The Ancestrale Method between Science & Art

Portland OR, january 19th 2024

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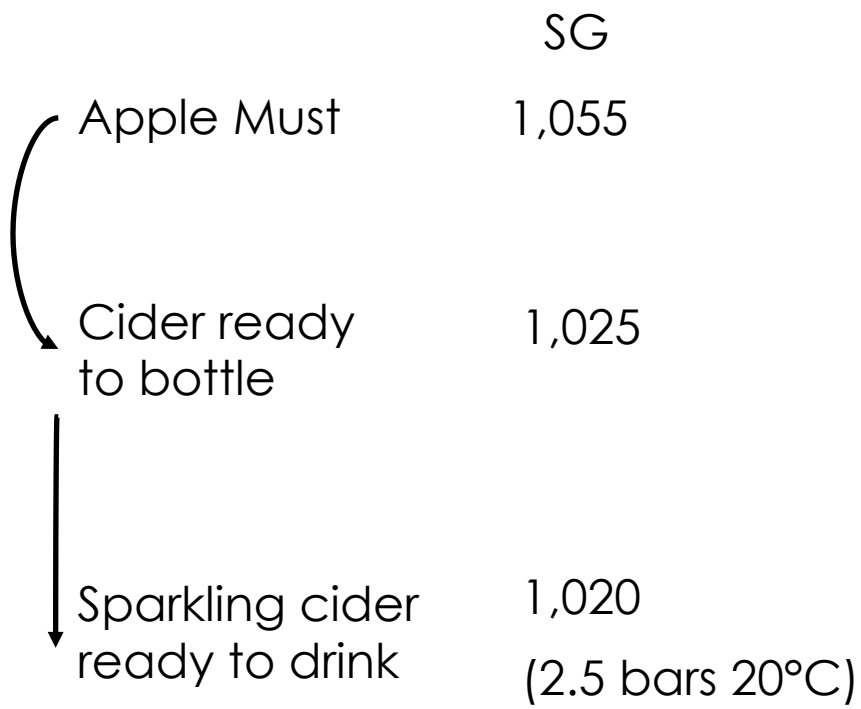
What is the Ancestrale Method ?

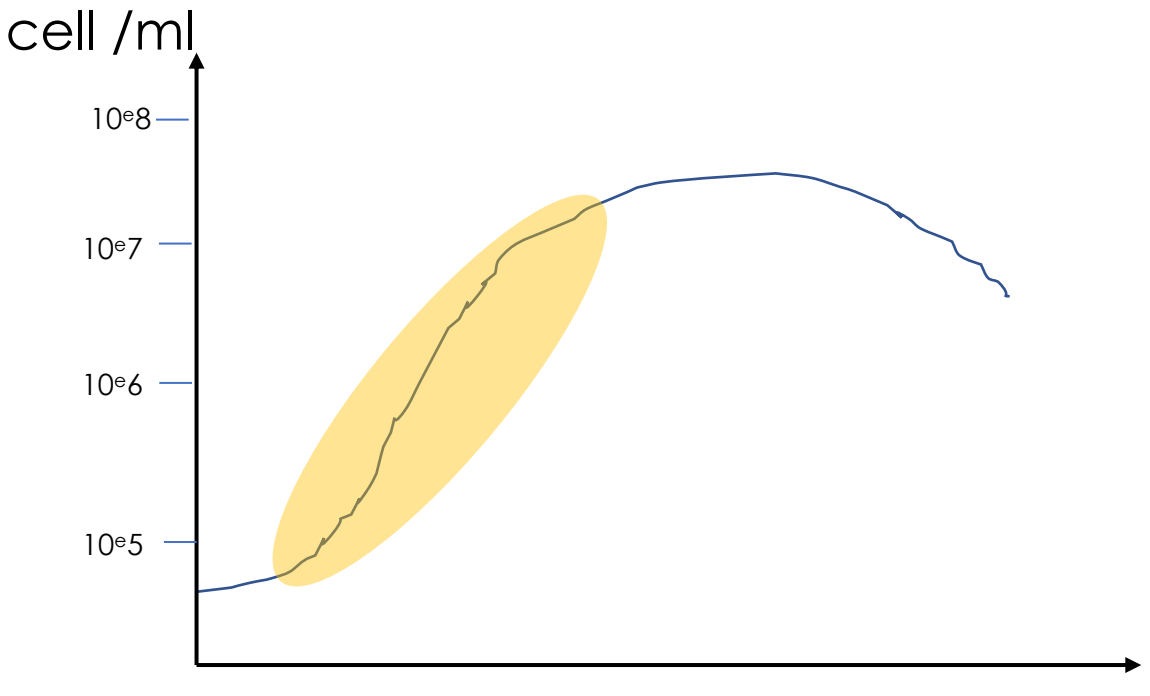
- **Incomplete First Fermentation in tank**
- **Incomplete Second Fermentation in bottle**
- **keeping residual sugars (up to 60g/L)**

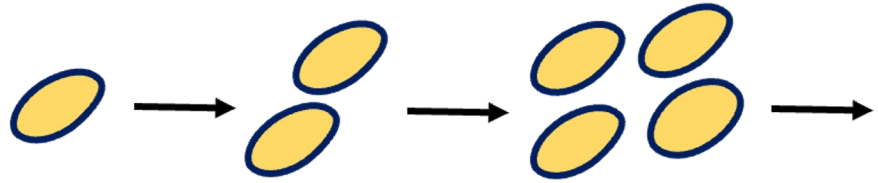


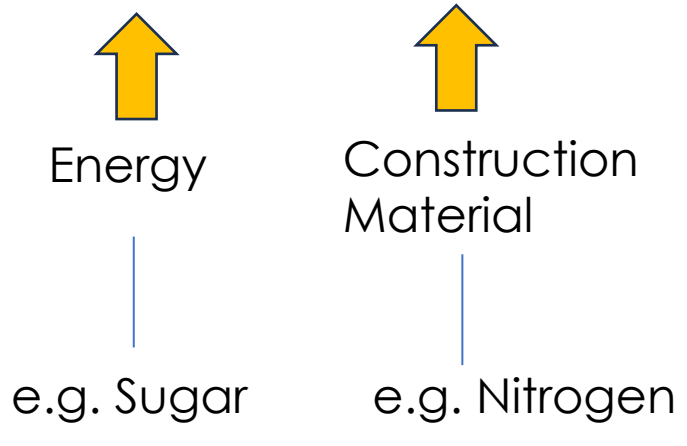
Yeast Growth limitation in bottle to avoid from excessive fermentation

Fermentation, Yeast and Nitrogen

Total Alive Yeast Population during a Fermentation

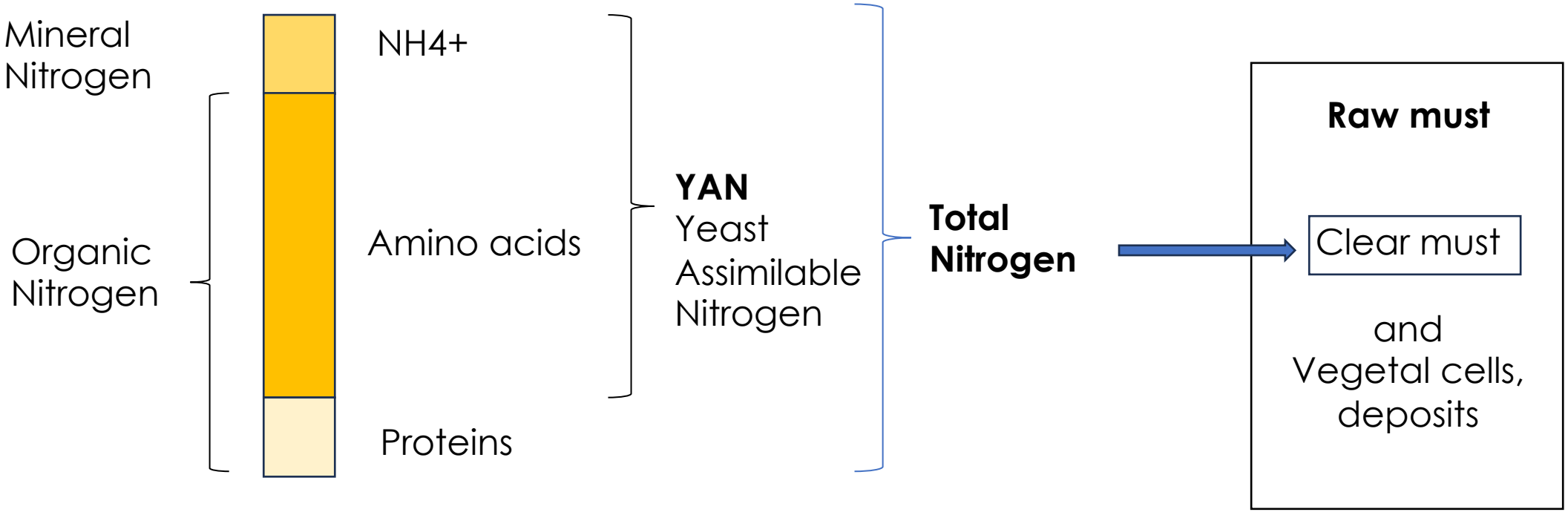






Yeast Growth Limitation in bottle by fostering a Nitrogen Deficiency from the must to the bottling

Nitrogen in the must



Nitrogen in the must

Total Nitrogen Content Goals in the clear must

50 to 70 mg/L	Low
80 to 100 mg/L	Middle
110 to 130 mg/L	High
> 130 mg/L	Very high

Fostering Nitrogen Deficiency

Nitrogen In the Apple

Factor	Nitrogen behavior
Variety	
Maturity	Decreases with maturation
Age of the Orchard	Higher during the first years of Production
Fertilization	Increases in the apple if use of high quantity of rapid assimilable fertilizer around the blossom
Climate	Influences the Organic Matter Mineralization and Tree Absorption Increases if warm but not too dry climate Lower if cool climate

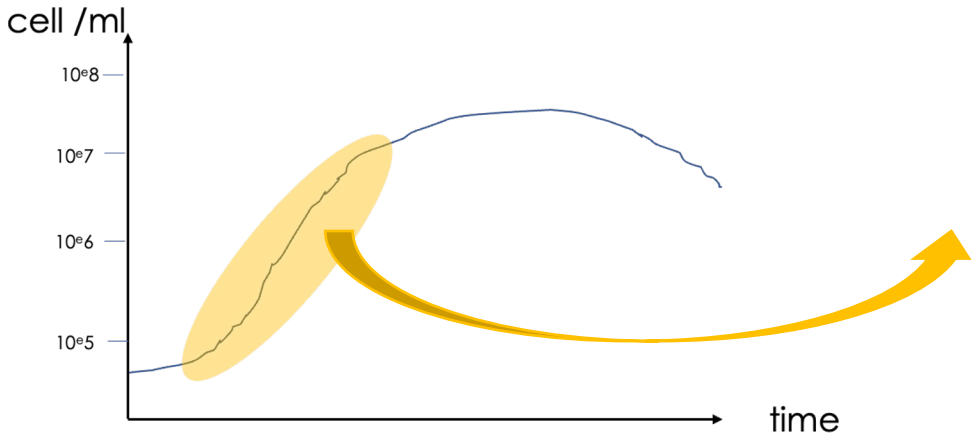
Fostering Nitrogen Deficiency

Must Clarification Impact

Clarification Technic	Nitrogen Behaviour
Settling	Removes vegetal Deposits
Keeving (pectins gelling)	Removes vegetal Deposits and a small quantity of yeasts that have assimilated a small amount of YAN

Fostering Nitrogen Deficiency

Fermentation in tank



Main Nitrogen consumption by Yeasts during the growth phase = the first 5 to 10 fermented SG points

Nitrogen Assimilation by Yeasts : around 50mg/L

Fostering Nitrogen Deficiency

Fermentation in tank

2 main Goals

- Keeping residual sugars
- Inducing Nitrogen Assimilation by Yeasts

Strategy

- Using Low temperature (8 to 10°C ; 46 to 50°F)

- Reducing the Yeast Population during the fermentation.
    - Racking
    - filtration (Diatomee earth Filter, Cross flow Filter, etc.)
    - centrifugation

- Number of population reductions and % of filtered Cider mainly depends on how much Nitrogen is in the must

- Fermentation Duration : 2 months minimum to 8 months

Fostering Nitrogen Deficiency

Fermentation in bottle

Bottling
Fermentation in tank must be slow (1 point SG/week maximum, better 0.5pt/week) in normal condition

Yeasts
5,000 to 1.5 million yeasts/ml
- type of Yeast (indigenous, commercial Strain)
- bottling period
- quantity of residual sugar
- past experience of the cidery
- Stress-test can help

Temperature
Around 8 to 10°C (46 to 50°F)

Bottle Fermentation Duration
4 to 9 months

Avantages/Disadvantages

Advantages

Traditionnal Method
No pasteurization
No input for Yeast developpement Control
No added CO2
No Oxydation in bottle
Natural, Alive

Disadvantages

Pay attention to the Orchard Fertilization
Long process (6 - 9 months minimum)
Fermentation management requires reactive actions (e.g. filtration)
Cool Temperature is needed
Sensitive to aromatic Reduction
Final pressure in bottle is not known precisely when bottling

Alternatives

- disgorgement
- Mixed Method : small Carbonation and slight second Fermentation in Bottle

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Thanks for your attention

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