
Kenflora Limited		Kiambu/ Limuru	Abdul Aleem	0722311468	info@kenflora.com
kensalt Ltd	Flowers	Solai	Pravin		
Kentalya		Naivasha	Linnet	0733549773	lynette@kentalya.com
KHE		Nanyuki	Elijah Mutiso	0722254757	mutiso@khekenya.com
Kisima Farm	Roses	Timau	Martin Dyer	0722593911	martin@kisima.co.ke
Kongoni River Farm-Gorge Farm	Roses	Naivasha	Anand Patil	0728608785	anand.patil@vegpro-group.com
Kongoni River Farm - Liki River	Flowers	Nanyuki	Madhav Lengare	0722202342	madhav@vegpro-group.com
Kongoni River Farm - Star Flowers	Flowers	Naivasha	Dinkar	0789487429	dinkar@vegpro-group.com
Kongoni River Farm - Timau	Flowers	Timau			
Korongo Farm		Naivasha	Macharia	0721387216	
Kreative	Roses	Naivasha	Bas Smit	0722 200643	info@kordesroses.com
Lamorna Ltd	Roses	Naivasha	Mureithi	0722238474	admin@lamornaflowers.com
Lathyflora		Limuru	Mbauni John	0721798710	mbaunij@yahoo.com
Lauren International	Flowers	Thika	Chris Ogutu/Carlos	0722783598	laurenflowers@accesskenya.co.ke
Livewire	Hypericum	Naivasha	Esau Onyango	0728606878	management@livewire.co.ke
Lobelia Ltd/ Sunland	Roses	Timau	Peter Viljoen	0721632877	info@lobelia.co.ke
Lolomarik	Roses	Nanyuki	Topper Murry	0715 727991	topper@lolomarik.com
Loldia Farm		Naivasha	Gary/Rotich	0720651363	
Longonot Horticulture		Naivasha	Chandu	0724639898	chandrakant.bache@vegpro-group.com
Longonot Horticulture		Naivasha	Patrick Mulumu	0722498267	patrick.mulumu@vegpro-group.com
Magana	Roses	Nairobi	Lukas	0788695625	farmmanager@maganaflores.com
Mahee / Mwanzi Flowers Ltd	Roses	Olkalou	Srinivasaiah	0711368756	sriini@eaga.co.ke
Mahee Wilham	Vegetables	Nakuru	Rao Venkatesh	0754444629	maheevgef@eaga.co.ke
Maridadi Flowers	Flowers	Naivasha	Jack Kneppers	0733333289	jack@maridadiflores.com
Maua Agritech	Flowers	Isinya	Madan Chavan	0738669799	production@mauaagritech.com
Mauflora	Roses	Nakuru	Mahesh	0787765684	mahesh@mauflora.co.ke
Millmet/Tindress Farms	Flowers	Nakuru	Pravin		pravinyadav.29@gmail.com
Molo Greens	Flowers	Nakuru	Justus Metho	0722 755396	justus@mologreens.com



FLOWER & VEGETABLE FARMS IN KENYA

FARM NAME	PRODUCT	LOCATION	CONTACT PERSON	TELEPHONE	E-MAIL
Mt Elgon Flowers	Roses	Eldoret	Bob Anderson	0735329395,	bob@mtelgon.com
Mweiga Blooms	Flowers	Nanyuki	Stewart/ Mburu	0721674355	mweigablooms@wananchi.com
Mzuurie Flowers - Maji Mazuri	Flowers	Eldoret	Mark Juma		
Mzuurie Flowers - Molo River Roses	Flowers	Nakuru	Andrew Wambua	0724256592	awambua@moloriverroses.co.ke
Mzuurie Flowers - Winchester Farm	Flowers	Karen	Raphael Mulinge	0725848909	rmulinge@winchester.co.ke
Mzuurie Flowers - Bahati	Flowers	Bahati	Raphael Mulinge	0725848909	rmulinge@winchester.co.ke
Nini Farms	Roses	Naivasha	Philip Kuria	0720611623	production@ninitld.com
Nirp East Africa	Roses	Naivasha	Danielle Spinks	0702685581	danielles@nirpinternational.com
Ol Njorowa	Roses	Naivasha	Charles Kinyanjui	0723986467	mbegufarm@iconnect.co.ke
Olij Kenya Ltd	Roses	Naivasha	Sally Nicholas	0737888028	v.bhosale@olijkenya.com
Oserian	Flowers	Naivasha	Musyoka Stephen	0722888377	stephen.musyoka@oserial.com
Panda Flowers	Roses	Naivasha	Chakra	0786143515	chakra@pandaflowers.co.ke
Panocol International	Roses	Eldoret	Mr. Paul Wekesa	0722748298	paul.wekesa@panocol.co.ke
Penta	Flowers	Thika	Tom Ochieng	0723904006	-
United Selections	Roses	Nakuru	-	-	-
Pj Dave	Flowers	Isinya	Simiyu	0723500049	pjdavetimau@pjdaveepz.com
Pj Flora	Flowers	Isinya	Palani Muthiah	0752607651	muthiah.palani1971@gmail.com
Pj Flowers Ltd		Kiambu/Limuru	Elizabeth Thande	0722380358	elizabeth@wetfarm.co.ke
Plantation Plants	Cuttings	Naivasha	William Momanyi	050 20 20282	pplants@kenyaweb.com
Porini Ltd	Flowers	Nakuru	Vivek Sharma	-	porini@isinyaroses.com
PP Flora	Roses	Nakuru	Robert /Prakash	0718045200	ppflora2010@gmail.com
Primarosa Flowers Ltd	Flowers	Athi RiVer	Shantaram	-	-
Primarosa - Zuri Farm	Roses	Olnjorok	-	-	-
Racemes Ltd		Naivasha	Bonny	0721938109	bonny@kenyaweb.com
Rain Forest	Roses	Naivasha	-	-	-
Ravine Roses Flowers	Flowers	Nakuru	Peter Kamuren	0722205657	pkamuren@karenroses.com
Redland Roses		Thika	Aldric Spindler	0733603572	aldric@redlandsroses.co.ke
Redwing Flowers	Flowers	Nakuru	Simon Sayer	0722227278	sayer@redwingltd.co.ke
Rift Valley Roses (K) Ltd	Flowers	Naivasha	Peterson Muchuri	0716589898	fm@riftvalleyroses.co.ke
Rimiflora Ltd		NaivaSha	Richard Mutua	0722357678	richard@rimiflora.com
Riverdale Blooms Ltd		Thika	Antony Mutugi	0202095901	rdale@swiftkenya.com
Roseto	Roses	Nakuru	Arvind		gm.roseto@megaspingroup.com
Rozzika Gardens - Kamuta Farm		Naivasha	Mbuthia	0721849045	jwachiram@yahoo.com
Savannah international	Geranium	Naivasha	Ignatius lukulu	0728424902	i.lukulu@savanna-international.com
Selecta Kenya		Thika	Alnoch Ludwig	0738572456	l.allnoch@selectakenya.com
Soljanmi	Fowers	Njoro	Ashesh Mishra	-	-
Schreus	Roses	Naivasha	Haiko Backer		
Shades Horticulture	Flowers	Isinya	Mishra	0722972018	info@shadeshorticulture.com
Shalimar Flowers	Flowers	Naivasha	Anabarasan	0733604890	anbarasan@eaga.co.ke
Sian Roses - Maasai Flowers	Flowers	Isinya	Andrew Tubei	0722728364	atubei@sianroses.co.ke
Sian Roses - Agriflora	Flowers	Nakuru	Clement Ngetich		cnetich@sianroses.co.ke
Sian Roses - Equator Roses	Flowers	Eldoret	Charles Mulemba	0721311279	cmulemba@sianroses.co.ke
Sierra flowers Ltd	Flowers	Nakuru	Sherif	0787243952	farm.sierra@megaspingroup.com
Simbi Roses	Roses	Thika	Karue Jefferson	067 44292	simbi@sansora.co.ke
Sirgoek Flowers	Flowers	Eldoret	Andrew Keitany	0715 946429	sirgeok@africaonline.co.ke
Solai Milmet/Tindress	Flowers	Nakuru	Ravindra	0737801646	solairoses@gmail.com
Subati Flowers- Nakuru	Flowers	Nakuru	Naren Patel	0712 584124	naren@subatiflowers.com
Subati Flowers - Naivasha	Flowers	Naivasha	Naren Patel	0712 584124	naren@subatiflowers.com
Suera Flowers Ltd	Flowers	Nakuru	George Buuri	0724622638	gbuuri@suerafarm.sgc.co.ke
Sun buds	Hypericum	Naivasha	Reuben Kanyi	0723920237	kanyireuben@gmail.com
	Gypsophilla, Army				
Sunland Timau Flair	Roses	Timau	Peter Viljoen	0723383736	info@lobelia.co.ke
Stockman rozen	Roses	Naivasha	Julius muchiri	0708220408	julius@srk.co.ke
Tambuzi	Roses	Nanyuki	Paul Salim	0722 716158	paul.salim@tambuzi.co.ke
Syngenta Flowers - Kenya Cuttings	Flowers	Ruiru	James Ouma	0725217284	john.odhiambo@syngenta.com
Syngenta Flowers - Kenya Cuttings	Flowers	Thika	Kavosi Philip	0721225540	philip.munyoki@syngenta.com
Syngenta Flowers - Pollen	Flowers	Thika	Joseph Ayieko	0733552500	joseph.ayieko@syngenta.com
Timafloor Ltd	Flowers	Nanyuki	Simon van de Berg	0724443262	info@timafloor.com



FLOWER & VEGETABLE FARMS IN KENYA

FARM NAME	PRODUCT	LOCATION	CONTACT PERSON	TELEPHONE	E-MAIL
Transebel		Thika	David Muchiri	0724646810	davidmuchiri@transebel.co.ke
Tropiflora		Kiambu/Limuru	Niraj		tropiflora@africaonline.co.ke
Tulaga	Roses	Naivasha	Steve Alai	0722659280	tulagaflower@africaonline.co.ke
Tk Farm		Nakuru	Gichuki	0721499043	davidgichuki20@yahoo.com
Uhuru Flowers	Flowers	Nanyuki	Ivan Freeman	0713889574	ivan@uhuruflowers.co.ke
V.D.Berg Roses	Flowers	Naivasha	Johan Remeuus	0721868312	
Valentine Ltd		Kiambu/Limuru	Maera Simon	0721583501	simon.maera@valentinegrowers.com
Van Kleef Ltd	Roses	Nakuru	Judith Zuurbier	0722 364 943	judith@vankleef.nl
Vegpro K Ltd Vegetables		Nanyuki	John Kirunja	0729555499	john.kirunja@vegpro-group.com
Vegpro K Ltd	Vegetables	Nairobi	Judy Matheka	0721245173	jmatheka@vegpro-group.com
Vegpro K Ltd	Vegetables	Nanyuki	John Nduru	0722202341	jnduru@vegpro-group.com
WAC International	Breeder	Naivasha	Richard Mc Gonnell	0722810968	richard@wac-international.com
Waridi Ltd		Athiriver	P. D.Kadlag	0724-407889	kadlag@waridifarm.com
Wildfire	Flowers	Naivasha	-	-	roses@wildfire-flowers.com
Wilmar Agro Ltd	Summer Flowers	Thika	Alice Muiruri	0722 321203	alice.muiruri@wilmar.co.ke
Windsor		Thika	Vikash	073705070	vikash@windsor-flowers.com
Xpression Flora		Nakuru	Mangesh Rosam	0720519397	mangesh.rasam@xflora.net
Zena -Thika Farm	Roses	Thika	Vincent	-	sales@zenaroses.co.ke
Zena - Asai Farm	Roses	Eldoret	-	-	sales@zenaroses.co.ke
Zena Roses - Sosiani Farm	Roses	Eldoret	Phaniel Ochunya	-	sales@zenaroses.co.ke
Zena - Nakuru Farm	Roses	Nakuru	-	-	sales@zenaroses.co.ke

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	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
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- Zirobwe rd	0757 777 700	pbenders@xclusiveuganda.com

FLOWER FARMS IN TANZANIA

TYPE	FARM NAME	CONTACT PERSON	LOCATION	PHONE NUMBERS	E-MAIL
Hypericum	Abssinia flowers	Sendafa		+251 11 6653911	office@abysiniaflowers.com
Cuttings	Abyssinia Ornamental	Ronald	-	+251 911490231	ronald.vijverberg@florensis.com
Roses, Summer Flowers	Afriflowers PLC		-	+251 937977849	ethiopia@bellaflo-group.com
Roses	Agriflora PLC	M. Asokan	Holeta	+251 112372324	flowers@ethionet.et
Roses	AQ Roses PLC	Frank	Ziway	+251911706234	frank@aqroses.com
Hypericum	Assela Flowers farm PLC			+251 118237091	office@asellaflowers.com
Roses	Braam Flowers PLC	Ben Braam	Ziway	+251 464413137	braam.roses@gmail.com
Gypsophila, Solidago, Limonium	Beti Ornamental			+251 930070000	betiornamentaldz@gmail.com



FLOWER FARMS IN ETHIOPIA

TYPE	FARM NAME	CONTACT PERSON	LOCATION	PHONE NUMBERS	E-MAIL
Cut Flowers	Condor Farms PLC			+251 911337207	haileseifu1@gmail.com
Cuttings	Desa Planta PLC			+251 116569195	gizbeley@yahoo.com
Roses	Dugda Floriculture Dev. PLC	sayalfe Adane	Debra Zyeit	+251111566311	general@dugdaflora.com
Roses	Ethio Dream PLC	Holeta	Ethiopia	+251 116189313/14	ethiodream@ethionet.et
Roses	Ethio- Agri- CEFT	Levi	Holeta	+251 116621030	agriceft@ethionet.et
Roses	Enyi- Ethio Roses	Teshale	Sebata	+251113481981	enyiethiopia@gmail.com
Roses	ET- Highland Flora PLC		Sebata	+251 114660982	bnf2etf@ethionet.et
Roses	Eden Roses	Vibhav Agarwal	Sebata	+2518959343	vaibhavaggarwal1@gmail.com
Cuttings	Ethiopian Cuttings PLC	solomon	Koka	+251 116633073	solomon.desta@syngenta.com
Carnation	Ethiopian Magical Farm	Ramadi		+251 552 9936	emf@ethionet.et
Roses	Euro Flora PLC			+251 118602075	ramadi.gowoda@gmail.com
Roses	Friendship flowers PLC	Edwin	Debra zyeit	+251 118602293	edwingruijil@gmail.com
Freesia & Statis	Freesia Ethiopia PLC	Ronald Vijvrbg	Sebata	+251 116450503	freesia@ethionet.et
Cuttings	Florensis Ethiopia PLC	Netsanet Tadasse	Koka	+251 116525556/57	florensis@ethionet.et
Roses	Flowerama PLC			+251 115157924	floweramaa@hotmail.com
Roses	Gallica Flowers PLC			+251 11 2849368	gallica@ethionet.et
Roses	Golden Rose Agro Farm Ltd	Mr. Sunil	Sebata	+251 115507144	goma@ethionet.et
Roses	Herburg Roses PLC	Hubb	Ziway	+251 464414281	huub@herburgroses.nl
Roses	Hortanzia	Mr Micheal Owen	Arusha	255 784 200 827	hortanzia@cybernet.co.tz
Roses	J.J. Kothari PLC			+251 114661155/12	j.jkothari@gmail.com
Roses, Herbs	Joytech PLC	mulugeta Meles	Debra Zyeit	+251 116620205	jagdish@joytechplc.com
Roses	Joe Flowers PLC			+251 112372016	jflowers@ethionet.et
Roses	Karuturi Sai Ramarkrishna			+251 116632437/39	jagdeep.singh@karuturi.com
Lilium	Klaver Flowers PLC			+251 916581769	klaverflowers@gmail.com
Roses	Lafto Roses PLC	Gerard	Sebata	+251 115541485/83	gerard@vanderdeijl.nl
Roses	Linssen Roses	Peter Linsen	Holeta	+251 113205668	linssenroseset@ethionet.et
Cuttings	Maranque Plants PLC	Mark Drissen	Merjetu	+251 113725145	md@maranqueplants.com
Hypericum	Marginpar Ethiopia PLC	Hayo Hamster	Holeta	+251 1137116223	marginpar@ethionet.et
Roses	Minaye Flowers PLC	Eyob Kabebe	Debra Zyeit	+251 113728666	minaye@ethionet.et
Hypericum , Veronica	Mullo Farm PLC/Derba PLC			+251 116639559	mullo@ethionet.et
Roses	Mt. Meru	Tretter	Arusha	255 27 2553385	office@mtmount-meru-flowers.com
Roses	Oda Flowers			+251 111561572/73	ethiopassion@ethiopassion.com
Roses	Olij Roses Ethiopia PLC	Bas Van der lee	Debra Zyeit	+251116525571/7	info@olijethiopia.com
Roses	Oromia Wonders PLC			+251935998751	hfeven@gmail.com
Roses	Rainbow colours PLC	Tadessa Kelbessa	Debra zyeit	+251116461105	rainfarm@ethionet.et
Cuttings	Red Fox Ethiopia PLC	Hamilton	Ziway	+251221129252	b.hamilton@ethiopia.redfox.de
Roses	Roshanara Roses PLC			+251 1161833087/88	roshanaraexport@gmail.com
Roses	Saron Roses Agro-Farm PLC		Sebata	+251 114625551	saronfarm@gmail.com
Roses	Sathiya Sai Farm PLC				roshanmutheppe811@gmail.com
Roses	Selam Flowers PLC	Etsegenet Shitaye	Sebata	+251 116463851	selamfwr@ethionet.et
Roses	Supra Floritech PLC	Kaka Shinde	Holeta	+251116633745	suprafloritechplc@yahoo.com
Roses	Sher Ethiopia PLC	Ramesh Patil	Ziway	+251 116185353	sherethiopia@ethionet.et
Summer Flowers	Tal Flowers PLC	Mr. Uri	Sebata	+251 116517394	uridago@gmail.com
Roses	Tana Flowers PLC			+251 58220047495	tanaflo1@ethionet.et
Roses	Tengeru Flowers	Tretter	Arusha	255 27 255 3834	"
Roses	Tinaw Business PLC			+251 113720110/11	tinawflower@gmail.com
Roses	Yassin Legesse Flower Farm S.C	Tesfaye Gidissa	Debra zyeit	+251 1161870951	yassinlegesse@yahoo.com
Hypericum	Yalkoneh PLC	-	Sebata	+251 911331021	frans.diedens@gmail.com
Roses	Z. K Flowers	Abebe Mamo	Debra zyeit	+251 114664476	zkflowers@gmail.com
Roses	Ziway Roses	Ermias Solomon	Ziway	+251464417274	ermiasziwayroses@gmail.com



HIGH CONCENTRATION POTASSIUM SOLUTION TO CORRECT DEFICIENCIES OF POTASSIUM IN FLORICULTURE, HORTICULTURE AND FIELD CROPS

hyK is a concentrated inorganic formulation containing potassium and nitrogen. Potassium is the second major nutrient required by all crops, highly mobile and quickly distributed within the plant.

The main function of Potassium within the plant is as a water regulator which in turn affects many plant processes such as:

- regulation of cell water content,
- cell turgidity
- transpiration rates
- translocation of photosynthates and enzymes.

Low levels of potassium can critically affect the growth of the crop, subsequently affecting quality and yield. hyK is a unique formulation containing a high concentration of potassium. This high analysis ensures optimum uptake of the potash where required and also assists the plant to create a leaf environment unfavourable to disease development.



Analysis of hyK	Weight/Volume	Weight/Weight
Total Nitrogen (N)	3.00%	1.95%
Potassium (K ₂ O)	50.00%	33.00 %
pH: (10% solution)	11.0 – 12.5	

Recommended Rate: 3 litres per hectare
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.

Recycle Paper

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.

For agriculture use only



The Farmer's Environmental Friend

A product of UK • Available in 10 Litre

P.O. Box 14494
Nairobi 00800 Kenya
Fax: +254 20 3742605
Tel: +254 20 3741482 / 3566241/2
Cell: +254 735 712090 / 720 937535
eco@organix-agro.com www.organix-agro.com

NEMATIC

Nematode free irrigation water

Be one step ahead

Plant Parasites Nematodes (PPN's) control consists of several aspects: soil, water and plant management. Although PPN's are soil born they are driven by water. Nematic offer new nematode control in Hydroponic, Soil-Less and Open Field Farming. Agriculture, floriculture and horticulture industries are aware of environmental considerations and strive to reduce the use of chemicals and to maximize the efficiency of their use in natural resources. As a result, the new NEMATIC addresses those concerns and allows for safe usage of water that are contaminated with nematodes.

Nematic value offer:

- Nematode free irrigation water
- Chemicals-free operation
- Simple and reliable mechanism
- Easy to install, operate and maintain
- Zero-liter discharge design
- Cost effective

NEMATIC by:

Filter Art
Let's Make it Clear

www.filter-art.com

Eyal (254) 0733660003 | Shay (254) 0731067946



Our Knowledge, Your Success.