

# **Oregon Wine Advisory Board Research Progress Report**

**1997 - 1998**

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## **Sensory Evaluation of Pinot noir Processing Trials: 1996 Enzyme and Tannin Additions**

Naomi Goldberg, Mina McDaniel, Barney Watson  
Department of Food Science and Technology  
Oregon State University

### **OBJECTIVES**

To determine the effects of commercial enzyme and tannin additions on the appearance, aroma and flavor profiles of Pinot noir processing trials. The wines were made by Barney Watson as part of the experimental wine program at Oregon State University (see Fermentation Processing Effects of Anthocyanin and Phenolic Composition of Oregon Pinot noir Wines).

### **RESULTS**

In July, 1997 seventeen winemakers evaluated wines from enzyme and tannin processing trials from the 1996 vintage. Winemakers evaluated all wines twice, with an ~10 minute break between samples. They used free-choice profiling to describe the appearance, aroma and flavor characteristics of the wines. The data was analyzed through Generalized Procrustes Analysis and Analysis of Variance.

The samples separated easily in terms of appearance (Figure 1). The enzyme treated samples (Scottzyme Color Pro and Scottzyme Color X) separated from the control and tannin treated samples (Tanin VR Supra, Quertanin and Oenotan) with the enzyme samples having more clarity, color intensity and purple attributes as is indicated on the positive side of axis 1. The winemakers' ratings of aroma descriptors found for Scottzyme Color Pro to rate highest in overall intensity, spice and fruity characteristics and was followed closely by Scottzyme Color X (Figure 2). The control and tannin treated samples (Tanin VR Supra, Quertanin and Oenotan) were rated higher in earthy and overall vegetable. This can only be considered a trend as PC1 was not statistically significant. The enzyme treatments also separated from the control and tannin treatments in terms of flavor (Figure 3). Color Pro and Color X were significantly higher than all other samples for the following terms: overall floral, overall intensity, acidity, bitterness and astringency. The control and tannin treated wines were rated higher in overall vegetable.

Figure 1:

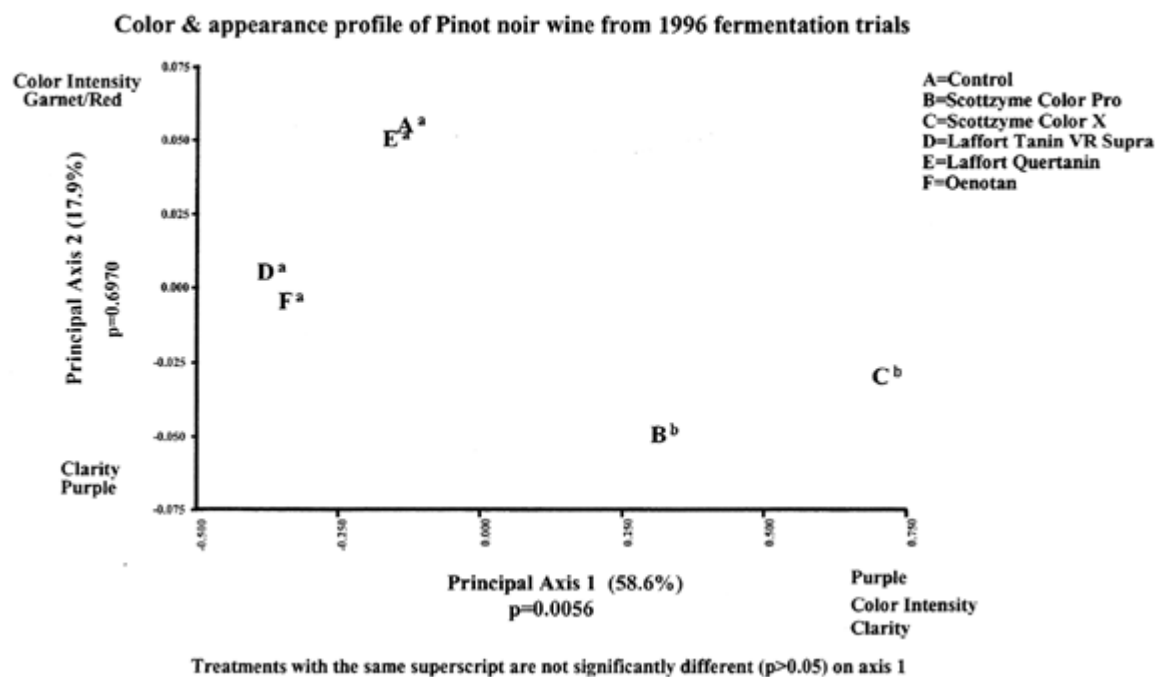


Figure 2:

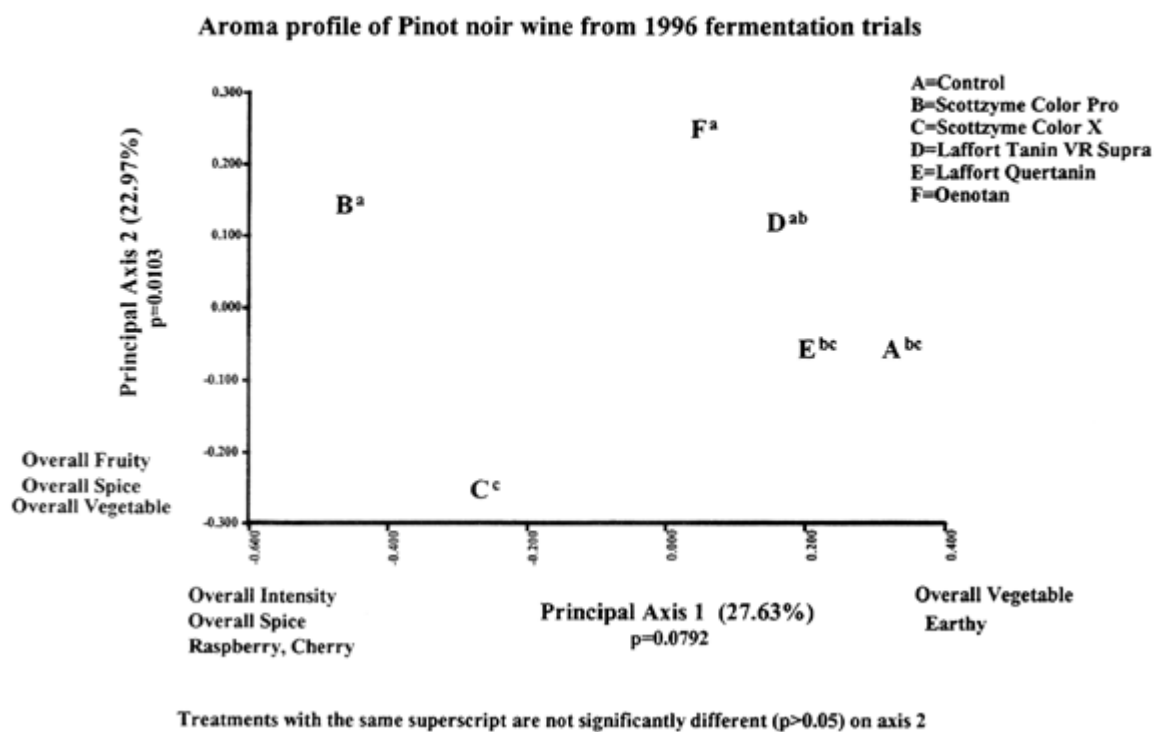
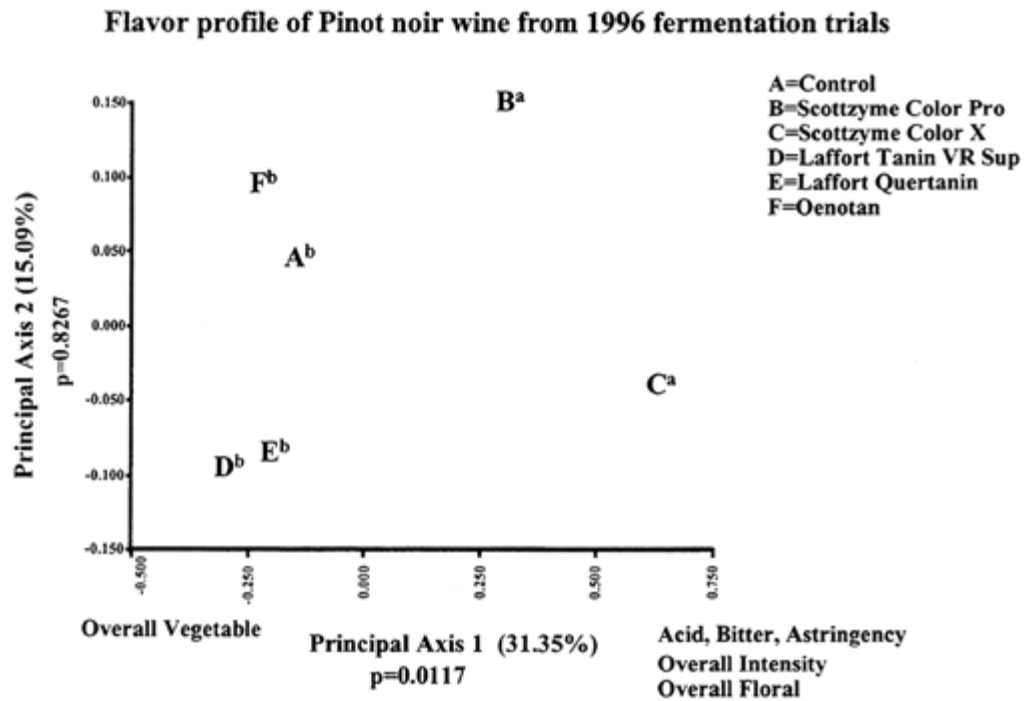


Figure 3:



Treatments with the same superscript are not significantly different ( $p > 0.05$ ) on axis 1

## POTENTIAL SIGNIFICANCE TO INDUSTRY

This research increases the knowledge of the effects of enzyme and tannin commercial fermentation treatments on Pinot noir appearance, aroma and flavor attributes helping to aid winemakers in producing optimum quality wines.