

BC GUILD OF WINE JUDGES
Dessert Wines
presented by Julian Young
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OBJECTIVE:

After completing this session you should know:

- The description and technical characteristics of the BCAWA Dessert Wine Class (F) and its three subcategories
- The most well-known sweet wines and the countries that produce them
- Typical varietals used to make dessert wines
- Several ways that sweet wines are made
- How to serve sweet wines

BCAWA CLASS F – DESSERT WINES:

Wines to be drunk with the dessert course of the meal. Should be sweet and luscious, but with sufficient acid to prevent them from being cloying. Alcohol must have been developed by fermentation of the wine. These are NOT fortified wines.

Wines such as ports, sweet sherries, Madeira types, and other wines that are fortified, baked or otherwise made using port, sherry, Madeira etc. processes do NOT belong in this class.

The Dessert Class has three style sub-categories: *Botrytis Affected*, *Ice Wine Style* and *Other Dessert Styles* (such as Late Harvest, etc.). The style of the wine should be indicated on the Registration Form and/or Bottle Tag.

Technical Characteristics:

	<u>Botrytis Affected</u>	<u>Ice Wine Style</u>	<u>Other</u>
Ingredients:	No restrictions	No restrictions	No restrictions
Alcohol:	12% - 14%	8.5% - 13.5%	8.5% - 14%
Colour:	No restrictions	No restrictions	No restrictions
Sugar:	7.5% - 10% (75-100 g/L)	Min. 8.5% (85 g/L)	5.5%-8.5% (55-85 g/L)
Specific Gravity:	1.024 – 1.034	1.028 – 1.048	plus or minus
Acid:	Min. 8 g/L	9 g/L - 14 g/L	Min. 8 g/L
pH:	3.1 - 3.9	3.1 - 3.9	3.1 - 3.9

BC LIQUOR STORES SWEETNESS SCALE: is from 0-10 and denotes sugar at the following concentrations:

0 = 0-4.9 g/L	6 = 55-64.9 g/L
1 = 5-14.9 g/L	7 = 65-74.9 g/L
2 = 15-24.9 g/L	8 = 75-84.9 g/L
3 = 25-34.9 g/L	9 = 85-94.5 g/L
4 = 35-44.9 g/L	10 = 95 or more
5 = 45-54.9 g/L	

INTRODUCTION:

Table wine is produced when yeasts ferment all the available sugar, creating a dry wine. Sweet wines occur when, either naturally or artificially, the yeast stops operating, and the fermentation ceases with some unfermented sugar remaining (this is called "residual sugar").

Fermentation stops naturally when a high alcohol level poisons the yeasts, or a combination of high alcohol and the effort of fermenting an abundant quantity of sugar exhausts them. Such a high sugar level occurs when natural conditions, particularly the presence of the fungal disease *Botrytis cinerea*, conspire to produce it. It also arises from leaving grapes on the vine longer than normal (late harvest wines), which concentrates the sugars at the expense of water content, or when grapes are picked and left to shrivel (as with the reciotos and amarones of northeast Italy). Ice wines, notably of Germany and Canada, also have this effect. These processes tend to produce the best and most complex sweet wines.

Fermentation can also be stopped artificially. Chilling the wines to suspend yeast activity and then filtering the yeasts out has this effect. High levels of sulfur dioxide will also inhibit yeast activity, but can also make the wine unpleasant. Wine should never be sweetened merely by adding sugar, but in some countries a sweet wine can be made by adding grape juice or concentrate to a wine that has been fermented dry. Wines made in this way, however, are generally cheap and of little complexity.

There are hundreds of different types of dessert wines made from a wide range of grape varieties. Historically, the most famous have been the French Sauternes made from Semillon, Sauvignon Blanc and Muscadelle; German Trockenbeerenauslese made from Riesling; Hungarian Tokajai made from Furmint or Hárslevelű; Although ice wine began in Germany (originating in the 1960s), Canada is now the largest producer (having entered the market in the early 1990s). Here it is made from Riesling, Gewurtztraminer, Cabernet Franc, Sylvaner and Vidal Blanc though other grapes can be used.

Here is a brief list of examples of sweet wines and the countries where they are produced:

France France makes many different styles of sweet wines from many different regions

- Sauternes
- Barsac
- Muscat Beaumes-de-Venise
- Vouvray
- Vin de Paille

Italy

- Asti Spumati
- Moscato d' Asti
- Vin Santo
- Recioto
- Vin Passito

Germany

- Auslese
- Beerenauslese
- Trockenbeerenauslese
- Eiswein

Hungary

- Tokaji (Tokay)

Canada

- Icewine

HISTORY:

Sweet wines are made everywhere wine is made and have a long history. The ancient Egyptian and Greek wines were very likely sweet wines. Sugar acts as a preservative, so sweet wines are good for storing and can last a long time. Sweet wines were popular during the 1700's. They got a bad reputation shortly after the repeal of prohibition in the United States during the early 1930s when they were poorly made from poor quality grapes.

BOTRYTIS AFFECTED WINES:

Botrytis cinerea is a fungus that affects many plant species, although its most notable hosts are wine grapes. Noble rot occurs when damp mornings are followed by dry afternoons during the harvest season. In such



conditions, the fungus attaches itself to the ripe grapes, consuming water from the berries by way of microscopic filaments through the pores of the grape-skin. This concentrates the solids – sugars, fruit acids, and minerals – reducing the grapes to shriveled raisins and in the end leading to very intense, sweet, and concentrated dessert wines. The infection attacks different grape bunches and even individual grapes within the bunches at different speed. As a result, the grapes are typically harvested in several passes through the vineyard. The harvesting season can often extend over a period of several weeks for one vineyard. The infection presents favourable conditions to acetic acid bacteria, leading to increased levels of volatile acidity (acetic acid, ethyl acetate) in the

finished wines. In addition, noble rot also affects the aromas and flavours of the resulting wines, with typical descriptors along the lines of: honeysuckle, honey, beeswax, or mushroom.

ICE WINES:

These wines are produced from must that has been concentrated by 1) leaving the ripe grapes on the vine until the weather gets cold enough; or 2) artificially freezing the grapes or wine juice.

There are only a few countries (Canada, Germany, and Austria) where the climate is suitable for the natural method of ice wine production. Not surprisingly, laws in these countries prohibit commercial producers from using the artificial method of production. Of course, this does not apply to home winemakers!

Canadian Rules for Ice Wine Producers:

- there must be a minimum Brix of 32 degrees in the juice after pressing when measured in the
- fermentation tank;
- the alcohol must derive exclusively from the natural sugars of the grapes;
- there must be residual sugar of 125g/litre;
- all wines that are labeled as Icewine must be produced by VQA registered growers and wine makers;
- The harvest of ice wine grapes must start after November 15. Before harvesting, the producer must verify in writing, (by specified form) the following:
 - i. the temperatures of each individual harvest (for Ontario producers the grape temp must be as low as -8°C / 18°F as is for Germany's Eiswein);
 - i. the acreage and tonnage of each given crop
 - ii. the measured Brix level of each must
 - iii. the harvesting date and time of day (usually in November or December between 5 am – 8 am)
 - iv. ice wine pressing capacity

Unlike the previous category of dessert wines, ice wine grapes are typically NOT affected by noble rot. The emphasis is on intense, pure fruit aromas and flavours. Ice wine usually has a medium to full body, with a long lingering finish. The nose is usually reminiscent of peach, pear, dried apricot, honey, citrus, figs, caramel, green apple, etc., depending on the grape variety. The aroma of tropical and exotic fruits such as pineapple, mango, or lychee is quite common, especially for white varieties.

OTHER DESSERT WINES:

These are any other wines that do not fall into the first two categories. The wines should be of sufficient sweetness to qualify for the dessert wine classification, balanced with an appropriate level of acidity.

Possible commercial examples would include:

Late harvest wines: grapes left on vine after regular harvest to achieve higher level of ripeness but harvested before freezing and without noticeable botrytis influence

- ⑩ Produced in: all wine regions
- ⑩ Grape varieties: various, white or red
- ⑩ Typical style: various, oak uncommon

Wines from grapes concentrated by drying

- ⑩ Produced in: Austria (strohwein), Italy (vin santo)
- ⑩ Grape varieties: various, typically white
- ⑩ Typical style: varies – from fruity, similar to Eiswein (Austria), to oxidative and complex, similar to Tokay or Sauternes (Italy);

Wines back-sweetened by concentrated must or unfermented grape juice (sussreserve in Germany)

- ⑩ Produced in: various wine regions, common in Germany
- ⑩ Grape varieties: various, typically white
- ⑩ Typical style: fruity.

SERVING SWEET WINE:

Since dessert wines are very rich, they are usually bottled in half (375 ml) bottles. Likewise they should be served in smaller glasses than you would usually serve wine in and never filled more than 2/3 full. A serving temperature of between 43° and 53° F (6° to 11° C) will allow you to enjoy them at their best. If you are enjoying a glass with dessert; make sure the dessert isn't too sweet. The wine should always be the sweeter of the two. Sweet wines also go very well with cheese, especially hard and aged cheeses such as cheddar and aged Gouda, blue cheeses such as Roquefort and Gorgonzola and some goat cheeses. Also, consider dessert wines with cheese flavoured foods – soufflés, quiche or grilled cheese sandwiches. Foie gras is another dish that pairs well with sweet wines.

THE FLIGHT OF WINES

Riesling

Riesling's homeland is Germany, where it has been cultivated since the 1400s or earlier, and where it is made into wines that run the gamut from bone dry and crisp quaffers to the complex, unctuous nectars made from Botrytis-affected, shriveled berries, individually late-picked, and known by the moniker *Trockenbeerenauslese*. Riesling has a powerful and distinctive floral and apple-like aroma. Its high natural level of Tartaric acid enables it to balance even high levels of residual sugar.

Riesling vines are particularly hard-wooded and tolerant of cold weather and they bud late, so are well-suited to the coldest wine-growing climates, but do well where seasonal temperature averages from 56° to 64° .

If dry conditions, however, follow a single day of wet, Riesling grapes left on the vine beyond normal ripeness can develop *Edelfäule* (Noble Rot). The result of this ugly but non-toxic mold, *Botrytis cinerea*, is the shriveling of the grapes, the evaporation of much of the juice, and the concentration of the sugar. The German names for this hierarchy, which ascends in order of the *must* weight or degree of sugar concentration, are *Spätlese* (late-picked), *Auslese* (selectively-picked bunches), *Beerenauslese* (selectively-picked berries), and *Trockenbeerenauslese* (only the most affected berries), or *TBA*. These wines have not only incredibly intense and concentrated flavors, but also remarkable life span.

Fruit Flavors: apricot, nectarine, peach, apple, pear, pineapple, lime, Meyer lemon

Other Aromas: honey, honeycomb, beeswax, petrol, ginger, citrus blossom, floral rubber, diesel fuel

Aged Flavors: diesel, petrol, lanolin

Acidity: High

Muscat

Each muscat produces, with subtle variation, wines with the distinct, intense, aromatic, rosy-sweet, and easily-recognized scent of muscat and, unusual for most wine varieties, that actually taste like grapes.

The muscat family has two main branches, one based on Muscat Blanc, one on Muscat Alexandria. Of over twenty identified distinct varieties of the muscat grape, the most desirable for wine due to its powerful aromatic intensity is Muscat Blanc, known as *Muscat de Frontignan* in France and *Moscato do Canelli* in Italy.

The sweetness of dessert wine can often overcome varietal personality, but Muscat Blanc holds its own and partners beautifully with sweet styles. It is the only variety allowed to make Beaumes de Venise, the fortified dessert wine of the Rhône and also the basis for wines as diverse in style as Australia's famous fortified, thick and dark "stickies" and Italy's Asti Spumante, the pale, low alcohol, frizzante wine of Piedmont. Nearly every Mediterranean country has a famous wine based on muscat in one of its many stylistic variations.

Fruit Flavours: fresh grapes, peach

Other Aromas: muscat (terpene), floral, rose petal, coriander

Acidity: Low

Tokaji

Tokaji is the name used to describe wine from the Tokaj region in northeastern Hungary. Though dry wine is made here, the region's most famous wines are lusciously sweet, and this is what most people refer to when they use the name Tokaji. The sweet wines of Tokaji are some of the world's greatest.

The Tokaj winegrowing region lies close to the Hungarian border with Slovakia, in the shadow of the Carpathian Mountains. The vineyards lie on the slopes of the Carpathian foothills, and the wines here have been held in the highest esteem for hundreds of years. Hungary's time under communist rule seriously hurt its wine industry, as the emphasis shifted from quality to quantity. Since 1989, quality has once again become a focal point, and today Tokaj boasts a wealth of top quality producers.

There are six grape varieties permitted to make Tokaji wine. The most important grape in sweet Tokaji production is Furmint. This is a late-ripening white grape, and is particularly susceptible to botrytis, lending itself well to quality sweet wine. Hárslevelű is also prone to botrytis, and is the next most common variety. The other grapes permitted here are Sárga Muscotály (known internationally as Muscat Blanc à Petit Grains), Kövérszőlő, Zéta and Kabar.

The best-known Tokaji wine style is certainly Tokaji Aszú. This is the primary sweet style of Tokaji, and is produced from grapes that have been affected by noble rot. The botrytis-affected berries are handpicked in a time-consuming and labor-intensive exercise.

There are several other styles of Tokaji wine, from dry and semi-sweet to even sweeter than Tokaji Aszú. Important styles include Szamorodni, Late Harvest and Eszencia.

Tokaji Eszencia is legendary in its own right, known for its low alcohol and decadent sweetness—the minimum level of residual sugar is 450 g/L, though it's possible to see levels closer to 800 g/L. This is an incredibly rare and expensive style of Tokaji. In a manner similar to Sherry, the wine is aged in partially filled barrels with a film of yeast on top and stored underground in wine caverns.

Viognier

Viognier seemed literally an endangered variety only a few years ago, but seems to be recovering worldwide in both popularity and acreage. Less than 18 acres remained planted in all of France, its homeland, by 1960. Those scarce vines were in the appellation of *Condrieu*; no other plantings were known, world over.

The viognier vine is one of the few white grape varieties that seems to prefer warmer weather, within a relatively narrow range of seasonal average temperatures of between 62° and 66° F. The major drawback of the viognier grape is that it is a very shy producer; Viognier is also somewhat difficult to grow. Although drought tolerant, it sometimes seems almost eager to become infected with powdery mildew, especially under damp conditions or in humid climates and rots easily, but resists Botrytis somewhat. Like many other varieties, viognier must be harvested at its peak of maturity in order to display its unique aroma and flavor character. The grape's tendency to develop high sugar but low acid can result in wines with neutral, merely vinous flavors and high alcohol. Probably the main attraction of Viognier is its potentially powerful, rich, and complex aroma that often seems like overripe apricots mixed with orange blossoms or acacia. With as distinctive and sweet an aroma-flavor profile as Gewürztraminer, Viognier is nevertheless usually made in a dry style and seems to appeal more to the typical Chardonnay drinker.

Both Chardonnay and Viognier share tropical fruit flavors and a creamy mouthfeel. Even with little or no wood aging, Viognier can be as full-bodied as an oaky Chardonnay, but has much more distinctive fruit character. It also has a typically deep golden color, as well as rich and intense flavor.

Fruit Flavours: apricot, mango, pineapple, guava, kiwi, tangerine

Other Aromas: orange blossom, honeysuckle, acacia, violet, honey, anise, mint, mown hay, tobacco

Acidity: Low

Sauternes (typically 80% Semillon, 20% Sauvignon Blanc, dash of Muscadelle)

Semillon:

Semillon grapes make up 80% of the blend in the most expensive and famous dessert wine in the world: Château d'Yquem. Semillon seems the favorite foil of Botrytis Cinerea, the noble rot which concentrates the sugars and flavors and intensifies the aromas for Yquem and the other "late-harvest" dessert wines of France's Monbazillac and Sauternes appellations. These wines hold up spectacularly in antiquity, a unique ability in the spectrum of unfortified wines.

Consistently productive at six to eight tons per acre and of vigorous vines, Semillon is easy to cultivate and flourishes in a variety of soil types. It is fairly resistant to common vine diseases, with the notable exception of rot, which is hoped to be of the "noble" type and not the destructive strain. Semillon clusters are medium-to-large and well-filled to compact. The thin, rot-sensitive berry skins can also sunburn easily. Keeping the canopy open to air circulation is equally important to minimizing direct sun exposure of the fruit. Overall, its viticultural profile has led to widespread propagation of Semillon vineyards, even if the popularity of their wine has waxed and waned. Wines dominated by Semillon may lack much youthful aroma, but have fairly full body and tend to be low in acidity, even "oily" or "fat" at times. Semillon also has an affinity for oak, accentuating subtleties such as "toast" and "smoke" that emanate from wines' "spice" rather than its "main ingredient", but nonetheless adding complexity. This is the flavor profile of a supporting role grape, rather than a star, and most winemakers use Semillon in blends, if at all.

Fruit Flavours: apple, date, fig, lemon, pear

Other Aromas: saffron, grass, weeds, (atypical) bell pepper, asparagus

Botrytis: apricot, quince, peach, honey, pineapple, vanilla, candy

Acidity: Low

REFERENCES: I have lifted liberally from past presentations and from these resources:

- Wikipedia
- Oxford Companion to Wine. Jancis Robinson
- The Global Encyclopedia of Wine. Peter Forrester Editor
- Muscat Wines.com
- winepros.org: Professional Friends of Wine
- Wines and Spirits, Looking Behind the Label (WSET)