# Conducting a Successful Malolactic Fermentation

## Grapes
- **pH**: Between 3.20 and 3.50
- **Fruit condition**: Visible rot, off odors

## Crush/Destem Maceration
- **SO2**: < 40 mg/L total for white<br>  < 70 mg/L total for red
- **Potential alcohol**: < 13.5%

## Alcoholic Fermentation
- **Yeast strain**: Use yeast strain that is compatible with ML bacteria

## Malolactic Fermentation
- **Inoculation strategy and timing**: Post-alcoholic fermentation<br>  Consider strains recommended for certain difficult wine conditions
- **Temperature**: 64-71°F (18-22°C)
- **SO2**: < 5 mg/L free
- **Alcohol**: < 13.5%
- **pH**: 3.20 to 3.50
- **Nutrients**: Consider ML nutrients if vineyard lots have been problematic in the past or you used high nutrient demand yeast strain
- **MLF progress**: Regular monitoring
  - Microscopic examination for Lactobacillus, Pediococcus
  - Monitor VA as indicator of spoilage bacteria
  - PCR analysis

## Post Fermentation & Aging
- **MLF completion**: Malic acid < 30-50 mg/L
- **Action**: Confirm with enzymatic assay or external lab analysis before making SO2 addition