Floriculture

A world wide business and international challenges

??-??-2012, Nico de Groot
Outline

- Floriculture; definition
- Floriculture; the Value Chain
- Consumption
- Exports
- Market organisations
- Imports
- Production
- Innovation
- Supply chain characteristics
- Sustainability
Floriculture; definition

- *Floriculture*: cultivation, production and marketing of flowering and ornamental plants under controlled conditions

- Variety of products:
  - Seeds
  - Bulbs
  - Cut flowers
  - Foliage
  - Live plants
Floriculture; the Value Chain

EU, USA and Japan count together for over 90% of worldwide consumption

### European Union; consumption of cut flowers and plants, bln. EUR
- 2005: 18.8
- 2006: 18.0
- 2007: 19.1
- 2008: 19.2
- 2009: 18.7

### USA; consumption of all floricultural items, bln. US$
- 2005: 31.1
- 2006: 32.5
- 2007: 33.6
- 2008: 33.9
- 2009: 32.5

### Japan; consumption of cut flowers; households, bln. EUR*
- 2005: 3.6
- 2006: 3.65
- 2007: 3.67
- 2008: 3.5
- 2009: 3.51

* In EUR 2007

Source: EU DG AGRI (2010). Adapted by: LEI
Source: USA Statistics. Adapted by LEI
Source: Bureau of Statistics Japan.
Adapted by: LEI
Consumption; EU countries; total

Total consumption top-6 countries in EU, 2005, bln. EUR.
1. Germany (4.2)
2. France (3.2)
3. Italy (2.7)
4. UK (2.3)
5. Spain (1.8)
6. The Netherlands (1.3)

Total consumption top-6 countries in EU, 2009, bln. EUR.
1. Germany (3.9)
2. France (3.2)
3. Italy (2.7)
4. Spain (2.2)
5. UK (1.9)
6. The Netherlands (1.3)
Consumption; EU countries; per capita

Consumption per capita top-3 countries in EU, 2005. In EUR.
1. The Netherlands (80.2)
2. Luxembourg (61.2)
3. Austria (57.7)

Consumption per capita top-3 countries in EU, 2009. In EUR.
1. The Netherlands (78.8)
2. Luxembourg (64.8)
3. Austria (58.6)

Source: EU, 2010
Consumption; latest trends

EU (IPM, 2012):

- Despite the economic crisis, the Northern European countries are exhibiting stability.
- Due to the crisis, the consumption volumes are falling in the severely affected countries, e.g. Greece, Spain and Portugal.
- In the Eastern European member states, the markets are developing positively once again with a rising demand.

World:

- The BRIC-countries are gaining importance.
### Exports; flowers and pot plants; world

<table>
<thead>
<tr>
<th>Region</th>
<th>Cut flowers, 2009, mln EUR</th>
<th>Pot plants, 2009, mln. EUR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>2850</td>
<td>3150</td>
</tr>
<tr>
<td>Netherlands</td>
<td>2440</td>
<td>1853</td>
</tr>
<tr>
<td>Germany</td>
<td>32</td>
<td>332</td>
</tr>
<tr>
<td>Belgium-Lux</td>
<td>118</td>
<td>248</td>
</tr>
<tr>
<td>Denmark</td>
<td>32</td>
<td>286</td>
</tr>
<tr>
<td>Italy</td>
<td>53</td>
<td>321</td>
</tr>
<tr>
<td>Spain</td>
<td>23</td>
<td>75</td>
</tr>
<tr>
<td>Asia</td>
<td>335</td>
<td>n/a</td>
</tr>
<tr>
<td>Israel</td>
<td>108</td>
<td>n/a</td>
</tr>
<tr>
<td>China*</td>
<td>108</td>
<td>58</td>
</tr>
<tr>
<td>Africa</td>
<td>855</td>
<td>n/a</td>
</tr>
<tr>
<td>Kenya</td>
<td>285</td>
<td>n/a</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>94</td>
<td>n/a</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>240</td>
<td>n/a</td>
</tr>
<tr>
<td>America</td>
<td>1250</td>
<td>n/a</td>
</tr>
<tr>
<td>Colombia</td>
<td>752</td>
<td>n/a</td>
</tr>
<tr>
<td>Ecuador</td>
<td>378</td>
<td>n/a</td>
</tr>
<tr>
<td>USA</td>
<td>110</td>
<td>50</td>
</tr>
<tr>
<td>World</td>
<td>5300</td>
<td>n/a</td>
</tr>
</tbody>
</table>

* 2008

Exports; EU and the Netherlands; partners; share by country

Exports of life plants and products of floriculture by weight; partners EU; share by country, 2009, %

- Switzerland: 20%
- Russia: 19%
- USA: 10%
- Norway: 8%
- Canada: 2%
- Turkey: 3%
- China: 3%
- Croatia: 4%
- Japan: 4%
- Ukraine: 5%
- Others: 22%

Source: EU, 2010

Exports of cut flowers and flower bud by value; partners NL; share by country, 2009, %

- Germany: 28%
- UK: 16%
- France: 14%
- Russia: 6%
- Italy: 5%
- Norway: 8%
- Japan: 4%
- Croatia: 4%
- China: 3%
- Canada: 2%
- Ukraine: 5%
- Others: 24%

Source: UN Comtrade
## Market organisation in the world; a selection

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Turnover, latest available data</th>
</tr>
</thead>
<tbody>
<tr>
<td>FloraHolland, the Netherlands</td>
<td>4.130 million EUR (2010)</td>
</tr>
<tr>
<td>Landgard, Germany</td>
<td>1.842 million EUR (2010)</td>
</tr>
<tr>
<td>Ota Floriculture Auction Co., Ltd, Japan</td>
<td>238 million EUR (2010)</td>
</tr>
<tr>
<td>Veiling Holambra, Brazil</td>
<td>102 million EUR (2009)</td>
</tr>
<tr>
<td>Kunming International Flora Auction Trading Co Ltd., China</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Source: AIPH (2010); Flora Culture International; FloraHolland; Veiling Holambra; New Covent Garden; Landgart
# Imports: flowers and pot plants; world

<table>
<thead>
<tr>
<th>Region</th>
<th>Cut flowers, 2009, mln EUR</th>
<th>Pot plants, 2009, mln EUR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>3,785</td>
<td>3,150</td>
</tr>
<tr>
<td>Germany</td>
<td>710</td>
<td>780</td>
</tr>
<tr>
<td>Netherlands</td>
<td>553</td>
<td>336</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>593</td>
<td>214</td>
</tr>
<tr>
<td>France</td>
<td>358</td>
<td>454</td>
</tr>
<tr>
<td>Russia</td>
<td>359</td>
<td>n/a</td>
</tr>
<tr>
<td>Switzerland</td>
<td>120</td>
<td>178</td>
</tr>
<tr>
<td>Italy</td>
<td>144</td>
<td>156</td>
</tr>
<tr>
<td>Asia</td>
<td>350</td>
<td>n/a</td>
</tr>
<tr>
<td>Japan</td>
<td>217</td>
<td>53</td>
</tr>
<tr>
<td>Chinese Taipei</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>26</td>
<td>n/a</td>
</tr>
<tr>
<td>Singapore</td>
<td>21</td>
<td>n/a</td>
</tr>
<tr>
<td>North America</td>
<td>805</td>
<td>n/a</td>
</tr>
<tr>
<td>USA</td>
<td>508</td>
<td>n/a</td>
</tr>
<tr>
<td>Canada</td>
<td>80</td>
<td>78</td>
</tr>
<tr>
<td>World</td>
<td>5,200</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Imports of life plants and products of floriculture by weight; partners EU; share by country, 2009, %

- Kenya: 22%
- Costa Rica: 11%
- Ethiopia: 7%
- USA: 7%
- Israel: 6%
- Colombia: 6%
- Ecuador: 4%
- Guatemala: 4%
- Turkey: 3%
- China: 6%
- Others: 24%

Source: EU, 2010

Imports of cut flowers and flower bud by value; partners NL; share by country, 2009, %

- Kenya: 47%
- Belgium: 8%
- Ecuador: 11%
- Italy: 3%
- Zimbabwe: 3%
- Colombia: 4%
- Uganda: 4%
- Ethiopia: 6%
- Germany: 2%
- Others: 12%

Source: UN Comtrade
## Production; flowers and pot plants; world

<table>
<thead>
<tr>
<th>Region</th>
<th>Area of land* (ha) (A)</th>
<th>Production value*, mln. EUR (B)</th>
<th>Productivity of land (B/A)</th>
<th>Holdings*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>48,705</td>
<td>10,843</td>
<td>0.22</td>
<td>37,319</td>
</tr>
<tr>
<td>Netherlands</td>
<td>7,560</td>
<td>3,780</td>
<td>0.50</td>
<td>5,372</td>
</tr>
<tr>
<td>Middle East</td>
<td>4,026</td>
<td>220</td>
<td>0.05</td>
<td>6,100</td>
</tr>
<tr>
<td>Africa</td>
<td>7,604</td>
<td>634</td>
<td>0.08</td>
<td>1,461</td>
</tr>
<tr>
<td>Kenya</td>
<td>2,180</td>
<td>299</td>
<td>0.14</td>
<td>140</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>645</td>
<td>90</td>
<td>0.14</td>
<td>80</td>
</tr>
<tr>
<td>Asia</td>
<td>523,829</td>
<td>7,608</td>
<td>0.01</td>
<td>156,764</td>
</tr>
<tr>
<td>China</td>
<td>286,068</td>
<td>2,668</td>
<td>0.009</td>
<td>n/a</td>
</tr>
<tr>
<td>North America</td>
<td>21,067</td>
<td>5,450</td>
<td>0.25</td>
<td>9,319</td>
</tr>
<tr>
<td>Central and South America</td>
<td>97,152</td>
<td>1,441</td>
<td>0.01</td>
<td>12,494</td>
</tr>
<tr>
<td>World</td>
<td>702,383</td>
<td>26,196</td>
<td>0.03</td>
<td>223,457</td>
</tr>
</tbody>
</table>

*Based on latest data available in 2010

Production; world and EU; share by country

Production value; world; share by country in 2009, %

- EU 44%
- USA 12%
- China 12%
- Japan 11%
- Colombia 3%
- Canada 4%
- Korea 2%
- Kenya 2%
- Others 10%

Source: AIPH

Production value; EU; share by country in 2009, %

- NL 31%
- BE 3%
- DE 13%
- ES 11%
- FR 11%
- IT 15%
- UK 5%
- Others 11%

Source: EU
Production; flowers and plants; EU

EU production of flowers and plants, mln. EUR

<table>
<thead>
<tr>
<th>Year</th>
<th>Production (mln. EUR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>19,948</td>
</tr>
<tr>
<td>2004</td>
<td>19,100</td>
</tr>
<tr>
<td>2005</td>
<td>18,925</td>
</tr>
<tr>
<td>2006</td>
<td>18,405</td>
</tr>
<tr>
<td>2007</td>
<td>19,688</td>
</tr>
<tr>
<td>2008</td>
<td>19,791</td>
</tr>
<tr>
<td>2009*</td>
<td>19,546</td>
</tr>
</tbody>
</table>

*Provisional
Source: EU (2010)
NL production of flowers and plants, mln. EUR

*Provisional
Source: EU (2010)
Production and trade; trends; roses

Land area and number of holdings in the Dutch rose production sector

<table>
<thead>
<tr>
<th>Period</th>
<th>Area of land</th>
<th>Number of holdings</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>918</td>
<td>675</td>
</tr>
<tr>
<td>2002</td>
<td>903</td>
<td>618</td>
</tr>
<tr>
<td>2003</td>
<td>851</td>
<td>563</td>
</tr>
<tr>
<td>2004</td>
<td>845</td>
<td>519</td>
</tr>
<tr>
<td>2005</td>
<td>776</td>
<td>457</td>
</tr>
<tr>
<td>2006</td>
<td>754</td>
<td>418</td>
</tr>
<tr>
<td>2007</td>
<td>650</td>
<td>350</td>
</tr>
<tr>
<td>2008</td>
<td>580</td>
<td>302</td>
</tr>
<tr>
<td>2009</td>
<td>532</td>
<td>260</td>
</tr>
</tbody>
</table>

% Change 2001-2009

- Area of land: -42%
- Number of holdings: -58%

Source: CBS
Production and trade; trends; roses

Supply of roses for auctioning in the Netherlands

<table>
<thead>
<tr>
<th>Period</th>
<th>Domestic production in the Netherlands</th>
<th>Imports</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number (in mln.)</td>
<td>Value (mln. EUR)</td>
<td>Price</td>
</tr>
<tr>
<td>2001</td>
<td>1,890</td>
<td>478</td>
<td>0.25</td>
</tr>
<tr>
<td>2002</td>
<td>1,787</td>
<td>505</td>
<td>0.28</td>
</tr>
<tr>
<td>2003</td>
<td>1,772</td>
<td>484</td>
<td>0.28</td>
</tr>
<tr>
<td>2004</td>
<td>1,712</td>
<td>481</td>
<td>0.28</td>
</tr>
<tr>
<td>2005</td>
<td>1,661</td>
<td>486</td>
<td>0.29</td>
</tr>
<tr>
<td>2006</td>
<td>1,524</td>
<td>496</td>
<td>0.33</td>
</tr>
<tr>
<td>2007</td>
<td>1,400</td>
<td>497</td>
<td>0.36</td>
</tr>
<tr>
<td>2008</td>
<td>1,280</td>
<td>458</td>
<td>0.36</td>
</tr>
<tr>
<td>2009</td>
<td>1,180</td>
<td>362</td>
<td>0.31</td>
</tr>
</tbody>
</table>

% Change 2001-2009: -38% -24% 24% 69% 91% 8% 7% 7% 0%

Source: VBN
Production and trade; trends; roses

Value of roses import in the EU from non EU-country, 2009; share by country

- Kenya: 49%
- Ethiopia: 16%
- Ecuador: 15%
- Colombia: 5%
- Uganda: 4%
- Zambia: 3%
- Zimbabwe: 2%
- Others: 6%

Source: Eurostat Comext

Number of roses import in the Netherlands from Kenya and Ethiopia, in mln.

Source: CBS
Innovation in floriculture

Innovation in seed breeding for improvement of:

- resistance against pests and diseases;
- temperature sensitivity;
- early ripening;
- uniformity;
- transportability;
- shape, colour, vase life (Flower Council Holland, 2005)

Innovation within floriculture companies:

- more efficient planting, growing, cutting and sorting systems;
- improved climate technology, multilayer cultivation;
- distinctiveness; concept development, marketing;
- collective promotion (Flora Holland, 2011)
Floriculture; innovation

Patent applications at CVPO, 2010

Turnover: share of R&D expenditures; plant reproduction materials sector NL

R&D expenditure: share of product innovation; plant reproduction materials sector NL

Source: LEI (2011)
Supply Chain Characteristics

- Strong crop improvement and reproduction (R&D)
- Cost efficient production
- Cooperative auctions
- Logistics
- Smaller flowers and plants retail channels
- Just in time delivery
- Tracking and tracing
- Sustainability and quality control
Sustainability

- New energies (geothermic, wind)
- CO2 emissions reduction
- Bio-based economy
Thank you for your attention!