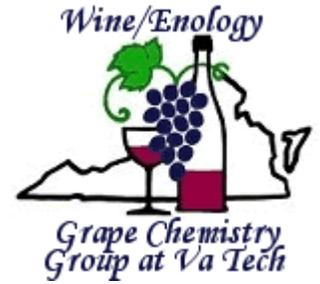


Matching Food and Wine

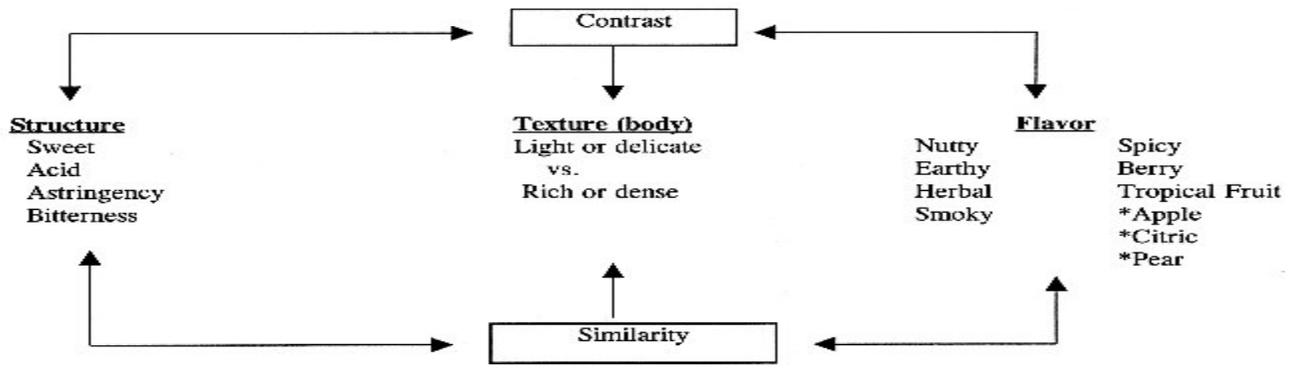
Bruce Zocklein, Head – Enology-Grape Chemistry Group, FST, Virginia Tech



Adapted from “Matching Table Wines with Food,” Zocklein, 2003, posted at www.vtwines.info.

Food and wine components can be broken down into three general sensory categories - structure, texture, and flavor (Figure 1). Wine components can be not present, similar to, or in contrast to, the structure, texture, and flavor features of the foods. The interactions between the structure, texture, and flavor of the food and wine are the basis for a rational understanding of food and wine pairings.

Figure 1



*found mainly in white wines
Adapted from Goldstein, 1991

Structural Components: Wines contain three tastes: sweet, acid, bitter (usually not salty), plus the tactile response from grape- and barrel-derived tannin phenols known as astringency. In wine, the taste and tactile components are perceived according to the following relationship:

Figure 2

$$\text{sweetness} \rightleftharpoons \text{acidity} + \text{astringency and bitterness}$$

The perception of sweetness must be in relative balance with the sum of the perceptions of acidity plus astringency and bitterness. This balanced relationship, true for all wines, suggests that a reduction in the perceived acidity, astringency or bitterness increases the perception of the sweetness. The reverse is also true: an increase in the sweetness decreases the perception of the acidity, bitterness and astringency. In food and wine pairing, the above palate balance relationship can be considered as two interrelating balance equations: thus the sweetness, acidity, bitterness and astringency of the food influences those same features in a wine.

$$\text{wine sweet} \rightleftharpoons \text{acidity} + \text{astringency and bitterness}$$

$$\text{food sweet} \rightleftharpoons \text{acidity} + \text{astringency and bitterness}$$

The following exercises help to illustrate the palate balance relationships.

Wines used today are the following:

Moselland Spätlese Piesporter Michelsberg Riesling, 2005

2 Brothers Riesling, 2006

Allan Scott Sauvignon Blanc, 2006

Whitehaven Sauvignon Blanc, Marlborough, 2005

Veritas Chardonnay, Saddleback, 2005

Veritas Harlequin Chardonnay Reserve, 2005

White Hall Viognier, 2006

Hogue Gewürtztraminer, 2005

Villa Appalaccia Francesco Cabernet Franc, 2004

Horton Cabernet Franc, 2005

Palandri Cabernet Sauvignon, 2002

Château Bouissle Fronton, 2005

Paso del Sol Cabernet Sauvignon, 2003

Exercise 1 illustrates sugar and acid interaction.

- Taste any wine and focus on the perception of acidity.
- Taste a strongly acidic food, such as lemon.
- Allow your palate to adjust for a moment, then re-taste the wine.
- After the lemon, the wine tastes much sweeter, or less acidic. The composition of the wine didn't change, but the perception did.
- Taste the wine again, noting the perception of sweetness.
- Taste some sugar and re-taste the wine. After the sugar, the wine tastes much less sweet or more acidic.

Exercise 2 helps to demonstrate how foods can influence astringency and bitterness features.

- Taste a red wine and note the astringency and bitterness, if present.
- Taste a source of protein or fat such as cream cheese and re-taste the wine.
- The wine will taste less astringent and/or bitter, perhaps even a little sweet, although the change is not as dramatic as noted with sugar and acid. Proteins and fats have the ability to bind with tannins, thus muting the sense of astringency and bitterness.
- The perception of sweetness is enhanced proportionally to the reduction in astringency and bitterness as the balance equation (Figure 2) would indicate.

Exercise 3 illustrates the relationship between high salt content in foods and the perception of acidity and astringency in wines.

- Select two wines, a young astringent red and a high-acid white wine.
- Taste the red wine and focus on the perception of astringency.
- Taste some salted food, such as pretzels or potato chips, and re-taste the red.
- Rough tannins in reds can be magnified by salt, although minor salt concentrations in foods are not usually a problem.
- Taste the high acid white wine and note the perception of acidity.
- Taste the salted food and re-taste the wine. The salt frequently magnifies the perception of acidity.

Exercise 4 involves pairing with the following foods to provide specific elements.

- apple slices: both sweet and acid
- jack cheese: high fat and salt
- triple-cream cheese: mainly fat
- Italian prosciutto: salt, protein and fat
- medium-rare roast beef: protein
- lemon: acidity
- cookie: sweetness

The wines for this exercise include Riesling, Sauvignon blanc, Chardonnay, Cabernet franc and Cabernet Sauvignon.

- The Riesling is tasted and the structure, textural and flavor components are noted. The Riesling is tasted again following the apple. The apple conceals the fruit in the wine, leaving a perception of sugar and acid only.
- The lemon is tasted next, followed by a sip of Riesling. The strong acid of the lemon depresses the sense of acidity in the wine, making it appear flat and lifeless.
- The next pairing is with the jack cheese. The high fat and salt completely overwhelm the light Riesling, making it seem muted in flavor and character. A preferred suggested match with a high fat-salty food would be a sparkling wine (CO₂ helps clean the palate and adds to the sense of acidity), which has more body and flavor consistency.
- The Sauvignon blanc is then tasted and the structure, texture, and flavor noted. With the Sauvignon blanc, the apple makes the wine seem less fruity.
- The Chardonnay fruit character is also muted by the apple, so that more oak and acid are perceived. It may be a better choice to pair a fruitier wine, such as a Gewürztraminer or perhaps a Viognier, if you are having fish with a fruit sauce.

- Pairing Chardonnay with cream cheese is an example of the importance of matching the weight (body) of the wine with the weight (texture) of the food. In an extreme mismatch where the food is rich and the wine less, the wine character will seem too pale.
- The high salt content of prosciutto destroys most dry white wines. A slight degree of salt can be offset by some residual sweetness in the wine.
- Noted the structure, texture, and flavor of the Cabernet franc and Cabernet Sauvignon. With the rare beef, more wine acid and particularly tannins are needed to balance the fat in the food. Both the Cabernet franc and the Cabernet Sauvignon match adequately, although most would prefer the Cabernet Sauvignon. The Cabernet franc and Cabernet Sauvignon are each tasted with the apple. Both the fruit and the wine are less interesting when tasted together. The apple with either the Cabernet franc or Cabernet Sauvignon makes the tannins seem more evident as a result of the sugar content of the fruit. The jack cheese is hard on the Cabernet Franc with the tannins muted by the fat and the salts helping to magnify the tannins. The result is that the wine tastes much thinner.

These exercises demonstrate several important rules of thumb regarding structural components:

1. Sweetness and sourness (acidity) may be the most important structural components when it comes to food and wine matching. If the sugar or acid content of a food is increased, the perception of the sugar or acid of the wine is decreased.
2. The intensity of this inverse relationship is dependent upon the difference in perception between the sugar and acid in the food and that of the wine.
3. Changes in sugar are more dramatic than structural changes of astringency and bitterness.
4. Salt can modify the perception of acidity and astringency.

Examples of pleasant flavor similarity and contrast

- Chardonnay and mustard - contrast - apple flavors in the wine work against the distinctive flavors of the mustard.
- Sauvignon blanc and goat cheese - contrast - herbal-vegetable flavors in the wine against earthy flavors of the cheese.
- Champagne (brut) and blue cheese - similarity - earthy flavors in the wine with the earthiness and gaminess of the cheese.
- White Rhône and nutmeg - similarity - spicy flavors of the wine against the aromatic spices. Custard-based first course such as poultry or vegetable mousse which are often flavored with nutmeg.
- Red Rhône and beef - contrast and similarity - Black pepper flavor in the wine complements the meaty flavors and complements any peppery seasoning.
- Cabernet Sauvignon and lamb - contrast - currant, berry and herbal flavors of the wine against the gaminess of the meat.
- Pinot noir and mushrooms - similarity and contrast - earthy flavors of the mushroom can complement berrylike flavors in the wine or echo earthy flavors in an older wine.
- Riesling and almonds - similarity - slight, nutty flavor in the wine balances almond flavor, emphasizing wine's fruit.
- Sauternes and caramel - contrast - honey flavor in wine becomes more complex with caramel overtones. Ex. Baked apples, caramelized fruit.
- Cream Sherry and mocha - similarity - coffee-like flavors in the wine against coffee - chocolate flavors of mocha. Ex. Mocha mousse, mocha soufflé.

Examples of flavor contrasts for different wine varieties

- Chardonnay: Orange, Tarragon, Pistachios
- Sauvignon blanc: Red Bell Pepper, Marjoram, Mustard
- Dry Riesling: Capers, Dill, Almonds
- Grenache: Curry, Orange, Mint, Cinnamon
- Cabernet: Nutmeg, Thyme, Wild Rice, Pecans
- Syrah: Rosemary, Cinnamon, Tomatoes