

Wine Making and Iowa Wines



Dr. Paul Tabor

Tabor Home Vineyards and Winery

Baldwin, Iowa



The Cultivars

We have experience with 4 red wine grape cultivars

- **Marechal Foch:** French hybrid (FH), Cold hardy (CH), early bud break, vigorous, trailing growth habit, early ripening, moderately disease resistant.
- **Leon Millot:** (FH and sister seedling of Foch) crown gall susceptible.
- **St. Croix:** (Swenson Cv.) CH, late bud break, over crops, super vigor, trailing growth habit (?), later ripening - brix plateau.
- **Catawba:** (American), CH enough, late bud break, vigorous, long cane pruning, trailing growth habit, later ripening, fair disease resistance.



The Cultivars

We have experience with 2 white white grape cultivars:

- **Seyval Blanc:** (FH), not hardy enough (considering the fan training system), buds break later than Foch, over crops, vigorous, moderately disease resistant, early ripening, semi-upright growth habit.
- **La Crosse:** (Swenson Cv.), CH, late bud break, super vigor, semi-upright growth habit (trained on low cordon with VSP), good disease resistance, early ripening (pre-Foch).

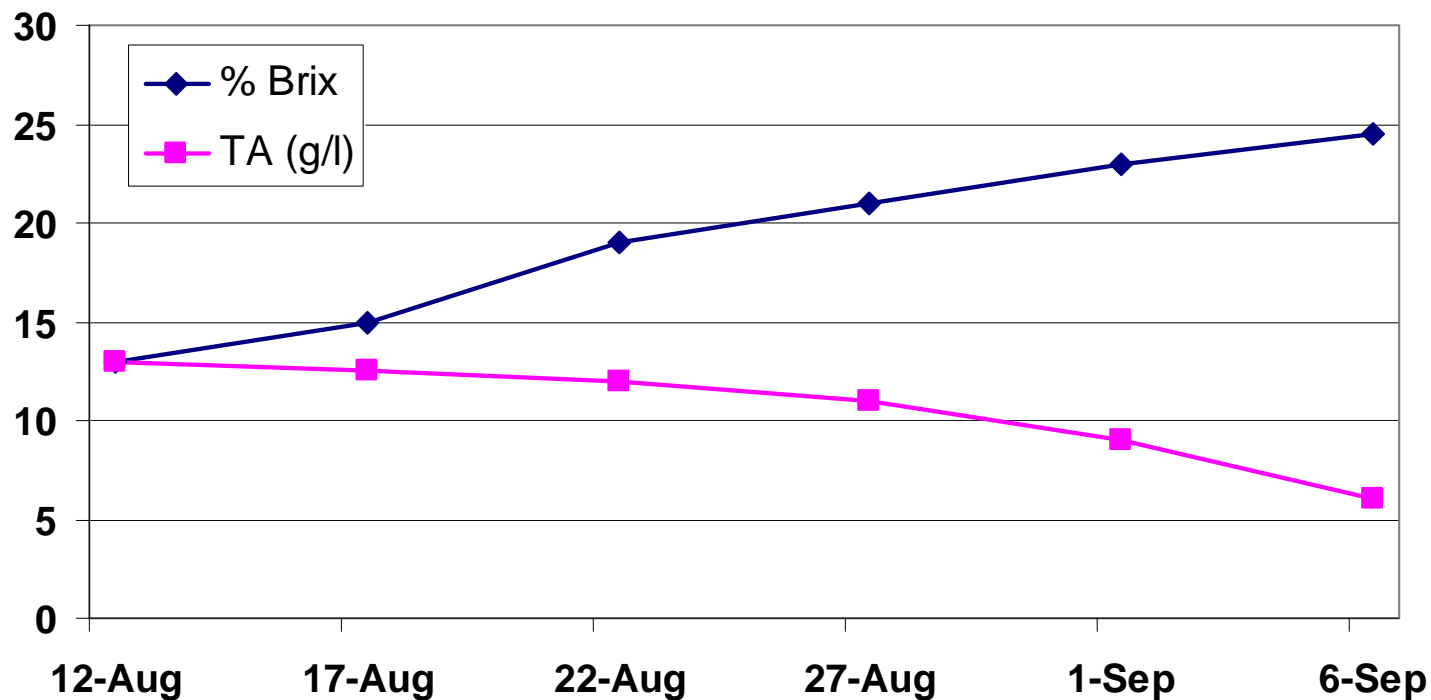


The Cultivars –harvest characters

- **Marechal Foch:** 3-4 tons/A, high °Brix (24.5), controllable titratable acidity (TA) and pH, hints “blackberry”, low tannins, sun exposure to avoid “vegetable” character.
- **St. Croix:** 4+ tons/A, <21° Brix, risk high pH, hints “dark cherry”, better tannins and complexity, sun exposure necessary, over-ripening develops “musky” flavors.
- **Catawba:** 5+ tons/A, high TA, <17° Brix, “grapey”, occasionally an excellent “late harvest” wine.

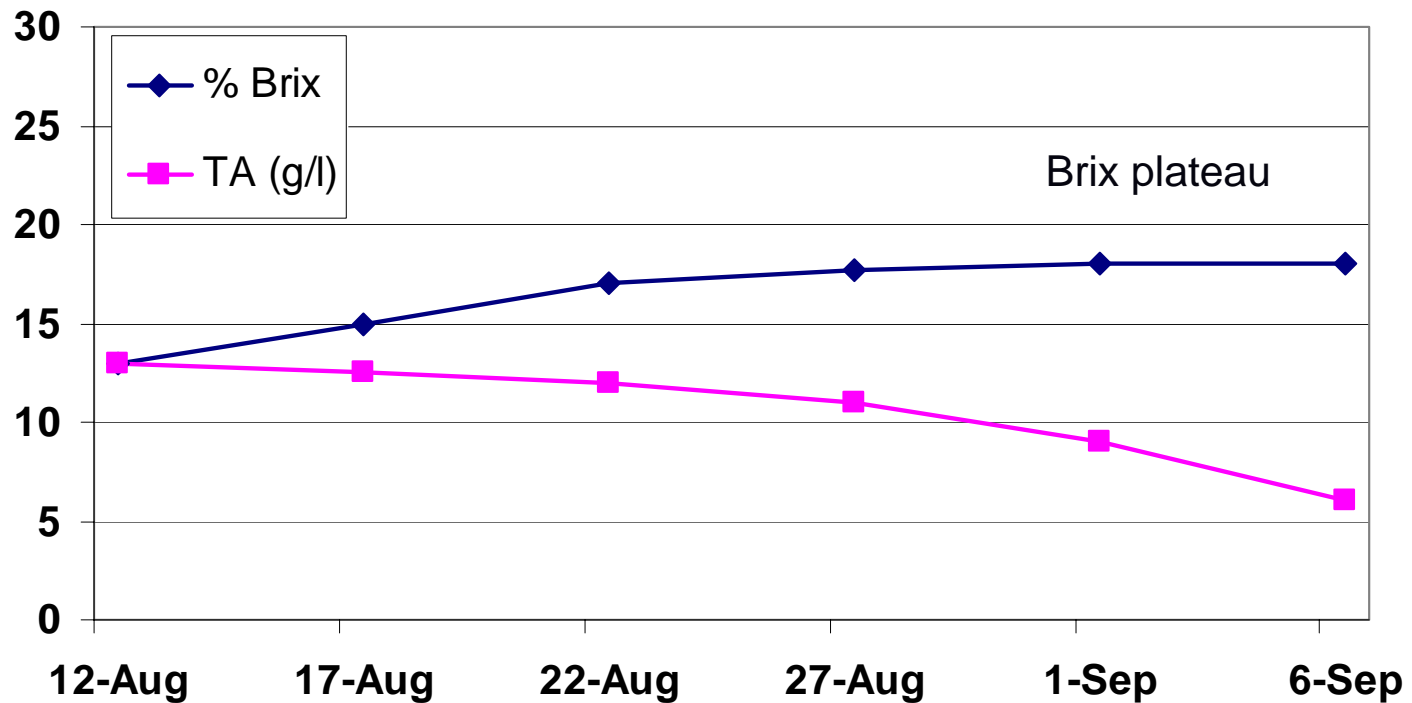
The Cultivars –harvest characters

Foch ripening



The Cultivars –harvest characters

St. Croix ripening





The Cultivars –harvest characters

- **Seyval Blanc:** 4 tons/A, high °Brix controllable TA and pH, hints “pears” and “pineapple”, low solids, low phenolics, oak aging, reduced fresh fruit. 21.5° Brix, 3.02 pH, 9.5 g/l TA
- **La Crosse:** 5+ tons/A, controllable TA and pH, high phenolics and risk of enzymatic browning - requires a pressing aid, hints “peaches” and “apricots”, maintains fresh fruit, poor aging potential. 19.5° Brix, 3.32 pH, 11.85 g/l TA



Where is the Wine Made?

- Grape production in the vineyard
 - Degree of ripeness and uniform ripening, soundness, varietal and quality flavors.
- Crush and pre-fermentation
 - Temperature, leaves and stems, Asian lady bugs, SO₂ and enzymes.
- Fermentation
 - Yeast selection, temperature, *sur lie*, skin contact time, malolactic (ML), alcohol content.
- Clarification, stabilization and aging
 - Fining, oak exposure, residual sweetness, adjustments.



Marechal Foch Winemaking

- Marechal Foch winemaking tips:
 - Stems produce bitter tannins.
 - Four wines - four yeasts plus ML fermentation required (BM45 eg.).
 - Oak trials are important.
- Marechal Foch can be successful in several styles.
 - Light body using carbonic maceration.
 - Moderate body using acid-metabolizing yeast strains that also produce mouth feel components.
 - Extended contact, acid-metabolizing yeast and short lees, certain types of oak enhance Foch wines



Foch Winemaking Research

- Interest in “hot-press” process for Foch.
- NY State wineries have had success, but NY Foch grapes can have much higher acids and “herbaceousness” at harvest than Iowa Foch grapes



St. Croix Winemaking

- St. Croix winemaking tips:
 - ‘D254’ yeast
 - Extended skin contact
 - Super ML fermentation strain
 - Oak trials are important
- St. Croix can produce full-bodied (“inky”), complex wines.



ML fermentation of Foch and St. Croix

	Initial		Finished	
	pH	TA	pH	TA
Foch for Barn Dance	2.88	10.8	3.29	8.9
Foch for Jackson Red	2.9	8.4	3.15	7.7
St. Croix	3.15	11	3.46	6.9



La Crosse Winemaking

- La Crosse winemaking tips:
 - Ripeness dramatically changes fruit character.
 - Yeast selection is critical to maintain fruit – ‘GRE’
 - Polyvinyl-polypyrrolidone (PVPP) treatments at crush, after pressing and at first racking to control enzymatic browning; watch color.
- La Crosse can produce a semi-sweet, moderate bodied cold fermented wine using yeast that enhances varietal characters.
- A *sur lie* table wine with slight oak contact is possible, but La Crosse aging is a problem.
- Award winning La Crosse wines are semi-dry.



Observations on Frontenac

- Galena Cellars is producing Frontenac with character from grapes left on the vines two weeks after they were fully ripe.
- Galena port wine produced from these grapes was excellent.



Progress towards Making Iowa Wines with Regional Identity

- There is very little background information on performance of cultivars and evaluation of their wines in Iowa.
- It will take a 15 to 20 years of work to develop a wine that truly has regional identity.
- Iowa Foch and La Crosse wines have good character and are recognized as distinctive.
- St. Croix and Frontenac may require the heat units Iowa has to make wines with character –heat units that Minnesota does not have.