

Strategies of organic sparkling wine production under changing climatic conditions

JM CANALS

Summary

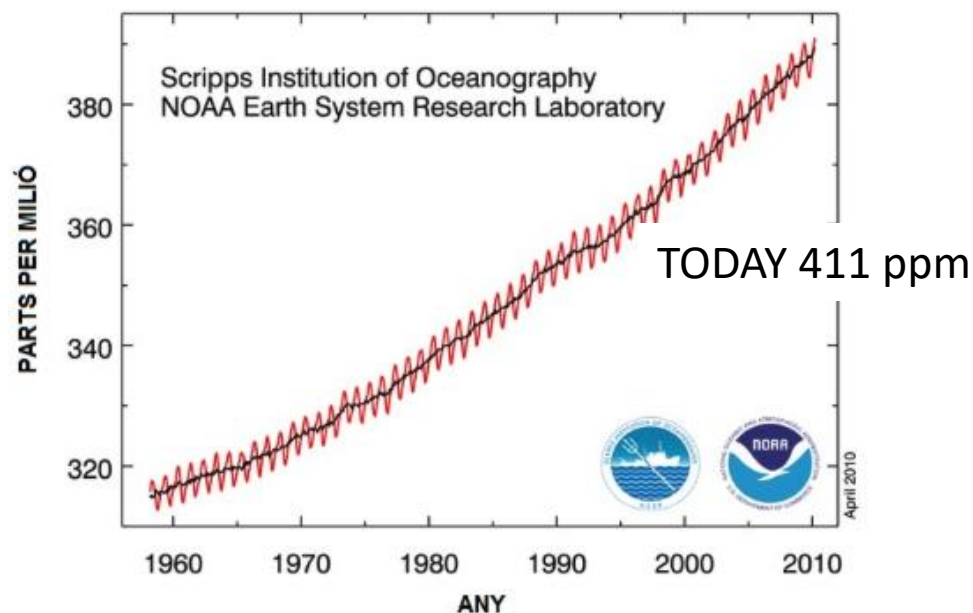
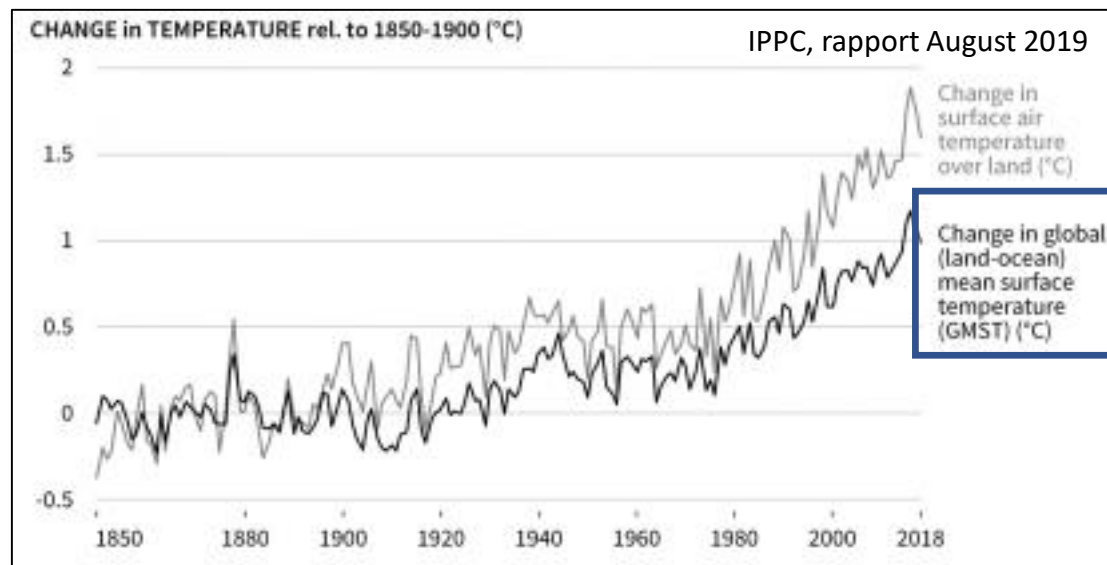
- Requirements for sparkling wines & consequences of global warming
- Possible solution: Ancestral method
- Ancestral method without sulphites
- Conclusions

Global warming

- Increase of temperature
- Higher alcohol content



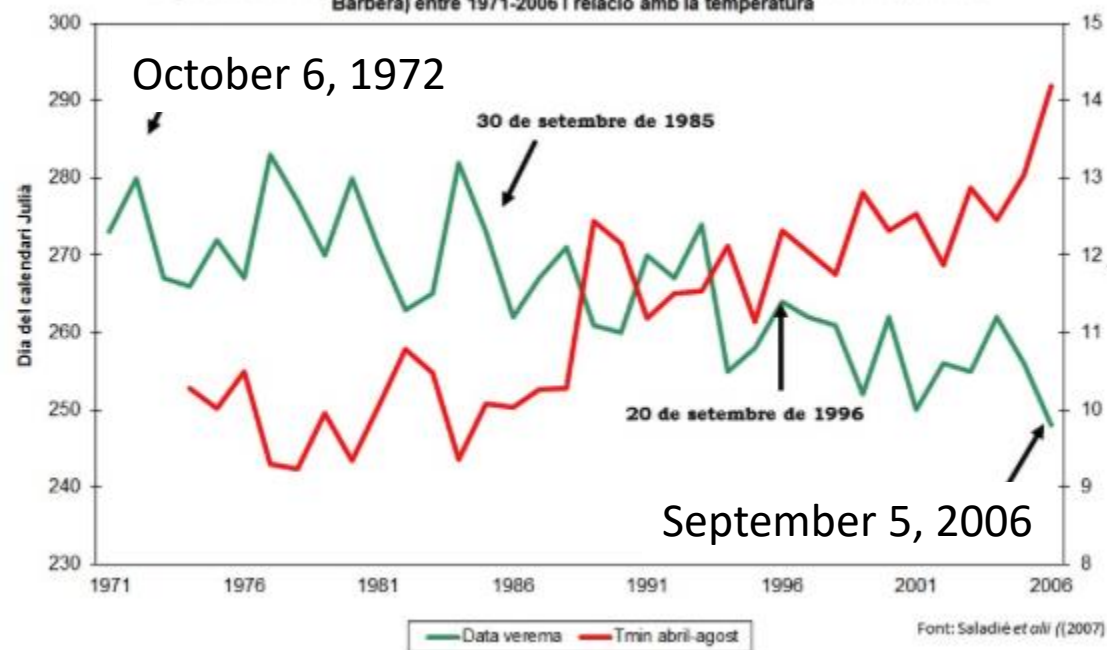
1. Early harvest: short maturity period if alcohol content is limiting
2. Changing of terroir:
 - Higher altitudes
 - Northern territories



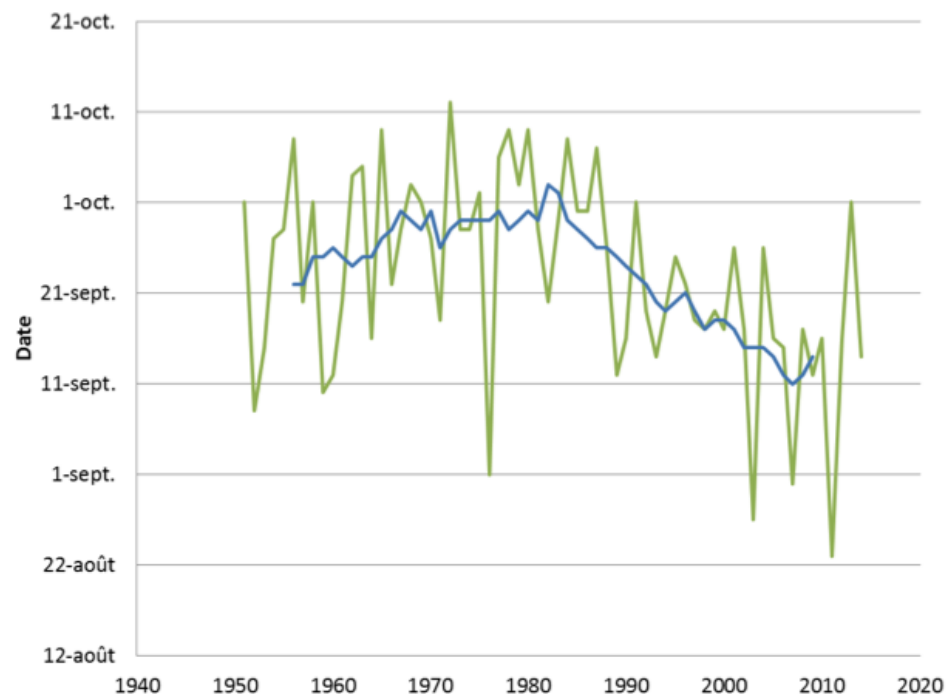
Date beginning harvest

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Fig. 8.11. Variacions en la data d'inici de la verema de la varietat Macabeu a Sarraí (Conca de Barberà) entre 1971-2006 i relació amb la temperatura



Date des vendanges en Champagne



— dates vendanges

— dates vendanges: moyenne glissante sur 11 ans

CIVC

Sparkling wines: Ancestral method

Wine Spectator

Ancestral Method: An inexpensive but risky and difficult-to-control method of producing sparkling wine, and almost certainly the oldest, in which the primary fermentation is stopped before completing, and a secondary fermentation occurs in the bottle, ending when the yeast cells deplete the supply of residual sugar. There is no dosage, or sugar addition, to kick-start the secondary fermentation, and the wine is not disgorged to remove any sediment or lees remaining afterward.

OTHER NAMES: *rurale*, *gaillacoise*, *artisanale*, *pétillant naturel*, and in some appellations, like Montlouis-sur-Loire, *pétillant originel*. Blanquette de Limoux (XVI century).

Sparkling wines: Ancestral method

- Base wine, with 20-25 g/l of sugar from the grape
- Filter and/or cooling system
- Tirage without adding sugar to do the second fermentation
- Clarification in bottle, disgorgement, cork, wired cage and packaging



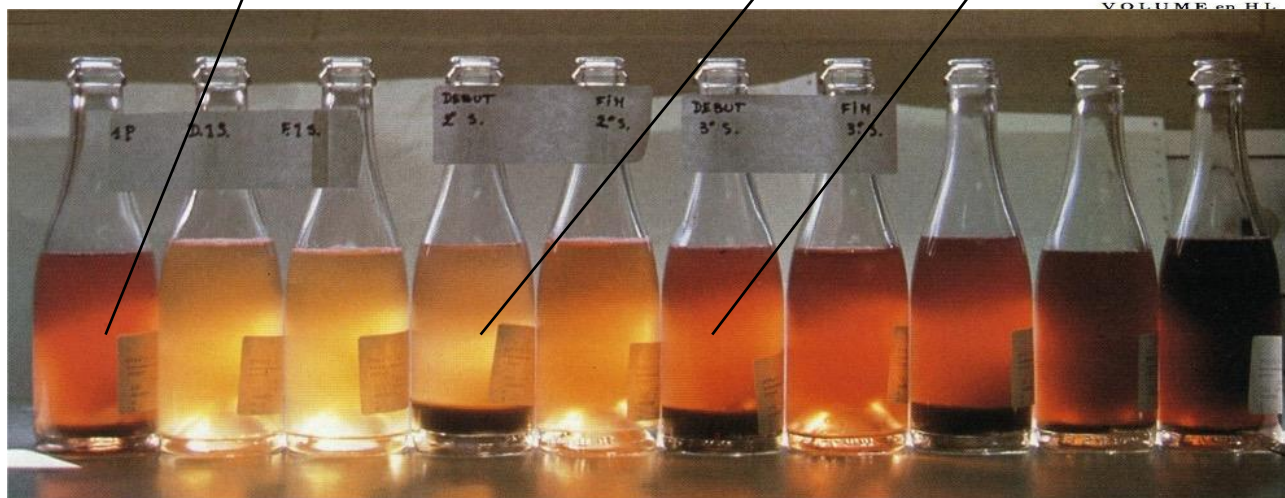
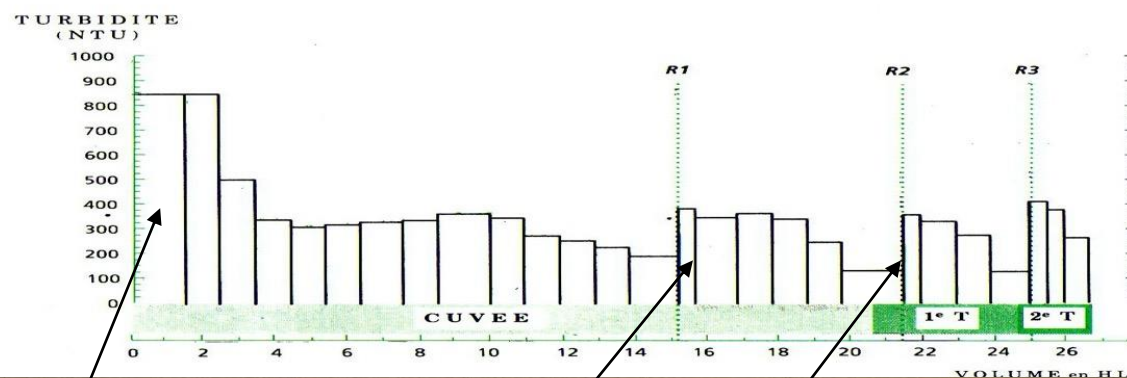
No alcohol increase from Potential Alcoholic Content of the grapes.

KEY POINTS

- SOME PRODUCERS JUST FILL BOTTLES WITHOUT REDUCE THE YEAST POPULATION (100 M cells/ml)
Reduction aromas @ ageing.
- COOL WINE 72 HOURS 0°C REDUCE POPULATION TO 3-5 M cells/ml, to avoid reductive aromas. ALSO STABILIZES WINE FROM TARTRATES PRECIPITATION.
- FILTER NOT COMPULSORY
- ADD A NEW YEAST STARTER IF NECESSARY
- CLARIFYING AGENT ADDED
- MAXIMUM TOTAL SO₂ allowed 120 mg/l

ANCESTRAL METHOD WITHOUT USING SULPHITES

TURBIDITY OF GRAPE JUICE @ PRESSING OF WHOLE GRAPES



COURTESY OF P. POINSAULT

PROCEDURE SUGGESTED

- PRESS WHOLE GRAPES AND TAKE LOW TURBIDITY FRACTIONS
- ADD A YEAST STARTER
- PROCEED AS USUAL



Limited oxidation because of Carbon Dioxide protection.

CONCLUSIONS

- RURAL METHOD AS A SUBSTITUTE OF TRADITIONAL METHOD TO PRODUCE SPARKLING WINES WITHOUT SULFITES
- AFFORDABLE FOR SMALL AND MEDIUM SIZE PRODUCERS
- PROCEDURE INTEGRATED WITH SAME EQUIPMENT THAN TRADITIONAL METHOD.