

# Representative product models for cut flowers and potted plants

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Marisa Vieira, Irina Verweij-Novikova, Albert Haasnoot, Paulina Gual, Pietro Goglio

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# Role of representative product models

- The RP(s) aims at:

1. Identifying the most relevant impact categories, life cycle stages, processes and direct elementary flows
2. Calculating the benchmark results
3. Identifying the secondary data needs
4. Becoming the 'skeleton' for all product-specific models

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# Products in scope of our PEFCR

Two sub-categories and, implicitly, two representative products:

- Cut flowers
- Potted plants

# Choice of RP models

*"The RP may be a real or a virtual (non-existing) product."*

➤ We chose to model:

- one **virtual product** made up of the arithmetic average of the 3 main products in the EU market **for cut flowers**, and
- one **virtual product** made up by the arithmetic average of 3 real products **for potted plants** chosen to allow us to capture different production technologies and product types, as market is very scattered and can be fluctuating and we don't want to overlook any relevant product/production system.

*"The virtual product should be calculated based on average European market sales-weighted characteristics of all existing technologies/ materials covered by the product category or sub-category. Other weighting sets may be used, if justified. (...) there is the risk that different technologies with very different market shares get mixed up and the ones with a relatively small market share might be overlooked."*

➤ We'll include major products, technologies and regions but we won't model as a weighted average based on the market shares.

# Cut flowers





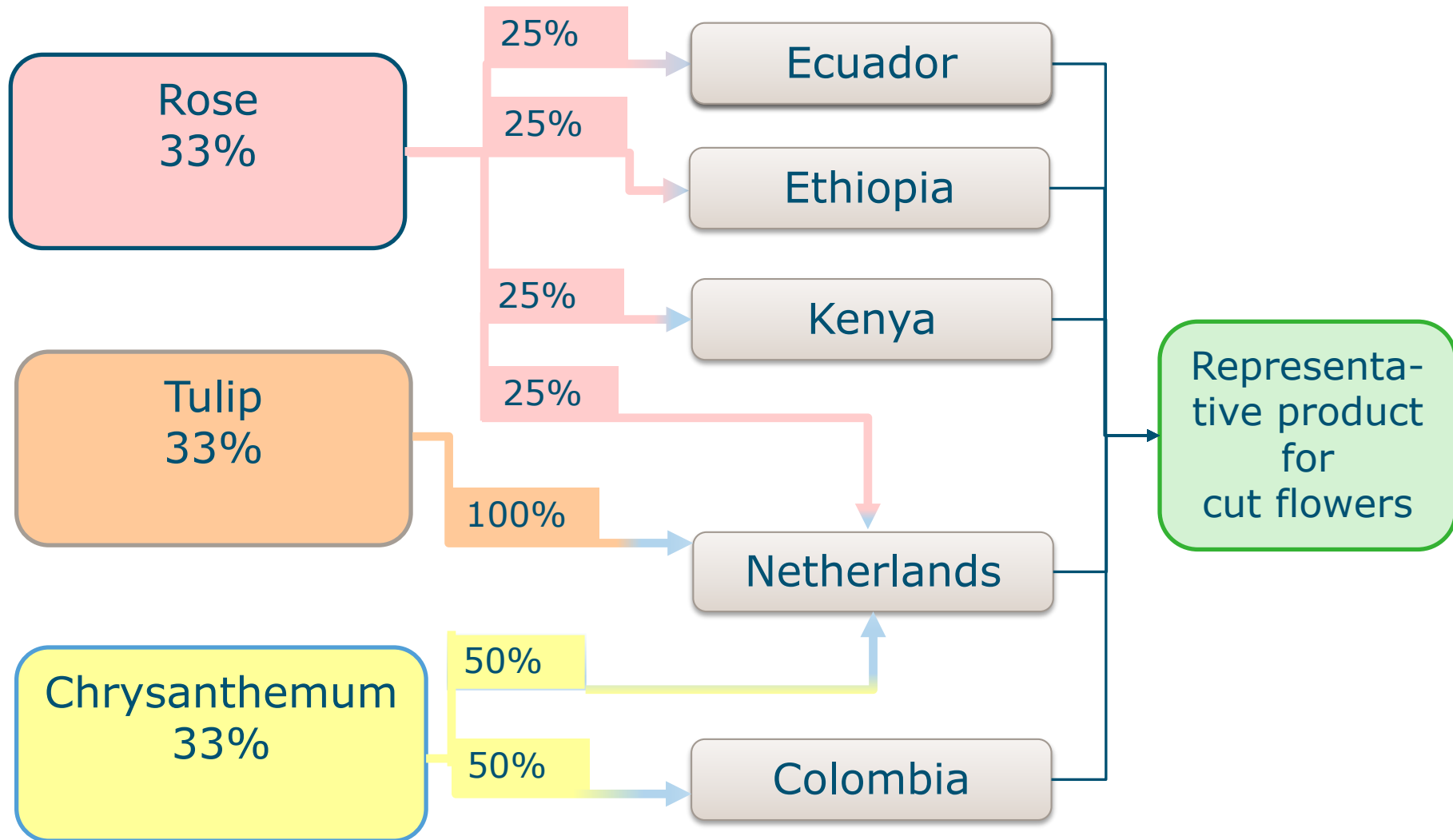
# RP for cut flowers

**Virtual product** with the following characteristics:

- **Roses, tulips and chrysanthemum** (using 1/3 of each because market shares can fluctuate significantly overtime)
  - For **roses**, cultivation in the Netherlands, Kenya, Ethiopia and Ecuador (using 1/4 of each because market shares can fluctuate significantly overtime) will be considered
  - For **chrysanthemum**, cultivation in the Netherlands and Colombia (using half of each because market shares can fluctuate significantly overtime)
  - For **tulips**, cultivation in the Netherlands.
- The different countries covered also ensure coverage of different **cultivation techniques**, i.e. high and low tech greenhouse and open field



# RP for cut flowers



# Potted plants





# RP for potted plants



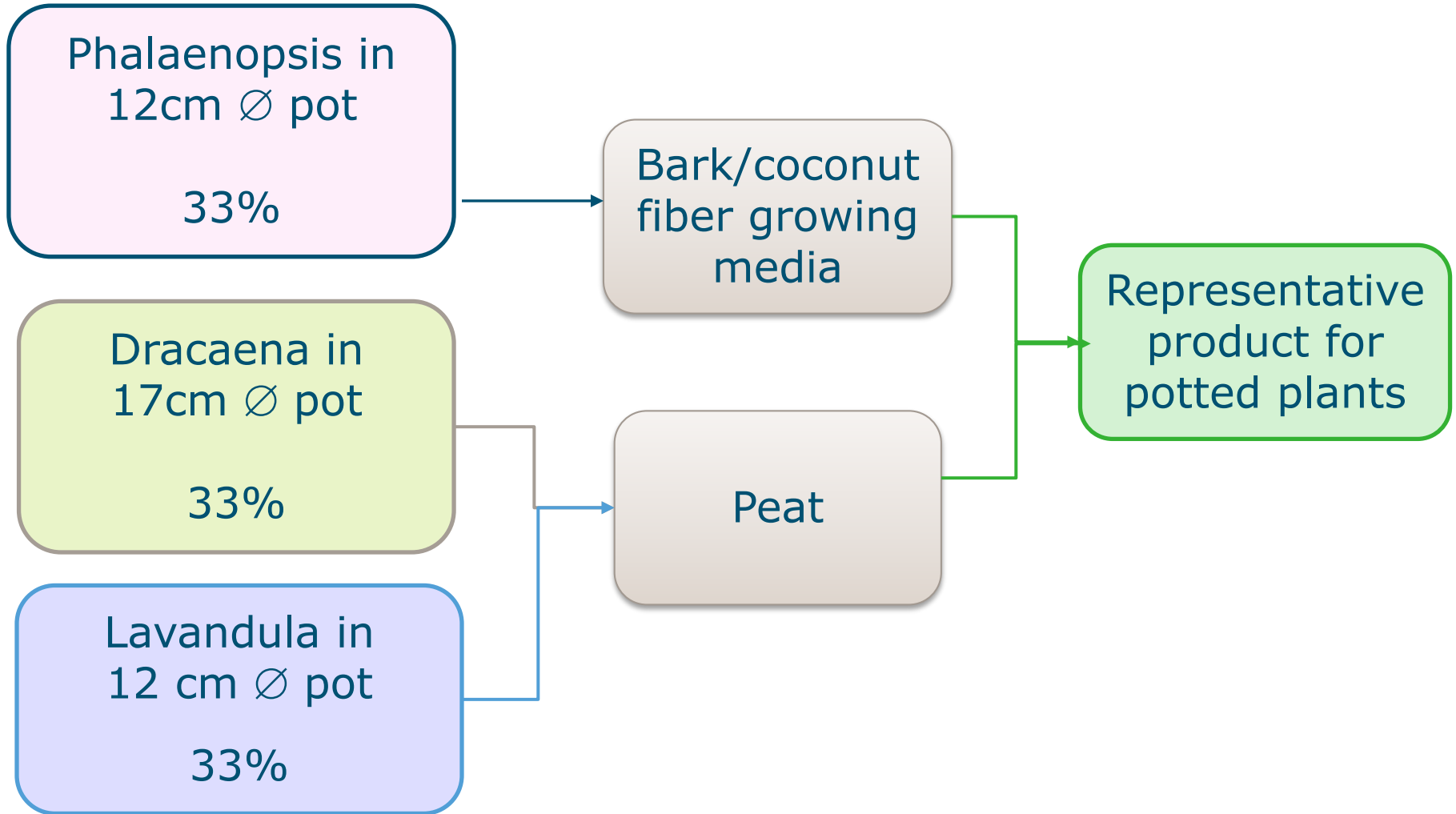
**An arithmetic average of 3 real products and country of origin will be used**

- For flowering plants: Phalaenopsis in a 12 cm diameter pot with bark/coconut fiber growing media
- For leaf plants: Dracaena sp in a 17 cm diameter pot plants in peat growing media
- For outdoor plants: Lavandula with 12 cm pot in peat growing media



All will be considered as produced in Netherlands because this country was dominant for all potted plants.

# RP for potted plants



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# Packaging

- Arithmetic average of different packaging materials used for cut flowers and potted plants, respectively

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# Use phase

## Cut flowers

- Fixed amount of water used in a vase
- “Flower food” packet
- Assumption in terms of time kept > 7-10 days

## Potted plants

- Specific per plant



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# End of life

- EoL of packaging materials using European average recycling, landfill and incineration mixes per packaging material
- Amount of growing media to composting

# Data sources for market analysis

- Royal FloraHolland (and checked with Union Fleurs for representativeness for the entire EU market)
  - Cut flowers
  - Potted plants
- Union Fleurs:
  - Crop origin
- Growing media:
  - Doi:10.17660/ActaHortic.2017.1168.12

# Thinking beyond the PEF-RP studies

We plan on selecting the supporting studies thinking of what we might have overlooked with the RPs selected, at least the following:

- One flowering potted inside plants (either roses or chrysanthemums)
- One dry climate plants (Kalanchoe/cactus)
- In the data needs, we've made a list as inclusive as possible, aimed at covering different pesticides, fertilizers, growing media, countries of origin, etc.

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# Looking forward to your questions and comments

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With a special thanks  
to Pietro Goglio for  
the data collection  
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and Union Fleurs for  
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