

RULES OF THUMB

- **Red Fermenter Space 235 gal/ton Juice Fermenter Space 190 gal/ton
- **Barrel Capacity is 225 liters or about 60 gallons.
- **Puncheon Capacity is 500 liters or about 132 gallons.
- **Barrels can be maintained for extended periods if they are stored wet. First, the barrel is washed several times with clean, cold water. Then the barrel is half filled with clean water, and a cup of sulfite powder and a cup of citric acid are added. Then the barrel is completely filled with water and bunged tight. The sulfite/acid solution will keep the barrel in good condition for some time, but after several months, the sulfite/acid solution must be replaced.
- **Estimated wine yield, at dryness, per ton of grapes is 175 gal/ton.
- **Estimated wine bottled per ton of grapes crushed is 65 cases for whites and 60 cases for reds.
- **One full 9-liter case of 750-ml bottles of wine weighs about 35 lb.
- **A 40"x48" wooden pallet holds 4 layers of 14 cases or 56 cases.
- **The addition of 8 #/m of tartaric acid to juice or wine will raise T.A. approximately 0.10 g/100ml as tartaric acid.
- **Make a 4.5% (w/v) aqueous solution of a wine additive in the lab and adding 1 ml of this solution to 375-ml of wine is the same as adding 1 #/m in the cellar.
- ** Make a 4.5% (w/v) aqueous solution of a wine additive in the lab and adding 0.1 ml of this solution to 50-ml of wine is the same as adding 1 #/m in the cellar.
- **Heat Stability: white and pink wines take an average of 2 #/m of bentonite to remove unstable protein. Red wines generally have no unstable protein.
- **Cold Stability: Occurs usually by holding wine at 23 °F for two weeks.
- **Add 1 g of prepared dry yeast to each gallon of juice.
- **Add 45 billion cells of malo-lactic bacteria to 60 gallons of wine.
- **SO₂: 18.2 g of KMS added to a ton of grapes gives 10 ppm SO₂. 0.076 g of KMS added to each gallon, or 76 g/m of wine gives 10 ppm SO₂. **13.68 g/bbl (60 gal) gives 30 ppm**
- **H₂S: 0.15 ml of 1% CuSO₄.5H₂O soln. in 1 gallon of wine is 0.1 ppm Cu⁺⁺, or 1.5 g/m of CuSO₄.5H₂O crystals raises the Cu⁺⁺ level 0.1 ppm.
- **°F = 32° + (°C x 9)/5 °C = 5 x (°F - 32°)/9

CONVERSION FACTORS

- 1 gallon = 3.785 liters
- 1 lb. = 454 grams
- 1 meter = 3.28 ft.
- 1 hectare = 2.47 acres

ABBREVIATIONS

- #/m is lb. per 1,000 gallons
- (w/v) is weight to volume
- soln. is solution
- KMS is potassium metabisulfite