KES | 101

KOBRAND Wine & Spirits
EDUCATIONAL SERIES

WINE 101

HOW WINE IS MADE (10-15 Minutes)

Facilitator's Guide

PowerPoint Presentation

How Wine Is Made (Handout)

Major Events In Winemaking (Handout)

How Wine Is Made Quiz (Handout)

HOW WINE IS MADE

OVERVIEW:

An introduction to the grape growing and winemaking process.

HANDOUTS:
- How Wine Is Made
- The Major Events in Winemaking

The Major Steps in White Winemaking

- Harvest
- Crush/Pressing
- Fermentation
- Maturation
- Bottling

The Major Steps in Red Winemaking

- Harvest
- Crush
- Fermenting/Pressing
- Malolactic Fermentation
- Maturation/Aging
- Bottling

Four Factors That Make Wines Different From One Another

- Climate and Weather
  Discuss the effects of climate and weather on grapes. Cool climates offer slower ripening opportunity. Warm climates can produce lush, ripe fruit. Each affects sugar levels, which can affect alcohol level, etc. Combinations of the two (warm days and cool nights) can be beneficial. Too much rain can water down the grape; too little rain can overstress the vine. Frost and snow at the wrong time of year can be dangerous.

- Soil and Aspect
  Sandy soil versus gravel or clay – each holds water differently and imparts different flavors upon the grape. Grapes planted on a hillside will receive different sun exposure, water retention, etc. than grapes planted in the valley.

- Grape Variety
  Some grapes are hardy, some are fickle, some are thick skinned and some are thin. Different grape varieties have different flavor components. Each factor contributes to varied flavors in the final wine.

- Viticulture and Winemaking
  The winemaker's decisions on where to plant, what to plant, how to farm, how to harvest, ferment, age, etc. are the biggest factors in the final outcome of a wine.

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HOW WINE IS MADE Continued

Vine Cycle

- Budbreak (the first budding of the season after winter dormancy)
- Flowering (the production of the flowers that will turn to grape clusters)
- Veraison (the process of grapes starting to soften, gaining sugar, acidity and color as they proceed to ripeness)

Once a vine is planted, it normally takes 3 years until the first commercial crop is realized. The vine reaches maturity after 6 years and begins to decline after 20 years.

- Harvest (the picking of grapes from the vines)
  - Can be hand harvested or machine harvested
  - Hand harvesting is more labor intensive, time consuming and costly (in general) but does not always guarantee better quality.
  - With hand harvesting pickers can take just the best fruit, leaving inferior fruit behind.
  - Machine harvesting is quicker and less discriminating.

Crush / Press

Discuss the "Lucille Ball" grape stomping episode and explain why a foot is an ideal tool for stomping grapes. The human foot is cushioned and doesn't break the seeds thereby reducing the potential for bitterness in wine. The modern day crushing machines simulate this process. The coil that operates within the hopper is gentle and simply bursts the grapes open to expose the pulp and let the juice run out.

Comment on the difference between red and white production in regard to the timing of "crush" versus "pressing". Explain "crush" – the process of putting grapes through rollers to gently bust the grapes and remove the leaves and stems, leaving a "must" consisting of juice, skins and seeds versus "pressing" – the process of gently squeezing the grapes (with a bladder press) and causing the juice to separate from the stems, seeds, skins, etc. leaving only the juice.

The Color of Wine – A Fun Activity

- Time permitting, give everyone a red table grape and ask them to peel the skin from the grape.
- Then ask them to squeeze the juice into a small cup. When they see the juice is actually white, ask: "If a red grape's juice is actually white, then how do red wines end up with a red color?"
- Answer: From the grape skins. The red wines are not "pressed" until later in the process so that the juice will have a prolonged contact with the red grape skins imparting flavor, tannin and COLOR.

HOW WINE IS MADE Continued

Alcoholic Fermentation

Sugar + Yeast = Alcohol + CO_2 + Heat

Don't get too technical about the formula. Describe how yeast can form naturally on the grape or can be added by the winemaker.

- Yeast naturally eats sugar that is found in the grape juice, with alcohol and CO2 as by-products.
- As the yeast eats the sugar and the alcohol level and temperature continue to rise, the yeast become exhausted and begin to die off but not usually before all of the sugar has been converted.
- If any sugar is left in the wine it is referred to as "residual sugar" and offers a level of sweetness to the wine.
- With some wines, the fermentation is purposely halted in order to create a final product that tastes sweet per the winemaker's wishes.

Malolactic Fermentation

Discuss the extra step in red wine making – Malolactic Fermentation (MLF), an optional step in some whites.

Formula: Malic Acid + Bacteria = Lactic Acid + CO2

Definition: Different from alcoholic fermentation as it does not involve yeast or the production of alcohol. It is a chemical conversion of ACID instigated by beneficial bacteria. The process turns the harsh malic acids to a softer lactic acid and adds an overall effect of softening the acids in the wine. This process can occur naturally or be induced. All reds undergo MLF and whites may or may not, based on the winemaker's desire. If the winemaker wants a softer mouthfeel in his white wine, he will allow MLF; if he prefers a snappy, lively acidity, he will prevent MLF.

Aging

- Stainless Steel/Oak
- Small Barrels/Large Barrels
- American Oak/French Oak

Discuss the options and how each has an affect on the final taste/flavor of the wine.

Bottling

"Wine improves with age. The older I get, the better I like it."

– ANONYMOUS

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