Closing the loop: Recycling yeast lees to enhance fermentation and sustainability

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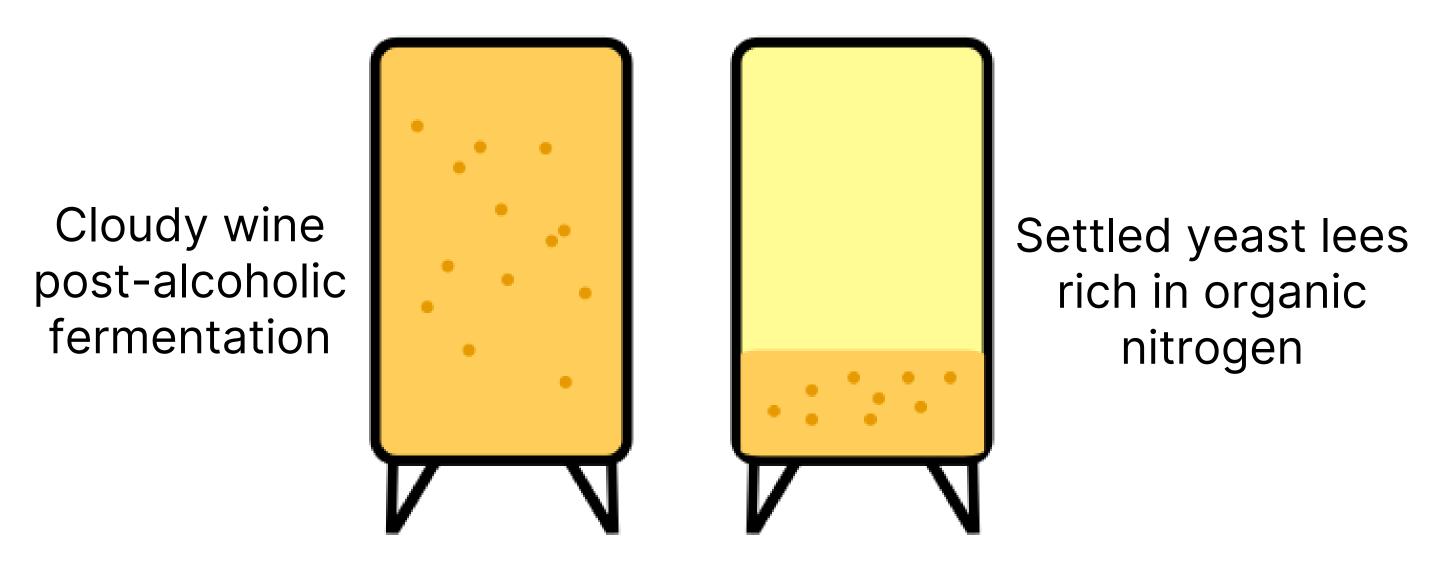
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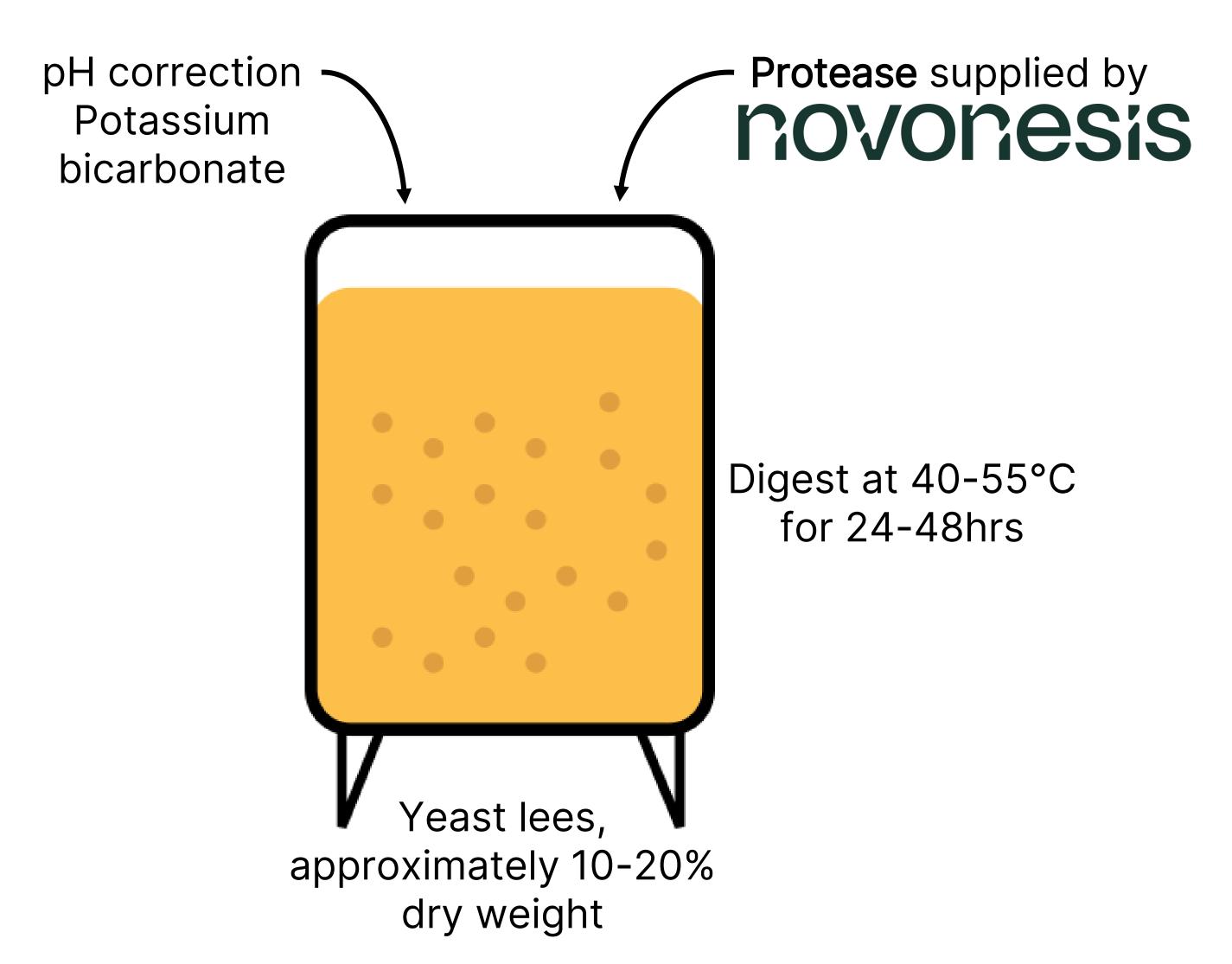
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1. Harvest post-alcoholic fermentation lees

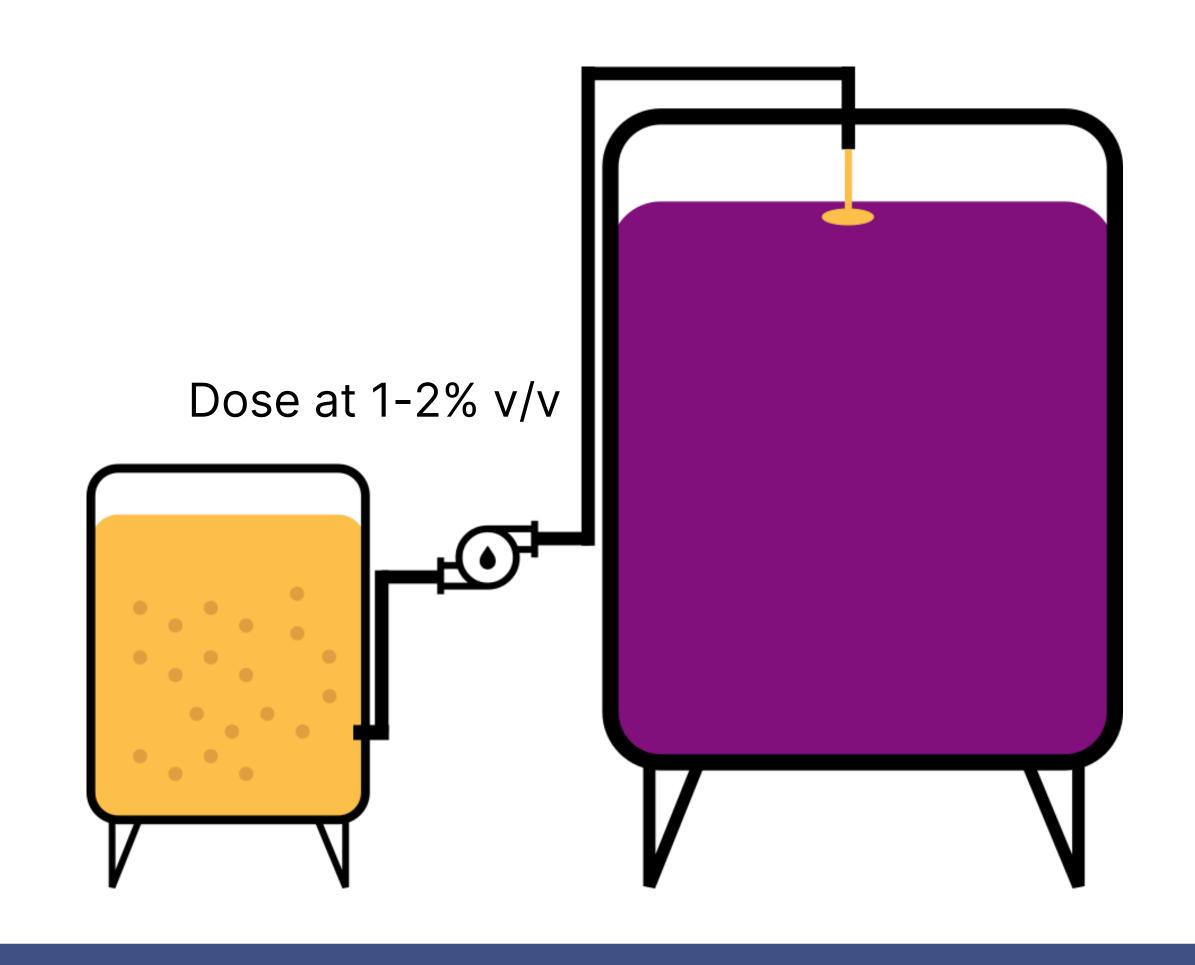
Sourced from racked wine, centrifuge and cross-flow waste



2. Enzymatic digestion



3. Add to grape must and ferment!



Introduction

Recycling and digesting yeast lees within a winery presents a promising strategy for producing a rich organic nitrogen source, which can enhance fermentation performance and influence the production of fermentation-derived volatile compounds in subsequent fermentations.

What is in the digested lees?

High concentration of individual amino acids

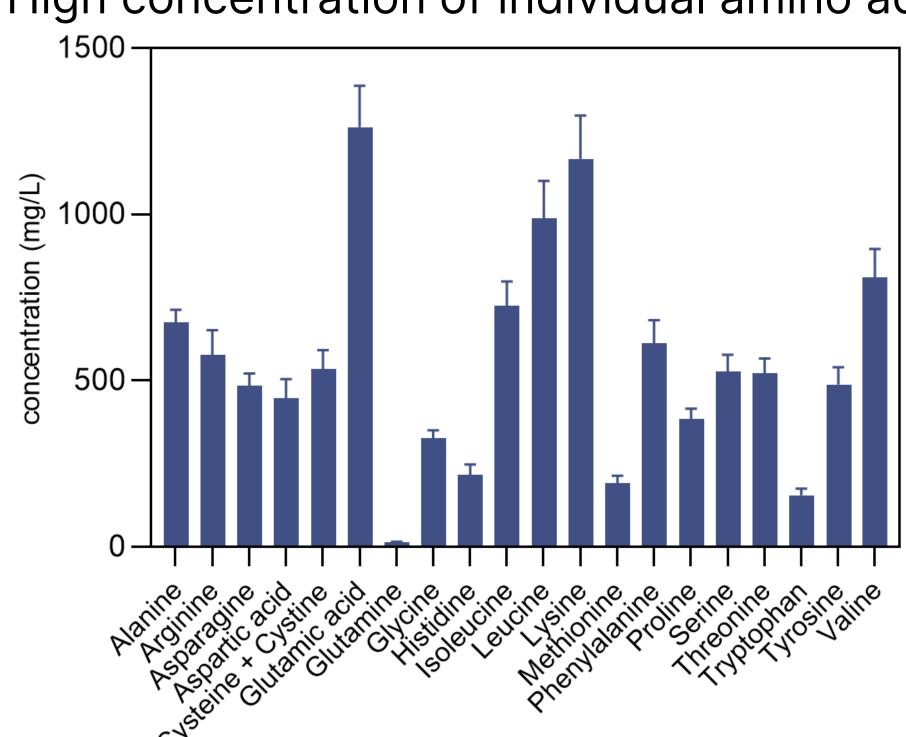


Figure 1. Amino acid concentration of digested lees sourced from a Chardonnay fermentation.

Fermentation performance

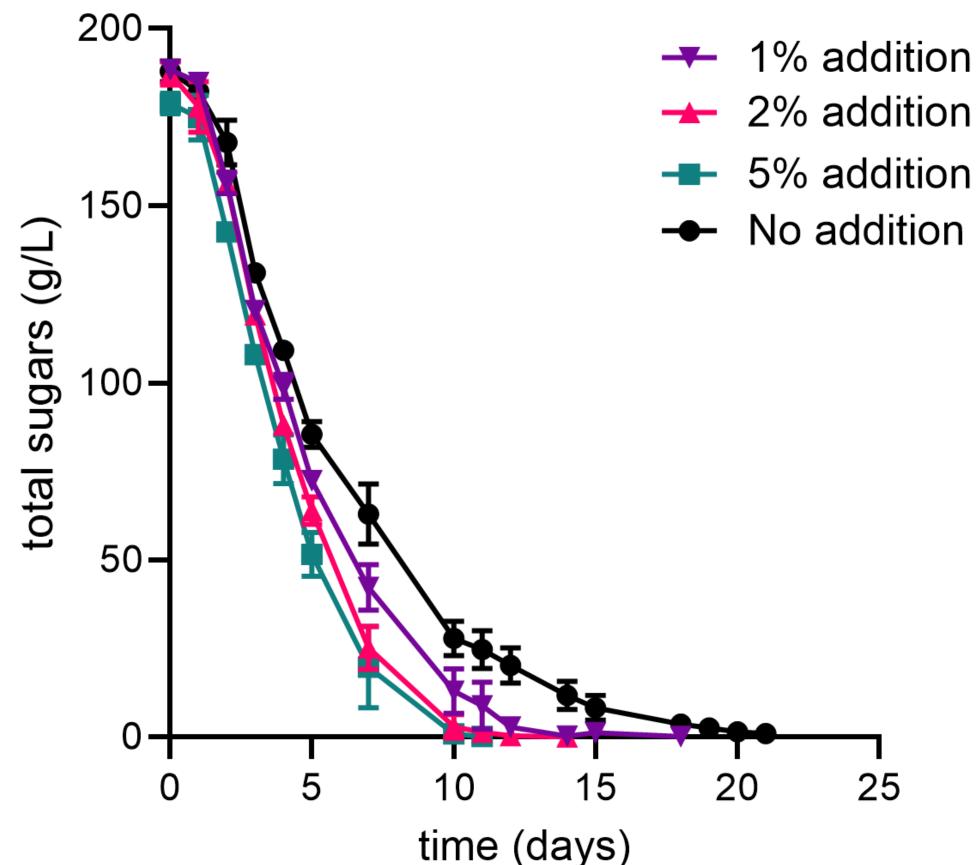


Figure 2. Sugar consumption (18°C) kinetics of a Chardonnay must supplemented with digested lees. The must had an initial YAN of 212 mg/L. A mean decrease in fermentation time of 10.7 days was observed in the 2 and 5% addition treatments.

Check-out the publication in Oeno-one.





