

# High quality blueberries from the Peruvian-Dutch supply chain

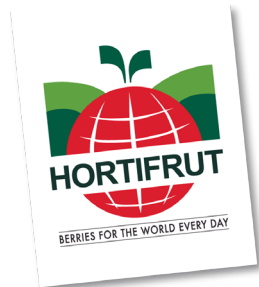
SMP presentations day

14 December 2023



# Project goal and partnership

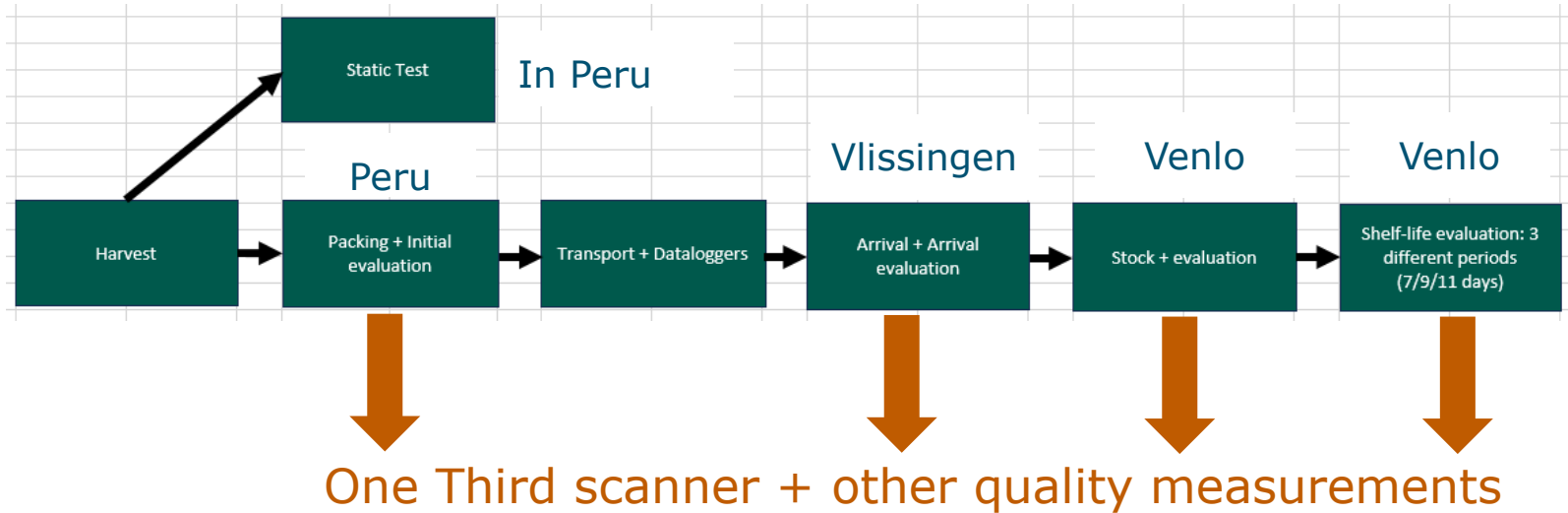
- **Improve the blueberry quality in de Peruvian-Dutch Chain to supply the European market**
  - Identify the current challenges
  - Explore quality measurement methods/technologies and chain conditions
  - Search alternative packaging solutions



# Approach

- Chain analysis
- Field test
  - Assess shelf life of different blueberries batches (harvest frequencies)
  - Compare 2 types of packaging systems
  - Measure berry quality non-destructively: explore technology One Third

# Outline field test + static test



- 1 variety
- 3 batches different harvest moments
- 2 types of packages

total 6 test variables

# Conclusions

- Blueberries become softer over time (visual and firmness)
  - Softening may be due to dehydration and senescence
- Harvest frequency impacts quality
- Use of liners seems to improve SOME quality aspects although not always consistent over time
- Static tests (Peru) are not a full simulation of the reality
- Spectral differences observed but real shelf life assessment requires extra data acquisition

**Possible ways to improve quality identified?**

# Follow up/Future plans

## **Combine activities = cooperation between partners!**

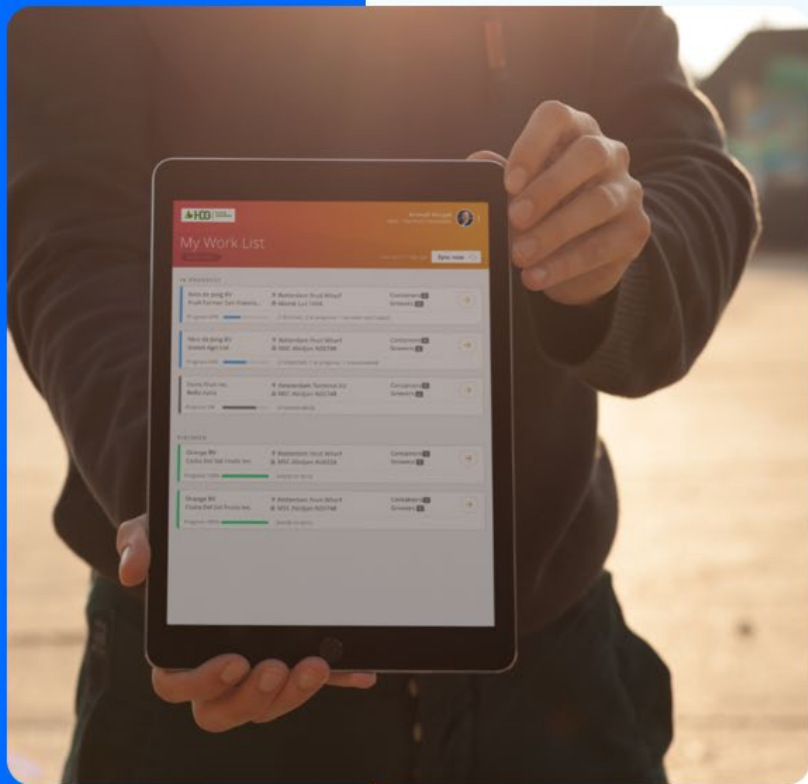
- Define most promising research questions to optimise product quality
- WUR set up and carries out research to improve quality
- Needed measurements are combined with building One Third application
- One third quality results are integrated in daily operations and logistical decisions by Agrisoftware

**Under discussion...**

# OneThird system for blueberry QC

- Fast and consistent tests are important to validate supply chain improvements for blueberries
- OneThird offered non-destructive system to:
  - Do visual inspection
  - Assess predictive shelf-life before/after shipment (from Peru to the Netherlands)
  - Assess non-destructive brix analysis
  - Easily enter other (manual) parameters to digital system, like weight, color etcetera
- Having all quality data in one cloud-base database allowed for fast data analysis, and trend analysis
  - Differences in shelf-life in Venlo as function of picking frequency
- Continuing with Hortifrut analysis of following batches having different varieties and test reproducibility of results
- Digital, real-time quality control results in time savings, waste savings and better supply chain decisions to get the optimal quality to the consumer





## Agri Software

**Agri Software specializes in the development of software for quality inspections of fruit and vegetables**

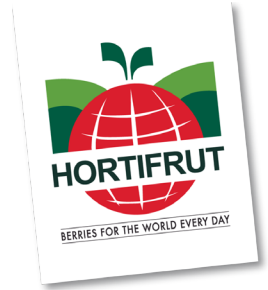
- Independent platform to combine data from different quality control inputs
- Easy integration in the quality control work process
- Standardized system to perform quality checks; Anywhere in the world
- Easy scoring system and direct visibility of quality score on the QC4U platform
- Possible to tailor to the clients needs



# End

## Follow up can lead to:

- efficiency
- objective quality assessment in less time
- decrease costs (less labour, less rejections)
- process digitalisation
- better insight in operations



**Let's work together!**