

ABSTRACT

MICROBIAL, CHEMICAL, AND SENSORIAL CONSIDERATIONS FOR MANAGING HIGH-DENSITY FERMENTATIONS

Commercial volumes of high-density syrah and chardonnay were fermented under different temperature levels, nutrient programs, and dilutions to determine their effect on avoiding stuck fermentations. The resulting wines were compared using a triangle discrimination test to determine any sensory effects from the different treatments. Based on yeast viability data, a method was developed to determine an impending stuck fermentation. Higher fermentation temperature was found to increase the risk of problem fermentations. Gradual nutrition programs, rather than an initial large nutrition application seemed to decrease the likelihood of a stuck fermentation. Sensory effects of temperature and nutrition programs vary with grape varietal. Dilution of high-density musts is a viable method for avoiding stuck fermentations. In some cases, there is little or no effect on the resulting wine sensory attributes.

Donald Edward Chaney, Jr.
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