4. Imports of Flowers and Plants

- Cut flowers account for the vast majority of imported flowers and plants. Cut flowers import has been on an increasing trend since 1985 when the custom duty was abolished. Major import partner countries include Colombia, Malaysia and China.
- Looking at items, imports of carnations and chrysanthemums are increasing remarkably due to improved vase life.

<table>
<thead>
<tr>
<th>Year</th>
<th>Domestic shipment volume</th>
<th>Export volume</th>
<th>Total</th>
<th>Proportion of imported cut flowers (in volume terms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>42.5</td>
<td>1.2</td>
<td>43.7</td>
<td>3%</td>
</tr>
<tr>
<td>1990</td>
<td>53.2</td>
<td>3.6</td>
<td>56.7</td>
<td>6%</td>
</tr>
<tr>
<td>1995</td>
<td>55.8</td>
<td>6.6</td>
<td>62.4</td>
<td>11%</td>
</tr>
<tr>
<td>2000</td>
<td>55.9</td>
<td>8.3</td>
<td>64.2</td>
<td>13%</td>
</tr>
<tr>
<td>2005</td>
<td>50.2</td>
<td>10.4</td>
<td>60.7</td>
<td>17%</td>
</tr>
<tr>
<td>2013</td>
<td>40.7</td>
<td>13.5</td>
<td>54.2</td>
<td>25%</td>
</tr>
<tr>
<td>2014</td>
<td>39.5</td>
<td>12.7</td>
<td>52.2</td>
<td>24%</td>
</tr>
<tr>
<td>2015</td>
<td>38.7</td>
<td>12.7</td>
<td>51.4</td>
<td>25%</td>
</tr>
</tbody>
</table>

Source: “Statistics on Flower Production and Shipment” and “Statistics on Plant Quarantine,” Ministry of Agriculture, Forestry and Fisheries

- Changes in the import ratio of cut flowers (carnation and chrysanthemum)

- Changes in the domestic shipment volume and import volume of cut flowers

<table>
<thead>
<tr>
<th>Year</th>
<th>Domestic shipment volume</th>
<th>Export volume</th>
<th>Total</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>42.5</td>
<td>1.2</td>
<td>43.7</td>
<td>3%</td>
</tr>
<tr>
<td>1990</td>
<td>53.2</td>
<td>3.6</td>
<td>56.7</td>
<td>6%</td>
</tr>
<tr>
<td>1995</td>
<td>55.8</td>
<td>6.6</td>
<td>62.4</td>
<td>11%</td>
</tr>
<tr>
<td>2000</td>
<td>55.9</td>
<td>8.3</td>
<td>64.2</td>
<td>13%</td>
</tr>
<tr>
<td>2005</td>
<td>50.2</td>
<td>10.4</td>
<td>60.7</td>
<td>17%</td>
</tr>
<tr>
<td>2013</td>
<td>40.7</td>
<td>13.5</td>
<td>54.2</td>
<td>25%</td>
</tr>
<tr>
<td>2014</td>
<td>39.5</td>
<td>12.7</td>
<td>52.2</td>
<td>24%</td>
</tr>
<tr>
<td>2015</td>
<td>38.7</td>
<td>12.7</td>
<td>51.4</td>
<td>25%</td>
</tr>
</tbody>
</table>

Source: “Statistics on Flower Production and Shipment” and “Statistics on Plant Quarantine,” Ministry of Agriculture, Forestry and Fisheries

- Import ratio and import volume by major cut flower item (2015)

**Carnation**
- 2005: Produced in Japan 73%, Imported 27%
- 2015: Produced in Japan 44%

**Chrysanthemum**
- 2005: Produced in Japan 92%, Imported 8%
- 2015: Produced in Japan 84%

**Rose**
- 2005: Produced in Japan 44%
- 2015: Produced in Japan 56%

**Lily**
- 2005: Produced in Japan 73%
- 2015: Produced in Japan 84%

Source: “Statistics on Flower Production and Shipment” and “Statistics on Plant Quarantine,” Ministry of Agriculture, Forestry and Fisheries
Comparison of Carnation Production in Japan and Colombia

- While there is no significant difference in annual average temperature between Japan and Colombia, the monthly temperatures are virtually constant throughout a year in Colombia. For this reason, heating facilities are unnecessary. ⇒ Facility expenses and heating and lighting expenses (fuel expense, in particular) are not required.
- Since there are no prominent seasonal changes in Colombia, seasonal shifting in production areas does not occur and products are stably supplied throughout the year. In addition, there is a big temperature difference within a day, which is ideal for the color and growth of carnations.
- Flower production in Colombia started as farm and auxiliary facility development by some wealthy people worked in harmony with guidance on crop diversion by the US and the Colombian government’s domestic security measures.

Comparison of the overview of carnation production

<table>
<thead>
<tr>
<th></th>
<th>Japan</th>
<th>Colombia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>318 ha (2015)</td>
<td>1,066 ha (2015)</td>
</tr>
<tr>
<td>High:</td>
<td>17°C</td>
<td>16°C</td>
</tr>
<tr>
<td>Low:</td>
<td>7.4°C</td>
<td>6°C</td>
</tr>
<tr>
<td>Altitude*</td>
<td>Approx. 1,500 m</td>
<td>2,600 m</td>
</tr>
</tbody>
</table>

Source: "Statistics on Production and Shipment of Flowers", "Statistics on Agricultural Production Income" (Statistics Department); International Statistics Flowers and Plants 2015(AIPH)

* Calculated at 136 yen to a euro, Figures for annual average temperature and altitude are those in the vicinity of production areas in Nagano Prefecture and Bogota.
### Comparison of Carnation Production in Japan and Colombia

- The average cost per unit in Colombia is half that of Japan (excluding distribution costs).
- While gray mold is a common disease in Japan, the risk of infection is lower in Colombia due to the weather conditions and cultivation environment.
- Colombia conducts thorough post-harvest temperature control and freshness control using antimicrobial agents, etc. In Japan, post-harvest processing and temperature control are still insufficient. Comprehensive efforts covering the production, distribution and retail phases need to be taken.

#### Comparison of Costs of Carnations

<table>
<thead>
<tr>
<th></th>
<th>Japan (Nagano)</th>
<th>Colombia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greenhouse</td>
<td>3,711,000 yen</td>
<td>240,000 yen</td>
</tr>
<tr>
<td>Fuel cost</td>
<td>264,000 yen/year</td>
<td>0</td>
</tr>
<tr>
<td>Facility cost*1 (per 10a)</td>
<td>130,000 yen/month</td>
<td>Wooden frame and polyethylene film</td>
</tr>
<tr>
<td>Labor cost per capita*2</td>
<td>260 dollars/month (Approx. 25,000 yen)</td>
<td>14 cents (Approx. 13 yen)</td>
</tr>
<tr>
<td>Production cost per unit</td>
<td>28.7 yen (Production area → Market)</td>
<td>12 – 15 cents (Bogotá → Narita)</td>
</tr>
<tr>
<td>Distribution cost per unit</td>
<td>10.4 yen</td>
<td>12 – 15 cents (Bogotá → Narita)</td>
</tr>
</tbody>
</table>

**Botrytis cinerea**

- Botrytis cinerea is a fungus that is a great threat to flowers, as it causes gray mold disease.
- As it is a common disease in Japan, thorough temperature control and crop dusting are needed, which adds to costs.

**Greenness Control for Carnations**

- Sorting after harvesting is conducted at room temperature in Japan, while in Colombia it is carried out in a room at 2-3 °C and flowers are then transported to airports at a low temperature.
- Since imported products have to endure lengthy transportation, freshness control is conducted in a thorough manner, through means such as using antimicrobial agents, preservation solutions and other chemical solutions.
- Such temperature control process is discontinued upon arrival at a Japanese airport and imported products are exposed to the same temperature conditions as the domestic products in the course of distribution to markets and retail stores.

---

*1: Since Colombia is free from typhoons, simple facilities are sufficient.
*2: Figure for Nagano is calculated with the minimum hourly wage (713 yen).
In order to recapture the market share seized by imported flowers and plants, it is important to leverage the strengths of domestically produced flowers, such as freshness and longevity.

In order to extend the vase life, on which consumers put a high priority in determining product quality, temperature control (establishment of the cold chain), hygiene control and use of preservative solutions must be thoroughly conducted in each phase of production, distribution and retail.

Timeline from harvesting to retailing for flowers produced in Japan and imported flowers and plants

<table>
<thead>
<tr>
<th>Day</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imported flowers (Colombian carnations)</td>
<td>Picking</td>
<td>Picking</td>
<td>Airport</td>
<td>Airport</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flowers Produced In Japan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Establishment of a distribution system to enhance the freshness and vase life of flowers

Growers
- Post-harvest pretreatment (soaking in water with antimicrobial solution, etc.)
- Strict temperature control before shipping (storing at a low temperature)

Markets
- Lowering temperatures at distribution facilities and wholesale markets
- Strict temperature control during transportation (lowering temperatures inside storehouses for loading products onto trucks, etc.)

Retail stores
- Preventing temperature rise on the way from markets to retail stores
- Soaking flowers in water upon arrival, using floral coolers, etc.

Emphasis growned in Japan by production area indication and sale with vase life guarantee

Based on interviews with market insiders
5. Exports of Flowers and Plants

The export value of flowers and plants (export items of focus) in 2016 was 8.8 billion yen, with garden trees, bonsai and potted plants accounting for the vast majority. Although the share of cut flower is low, the absolute value is growing thanks to promotional activities in export partner countries, etc.

Based on the Strategy on the Enhancement of Export Power in the Agriculture, Forestry and Fishery Industries formulated in May 2016, Japan aims to increase the export value of garden trees, bonsai, potted plants and cut flowers to 15 billion yen by 2019 by communicating the attractive features of Japan-made flowers and plants that flowers and plants made in mass producing countries lack.

### Export values for flowers and plants

<table>
<thead>
<tr>
<th>Year</th>
<th>Garden trees, bonsai, potted plants</th>
<th>Cut flowers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>15</td>
<td>24</td>
<td>39</td>
</tr>
<tr>
<td>2006</td>
<td>52</td>
<td>53</td>
<td>105</td>
</tr>
<tr>
<td>2007</td>
<td>46</td>
<td>63</td>
<td>109</td>
</tr>
<tr>
<td>2008</td>
<td>68</td>
<td>68</td>
<td>136</td>
</tr>
<tr>
<td>2009</td>
<td>83</td>
<td>83</td>
<td>166</td>
</tr>
<tr>
<td>2010</td>
<td>85</td>
<td>85</td>
<td>170</td>
</tr>
<tr>
<td>2011</td>
<td>81</td>
<td>81</td>
<td>162</td>
</tr>
<tr>
<td>2012</td>
<td>88</td>
<td>88</td>
<td>176</td>
</tr>
</tbody>
</table>

**Source:** "Trade Statistics of Japan," Ministry of Foreign Affairs

<table>
<thead>
<tr>
<th>Item</th>
<th>2016 (results)</th>
<th>2019 target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Export value (B. yen)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major export partner countries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garden trees, bonsai, potted plants</td>
<td>8.03 China, Vietnam, Hong Kong</td>
<td>14 China, Hong Kong, EU</td>
</tr>
<tr>
<td>Cut flowers</td>
<td>0.72 Hong Kong, US, China</td>
<td>1 Hong Kong, Singapore, US, Canada, Russia</td>
</tr>
<tr>
<td>Total</td>
<td>8.75</td>
<td>15</td>
</tr>
</tbody>
</table>

**Source:** "Trade Statistics of Japan," Ministry of Foreign Affairs

 Demonstration by Japanese flower designers using Japan-made flowers (U.S.)

Source: "Trade Statistics of Japan," Ministry of Foreign Affairs
Export of Garden Trees and Bonsais

- Japanese garden trees are gaining a high reputation among wealthy people attracted by genuine Japanese gardens, and have grown to become a main pillar of Japanese flower exports. "Bonsai" has already become a universal word, and has fans all over the world including the EU (e.g. Italy, Spain), China and South Africa.

- The World Bonsai Convention was held in Saitama, Japan from April 27 to 30 in 2017, for the first time in 28 years. MAFF opened a plant quarantine counter at a bonsai shop booth, so as to facilitate export of bonsais, including purchasing by inbound tourists.

- Negotiating with EU to lift the export quarantine restriction on Japanese black pine. (Made a request for lifting the restriction in March 2016)

Export value of garden trees/bonsais (by country)

<table>
<thead>
<tr>
<th>Country</th>
<th>Export Value (100M yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>45.0</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>13.6</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>7.2</td>
</tr>
<tr>
<td>Taiwan</td>
<td>5.0</td>
</tr>
<tr>
<td>Germany</td>
<td>1.1</td>
</tr>
<tr>
<td>Italy</td>
<td>3.8</td>
</tr>
<tr>
<td>Others</td>
<td>4.5</td>
</tr>
</tbody>
</table>

- Period: April 27-30, 2017
- Venue: Saitama Super Area/Omiya Sonic City
- Turnout:
  - General visitors: about 45,000
  - Registered participants: about 1,200 (about 800 foreign participants)
Export value of cut flowers in 2016 increased to 0.72 billion yen.

Particularly in the U.S., there is demand for rare flowers and gorgeous floral materials for high-end parties, fashion events, etc. As Japan started efforts for expanding the export of quality Japanese flowers, export value of cut flowers to the U.S. in 2016 reached 0.19 billion yen, or a 3.8-fold increase compared to four years ago.

About Export of Cut Flowers

Export value of cut flowers (by country)

- China 1.0
- U.S. 1.9
- Korea 0.7
- Taiwan 0.1
- Netherland 0.1
- Others 0.4

Export value in 2016: JPY 0.72 billion

Change in export value of cut flowers

Change in export value of cut flowers to the US

Source: "Trade Statistics of Japan," Ministry of Foreign Affairs

Japan-made gloriosa used in decoration at the reception of the Consulate General of Japan in New York in celebration of the Emperor’s birthday
5. Exports of Flowers and plants

In order to increase the flower and plants export value to 15 billion yen by 2019, it is important to study outstanding cases from major exporting countries and investigate the market situation of export partner countries of focus.

**[Examples of investigations on one of the major cut flower exporting countries, Kenya]**
- In order to acquire foreign currencies, the government implemented a national policy to stimulate cut flower production and export, with a focus on roses.
- A unified Kenyan brand was established and common promotional activities were carried out by the entire country.
- The cold chain from production areas to airports was established.
- Producers are engaged in the whole process, from production to processing, transportation, overseas marketing and branding.
- They are also making active efforts to obtain environmental certifications, such as MPS.

**[Examples of investigations on one of the export partner countries of focus, Singapore]**
- Singapore is a multi-ethnic country of the same size as Tokyo 23 special wards, and its population is about 5.54 million. Singapore has many residents from abroad.
- Agricultural land is scarce, and the only domestically-grown flower species is the orchid. In spite of this, Singapore is rich in plants and is called “Garden City.” People have strong interest in flowers.
- In recent years, Singapore has been importing flowers from China, EU, Africa, etc., but species of imported flowers are limited.

**[Examples of investigations on one of the export partner countries of focus, Hong Kong]**
- Hong Kong is the logistics center for East Asia and thus is a very important export destination for potted plants and cut flowers. Many cargoes are forwarded to casinos in Macau.
- There is strong demand for flowers in vivid colors, such as red and yellow, which are believed to bring good luck, especially on Chinese New Year and Valentine’s Day. Flowers are also in high demand at shopping malls, hotels, squares, etc.
- It is important to improve the profile of Japan-made flowers that are rich in variety and have delicate colors.
Export Japanese Flowers and Plants, and then Culture to the World through Collaboration among Producers (year-round supply etc.)

To EU that has a rich flower and plant culture and Russia that has potential demand!

To North America beyond the Pacific! (US, Canada)

To Asian countries with rapid economic growth! (Hong Kong, Singapore, China)

Measures to be taken:
- Collecting information on the situation of overseas markets
- Communicating information on Japanese flowers and plants including culture
- Improving quality control technologies to prepare for long distance transportation
- Measures for plant quarantine, such as the development of nematode control and elimination technologies
- Inviting overseas buyers
Case 1

Ashiro Rindo (Hachimantai Flower Production Group, Shin-Iwate Agricultural Cooperative)
- Efforts for Developing World-Class Brands with Original Varieties -

Won the Emperor’s Cup Award at the FY2015 Agriculture, Forestry and Fisheries Festival

<management>
- Gentian production area that accounts for approximately one-fourth of cultivation area and approximately 30% of the shipment volume in Japan.
- [Number of members] 170 farmers; [Cultivation area] 110ha; [Shipment Volume] Cut flowers - 24.69 million units, Potted flowers - 0.14 million units. The sales have been over 1 billion yen for 10 consecutive years since 2005.

<initiatives>
(1) Producers and local government work together in growing regional original varieties
- 30 kinds of cut flowers and 9 kinds of potted plants are currently being produced. In developing these varieties, Ashiro Rindo Development Corporation, whose employees are all cooperative members, concluded a joint research contract with the Hachimantai Flower Research Center. They cooperated in the characteristics inspection of candidate lineages and establishment and management of test fields for growing parent strains. The corporation also entered into a license agreement on exclusive user rights with the city government, which limits the use of original varieties to cooperative members. In addition, producers contribute 2% of their sales to the research fund so as to ensure stable corporation management and inclusion of producers’ opinions in the process of variety development.

(2) Establishment of production area brands built on strong ties among producers
- The corporation has established the brand named “Ashiro Rindo” and an advantageous position at markets with [1] stable shipment under a joint sales system that maintains the lineage shipment ratio at 90% or more; [2] production of quality original varieties by jointly raising all seedlings, visiting all fields and providing instruction, and carrying out strict self-inspection; and [3] cost reduction efforts, such as strict freshness preservation measures and mechanization of shipment and adjustment work.

(3) Export and overseas production of cut flowers, and export of intellectual property
- Export of cut flowers to Netherlands started in 2002. In recent years, new sales channels have been developed in Hong Kong, Singapore, and North America. As for potted flowers, the corporation entered into a cultivation licensing agreement with overseas bodies and is also working on the export of intellectual property.
- Overseas production is carried out in New Zealand and Chile based on cultivation agreements. Cut flowers can be stably supplied throughout the year by cultivating them in the southern hemisphere in which the seasons run the opposite of Japan.
Overseas Sales of the Prefecture-Developed Carnation Varieties, “Mini Tiara” Series (Kagawa Prefecture)

1. Overview
- Kagawa Prefecture entered into a five-year license agreement with Hilverda Kooij, a major seed and seedling company in Netherlands, for the overseas production and sales of seedlings of two carnation varieties under the prefecture-developed “Mini Tiara” series.
- The two varieties subject to licensing are “Mini Tiara Coral Pink” and “Mini Tiara Lilac.”
- User countries are EU, Kenya and Colombia.
- It is hoped that sales in overseas markets will raise the international profile of the prefecture’s original varieties and increase not only overseas demand, but also significantly increase domestic demand.

2. History
- In 1994, prefectoral agricultural test fields started interspecific crossing between carnation cultivars and wild dianthus.
- In 2007, the prefecture grew a new carnation variety “Mini Tiara,” which has pointed petals.
- In 2011, “Mini Tiara Coral Pink” and “Mini Tiara Lilac” were grown.
- The petal shape and color variations of “Mini Tiara” caught the attention of Hilverda Kooij. In March 2012, the company and Kagawa Prefecture entered into two-year agreement on cultivation in Netherlands.
- In January 2014, the license agreement was concluded (currently preparing to file variety registration applications to above mentioned three countries (regions)).

【Carnation: “Mini Tiara” series】
It was named after the ornamental crown for women as the petal shape resembles it and the flower is small and pretty. Seven varieties have been developed so far, for which variety registration applications have been filed.

Name of the seven varieties:
- “Mini Tiara Pink,” “Mini Tiara Cream,” “Mini Tiara Coral Pink,” “Mini Tiara Lilac,” “Mini Tiara Star Yellow,”
- “Mini Tiara Milk White,” “Mini Tiara Baby Pink,”

【Hilverda Kooij】
One of the world’s largest seed and seedling companies that develop flower variety and seed/seedling sales with a focus on carnations. It accounts for approximately 20% of the world’s carnation seed and seedling production. Many of the varieties developed by the company are also produced in sold in Japan.
6. Japanese Flowers and Plants in the world

○ Japan participated in the EXPO 2016 Antalya International Horticultural Exposition held in Antalya, Turkey, from April 23 to October 30, 2016.
○ During this exposition, approximately 160,000 people visited the Japanese government’s exhibition, which won the gold prize for the indoor exhibition section. In addition, many Japan-made flowers and plants also won prizes at the contest with some attaining record high scores, gaining international reputation for Japanese flowers and plants.

Outline of the EXPO 2016 Antalya

Name: EXPO 2016 Antalya
Theme: Flowers and Children - A Green Life for Future Generations
Period: April 23 to October 23, 2016
Participating countries/regions: 55 (including Turkey)
Number of visitors: 4.5 million
Turkey’s first EXPO

Indoor exhibition at the EXPO 2016 Antalya

Government exhibition
Flowers for competitions
160 thousand people has visited
Japan won many medals
Varieties that won the gold prize at the contest

- Tulip
  - Haru-otome
  - Haru-no-awayuki
  - Nagori-yuki
  - Petit Luna
  - Petit Cheminée
  - Petit Selene
  - Petit Fraise
  - Petit Blanc

- Lily
  - Lily
  - Lily
  - Lily

- Bonsai
  - Shinpaku (Chinese juniper)
  - Acer palmatum

- Eustomas
  - Miyabi
7. Consumption of Flowers and Plants

- Spending of cut flowers has been on decrease over a long term. According to the statistics by the age group of heads of household, the younger generation spends less on cut flowers.
- Among flower and plants dealers, retailers specialized in flowers and plants constitute 60% of number of stores and 70% of sales turnover.

### Household spending on cut flowers

- **Changes in annual spending**

- **Annual spending by householder age group (2015)**

  - **2014**
    - 15,903 stores (59%)
    - 6,160 stores (23%)
    - 4,833 stores (18%)

### Sales of flower and plants dealers

- **2014**
  - 368.3 B. yen (70%)
  - 96.6 B. yen (19%)
  - 54.6 B. yen (11%)

---

Source: "Census of Commerce," Ministry of Economy, Trade and Industry
Note 1: Figures for retailers specialized in flowers, etc. are the total of the figures for "retailers specialized in flowers" and "retailers mainly handling flowers (50% or more of the goods dealt in are housing-related goods (including flowers and garden trees))."
Note 2: Figure for supermarkets/home improvement stores is the figure for specialized supermarkets.
Expanding Demand: Revitalization of Floral Culture

In order to revitalize floral culture, the following measures need to be promoted:

- use of flowers and plants in city planning and at public facilities and other facilities where flowers and plants bring about beneficial effects, such as social welfare facilities;
- promotion of educational programs using flowers and plants (floral education) for pupils and students and regional events using flowers and plants; and
- promotion of use of flowers and plants in everyday life, succession of floral traditions, and creation of new floral culture.

Use of flowers and plants in city planning and at public facilities

- Indoor greening at offices, etc.
- Greening of stations and airports
- City planning featuring flowers and greens

Use of flowers and plants in education and regional activities

- Promotion of regional floral education activities
- Flower festivals held in individual prefectures

Dissemination of benefits of flowers and plants

- Utilizing flowers’ healing effects at social welfare facilities, etc.

Succession of floral traditions

Creation of new floral culture