

Rapid Assessment of the Floriculture Sector in Kenya

Roses for export to Europe at a Kenyan flower farm
(Photo: Lidia Daskalova)

Impact Area 1

Significant decrease in air-cargo capacity

Impact Area 2

Considerable reduction in demand for flowers

Impact Area 3

Limited adaptive governance in response to the pandemic

Impact Area 4

Disruption in access to inputs, training, and education

Impact Area 5

Reduction in flower production area, leading to increased costs per unit area

Impact Area 6

Limited employment opportunities, resulting in lower incomes and more vulnerable workers

Impact Area 7

Decrease in farm labourers' income, contributing to social instability

Impact Area 1

Significant decrease in air-cargo capacity

What is the impact?

- Adaptive measures, including the repurposing of passenger aircraft for carrying air cargo, have not been rapid enough for the fresh produce sector, which has an ongoing deficit of 3,000 tonnes per week.
- Grounding of international flights in February 2020, without alternative means of shipment, impacted 25% of air-cargo capacity during the peak season of February and March 2020.
- Competition for limited air-cargo capacity has resulted in higher shipment costs and lower profit margins.
- Small to medium-sized enterprises (SMEs) have struggled to secure cargo space as large companies have signed contracts for most of the available space, leaving SMEs vulnerable.
- Some companies were not able to ship their produce in the early stages of the pandemic due to the measures adopted by the Government of Kenya (GoK) to mitigate the effects of COVID-19, including lockdowns, restrictions in movement, and travel passes.
- Demand for increased sea freight capacity has been hindered by the limited adaptive capacity of sea freight.
- A lack of clarity as to whether sectors supporting the agricultural sector could be considered essential and would therefore not be subject to pandemic restrictions caused some confusion among transport workers.
- The cost of fuel in the domestic market has decreased because of the pandemic.
- Smallholder farmers have lost their share in the markets because transport providers and aggregators in rural areas have not been prioritized as essential services, and their issues have not been considered urgent.
- Measures adopted by the UK government restricting entry to Kenyan flights meant that the cargo had to detour through EU airports, at a significant cost, further eroding profit margins.

What actions are required and by whom?

Short-term actions

- Ministry of Transport, Infrastructure, Housing, Urban Development and Public Works (MoT) to develop policies, for implementation by Kenya Airways, on pandemic preparedness to ensure the availability of sufficient, dedicated, and affordable air-cargo capacity as a strategic national asset for the fresh produce export sector.
- SMEs and logistics specialists to establish a platform to negotiate collectively for cargo space and costs.
- Ministry of Agriculture (MoA) to clarify local policies on designating sectors as essential services, and develop procedures to comply with measures put in place to mitigate the effects of the pandemic.

Strategic interventions

- Alternative ways of transporting flowers to be further studied, to reduce the dependency on air cargo i.e., as sea freight, through the Port of Mombasa.
- Research and development organizations to identify potential new products and opportunities for new markets for more resilient products e.g., dehydrated/dried flowers and the domestic market.
- Government to prioritize the establishment of aggregation and logistics facilities for smallholder farmers, and investment in their market infrastructure.

Stacked roses at a Kenyan flower farm, prepared to be exported (Photo: Lidia Daskalova)



Impact area 2

Considerable reduction in demand for flowers

What is the impact?

- Earnings have dropped because of a decrease in the volume of flowers being exported (see Figure 1); however, roses have recovered faster than other varieties. During April and May 2020, for example, the volume of flowers exported was lower compared to previous years. The total volume of flowers exported in 2020 was 50,000 tonnes lower than in 2018.
- Demand for flowers has fluctuated owing to restrictions in mobility and the types of businesses that can remain open in destination markets.
- Demand for flowers from companies selling through auction has dropped, while demand from supermarkets has increased, leading to an increase in demand for suppliers dealing with direct markets.
- High demand for flowers between March and May 2020, which could not be met because of limited air-cargo capacity, led to a loss of income for the majority of growers during what should have been the most profitable months of the year.
- Regulatory requirements on plant health in Europe have been strictly enforced with diminished capacity and inputs to manage and control zero-tolerance pests, and comply with the maximum residue level (MRL) requirements¹.

Exported volume

- 2018
- 2020

Figure 1: International export of flowers from Kenya (kg/month) in 2020 compared with 2018

(Source: United Nations Commodity Trade Statistics Database, and the Horticultural Crops Directorate)



What actions are required and by whom?

Short-term actions

- Growers to focus on the production of flowers with secure demand from direct markets.
- Bilateral agreements to be developed between the UK and Kenya on how to sustain trade amidst COVID-19 mitigation measures in 2021 and beyond.
- SME growers to diversify and balance their dependence on the floriculture sector with the production of food that sustains demand even during the pandemic period.
- Risk sharing across the entire value chain to be considered; for example, companies could provide food to workers who have lost their jobs, and buyers could contribute towards workers' wages to sustain earning opportunities.

Strategic interventions

- GoK and bilateral partners:
 - to support the development of studies on the pandemic and measures to mitigate its effect on the Kenyan floriculture sector, and formulate future-proof measures;
 - to consider alternative markets and conduct market research to reduce dependence on certain markets; and
 - to establish quarantine and fumigation facilities in response to a decrease in flower exports to Australia and Japan resulting from the current lack of appropriate facilities.
- Independent studies to be conducted with the aim of developing enabling policies (that include setting conducive levies and taxes) to help sustain the competitiveness of the Kenyan floriculture sector (post-pandemic and beyond), and dissuade companies from relocating to neighbouring countries.

¹] MRLs relate to maximum amount of pesticide residue that is expected to remain on products.

Impact area 3

Limited adaptive governance in response to the pandemic²

What is the impact?

- Generic COVID-19 adaptive measures implemented by the GoK have not taken into consideration the needs of just-in-time sectors in fresh produce/flowers.
- The needs of just-in-time non-food sectors, like floriculture, have not been forefront in the formulation of response mechanisms, leading to delays and losses.
- Companies wishing to introduce innovations and products have experienced delays in their registration as the evaluation process has been disrupted by the lockdowns, creating significant backlogs and a loss of revenue.
- The Kenya Revenue Authority (KRA) fast-tracked VAT refunds to unlock cash flow essential to the sector; however, significant backlogs remain.
- Incentives like tax breaks offered by the government at the onset of the pandemic were too limited in duration in the face of an ongoing pandemic, leaving the sector vulnerable and exposed.
- The long-term position of Kenya as a reliable supplier of flowers has been weakened as the country did not adapt quickly enough in March and April 2020, to ship flowers to markets that were demanding produce, hence some customers may have changed to other supplier countries, such as Ethiopia, that were quicker to adapt their logistics to cater to disruptions caused by the pandemic.
- Reluctance by local plant health regulators to fast track the implementation of adaptive mechanisms of plant health regulations in destination markets has exacerbated the impacts of the pandemic on a weakened sector.

What actions are required and by whom?

Short-term actions

- GoK to prepare evidence-based sector-specific mechanisms (scenarios) for dealing with extraordinary circumstances such as pandemics.
- Floriculture to be recognized as an essential service.
- Supply chain actors, such as transport service providers, to be supported through an integrated value chain approach.
- Regulators to streamline and encourage more adaptive management among sector institutions, such as the Kenya Plant Health Inspectorate Service (KEPHIS), the Pest Control Products Board of Kenya (PCPB), and the Agriculture and Food Authority (AFA), to fast track the registration of innovations i.e., through e-submissions to ensure that all processes can be undertaken online, and the establishment of clear procedures and timelines.
- All sector stakeholders to promote e-learning platforms for continuous learning, while providing technical support to ensure less reliance on physical meetings.
- KRA to fast-track VAT refunds to the sector to increase cash flow for companies, which will create more opportunities for other value chain actors.

Strategic interventions

- MoA and MoT to implement adaptive policies and mechanisms for future pandemics or extraordinary events, to ensure the transportation of cargo is not disrupted.
- Research organizations and academia to conduct research and develop studies on the classification of essential services in value chains to inform future policies.
- Research and sector organizations to document and raise awareness on lessons learned from the impact of the COVID-19 pandemic on the competitiveness of the Kenyan floriculture sector.
- National tripartite labour partners to lobby for the commissioning and implementation of policy briefs on how to avoid massive loss of employment and livelihoods during times of crises.

² Measures adopted by the government to support the sector include lowering of corporate tax and VAT, and fast-tracking VAT refunds to the sector.

Impact area 4

Disruption in access to inputs, training, and education

What is the impact?

- The supply of inputs has been disrupted due to restrictions in movement, leaving the sector without an adequate supply of essential inputs.
- Most suppliers of inputs and technologies have lost turnover and income due to disruptions in operations in the wider floriculture sector ecosystem, and to travel restrictions that have prevented them from delivering their products and services to the sector.
- Technical advice and support provided to the sector by input providers has been hampered by restrictions in movement, and by health and safety measures that discourage field visits without providing alternative mechanisms of delivering the support. The initial costs of adapting to these new circumstances are high, as companies have to retrain workers and invest in digitization to adapt to a new way of working through digital technology and e-platforms.
- The registration and supply of inputs needed to control zero-tolerance pests have been disrupted, leading to increased MRL interceptions in the EU market.

What actions are required and by whom?

Short-term actions

- Sector associations:
 - to mainstream digitization, building on the momentum that has been gained in response to the pandemic to ensure the continued delivery of services;
 - to conduct training programmes for a wide array of actors and stakeholders on the use of digital platforms and technologies to deliver products and services; and
 - to incentivize the sector to increase the adoption of digital technology and infrastructure.
- Growers to be trained in crisis management to reduce confusion and enhance abilities to respond to pandemics and other extraordinary events.

Strategic interventions

- PCPB to accelerate registration of alternative crop protection products to deal with zero-tolerance pests.
 - Research organizations to conduct studies on the most effective ways to deal with zero-tolerance pests and cost-effective alternatives to crop protection products being used by the sector and facing prohibition in the market.
 - The Communication Commission of Kenya to review current policies on the use of digital technologies and infrastructure to ensure they are targeted and accessible.
 - Academic institutions to incorporate digitization in training curricula to ensure early preparedness of graduates going into industry.
 - All sector stakeholders to mainstream the use of e-learning platforms in training, service delivery and provision of technical support.
 - Government to implement policies on social safety nets for trainers and facilitators who continue to lose earning opportunities due to the pandemic.
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Impact area 5

Reduction in flower production area, leading to increased costs per unit area

What is the impact?

- Companies have reduced the flower production area in response to a decrease in demand for flowers, and an increase in production costs³.
- Sustainability strategies adopted by the sector to reduce the use of hazardous materials, including the adoption of biological and organic controls, have been scaled back owing to the increased cost of flower production and reduced profitability resulting from the COVID-19 crisis.
- The flower-growing area under research and innovation has decreased in size due to limited access to actors in the innovation ecosystem, technical support and inputs needed to conduct research trials.
- There has been a drop in sector competitiveness and innovativeness due to increasing domination by a limited number of investors following their acquisition of companies that struggled to mitigate the impacts of the pandemic.

What actions are required and by whom?

Short-term actions

- Growers:
 - to reduce or enlarge production areas to match market demand; a strategy already adopted by the majority of growers; and
 - to continue to adopt strategies that lower the cost of production to maintain sector competitiveness, such as the use of low-cost inputs where sustainability goals are not compromised.
- Growers and investors:
 - to consider mergers or consolidation to create larger facilities with more economic power and increased capacity to withstand the impacts of the pandemic; and
 - to document and share good practices that have an overall positive pre-competitive impact on the sector.
- Lenders to introduce short- and medium-term financing instruments that allow businesses to become more resilient and recover from the COVID-19 crisis, including low- or zero-interest loan products, grants and technical assistance packages.

Strategic interventions

- National tripartite labour partners to develop policies on labour productivity and new compensation schemes.
- Technology providers to introduce efficient and affordable solutions to accelerate automation and mechanization as a strategy to lower production costs.
- Associations and platforms to increase pre-competitive sector collaboration to share good practices and collectively respond to current and future pandemics, as well as other catastrophic events that could have a negative impact on the floriculture sector.
- GoK to develop new incentive packages to reduce the impact of the COVID-19 crisis and future shocks on the sector.
- Donors and non-governmental organizations (NGOs) to invest in risk-based, long-term mitigation measures, and build structures and partnerships for sustained impact.
- Growers and their associations to lobby for the equitable sharing of responsibilities by all supply chain actors to support those at the bottom of the chain (most at risk) to withstand shocks.

3] According to reports, measures taken to reduce the flower production area include the closure of some farms, decrease in size of individual production areas, complete pruning of entire production blocks, and uprooting of varieties that have become uncompetitive over the course of the pandemic.

Impact area 6

Limited employment opportunities, resulting in lower incomes and more vulnerable workers

What is the impact?

- Reduced employment opportunities:
 - At the onset of the pandemic, most companies were forced to reduce labour by 50% as they could not secure air-cargo space and there was uncertainty surrounding the coping mechanisms put in place for the sector.
 - Temporary workers were the most affected as most of them were laid off, while in some cases permanent workers were sent home on unpaid leave.
 - While rose farms were able to resume operations within two months of the onset of the pandemic, carnations and hypericum farms were more seriously affected; some farms uprooted carnations, while hypericum operations were maintained at a minimum.
- Increased vulnerability:
 - Gains made over time on working conditions and workplace benefits have been eroded, leading to an increase in the number of workers with reduced pay rates, increased workloads and regular overtime work, and the growing casualization of the workforce.
 - Competition for the few employment opportunities available in the sector has made workers vulnerable and susceptible to discriminatory practices like sexual harassment, favouritism, and tribalism; the situation has been further exacerbated by the fact that the monitoring of labour standards compliance has been suspended owing to the pandemic.
 - Coping strategies adopted by workers to mitigate the impact of the COVID-19 crisis, including early resignation to redeem end-of-employment benefits like gratuity, have increased structural poverty due to delays in processing payments.
 - The reduction in number of workers has led to an increase in the workloads of those who remained on the farms; however, workers' representatives do not have the necessary skills to adequately support these workers and deal with such challenges.
- Workers' incomes have decreased in the following three ways:
 - Strategies adopted by some businesses to keep existing workers in employment by introducing part-time shifts, two weeks a month, have led to reduced incomes as workers have not been able to find alternative income-generating opportunities.
 - Some companies placed those workers who had been earning higher wages on unpaid leave while maintaining temporary workers on entry-level wages.
 - Some workers resigned from their positions so that they could receive end-of-employment benefits and later had to accept entry-level jobs when the COVID-19 restrictions eased, earning as little as half the pay they had earned before the pandemic.

Solar panels on a rose farm in Kenya (Photo: Sebastian Noethlichs)



What actions are required and by whom?

Short-term actions

- Businesses and unions to develop instruments and mechanisms to keep workers in employment while planning and communicating the availability of cash flow to pay end-of-employment benefits to those seeking to leave employment.
- Unions, government, and certification organizations to adapt and adopt tools and approaches that are effective during periods of crises to ensure continued monitoring of labour rights.

Strategic interventions

- Labour unions to repurpose and build capacity of labour unions to play a more active role in protecting workers against measures that go beyond crisis response.
- Research organizations to document good and bad practices, to identify appropriate response measures and reshape industry compliance to labour standards.
- Ministry of Labour to prioritize the implementation of measures to prevent the erosion of workers' earnings during pandemics and other crises.
- Certification organizations to implement systems for monitoring labour conditions that can be used remotely to ensure continued compliance even in the context of pandemics.
- Ministry of Labour to review labour laws to include provisions on responsibilities, roles and/or tasks of businesses, workers, and the public sector in the context of shocks/pandemics.
- NGOs and community-based organizations (CBOs) to be encouraged to work with labourers to design programmes that could potentially be funded by donors, or to raise funds in the global community to support recovery for workers who have fallen into structural poverty due to the pandemic.
- Growers and their associations to establish and finance a national fund for food and education to mitigate child hunger and malnutrition and provide free basic education (primary and secondary) to children of farm workers.

Greenhouses of a flower farm in Nakuru, Kenya (Photo: Lidia Daskalova)



Impact area 7

Decrease in farm labourers' income, contributing to social instability

What is the impact?

- Income of workers and sector stakeholders has reduced overall during the current COVID-19 crisis.
- Disruption in the dynamics of a household between women and men has led to increased cases of separation, gender-based violence and child neglect.
- Many families of workers who lost employment had to relocate to other towns with uncertainty surrounding whether they would return or not.
- The COVID-19 lockdowns have been linked to an increase in early pregnancies among female workers.
- Many workers have been unable to service their loans on time since losing their jobs and cannot anticipate when they will be able to resume payments, causing a crisis between workers and membership institutions. Some parents have been left without the means to pay school fees and have been relying on loans to keep their children in school.
- There has been an increase in incidences of criminal misdemeanour such as petty theft in low-income workers' residences.
- The reduction in opportunities for employment has led to an increase in competition between local communities and migrant workers, and a rise in conflict and social tensions.
- Workers have reported missing meals, and sometimes going all day without any food; some women have at times had to give their portion of food to their children.
- Reports of severe depression have increased, with suspected cases of suicide linked to loss of employment and inability to provide for their families.

What actions are required and by whom?

Short-term actions

- Grower associations and civil society to discuss possibilities to link the floriculture sector with nutrition support and education-based programmes for workers.
- Short-term education fund to be set up by stakeholders in the floriculture sector to enable workers' children to attend school.
- Social safety nets to be provided through unemployment insurance for highly vulnerable groups like farm workers.
- Counselling centres and emergency hotlines for depression and suicide prevention to be set up.
- Local CBOs and NGOs to offer support in mitigating the effects of the pandemic and implementing adaptation measures for workers.

Strategic interventions

- Social security to be expanded to include unemployment insurance for vulnerable populations, i.e., workers in the floriculture sector.
 - Growers and sector associations to organize crisis management and training programmes aimed at supporting workers – both employed and unemployed - to adapt to and engage in alternative income-generating activities.
 - Human rights groups to support the sector in moving towards establishing a living wage that would allow workers to have a decent life and be able to save money.
 - County governments (COG) in flower-growing areas to provide unemployment insurance or welfare cards to facilitate access to health and basic needs.
 - Ministry of Health (MoH) to develop guidelines and circulars on depression, and set up counselling centres and emergency hotlines for depressed and suicidal workers.
 - State Department for Cooperatives to develop policies and structures to cushion membership organizations, i.e., Savings and Credit Cooperatives (SACCOs), from bad debt, especially at times of crises such as pandemics.
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Dashboard

Level of impact of the COVID-19 pandemic and related restrictions and measures - Outcomes of a survey conducted in May 2021

Survey questions were rooted in the [integrated food system and sector framework](#), which also provides the structure of this dashboard.

Socio-economic drivers		
Safety measures to prevent the spread of Covid-19 on farms	Mobility of sector stakeholders	Diversification of flower farms into other crop production activities
Willingness value chain stakeholders to support pandemic risk mitigation	Social stability	

Regulation	Coordination	Investment
Compliance with MRLs requirements	Collaboration among stakeholders	Availability of subsidies, waivers and moratoriums
Access to audits to comply with sector standards	Dissemination of information	Maintenance of the existing infrastructure
Formulated policies to support the sector		

Stakeholder organization	
Success in advocating interests	Mergers and acquisitions

Service provision		
Access to production inputs	Access to international advisory services	Equipment maintenance and repair services
Availability of financial services	Access to training and education	Access to demonstration farms or plots

Production	Value chain development
Application of good agricultural practices	Cost of air transportation in 2020 and 2021
Area produced in 2020 and planned for 2021	Availability of air transportation in 2020
Plantation of new flower varieties	Availability of air transportation in 2021
Costs of production	Smooth functioning of the cold chain

Consumption	
Market information flow (consumer preferences)	Flower demand in 2020 and 2021

Environmental drivers		
Energy consumption	Waste from abandoned greenhouses	Emergence of pest and diseases from abandoned production sites

Socio-economic outcomes	
Employment opportunities skilled labour	
Total employment of labourers in 2020 and 2021	
Safe working conditions of labourers	
Sector employment (excl production) in 2020	
Sector employment (excl production) in 2021	
Value of foreign currency earned	
Income earned	
Income earned by female labourers	

Food & nutrition security outcomes	
Flower price in 2020 and 2021	

- Color coding**
- Severely negative impact
 - Moderately impact
 - Slightly negative impact
 - No significant impact

Environmental outcomes	
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Rapid assessment of the floriculture sector in Kenya

Amidst the worldwide COVID-19 crisis we currently face, and the socio-economic effects of coping measures, specific attention and actions are needed to secure agricultural production for income, employment, and food security and nutrition, i.e., to safeguard the continued functioning of the food system.

For the near and mid-term future, it is important to ensure that the production and marketing of agricultural commodities will continue in the best way possible under the prevailing circumstances. This requires assessing how the COVID-19 containment measures and other indirect results of the pandemic affect individual agricultural sectors, and take action to minimize negative impacts on the functioning of agricultural sectors within the larger food system.

Through a collaborative effort involving a broad range of sector stakeholders, a rapid assessment of the floriculture sector in Kenya was conducted to propose adequate responses to the challenges that were identified. The rapid assessment contributes to developing short-, mid-term and strategic actions and interventions that will enhance the sector's resilience and support the continuity of activities within the sector, taking into account the unpredictability of the crisis. More details on the methodology and steps used in the rapid assessment and development of the current document can be accessed through this link.

Purpose

The rapid assessment aims to assess the impact of the COVID-19 crisis on the functioning of the floriculture sector in Kenya. Further information on the rapid assessment project can be accessed through this link.

Rapid assessments in other sectors

Working with a similar model of rapid assessment in various sectors and countries over a time series allows for interpretation and synthesis of the impact of the COVID-19 crisis on food systems at national, regional, and global levels. It identifies coping strategies, and immediate and

practical actions required to address emerging challenges. Furthermore, it provides insights into the use of sector transformation as a diagnostic tool supporting strategic development, planning, identification and monitoring of interventions that aim to enhance the functioning and resilience of agricultural sectors and food systems.

Partnership

The rapid assessment was facilitated by WCDI and conducted in close collaboration with Wageningen Economic Research and Tradecare Africa Ltd, Nairobi. They are further joined by Kenya Flower Council in the implementation of the assessment.

Contributing organizations

The rapid assessment of the floriculture sector in Kenya involved representatives of the following organizations in the survey and focus group discussions: Milk processors: New Kenya Cooperative Creameries (New KCC), Countryside Dairy, Meru Dairy Farmers Cooperative Union, Bio Foods; Producer organizations/cooperatives: Kieni Dairy Products Limited, Dairy Farmers Cooperatives – Ndumberi, Uruku, Naari, Mweiga, and Karongoni, Dairy Traders Association; Financial institutions: Savings and Credit Cooperative Organizations (SACCOs) – Taifa, Capital, and Yetu and Kenya Commercial Bank; Public sector: Kenya Dairy Board, State Department for Livestock - in Embu, Machakos, Kirinyaga, and Nyandarua counties, Dairy Training Institute; Development partners: Agriterro, SNV, Netherlands Development Organisation, AVSI Foundation, SPARD Africa, Research Triangle Institute (RTI), Kenya Crops and Dairy Market Systems (KCDMS) Activity, Kenya Climate Smart Agriculture Project, Tharaka Nithi County; Service/extension providers: Farming Solutions Africa, Agrovet services- Kairo, Gatarakwa, Malewa, and Pillar, Reliable AI Services, African Breeders Services; Research/learning institutions: Kenya Agricultural and Livestock Research Organization (KALRO), International Livestock Research Institute (ILRI), University of Nairobi and Jomo Kenyatta University of Agriculture and Technology.

This rapid assessment is published within a series of rapid assessments in multiple (sub)sectors and countries, and is part of WCDI Sector Transformation publications.

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