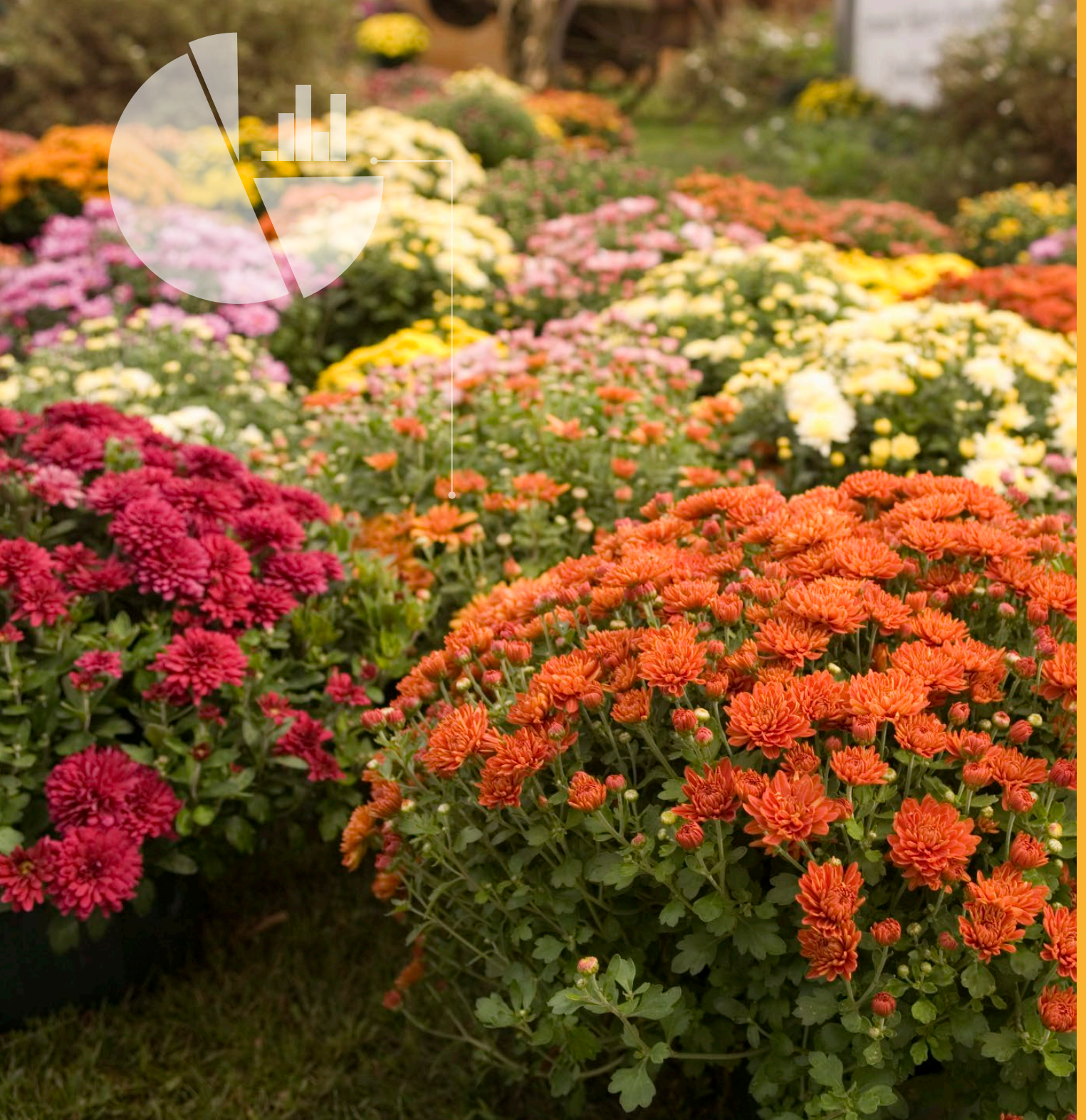


# THE FLOWER SECTOR IN KENYA: SUMMER FLOWERS





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# List of acronyms

|         |   |
|---------|---|
| BEEEP   | Business Environment and Export Enhancing Programme                 |
| DFG     | Dutch Flower Group  |
| DTL     | Drawing The Line  |
| EU      | European Union  |
| FSI     | Flower Sustainability Initiative                                    |
| F.O.S.S | Flowers and Ornamental Sustainability Standard                      |
| GAP     | Good Agricultural Practices   |
| GRASP   | GlobalG.A.P. Risk Assessment on Social Practice                     |
| IDH     | Sustainable Trade Initiative (in Dutch: Initiatief Duurzame Handel) |
| IFA     | Integrated Farm Assurance   |
| IPD     | Import Promotion Desk   |
| KEPHIS  | Kenya Plant Health Inspectorate Service                             |
| KFC     | Kenya Flower Council  |
| KRA     | Kenya Revenue Authority   |
| PASA    | Packed At Source Africa   |
| PEF     | Product Environmental Footprint                                     |
| PESCR   | Product Environment Social Category Rules                           |
| PPP     | Plant Protection Products   |
| SPS     | Sanitary and Phytosanitary  |
| SWOT    | Strengths, Weaknesses, Opportunities, and Threats                   |
| UK      | United Kingdom  |
| USA     | United States of America  |
| VAT     | Value-Added Tax   |

# 1. Introduction

In Kenya, “summer flowers” refers to a diverse group of flowers cultivated outdoors that thrive in warm, temperate conditions year-round. These include varieties such as Limonium, Alstroemeria, Solidago, Eryngium, and Gypsophila. Unlike traditional greenhouse crops such as roses, summer flowers are grown to fill the seasonal gaps of export destination markets. Mostly this is during the colder months of Europe, when similar flowers cannot be produced locally.

Kenya’s summer flower production has expanded over the years and is now seen as increasingly vital to its floriculture sector, with most growth in the industry tied to this production. Currently, roses make up approximately 70% of Kenya’s flower production, while outdoor flower cultivation, primarily summer flowers, accounts for 30%. Over the next 5-10 years, this balance is expected to shift to a 50%-50% split. In Kenya, around 70-80 varieties of outdoor summer flowers are cultivated.

Summer flowers offer several advantages, notably the ability to grow them year-round and outdoors. This ensures that demand for floral arrangements can be met even when summer flowers are less abundantly cultivated in destination markets. Additionally, the plant material is significantly more affordable compared to for example roses. Many summer flowers can be grown from seeds or at a lower cost than rose propagation materials.

Cultivating summer flowers allows Kenyan flower farms to capitalize on this market opportunity. Many emerging small-scale flower growers are opting for summer flowers as they are perceived to be easier and more affordable to cultivate and manage, requiring lower investments. This is particularly beneficial compared to roses, which often need specialized greenhouse conditions and large-scale operations to achieve profitable returns.

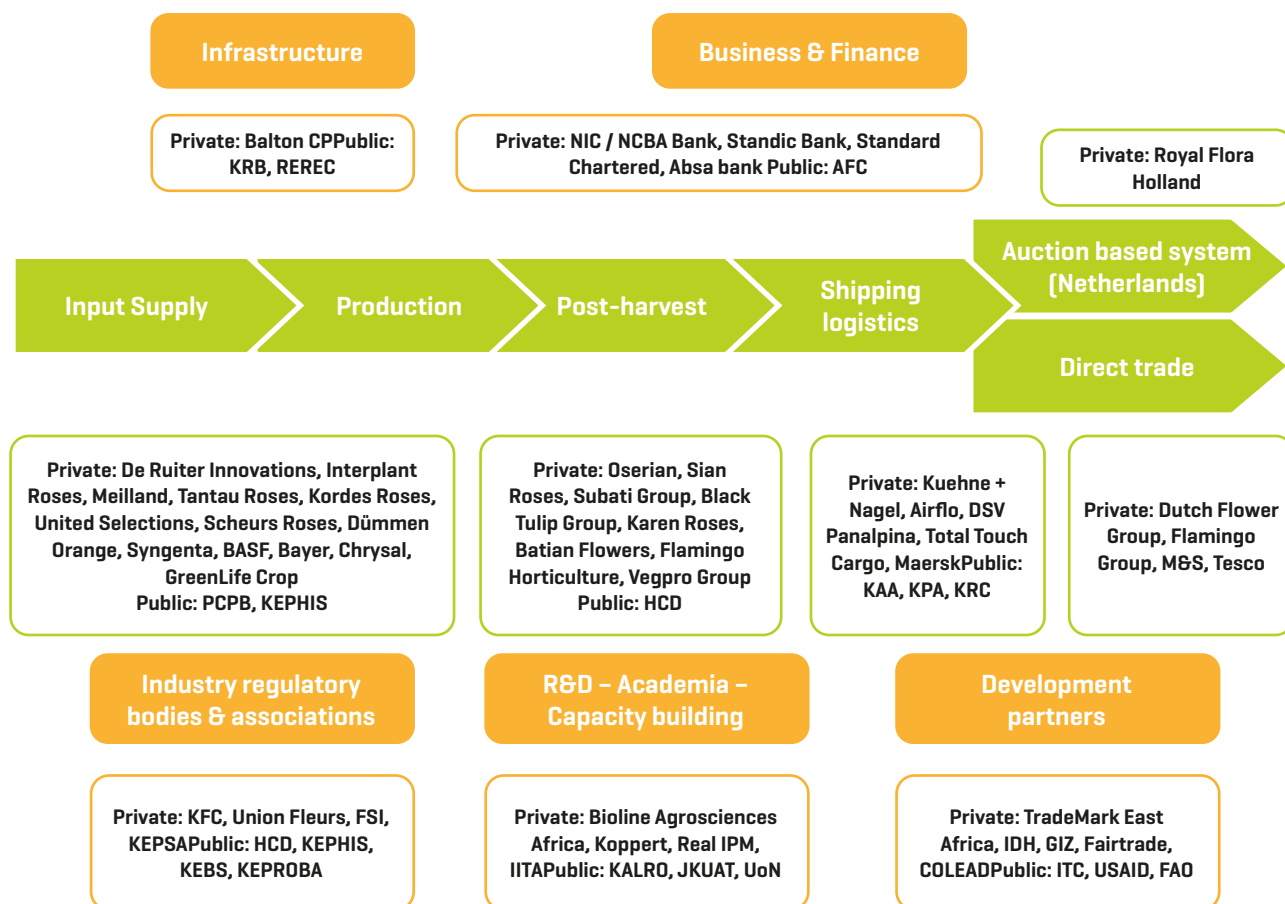


# 1. Introduction

## 1.1 Value chain description

In recent years, the production of summer flowers in Kenya has seen a significant increase, driven by both smallholder farmers and larger commercial growers. The value chain and its enabling environment are illustrated in Figure 1 below.

Figure 1. The summer flower value chain is composed of five main steps (in green) and is surrounded by an enabling environment consisting of five pillars (in orange).



Initially, summer flower cultivation was predominantly the domain of smallholder farmers, who typically managed plots ranging from 0.1 to 2 hectares. These farmers often relied on seasonal rains and grew flower types that do not require extensive breeding, making the financial entry point feasible and the growing process relatively straightforward compared to the more complex cultivation of roses.

Over the past 1.5 years, there has been a noticeable shift as larger growers, traditionally focused on rose cultivation, have diversified into the summer flower market. These larger growers tend to operate on larger farms, typically between 5-10 hectares, and they often grow types developed by professional breeders. This diversification strategy allows them to cater to changing international market demands, extend their production seasons, and gain a competitive edge in the global flower industry. The scale of their operations also provides them with significant cost advantages, making their production more efficient and profitable.

Smallholder farmers (< 5 hectares) continue to play a vital role in the summer flower sector, but their focus has shifted towards cultivating niche types that are less common in the larger market. These niche types provide a good entry point for smallholders into the flower sector, offering them a way to differentiate their products from larger growers and cater to specific market demands. Examples of such niche varieties are (Thursd, 2024):

- *Scabiosa*: Known for its delicate, pincushion-like flowers, *Scabiosa* is popular in boutique floral arrangements.
- *Astrantia*: This flower has unique, star-shaped blooms that add texture and depth to floral displays.
- *Craspedia* (Billy Buttons): With its bright yellow, spherical flowers, *Craspedia* is often used as an accent in modern arrangements.
- *Nigella* (Love-in-a-Mist): With lacy foliage and delicate flowers, *Nigella* adds a whimsical, airy quality to arrangements.
- *Ammi majus* (False Queen Anne's Lace): This delicate, lacy flower is often used as a filler in bouquets, adding a light and airy feel.
- *Euphorbia*: Valued for its unique textures and vibrant green tones, *Euphorbia* varieties are used as fillers or accents in high-end arrangements.
- *Bupleurum*: This green flower with small, yellow-green blooms is sought after for adding unique foliage and texture to arrangements.

Many of these smallholder farmers have started collaborating through joint digital trading platforms, such as [Floriday of Royal FloraHolland](#), which helps them strengthen their market position and enables them to export directly, rather than relying on larger growers. While it originated in the Netherlands, Floriday is actively used by over 5,000 growers and buyers across 45 countries, facilitating both national and international transactions (Floriday, 2024).

Direct sales by smallholders are particularly prevalent in Asian and Middle Eastern markets, including Pakistan, Saudi Arabia, and Dubai, whereas the European Union (EU) market is more dominated by larger commercial growers. In several Asian and Middle Eastern markets, the clients are willing to pay premium prices for the flowers and in many cases the client has already paid upfront, before the flowers are received, limiting the financial risk of the grower.

This diversification in the summer flower sector not only enhances the resilience of Kenya's flower industry but also creates opportunities for both smallholders and larger growers to thrive in a competitive global market. Summer flowers are often mixed with roses and packed into bouquets at the source, which reduces labour and energy costs and minimizes product handling. Larger growers, who dominate the bouquet-making process, typically include about 25% of smallholder-grown flowers in their bouquets. This practice helps diversify their supply base, mitigate risks, and strengthen their operations. Sourcing from smallholders aligns with broader social and economic goals, such as community engagement and inclusive growth, and ensures a stable supply of flowers during peak seasons. It is rare for smallholders to be involved in the bouquet-making process for the export market, as this requires the infrastructure and expertise of larger growers to meet international standards for flower bouquets. Smallholders, while essential to the supply chain, typically focus on cultivating and supplying niche or complementary types of summer flowers rather than processing them for direct export.

An example of a facility for bouquet-making is the "Packed At Source Africa (PASA)" facility of the Dutch Flower Group (DFG) in Kenya, which opened in the first month of 2024 (Dutch Flower Group, 2024). The facility is located between Naivasha and Nairobi and offers the capacity to create 1 million bouquets a month. It is not just a location for bouquet-making, but also flower packages are produced on-site.

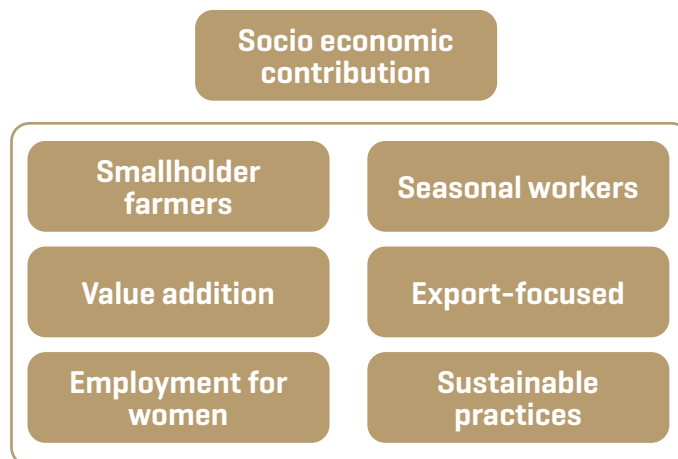
This integration of smallholder-grown flowers into larger export operations highlights the interconnectedness of different scales of production within Kenya's floriculture sector, enhancing both economic viability and sustainability.

# 1. Introduction

## 1.2 Socio-economic contribution

The Kenyan summer flower sector provides several benefits to the socio-economic state of Kenya, summarised in Figure 2 below.

Figure 2. Socio-economic contribution of the summer flower sector in Kenya.



The summer flower growing in Kenya plays an increasing role in its floriculture sector, providing essential economic opportunities and enhancing the livelihoods of countless smallholder farmers. This sector's significance extends beyond mere agricultural production, encompassing aspects of value addition and export that collectively bolster Kenya's economic standing on the global stage.

### Smallholder farmers

Smallholder farmers do play a crucial role in the summer flower industry in Kenya. Companies like [Wilmar](#) have contracted thousands of smallholder farmers across various regions in Kenya to produce summer flowers, which are then exported, primarily to Europe. These farmers have indeed benefited from higher returns compared to traditional crops, making flower farming a lucrative option for rural households. This shift to flower farming is driven by the ready market and better pricing of flowers compared to vegetables and fruits, which often suffer from price volatility and post-harvest losses.

### Seasonal workers

The summer flower sector provides significant employment opportunities not only for smallholder farmers but also in related areas such as transportation, packaging, and export logistics. Seasonal employment is common during peak harvest times, which helps to alleviate unemployment and underemployment in rural areas.

However, despite these economic benefits, challenges around living wages remain. The Kenyan Flower Council (KFC) acknowledges that while wages have improved over time, a significant percentage of workers in the floriculture sector are still paid below the living wage (KFC, 2023). A study found that 63% of workers are paid below the living wage, highlighting the



need for more aligned efforts to improve standards (KFC, 2023). Initiatives like the roadmap developed by IDH, the Sustainable Trade Initiative, aim to address these systemic issues by providing practical steps for companies to move towards paying living wages. These five steps are visualised below and the complete roadmap is openly accessible on the website of IDH ([IDH - the Sustainable Trade Initiative](https://www.idhsustainabletrade.com/living-wage-platform/)) (Figure 3).

Overall, while the summer flower industry has brought positive economic impacts to smallholder farmers and rural communities, the issue of living wages requires ongoing attention and coordinated efforts from all stakeholders in the floriculture sector.

Figure 3. Five steps for companies to work towards living wages (IDH, 2024). Retrieved from <https://www.idhsustainabletrade.com/living-wage-platform/>



### Value addition

A distinctive feature of Kenya's summer flower industry is the process of value addition. Instead of exporting the flowers separately, Kenyan growers engage in the value addition of creating bouquets, which are packed at the source before export. This value addition significantly enhances the market value of the flowers and ensures that a larger share of the revenue remains within the country. The crafting of bouquets involves the selection and arrangement of flowers, which requires skilled labour and creates additional employment opportunities. Furthermore, this practice helps position Kenyan flowers competitively in international markets, catering to consumer preferences for ready-made bouquets.

### Export-focused

The export of these value-added products is a substantial contributor to Kenya's foreign exchange earnings. The floriculture sector is one of Kenya's leading export industries, with the EU being a major market for its flowers. By exporting high-value bouquets rather than raw flowers, Kenya maximizes its earnings from the global flower market, which in turn strengthens the country's trade balance and contributes to economic stability and growth. This revenue is crucial for national development, funding infrastructure projects, public services, and other governmental initiatives.

### Employment for women

In addition to economic benefits, the summer flower sector in Kenya plays a significant role in promoting gender equality and women's empowerment. Women account for at least 50% of the workforce in the floriculture sector, making them a critical component of the industry's

# 1. Introduction

labour force. Their roles primarily involve flower harvesting, sorting, and bouquet making, which not only provides them with financial independence but also offers opportunities for skill development. This, in turn, contributes to broader social changes and advances gender equality in rural areas. The socio-economic contribution of the flower sector in terms of employment is indicated in Table 1.

Table 1. Number of workers from growers audited under KFC's certification scheme (2019-2023). Source: KFC.

| Year | Number of farms | Male   |     | Female |     | Total  |
|------|-----------------|--------|-----|--------|-----|--------|
| 2023 | 77              | 23,441 | 49% | 24,175 | 51% | 47,616 |
| 2022 | 83              | 20,207 | 48% | 21,836 | 52% | 42,043 |
| 2021 | 77              | 21,894 | 49% | 23,084 | 51% | 44,978 |
| 2020 | 67              | 18,101 | 49% | 19,216 | 51% | 37,317 |
| 2019 | 60              | 14,462 | 47% | 16,387 | 53% | 30,849 |

KFC has recognized the importance of addressing gender-specific challenges in the workplace. In partnership with Women Win, KFC has implemented the Drawing The Line (DTL) tool across many large farms. This tool helps identify key issues faced by women in the workplace, such as harassment or unequal pay and serves as a foundation for developing sustainable solutions (KFC, 2023). By addressing these challenges, the floriculture sector not only improves working conditions for women but also promotes their overall empowerment and well-being.

## Sustainable practices

The environmental aspect of floriculture cannot be overlooked. While the industry does face challenges related to water usage and pesticide management, there have been concerted efforts to adopt sustainable farming practices. Many flower farms in Kenya are increasingly embracing eco-friendly methods, such as integrated pest management, organic fertilizers, and efficient irrigation systems to mitigate environmental impact and ensure long-term sustainable production.

### 1.3 Main messages: flower value chain and socio-economic contribution

- Kenya's summer flower production has significantly grown, contributing 30% of the country's total flower output, with expectations to reach a 50% share within the next 5-10 years.
- Summer flowers offer a unique advantage by being grown outdoors year-round, allowing Kenyan farms to extend their production season and meet global demand.
- Smallholder farmers play a critical role in the summer flower sector, cultivating niche types that require lower investments and offer higher returns compared to traditional crops like vegetables and fruits.
- Larger commercial growers, traditionally focused on roses, are increasingly diversifying into summer flower production to meet changing international market demands and increase efficiency through economies of scale.
- The summer flower sector provides significant employment opportunities, especially for women, and contributes to Kenya's economic stability through value-added exports such as ready-made bouquets.




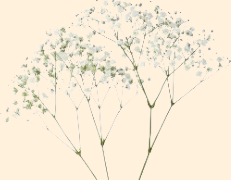


## 2. Market



### 2.1 Market trends

The demand for summer flowers from Kenya has experienced significant growth over the past few years, driven primarily by shifts in consumer preferences and market dynamics in the EU and the United Kingdom (UK). As indicated by KFC in 2023, this increased demand has led many growers, who traditionally focused on roses, to diversify their crops by adding summer flowers to their assortment. The shift from mono bouquets, which consist solely of roses, to mixed bouquets incorporating summer flowers as bouquet fillers has been a major factor behind this trend.

A critical catalyst for this demand shift was a dip in the reputation of Kenyan roses in 2018 due to emerging quality issues. While the rose industry worked to recover its image, the market's preference had already begun to shift towards mixed bouquets, featuring an array of summer flowers. This trend gained momentum in 2019, and even as the quality of Kenyan roses improved, the demand for summer flowers continued to grow and has remained strong ever since. About 70-80 outdoor summer flower types are grown, of which a few are illustrated below:

| Photo   | Type       | Description   |
|---|------------|---|
|  | Limonium   | Known for its delicate, papery blooms, Limonium adds texture to bouquets and is popular for its long-lasting, airy appearance.    |
|  | Solidago   | Also called goldenrod, Solidago produces bright yellow flowers on tall stems, often used as filler in floral arrangements.        |
|  | Hypericum  | Bearing colourful berries rather than flowers, Hypericum provides a striking contrast in floral displays, adding vibrant texture. |
|  | Gypsophila | Gypsophila features small, cloud-like white flowers, ideal for softening bouquets.  |

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|   |              |   |
|---|--------------|---|
|  | Alstroemeria | This flower offers vibrant colours and long-lasting blooms, making it a staple in floral arrangements.      |
|  | Eryngium     | With spiky, blue or silver thistle-like blooms, Eryngium adds a different element to floral designs.        |
|  | Veronica     | Featuring tall, spiky clusters of small flowers, Veronica brings vertical interest and texture to bouquets. |

The most commonly grown summer flower types in Kenya include Limonium, Solidago, Hypericum, Gypsophilia, and Alstroemeria (Table 2). The composition of bouquets typically includes a mix of roses, summer flowers, and foliage, with greens such as Eucalyptus playing a vital role in enhancing the visual appeal of these arrangements. The industry thus shifts towards a broader diversity of flowers, not only catering to changing consumer demands but also allowing growers to better manage risks associated with market fluctuations.





Table 2. Certified areas under production per crop, indicated for all farms audited under the KFC certification scheme. Source: KFC.

| Flower        |              | 2019  | 2020  | 2021  | 2022  | 2023  |
|---------------|--------------|-------|-------|-------|-------|-------|
| Roses         | Hectarage    | 1,971 | 1,961 | 2,236 | 2,009 | 1,918 |
|               | No. of farms | 58    | 55    | 60    | 56    | 52    |
| Limonium      | Hectarage    | 76    | 75    | 95    | 112   | 137   |
|               | No. of farms | 12    | 10    | 16    | 12    | 15    |
| Solidago      | Hectarage    | 46    | 46    | 55    | 60    | 123   |
|               | No. of farms | 5     | 5     | 10    | 5     | 7     |
| Hypericum     | Hectarage    | 83    | 81    | 132   | 155   | 122   |
|               | No. of farms | 12    | 12    | 14    | 15    | 13    |
| Gypsophilia   | Hectarage    | 112   | 108   | 132   | 204   | 87    |
|               | No. of farms | 12    | 12    | 14    | 12    | 12    |
| Alstroemeria  | Hectarage    | 51    | 75    | 61    | 77    | 70    |
|               | No. of farms | 8     | 8     | 13    | 11    | 10    |
| Carnations    | Hectarage    | 37    | 51    | 59    | 36    | 58    |
|               | No. of farms | 5     | 5     | 8     | 6     | 8     |
| Eryngium      | Hectarage    | 42    | 42    | 52    | 63    | 38    |
|               | No. of farms | 9     | 10    | 12    | 11    | 11    |
| Veronica      | Hectarage    | 3     | 3     | 24    | 62    | 30    |
|               | No. of farms | 2     | 2     | 5     | 7     | 4     |
| Chrysanthemum | Hectarage    | 33    | 33    | 55    | 16    | 29    |
|               | No. of farms | 8     | 8     | 7     | 7     | 9     |

This growing trend reflects a broader shift in the global flower market, where consumers increasingly favour diversity and sustainability in their floral purchases. The Kenyan floriculture sector has adapted well to these changes, ensuring that it remains a key player in the global market.

## 2.2 Trade channels

The flower trade from Kenya is primarily divided between two main channels: sales through the Dutch auction system and direct sales to supermarkets or retailers via wholesalers or flower providers. The Dutch **auction-based system**, particularly through Royal FloraHolland, has long been a key route for Kenyan flower exports. At Royal FloraHolland, growers have access to multiple sales methods:

- The traditional auction clock sale, where buyers bid via a descending clock with the option for growers to set minimum prices.
- Pre-auction sales allow buyers to purchase products before the main auction.
- Direct bidding is where growers set an asking price that buyers can either accept or negotiate.
- Direct sales via Floriday, giving growers full control over pricing and availability.

All of these methods provide flexibility and come with a 100% payment guarantee from Royal FloraHolland, ensuring growers are always assured of payment. This system offers growers notable financial benefits by aggregating demand from various buyers, thus providing

## 2. Market

consistent demand and reducing the unpredictability of retail-focused sales. Furthermore, the auction's prompt payment structure allows growers to receive earnings before the week's end, minimizing financial risk and supporting cash flow stability, reducing reliance on extended credit terms or delayed payments.

Over the past decade, there has been a significant shift towards the **direct sales** of flowers grown in Kenya, particularly to supermarkets in the EU and the United Kingdom (UK), but also to Asian and Middle Eastern markets. This model has become popular because it allows growers to bypass auctions and potentially secure higher prices through direct dealing with retailers. However, it requires a strong focus on quality, delivery reliability, and traceability, often operating on a just-in-time delivery basis. Growers must align production with market demands to ensure flowers reach their destinations precisely when needed. This can introduce challenges, such as fluctuating demand due to public holidays and festive events in target markets. Direct sales therefore primarily benefit larger growers with the marketing and logistical capabilities to scale production and streamline logistics efficiently.

In the direct sales model, particularly with supermarket sales via wholesalers, in some cases, there is no immediate payment security as offered by the auction system. Supermarkets often operate with payment terms extending to 60 or even 90 days. Conversely, for markets like Asia and the Middle East, buyers are often willing to pay in advance, reducing financial risk for the flower producer.

To support farmers with direct sales, the Import Promotion Desk (IPD) connects small and medium-sized Kenyan flower farms with European markets. This gives farmers a chance to sell directly to buyers, avoiding intermediaries. IPD ensures that the farms meet international standards like GLOBALG.A.P. and SEDEX, making it easier for buyers to trust the quality and sustainability of the flowers. Their cost-free matchmaking services, such as organizing B2B meetings and direct introductions, help Kenyan farmers find new buyers and expand their market access (IPD, 2024). These connections provide farmers with better and more stable incomes by linking them with buyers who value high-quality, sustainable flowers. IPD's emphasis on international standards helps farmers enhance production standards, improving both product marketability and environmental sustainability (IPD, 2024).

Within these two main routes, there are a few types in terms of product flow, which is illustrated in Figure 4. In the specific case of smallholder farmers, it should be noted that often the summer flowers first move to a larger grower where the flowers are mixed into the bouquets.





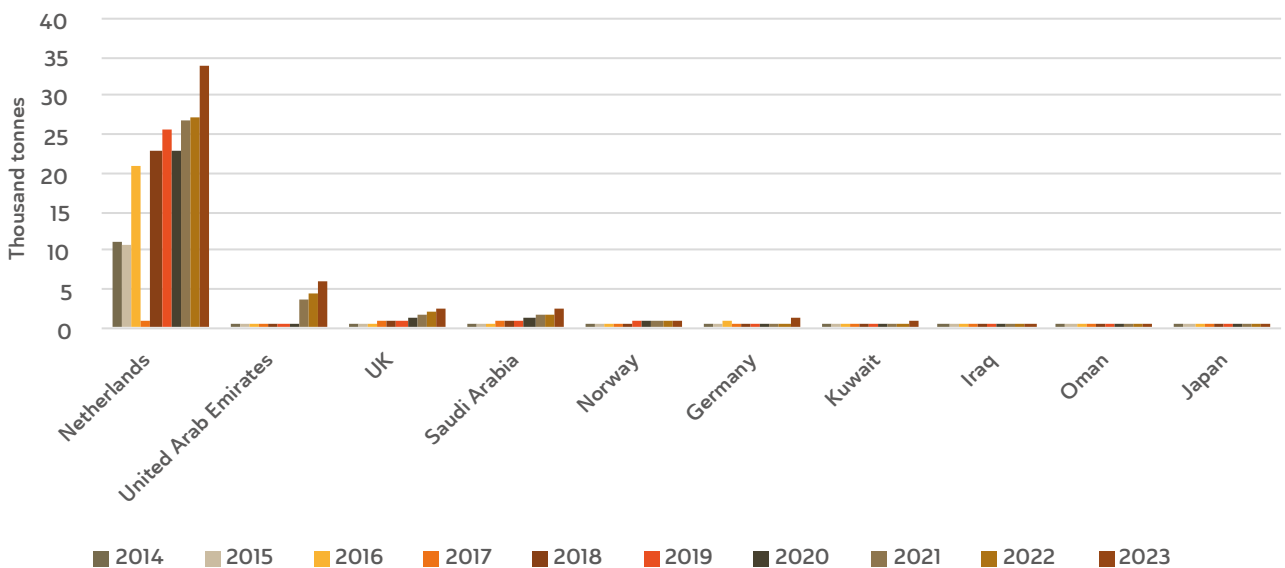
Figure 4. Product flow from farmer to consumer, best applicable to the EU and UK markets.



### 2.3 Export destinations

In recent years, alongside the increase in direct sales of Kenyan flowers to supermarkets in the EU and UK, there has been significant growth in other destination countries. The Middle East has become increasingly important as an emerging market for Kenyan fresh cut flowers (Figure 5).

Figure 5. Main Destination countries for Kenyan exports of fresh cut flowers (2014-2023), by volume (tonnes). Data represented for Flowers HS Code 060319 (Fresh cut flowers and buds, of a kind suitable for bouquets or for ornamental purposes (excl. roses, carnations, orchids, chrysanthemums and lilies)). Source: NL: COLEAD based on Eurostat, GB: COLEAD based on UK Trade Info, Other countries: COLEAD based on ITC Trade Map.



## 2. Market

These Gulf countries are particularly attractive due to their growing demand for high-quality flowers and the ability of Kenyan growers to meet these demands with reliable delivery and product diversity. It has been acknowledged that this market offers substantial opportunities for growth (KFC, 2023). The competitive advantage of Kenyan flowers in the Middle East is also achieved through the improvement of the logistical infrastructure supporting these exports. Direct flights and better cold chain management ensure that the flowers reach these markets in optimal condition, meeting the demanded quality requirements.

The expansion into the Middle East is part of a broader strategy by Kenyan growers to diversify their export destinations and reduce dependency on traditional European markets. This diversification not only helps mitigate risks associated with market fluctuations and strict SPS and quality requirements in the EU and UK but also taps into the increasing global demand for flowers.

SPS regulations and quality standards, including social and environmental criteria, vary significantly across regions. The EU is renowned for its stringent SPS measures and comprehensive quality standards, encompassing environmental sustainability and social responsibility. In contrast, countries in the Middle East generally have less rigorous SPS regulations and quality standards compared to the EU. While some nations in these regions are working towards enhancing their standards, they often do not match the EU's level of strictness. This disparity can be attributed to differences in regulatory frameworks, enforcement capabilities, and varying levels of emphasis on environmental and social issues.

The growing importance of the Middle East as destination market for Kenyan fresh cut flowers reflects this regulatory landscape. However, it is important to note that this situation is evolving. For instance, the Common Market for Eastern and Southern Africa (COMESA) has recently revised its SPS regulations and strategies to strengthen capacities across member states, aiming to harmonize standards and facilitate safer trade practices (COMESA, 2024).





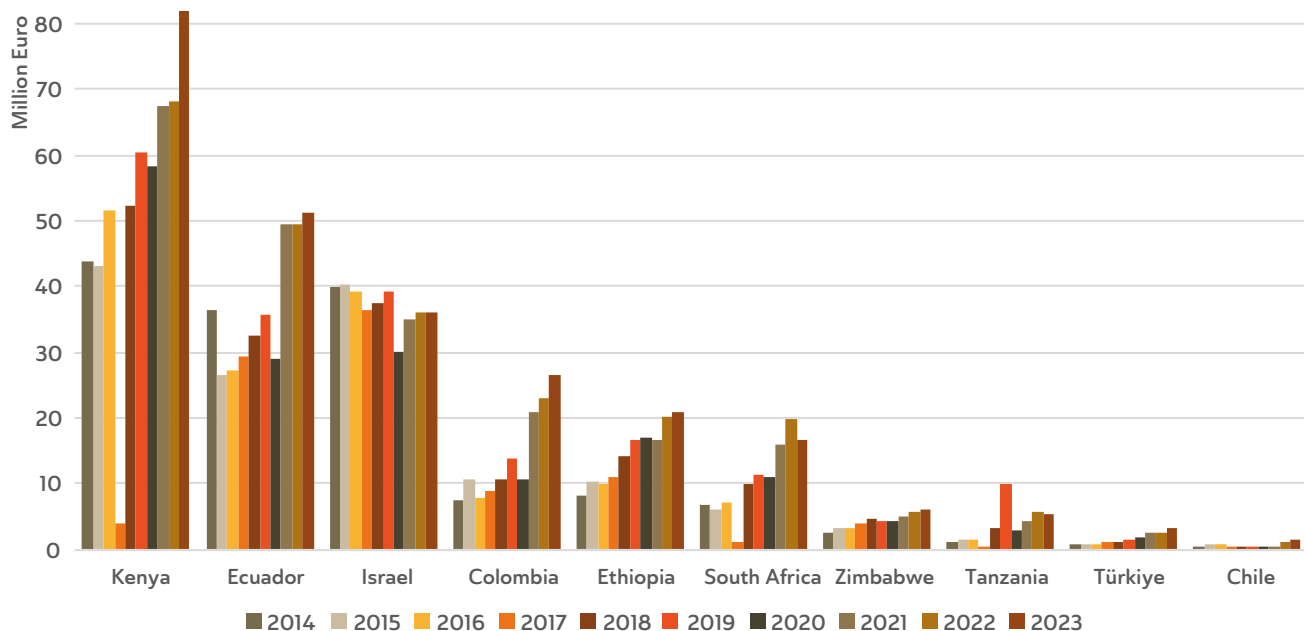
## 2.4 Main competitors in production

Kenya is a dominant force in the global floriculture industry, especially within the East African region, where it is considered the main hub due to its skilled flower labour force, efficiency, market access, and access to finance. While neighbouring countries like Tanzania and Uganda produce small quantities of flowers, Kenya's primary competitors in the global market, outside the EU, are Ecuador, Israel, Colombia, Ethiopia, and South Africa (Figure 6).

Ethiopia is Kenya's closest competitor in the African continent, with a rapidly growing floriculture industry. Benefiting from government subsidies, favourable climatic conditions, and lower production costs, Ethiopia has become a strong competitor in EU and UK markets, which is the primary destination for African-grown flowers. Ethiopian Airlines, the national carrier, offers subsidized airfreight rates, giving Ethiopian flowers a cost advantage in logistics. Additionally, Ethiopia's proximity to Europe and favourable trade agreements make it an attractive alternative to Kenyan flowers.

Ecuador is the major competitor and benefits from its geographical location along the equator, similar to Kenya, allowing for year-round production. Their flowers are favoured for their superior quality, making them strong competitors in the markets where quality is a primary concern. Ecuador's competitive edge is particularly in high-quality roses and popular summer flowers like gypsophila and carnations, which are popular in markets prioritizing superior quality. However, other summer flowers that are commonly produced in Kenya, such as hypericum, eryngium, and alstroemeria, do not have a strong presence in Ecuador and therefore encounter less competition from Ecuadorian suppliers. Israel and Colombia are other key suppliers.

Figure 6. Top 10 suppliers by value of flowers from outside the EU to the EU27 market. Data represented for Flowers HS Code 06031970 (Fresh cut flowers and buds, of a kind suitable for bouquets or for ornamental purposes (excl. roses, carnations, orchids, gladioli, ranunculi, chrysanthemums and lilies)). Source: COLEAD based on Eurostat.



Other flower producers in the region are Tanzania and Zimbabwe, although their output is relatively small compared to Kenya. These countries are slowly growing their floriculture industries, but they lack the infrastructure, market access, and production capacity that Kenya has established. Both countries benefit from similar climatic conditions as Kenya, but they still face challenges such as limited access to finance, less developed logistics, and smaller economies of scale.

Kenya can be seen as a main supplier of flowers to the EU market, which can be explained because of several market strengths Kenya's flower sector benefits from.

- **East African Hub:** Kenya is considered the main hub for flower production in East Africa due to its well-established infrastructure, access to international markets, and efficient production practices. The country's proximity to major markets in Europe, coupled with reduced training time for new farmers and better access to finance, gives Kenya a significant advantage over its neighbours.
- **Global market access:** Kenya's strategic location and well-developed airfreight services enable it to access a wide range of global markets efficiently. This is crucial for maintaining freshness and quality, which are key selling points in the highly competitive flower industry.
- **Diversified export markets:** In addition to Europe, which remains the largest market for Kenyan flowers, the country is increasingly exporting to other regions.

### 2.5 Main messages market

- The demand for summer flowers from Kenya has grown significantly, driven by shifts in consumer preferences, particularly in the EU and UK, favouring mixed bouquets over mono-bouquets of roses.
- Kenyan growers, traditionally focused on roses, are increasingly diversifying their crops to include summer flowers, allowing them to meet rising global demand and improve their resilience to market fluctuations.
- The most commonly grown summer flower types in Kenya include Limonium, Solidago, Hypericum, Gypsophilia, and Alstroemeria, predominantly cultivated by larger growers.
- Smallholder farmers often focus on niche types, which allow them to carve out a unique market segment.
- The composition of bouquets typically includes a mix of roses, summer flowers, and foliage, with greens such as Eucalyptus.
- Direct sales of summer flowers to supermarkets in the EU and UK have increased, offering growers better pricing opportunities while requiring strict quality, traceability, and just-in-time delivery.
- Kenyan flowers are gaining traction in emerging markets such as the Middle East, driven by growing demand, improved logistics, and direct flights ensuring optimal product quality.
- Kenya maintains a competitive edge in floriculture through its well-established infrastructure, proximity to Europe, and efficient production practices, which have positioned it as the leading flower exporter in East Africa.
- While Ethiopia is Kenya's closest competitor in the African flower market due to favourable conditions and government support, Ecuador remains a global competitor.



## 3. Regulatory and standards

### 3.1 SPS compliance

The Kenyan floriculture industry is currently navigating challenges related to meeting requirements for Sanitary and Phytosanitary (SPS) measures. This is especially critical to retain access to important export markets like the EU and the UK. While the industry has established a solid reputation for quality and compliance, it now faces pressures due to emerging pest risks and evolving regulatory standards. The open-field cultivation method means that summer flowers do not benefit from the controlled conditions of a greenhouse. Summer flowers are therefore more exposed to the environment and this increases their vulnerability to fluctuating weather patterns and the associated rise in pest populations. Climate change has exacerbated these challenges, leading to more frequent and severe pest infestations. Key pests and diseases that affect summer flowers include spider mites, whiteflies, thrips, false codling moths, and occasionally caterpillars and leaf miners. Spider mites thrive in hot, dry conditions and the whiteflies and thrips are difficult to manage due to their resistance to many traditional pesticides.

Growers of specific crops like Gypsophila are required to de-leaf the crop to manage pests and diseases effectively, specifically the leaf miner. This practice, while necessary, adds to the labour intensity and costs of production.

In ten years, the number of interceptions has fluctuated, as specified for the EU in Table 3. Pests and diseases that have mostly caused these interceptions in the last ten years include leaf miners (e.g. *Liriomyza huidobrensis*), whiteflies (e.g. *Bemisia tabaci* and *Trialeurodes vaporariorum*), false codling moth (*Thaumatotibia leucotreta*), and the worms fall army worm and Egyptian cotton leaf worm (*Spodoptera frugiperda* and *Spodoptera littoralis*).

Table 3. Number of interceptions each year for EU member states and Switzerland for fresh cut flowers, excluding roses, from Kenya. Source: EUROPHYT.

|                                  | 2015      | 2016     | 2017     | 2018      | 2019      | 2020     | 2021     | 2022     | 2023     | 2024*     | Total |
|----------------------------------|-----------|----------|----------|-----------|-----------|----------|----------|----------|----------|-----------|-------|
| <b>Total interceptions:</b>      | <b>11</b> | <b>6</b> | <b>8</b> | <b>12</b> | <b>11</b> | <b>1</b> | <b>7</b> | <b>4</b> | <b>3</b> | <b>12</b> |       |
| <i>Spodoptera littoralis</i>     | 4         | 1        | 1        | 3         |           |          |          |          |          |           | 9     |
| <i>Liriomyza huidobrensis</i>    | 3         | 3        | 1        | 1         | 6         | 1        |          |          |          |           | 15    |
| <i>Trialeurodes vaporariorum</i> | 1         |          | 2        |           |           |          | 1        |          |          |           | 4     |
| <i>Liriomyza congesta</i>        | 1         |          |          |           |           |          |          |          |          |           | 1     |
| <i>Thrips tabaci</i>             | 1         |          |          |           |           |          |          |          |          |           | 1     |
| <i>Thysanoptera</i>              | 1         |          |          |           |           |          |          |          |          |           | 1     |
| <i>Coleosporium asterum</i>      |           | 1        |          |           |           |          |          |          |          |           | 1     |
| <i>Dacus</i>                     |           | 1        |          |           |           |          |          |          |          |           | 1     |
| <i>Liriomyza</i>                 |           |          | 2        | 1         |           |          |          |          |          |           | 3     |
| <i>Bemisia tabaci</i>            |           |          | 1        |           | 2         |          | 1        | 1        | 2        | 7         | 14    |
| <i>Helicoverpa armigera</i>      |           |          | 1        |           |           |          |          |          |          |           | 1     |

### 3. Regulatory and standards

|                                 |  |  |  |   |   |  |   |   |   |   |    |
|---------------------------------|--|--|--|---|---|--|---|---|---|---|----|
| <i>Thaumatotibia leucotreta</i> |  |  |  | 6 | 1 |  | 2 | 1 |   | 2 | 12 |
| <i>Spodoptera frugiperda</i>    |  |  |  | 1 | 1 |  | 2 | 2 | 1 | 2 | 9  |
| <i>Tephritidae</i>              |  |  |  |   | 1 |  |   |   |   |   | 1  |
| <i>Scirtothrips aurantia</i>    |  |  |  |   |   |  |   |   |   | 1 | 1  |
| <i>Aleyrodidae</i>              |  |  |  |   |   |  | 1 |   |   |   | 1  |

\*Data for 2024 is incomplete and contains an overview of January-September.

Multiple causes can be identified for increased interceptions such as stricter regulations by importing countries on certain crops and pests or diseases, more (required) sampling, a push from the market to reduce pesticide use, and climate change effects increasing the prevalence of certain pests and diseases.

Market pressure, especially from retailers, is driving a push for growers to reduce pesticide use across all flower types, regardless of quality class. Growers are left with limited Plant Protection Products (PPPs) options to use which are not always as effective, especially in case of a massive outbreak of a certain pest or disease. KFC has been active in lobbying the European Union to reconsider its stringent pesticide reduction goals, which aim for a 50% reduction by 2030 without offering clear alternatives. The KFC's advocacy includes pushing for a phased-out program that gradually eliminates the most dangerous pesticides while providing growers with viable alternative pest management solutions.

Importing countries and regions such as the EU and the UK have been tightening plant health regulations, for example under the Regulation (EU) 2016/2031 and the Commission Implementing Regulation (EU) 2019/2072. These regulations demand increased inspection and sampling at the border of the importing country and more from inspection services and national plant protection organizations like Kenya Plant Health Inspectorate Service (KEPHIS). These evolving regulations are increasingly complex, affecting not only compliance but also the overall cost and efficiency of the supply chain.

While Kenyan summer flowers remain competitive in international markets, maintaining this position requires addressing the SPS compliance challenges through coordinated efforts, innovation, and adherence to evolving regulatory and sustainability standards.

### 3.2 Tax environment

The Kenyan floriculture industry, a significant contributor to the country's economy and one of its largest foreign exchange earners faces a complex and burdensome tax environment. Not only does it provide significant employment opportunities and generate foreign exchange earnings, but it also contributes to government revenues through various tax channels. Below are key ways in which the floriculture sector supports government revenue generation (KFC, 2024):

- **Corporate Income Tax:** Flower farms in Kenya are required to pay corporate income tax on their profits. As the floriculture industry has grown, so has its taxable income, leading to a notable increase in government revenue from this sector.
- **Value-Added Tax (VAT):** VAT is another significant source of government income from floriculture businesses. Flower farms apply VAT to their products, and this tax is collected



and remitted to the government. Given the export-driven nature of the sector, much of the VAT collected comes from foreign currency transactions, which also strengthens the country's foreign exchange reserves.

The high and often unpredictable **tax environment** significantly impacts decisions regarding investment in the Kenyan floriculture sector. The complex tax structure, which includes decentralized taxation leading to double taxation at both national and county levels, deters local and foreign investors. In 2024, 51 different taxes and levies were recorded to apply to the flower industry, see the table in Annex I. Furthermore, the VAT refunds by the Kenya Revenue Authority (KRA) are perceived to be slow, with an average waiting time of 16-20 months. The tax environment therefore strains the working capital of flower farms, stifling growth and investment.

This heavy tax burden raises the overall cost of doing business in Kenya, making the sector less competitive compared to neighbouring countries like Ethiopia, Tanzania, and Uganda, which offer more favourable tax regimes. In Ethiopia, Ethiopian Airlines, its national carrier, offers subsidized airfreight rates, giving Ethiopian flowers a cost advantage in logistics. The floriculture sector in Kenya would thus highly benefit from more coherent and supportive tax policies, making the sector more competitive and opening opportunities for future growth and investments.

Despite these challenges, the tax environment also poses opportunities for companies in the Kenyan summer flower sector. The government has implemented agricultural tax policies aimed at attracting investment, promoting the use of underutilized resources, improving productivity, generating employment, and reducing poverty. These policies can offer incentives for production investments, particularly in areas like irrigation equipment, energy-efficient technologies, and environmental conservation, which can help companies reduce costs and improve competitiveness.

### 3.3 Standards

Kenyan flower growers are among the most certified and audited globally, adhering to numerous international standards. Over the years, the number of certified growers has remained relatively stable while the number of certifications increased. This increase can largely be attributed to the expansion of existing growers. This includes setting up new locations at different altitudes to offer a broader range of flowers, or rose growers diversifying by cultivating summer flowers at additional sites.

To benchmark standards and mainstream sustainability, the Flower Sustainability Initiative (FSI) Basket was developed. The FSI Basket at this moment includes 16 voluntary sustainable standards and schemes which are benchmarked against international criteria for Good Agricultural Practices (GAP), environmental sustainability, and social responsibility (Figure 7). Compliance with one of these standards ensures transparency and compliance with global practices. All standards and schemes in the basket are shown in Figure 7, indicating for each standard or scheme whether it complies with GAP, environmental, and/or social basic requirements. The FSI has the major benefit that all standards falling under the basket are perceived as equal. In practice, however, particular customers still request a specific standard, even though the grower is certified under an equal standard. Royal Flora Holland wants to source flowers that are fully FSI compliant by the 1st of January 2026, to demonstrate again the importance and benefits of the FSI basket of standards.

### 3. Regulatory and standards

Figure 7. Standards and schemes in the FSI basket indicating for each standard whether it complies with GAP, Environmental, and/or Social basic requirements (FSI, 2024). Retrieved from <https://www.fsi2025.com/basket/>.

#### FSI 2025 Basket of Standards



|   | Gap | Environmental | Social |
|---|-----|---------------|--------|
| AMFORI CODE OF CONDUCT                  |     |               | ●      |
| OHAS GROWER STANDARD                    | ●   |               |        |
| EHPEA CODE OF PRACTICE                  | ●   |               | ●      |
| ETI BASE CODE / SMETA                   |     |               | ●      |
| EU ORGANIC FARMING                      | ●   |               |        |
| FAIR TRADE HIRED LABOUR STANDARD        |     |               | ●      |
| FLOR ECUADOR V4.0 + FLORVERDE ADD-ON    | ●   | ●             | ●      |
| FLORVERDE® SUSTAINABLE FLOWERS STANDARD | ●   | ●             | ●      |
| GLOBALG.A.P. FLORICULTURE STANDARD      | ●   |               |        |
| GLOBALG.A.P. IDA MODULE/ADD-ON          |     | ●             |        |
| KENYA FLOWER COUNCIL SILVER STANDARD    | ●   | ●             | ●      |
| MPS-GAP                                 | ●   | ●             |        |
| MPS-ABC                                 |     | ●             |        |
| MPS-SQ                                  |     | ●             | ●      |
| RAINFOREST ALLIANCE CERTIFICATE         |     |               | ●      |
| SIZA SOCIAL STANDARD                    |     |               | ●      |
| SIZA ENVIRONMENTAL STANDARD             |     | ●             |        |
| SAB8000 STANDARD                        |     |               | ●      |
| USDA NATIONAL ORGANIC PROGRAM           | ●   |               |        |

The standards that growers pick to comply with are dictated by the market they are selling to. The standard for which most growers in the floriculture sector are certified is the standard of KFC. This is the Flowers and Ornamental Sustainability Standard (F.O.S.S) that includes all three pillars and is perceived as the most complete standard. Of KFC’s members, about 70% are certified against the KFC F.O.S.S standard (KFC, 2023).

After the F.O.S.S, most growers are certified for the GlobalG.A.P. Flowers and Ornamentals standard, the Integrated Farm Assurance (IFA). For smallholder growers, the GlobalG.A.P. standard is perceived as the most feasible to certify given the extensiveness of other standards and certification costs. The GlobalG.A.P. certificate is often restricted as the minimum certification by larger growers for smallholder growers to sell flowers to them. Smallholder growers are often individually certified, explaining why certification costs can be a restriction for smallholder growers to become certified. GlobalG.A.P. offers the benefit of certifying with chosen add-ons to fit the specific demand of a grower’s customer (GlobalG.A.P., 2024a). To meet the requirements of the destination market, the GlobalG.A.P. Risk Assessment on Social Practice (GRASP) is a popular add-on, focusing on the workers’ well-being at farm level. It covers four major responsibility topics: workers’ voice, human and labour rights information, human and labour rights indicators, and child and young workers’ protection (GlobalG.A.P., 2024b). The GlobalG.A.P. requirements and checklists are publicly accessible on their [website](#).

Another common standard in the Kenyan floriculture sector is the MPS-GAP. MPS-GAP aligns with GlobalG.A.P. requirements and includes additional environmental and social criteria, helping growers showcase their commitment to sustainable production. This certification meets EU market demands for eco-friendly practices, reflecting the sector’s shift toward sustainability and the well-being of workers and ecosystems alike.

Alongside these standards, there is the KS1758:2016 certification scheme which is a code of practice focusing on hygiene and safety requirements during the production, handling, and marketing of flowers and ornamentals. Compliance with this standard is mandatory to receive an export license. An additional audit for the KS1758 standard is not necessary as it can be merged into an audit for one of the international standards. However, costs for certification should be covered (KS1758, 2024).

Related to the topic of standards and compliance is the topic of traceability, especially for the summer flower industry. Since most summer flowers are used to make mixed bouquets, traceability is even more important. Traceability has to ensure that a bouquet marketed to comply with a certain standard, such as Fair Trade or GlobalG.A.P., is only composed of flowers grown at farms that are Fair Trade or GlobalG.A.P. compliant.

### 3.4 Sustainability

Sustainability is seen as the current buzzword in the flower sector, of which summer flowers are no exception. It is about managing the primary elements of production: the environment, conditions of the soil, social welfare, and the use of water, chemicals, and fertilizers. These demands do not only come from the market directly but also from the international regulatory context. The EU Green Deal requirements, including mandatory carbon footprint labelling, signal a significant shift in the industry's operational landscape. This development underscores that sustainability is no longer just a peripheral concern but must be fully integrated into the core of business operations. Kenyan flower growers and exporters will need to embed sustainable practices into every aspect of their production processes, from cultivation to distribution, ensuring that sustainability is a fundamental part of the business's DNA. This integration will be crucial not only for meeting regulatory requirements but also for maintaining competitiveness in the increasingly eco-conscious European market.

There are several initiatives with a focus on sustainability in the flower sector:

- **Sustainability integrated into standards.** Certification has become an important element as it helps to identify where the industry is in terms of sustainability and helps to benchmark growers. A well-known example is FSI which is a global initiative aiming to make sustainability a standard practice within the floriculture industry. Its specific goal is to advance sustainability in the floriculture industry by the year 2025 through its FSI 2025 basket (FSI, 2024). The FSI acts as a benchmark for sustainable flower production, with the ambitious goal of ensuring that 90% of flowers and plants traded by FSI members are sustainably sourced by 2025. This robust approach empowers stakeholders throughout the floriculture supply chain to reliably source flowers and plants that meet high sustainability standards, thereby contributing to the overarching goal of making sustainable sourcing the norm by 2025.
- Increased demand for **transparency and environmental responsibility.** Over recent years, the emphasis has shifted towards comprehensive lifecycle analysis and carbon footprinting, pushing growers to adopt more sustainable practices. This includes meticulous reporting on the use of chemical fertilizers, water consumption, waste management, and the application of agrochemicals. Growers are now required to provide detailed accounts of their sustainability efforts, demonstrating their commitment to reducing the environmental footprint of their products. This shift not only addresses global concerns about climate change but also aligns with the growing consumer preference for eco-friendlier products, thereby enhancing the competitiveness of Kenyan flowers in international markets. The sector's ability to adapt to these evolving standards is crucial for maintaining market access and fostering long-term growth.
- Tools, such as the **HortiFootprint Calculator of MPS**, are developed to help horticultural producers, including flower growers, measure their environmental footprint by analysing various inputs such as energy use, fertilizers, and packaging (MPS, 2024). A harmonised methodology (FloriPEFCR) has been developed by a consortium of industry stakeholders and approved in 2024 by the EU (HortiFootprint Calculator, 2024). This methodology provides for harmonised rules to ensure standardised calculations across the global flower industry whichever tool is being used. First results from carbon footprint calculations showed that agrochemicals and packaging had minimal effect on the carbon footprint, whereas nitrogen-based fertilisers were found to have the biggest footprint in the fertilizer category.



### 3. Regulatory and standards

- Implementing a hybrid approach whereby both **airfreight and sea freight** are used, see more information in section 4.3.
- Practical examples of efforts growers are taking to reduce their carbon footprint are establishing a dam for rainwater harvesting, managing wastewater through a natural wetland, installing solar panels to support their cold stores, pumps, and offices, and using vehicles on the property that are running on solar power. Currently, 60% of all flower farms have solar energy to support their daily farm operations.

Global buyers are thus demanding higher standards of environmental sustainability and social accountability, driven by regulatory changes and consumer preferences. This shift adds further pressure on Kenyan producers to adapt quickly to maintain their market share. Smaller producers in Kenya may lack the resources or awareness to comply with these evolving standards, risking being excluded from the value chain.

#### 3.5 Main messages regulatory and standards

- Kenyan floriculture faces increasing challenges in meeting SPS requirements due to rising pest populations and evolving regulatory standards in key export markets like the EU and UK.
- Growers are under pressure to reduce the use of harmful pesticides, but alternative pest control solutions are less effective, particularly during massive outbreaks, increasing costs and risks for flower farms.
- The complex and unpredictable tax environment in Kenya, with issues like double taxation and slow VAT refunds, negatively impacts floriculture investments and competitiveness, especially compared to neighbouring countries like Ethiopia.
- Standards that growers pick to comply with are dictated by the market they are selling to. The standard for which most growers in the floriculture sector are certified is the standard of KFC.
- For smallholder growers, the GlobalG.A.P. standard is perceived as the most feasible to certify with given the extensiveness of other standards and certification costs. Large growers often request the GlobalG.A.P. certificate as the minimum certification for smallholder growers to sell flowers to them.
- Kenyan flower growers must increasingly adopt sustainability practices, not just to meet market demands but also to comply with stringent international regulations like the EU Green Deal and carbon footprint labelling.

## 4. Cold chain developments

### 4.1 Cold chain of flowers

Research into optimal conditions for flower transport and storage is well-established, with findings on the necessity of cooling dating back over 30 years. Significant contributions were made in the 1980s by the Sprenger Institute (later ATO, now part of Wageningen University & Research), which conducted extensive studies on temperature management to preserve flower quality during transport. Additionally, the University of California, Davis, has been a prominent contributor in this field, examining various factors that impact the postharvest life of flowers. These foundational studies underscore the critical role of cooling in maintaining quality and extending the shelf life of flowers during transit.

In terms of transportation, the summer flowers are transported from the farms or bouquet-making facilities directly to the airport. Smallholder farmers formally group and transport the summer flowers often in insulated trucks without a reefer, or use an ordinary truck that is not insulated. Larger growers often have access to better facilities and transport the flowers in cooled reefer trucks or insulated reefer trucks, thus having a fully controlled cold chain starting from the farm, to the collection rooms, and having chilled transport to the (air)port.

The domestic infrastructure is more suitable for bigger volumes, where a lorry can be filled and brought straight to the (air)port. Consolidation of smaller growers is more complicated as it involves more logistics and administration.

The cold chain for transporting cut flowers is critical to maintain quality and extend the shelf life. Immediately after harvest, flowers begin to degrade due to the cut stems halting nutrient supply. To slow this process, flowers must be cooled immediately (Vijayakumar, Singh, Pandiyaraj & Sujayasree, 2021). The sooner flowers are cooled after harvest, the longer the vase life and transporting time can be (Sharma & Thakur, 2020). Rapid cooling reduces respiration rates, delays wilting, and minimizes the risk of fungal infections like *Botrytis Cinerea*. Not just the storage, but also processing and packing are recommended to be performed in a cold environment to prevent any early decay (Vijayakumar, Singh, Pandiyaraj & Sujayasree, 2021).

Flowers are sensitive to even slight temperature changes as deviations from the recommended temperature range can lead to accelerated ageing, wilting, and fungal growth (Vijayakumar, Singh, Pandiyaraj & Sujayasree, 2021). It is thus crucial to maintain a stable temperature during storage, processing, packing, and transportation. Hence, the term “cold chain” where flowers move through the chain as much as possible in a cold environment before reaching the destination market. The cold chain is not just about temperature, but proper humidity control is equally important. Excess moisture could lead to the development of mould, while overly dry conditions could cause petals to desiccate, even in a cooled environment (Vijayakumar, Singh, Pandiyaraj & Sujayasree, 2021).

Sea freight is becoming a more viable option due to advancements in cold chain technology, offering a cost-effective and environmentally friendly alternative to airfreight, but this requires meticulous control of temperature and humidity over long transit times.

### 4.2 Airfreight

Kenya’s flower industry has historically depended on airfreight to meet the demand for “day fresh” exports. The country’s competitive position relies heavily on the efficiency, quality,

## 4. Cold chain developments

cost, and availability of its logistics, as flowers are highly sensitive to delivery timelines. Key calendar events, such as Valentine's Day and Mother's Day, amplify the need for rapid, reliable transportation, as delays would result in unsellable products and missed market opportunities (TradeMark Africa & Flying Swans, 2024).

The flower sector's profitability hinges on the timely delivery of fresh products, as the vase life of flowers directly impacts the returns for growers and retailers. Recent global events like the COVID-19 pandemic, Russia's invasion of Ukraine, and disruptions by rebels in the Red Sea have highlighted the critical need for resilient supply chains capable of absorbing shocks while controlling costs. These challenges underscore the continuing importance of airfreight for Kenya's exports, especially in delivering fresh produce to international markets on time.

However, increasing environmental concerns and rising costs associated with airfreight have prompted a shift towards more sustainable logistics. Sea freight, already utilized for fruits like avocados and mangoes, is now being considered as a viable alternative for exporting flowers. While implementing a hybrid approach using both airfreight and sea freight requires careful planning, it offers a more balanced and cost-effective logistics strategy. This helps to maintain Kenya's competitiveness in the global flower market while addressing sustainability goals.

### 4.3. Sea freight

The shift towards more sustainable logistics has led the Kenyan cut flower industry to, in recent years, focus on sea freight as a viable transportation alternative to airfreight. In 2021, two containers of flowers a week were sent from Kenya and by December 2023, about 25 containers a week were sent. Fresh cut roses were the dominant flower exported by sea (KFC, 2023). Maersk has collaborated with Kenyan flower producers to facilitate the shipment of various flowers, including summer flowers, from Mombasa to Rotterdam using refrigerated containers (Maersk, 2022). Several economic, logistical, and environmental factors are contributing to the implementation of a hybrid approach using both airfreight and sea freight for Kenyan flowers.

#### *Economical, logistical, and environmental factors*

Sea freight offers significant cost savings, reducing transportation costs by about 50% compared to airfreight. This is especially critical as transportation costs can constitute 30-40% of the total costs for exporters. Such a cost reduction is particularly interesting for those exporters supplying European big-box retailers who prioritize cost efficiency and sustainability (Rabobank, 2024).

In terms of logistics, sea freight offers a significant advantage for Kenya's horticulture industry by providing far greater capacity compared to airfreight, making it ideal for handling the high export volumes typical of the sector. Unlike airfreight, which is limited by the smaller cargo space of aircraft, sea freight can accommodate much larger shipments, reducing the cost per unit and making large-scale exports more economically viable. Additionally, this increased capacity enhances supply chain resilience by offering an alternative when global disruptions—such as pandemics or geopolitical conflicts—restrict air transport options (TradeMark Africa & Flying Swans, 2024).

Sustainability is becoming a top priority causing the floriculture industry to face growing pressure from European regulations and consumer expectations to reduce its carbon footprint. In response, sea freight is gaining traction as a more environmentally friendly alternative to airfreight, offering lower greenhouse gas emissions (Rabobank, 2024).



### *Key challenges sea freight*

Despite the economic, logistical, and environmental factors arguing for the benefits of sea freight, several significant challenges are identified to hamper the increasing use of sea freight.

- A disadvantage of sea freight is that larger growers can easily fill up a sea container, but this is almost impossible for smallholder farmers. Therefore there is a need for consolidated shipments from smaller growers increasing the complexity of quality control.
- Transporting flowers by sea can take between 28-35 days to reach European markets, with the variability in transit times posing a major challenge for meeting specific delivery dates, especially during peak periods like Valentine's Day and Mother's Day.
- The long transit times increase the risk of quality degradation, including flower opening failures, leaf desiccation, and fungal infections.
- Recent disruptions in the Red Sea and Suez Canal have highlighted the fragility of sea transport routes, due to which momentum was lost to increase sea freight further. Such disruptions lead to delays and increased uncertainty. The variability in transit times hampers flower marketing efforts, making it difficult to meet specific customer demands and timelines (Rabobank, 2024).

Given the benefits and challenges, most traders recognize the need for a hybrid approach, combining both sea and airfreight to mitigate risks. While airfreight remains more reliable, its capacity constraints and environmental impact make sea freight an increasingly attractive option. The industry expects the share of sea-freighted flowers to continue growing, taking into consideration the required adaptations for sea freight to succeed.

### **4.4 Projects and initiatives**

The embassy of the Kingdom of the Netherlands and KFC worked together on a project to improve opportunities for sea freight. Its objective was to make a green channel, to move products from a consolidation centre through a cooled railway to Mombasa. Once arrived in Mombasa, fresh produce was meant to skip the queue, to enhance its freshness. A more long-term objective was to make the shipping lines shorter, with a direct connection to Europe. Although the project has slowed down due to the recent disruptions in the Red Sea, fresh produce does not have to wait in line anymore at the port in Mombasa. The slowdown of improving sea freight also shifted focus to innovations making airfreight less polluting and investing in more carbon-friendly fuel. Although such innovations would require more extensive research and optimisation, the combination of these ongoing initiatives could benefit a hybrid approach, whereby sea freight is combined with airfreight.

A current project focusing on the logistics of, amongst others, the flower trade is the Business Environment and Export Enhancing Programme (BEEEP). It is a 25 million euro EU-funded project that seeks to close the negative balance of trade by stimulating export growth, enhanced productivity, economic development and job creation, all sustainably and inclusively. BEEEP focuses on solutions that resolve supply chain constraints, and storage and logistics challenges; improve processing, value addition and information access; and enable reforms that will enhance the business environment. Interventions will include increasing the supply of locally produced goods that meet export market requirements, reducing trading times and costs, and helping to implement a hybrid approach that uses both airfreight and sea freight.

### 4.5 Main message cold chain

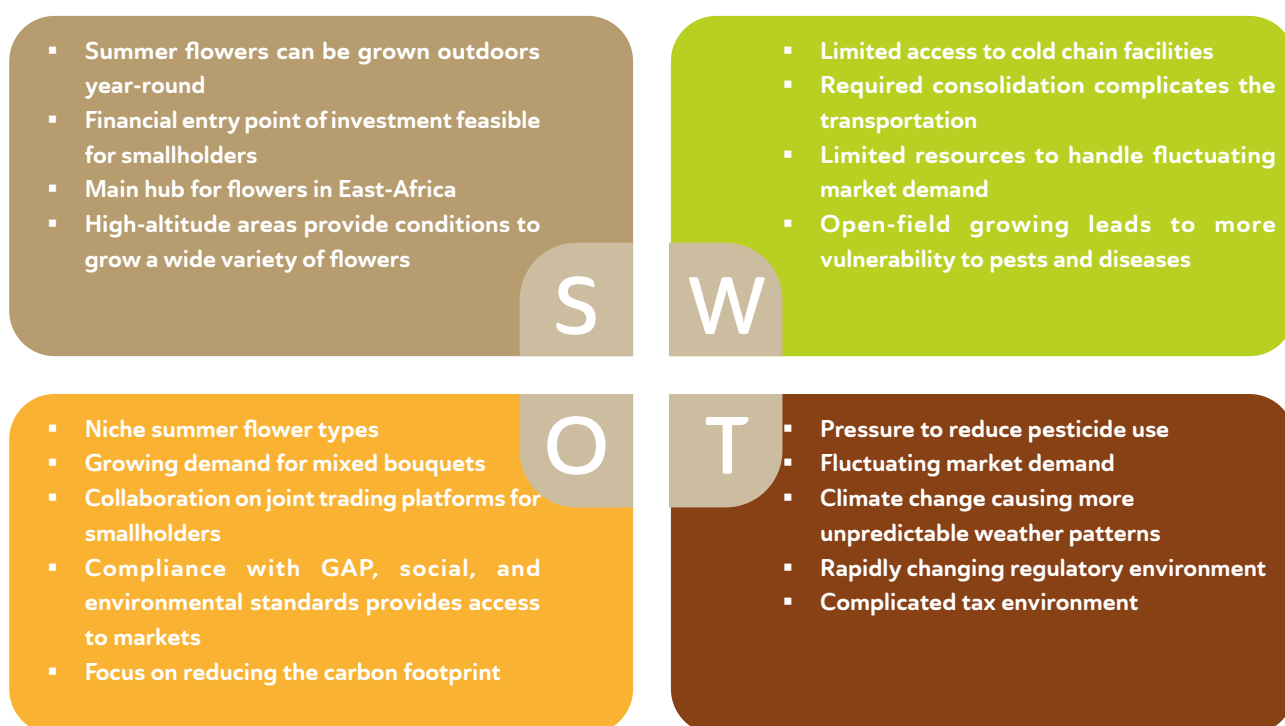
- Maintaining a consistent cold chain is essential to preserve the quality of cut flowers, extend their shelf life, and minimize spoilage during transport.
- While larger growers benefit from full cold chain control, smallholder farmers face challenges due to limited access to advanced facilities and the need for consolidation, which complicates logistics.
- Advancements in cold chain technology make sea freight a cost-effective and environmentally friendly option, offering savings of up to 50% compared to airfreight, especially for large volumes of flowers.
- Long transit times, quality degradation, and the difficulty of consolidating shipments for smallholder farmers present significant challenges in switching from air to sea freight.
- The benefits and challenges of sea freight call for a hybrid logistics model, combining both sea and airfreight to balance cost-efficiency, environmental impact, and supply chain resilience.

# 5. Proposed options for marketing strategy

## 5.1 SWOT analysis

The Kenyan summer flower sector still is seen as competitive in the global market. To maintain this position, marketing strategies should be developed and the context of the sector should be well taken into account. The Kenyan summer flower sector has been summarized in the Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis, from the perspective of smallholder growers (Figure 8). The elements of the SWOT analysis will be discussed in more detail below.

Figure 8. SWOT-analysis for the summer flower sector in Kenya, from the perspective of a smallholder grower.



### Strengths

- Summer flowers offer a unique advantage by being grown outdoors year-round, allowing Kenyan farms to extend their production season and meet global demand.
- Growing summer flowers requires lower investments, as they can be cultivated in open fields without the need for costly greenhouse conditions, large-scale production, or expensive plant material to achieve reasonable returns; making the market accessible for (emerging) smallholder growers.
- Kenya is considered the main hub for flower production in East Africa due to its well-established infrastructure, presence of experience and technical expertise, access to international markets, and efficient production practices, giving Kenya a significant advantage over its neighbours.
- Kenya's varying high-altitude areas offer ideal growing conditions for a wide variety of summer flowers, allowing smallholder growers to diversify their production and meet different market demands.



## 5. Proposed options for marketing strategy roses

### *Weaknesses*

- Smallholder growers often have limited access to proper cold chain facilities and rely mostly on (non-)insulated trucks instead of cooled reefer trucks, affecting the quality of their flowers.
- The domestic infrastructure is more suitable for bigger volumes, causing a need for consolidation of smaller growers. This makes transportation more complicated because it involves more logistics, administration, and risks regarding quality control.
- Smallholder growers often do not have the resources to sustain themselves in a period of limited demand in off-seasons, especially challenging given the fluctuating market demand.
- The open-field cultivation of summer flowers leaves them more exposed to fluctuating weather conditions, making them vulnerable to rising pest populations. Climate change has worsened these challenges, leading to more frequent and severe pest infestations.

### *Opportunities*

- Niche summer flower types provide a good entry point for smallholders into the flower sector, offering them a way to differentiate themselves from larger growers and cater to specific market demands.
- A shift from mono bouquets to mixed bouquets increases the demand for summer flowers. Larger growers, who dominate the packed-at-source bouquet-making process, typically include about 25% of smallholder-grown flowers in their bouquets.
- Collaboration of smallholder growers to join digital trading platforms, such as Floriday, helps to strengthen their market position and enables smallholders to export directly, rather than solely relying on larger growers. Direct sales by smallholders are particularly prevalent in Asian and Middle Eastern markets.
- Compliance with GAP, social, and environmental standards provides access to international markets. The GlobalG.A.P. certificate is often required as the minimum certification by bigger growers in order for smallholder growers to sell flowers to them.
- Given the increased demand in destination markets for transparency and environmental responsibility, growers should adopt more sustainable practices. Focussing on reducing the carbon footprint is an opportunity to remain attractive to the market.

### *Threats*

- Increasing pressure from markets, consumers, and importing countries to reducing pesticide use is a threat. Pesticides are highly effective at controlling pests and diseases, but due to health, environmental, and safety concerns, their use is being restricted or phased out. Alternatives may not be as effective, which is especially prevalent given the open-field cultivation method of summer flowers, risking during pest or disease outbreaks.
- Fluctuating market demand makes it difficult for smallholder growers to sustain themselves, with often limited resources, in a period of limited demand in off-seasons. Improved access to finance, such as loans, could support the small and medium-sized growers to overcome these periods.
- Erratic weather patterns and increased pest and disease prevalence due to climate change threaten productivity. Coupled with the pressure to reduce pesticide use without sufficient alternatives, this can severely impact flower production.
- Rapidly changing stringent quality and SPS standards pose a threat. Export markets like the EU and UK demand strict compliance with pesticide residues, pest control, and product quality. Failure to meet these sometimes rapidly changing standards could lead to shipment rejections, trade restrictions, and loss of market access. Additionally, higher expectations

## 5. Proposed options for marketing strategy roses

around social and environmental standards could raise operational costs and should be integrated to avoid loss of market access. Countries in the Middle East and Asia generally have less rigorous SPS regulations and quality standards compared to the EU.

- Kenya's complex tax environment adds to the cost of doing business, making it less competitive compared to neighbouring countries like Ethiopia. High taxes could deter international investment and stunt growth in the sector.

### 5.2 Key opportunities and challenges

Key opportunities and challenges in the marketing of Kenyan summer flowers are summarised in Figure 9.

Figure 9. Key opportunities (green) and challenges (yellow) for the marketing of Kenyan summer flowers.



In terms of marketing, the topics of quality and SPS requirements are crucial for the Kenyan flower sector. The sector faces intense scrutiny due to stringent global regulations that demand high standards in pest control, pesticide residue levels, and overall product quality. Certification standards are rigorous, requiring adherence to various international norms, which can be challenging for growers. Any issues related to quality or pest infestations can result in shipment rejections, damage to Kenya's reputation in the global market, or even market restrictions.

Given this heightened level of oversight, Kenyan summer flower growers must be exceptionally vigilant in their practices. To successfully market Kenyan summer flowers, there needs to be a sector-wide approach that emphasizes the country's commitment to quality and safety.

Compliance with standards thus is of increased importance, also given the higher expectations around social and environmental standards. For growers to remain a competitive player in the international flower market, compliance with standards is key.

#### Unified strategy

When the quality of the flowers is properly managed, the flowers of Kenya can be promoted as a united front. Kenya's flower sector has a lot of advantages that should be promoted, such as the availability of land, an equatorial climate enabling a wide assortment of flowers

## 5. Proposed options for marketing strategy roses

growing year-round, a skilled labour force after being in the industry for over 30 years, technical expertise, and the ability to do consolidation. An initiative already taken in this field is the communication campaign by KFC promoting Kenyan flowers on the market through the #BoldBeautifulKenyanFlower (KFC, 2023).

### Packing at source solutions

The Kenyan flower sector can also explore more packing-at-source solutions. Increasing the technical capacity to design season-specific bouquets and improving packaging and quality control can enhance the marketability, competitiveness, and diversification of Kenyan flowers.

### Fluctuating market demand

### Access to finance

A key challenge for summer flower growers is fluctuating market demand. Smallholder growers and medium-sized growers often do not have the resources to sustain themselves in a period of limited demand in off-seasons. Improved access to finance, such as loans, could support small and medium-sized growers to overcome these periods and remain more consistent in their marketing of summer flowers.

### Complicated tax environment

Finally, a perceived challenge is the inconsistent and unpredictable tax and levy policies. In 2024, even 51 different taxes, levies, and duties were identified for Kenyan floriculture operators, coming from various government agencies. This highly influences the competitiveness of Kenyan flowers, especially concerning competing neighbouring countries, such as Ethiopia, where tax relief is offered. Furthermore, the average period to process VAT refunds by the KRA is 16-20 months, negatively influencing the working capital of flower-growing farms.

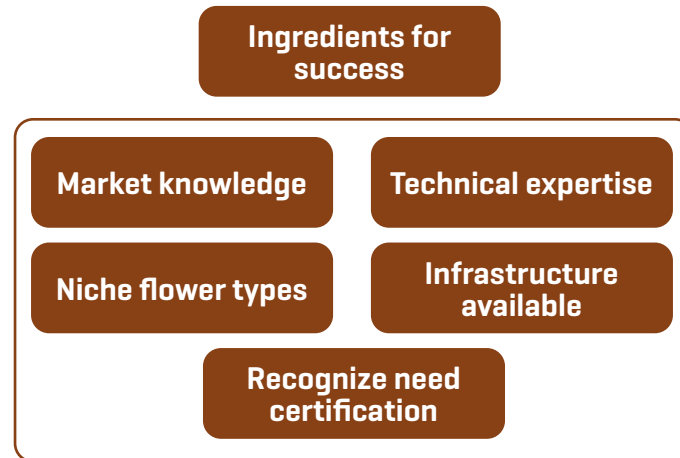




### 5.3 Ingredients for success

Several ingredients for success for starting summer flower growers were identified, which are summarised in Figure 10.

Figure 10. Ingredients for success for starting summer flower growers.



#### Market knowledge

Before embarking on the cultivation of summer flowers, it is crucial to gather comprehensive market knowledge. Understanding the market goes beyond knowing the destination country; it involves a deep dive into the specific demand and supply dynamics for each type of flower. Every product has its season, and simply growing what your neighbour is growing is not a strategy for success. Instead, strategic planning is needed to capitalize on market opportunities. Market knowledge should not just be gathered at the start, but should be a continuous process since markets are constantly changing. Market research should be conducted to identify which summer flowers have the highest demand and when this demand occurs. Additionally, it should be understood which summer flowers thrive in the specific growing conditions available. By aligning your cultivation efforts with both market demand and local growing conditions, the chances of success are optimised. Proper planning based on detailed market insights will enable an entrepreneur to take full advantage of the opportunities available in the flower market.

#### Technical expertise

Not only market knowledge is needed, but growing summer flowers also requires specialized technical expertise, as each crop has unique needs and cultivation techniques. To successfully grow these flowers, it is essential to have a thorough understanding of the specific requirements of each type, such as soil conditions, water needs, pest management, and optimal sunlight exposure. Experience gained through trials is invaluable, as it allows growers to understand the intricacies of the crop firsthand. Additionally, testing the growth of these flowers at different altitudes is advised to determine the optimal altitude for the different types of summer flowers. This combination of technical knowledge and practical experience is crucial for maximizing the yield and quality of summer flowers.

## 5. Proposed options for marketing strategy roses

### Niche flower types

In the selection of summer flower types to grow, the general advice is to favour niche types. The market for mass types is saturated and dominated by the large-scale growers. To do so, investments in data might be required to find the summer flowers that are unique and in demand on the market.

### Infrastructure available

Establishing a summer flower farm requires the right infrastructure, starting with a reliable supply of quality water and adequate power. It is essential to assess whether the farm has access to sufficient water resources and the necessary infrastructure to support irrigation systems and other farm operations. Additionally, starting small is advisable to ensure the farm can manage resources effectively and scale operations sustainably. As the business expands, the growing area can gradually increase, leveraging the experience and infrastructure improvements made along the way.

### Recognize need certification

Finally, an ingredient for success would be to recognize the need to comply with (inter)national standards and regulations, which are also rapidly changing. As a grower, it is essential to understand and at some point meet the stringent standards set by the global market, including requirements for GAP, social welfare, and environmental responsibility. Certification for standards opens up access to markets and builds trust with buyers. Meeting tax requirements and adhering to the regulatory environment within Kenya is a must to function as a legal (exporting) business. A commitment to meeting these legal and quality standards is a crucial ingredient for long-term success and competitiveness in the global flower market.

Although this seems challenging, there is enough knowledge present in the sector, so it is important to know how and where to find the right information. KFC is for example an organisation that initiates many capacity-building initiatives. An example is a cooperation with the Import Promotion Desk (IPD) through which they supported smallholder growers with expert and cost-effective advice and services such as training, coaching, market intelligence, networking and matchmaking. All to enable smallholder growers to establish the knowledge, skills, and contacts required to sell to the EU market successfully and sustainably (KFC, 2023).

### 5.4 Conclusion: main messages strategies

#### **Key opportunities for marketing summer flowers:**

- Compliance with GAP, social, and environmental standards is essential in accessing international markets.
- A unified strategy to promote Kenyan flowers is required to remain a competitive player in the global flower market.
- Increasing the technical capacity to design season-specific bouquets and improving packaging and quality control can enhance the marketability, competitiveness, and diversification of Kenyan flowers.
- Improved access to finance, such as loans, is needed to support smallholder farmers to overcome low demand in off-seasons.

#### **Key challenges in marketing summer flowers:**

- Quality and SPS are crucial for the Kenyan flower sector. Any issues related to quality or pest infestations can result in shipment rejections, damage to Kenya's reputation in the global market, or even market restrictions.
- Smallholder growers and medium-sized growers often do not have the resources to sustain themselves in a period of limited demand in off-seasons.
- The inconsistent and unpredictable tax and levy policies highly influence the competitiveness of Kenyan flowers.

#### **Key ingredients for success:**

- Success in cultivating summer flowers requires comprehensive and ongoing market research to understand demand, supply dynamics, and seasonal trends for each type of flower.
- Aligning cultivation with market opportunities and local growing conditions through strategic planning is crucial.
- Growing summer flowers requires specialized technical expertise, as each crop has unique needs in terms of soil, water, pest management, and sunlight.
- Practical experience through trials and testing growth at different altitudes is essential to optimize yield and quality.
- It is advised for smallholder growers to focus on niche summer flower types. Investing in data to identify unique and in-demand flowers helps to find opportunities in the market.
- Ensure the presence of the right infrastructure, including a reliable supply of quality water and adequate power.
- Starting small is advised to effectively manage resources and gradually scale operations, allowing for infrastructure improvements and the accumulation of experience as the business expands.
- Recognizing the need to comply with (inter)national standards and regulations from the start is crucial for success in the summer flower market.
- Know how to find and use the knowledge already present in the sector.



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## List of interviewed organizations:

- KFC
- Royal FloraHolland
- Union Fleurs
- FlowerWatch
- Flamingo Horticulture
- Tambuzi
- KEPROBA
- Import Promotion Desk
- MPS
- Rabobank
- United Selections

# 7. Annex

## Annex I.

Table I. Licences, permits, and certificates relevant to the Kenya flower industry, and responsible ministries and issuing organisations (2024). Source: KFC.

|  | Licence/Permit/Certificate name                       | Ministry in charge   | Issuing organisation                                   |
|--|---|--|--|
| <b>Applicable to all businesses</b>              |   |  |  |
| 1  | Single business permit application                    | Local Government   | Local Authorities at county council                    |
| 2  | Single business permit                                | Local Government   | Local Authorities at county council                    |
| 3  | Health & safety Audit                                 | Labour   | Directorate of Occupational Health & Safety            |
| 4  | Training levy   | Labour   | NITA <sup>1</sup>                                      |
| 5  | Premises licence                                      | Agriculture  | PCPB <sup>2</sup>                                      |
| 6  | National Housing Development Fund                     | Treasury   | KRA <sup>3</sup>                                       |
| 7  | Affordable Housing Levy <sup>4</sup>                  | Ministry of Lands, Public Works, Housing & Urban development | KRA  |
| 8  | Social Health Insurance Fund <sup>5</sup>             | Ministry of Health   | KRA  |
| 9  | NSSF <sup>6</sup>                                     | Labour & Social Protection                                   | KRA  |
| 10   | Value Added Tax                                       | Treasury   | KRA  |
| <b>Applicable to manufacturers and producers</b> |   |  |  |
| 11   | Water permit  | Water  | Water apportionment Board                              |
| 12   | Effluent discharge licence                            | Environment  | NEMA <sup>7</sup> / WRA <sup>8</sup> - Double taxation |
| 13   | Environment impact assessment licence                 | Environment  | NEMA   |
| 14   | Notification of transfer of impact assessment licence | Environment  | Director General (NEMA)                                |

1 National Industrial Training Authority (NITA)

2 Pest Control Products Board (PCPB)

3 Kenya Revenue Authority (KRA)

4 1.5% of employee's monthly gross salary, employer matches and contributes 1.5% of each employee's monthly gross salary

5 2.75% of employees monthly gross salary

6 National Social Security Fund (NSSF). Contribution of 12% of Pensionable Earnings (split 6% by employees and 6% by employers)

7 National Environment Management Authority (NEMA)

8 Water Resources Authority (WRA)



|   |  |                    |   |
|---|--|--------------------|---|
| 15  | Submission of project report                               | Environment        | NEMA  |
| 16  | Waste licence  | Environment        | NEMA  |
| 17  | Quality inspection levy                                    | Industrialization  | KEBS <sup>9</sup>                                   |
| 18  | Standards Levy   | Industrialization  | KEBS  |
| 19  | Water sampling   | Ministry of Health | Public Health Department                            |
| 20  | Registration of pest control products                      | Agriculture        | PCPB  |
| 21  | Approval of labels for pest control products               | Agriculture        | PCPB  |
| 22  | Registration of existing operations involving pest control | Environment        | NEMA  |
| 23  | Registration of pesticides and toxic substances            | Environment        | NEMA  |
| 24  | Registration of pesticides                                 | Environment        | NEMA  |
| <b>Applicable to fresh produce producers and/or exporters</b> |  |                    |   |
| 25  | Registration for pack-houses & factories                   | Agriculture        | HCD (Horticultural Crops Directorate) <sup>10</sup> |
| 26  | Annual environmental audit reports                         | Environment        | NEMA  |
| 27  | Laboratory Licence   | Health             | KMLTTB <sup>11</sup>                                |
| 28  | Licence to export horticultural produce                    | Agriculture        | HCD   |
| 29  | Export cess <sup>12</sup>                                  | Agriculture        | HCD   |
| 30  | Produce Cess   | Local Government   | Local authorities at county council road blocks     |
| 31  | Export health certificate for product inspection           | Health             | Nairobi City Council                                |
| 32  | Certificate of lease                                       | Transport          | KAA <sup>13</sup>                                   |
| 33  | Seed importer's trading licence                            | Agriculture        | KEPHIS <sup>14</sup>                                |
| 34  | Seed grower's licence                                      | Agriculture        | KEPHIS  |
| 35  | Seed merchant licence                                      | Agriculture        | KEPHIS  |
| 36  | Seed seller's licence                                      | Agriculture        | KEPHIS  |
| 37  | Agrochemical stores permit                                 | Agriculture        | PCPB  |

9 Kenya Bureau of Standards (KEBS)

10 Kenya Bureau of Standards (KEBS)

11 Kenya Medical Lab Technicians & Technologists Board (KMLTTB)

12 0.25% of value of exports

13 Kenya Airports Authority (KAA)

14 Kenya Plant Health Inspectorate Service (KEPHIS)

## 7. Annex

|    |  |   |                           |
|----|--|---|---------------------------|
| 38 | Import/export licence for pest control products    | Agriculture                                 | PCPB                      |
| 39 | Licence of dam contractors                         | Water                                       | Water apportionment Board |
| 40 | Permit for abstraction of ground water             | Water                                       | Water apportionment Board |
| 41 | Permit involving irrigation of land                | Water                                       | Water apportionment Board |
| 42 | Permit for reclamation or drainage of land         | Water                                       | Water apportionment Board |
| 43 | Approval for any work in rivers, lakes or wetlands | Environment                                 | Director General          |
| 44 | IDF <sup>15</sup>                                  | Finance                                     | KRA                       |
| 45 | KAA parking fee                                    | Transport                                   | KAA                       |
| 46 | KAA charges/Airway bill                            | Transport                                   | KAA                       |
| 47 | EURI Certificate per shipment                      | Trade                                       | Ministry of Trade         |
| 48 | Import Levy on cartons                             | Treasury                                    | KRA                       |
| 49 | Export promotion levy                              | Treasury                                    | KRA                       |
| 50 | UCR <sup>16</sup>                                  | National Treasury                           | Kentrade                  |
| 51 | HCD Packhouse fee <sup>17</sup>                    | Ministry of Agriculture - AFA <sup>18</sup> | HCD                       |

<sup>15</sup> Import Declaration Fee (IDF)

<sup>16</sup> Unique Consignment Reference (UCR). \$10 per consignment

<sup>17</sup> KES 5000 per packhouse annually

<sup>18</sup> Agriculture & Food Authority (AFA)





# THE FLOWER SECTOR IN KENYA: SUMMER FLOWERS

1. Roses

2. Summer flowers



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