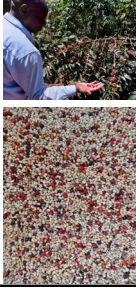
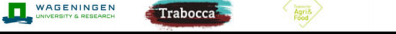


SMP-2224 | Understanding and improvement of coffee fermentation

Wageningen Food & Biobased Research: Paulo de Boer, Catrienus de Jong
Trabocca: Stijn van Mourik


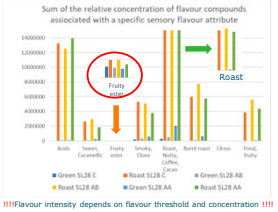
- Coffee flavour is influenced by many factors:
 - Coffee variety, terroir, cherry quality, **fermentation**, drying, green bean grade, roasting, brewing
- Fermentation: Mucilage removal + generation of flavour
 - Accomplished by microorganisms
- Available results (sensory, analytical, microbiome) from the 'fly crop'; 'main crop' analysis ongoing

1

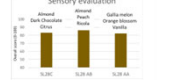

Kenya-Kambarare-SL28: Fly Crop experiments

- Roasty, brown and floral attributes are mostly formed **during** roasting.
- Fruity esters are already present **before** roasting
- This gives **opportunities** to change character and/or increase levels during fermentation!

Sum of the relative concentration of flavour compounds associated with a specific sensory flavour attribute

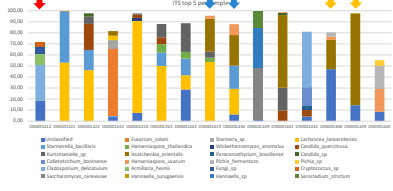
!!!!Flavour intensity depends on flavour threshold and concentration!!!!

2


Microbiome analysis (fly crop: yeasts and fungi)

- Red: rinsing water
- Blue: 24 hrs fermentation
- Orange: 12 hrs soaking
- Used water does not fully drive microbial pattern → room for intervention, e.g. addition of yeasts (Lallemand) to add flavour



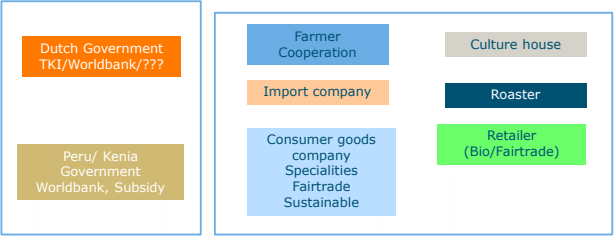
ITS tag 1 sequencing

- Pop in Kenya with a small-holder → scale-up using a cooperation of coffee farmers
- Best structure and funding → all advice more than welcome!




3

Example



Subsidy Consortium



4

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To explore the potential of nature to improve the quality of life



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