



# WINE 101

WINE EDUCATION FOR INDUSTRY PROFESSIONALS

“Alcohol is proof that God loves us and wants us to be happy” – Benjamin Franklin

Should be completed during  
your 3<sup>rd</sup> month in the role

Company Proprietary and Confidential Information

**Objective:**

Attain an understanding of wine, including how it is produced, varietal characteristics, and the regions from which specific products originate.

**Goal:**

Provide basic wine knowledge for industry professionals in order to enhance sales potential.



# THE THREE TIER SYSTEM



## Tier I – Our Partners

- Suppliers, Manufacturers & Producers
- Wineries, Distilleries, Breweries

## Tier II – RNDC

- Wholesalers & Distributors

## Tier III – Our Customers

- Retailers – Grocery Stores, Package Stores, Restaurants, Hotels, Bars, etc.

After the repeal of Prohibition, some states adopted a Three-Tier System of distributing alcohol to regulate the manufacturing, distribution, and retail sales of alcoholic beverages.

- The three-tier system separates the manufacturer from the retailer to protect the retailer against control by a large dominant supplier. The three-tier system:

- ✓ Avoids the overly aggressive marketing and sales practices of the pre-Prohibition era;
- ✓ Generates tax revenues that can be collected efficiently from the industry;
- ✓ Facilitates state and local control.

# WHAT IS WINE?

## What is wine?

- Wine is an alcoholic beverage obtained from the fermentation of juice from freshly gathered fruit (usually grapes).
- Fermentation is what allows juice to turn into wine. It is simply defined as the process by which sugars are converted into alcohol through the presence of yeasts.
- When the grapes are crushed, even under their own weight, the natural yeasts that are present on the skins of the grapes come into contact with the natural sugars in the juice of the grape. When crushed and fermented, all grapes will naturally make wine.
- Grapes + yeast = alcohol + heat + CO<sub>2</sub>

# WHAT IS WINE?

- The fermentation of a particular wine typically takes place in its district of origin according to local tradition and practice.
- Though wine is produced on a global level, the principles behind production can be as different as the places where the grapes are grown.
- Employing these principles is where the winemaker earns his keep, intervening to produce quality wine: selecting the best quality fruit, envisioning the style of the finished product, and maintaining meticulous hygiene at all phases of production are the aspects of production that all winemakers share.

# WHAT IS WINE?

- There are many other factors that affect the quality and taste of a wine: grape varietal, geographic location, climate, soil and vintage are all determining factors, as well as the balance between viticulture – the planting, growing, studying and harvesting of the grapes – and viniculture – the entire process of making wine from the moment the grapes are picked to when the wine is bottled.

The goal of this course is to gain an understanding of the production of wine and a deeper understanding of grape varieties, their flavor profiles and to apply that knowledge toward sales.

# WHERE DOES WINE COME FROM?



# WHERE DOES WINE COME FROM?

## **Grape Variety**

Wine grape varieties of commercial importance represent only a fraction of the thousands of vine varieties grown throughout the world. Grapes that are used in wine production (Chardonnay, Merlot, Sangiovese, etc.) are called *vitis vinifera*. Each type has its own particular character, defined by factors such as flavor, color, size, tannins, acidity, and its unique ability to be grown in various climates and zones.



# WHERE DOES WINE COME FROM?

## **Geographic Location**

Geographic location plays a major role in wine production. Wines from warmer, sandier regions will possess different characteristics than wines grown in rocky, cooler regions. Traditions and laws of individual regions also affects wine as vineyard locations within nations will have specific guidelines that must be met in order to qualify for certification. For example, in France, a wine from Burgundy will differ from a wine produced in the Rhone. Likewise, on a grander, global scale, a Cabernet Sauvignon produced in Washington State will differ from one produced in Barossa Valley, Australia.

# WHERE DOES WINE COME FROM?

## **Climate**

Temperature is probably the most important aspect of climate, though exposure to sun, fog, wind, rainfall, and humidity are also factors in the quality of grape production. Climate is a reference to a region's conditions over the course of many years, not just a single season or vintage.

## **Soil**

For grape growing, soil needs to be able to drain well, but retain some moisture during the warmer summer months. The soil also needs to provide the vine with key nutrients such as nitrogen and iron.

## **Vintage**

The vintage is the process of the harvest. The grapes harvested for wine and the resulting product from that harvest will vary from year to year. For example, a vintage that sees a cold, wet summer will produce a very different wine compared to one that sees a summer of more ideal growing conditions.

Many wine regions and wine styles are not as effected by the conditions of a particular year. Many wines come from regions that consistently deliver quality nearly every year. Also, wines meant for immediate consumption are often made consistently of the same style despite vintage specifics.

# STEPS TO WINE PRODUCTION

1. Harvest: This is when the grapes are picked. Depending on style, country, and vintage, the harvest normally occurs in September/October in the Northern Hemisphere and in April/May in the Southern Hemisphere.
2. Crush: The grapes are placed in a vat and the skins are broken to release the juice. Depending on the style, typically for red and rosé wines, the skins may remain in contact with the juice for a period of time in order to extract varying degrees of color, tannins, and aromatic compounds – this process is also known as maceration.
3. Fermentation: The process by which grape juice becomes wine. Fermentation is when yeasts (either natural or added) consume the sugar in the juice and produce alcohol, heat, and carbon dioxide.

4. Aging: Also referred to as maturation, aging typically takes place either in oak barrels, stainless steel tanks, as well as the bottle, depending on the style and/or varietal.  
\*Many wines do not need any aging at all before they are bottled and prepared for the market
5. Clarification: Fining and/or filtration. This adds clarity to the finished product thereby eliminating any extraneous particles such as proteins or sediment that tend to cloud the wine.
6. Bottling: The wine is bottled and can be ready for either immediate distribution or stored for delayed release.
  - A. Standard Bottle: 750 milliliters (ml). Used for most styles.
  - B. Half Bottle: 375 ml. One-half of a standard bottle.
  - C. Magnum: 1.5 Liters (L). Equivalent of two standard bottles.

\*Please note\* There are other factors in wine production depending on the style, e.g., Sparkling, Dessert, Port, and Sherry. These details are addressed in subsequent sections.

# GRAPE VARIETIES

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## WHITES

## **Chardonnay**

Chardonnay is the world's most widely planted quality white grape. It adapts well to every climate and is the grape that most easily shows off the winemaker's skills.

- Viticulture: Versatile in adapting to varying climates and can grow in a range of soils.
- Vinification: Fermented in stainless steel or oak. Matured in old or new oak.
- Style: May be produced in a wide range of styles such as:
  - Fresh, light unoaked, typically produced in cooler regions such as Chablis, France
  - Rich, tropical fruit aromas and flavors from many New World regions like Napa Valley
  - Oaky, creamy, and buttery styles from wine produced with malolactic fermentation
  - Sparkling wine from around the world



## **Chardonnay**

- Produced in every wine producing country.
- Premium regions for Chardonnay
  - France - Burgundy – Chablis, Puligny-Montrachet, Chassagne-Montrachet
  - USA – California – Napa, Sonoma, Santa Barbara
  - Chile – Casablanca
  - South Africa – Walker Bay
  - Australia – Yarra Valley, Margaret River
  - New Zealand – Marlborough

## **Sauvignon Blanc**

- Sauvignon Blanc is an aromatic and high acid grape variety.
- Viticulture: Cool to moderate climates
- Varietal/Blend: Often bottled on it's own, but occasionally blended with Semillon
- Vinification: Fermented in stainless steel.
- Style:
  - Versatile: may be tangy and sharp as well as softer styles when aged in oak
  - California Sauvignon Blancs tend to be more full bodied than French Sauvignon Blancs, while New Zealand Sauvignon Blancs are remarkably aromatic with citrus fruits and herbal notes.
  - High acidity
  - Aromatic grape variety
  - Generally best enjoyed when young
  - Usually unoaked, though some producers may briefly mature in oak

## **Sauvignon Blanc**

- Produced in most every wine producing country.
- Premium regions for Sauvignon Blanc
  - France – Bordeaux , Loire Valley (Sancerre, Pouilly-Fume)
  - USA – California – Napa, Sonoma, Lake County
  - Chile – Casablanca
  - South Africa – Constantia, Elgin
  - New Zealand – Marlborough

## **Pinot Gris/Pinot Grigio**

Pinot Grigio and Pinot Gris are the same grape, but made in two different styles.

- Viticulture: Versatile cool to moderate climate
- Varietal/Blended: Often bottled on its own
- Vinification: Fermented in stainless steel. Oak is seldom used.
- Style:
  - Higher acid, subdued citrus and green flavors.
  - Richer, intense style in Alsace.

## **Pinot Gris / Grigio**

- Produced in a lot of wine producing countries.
- Premium regions for Pinot Gris / Grigio
  - France – Alsace (rich, ripe style)
  - Italy – Veneto, Trentino (higher acid, citrus flavors)
  - Germany – known as Grauburgunder
  - New Zealand

## **Riesling**

Riesling is a high acid, highly aromatic grape variety that it is also produced around the world in a variety of styles. Riesling is capable of producing powerful wines of superb quality and elegance.

- Viticulture: Cool or moderate climates.
- Varietal/Blend: Usually bottled on it's own, but occasionally blended
- Vinification: Fermented in stainless steel. Almost never aged in oak or with the use of malolactic fermentation.
- Styles:
  - Made in various styles from light-bodied, dry, and crisp to rich, sweet and hedonistic
  - When harvested late, will produce a sweeter, luscious style
  - Can age well due to the high acid.

## **Riesling**

- Produced in most every wine producing country.
- Premium regions for Riesling.
  - France – Alsace
  - USA – Washington
  - Germany – Mosel, Rheingau, Pflaz
    - Ripeness levels from least ripe to most ripe
      - Kabinett
      - Spatlese
      - Auslese
  - Australia – Clare Valley, Eden Valley
  - Austria

## **Moscato**

Moscato is a high acid, extremely aromatic grape variety. It produces wines of high intensity flavors

- Viticulture: Cool or moderate climates.
- Varietal/Blend: Usually bottled on it's own, but occasionally blended
- Vinification: Fermented in stainless steel. Almost never aged in oak or with the use of malolactic fermentation.
- Styles:
  - Made in a slightly sweet, highly aromatic style
  - Moderate acid
  - Mild to full bubbles



## **Moscato**

- Produced in Italy and USA.
- Premium regions for Moscato
  - France – Beames de Venise (fortified style)
  - Italy – Piedmonte (still, half bubbles and full bubbles)
  - USA – Isolated producers make premium bottlings

# GRAPE VARIETIES

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## REDS

## **Pinot Noir**

The great red wines of Burgundy are from Pinot Noir. It is a lower tannin wine that can exhibit high levels of elegance.

- Viticulture: Cool to moderate climates
- Vinification: Stainless fermentation normal. Can be oak aged, but care must be taken as the oak can over power the flavors.
- Varietal/Blended: Very rarely blended.
- Style:
  - Low to medium levels of tannins
  - Pronounced aromas of red fruits, that can develop into mushroom and meat aromas with age.
  - Some examples will have subtle oak aromas of vanilla and toast.

## **Pinot Noir**

- Pinot Noir is a difficult grape to grow, so inexpensive versions are few and far between.
- Premium regions for Pinot Noir
  - France – Burgundy (Gevrey-Chambertin, Nuits-St-Georges, Pommard, Volnay)
  - USA – Carneros, Russian River Valley, Willamette Valley
  - Chile – Casablanca Valley
  - Germany – Pfalz and Baden
  - South Africa – Walker Bay
  - New Zealand – Central Otago

## **Cabernet Sauvignon**

Very popular style, referred to as the 'King of the Noble grapes.' Most famous for its origins in Bordeaux, France. It is most known for its structure.

- Viticulture: Moderate to warm climates
- Vinification: Fermented in stainless steel or oak. Matured in old or new oak.
- Varietal/Blended: Often blended with Merlot and Cab Franc. Sometimes blended with whatever grapes are grown in the area, Cabernet Sauvignon brings tannin, acid and black fruit flavors to a blend.
- Style:
  - Deeply colored
  - High levels of tannin and acidity
  - Pronounced aromas
  - Typically ages well
  - Often oaked

## **Cabernet Sauvignon**

Produced in most every wine producing country.

Premium regions for Cabernet Sauvignon

France – Bordeaux (blended with Merlot and Cab Franc)

USA – Washington, California (Napa), Sonoma (Alexander Valley)

Italy – Tuscany (blended with Sangiovese)

Chile – Colchagua, Cachapoal (possibly blended with Merlot and Carmenerere)

Argentina - Mendoza

Australia – Coonawarra, Margaret River (possibly blended with Shiraz)

South Africa – Stellenbosch (possibly blended with Merlot and Pinotage)

New Zealand – Hawkes Bay

## **Merlot**

Great wines of Pomerol and St Emilion in Bordeaux are Merlot based. This is a wine known for its lushness and rich body.

- Viticulture: Moderate to hot climates
- Vinification: Fermented in stainless steel or oak. Matured in old or new oak.
- Varietal/Blended: Often blended with Cabernet Sauvignon and Cab Franc. Also blended with whatever grapes are grown in the area. Merlot brings red fruit and body to the blend.
- Style:
  - Medium levels of tannin and acidity
  - Pronounced aromas of red fruits, herbal, blackberry, chocolate and fruitcake.
  - Often oaked
  - Soft, subtle, and less tannic than Cabernet Sauvignon.

## **Merlot**

- Produced in most every wine producing country.
- Premium regions for Merlot
  - France – Bordeaux (blended with Cabernet Sauvignon and Cab Franc) – Pomerol and St Emillion.
  - USA – Washington, California (Napa), Sonoma (Alexander Valley)
  - Chile – Colchagua, Cachapoal (possibly blended with Carmenera)
  - Australia – Coonawarra, Margaret River
  - South Africa – Stellenbosch (possibly blended with Cabernet Sauvignon and Pinotage)
  - New Zealand – Hawkes Bay



## **Cabernet Franc**

Cabernet Franc is known for its high acidity and intense aromas.

- Viticulture: Cool to moderate climates.
- Vinification: Fermented in stainless steel or oak. Matured in old or new oak.
- Varietal/Blended: Occasionally bottled on its own, but more often blended with Cabernet Sauvignon and Merlot. It brings acidity and floral aromas to the blend
- Style:
  - Medium levels of tannin and high acidity
  - Pronounced aromas of red fruits, herbal, tea, moss
  - Can be oaked or unoaked.

## **Cabernet Franc**

- Premium regions for Cabernet Franc
  - France –
    - Bordeaux (Pomerol and St Emilion) where it is usually blended,
    - Loire Valley (Chinon) where it is usually bottled single varietal
  - USA –
    - Napa
    - Washington State

## **Shiraz / Syrah**

Highly structured wine with red, black and peppery flavors.

- Viticulture: Moderate to warm climate
- Vinification: Stainless or large oak fermentation, oaked or unoaked aging
- Varietal/Blended: Often blended with Grenache to add in tannin, acidity and black fruits. Single varietal wines are common in Australia.
- Style:
  - Medium levels of tannin and acidity
  - Pronounced aromas of black fruits, smoked meat, black pepper that moves into leather with age.
  - Often oaked
  - Similar to Cabernet Sauvignon, but with more spicy, black pepper flavors.

## **Shiraz / Syrah**

- Produced in France, Australia, USA, New Zealand and Chile.
- Premium regions Syrah / Shiraz
  - France – Rhone – Northern (Cote Rotie, Hermitage, Croze-Hermitage) non-blended, Southern (Cotes du Rhone, Chateauneuf-du-pape) blended with Grenache
  - USA – Santa Barbara
  - Australia – Hunter Valley, McLaren Vale and Barossa Valley
  - South Africa
  - New Zealand – Hawkes Bay

## **Grenache / Garnacha**

This is a large grape with a thin skin and low acid and that can have higher sugar content

- Viticulture: Moderate to warm climate
- Vinification: Often blended with Syrah to add in red fruit flavors and body. Single varietal wines are common in Australia .
- Style:
  - Medium levels of tannin and low acidity.
  - Pronounced aromas of red fruits that will develop into toffee and liquorice with age.
  - Considerable range from medium to full bodied wines.
  - Oak is sometimes used, but isn't common for more inexpensive versions.
  - Due to the thin skin it is easy to make rose from this grape.

## **Grenache / Garnacha**

- Produced in France, Australia, Spain, USA.
- Premium regions for Grenache
  - France – Rhone (Chateauneuf-du-Pape, Cotes-du-Rhone)
  - Spain – Navarra, Priorat, Rioja

## **Malbec**

Originally from Bordeaux, it has found a home in Argentina

- Viticulture: Moderate to warm climate
- Vinification: Often bottled single varietal, but is common in Bordeaux style blends.
- Style:
  - Full bodied with medium to high tannins
  - Pronounced aromas of black fruit and blue fruit with spice flavors.
  - The best examples are often oaked, but many entry level wines will not see oak.

## **Malbec**

- Produced in France, USA and Argentina.
- Premium regions for Malbec
  - France - Cahors
  - Argentina - Mendoza



## Zinfandel

Important black grape for premium quality wines in the USA

- Viticulture: prefers a warm climate
- Vinification: Most examples will be aged in oak. American oak (coconut and vanilla) is not uncommon for Zinfandel
- Style:
  - Very full bodied with lots of alcohol
  - Pronounced aromas of blackberry, raspberries, prune, and raisin.
  - Can be made into an off-dry rose style called White Zinfandel

## **Zinfandel**

- Produced in USA. Primitivo from Italy is very closely related to Zinfandel
- Premium regions for Zinfandel
  - California – Lodi
  - California – Sonoma (Dry Creek in particular)
  - California – Paso Robles