

**THE FLORICULTURAL MARKET IN SOUTH KOREA, 2019 – SUGGESTIONS  
FOR IMPROVEMENT TOWARDS A MORE PROFESSIONAL AND  
PROFITABLE ORNAMENTAL SECTOR, WITH A FOCUS ON CUT FLOWERS.**

**November 2019**

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## **Executive Summary.**

- *The South Korean economy* is growing at a stable 3% per year. Nearly all its 51 million people belong to the middle and higher income classes and can afford cut flowers and pot plants. Ornamentals, especially *flowering pot plants*, have a positive symbolic meaning in classical culture. *Cut flowers* are a relatively new, 'luxury' phenomenon. The cut flower market has *not* grown in line with general growing prosperity, as in other countries in the region,
- *Statistics* for 2017 show a total acreage for all ornamental crops of nearly 5,000 Hectares. Cut flowers cover 1,314 Ha, and 'pot plants and ornamental trees' 3,622 Ha. In 2018/19, total acreage has stabilized/declined slightly. Total domestic wholesale value in 2017 was € 442 mln, of which cut flowers covered € 143 mln.
- The sector faces many *challenges*: small size of land holdings, competition by food crops, rising cost prices for quality inputs and labour, lack of knowledge at many levels, not enough investments in infrastructure and the cold chain, and Breeders Rights (PVP) issues, resulting in an 'old' assortment.
- The *Korea Florist Association (KFA)* is a producer's union, defending existing growers' interests and closely attached to the government.
- A main government organisation known as 'aT' operates 6 flower and plant wholesale markets/auctions, only dealing with locally grown produce. Imported flowers are traded at 'private markets', mostly in the Seoul area.
- *Main cut flower crops* (both locally grown and imported) are rose, carnation, lily, chrysanthemum, orchid and tulip. With its favourable location, *Gyeonggi Province* dominates cut flower production.
- Traditional *wholesale/retail markets* are still the main distribution channel for flowers and plants. Their infrastructure needs improvement; some growers try to organize their own 'cold chain'.
- *Other channels* are still rare: local flower shops sell traditional bouquets and ceremonial arrangements. New *life style stores* are combining fresh produce with luxury goods. Supermarkets and megastores like E-mart and Lotte Mart are not (yet) active in cut flowers, and only a bit in pot plants.
- *E-commerce is on the rise*: it started as a home delivery service by traditional flower shops, but in recent years innovative concepts were developed by start-up companies, often combining *online* and *offline* activities. In this report, a successful case study is described.
- While local production is declining, *imports of fresh cut flowers* are growing: consumers are happy to find better quality combined with similar or even lower prices than local flowers, and traders organize their own imports.
- *Flower bulbs* are a flourishing Dutch export article to South Korea: Estimates indicate a growth from 3.5 mln bulbs/year to 20 mln in the last 10 years. 60% of these go to parks and flower shows, and 40% to cut flower growers.
- An investigation of "the Basic Issues" influencing the stagnation and only very recent slight progress in the South Korean cut flower market defines these issues as follows:
  - Production – Lack of investment and ambition.
  - Distribution - An un-developed retail system and problems in the 'cool chain'.
  - Consumption – Cultural and social factors.
  - Consumption – Successful marketing of 'competing' products.
  - Consumption - Lack of professional promotion and marketing efforts.

- Consumption - High prices.
- Consumption - Inflation and rising costs of living.
- However, given the stable and wealthy condition of its economy and the hopeful signs we noted among a new generation of creative entrepreneurs, we think *the South Korean cut flower sector is now ready for revitalization, preferably organized by a "PPP-style" cooperation between government organizations and the private sector.*
- In this revitalization, **investment** (in the 'cool chain', and in cultivation technology, planting materials and training of growers at 'feasible' projects) and **marketing** (by advertising, pop-up stores, festivals, TV and social media etc.) will be essential elements.
- *Training, education and consulting* services are of special interest: new investment should include training, especially to increase practical skills in greenhouse operation, flower cultivation, post-harvest handling and effective marketing.
- A *SWOT Analysis* shows the stable, growing economy, consumer wealth, the rise of e-commerce, opportunities for investment (notably in newly reclaimed land areas along the coast) and young consumers' demand for 'new' and better flowers and plants as *strengths* of the South Korean market. *Weaknesses* are worries about social and political developments, less institutional consumption (austerity), lack of knowledge at many levels, insufficient distribution systems and the small size of farm holdings. *Opportunities for Dutch* input are in the field of cut flower trade, greenhouse technology and cultivation systems, cold chain distribution and training and education. *Threats* are uncertainty about government policies, PVP issues and copycat competition, priority for food crops over ornamentals and lack of a coordinated approach on the Dutch side.
- The following sectors are considered especially promising for Dutch suppliers to, and investors in the South Korean cut flower market in the near future:

- Cut flower imports to South Korea from The Netherlands, Africa, Latin America and other areas, especially in 'new' species and varieties.
- Flower bulbs and other planting materials, especially for landscaping, gardening and flower festivals.
- Greenhouse engineering and construction (with local partners/sourcing of certain materials locally).
- Cultivation technology for greenhouse production.
- Training, education, cultivation management and consulting services.

- *Sustainability* is now getting much attention from the government, corporations and consumers: as a developed country, South Korea aims to harmonize economic growth with respect 'PPP' effects, and both industry and agriculture face regulations ensuring this. Also because South Korean growers have already reached a 'medium level' of technology and operations, they are able to minimize pesticide use and apply Integrated Pest Management. Working conditions for staff have to meet demanding labour laws.
- The main development with a negative effect on sustainability is *the rise of cut flower imports from far-away regions* like The Netherlands, East Africa and South America. Long distance transport by air causes high emissions of CO<sub>2</sub>. For the short term, this situation is expected to persist. It will however be an argument to put effort in revitalizing local ornamental production.

## **1. Foreword.**

This market research report has been commissioned by the Royal Netherlands Embassy in Seoul (Agricultural Counsellor's Office) in cooperation with the Dutch Ministry of Economic Affairs/RVO. Purpose is to analyse developments in the South Korean flower and pot plant market in the last five years, and to present suggestions for improvement and expansion of this market in the near future, with an emphasis on cut flowers. Important aspects are *professionalization of the value chain* and *profitability* (for both local growers and Dutch/foreign suppliers).

The report contains an Executive Summary, chapters describing developments and trends in the sector in recent years and expectations for the future, a chapter with conclusions and recommendations, and an Annex with names of major players in the South Korean market consulted for this study.

### **Targets.**

Chapters 1-5 of the report give an analysis of the actual situation of the floriculture market in the Republic of Korea (ROK, the official name of the country known as South Korea, with an emphasis on the market for *cut flowers*. The most relevant figures and other quantitative data are given, but emphasis has been put on *qualitative aspects*: trends in assortment and consumer preferences, shrinking local production and growing imports from The Netherlands and elsewhere, changes in distribution and sales systems, and expectations for the short and medium term.

Chapter 6 presents the 'basic issues' the South Korean cut flower is now facing, and in Chapters 7-9 suggestions and recommendations for improvement and market expansion are given, based on desk research and a fact-finding visit to South Korea in November 2019.

In Chapter 8, a SWOT Analysis is included, focusing on the outlook for Dutch market players to enter or expand their position in this market that definitely has potential for growth in spite of its present 'stagnant' situation. In Chapter 9, some general conclusions are drawn and recommendations are summarized on strategies to improve the South Korean ornamental sector and its value chain, with a focus on *profitability* for all links in the chain (including Dutch/Western players) and *sustainability* (care for the environment, avoiding waste and pollution, healthy and safe working conditions).

### **Methods**

This report was prepared and co-ordinated by *CoHort Consulting* (Amsterdam, The Netherlands), under responsibility of its CEO, Drs. Oscar Niezen, using input by dozens of persons and companies from CoHort Consulting's network in South Korea, The Netherlands, Japan, PR China, ASEAN countries, Africa and Latin America. Interviews with key players and experts (names are mentioned where applicable) contributed to the preparation of this report. Furthermore, a field work visit to South Korea has been very useful to complete market views and suggestions as given in the report.

Amsterdam, November 2019

Oscar Niezen,  
CEO CoHort Consulting.

## 2. South Korea – introduction to the country and its market for ornamental products.

### 2.1 Geography, history and population.

The Republic of Korea (ROK, the official name of the country known to most of the world as “South Korea”) was founded in 1953 after a ceasefire put an end to hostilities in the Korean War. It covers an area of 100.280 km<sup>2</sup> (2,4 times the surface of The Netherlands). With a population of 51 million people (half of which are living in the Seoul/Incheon Capital Area, one of the largest metropolitan areas in the world), the country is therefore more densely populated than the Netherlands. This fact is even more striking if we consider that over 63% of the country is covered with forest, mostly in hilly and mountainous areas.

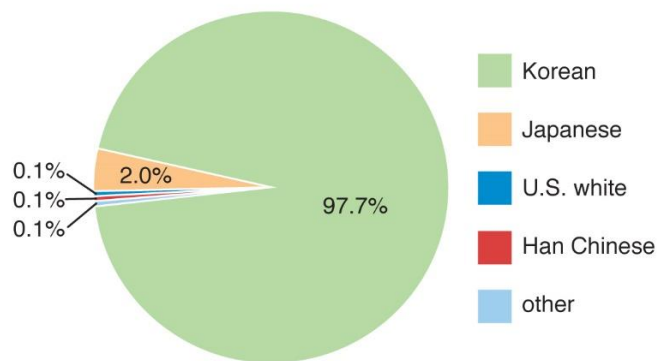


**Figure 1: South Korea (Republic of Korea), official map.**

As can be seen on the map, the Seoul/Incheon Capital Area is situated very close to the border with North Korea (officially, the Democratic People's Republic of Korea). The two countries are separated by the 240 km long, 4 km wide *Demilitarized Zone (DMZ)*, guarded by UN troops. On both sides of the DMZ, North and South keep troops on high alert.

The **climate** in the entire country shows the typical summer-winter temperature extremes of a *continental* climate. Additionally, the north-east Asian monsoons bring large amounts of rain, especially in the summer months. In the south of the country (Busan, Jeju/ Cheju Island) and along the coast, temperature ranges are smaller than in the north and the interior. In general, winters are cold and relatively dry, and summers are hot and humid. In the whole country except along the southern coast, winter temperatures drop below freezing point. In Seoul, the *average* temperature in January is  $-5^{\circ}\text{C}$ , and in southern Busan it's around  $+2^{\circ}\text{C}$ . In summer the average temperature all across the country is about  $25^{\circ}\text{C}$ . Annual rainfall figures are between 900 and 1500 mm. The southern (sub)tropical island of Jeju gets 1800 mm of rain per year. Up to 60% of all rain falls in the 'monsoon' period of June-August. Occasionally, *typhoons* occur in late summer, bringing heavy winds and causing damage along the southern coast, but this phenomenon is not as serious as in more southern countries like Taiwan or The Philippines. Korean mountain areas can get heavy snowfall in winter. The *frost-free period* is about 170 days in the hills of the north, and more than 240 days on Jeju Island.

**Ethnic composition (2000)**



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**Figure 2: Composition of the South Korean population (2000).**

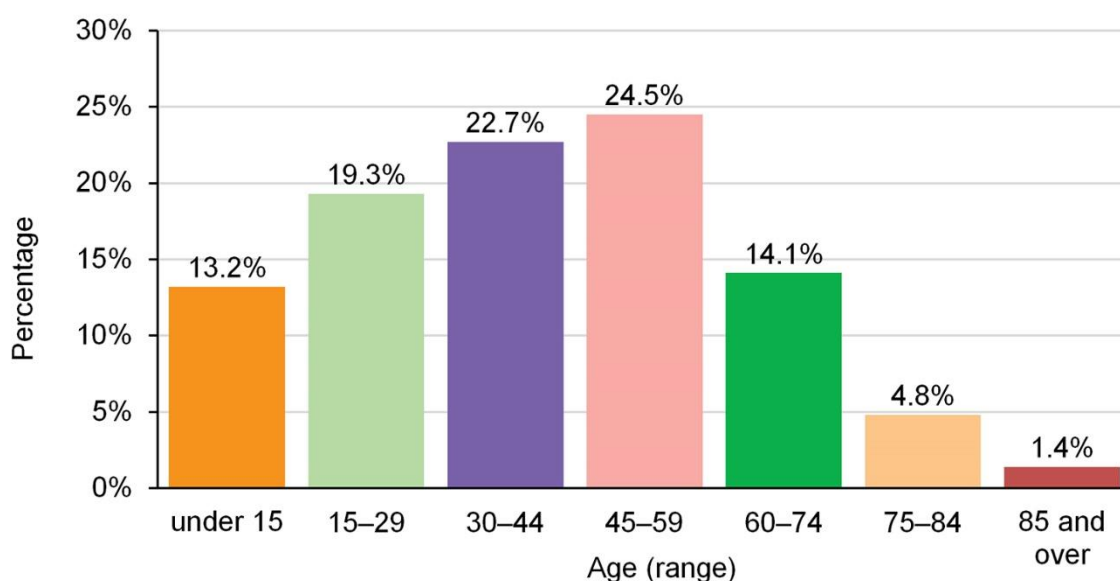
As can be seen in Fig. 2, South Korea's population of approximately 51 million people is extremely homogeneous, with Koreans making up almost 98% of the total.

The Korean people are believed to have links to the original inhabitants of Central Asia, Mongolia and the Lake Baikal region of Siberia. These links can still be distinguished in the *Korean language*, which is often classified as belonging to the *Altaic* family, just like Turkish, Mongolian and the languages of Central Asia. In the course of 3000 years, Korean has also been influenced by Japanese, and adopted many Chinese loan words.

A unique feature is the *alphabet*: unlike China and Japan, South Korea has managed to reduce the number of phonetic symbols ('letters') to 24, so they fit on modern computer keyboards and smartphones.



### South Korea age breakdown (2017)



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**Figure 3: Division of age groups within the South Korean population (2017).**

As can be seen in Fig. 3, nowadays the age breakdown in the population indicates that South Korea is a wealthy, developed country, similar to Japan and most Western countries. This data are of course important indicators for consumer behaviour and the market for many products, including ornamentals. *Example:* nowadays, the 30-44 and 45-59 age brackets are dominant, while the percentage of 15-29 year olds is a lot lower than, say, 20 years ago. According to sources interviewed in South Korea, this fact has a *direct* influence on the market for cut flowers: 20 years ago, there were much more people between 16 and 28 than today. That's the romantic age, when boys buy a lot of flowers for their girlfriends and fiancées. Now, these people are in their 40's or 50's, very busy with children and careers, and not much interested in flowers anymore.. See also Chapter 6.

**Government:** the country is divided into 9 provinces (see map in Figure 1), that are further divided into counties and cities. The present democratic government system resembles that of the United States, with a strong role for the President and two parties dominating parliament.

The **history** of Korea spans more than 3.000 years and can't of course be even summarized in this report. Still, it is a main source of present-day government policies and the economic behaviour of consumers and companies. The Korean War, resulting in the division of the country, and the frequent provocations and quarrels between North and South all have a great influence on daily life. Many Koreans also take pride in their *earlier* history, when Korean kingdoms were ruling large parts of present-day China, Russia and Mongolia. For Dutch and other actors interested in this market, some study of Korean history is therefore recommended.

## 2.2 Economy: developments in recent years.

With a GDP of USD 1,620 billion (EUR 1,459 billion) and an annual economic growth that has slowed down somewhat to 2.8% (2018, *source: World Bank*), South Korea is placed as the 11<sup>th</sup> largest economy in the world, a huge achievement for a country that was in total ruins in 1953 (literally: the city of Seoul was almost completely destroyed during years of heavy fighting. All buildings there today are post-war, with a few largely rebuilt monuments). Moreover, the country's per capita income, defined using the widely used PPP-system, stands at USD 40,000 (EUR 36,000).

Until the 1980's, the export-driven South Korean economy grew at double-digit levels, behind tariff walls drawn up by the *de facto* military dictatorship of the time, its security safeguarded by the United States' military forces. Companies developed into large multinationals called *chaebols*, owned by upper class families (and some of their political and military protectors). World-famous brand names like Hyundai, Samsung and Daewoo developed into world players, like their Japanese colleagues had done one or two decennia before. The *chaebol* system made it difficult for SME companies to develop, as most government subsidies and long-term bank loans went to the multinationals. However, a middle class has developed, and in general South Koreans are confident about their jobs and their families' future.

<b>Export partners in 2017</b>	<ol style="list-style-type: none"> <li>1. P.R. China (25%)</li> <li>2. United States (12%)</li> <li>3. Vietnam (8%)</li> <li>4. Hong Kong SAR (7%)</li> <li>5. Japan (5%)</li> </ol>
<b>Import partners 2017</b>	<ol style="list-style-type: none"> <li>1. P.R. China (20%)</li> <li>2. Japan (12%)</li> <li>3. United States (11%)</li> <li>4. Germany (4%)</li> <li>5. Saudi Arabia (4%)</li> </ol>

*Source: World Bank*

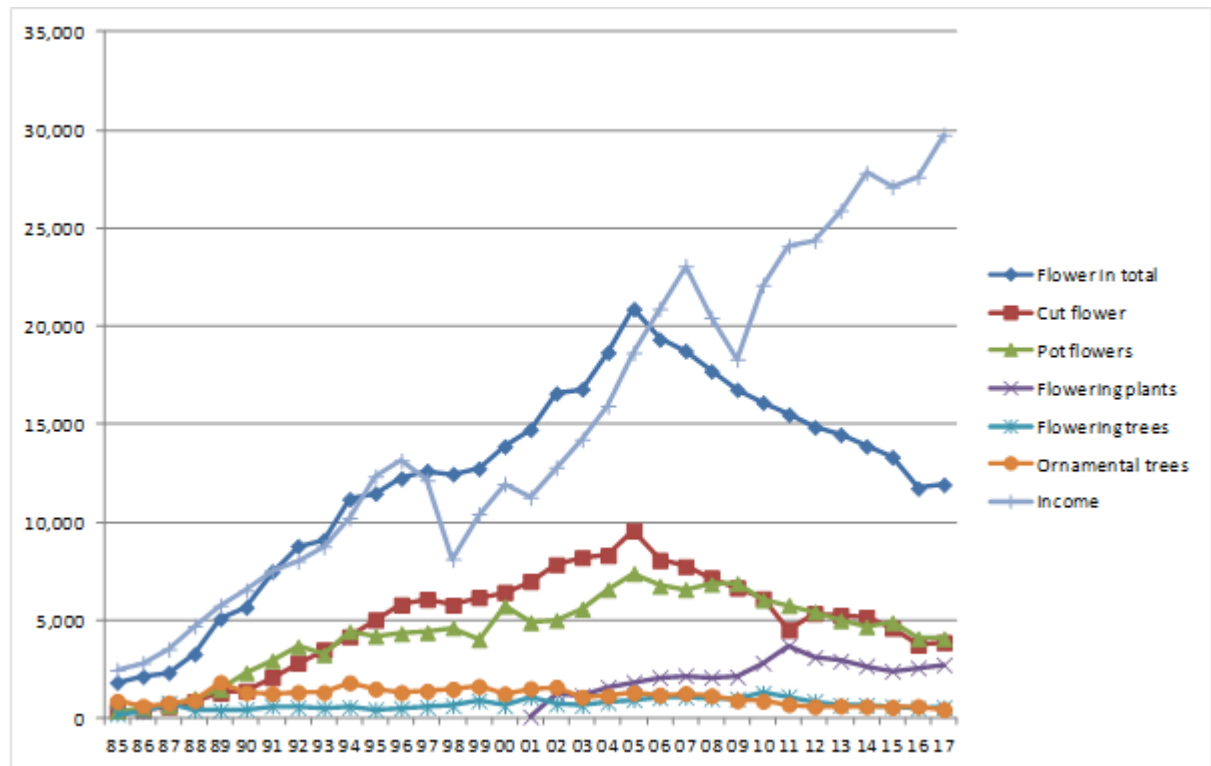
**Figure 4: The most important import and export partners of South Korea (2017)**

The Netherlands are still exporting more to South Korea than they are importing; in 2017, total value of exports was 6.1 billion USD (EUR 5.5 billion), and import value was 4.7 billion USD (EUR 3.7 billion). In 2018 exports rose slightly and imports remained stable.

## 2.3 Flowers and Plants and Korean culture.

Like in most East Asian countries, flowers and plants have always had an important position in *classical* Korean culture. Writers and painters use flowers and plants for their symbolic meaning. Also in (Buddhist) religious and other *rituals* (marriage celebrations, funeral ceremonies, festivals), specific flowers and plants have been used. As a 'luxury' product, ornamentals were mostly used by the royal court, aristocratic families and temples. Average Koreans often only used them for special ceremonies. Scarce and mostly

'ceremonial' use of cut flowers remained the situation until the late 1970's, when South Korea was still recovering from the devastations of war and building up its chaebol-dominated economy at dazzling speed (see § 2.2). From the early 1980's however, a *boom* developed in per capita consumption of flowers and pot plants (in the last category, 'potted flowers', i.e. flowering pot plants, play an important role) – see Fig. 5.



**Figure 5: Per capita ornamental consumption (in KRW, Korean Won) by type and per capita income (USD) in Korea [Source: MAFRA].**

As the above graph shows, rising flower and plant consumption could happen thanks to a spectacular rise in per capita income: between 1985 and today, South Koreans' average income increased by a factor 12 to 14, from USD 2,500 to USD 30,000 to 40,000.

Both income and ornamental consumption figures were affected by the two major financial crises that shocked the region. The *Asia Crisis of 1998* temporarily wiped out export markets for Korean companies in the ASEAN countries of South-East Asia. The *world-wide credit and banking crisis of 2008 and beyond* shook the South Korean economy like it did elsewhere. The impact of both crises on the ornamental market was different: the 1998 downturn was definitely temporary, with business and growth picking up within a few years, but the 2008 crunch seems to have a more lasting effect. In spite of the fact that per capita income started growing again after 2009 (and at high rates, for European standards), it seems the cut flower and pot plant markets never really recovered. Spending went down, or at best stayed stagnant, and many growers changed from ornamental crops to more lucrative vegetables (see § 4.1). This brings us to this Study's fundamental questions: *what are the causes of the stagnation and downturn in the Korean ornamental market (especially for home-grown products) after its 2005/2006*

peak, and how can this trend be reversed and the market improved? This report tries to answer this question and provide suggestions for improvement.

#### **2.4 Boom and Bust – a shift in market forces, lack of trust at growers and other market players.**

A more careful look at details shows that the relative *boom* in the Korean ornamental market in the period 1985-2006 was mostly caused by *institutional use*. Powerful and wealthy *chaebol* multinational companies wanted to show off their power by buying flowers and plants for opening ceremonies and other celebrations, and as expensive gifts for clients and important government officials. Government institutions were less important buyers, but also contributed to the market's growth.



**Figure 6: Large flower design for institutional use, Yangye Flower Market, Seoul, 2019.**

In general, institutional use (including buying by hotels and marriage ceremony organizers) accounted for 80% of total consumption, and consumer use only for 20%. In neighbouring Japan, these figures were/are 30/70, and in The Netherlands even 20/80, so the opposite of South Korea until 2006. The *international credit and banking crisis* from 2008 onwards changed all this. Companies have become more pragmatic and budget-conscious, and consumers spend less on huge decorations for marriages and other festivities. This has led to an ongoing decrease, or at best stagnation, of spending on ornamentals.

The situation became even more complicated when the South Korean Government issued the "Anti-Bribery and Graft Act" in 2016, with the aim of strongly reducing corruption and illegal financial transactions in both the private sector and government services. Fancy decorations, along with lavish dinners, parties and business trips to holiday destinations, became more rare as this new policy took root in the country.

Interestingly, there's a certain parallel between this development and what happened across the Yellow Sea, in the *P.R. China*: in that country, in late 2012, President Xi Jinping issued directives to all local governments and ministries to 'keep things simple', and ban activities seen as extravagant. One such directive literally states: "For official visits, there should be no welcome banner, no red carpet, *no floral arrangement* or grand receptions for officials". This measure alone resulted in a temporary market collapse for flowering pot plants, which shrunk by more than 30% in a single year (2013). The difference with South Korea is that two to three years later, by late 2015, the total Chinese market volume had been restored by the *growth in consumer spending*, and it keeps on growing at a steady pace. This shift (or rather *transformation*) from a government-dominated market to a consumer and leisure market, also seriously affected the assortment of plants and flowers on offer.

Apart from the fact that this 'bouncing back' -and even continued growth- of total market volume has hardly or not occurred in South Korea, another, almost 'paradoxical' phenomenon took place: *local production has definitely decreased since 2005 (see Fig 7 in § 4.1), but imports of (mostly) cut flowers have risen, and continue to rise*. The Netherlands, Colombia, Kenya and even China export more cut flowers to South Korea, while South Korean flower growers are suffering, and still change their crops to vegetables that are considered to be more profitable.

Rising consumer incomes indicate that there is enough space for market growth and serious consumption of ornamentals. Still, local producers don't benefit from this. Growers -who can be quite militant in South Korea, and are an important 'voting base' for politicians- often blame lack of government support and unfair competition by imports. Consumers complain of high prices and relatively low quality of the national product (which are partly caused by high energy use because of lack of investment in greenhouse insulation and modern technologies) and prefer to buy imported, high quality flowers.

Finally, apart from institutional and consumer use, another phenomenon is on the rise: *Agritourism, Flower Festivals and 'Green' Theme Parks*. Recent years have shown a growing interest in this form of "green and colourful entertainment" by Korean consumers, indicating that people definitely love flowers, also in this relatively underdeveloped market. These green oases and event centres offer visitors a brief escape from their city life. More information on this promising trend -notably for supply of flower bulbs- will be given in § 4.7

### 3. The South Korean Market for Ornamentals – Facts & Figures, and trends in recent years.

#### 3.1 The market – Acreage, Production and Value, Recent Developments

The latest available statistics on South Korean ornamental production areas and main species grown date from 2017; since then, numbers have dropped slightly or stayed more or less the same.

**Table 1: Ornamental production facilities in South Korea by type in 2017 (in ha)**

Crops	Total						
	Total	Under Cover (protected, in greenhouses) and Open Field					Open Field
		Total Co- vered	Glass	Hard plastic/ poly- carbonate	Plastic Foil	Others	
Pot plants/other ornamentals*)	3,622	1,047	18	42	963	25	2,574
Cut flowers	1,314	1,167	53	91	1,000	23	148
<b>TOTAL</b>	<b>4,936</b>	<b>2,214</b>	<b>71</b>	<b>133</b>	<b>1,963</b>	<b>48</b>	<b>2,722</b>

**Source: "Statistics on the Current Situation of Korean Flower Production", Ministry of Agriculture, Food and Rural Affairs, 2018 (in Korean language).**

As can be seen in Table 1, in 2017 ornamental products were cultivated on a total of 4,936 ha, of which 1,314 ha refers to cut flowers, and 3,622 ha to "pot plants and other ornamentals" (= all kinds of pot plants and ornamental trees, *not* including fruit trees). 71% of "pot plants & trees" are grown in the open field, whereas in cut flowers almost 90% is protected cultivation in greenhouses, mostly covered with plastic (PE) foil. In both categories, glass-covered greenhouses are still an exception (1,7% of the covered area in "pot plants & trees", 4,5% in cut flowers).

#### Production value and most important production regions

The total (wholesale/FOB) value of production of ornamentals in 2017 was 565.8 bn Korean Won (€ 441.9 mln by Nov. 2019 exchange rates). Of the total value, cut flowers covered KRW 183.3 bn (€ 143.2 mln). This comes down to an average gross revenue of approximately € 89,500.-/ha for all ornamentals, and of approx. € 109,000.-/ha for cut flowers.

Cut flowers, pot plants and ornamental trees are cultivated in all provinces, but *Gyeonggi Province* is the largest production area, given the fact that the climate in this region is not too extreme, flat land for cultivation and greenhouse construction is available and it is close to Seoul/Incheon, the largest urban area in South Korea.

In Table 2, production figures are given *per province*: the number of farms growing ornamental crops, total acreage in hectares, the number of plants/stems sold, and the sales value.

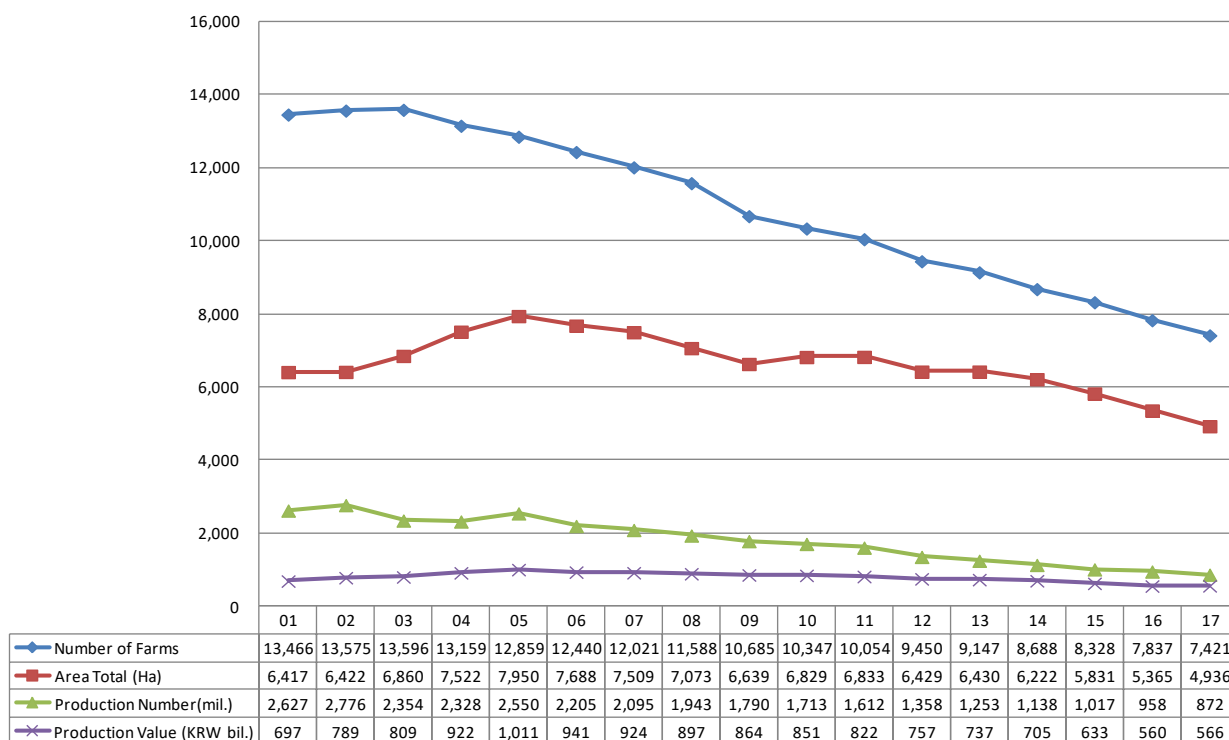
Province	<b>A - All ornamental plants</b>			
	Number farms	Area (ha)	Sales (number ×1,000)	Sales (1,000 KRW)
<b>Total</b>	<b>7,421</b>	<b>4,936</b>	<b>872,045</b>	<b>565,787,591</b>
Sejong	64	73	6,198	2,789,218
Seoul	139	48	2,744	8,697,213
Busan	334	135	51,386	34,199,103
Daegu	67	27	8,841	6,446,658
Incheon	49	27	6,744	3,220,750
Gwangju	41	28	4,177	1,204,091
Daejeon	34	12	2,303	4,665,980
Ulsan	31	10	1,062	2,517,000
<b>Gyeonggi</b>	<b>2,318</b>	<b>974</b>	<b>295,536</b>	<b>260,139,787</b>
Gangwon	146	175	34,566	17,870,573
Chungbuk	247	159	97,998	40,113,191
Chungnam	530	417	72,630	43,536,441
Jeonbuk	835	778	54,914	23,199,844
Jeonnam	1,149	895	55,933	30,064,927
Gyeongbuk	315	290	47,100	22,123,742
Gyeongnam	947	692	114,623	49,401,429
Jeju	175	199	15,295	15,597,643

Province	<b>B - Cut Flowers</b>			
	Number farms	Area (ha)	Sales (number ×1,000)	Sales (1,000 KRW)
<b>Total</b>	<b>2,491</b>	<b>1,314</b>	<b>439,599</b>	<b>183,264,134</b>
Sejong	2	1	50	34,000
Seoul	6	1	81	36,450
Busan	199	89	40,847	18,768,310
Daegu	13	4	3,399	1,082,310
Incheon	38	22	5,858	2,041,750
Gwangju	16	14	3,726	772,473
Daejeon	4	2	90	124,000
Ulsan	3	1	283	240,000
<b>Gyeonggi</b>	<b>594</b>	<b>263</b>	<b>64,414</b>	<b>40,013,589</b>
Gangwon	117	100	16,582	10,267,236
Chungbuk	62	41	24,126	5,497,434
Chungnam	327	191	60,080	24,114,344
Jeonbuk	142	135	42,738	15,720,909
Jeonnam	163	81	26,701	10,776,462
Gyeongbuk	193	77	41,227	14,514,395
Gyeongnam	505	223	98,647	32,401,801
Jeju	107	71	10,750	6,858,608

**Table 2: Ornamental crop acreage and production (numbers & value; 2A = All Crops, 2B = Cut Flowers) per province, 2017. (Source: MAFRA)**

### 3.2 Trends in production, import and export (all ornamental crops, 2001-2017)

As shown in Fig. 7 below, since 2001 total acreage has stagnated or gradually decreased, and the number of individual ornamental farms has decreased. Production value (measured in KRW) has remained stable, while production figures (numbers of stems/plants) for “all ornamental plants” have been reduced by more than 50%. This points at notable changes in price levels, caused by inflation and rising input costs (young plants, fertilizers, chemicals, labour, equipment etc.), and at changes to an assortment of higher value.



**Figure 7: Production of ALL ornamental plants per year, 2001-2017:**

- **Number of individual ornamental farms**
- **Total acreage (in Ha)**
- **Production numbers (stems/plants)**
- **Production value (in billion KRW, Korean Won). [Source: MAFRA]**

The graph shows that the *number of individual ornamental farms* has been reduced by almost 50%, from approx. 13,500 (2001) to 7,400 (2017). This is a usual development in developed countries: the same trend has been seen in The Netherlands and the rest of Europe since the 1980’s.

The *total ornamental acreage* has declined by about 20%, from 6,400 Ha in 2001 to 5,000 in 2017. Combined with the closure of nearly half of individual ornamental farms, this illustrates the well-known trend that growers who survive and continue need to enlarge their scale of operations, either by buying their retiring neighbour’s facilities or by expansion of their own.

*Production numbers* (stems/plants) have dropped steadily, from about 2,6 bn in 2001 to less than 1 bn in 2017.

Finally, *production value* (in KRW) has remained almost constant, at around 600 bn KRW (EUR 461 mln).



A more specific look at the situation in 2017 (which doesn't differ much from the one today in 2019, as confirmed in by market parties in South Korea this year) shows that, in spite of the trend toward 'upscaling' of growing acreage per farm, the sector still faces a main **challenge**: for a modern developed country like South Korea, the situation of ornamental growers and farmers is precarious, especially due to *the extremely small average size of their land holdings*. In a country where living costs have been rising steadily, ornamental farmers today derive their income from plots of land that average less than 7000 m<sup>2</sup> per farm. These small plot sizes form a huge obstacle for investment in mechanization and agricultural modernization. Furthermore, it will be practically impossible for a farmer to feed his whole family from such an (average size) plot. Small family-owned plots of agricultural land are often kept in the family as valuable assets, but actual farming is done by elderly, retired family members and as a 'hobby' activity for weekends and holidays, while full-time working family members derive their income from industry and service jobs.

### **3.3 Organization: Korea Florist Association, its members and activities.**

The *Korea Florist Association (KFA)*, having its head office in Seoul, is essentially a *producers' union*: its members are mainly *growers of cut flowers and other ornamentals*. Trade and retail are *not* represented in this organization, which therefore operates mostly as a "farmers movement", defending growers' interests towards trading businesses and other parties involved in floriculture. Government and 'political' influence on the KFA is seen as considerable.

During an interview with the KFA Secretary General and the Chairman of all combined South Korean producers' unions in Seoul, the KFA's main tasks and responsibilities were identified:

- Improvement of the position of South Korean growers of cut flowers and other ornamentals;
- Acting as a liaison between member-growers and government institutions, lobbying and influencing of government policies;
- Protection of legal rights of its members;
- Cooperation with aT (see § 3.4 below) in management and exploitation of government-owned flower auctions and wholesale markets;
- Promotion of floriculture in the broadest sense.

### **3.4 Organization: Korea Agro-Fisheries & Food Trade Corporation (aT)**

The Korea Agro-Fisheries & Food Trade Corporation (locally known by its short abbreviated name "aT") is a government-owned support and promotion office, focusing both on export promotion abroad and on support to farmers and other parties active in Korean agriculture and fisheries.

aT has a broad network of offices around the globe; in Western Europe, its activities are coordinated by the office in *Paris*. In Korea itself, aT -among many other things- is responsible for management and operation of the (semi-) government-owned *flower auctions* (see § 4.2). From a government point of view, this could be a suitable organization to launch a 'revitalization program' for the Korean ornamental production, trade and marketing sector.

aT and the Korea Florist Association are closely related: the KFA head office is located on the premises of the aT-operated *Yangye flower wholesale market & auction* in Seoul.



**Figure 8: Yangye Flower Market, Seoul, operated by "aT": main building entrance and Auction Hall with "Dutch style" auction clock.**

### **3.5 Professional Flower & Plant Exhibitions/Trade Shows**

Flower Trade Shows haven't spread in South Korea like they have in other Asian countries. The following trade fairs are of importance:

- *Goyang Flower Show*: held every year in April/May (the 2020 edition will be from 24<sup>th</sup> April to 10<sup>th</sup> May), this is a flower show for the general public (outside gardens) combined with a hall for professional businesses.
- *KIEMSTA*: this agricultural *technology* trade fair is held every two years in Cheonan city, in October/November. The next edition is from 28<sup>th</sup>-31<sup>st</sup> October 2020; the Netherlands Embassy participates with a Holland Pavilion.
- *TAMAS*: similar to KIEMSTA and held in uneven years in September, in Daejeon city; the importance of this fair is reportedly declining.

### **3.6 A note on Statistics.**

Finally, a point of attention for users of this report: in this chapter as well as in others, statistics have been used, with indication of sources consulted. Main source of Korean market statistics has been the Ministry of Agriculture, Food and Rural Affairs (MAFRA). In general, numbers and developments portrayed are judged as reliable. However, during interviews in South Korea, some sources showed some doubts about the accuracy of these annual figures.

While the figures obtained are definitely very good indications of actual market developments, the main emphasis of the report lies on its *qualitative analysis* of trends, strengths, weaknesses and opportunities / challenges in the market. In the current situation, claiming to provide 100% exact figures on (for example) cultivation acreages and products would be a target too ambitious to be realistic.

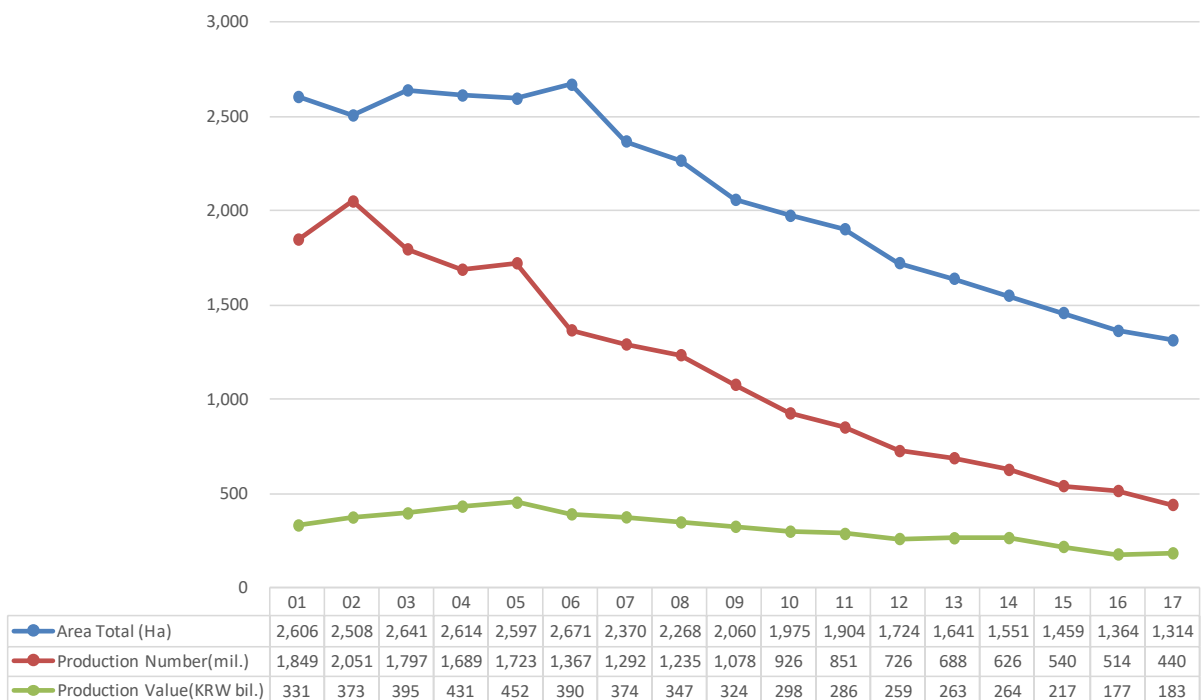
## 4. Cut Flowers.

Cut flowers, the main subject of this report, are a relatively new phenomenon in average Korean daily life. In the traditional, pre-war agrarian society, people were more familiar with pot plants, and especially the flowering ones (often called 'potted flowers' in Asian English-language publications) have been popular from pre-modern times, as they still are today (see Chapter 5). Even ornamental plants were a luxury only affordable for the privileged class.

Until the early 1980's, cut flowers were mostly used (if at all) at special *rituals* like marriage celebrations. Also funerals and rituals associated with the dead are occasions for buying (mostly white) cut flowers. However, with the growing prosperity of consumers within the surging South Korean economy, and the increasing adoption of 'Western' fashion trends and lifestyle, cut flowers became more appreciated as gifts (as an alternative for food and drink) and as an enrichment of the home for middle-class families.

Like in any country, cut flowers remain the most 'luxury' type of ornamentals, which makes them highly vulnerable to downturns in the economy's conjunctural cycle. Still, it remains a mystery why cut flower consumption has not grown at an equal pace with South Korea's steady economic growth during most of the past two decades. This central question will be further analyzed in Chapter 6.

### 4.1 Cut flower production: acreage, numbers and production value.



**Figure 9: Production of Cut Flowers per year, 2001-2017:**

- **Total acreage (in Ha)**
- **Production numbers (millions of stems)**
- **Production value (in billion KRW, Korean Won). [Source: MAFRA]**

The graphs in Fig. 9 show a clear trend, intensified up a bit by the world-wide credit and banking crisis of 2008-2012 but *not* reversed after that period:

The *total cut flower acreage* has declined by about 50%, from 2,600 Ha in 2001 to about 1,300 in 2017. Although there is a certain trend that growers enlarge their scale of operations, we have already seen in § 3.2 that the *average size* of farms remains too small for a developed country like South Korea.

*Production numbers* (stems) have dropped dramatically by more than 75%, from about 1,8 bn in 2001 to 440 mln in 2017.

Finally, *production value* (in KRW) has declined from KRW 331 bn to KRW 183 bn (EUR 142.4 mln).



**Figure 10: A day's harvest at a South Korean rose grower's facility, 2019.**

Developments in local production of cut flowers since 2001 are thus utterly dramatic. Many factors are of influence: the small size of individual farms, rising costs of labour and other input, greater profitability of other greenhouse crops (sweet peppers for export to Japan, strawberries) and difficulties to obtain commercial financing or government subsidies. Still, there must be other factors at stake here. During field interviews in Korea, the most important of these factors have been identified (see § 4.2 below and Chapter 6).

## 4.2 Marketing and distribution – the traditional Flower Market / wholesale & retail system.

In the 1990's, the South Korean government has established 8 joint *markets for ornamental plants* nationwide, aiming to modernize the distribution system. Two of these markets have closed in the meantime, so there are 6 still in operation. Based on the 'Dutch' system, the markets contain a flower auction to set prices, and the markets create business contacts between growers, wholesalers and retailers. *Yangje flower market* in Seoul (see Fig. 8 at Page 19) is the largest wholesale market among these (semi-) governmental flower markets.

There are also '*private markets*', that in fact handle a larger trade volume than the government-owned ones: the largest one of these is the *Gangnam Express Bus Terminal Market* in Seoul.

37% of all locally produced ornamental plants go to the (semi-) governmental markets, while 63% go to private markets. As to locally grown cut flowers, 65% go to the (semi-) government markets while 35% go to private markets. Since the (semi-) governmental joint markets were established to promote local flower industry and to protect local farmers, the markets usually don't deal with imported flowers. As a result, imported flowers are mostly distributed through private markets.

As shown in Fig. 7, auction prices of cut flowers in the (semi-) governmental markets have not been rising much during the last 10 years. Prices of rose, gypsophila and gladiolus have increased, while those of chrysanthemum, carnation, lily and gerbera have been stagnant. This is an indication that flower species for ceremonial occasions are becoming less popular.

*Wholesale* companies in Korea are very small and do business in an old-fashioned way. There are hundreds of small wholesalers in the highly fragmented market, and -unlike in other Asian countries- no medium- or large-scale wholesalers who dominate the market. Some wholesalers also act as importers, but most of them are weak in terms of market power and command of the English language. Consumers sometimes visit wholesale shops to buy flowers there directly, at lower prices than in their neighbourhood flower shop.

### **Traditional flower markets – Need for improvement.**

In general, one conclusion of a fact-finding visit to South Korea has been that local wholesale/retail markets lack *all* major advantages of the Dutch flower auction markets:

- They are *not* owned by (cooperatives of) their growers/members, but by a government organization that is lacking in skills and motivation to really develop a dynamic, developing flower sector.
- They do *not* provide enough refrigerated transport and do *not* have enough adequate cooling and storage facilities, resulting in quality problems and losses.
- There is *no* independent quality control, leaving growers (99% of whom already have very little bargaining power due to their small size) at the mercy of wholesalers/traders, who only focus on their own profit margins and on efforts to monopolize parts of the market. KFA officials reported that the government has tried to introduce a *license system* for flower

and plant wholesalers, to force grip to them and professionalize, but that this plan failed; wholesalers' power seems unbreakable.

- In general, most market players (including growers) do *not* have sufficient knowledge of post-harvest treatment and quality improvement methods, which has a negative effect on products' reputation.

As seen during visits to local cut rose growers and private traders/exporters of cut flowers, many practices which are 'standard' in developed production areas in Europe and the Americas (and even in upcoming regions like East Africa and China) are still rare and seen as 'new' in South Korea. Storage on water, use of 'flower food' products and refrigerated transport are beginning to appear, usually initiated by growers working together and a few more far-sighted wholesalers and traders. These improvements are still rare however, and depend very much on the energy and creativity of individual flower growers and/or traders. One private entrepreneur reported that he tried to convince management of the government-owned flower auctions to use and promote the leading flower preservative (a "vase life-extending" substance) among flower growers and buyers. This plan was turned down by auction officials with the argument that "the Flower Auction can't be accused of favouritism towards one commercial production company of these chemicals" – another example of the highly 'politicized' situation of South Korean agriculture which often creates obstacles and inhibiting factors for innovation and development.

#### **4.3 Consumption - Retail outlets for consumers: flower shops, wholesale markets and other options.**

For decades, South Korean consumers have purchased flowers in small shops in their towns or villages, for individual home use. For ceremonial occasions and business, nowadays households and companies increasingly order flowers online or by phone (see § 4.3).

*High-end flower shops* have come up in the last ten years, and are also being established in high-class hotels. Those shops provide hotels with floral decorations and sell high-end flowers to wealthy consumers.

In large *supermarkets* such as *E-mart*, *Lottemart* and *Homeplus*, cut flowers are *not* for sale at the moment. Through this channel, only *pot plants* are increasingly sold to consumers. For cut flowers, the key problem for these large professional retailers is the *irregularity and unstable quality of supply*: supermarkets are used to work with year-round, reliable supply of products, and base their marketing campaigns on planning covering the whole year, or at least seasonal periods like summer, the Christmas period etc., with predictable quantities and agreed quality. There is still a great lack of growers or importers who can provide cut flowers to the big supermarkets in such a stable way. If this supply problem is overcome, supermarkets will definitely be interested to add cut flowers to their product portfolio, which could contribute seriously to the development of the Korean flower sector.

A positive development is the newly set up (in fact, still to be implemented) cooperation between *E-mart* and an upcoming online retailer: see § 4.3.

Apart from local traditional flower shops, consumers can also buy pot plants and cut flowers at *wholesale markets*. This is a typical Asian phenomenon.

Wholesalers and traders operate 'consumer booths' in buildings next to the flower auctions, offering mostly pre-arranged bouquets at fixed prices, along with artificial flowers, small-sized pot plants and paraphernalia like baskets, pots and textile decorations.



**Figure 11: Booth at Yangye Flower Market (retail part), Seoul.**

Still not found often in South Korea, but potentially highly effective in cut flower promotion and market development, is the phenomenon of *pop-up flower & plant shops* in shopping malls and other busy areas. Here, *impulse buying* is encouraged by beautiful flower displays and temporary "quality flower festivals" (see § 4.3).

In the same line is the recent appearance, in high-end districts of Seoul like Gangnam and Songpa, of *luxury lifestyle shops or cafés selling flowers & plants* (like *Snow Fox* and *Flower Café*), where green and colourful living products are combined with coffee & cakes and sales of home decoration, gifts, small furniture, fabrics and clothing.

This partly old-fashioned and still modestly innovating distribution system may in the coming years -but, according to parties concerned, *not* in an exponential and

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*booming* way- be transformed by the rise of a new phenomenon that has become mainstream already in the food and hardware sector: *e-commerce*.

#### **4.4 Consumption - new, direct B-to-C distribution systems: E-commerce, bouquet services, home delivery. A case study: *Kukka*, a promising market innovator.**

Just like in most other countries in East Asia, in South Korea today there are a number of small online/home-delivery flower shops. Most of these are linked to (small) "offline flower shops" in their region, and organize internet sales and home deliveries based on commercial contracts with these shops.

A recent trend is the rise of 'new style' e-commerce shops. They don't work with traditional local florist shops but have their own facilities to make flower bouquets and combinations, and deliver them directly to consumers. Their 'flower subscription programs' are getting more successful, and may be the key to market growth and professionalization. An interesting case-study describes a front runner in this field: *Kukka*, founded as a totally new startup in 2014 and using the slogan "*Live every day with beautiful flowers*".

*Kukka* (the name is the word for 'flower' in Finnish) has developed the concept of e-commerce and home delivery of flowers using its own buyers, designers and arrangers, a concept that was virtually unknown in South Korea before. From its central arranging and packaging warehouse in Seoul, *Kukka* supplies bouquets, small flower combinations and even single flowers ("signs of friendship and love"), using Oasis floral foam and sturdy packaging (mostly cardboard boxes). Deliveries to homes and offices are carried out by a specialized courier service. The company now has 10,000 regular subscribers for regular deliveries, and has developed many other activities:

- They run their own (now three) 'offline' *flower fun outlets / coffee & cake shops*, under the *Flower Café* brand name, in a similar way as *Snow Fox*, an upcoming chain of flower & lifestyle stores founded by a South Korean businessman who has gained experience in Japan and also operates restaurants and food outlets. In these stores, bouquets for home use can be ordered *tailor-made*; on the spot, customers can decide on the number of each type of flower available, and compose their bouquets with the shop's flower arrangers. Common practice in Europe and the US, but a novelty for South Korea..
- *Kukka* also engages in *pop-up flower stores and festivals* in major shopping malls, a marketing tool that has proven to be incredibly effective. Consumers, not used to seeing flowers in their luxury mall, are suddenly confronted with the beauty and availability of flowers in all kinds of arrangements. In wealthy countries like South Korea, this leads to a lot of impulse buying and immediate promotion of repeat sales by the store's internet channel. In the case of *Kukka*, this effect was shown by pictures of rows of customers waiting to pay for their flower purchases.
- At the moment, *Kukka* purchasers (six 'licensed florists') buy 95% of the company's needs, daily from Monday to Friday, at Seoul's 'private' flower wholesale market at the Gangnam Express Bus Terminal. Recently however, the company has started its *own imports* from Colombia (roses, carnations), and it also expects to set up direct lines with East Africa and The Netherlands, the latter mostly for import of tulips in the season.



- Kukka has concluded agreements with a number of (*chaebol*) companies with their head offices near its packing facilities; in total, these offices number 7,000 employees. On his or her birthday, each employee receives a Kukka bouquet and wishing card, paid for by the employer. In 2020, this activity is expected to grow to a customer base of 50 companies and 100,000 employees.
- Furthermore, in 2020 Kukka will start cooperating with leading supermarket *E-mart*: the agreement involves the setup of a (permanent) flower sales outlet near the entrance of one of E-mart's megastores, and if this trial is successful other stores will follow. Again, a potentially very successful online/offline combination.

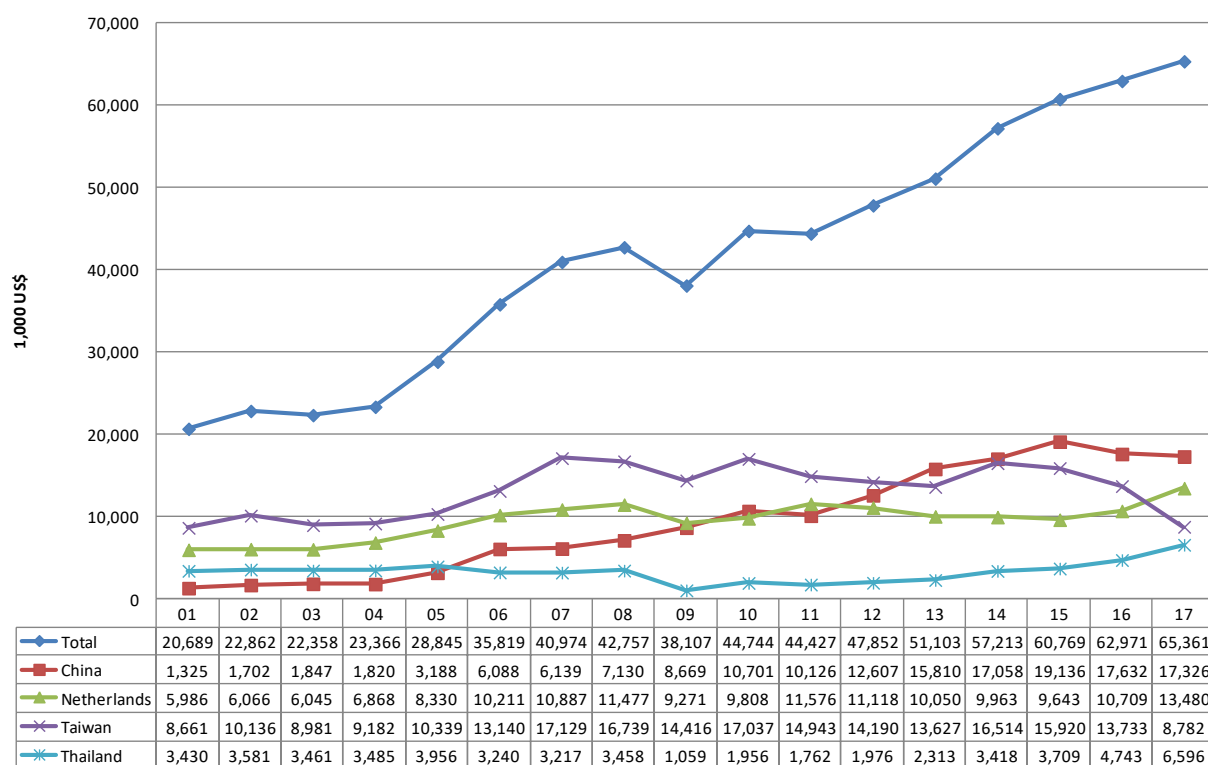


**Figure 12: Kukka facility, Seoul.**

As shown in the above case study, there is definitely 'room' in the South Korean cut flower market, and this also means opportunities for flower traders/exporters from The Netherlands. This is even more the case -as reported by successful newcomers like Kukka- because a *challenge* still faced by all channels in South Korea's flower and plant market is *the irregular supply and often substandard quality of the domestic product* (see also § 4.6). South Korea still lags way behind countries like The Netherlands, Germany, Colombia and the US in terms of product uniformity, quality, shelf life and other essential features, mostly due to growers' lack of knowledge and unwillingness to invest in cultivation technology and storage/distribution equipment.

#### 4.5 Cut Flower Imports; new products and players enter a market that was 'sheltered' until recently.

In recent years, parallel to the persistent decline in local production and almost no visible growth in consumption, a slight increase has been noted in cut flower imports to South Korea.

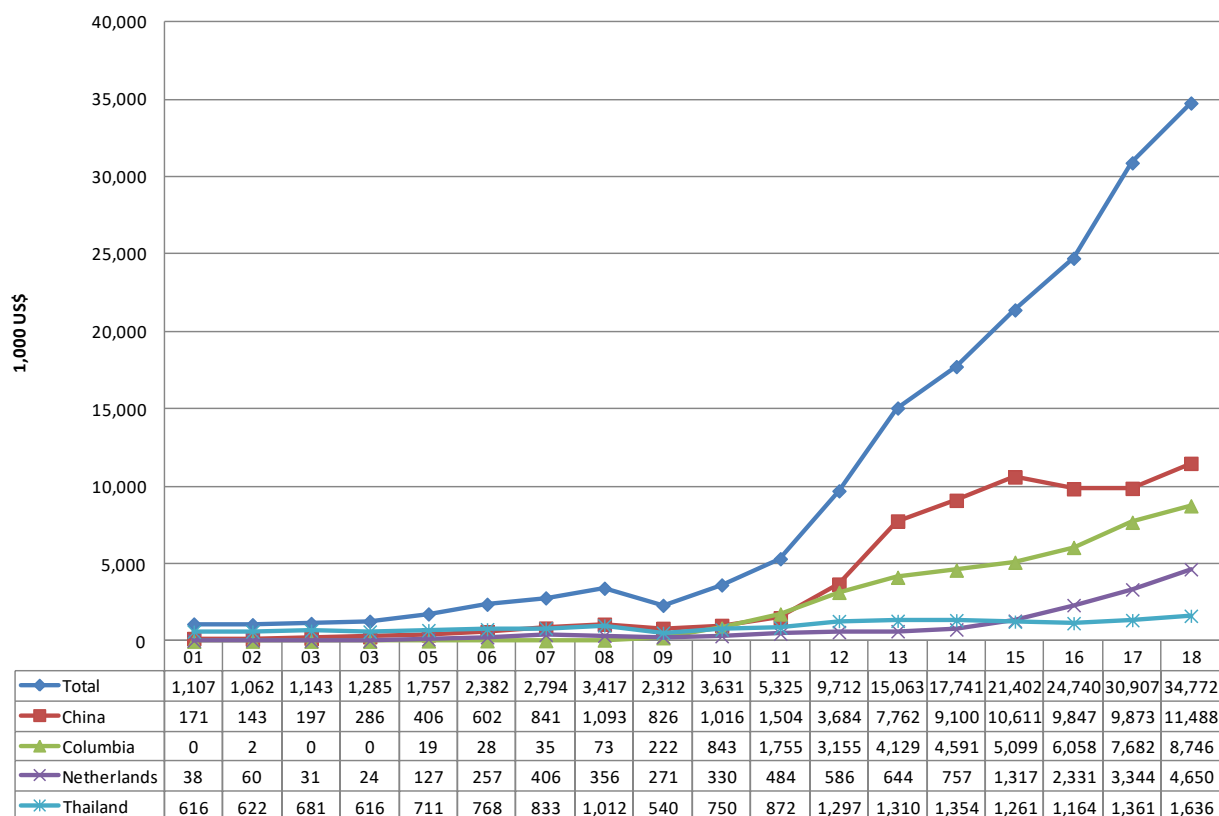


**Figure 13: Imports of All Ornamental Plants per year, 2001-2017:**  
 - Value (in 1000 USD)  
 - Division between the four most important places of origin: P.R. China, The Netherlands, Taiwan and Thailand. [Source: MAFRA]

As can be seen in the graphs in Figure 13, imports of "all ornamental plants" have steadily increased, after a short dip in 2008/2009 due to the world-wide financial crisis. Total import value has increased from USD 20 mln (at today's rates, € 18.1 mln) in 2001 to USD 65 mln (€ 59 mln) in 2017.

In 2017, with an import volume of USD 13.5 mln (€ 12.2 mln) The Netherlands were the 2<sup>nd</sup> largest exporter of ornamental plants to South Korea, after China with USD 17.3 mln (€ 15.7 mln). Imports from the Netherlands and Thailand have grown in the last 3 years, while those from China and Taiwan have slightly declined.

In *cut flower imports*, the rise is more dramatic. Especially since 2011, as the local flower sector has been shrinking, Korean consumers have increasingly relied on imported cut flowers with higher quality and (reportedly) lower or similar prices. This trend is now expected to continue -as confirmed by sources interviewed-, and will be a growing opportunity for Dutch and other exporters.



**Figure 14: Imports of Cut Flowers per year, 2001-2018:**

- **Value (in 1000 USD)**
- **Division between the four most important places of origin: P.R. China, Colombia, The Netherlands and Thailand.** [Source: MAFRA]

In 2018, with an import volume of USD 4.65 mln (€ 4.2 mln) The Netherlands were the 3<sup>rd</sup> largest exporter of cut flowers to South Korea, after China with USD 11.5 mln (€ 10.4 mln) and Colombia with USD 8.7 mln (€ 7.9 mln). Imports from all main places of origin have increased significantly since 2011.

As main *reasons* for rising cut flower imports in a market that is still hardly or not growing, sources stated the following:

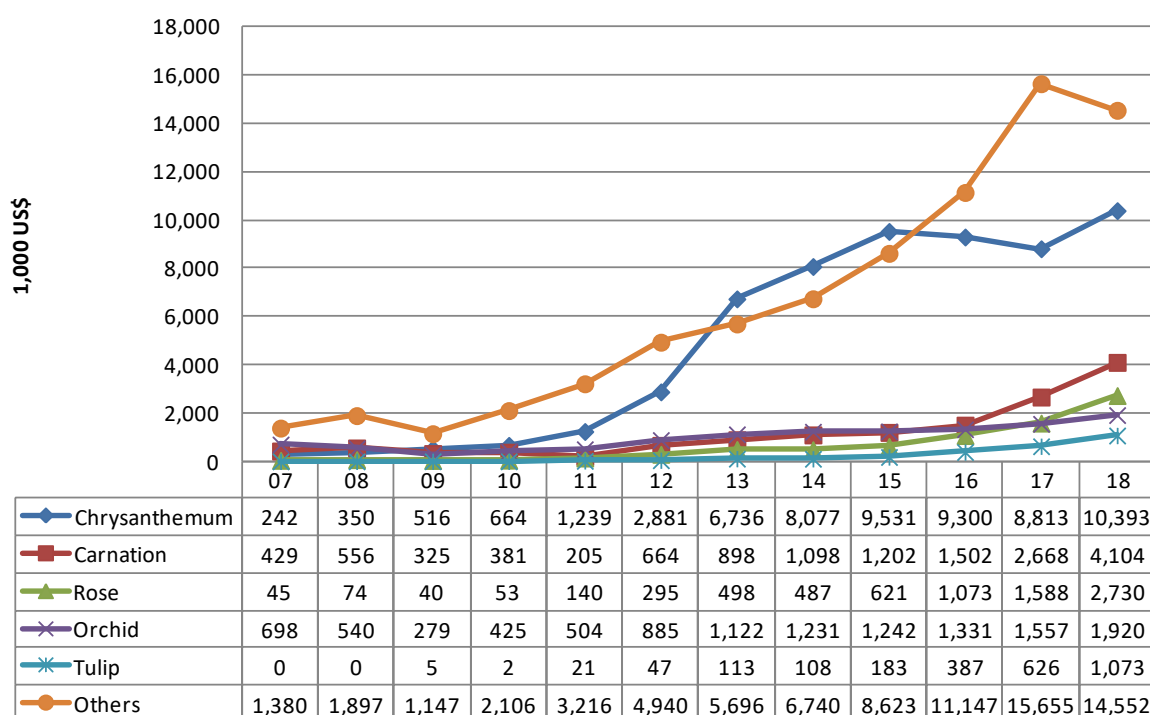
- *Insufficient quality* of the locally grown product: even including long-distance transport from Colombia, Kenya or The Netherlands, the 'foreign' product has shown to be of better appearance and -most importantly- having a *longer vase life* than locally grown flowers. Regardless of the species (Colombian roses, Kenyan lilies or Dutch tulips), this argument was always used. It points to a lack of innovation, investment and knowledge among local flower growers and other links in the value chain.
- Interestingly, importers also mention *lower prices* of imported cut flowers, compared to the (wholesale) prices of South Korean produce. As found out from market research, average auction/wholesale prices for cut roses, both at the government-owned Auction Markets and at the "private" market at Gangnam Express Bus Terminal, are indeed 50 or even more % higher than they would be at the Royal Flora Holland auction at Aalsmeer in the Netherlands, for a similar ('medium') size and quality. In this way, imported flowers can indeed compete on price as well. This quite unusual phenomenon indicates that Korean domestic cut flower production has

been 'sheltered' from outside influences for many years. Although no significant import duties are charged on cut flowers, it seems the country wasn't clearly 'noticed' by international suppliers and exporters, unlike its large neighbour Japan. In this respect it has to be noted as well that the Japanese economy reached a wealthy/middle class level about two decades earlier than that of South Korea, and that some cultural factors also differ (see § 6.1).

- Finally, as in all other markets, import of cut flowers broadens the *assortment*. Many consumers (especially the younger generations) are looking for new species, new types and new colours, and conservative local growers often keep to 'traditional' varieties that have proven to sell.

Growing imports (at price levels that South Korean consumers can afford) may be a stimulus for market growth, especially in combination with innovative marketing concepts, as we have seen in the *Kukka*-case study in § 4.3.

### Cut flower imports – most important species in the assortment.



**Figure 15: Imports of Cut Flowers per year, 2007-2018:**

- **Value (in 1000 USD)**
  - **Division between main species: Chrysanthemum, Rose, Orchid, Tulip and Others.**
- [Source: MAFRA]

As shown in figure 15 above, *Chrysanthemum* was the largest cut flower species imported into South Korea in 2018, followed by *carnation*, *rose*, *orchid* and *tulip*. *China* was the largest exporter of *chrysanthemums* to South Korea, accounting for 91% of import value of that species.

*Colombia* was the largest exporter of *carnations* with 77% of import value, followed by *China*.

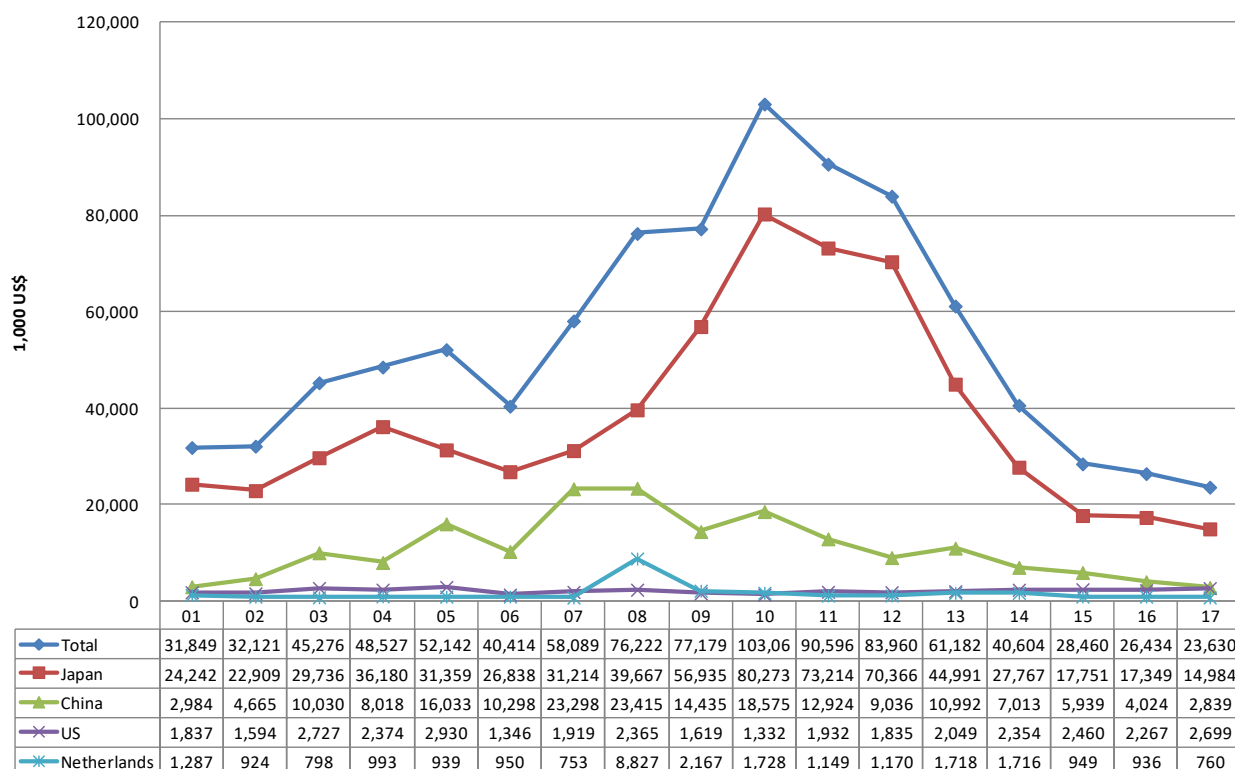
*Ethiopia and Colombia* were the two largest exporters of roses into South Korea. *Thailand* was the largest exporter of orchids accounting for 76% of import value, followed by the Netherlands.

The Netherlands were the only country exporting tulip cut flowers to South Korea.

Regarding 'other species', Colombia and the Netherlands are increasingly exporting new, different kinds of cut flower species to South Korea.

It can be expected that the rise in imports will continue in the coming years, creating new possibilities for Dutch and other exporters.

#### 4.6 Cut Flower Exports.



**Figure 16: Exports of 'all ornamental plants' per year, 2001-2017:**

- Value (in 1000 USD)
- Division between main destinations: Japan, PR China, the US and The Netherlands.

As is made very clear in Fig.16, exports of ornamental plants have dropped in a staggering way since 2010.

After a boom of 103 mln USD (€ 93.3 mln) in 2010, total export value has plummeted to 23.6 mln USD (€ 21.4 mln) in 2017. Only Japan is still a relatively serious export market, while exports to other traditional destinations (PR China, the US, The Netherlands) have gone down to nearly nothing.

Today, more than half of export value is made up out of cut flowers, and lilies account for 61% of this. More than 60% of all exported ornamental plants are sent to Japan. 100% of lily cut flower exports are destined to Japan.

The South Korean government still contributes a subsidy to cut flower exports, but this only covers part of transport costs. As Japan is the only remaining export market for South Korean flowers, prospects for the future of this trade are grim:

for all products including cut flowers, the Japanese insist on *top quality*, and their market definitely is on the radar of all international traders and exporters. In the current situation -which differs a lot from that of other fresh produce like sweet peppers and strawberries- Korean cut flower growers and exporters are losing their last remaining export market to countries like Colombia and Vietnam.

#### **4.7 Challenges - quality problems and other issues for the cut flower industry.**

As described already in this report, the ornamental sector in South Korea is facing many challenges and setbacks, and improvement is visible but slow. In this paragraph, a number of challenges are given which are specific to *cut flower* production, marketing, distribution and sales.

##### **Quality problems.**

As shown in several preceding paragraphs, flower quality of domestic produce needs improvement. Consumers complain about a *short vase life* ("less than half of that of imported flowers"), *thin stems*, *lack of homogeneity* – and on top of that, *high prices*, leading to a bad reputation of cut flowers in general. Some problems are of a structural nature and urgently need to be addressed. In summary, flower quality is influenced negatively by the following factors:

- *Lack of knowledge at grower level (structural)*. There are no effective extension services, and the offer of vocational education in the ornamental sector is limited. University graduates, with their impressive theoretical knowledge, mostly engage in research and scientific work. Suppliers are also often not able to help growers improve quality. New initiatives in training and education tend to focus on 'booming' crops like (export-oriented) vegetables and fruits.
- *Small land holdings of >95% of growers (structural, a politically sensitive subject)*. Smallholder farms miss the knowledge and capital to develop into professional companies (see § 3.2). Farm owners often combine a small greenhouse or flower field with other activities in industry, real estate or other services, while their flower quality is lagging behind. The government has been trying to encourage large-scale new greenhouse projects (co-funded by large *chaebol* multi-nationals like LG Group) on newly reclaimed land areas along the coast. These projects faced a large and militant opposition by farmers' unions and opposition parties in parliament, so at present the land issue remains a serious obstacle for reform and professionalization.
- *The inadequate organization of wholesale markets and distribution channels (structural)*. Wholesalers hardly invest, and are mostly interested in a low purchase price; there's a lack of independent quality control, little use of flower preservation methods and cold storage, and precooling facilities and refrigerated transport are insufficient (see § 4.3).
- *Rising prices of essential inputs* also affect final product quality. Costs of inputs like seeds, young plants, cuttings, agrochemicals and fertilizers are gradually rising, as (foreign) breeders and suppliers demand prices linked to the world market, especially for new and highly demanded varieties and products. Growers who don't want to invest in these necessities, or simply can't afford them, will continue working with old materials, propagating the same plants over and over again, select the

cheapest but less effective crop protection products etc., again resulting in low flower quality.

- *Traditional use of cut flowers for ceremonies* (marriages, funerals, office openings) *didn't require a long vase life*. Usually, one day was enough, after the ceremony nobody cared about the flowers. Many consumers and growers are still used to this, which negatively influenced the sense of urgency to improve quality and ensure a longer vase life.



**Figure 17: Traditional rose growing nursery, representative for the South Korean market: greenhouse with double PE plastic cover, some electrical heating and lighting, dripping irrigation, medium to low-quality facilities.**

### **Other issues.**

Quality problems may be the largest challenge in South Korean cut flower production and marketing/sales, but they are not the only issue affecting profitability and growth of the sector. Certain economic and social/cultural factors also are of influence. The most noteworthy are:

- *Cultural preferences* were mentioned by many people interviewed for this report. Unlike the Japanese, who appreciate flowers as gifts and often have a small 'house altar' with fresh flowers in honour of their ancestors, South Koreans seem less interested to spend their present-day wealth on cut flowers. Electronic gadgets, clothes and leisure gear seem in higher demand. However, with new initiatives like pop-up stores and online/offline combinations, and preferably with more focused marketing campaigns [as known in The Netherlands and many export markets for Dutch flowers, carried out by "Flower Bureau Holland"], it must be possible to realize a 'culture change' among younger generations.

- *Rising labour cost* is a factor that influences the whole economy, and may lead to shifts in growers' strategies. If growing certain cut flowers involves more labour per unit than growing other crops that roughly result in the same income, labour cost can be a reason for growers to change crop. The alternative, automation to replace labour by efficient machinery, is an investment only very few growers can afford.
- Finally, the problem of *succession / finding a new generation of growers* presents itself in floriculture as in most other sectors of agriculture. In South Korea, the average age of farmers today is 64. The general image of farm work is bad; young people from rural areas often prefer a job as a factory worker or office assistant over continuing their parents' farm.

In many sectors of agriculture, South Korea has followed the path of all developed nations: during the 'developing' phase, the percentage of the working population active in agriculture (all plant and animal sectors combined) drops from way over 50% to 5% or less (in South Korea, with its scarce availability of arable land, this percentage now lies around 3), while total production output doubles or triples and product quality highly increases. As figures indicate however, this output boost has *not* happened in floriculture. More details on the reasons for this 'non-transformation' are given in Chapter 6.

#### **4.8 Flower Bulbs.**

Flower bulbs, an iconic Dutch product serving the markets for cut flowers, pot plants (bulbs-on-pot) and gardening/landscaping, deserve a separate paragraph in this report.

Especially for *landscaping and "spring flower park" activities*, Dutch flower bulbs have been exported to South Korea for decades. The yearly "*Tae An Tulip-Flower Festival*" is a long-standing tradition. Also the highly popular "*Everland*" attraction park near Seoul has its "Holland Village", along with several other flower gardens. South Korean tourists love to take day trips to these parks, and these visits also result in sales of 'dry' flower bulbs and bulbs-on-pot for consumer use.

*Production of cut bulb flowers* focuses mainly on *lilies*, of which still significant quantities are exported to Japan (see Fig. 15). Tulip cut flowers are seen as 'too difficult and sensitive to grow', and consumers find that imported Dutch tulips, in spite of the long journey, are more vigorous and last longer than the locally grown alternative.

According to a leading importer of Dutch flower bulbs in South Korea, who was interviewed for this report, the total number of tulip bulbs imported into the country has risen from 3.5 million ten years ago to 20 million today. 60% of imported bulbs go to festivals and flower parks, and 40% are meant for professional cut flower growing. Figures on other bulbs are hard to obtain. In general, the market for bulbs mostly used for cut flower production (like lilies) will not rise as nicely as the one for tulips, given the general gloomy situation of the domestic and export markets for South Korean cut flowers.

The season for tulips and other bulbs has been extended by the option to import bulbs from Holland and also from the Southern Hemisphere (New Zealand,



Australia, Chile), where Dutch breeders and propagators have their counter-season production facilities.

Especially in the bulb sector, importers and growers in South Korea complain about *restrictive, and often 'politically motivated' quarantine policies*. In 2019, a huge number of *narcissus* bulbs (80% of all imports) were destroyed by the Plant Quarantine Service; officials indicated a virus contamination as reason for this. As is often the case, the market is abuzz with rumours about the real reason: illegal 'protection' of traders with good government contacts, personal feuds between importers and politicians, or conflicts between flower growers. After more than 30 years of flower bulb imports from The Netherlands, South Korea still doesn't have an efficient system of *pre-inspection* of bulbs in The Netherlands before shipment, as the Japanese have been operating together with their Dutch colleagues since the 1980's; there is definitely room for improvement here.

## 5. Pot Plants.

As in most developing markets, *pot plants* have been adopted by the non-elite segments of South Korean society ahead of cut flowers. Especially *flowering* species (also known as 'potted flowers') are appreciated as decorations for home, balcony and courtyard, and seen as symbols of good fortune. Plants are presented as gifts at festive openings of offices, shops and government buildings. For government buyers, the "Anti-Bribery and Graft Act" of 2016 reduced their options to buy large size orchids and other plants as gifts, so the assortment offered by growers has changed to smaller pot sizes. Consumers also tend to be very price-conscious when buying plants, favouring succulents and petunias and other annuals over large size and 'special' types.

### 5.1 Production figures and market trends in pot plants.

As this reports focuses on cut flowers, the pot plant market will be only briefly discussed here.

As can be deduced from Fig. 7 and Fig. 9 (pages 16 and 19), domestic production of 'other ornamentals' (= all kinds of pot plants and ornamental trees, *not* including fruit trees) has developed as follows, from 2001 to 2017:

- Acreage: stabilized, from 3,800 Ha in 2001 to 3,700 Ha in 2017.
- Number of plants/year: almost 50% decrease, from 800 mln in 2001 to 432 mln in 2017.
- Production value: stable/slight growth, from 366 bn KRW in 2001 to 383 bn KRW (€ 295 mln) in 2017.

While keeping the remark about (un)reliability of statistics in mind, this seems to show that the pot plant market in South Korea shows more stability than the cut flower sector. This has also been confirmed by suppliers (a/o of potting soil) consulted for this report. The decrease in 'number of plants' combined with a stable and even slightly grown wholesale market value may be an indication that growers focus more on larger species and sizes (possibly for office decoration) or on outdoor plants and trees for landscaping use.

In a follow-up to the present report, more attention may be given to pot plants; for now the focus remains on the cut flower market.

### 5.2 Marketing and distribution of pot plants – the 'traditional' Flower Market / wholesale & retail system.

For a detailed description of the 'traditional' system of *wholesale flower and plant markets and auctions*, partly government-backed and partly 'private', reference is made to § 4.2. All characteristics and challenges -described there in the context of cut flower sales and distribution- also apply to pot plants. The difference between the two sectors lies in the fact that pot plants, due to their weight and bulkiness, are even more dependent on the wholesale/retail markets, and on 'local' sales (not too far from where they are grown) than cut flowers. Exceptions are some small-sized items like kalanchoe and small and mini-succulents. Also *annual and perennial plants grown from seed* are popular: according to estimates from market parties, the leading US flower seed company

*Ball Seeds* alone produces close to 300 million 'plugs'/young plants from seed at its propagation facilities in South Korea, for supply to pot plant growers in the region.

Apart from the big markets, most *florists* and the new trendy pop-up stores in shopping malls focus on cut flowers and high-value (but low-volume) gifts, combining flowers or plants with jewellery, clothing or perfumes. *Garden centres*, of the type known from western countries, where pot plants form a major part of the turnover, are still virtually unknown in South Korea. The concept of garden centres may be developed further, but not in the same way as in Western Europe: for example, in South Korea's urban society, more than 90% of consumers do *not* own or rent a private garden.

*Internet* will of course play a role in improving distribution of pot plants, but the focus will be more regional and local than in the national (and even global) market of cut flowers.

### **5.3 Consumption and new, direct B-to-C distribution systems: E-commerce and home delivery of pot plants?**

As made clear already, the recently budding business in e-commerce and home delivery in South Korea has much less relevance for pot plants than for cut flowers. Most plants are still too heavy and low-value to make the whole e-commerce chain feasible, but of course some elements (ordering online, home delivery from regional and local 'plant hubs' or garden centres keeping stock of the most popular plants) can be expected.

An exception can be made for really small plants: **succulents** are presently enjoying a relative rise in sales and in e-commerce as well. Small, brightly coloured, easy to handle and hard to damage, succulent plants are popular on internet shops. Even though prices per individual plant are not very high, consumers often buy a box with several succulents, making a longer-distance delivery feasible.

### **5.4 Quality issues and other challenges for the pot plant industry.**

This paragraph refers almost completely to § 4.7: in general, the same main issues and challenges affecting the cut flower value chain indicated there also apply to pot plants. Differences are mainly gradual, and in some cases the South Korean pot plant industry may be seen as 'more stable' than the cut flower sector, given its longer history and traditional position in Korean culture and society.

In a brief summary, the following pot plant-specific remarks can be made:

#### **Quality problems.**

Factors that negatively influence product quality, as mentioned in § 4.7, also apply to the pot plant sector:

- *Lack of knowledge at grower level (structural).*
- *The country's harsh climate (especially the long and cold winters), in combination with insufficient or absent heating in greenhouses.*

- *Small land holdings of >95% of growers, making investments in quality improvement impossible or unfeasible.*
- *The inadequate organization of wholesale markets and distribution channels (structural).*
- *Poor and mostly absent cold storage and refrigerated transport.*
- *Rising prices of essential inputs (seeds/young plants/cuttings, agrochemicals, fertilizers etc.).*

The same is valid for the other, social and economic issues growers are facing:

- *Cultural preferences (competition with gadgets and leisure items)*
- *Rising labour cost.*
- *Succession problems / finding a new generation of growers.*

For more details on these two groups of factors, reference is therefore made to § 4.7 (pages 30-32).

## **6. The 'Basic Issues': factors influencing the current stagnant, or even declining cut flower market in South Korea.**

After Chapters 1-5, with an overview of the current situation in the South Korean ornamental market, its recent history and trends in domestic production and national and international trade, in this chapter the 'core issue' of this report is addressed: *what are the reasons that South Korean consumers and other 'users' of cut flowers, given their established wealth and moderately rising income levels, seem to spend less on cut flowers than their counterparts in comparable economies (like Japan and Western Europe) or even in less developed nations (like China and Russia)?*

In research and interviews with consumers, government officials, economic researchers, flower growers, suppliers, importers and exporters, several factors have been mentioned that may be of influence on the current market situation. In this chapter these factors are listed; Chapter 7 offers suggestions and recommended strategies to overcome bottlenecks and accelerate market development.

### **6.1 Production – Lack of investment and ambition.**

As made clear in § 4.7, on the production side, a lot could be gained by investment in technology, use of new species and varieties and training of operational staff in use of new technologies and cultivation of 'new' ornamental crops. Up to now, efforts to set up large-scale, modern greenhouse projects have been unsuccessful, mostly due to internal, 'political' factors. On the individual grower level, investment budgets are minimal and the general mentality is conservative. Growers of ornamental crops who can't cope in the stagnating or shrinking market either retire or change to vegetable or fruit crops. It will be crucial to create a better investment climate, and in South Korea the government will have an important role in this, especially by encouraging banks to invest in the sector and by creating incentives for commercial investors and 'new style co-operatives' of existing growers enabling them to scale up their business in a feasible way – see § 7.1 for suggestions in this field.

### **6.2 Distribution - An un-developed retail system and problems in the "cool chain".**

As we have seen, compared to other sectors, *ornamental retail channels in South Korea are still underdeveloped, few in numbers and (often) unprofessional.* Consumers can buy pre-composed bouquets at the wholesale markets' retail stores, in traditional flower shops and at a limited number of web shops, but the system can't be compared with retail structures in Western Europe, the US or even Japan. On top of clearly visible logistic bottlenecks, consumers still complain about *poor quality* (especially of locally grown cut flowers), which has a lot to do with lack of investment in a professional "cool chain" from grower to consumer, see § 4.6.

### **6.3 Consumption - Cultural and social factors.**

Several respondents emphasized that “Korean people are different” from their neighbours in Japan, China and the nearby ‘Europeans’ of the Russian Federation. In their view, Korean consumers are *less interested* in buying cut flowers and other items for home decoration or as personal gifts. The ‘showing face’ attitude of large companies and government services does have a positive influence on flower and plant sales. However, as indicated, this type of buying has been severely obstructed in recent years, first by the world-wide financial and banking crisis and subsequently by ‘anti-graft & bribery laws’ and government austerity measures.

An issue in this respect may be the fact that South Korea is a relative *newcomer* in the Rich Countries’ League: still in 1985, per capita income was about 2,500 USD per year, while today it lies between 30,000 and 40,000 USD, depending on the calculation method used. Neighbouring Japan preceded South Korea by at least two decades in reaching high income levels, and also Japan’s pre-war history from 1850 onwards shows more ‘modernization’ and picking up of Western technologies and habits. Maybe it’s just a matter of *time* before cut flowers really become hip & trendy in South Korea... in any case, cultural aspects need special attention in designing marketing campaigns.

*Social* factors mentioned tend to focus on the *work-oriented attitude* of consumers: people are always working, parents make very long working days and rather spend their free time and budget on food, drink and holidays than on home decoration, while grandparents (who often take care of their grandchildren outside school hours) are so cost-conscious they don’t want to spend a penny on ‘frivolous’ items like cut flowers.

While there may be some truth in this opinion, it doesn’t explain the more steady rise (and in some products even a *boom*) in *Japan and China*, where the same focus on work and scarce free time don’t block people from buying cut flowers and asking for new, unknown species and varieties.

### **6.4 Consumption - Successful marketing of ‘competing’ products.**

According to trend-watchers and market analysts, South Koreans may be the most eager ‘early adopters’ of all kinds of electronic gadgets, video games, robot toys and ‘household robots’ in the world. Even more than other Asian consumers, they tend to follow ‘everything’ on Internet, and spend a lot of their free time *and* budget on the constant stream of updates, new versions and electronic *must-haves*. Both the government (a/o by creating immense public wi-fi networks) and the private sector (mobile phones and the whole ‘new economy’ designed for the small screen) encourage this consumption frenzy, and their intensive advertising and marketing campaigns can be seen everywhere. In the battle for consumers’ attention and budget, the cut flower sector clearly doesn’t belong to the winning parties. With the total economy as it is today however, improvement should be possible, as will be addressed in Chapter 7.

## **6.5 Consumption - Lack of professional promotion and marketing efforts.**

This phenomenon is of course directly linked to § 6.2: the electronics industry, *gaming* stars, casinos and suppliers of food, drink and -a recent trend- *camping and outdoor gear* are doing excellent business in South Korea supported by professional marketing and advertising. The cut flower sector however is characterized by low investments, stagnation and lack of 'confrontation' of consumers with its products. South Korean growers and officials are surprised to hear that even in Holland ("the number 1 flower country in the world") and its direct surroundings (Germany, Belgium, France), where everyone can find excellent flowers and convenient distribution close to home and office, Dutch flower promotion bureaus still engage in frequent campaigns to keep consumers focused on their products and attract new (young) buyers. New, innovating 'flower start-ups' like Kukka seem to realize the importance of marketing and promotion much more than traditional market parties; this indeed gives hope for the future.

## **6.6 Consumption - High prices.**

A rather surprising result of research in South Korea was the fact that consumers complain about *high prices of locally produced cut flowers, and almost no difference with prices of imported flowers*. It seems that somehow the market has retained price levels from a past period, where a certain 'luxury / elite' approach resulted in high prices combined with relatively low volumes. For many years, existing flower growers were able to make a nice living out of this relatively small but stable market, and no heavy price-fighting with foreign suppliers was taking place. This situation seems about to change: new innovating entrepreneurs start their own import business with Colombia, Africa and The Netherlands, and new suppliers like Vietnam and China (cut orchids, chrysanthemums) are discovering South Korea as an addition to their growing exports to Japan.

## **6.7 Consumption - Inflation and rising costs of living – what's the consumer's real budget?**

In spite of official economic figures showing a steady growth of the total South Korean economy with annual rates between 2.5 and 4%, several sources in the country reported that *inflation* and rising prices of certain necessities (housing, meat, fish, transport) largely compensate this growth, leaving real expendable income levels largely *stagnant*.

Statistics (a/o official figures published by the World Bank) indicate that inflation (defined as rise in consumer prices) has remained below general economic growth in the last decade, and is at a 'healthy' level between 1 and 2%, after a short spike to 5% in the crisis year 2008. Still, the idea of stagnation can also have a psychological component. Consumers are afraid of a new recession, and worry about the current trade war between China (still the only friend and protector of unpredictable North Korea) and the US (South Korea's biggest ally, deploying large numbers of troops in the country).

This difficult situation (whether completely true or more perceived) is of course not favourable for development of the market for 'luxury' items like cut flowers. However, room for improvement can be seen, given the level reached by the country's economy; suggestions for this are given in the next chapter.

## **7. Suggestions and recommendations for improvement and development of the South Korean cut flower market.**

Based on the 'basic issues' defined in the preceding chapter, in this part some suggestions for improvement are presented. Apart from desk research and a very enlightening fact-finding visit to South Korea (in mid-November, 2019), these recommendations are based on a long experience (>25 years) with the international horticultural sector including ornamental products and young plant materials, a world-wide network in this field, and a focus on East Asia (China & Taiwan/Hong Kong, South Korea, Japan, Thailand, Vietnam, other ASEAN countries) during the past 8.5 years.

Issues are discussed in the same sequence as in Chapter 6; efforts have been made to emphasize factors seen are more important or having a larger impact than others. Also, *lessons learned* from past activities will be included in this chapter.

*In each paragraph, a general part (Suggestions) is followed by a more specific part (Recommendations), which includes possible input by Dutch specialized suppliers of technology and services. It should be kept in mind here that any major change or improvement will have to involve a certain input by South Korean government institutions; not only for financing reasons, but also due to the 'politicized' nature of agricultural activities in the country. Given this situation, Dutch companies and institutions looking to enter the South Korean market, or to intensify their activities there, can benefit greatly from services supplied by the Agricultural Bureau of the Royal Netherlands Embassy in Seoul.*

### **7.1 Production – Lack of investment and ambition.**

As seen in § 6.1, today's ornamental growers in South Korea lack financing for investment in technology and expansion of acreage, and in general they're not up-to-date with the latest innovations in high-tech horticulture. This does *not* mean that the sector has to be built up from scratch; it can be said that South Korean ornamental production functions on a *medium level*. Most greenhouse cultivation is done in substrate (soilless), and dripping irrigation and (partly) automated fertilizing are widely used. In the field of Integrated Pest Management (biological control of pests), South Korea has already reached an advanced level: almost all biological control organisms have been allowed by the authorities, and are used on a large scale in vegetable cultivation (less in ornamentals). A certain infrastructure of technology suppliers (including some Dutch companies and their agents) is available. However, in order to revitalize local cut flower and plant production in such a way that the required levels of product quality and delivery assurance are reached (in order to meet demands of domestic supermarkets and consumers and be able to export to Japan and other markets), *serious investment in technology, practical knowledge and organizational reform* will be needed.



Investment in new technology can only be realized with the help of *banks*, by *government subsidies* or by *financial injections by large chaebol corporations*. An important lesson *learned here* in the past three decades is the high sensitivity of several 'interest groups' (growers' unions, political parties, lobbyists for different sectors within and without agribusiness). This sensitivity has created many obstacles for large-scale, turn key investment in modern greenhouse projects. Dutch turn key greenhouse construction companies have experienced quite some difficulties in South Korea (also financially), although there are examples of good co-operation with South Korean agents/counterparts, whereby engineering and key technology were supplied by the Dutch and many materials (steel frame, glass, heating pipes, specific South Korean electrical boilers etc.) by local manufacturers. A well-known example of difficulties experienced is the *Dong Bu* project, initiated around 2010 and meant to become a large-scale glasshouse project (starting with 10 hectares) on newly reclaimed land in a coastal area. Financing included substantial government subsidies. Several Dutch greenhouse constructors were approached for turn key quotations, but (according to sources involved at the time) half-way in the procedure the government "changed the rules" and suddenly stipulated large input by domestic builders and suppliers. On top of that, domestic growers protested that this new investment came down to unfair competition and favouritism. The project suffered great delays and has lain unproductive for years. Other projects, all in the vegetable sector, were finished more smoothly, but the general feeling among foreign suppliers is still that South Korea is an unpredictable, difficult market.

- **Recommendations, incl. opportunities for Dutch input.**

- Clear, long-term *financing schemes* should be made available for (groups of) ornamental growers and new investors, favouring high tech, high quality technical solutions. **Actors:** the government, banks, large corporations, growers' groups (all domestic), consulting companies (domestic and foreign).
- *Large scale land plots* (mostly in reclaimed land areas) should be made available at attractive rental or leasing rates. **Actor:** the government.
- *Engineering, construction and installation services* must be offered, designed to meet South Korea's (harsh) climate conditions and creating an optimum situation for growing high-quality cut flowers and plants. **Actors:** greenhouse construction companies and other technical companies supplying greenhouse technology, consultancy companies (domestic and foreign, notably Dutch).
- Ideally, *co-operation systems ('new-style co-operatives')* should be formed involving young and ambitious ornamental growers, enabling them to be partners in, operate and manage new, large-scale modern greenhouse projects. **Actors:** the government, growers' associations, consulting companies (domestic and foreign, notably Dutch, e.g. Alterra).
- *Training programs* are needed to educate both established growers and the new generation (college and university students of horticulture) in operation and management of modern greenhouse projects. Knowledge transfer should focus on practical skills and use of high-tech equipment. **Actors:** domestic colleges and universities (the interest is there), foreign (notably Dutch) education groups and consulting companies.

## 7.2 Distribution - An un-developed retail system and problems in the “cool chain”.

The unprofessional approach in parts of the ornamental value chain is a very important ‘braking factor’ for total market growth and development. Two essential ‘remedies’ can help solve this issue: *investment* and *training*. As can also be seen elsewhere, investment alone is often not enough: growers, traders, market employees and even consumers often have to be trained and instructed on how to handle equipment and how to deal with a valuable living product like cut flowers.

It is therefore advisable to set up *practical training programs* for young and future growers, and also for staff of young and ambitious entrepreneurs (like Kukka and Snow Fox). A government-funded organization like *aT* could play a role in this, but we strongly recommend to involve *the private sector* as well, creating a kind of ‘Public-Private Partnership’, with which the sector in The Netherlands has had good experiences.

*Investment* in certain ‘weak links’ in the chain is also crucial to boost product quality and create more consumer confidence. Finally, given the steady reduction of the number of flower growers, scarcity of land and the presence of many job opportunities in other sectors (both inside and outside agribusiness), we expect that *cut flower imports* will keep growing in South Korea, possibly at an even faster rate when the entire value chain professionalizes further.

### • Recommendations, incl. opportunities for Dutch input.

- Naturally, the need for clear, long-term *financing schemes* also applies to investments in the ‘cool chain’ and distribution. The cool chain starts at grower level (post-harvest handling and packaging, pre-cooling at the farm, use of flower preservatives) and should also involve transport companies, flower markets and auctions, private wholesalers and traders, retailers and e-commerce companies.  
**Actors:** the government, banks, large corporations (all domestic), consulting companies (domestic and foreign).
- *Engineering, design services and supply of cool chain technology and distribution facilities* must be offered: cooling rooms, refrigerated transport, sorting and packing lines, flower preservatives and other necessities, distribution centres. **Actors:** specialized technology suppliers, existing facilities at wholesale markets, flower auctions and airports (domestic), consulting companies (domestic and foreign, notably Dutch).
- *Training programs* are needed focusing on post-harvest handling, handling of imported flowers and export shipments and the cool chain.  
**Actors:** domestic colleges and universities, foreign (notably Dutch) education groups and consulting companies.

## 7.3 Consumption - Cultural and social factors.

The concept that “(South) Koreans are different from other people” is of course a very wide-spread phenomenon, and can just as frequently be heard in China, Italy or -maybe most of all- the UK. In itself it doesn’t explain the under-developed state of the South Korean cut flower market, but it will be important for marketeers (whether local or foreign/Western) to take cultural factors into South Korean Floriculture – November 2019

account when designing campaigns to promote flower consumption in South Korea. Partly because of their sad and violent history in recent times and especially before the 1980's, South Koreans tend to have a high sense of 'uniqueness' and are sensitive to foreigners' perception of the (South) Korean history and culture. Some study of typical customs and symbols that differ from those of neighbouring countries will improve the effect of marketing campaigns.

- **Recommendations, incl. opportunities for Dutch input.**

- Cultural and social factors typically ask for a focused *marketing* approach: show consumers the added value of flowers and plants in their home and leisure time, with respect for local customs and traditions but creating a kind of 'wow factor' related to the use of flowers and plants.

**Actors:** wholesalers, traders, retailers and e-commerce shops (domestic, possibly with assistance by foreign exporters and marketing specialists), promotion bureaus, advertisers and consulting companies (foreign, notably Dutch).

- In this respect, the formation of a kind of "*Flower Bureau Korea*", modelled after its namesake in Holland, is recommended. Of course, flower/plant/ bulb promotion can be done by traders, importers and (Dutch) exporters to South Korea, assisted by product promotion organisations like BBH and iBulb, but the mere fact that South Korean ornamental consumption (especially in cut flowers) is clearly lagging behind compared to that of neighbouring countries calls for a more intensive approach. **Actors:** wholesalers, traders, flower auction and retail incl. e-commerce (domestic), exporters, promotion bureaus and consultants (foreign, notably Dutch). A joint approach by South Korean and Dutch/foreign initiators will minimize risks of cultural or social errors in setting up advertising campaigns, events, festivals, TV programs ("Korea's Best Florist") and other activities.

#### **7.4 Consumption - successful marketing of 'competing' products.**

#### **7.5 Lack of professional promotion and marketing efforts.**

As seen in § 6.4, it is a clear fact that in South Korea today, many other consumer products, especially in the electronics/internet/mobile phone sectors, are being marketed much more successfully than cut flowers. Although it isn't easy to compare the market potential of totally different products, growth figures (both in the general economy and in GDP per capita) indicate that there is room for more consumption of cut flowers and pot plants. Also here, professional *marketing* efforts will be needed to increase ornamentals' share in consumer budgets. New and innovating private companies like Kukka are launching promising and successful initiatives in marketing, but for now they still lack the clout to be a promotor for the whole sector.

- **Recommendations, incl. opportunities for Dutch input.**

- As also stated in § 7.3, *concerted action in marketing* is urgently needed. On the South Korean side, government and private sector should jointly create an efficient and highly commercial *organization resembling the "Flower Bureau Holland"*, preferably in direct co-operation with parties in

The Netherlands. South Korean consumers must be made clear that “Flowers Love People”, as the famous Dutch advertising song goes: in pop-up stores, on TV and internet, in the subway, everywhere where large groups of consumers are passing there should be advertising for cut flowers as a source of happiness and beauty. The market potential -in the form of the buying power of more than 51 million consumers- justifies serious investment in cut flower marketing. **Actors:** see § 7.3. Apart from direct advertising, of course other *soft tactics* can be used: flower festivals (with sponsoring by suppliers of high quality and ‘new’ types of flowers), TV and Internet show programs and floral decoration of events like trade shows in industrial sectors, fashion and cosmetics.

## 7.6 Consumption - High Prices.

As indicated in the above, it seems that the relatively sheltered and ‘protected’ position of South Korean cut flower growers is coming to an end, as imports are growing and traders and consumers discover that better quality flowers are available for similar or even lower prices than locally grown ones. With *more competition*, there will be more pressure on pricing; hopefully flower traders will not end up starting a ‘race to the bottom’ in which nobody makes money anymore. This won’t be necessary, as consumers are already used to relatively high price levels.

- **Recommendations, incl. opportunities for Dutch input.**
- In the wholesale, retail and flower import (export from third countries, often involving Dutch producers and traders), a careful *pricing policy* should be maintained: really luxurious and costly items like orchids and tulips may remain at relatively high price levels, but in more large-scale and world-wide businesses like lilies, chrysanthemums and carnations, slightly more aggressive pricing may turn more consumers into regular buyers. **Actors:** wholesalers, traders and retailers incl. e-commerce shops (domestic), exporters to South Korea, business development consultants (foreign, notably Dutch).
- Also, *rationalization of sales processes* and *further growth of e-commerce/direct home delivery* (by which certain ‘middlemen’ are kicked out of the value chain) can lead to more affordable prices and more frequent buying by consumers. **Actors:** especially domestic sales channels.

## 7.7 Consumption - Inflation and rising costs of living – the consumer’s ‘real budget’.

Following some crisis periods in the past, economic growth in South Korea in the last decade has been stable at rates of 2,8 to 4%. Since 2012, the official annual rise in consumer prices has remained below 2%. The population therefore enjoys a stable and financially ‘healthy’ life, as is also proven by other indicators. Still, actual regional and world-wide developments (trade wars, unrest in certain regions, the ongoing unpredictability of the neighbours in the North) create some

worries among consumers. However, South Korean consumers definitely have financial room to allow the market to develop further

- **Recommendations, incl. opportunities for Dutch input.**

– Reference is made to the preceding paragraphs of this chapter: *investments leading to quality improvement of products of offer, professionalization of the value chain, skills training, focused marketing.* **Actors:** see § 7.1-7.6.

## 8. SWOT Analysis – The South Korean market and opportunities for input from The Netherlands

In the following diagram, a short SWOT Analysis is given of the South Korean cut flower market, focusing on its Strengths and Weaknesses as of today, and on Opportunities and Threats for Dutch companies and institutions operating in South Korea or willing to do so.

<b>STRENGTHS (South Korean Market)</b>	<b>WEAKNESSES (South Korean Market)</b>
<i>Developed and stable Economy: wealthy middle class.</i>	<i>Social and psychological factors: perceived stagnation, worries about international political developments.</i>
<i>Market: growth at consumer level.</i>	<i>Market: shrinking at institutional level (government, multinationals).</i>
<i>Room for more purchases of quality and luxury goods by upper and middle class consumers.</i>	<i>Sensitivity to conjuncture change: ornamentals are most affected in case of economic downturn.</i>
<i>Production: existing growers have a certain experience and use 'medium tech' greenhouses and technology.</i>	<i>Production: lack of knowledge at all levels, not enough investment in cold storage, logistic cold chain etc.</i>
<i>Distribution/sales: E-commerce boosts cut flower/bouquet sales.</i>	<i>Distribution/sales: Flower wholesale markets and traditional shops are lagging behind, inadequate facilities, product deteriorates quickly.</i>
<i>Consumers and traders look for new/non-traditional species and varieties</i>	<i>Breeders and young plant suppliers are reluctant to introduce new/better varieties because of royalty issues.</i>
<i>Government and multinational corporations (chaebols) aim to create new, large agri-industrial zones in reclaimed lands along the coast.</i>	<i>Small size of traditional farm holdings, transformation will take time. New investments face large political opposition and obstruction.</i>

<b>OPPORTUNITIES (NL input)</b>	<b>THREATS (NL input)</b>
<i>Import of finished product is growing fast, especially in cut flowers.</i>	<i>Government may face political pressure to change policies and legislation.</i>
<i>Excellent reputation of The Netherlands in all fields: cut flowers, seeds &amp; young plants, greenhouse engineering, technology.</i>	<i>Seeds &amp; young plants: uncontrolled propagation. Technology: copycat production by local competitors.</i>
<i>High-tech agriculture is developing well, very good prospects for Dutch suppliers.</i>	<i>Vegetables and other food crops (like strawberries) dominate the current 'boom'.</i>
<i>Need for cold storage, distribution centres and other post-harvest facilities and equipment.</i>	<i>Competition by local and Chinese/third country suppliers; some investors still don't realize the importance of the post-harvest chain.</i>
<i>Need for training programs and consultancy in all fields.</i>	<i>Training: more cooperation is needed, joining of forces by Dutch institutions will increase efficiency.</i>

## 9. Conclusions and summary of recommended strategies.

In this final chapter, some general conclusions are given based on the SWOT Analysis and the preceding chapters. As shown, the South Korean market for cut flowers seems to be entering the 'World League', after a long sheltered, protected (and maybe unnoticed) period. Some trends and expected developments are identified, and suggestions given for strategies to boost the market and opportunities for all links in the chain, including Dutch suppliers.

### 9.1 Conclusions.

In its own, unique way, in only 40 years (1953-1993), South Korea has developed from a poor, war-torn and subsistence-farming society to the 11<sup>th</sup> economy in the world, with nearly full employment for its (mostly upper and middle class) inhabitants.

Against expectations, this development has *not* been a stimulus for growth of the market for cut flowers and other ornamental products. *Local growing of cut flowers* has stagnated and is currently going down, and only very recently *cut flower imports* have picked up, giving some hope for the future. Also imports of Dutch *flower bulbs* (60% used for parks and flower festivals) show healthy growth; *gardening and landscaping* have also created stable or growing business. For the 'finished product' of cut flowers and pot plants however, the negative effects of the 2008-2012 financial crisis have *not* been repaired by new serious growth, and even new obstacles were introduced by the government's austerity and 'anti-graft' campaigns since 2016.

As a result of positive developments in *other horticultural crops* (like sweet peppers and strawberries, for both export and domestic sales), a certain infrastructure of South Korean and international suppliers (many of the latter are Dutch) has formed. Technology suppliers and breeding companies have taken the lead in setting up sales & service facilities in South Korea (often working with local agents), and only recently the market has been getting more attention from *cut flower exporters*. Furthermore, *training and education organizations and consultancy companies* are increasing their activities in the country, benefiting from a growing awareness by the South Korean government and investors of the importance of training and start-up management in horticulture.

We expect a growing 'internationalization' of the South Korean cut flower market as well; the better quality of imported flowers (combined with a similar or even lower price level, compared to what the market had been used to) will stimulate consumer confidence and sales.

Flowers and plants are 'luxury' products, and sales are highly influenced by the general state of the economy and consumer purchasing power. The South Korean economy is now generally seen as prosperous, open and little regulated, but the highly 'politicized' nature of the *entire* society should not be underestimated. People still remember the military dictatorship in the 1960's en - 70's (when the economy developed rapidly, sheltered by huge tariff walls and other protection measures), and even recent democratic governments have repeatedly reversed or cancelled policies to appease important voter groups – one of which is formed by conservative farmers. Even though in the cut flower

sector any drastic measures (like prohibitive import duties) are not expected in the near future, in this country they can't be completely ruled out.

Though a bit outside the scope of this report, *legal issues* can be important obstacles for business growth, especially in the markets for *seeds, cuttings and other planting materials*. South Korea's strict (and sometimes a bit erratic) *plant quarantine regulations* can make it difficult to supply materials, in spite of market demand. An even larger issue is *the low priority given to the enforcement of Plant Variety Protection (Breeder's Rights) and the still widespread uncontrolled propagation of ornamental crops*. Foreign breeders are reluctant to introduce their newest and best varieties to South Korea, leading to stagnation in development of the country's cut flower and pot plant assortment.

## **9.2 Recommended strategies, and options for input from Dutch and Dutch-operated companies and institutions.**

*Investment in improvements* is needed. As in earlier chapters, categories within the value chain can be identified as follows:

- **Production** (financing, ensuring availability of large-scale plots of land, formation of 'new style co-operatives' of growers, greenhouse engineering and construction, cultivation technology, training and education).
- **Distribution** (post-harvest handling, refrigerated storage and transport, the entire 'cool chain' from grower to consumer, professionalization of wholesale and retail channels, involvement of supermarkets, further growth of e-commerce and home delivery, growth of imports of attractive flowers, training and education in the 'post-harvest cycle').
- **Marketing & Consumption** (marketing and advertising campaigns, the creation of a "Flower Bureau Korea", pop-up stores, online/offline combinations, events and festivals, floral decorations at events and trade fairs in other popular sectors, more aggressive pricing policies).

With the exception of (local) financing and greenhouse project land policies, Dutch and Dutch-operated companies and institutions can (and should) be very valuable contributors to **all** activities mentioned here.

Engineering and construction of greenhouses, all kinds of cultivation technology, cold storage and the entire cold chain; supply of flower bulbs and other planting materials; export of cut flowers to South Korea from The Netherlands, East Africa and other regions; assistance and training in setting up professional marketing systems and promotion campaigns; training and education in 'all' fields relating to floriculture – all these products and services can be found in The Netherlands and are applied world-wide, many of them also already in South Korea. It is highly recommended that manufacturers and service providers in *all* these sectors pay more attention to South Korea as a market with great sales potential and an underdeveloped floriculture sector.

As hopefully made clear as well, the complex (and in some cases unique) South Korean ornamental market also has its drawbacks and (potential) problems. For new parties in the market, *caution and patience* are highly recommended, and a thorough *preparation* of activities will help to avoid disappointment. Market parties warn for overstretched expectations: any reversal of the last decade's market decline to new growth -which seems definitely possible- will *go slowly*

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*and take time, a good network and a sense of the cultural and historical issues affecting business practices.*

Chances at success will be maximized if forms of *co-operation* are established. Firstly, supply of goods and services can best be carried out together with a local *South Korean partner* (agent, associate or 'sister organization'). This has been proven by success stories from the past to decades, and the situation will remain like this. Furthermore, it is recommended that *exporters and suppliers of goods and services to South Korea work together wherever possible*; in spite of its modern, wealthy and westernized appearance, this is definitely a country where efforts to 'invent the wheel' by individual foreign actors will mostly lead to delays and disappointments.

**To sum up:** after years of stagnation and even decline, the South Korean floriculture market shows some signs of revitalization, especially in cut flower imports and consumer sales by online/offline retail combinations. There are big opportunities for Dutch suppliers of products and services, when they keep in mind that entering *and staying in* this market takes a lot of time, investment in local partners and a large network, and careful operation in legal and financial matters.

The following sectors are likely to be especially interesting for Dutch suppliers and investors in South Korea in the coming years:

- Cut flower imports to South Korea from The Netherlands, Africa, Latin America and other areas, especially in 'new' species and varieties.
- Flower bulbs and other planting materials, especially for landscaping, gardening and flower festivals.
- Greenhouse engineering and construction (with local partners/sourcing of certain materials locally).
- Cultivation technology for greenhouse production.
- Training, education, cultivation management and consulting services.

### **9.3 Sustainability.**

Generally speaking, South Korea's present status as a developed country also brought about serious interest for *the environment, sustainability and Corporate Social Responsibility (CSR)*, at all levels: government, corporations and consumers all formulate opinions and policies to ensure production and economic growth has to consider the 'PPP' principle: not just *profit*, but also taking care of the *people* (safe working conditions, fair pay) and the *planet* (no harm to the environment, minimum waste, responsible use of resources).

In agriculture, this awareness can be seen in *legislation* (quick adoption of Integrated Pest Management, control on sales of pesticides and their use by farmers), and -in the food business- a growing interest for *food safety, organic produce and 'safe and healthy' working conditions* in crop production and handling. Because most growers in greenhouse horticulture already operate on a 'medium-tech' level (see § 7.1), they also are *able* to implement working methods meeting government and consumer demands: minimal use of pesticides (and only the ones allowed by legislation), precise dosage of fertilizers (partly or fully automated), safe labour conditions for workers and fair payment to staff. Food safety issues are of course more essential in vegetable and fruit production

than in ornamentals. Korean growers' aim to *export* to Japan further increases their eagerness to operate in a 'clean' way, because that country has one of the strictest quarantine and food safety legislations in the world, which is actually reinforced in a very perfectionist manner. Still, the relatively strict safety and sustainability regulations in the food sector also have their influence on ornamental production: also flower and plant growers have to follow the rules, and don't see sustainable production as merely a cost-raising factor but also as a way to distinguish themselves in the market and promote sales.

Another example of efforts to increase sustainability can be seen in the *energy* sector: although South Korea has little or no fossil fuel resources, there is considerable public resistance against coal-fired power plants, even though they use the most modern filters and purification systems. Natural gas (also imported as LNG) and nuclear power (not totally 'clean', but CO<sub>2</sub>-free) are promoted, and greenhouse growers use electrical boilers for their heating systems, as coal burning is often prohibited and electricity rates are low due to government policies.

One development, at least in the short term, can be seen as a negative factor where sustainability is concerned: the growing *import of cut flowers*. The Netherlands, Kenya and Colombia are all 10,000 km or more away from South Korea, so the journey of fresh cut flowers by air results in a heavy *carbon footprint*. Imports from China or Vietnam result in less CO<sub>2</sub> emissions, but of course they also contribute negatively to climate change.

As has been made clear in the preceding chapters, at this moment imports of high-quality cut flowers are growing, and their market share is rising while that of local production is shrinking.

From a sustainability point of view, accelerated improvement of *local* flower and plant production, using methods, technology and services as described earlier in this chapter, is to be preferred over a *boom* in cut flower imports. Realistically speaking however, for the short term imports are expected to rise faster than local production. Sustainability issues may be used as a factor in advising the South Korean government and the private sector to revitalize the domestic ornamental sector, and not become totally dependent on imports from far away regions.

**Annex:**

Names and e-mail addresses/websites of a selection of organizations and companies active in the South Korean floriculture sector and consulted for this report (indicating sector/type of business).

**Note: some websites may only be in Korean.**

**Chapter 1: Foreword.**

- **Royal Netherlands Embassy, Seoul** – Agricultural Bureau: [sel-Inv@minbuza.nl](mailto:sel-Inv@minbuza.nl)

**Chapter 2: South Korea – Introduction to the country and its market for ornamentals.**

- **World Bank** (data): <https://data.worldbank.org>
- **World Economic Forum**: [www.weforum.org](http://www.weforum.org)

**Chapter 3: The South Korean market for ornamentals: facts and figures, and trends in recent years.**

- **Ministry of Agriculture, Food and Rural Affairs, Seoul**: [www.mafra.go.kr](http://www.mafra.go.kr)
- **Korea Florist Association (CFA)**: [www.koreaflower.or.kr](http://www.koreaflower.or.kr)
- **Korean Economic Research Institute (Agriculture Dept.)**: [www.krei.re.kr](http://www.krei.re.kr)
- **Korea Agro-Fisheries & Food Trade Corporation (aT)**: [www.at.or.kr](http://www.at.or.kr)
- **Goyang Flower Show (annually)**: <http://flower.or.kr>
- **KIEMSTRA Agricultural Technology Trade Fair (bi-annually, next one to be held from October 28-31, 2020)**: [http://kamico.or.kr:8001/KIEMSTA/e\\_sub1\\_about.html](http://kamico.or.kr:8001/KIEMSTA/e_sub1_about.html)

**Chapter 4: Cut flowers.****(i) Dutch companies and institutions:**

- **Holex BV** (Dutch exporter/trader of cut flowers, recently opened a sales office in Shanghai, China): [www.holex.com](http://www.holex.com).
- **Floral Trading Group**: [www.floraltradegroup.com](http://www.floraltradegroup.com).
- **Wely Flor**: [www.welyflor.com](http://www.welyflor.com).
- **Batian Flowers/Upendo Flowers** (Dutch grower and exporter/trader of cut flowers, very active in East Africa and now represented in Beijing, China): [www.upendoflowers.com](http://www.upendoflowers.com).
- **Rijns Flowers**: [www.rijnsfloweronline.nl](http://www.rijnsfloweronline.nl).
- **Front Mountain**: [www.frontmountain.com](http://www.frontmountain.com).
- **IBH Export**: [www.ibh-export.nl](http://www.ibh-export.nl).
- **Vianen, Rijnsburg**: [www.cjvianen.com](http://www.cjvianen.com).
- **Dümmen Orange China** (Dutch conglomerate of breeding companies of cut flowers and pot plants, represented in South Korea): [www.dummenorange.com](http://www.dummenorange.com).
- **Syngenta Flowers** (ornamental division of seed giant Syngenta Seeds): [www.syngentaflowers.eu](http://www.syngentaflowers.eu).
- **iBulb** (Dutch Flower Bulb and Bulb Flower Information Centre): [www.ibulb.org](http://www.ibulb.org).
- **Haakman Bloembollen BV** (Dutch exporter of tulip- and other flower bulbs, represented in South Korea since many years): [www.haakman.com](http://www.haakman.com).
- **C. Steenvoorden BV** (Dutch exporter of lily- and other flower bulbs, represented in South Korea since many years): [www.steenvoorden.nl](http://www.steenvoorden.nl).

- **Jansen Overseas BV** (Dutch exporter of tulip- and other flower bulbs, active in South Korea: [www.jansenoverseas.com](http://www.jansenoverseas.com)).
- **Kapiteyn Group** (Dutch breeder and supplier of calla (zantedeschia) bulbs, active in South Korea): [www.kapiteyn.nl](http://www.kapiteyn.nl).

(ii) **South Korean companies and institutions:**

- **Kukka** (successful start-up in flower e-commerce, combining its online sales with a growing number of “flower & fun cafés” in Seoul): <https://kukka.kr>.
- **Snow Fox** (upcoming chain of “flower & lifestyle shops” and restaurants in Seoul): <http://snowfoxflowers.com>.
- **Woori Seeds & Flowers** (successful importer of Dutch flower bulbs and flower seeds, also involved in export of his South Korean customers’ cut flowers to Japan): [www.wooriseed.com](http://www.wooriseed.com).

(iii) **Companies/institutions from other countries:**

- **Ball Seeds** (US breeder of (a/o) cut flowers and pot plants propagated from seed, very active in South Korea): [www.ballseed.com](http://www.ballseed.com).
- **Sakata Seeds** (Japanese seed breeder for ornamentals and vegetables, represented in South Korea and having a research station in the country): [www.sakata.com](http://www.sakata.com) and [www.sakataseed.co.jp](http://www.sakataseed.co.jp).
- **Klasmann-Deilmann GmbH** (German manufacturer and supplier of substrates, young plant plugs and potting soil, covering South Korea from its sales office in Shanghai, China): [www.klasmann-deilmann.com](http://www.klasmann-deilmann.com).

**Chapter 7: Suggestions and recommendations for improvement and development of the South Korean cut flower market.**

(i) **Dutch companies and institutions:**

- **Koppert Biological Systems** (producer and supplier of Integrated Pest Management systems: predator insects to eliminate harmful insects in greenhouses, bumblebees for natural pollination etc., very active in South Korea through a JV company with a local partner): [www.koppert.nl](http://www.koppert.nl).
- **Codema Systems Group** (engineering, manufacturing and installation of energy-saving internal transport systems, cultivation systems, automated irrigation and fertilizing systems and lighting systems for greenhouses, active in South Korea and having an Asia office in Beijing, China): [www.codemasystemsgroup.com](http://www.codemasystemsgroup.com).
- **Priva BV** (manufacturer of greenhouse computer systems for climate control and coordinated operation of equipment, irrigation/fertilizer/water recirculation systems and labour registration systems, very active in South Korea and having a service & support office for East Asia in Beijing, China): <https://www.priva.com>.
- **Lentiz Education Group** (Vocational training for operational staff and management of modern greenhouse projects and mid-level courses for students of South Korean universities / agricultural vocational colleges, based in the Westland region): [www.lentiz.nl](http://www.lentiz.nl).
- **Aeres Group** (University of Applied Sciences, active in South Korea): [www.aeres.nl](http://www.aeres.nl).
- **Terra College** (Vocational education schools from the north of Holland, active in South Korea): [www.terra.nl](http://www.terra.nl).
- **CoHort Consulting** (Business development consultancy & representation company, active in South Korea): [www.cohortconsulting.eu](http://www.cohortconsulting.eu).