OPTIMIZING WINEMAKING FOR NORTHERN GRAPES

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Develop and optimize winemaking practices to sustainably produce and market distinctive, high quality wines from cold climate cultivars.

- Optimize sensory profile
- Acid reduction
- Suppress hybrid notes
- Balance tannin profiles
- Varietal vs. regional?

Wild riparia, Chaska, MN
EDELWEISS & LA CRESCENT

Impact of processing on volatile extraction
- duration of skin contact
- enzyme treatment
RED WINE TANNINS

- Frontenac & Marquette
- Polyphenolic characterization
- Enological additive trials
- Physiobiological deacidification
  - Marquette & Frontenac
    - malate-reducing yeast strains
    - amelioration
  - Frontenac gris & La Crescent
    - ratable blends of MLF and non-MLF
    - amelioration
Revisiting “Double-salt” deacidification
- La Crescent, Frontenac gris, Frontenac rosé
  - Pre- and post-fermentation ‘double-salt’
  - Preferential malic reduction?

Cross-regional optimization trials
Acid reduction kinetics in model wine solutions with varying malic: tartaric ratios
Characterize non-methoxypyrazine ‘green’ compounds in hybrid grapes

- GCO/MS characterization in ‘extreme’ wines
- Use recombination trials to positively identify compounds
Consumer preference testing
- R-index

Characterization by trained panels
- Projective mapping
- Descriptive analysis

Informal industry tastings
INVESTIGATORS

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