THE KENYAN-DUTCH SEA FREIGHT SUPPLY CHAIN FOR ROSES

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OBJECTIVES OF THE STUDY

Gain insight into the still to develop Kenyan-Dutch sea freight supply chain for roses.

Learn lessons from previous and current (pilot) projects

Insight into the sea freight supply chain:

• Freight routes, shipping lines and schedules
• Relevant actors
• Carbon footprint
• Bottlenecks and challenges

Ideas for subsequent pilot shipments
METHODOLOGY

Desk research

Interviews in Netherlands

Fact-finding mission in Kenya

• Mombasa, Nairobi, Naivasha and Limuru
• 15-20 visits and interviews

Executing parties *Hortiwise* and *FlowerWatch*, in close collaboration with *VGB*
STRONG GROWTH KENYAN EXPORTS TO THE EU

Figure 1  Development of Kenyan cut flower exports

Source: Hortiwise from HCDA and KFC (2012)
SOME OTHER DEVELOPMENTS

Strong growth Kenyan horticultural exports to the EU

Changing market conditions
• Stagnating market growth
• Retail chains increasingly dominate
• Sustainability becomes mainstream
• Lean and transparent supply chains

Other
• Improved varieties (for production in Africa)
• Preferential access uncertain
• Piracy
• Maersk price increase
• Development in air freight capacity
RECENT AND ONGOING SEA FREIGHT PROJECTS

• Onderzoek Zeetransport (2003-2005)
• Flowers on Waves (2006)
• Star Flower project (2005-2007)
• Bloemen in containers beter bekeken (2005-2008)
• CoCos - Containerisatie en Conditionering in Sierteeltketens (2008-2010)
• Ketenregie en kwaliteitsborging zeetransport (2009-2010)
• CO2 reductie duurzame ketens bloemisterij (fase 1) (2012)
• Plantgezondheid in de multimodale keten (2012)
• Compact & Dry
• Fresh Flower Solutions (FFS) (2012-ongoing)
1. INTRODUCTION
2. DEVELOPMENTS
3. SEA FREIGHT ROUTES
4. SUPPLY CHAIN CHALLENGES
5. CONCLUSION
SOMALI PIRACY PROBLEM
LINEA MESSINA

Source: www.messinaline.it
Source: Bolloré Africa
BEST OPTIONS

Table 2  Best option sea freight routes

<table>
<thead>
<tr>
<th>shipping line</th>
<th>destinations</th>
<th>trans shipping</th>
<th>travel days</th>
<th>remarks</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>ideal schedule</td>
<td>realistic schedule</td>
</tr>
<tr>
<td>Messina</td>
<td>Genoa</td>
<td>no</td>
<td>20</td>
<td>25</td>
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<tr>
<td></td>
<td>Marseille</td>
<td>no</td>
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<tr>
<td></td>
<td>Barcelona</td>
<td>no</td>
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<td>23</td>
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<td>Maersk</td>
<td>Felixstowe</td>
<td>at Salalah</td>
<td>26</td>
<td>31</td>
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<td></td>
<td>Zeebrugge</td>
<td>at Salalah</td>
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<td>Bremerhaven</td>
<td>at Salalah</td>
<td>29</td>
<td>34</td>
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<tr>
<td></td>
<td>Rotterdam</td>
<td>at Salalah</td>
<td>31</td>
<td>36</td>
</tr>
</tbody>
</table>

Sources: Messina, Bolloré, Maersk

Shipping lines: Maersk (Safmarine), Linea Messina, Mediterranean Shipping Company (MSC), CMA CGM / Delmas, and others
SEA FREIGHT CHAIN FROM GROWER TO CONSUMER

Grower → Forwarder → Port → Shipping line → Arrival Port → ...

Source: www.360quality.org
Transit time is typically 25+ days to Europe depending on the destination, with high risk of delays

Recommendation:

Direct connections preferred: shorter transit times, less risk of delays, but selection of route also depends on the targeted market, etc.
CHALLENGE 2: SCHEDULE INTEGRITY

Reliability of shipping lines
Flowers no bulk article
Uncertainty about delays and waste rates

Recommendation:

- Risk management: Assess historical shipping data and/or record current schedules to obtain insight into actual delays per shipping lines and routes.
- Forwarder (two viable options): GMS and Bolloré Africa.
- Insuring shipments?
A 40ft container contains about 955 boxes. Challenges for both grower and importer. Consolidated loads also brings new logistic challenges.

**Recommendation:**

- Initial trial shipment (proof of concept) ideally all products come from one farm.
- Alternatively, a farm can be used as a consolidation point for flowers from a small number of different farms.
- Locations for consolidating are available for in a later stage.
Possibilities and requirements of many Kenyan varieties are not yet known.

**Recommendation:**

- Relevant Kenyan varieties need to be researched. Which can cope with 25+ days of sea transport and how?
- Pre-selection of varieties for the initial trial shipment.
CHALLENGE 5: MOMBASA PORT
Port congestion & customs clearance procedures
Slowly improving

Recommendation:
- Liaise with relevant local authorities and (stakeholder) organisations.
CHALLENGE 6: ARRIVAL PORT

Port of arrival: close to the final destination and swift clearance procedures and fast container handling.
Partly a learning process.

Recommendation:
- To be determined by project partners (market).
Quality is a critical variable: temperature primary factor. Entire supply chain, from grower to end customer. What additional techniques for atmosphere management to use?

**Recommendation:**

- Develop, implement and strictly monitor protocols for sea transportation.
- Start initial trial shipments without additional techniques.
- Assess (and research) impact of additional techniques.
THOUGH LIFE OF A REEFER
Boxes will have to be optimised to fulfill reefer requirements, but also still need to comply with on-farm cold store requirements.

**Recommendation:**
- Use (design) boxes specifically for sea freight requirements.
WHAT ABOUT THE COSTS?

Costs of shipping a container to Europe US$ 10,000 to US$15,000. Flying 11 tonnes: US$ 20,000 to US$ 25,000. Estimated cost savings in the 30-40% range.

But:

- Price differences between shipping lines and forwarders.
- Inland transport in Europe up to € 4,500 euro.
- Value at risk: full container of roses anywhere between € 20,000 and € 80,000 (955 boxes x 250 to 400 stems per box x € 0.10 to € 0.20 per stem).
- Waste?
- Atmosphere control?
- Consultancy and guidance?
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A commercially successful sea transport supply chain is all about:

**Optimisation**
- Varieties
- Quality
- Cold chain
- Packaging
- Protocols
- Market

**Monitoring & Controlling**
- Post-harvest
- Cold chain
- Procedures
- Planning

**Managing Risk**
- Transit times
- Schedule integrity
- Delays
- Waste rates
- Liaising