

WHITE WINE: VARIETAL ANALYSIS
Robert L. Cunningham

| White Grape Variety | Herbal and Other Aromatic Elements | Structural/Tactile and other Features and Characteristics | Additional Varietal Notes (and Blending Effects, if applicable) | Selected Food Pairings |
|-------------------------------|--|---|--|---|
| Albariño | <ul style="list-style-type: none"> • Peach • Apricot • Honeysuckle • Lime | <p>A creamy white wine sometimes with a touch of sweetness. The grape is noted for its distinctive aroma, very similar to that of Viognier, Gewurztraminer, and Petit Manseng, suggesting apricot and peach. The wine produced is unusually light, and generally high in acidity with alcohol levels of 11.5–12.5%. Its thick skins and large number of pips can cause residual bitterness.</p> | <p>The signature grape variety from the region of Rías Baixas in Galicia, in northwest Spain. Also produced in Portugal where it is known as Alvarinho, and sometimes as Cainho Branco. Additional growing areas include Australia and several California regions including the Santa Ynez Valley, Clarksburg, and Los Carneros AVAs. DNA testing has confirmed that the grapes labeled as Albarino in Australia are in fact mostly French Savagnin.</p> | <ul style="list-style-type: none"> • Seafood • Serrano Ham • Veal • Chicken • Pasta • Asian cuisine • Cheese |
| Arneis (Barolo Bianco) | <ul style="list-style-type: none"> • pears • peaches • apricots • almonds • hops • herbs | <p>A pleasant, easy to drink white varietal for early consumption. Generally dry and full bodied. Difficult to grow, and when fully ripe often lacking in acid. Often lacking capacity to age well.</p> | <p>Originally from Roero, in Piedmont, Italy, where it was blended with Nebbiolo to soften the intense Nebbiolo tannins (similar to blending Viognier with Syrah for the same reason). Almost extinct (being grown only by Vietti and Bruno Giacosa), it had a resurgence in the 1980's and now has a loyal following and DOC status.</p> | <ul style="list-style-type: none"> • Fish • Chicken • Veal |

* Please note that some of the information above has been derived from Joanna Simon's excellent "Wine with Food," various articles appearing in "Wine Spectator" magazine and other sources.

| White Grape Variety | Herbal and Other Aromatic Elements | Structural/Tactile and other Features and Characteristics | Additional Varietal Notes (and Blending Effects, if applicable) | Selected Food Pairings |
|--------------------------|--|---|--|--|
| <p>Chardonnay</p> | <p>When not masked by the vanilla and caramel overtones of oak, Chardonnay exhibits a wide variety of flavor profiles. At its best, Chardonnay offers bold, ripe, rich and intense fruit flavors of apple, fig, melon, pear, peach, pineapple, lemon and grapefruit, along with spice, honey, butter, butterscotch and hazelnut flavors. Its manifestation is often linked to its area of production:</p> <ul style="list-style-type: none"> • In Chablis, steel, flint and citrus. • In Macon, ripe melons and apples. • In Mersault, buttery hazelnut. • In California and Australia, ripe grapes, apple, peach, pineapple, figs, citrus, and vanilla if oaked. | <p>Hardy, easy to grow, a natural companion to oak, a naturally high alcohol level, winemakers love Chardonnay and so do consumers. A wine capable of great intensity and complexity. Winemakers build more complexity into this easy-to-manipulate wine using common vinification techniques: barrel fermentation, sur lie aging during which the wine is left on its natural sediment, and malolactic fermentation (a process which converts tart malic acid to softer lactic acid). No other white table wine benefits as much from oak aging or barrel fermentation.</p> <p>Often severely over-oaked in the 1970's and 1980's in the New World, and continuing today in the Australian and Chilean versions, as well as many US versions, many American, Chilean and Australian Chardonnays remain very showy, well oaked and appealing on release, but they lack the richness, depth and concentration to age and have in fact evolved rather quickly, often losing their intensity and concentration within a year or two. The trend is to return to better balanced versions produced in the more traditional style of Burgundy, though the American love for the sweet, caramelized flavors found in oak is a continuing impediment to this trend.</p> | <p>In Burgundy, Chardonnay traditionally reached its zenith, producing some of the greatest white wines in the world. But Burgundy also produced many mediocre whites that were often grossly overpriced. In recent years, California has truly come into its own, producing Chardonnays that can easily be mistaken for top ranked Burgundy. Chardonnay is also a major component of Champagne. Beware of the large number of truly mediocre Chardonnays in the market.</p> | <ul style="list-style-type: none"> • With the flinty, citrus styled versions, fish, grilled or meuniere, scallops with lemon. • With the more opulent styles, roast chicken with herbs, roast veal with truffles, sweetbreads, fish, scallops or lobsters with rich sauces, richly textured fishes, such as wild salmon, game birds such as pheasant. • Often a poor match with spicy dishes. |

| White Grape Variety | Herbal and Other Aromatic Elements | Structural/Tactile and other Features and Characteristics | Additional Varietal Notes (and Blending Effects, if applicable) | Selected Food Pairings |
|-----------------------|---|---|--|--|
| Chenin Blanc | <p>An aromatic white.</p> <ul style="list-style-type: none"> • honeysuckle, honey. • melon, especially Honeydew and cantaloupe, vanilla, sweet wood, apple. • iodine. • flint, smoke, beeswax, almond. • Herbal: grass, hay. • Wet wool | <p>Varies from light and refreshing to deep and rich. Capable of great longevity.</p> | <p>A versatile grape, can be made into a dry wine, a sparkling wine, a heavy desert wine and even brandy.</p> | <ul style="list-style-type: none"> • Very versatile • Works well with Indian, Chinese and other spicy dishes • Fish and seafood (especially halibut, cod, scallops, sea bass) • Ham, turkey, pork, chicken |
| Gewürztraminer | <p>An aromatic white.</p> <ul style="list-style-type: none"> • ginger • cinnamon and other spices • lychees and other tropical fruits • rose petals; other rich, floral overtones | <p>"Gewurtz" means spice, and the spicy overtones are evident. The varietal needs cool weather to maintain sufficient acid to avoid becoming flabby. At its best, it produces a floral and refreshing wine with crisp acidity that pairs well with spicy dishes. When left for late harvest, it is uncommonly rich and complex, a tremendous dessert wine. Ranges from very dry to sweet.</p> | <p>Gewürztraminer can yield magnificent wines. Gewürztraminer is at its best and most elegant in Alsace, where it is made in to a variety of styles from dry to off-dry to sweet. The grape needs a cool climate that allows it to ripen fully. It is a temperamental grape to grow and vinify, as its potent spiciness can be overbearing when unchecked.</p> <p>It is also popular in eastern Europe, New Zealand and the Pacific Northwest.</p> | <p>Very spicy curries, lime and coconut flavored curries, Chinese food (from sweet and sour to highly spiced), foie gras (with sweeter versions such as SGN), leek gratin, satay, onions, red peppers, Munster and other pungent cheeses.</p> <ul style="list-style-type: none"> • Excellent with spicy dishes. Gewürztraminer may be the best overall varietal match for spicy cuisines. |

| White Grape Variety | Herbal and Other Aromatic Elements | Structural/Tactile and other Features and Characteristics | Additional Varietal Notes (and Blending Effects, if applicable) | Selected Food Pairings |
|-------------------------|--|---|--|--|
| Grüner Veltliner | <p>An aromatic white.</p> <ul style="list-style-type: none"> •intense minerality <p>Fresh rain on granite or slate</p> <p>exotic tropical fruits</p> <ul style="list-style-type: none"> • grapefruit and other citrus <p>overtones</p> <ul style="list-style-type: none"> • spicy fragrance of white pepper • lentils, green beans | <p>High in acidity, the wines range from elegant to deep and powerful, becoming more nuanced, complex and perfumed as they age. The finest Grüner Veltliners from the Wachau are deep and powerful, the most elegant examples of this variety come from the Kremstal and Kamptal.</p> | <p>Grüner Veltliner is the most widely planted grape variety in Austria, accounting for 37 percent of the country's total vineyard area. Most of these vines are in the large wine region known as <i>Niederösterreich</i> (Lower Austria), along the Danube River north of Vienna. It also grows in a few other Eastern European countries, such as Slovakia, Yugoslavia and the Czech Republic, but the variety is most closely associated with Austria, where it has been cultivated since Roman times. Grüner Veltliner is, in effect, the indigenous variety of Austria.</p> <p>With lower yields and higher ripeness, Grüner Veltliner can produce stunningly intense and concentrated wines.</p> <p>Best wines are being made in the three small, adjoining districts along the Danube: the <i>Wachau</i>, <i>Kremstal</i> and <i>Kamptal</i>.</p> <p>Capable of significant aging.</p> | <p>Similar to Riesling, Kerner and Gewurtz in being very food friendly, and works well with many of the same cuisines.</p> |

| White Grape Variety | Herbal and Other Aromatic Elements | Structural/Tactile and other Features and Characteristics | Additional Varietal Notes (and Blending Effects, if applicable) | Selected Food Pairings |
|---------------------|--|--|--|--|
| Kerner | <p>An aromatic white.</p> <ul style="list-style-type: none"> •minerality • floral aromatics • tropical fruits | <p>High in acidity with moderate body and well balanced texture on the palate.</p> | <p>It was bred in 1929 by August Herold by crossing Trollinger (a red variety also known as Schiava grossa or Vernatsch) and Riesling.</p> <p>Kerner has been named in honour of a poet and physician from Swabia, Justinus Kerner, whose works included songs and poetry on wine. Kerner lived from 1818 to his death in Weinsberg.</p> <p>In 2006 Kerner was the 8th most planted variety in Germany with 4,004 hectares (9,890 acres) and 3.9% of the total vineyard surface. The trend since the mid-1990s is that German plantations of Kerner decrease, just as the case for all other "new breeds" of white varieties, such as Müller-Thurgau and Bacchus. German plantations of Kerner reached their highest point around 1990, with around 8,000 hectares (20,000 acres) and 7.5% of the total German vineyard surface. For a while around 1995 it was in fact the third most planted variety in Germany after Riesling and Müller-Thurgau. Kerner is most commonly planted in the German regions of Palatinate, Rheinhessen, Mosel, and Württemberg, but it is also grown in Austria (Styria), Switzerland and the Italian province of South Tyrol. It was introduced into South Tyrol in the early 1970s and awarded Denominazione di origine controllata (DOC) status in 1993.</p> | <p>Similar to Riesling, Gruner and Gewurtz in being very food friendly, and works well with many of the same cuisines.</p> |

| White Grape Variety | Herbal and Other Aromatic Elements | Structural/Tactile and other Features and Characteristics | Additional Varietal Notes (and Blending Effects, if applicable) | Selected Food Pairings |
|---------------------|---|---|---|------------------------|
| Marsanne | <ul style="list-style-type: none"> • almond • honeysuckle • marzipan | | <p>This grape is relatively new to the "varietal scene", as one of the white wine grapes that is helping, along with Viognier and Roussanne, to increase the visibility and popularity of "Rhône-style" wines in California in particular and the United States in general.</p> <p>Its probable origin is the northern Rhône region and it is one of eight white grape varieties allowed in the Cotes du Rhône appellation. Offering greater productivity and intriguingly different aromas, it has gradually taken over the role of blending that traditionally was held in many Rhône appellations by Roussanne. Besides fairly recent and limited plantings in California, Australia has less than 250 acres of vineyards planted to Marsanne, although some date back a century or more.</p> <p>While the vines are relatively hardy, the grapes hang in winged, long, well-filled, and compact clusters. This leaves the fruit susceptible to powdery mildew (odium), bunch rot, berry cracking and excessive juicing at harvest. Marsanne grapes tend to be low in acidity, so both must and wine have tendencies to oxidation and browning. This grape's varietal character has little tolerance for weather that is either too cool or too warm and bland, simply vinous wine will result.</p> <p>The round, medium-gold to amber Marsanne berries make deep-colored wine that is also fairly full-bodied, sometimes described as almost "waxy". Where growing conditions are right, Marsanne aromas can suggest almond paste or citrus, mixed with perfume or model airplane cement. Low acidity means Marsanne wine is best consumed young.</p> <p><i>[www. WinePros.org]</i></p> | |

| White Grape Variety | Herbal and Other Aromatic Elements | Structural/Tactile and other Features and Characteristics | Additional Varietal Notes (and Blending Effects, if applicable) | Selected Food Pairings |
|---------------------|--|---|--|--|
| Pinot Gris | <p>An aromatic white.</p> <ul style="list-style-type: none"> • Honey • tropical flowers • spicy | <p>When good, this varietal is soft, gently perfumed and has more color than most whites. The variety ranges from dry to sweet.</p> | <p>Known as Pinot Grigio in Italy, where it is mainly found in the northeast, producing quite a lot of undistinguished dry white wine. As Pinot Gris, it used to be grown in Burgundy and the Loire, though it has been supplanted.</p> <p>Pinot Gris is widely planted in Central and Eastern Europe and is gaining popularity and standing in Oregon and California. The best versions are found in Alsace, where it is known as Tokay. Southern Germany plants it as Ruländer. They are richer and fuller than Pinot Blanc: less exotic and spicy than Gewürztraminer.</p> | <p>Chinese food, corn on the cob, Indian curries, fois gras, fish in cream sauce, onion tart, quiche, smoked salmon, trout, veal, mushrooms.</p> |

| White Grape Variety | Herbal and Other Aromatic Elements | Structural/Tactile and other Features and Characteristics | Additional Varietal Notes (and Blending Effects, if applicable) | Selected Food Pairings |
|---------------------|---|---|---|---|
| Reisling | <p>An aromatic white.</p> <ul style="list-style-type: none"> • floral • honeysuckle • citrus • apples • honey • apricots • passion fruit • peaches • spicy • petrolly • lime • flinty • minerally • slate | <p>Considered by many to be the greatest white wine varietal of all, Reisling is widely grown from Germany, Alsace and Austria to Australia, New Zealand and the U.S.A. In Germany, Reisling ranges from the light Mosels (tart, floral and smoky; low alcohol and ageworthy) to the Rhine (more body, sometimes petrolly and, in Pfalz and Baden, sometimes spicy). In Alsace, the wines are often bigger than in Germany, and are most often made in a dry style, full-bodied, with a distinct petrol aroma, and have spicy elements and match with more substantial foods, such as richer pates. In Austria, Riesling plays second fiddle to Gruner Veltliner in terms of quantity, but when grown on premium sites it offers wines of substantial clarity and focus. In Australia, where they match well with smoked fish, sundried tomatoes, grilled red peppers and certain tamer Asian spices, Reisling can take on either a range of tropical flavors such as passion fruit and lime, and age to a deep honeyed texture, or a mineral, smoky character. In the U.S., where Reisling is grown in New York State, Washington State, Oregon, Ontario and California, Reisling ranges from bland to elegant, dry and off dry, to excellent late harvest and Ice Wine.</p> | <p>The variety excels in cooler climates, where its tendency to ripen slowly makes it an excellent source for sweet wines made from grapes attacked by the noble rot <i>Botrytis cinerea</i>, which withers the grapes' skin and concentrates their natural sugar levels.</p> <p>Riesling is best known for producing the wines of Germany's Mosel-Saar-Ruwer, Pfalz, Rheinhessen and Rheingau wines, but it also achieves brilliance in Alsace and Austria. While the sweet German Beerenauslese and Trockenbeerenauslese wines, along with Alsace's famed Selection de Grains Nobles, are often celebrated for their high sugar levels and ability to age almost endlessly, they are rare and expensive.</p> <p>More commonly, Riesling produces dry or just off-dry versions. Its high acidity and distinctive floral, citrus, peach and mineral accents have won dry Riesling many fans. The variety pairs well with food and has an uncanny knack for transmitting the elements of its vineyard source (what the French call <i>terroir</i>).</p> <p>Reisling competes successfully with Chardonnay in a number of respects. First, unlike Chardonnay, it can make both sweet and dry wines equally well. Secondly, it is capable of enormous longevity, unlike most Chardonnays, and its extraordinary acid content allows the wine to develop richness over time without losing its supple structure. Thirdly, its rich array of aromatic qualities makes it a far more versatile food wine than Chardonnay.</p> | <p>Dim sum and other Chinese food (esp. Kabinett and Spatlese Halbtrocken (or half dry)), choucroute, fruit tarts and puddings, Japanese noodles, green olives, pate, sushi (crisp, drier varieties such as Mosel Kabinett), sweetbreads, and lobster, scallops, smoked fish and trout (esp. Kabinett and Spatlese Halbtrocken), cold roast pork, goose and duck with sweet fruit sauces (esp. with the sweeter Spatlese and Auslese), mustard and mustard sauces.</p> <ul style="list-style-type: none"> • Excellent with spicy dishes. One of the best matches with spicy cuisine. |

| White Grape Variety | Herbal and Other Aromatic Elements | Structural/Tactile and other Features and Characteristics | Additional Varietal Notes (and Blending Effects, if applicable) | Selected Food Pairings |
|---------------------|--|---|---|------------------------|
| Romorantin | Intense minerality. Not an aromatic white. | Romorantin produces intense, minerally wines somewhat reminiscent of Chablis. | <p>Romorantin is a traditional French variety of white wine grape that is a sibling of Chardonnay. Once quite widely grown in the Loire, it has now only seen in the Cour-Cheverny AOC.</p> <p>Legend has it that Romorantin was introduced to the Loire by King Francis I of France (1494–1547). The commune of Romorantin-Lanthenay is not far from the grape's stronghold in the Cheverny AOC, suggesting that the grape's name reflects a geographical connection - the king was from the region.</p> <p>DNA fingerprinting has shown that it is one of many grapes to be the result of a cross between Gouais blanc (Heunisch) and Pinot fin teinturier, making it a sibling of famous varieties such as Chardonnay and Aligoté.</p> | |

| White Grape Variety | Herbal and Other Aromatic Elements | Structural/Tactile and other Features and Characteristics | Additional Varietal Notes (and Blending Effects, if applicable) | Selected Food Pairings |
|---------------------|------------------------------------|---|---|------------------------|
| Roussane | | | <p>This grape should be extinct for all practical purposes, as far as vineyardists are concerned, who would rather manage more cooperative vines. Roussanne gives irregular yields and tends to uneven and late ripening, has little resistance to powdery mildew and rot and is easily damaged by wind and drought.</p> <p>By selecting and propagating only the least problematic clones, it is the vintners who have preserved Roussanne for two primary reasons:</p> <p>unique aroma and bracing acidity.</p> <p>Roussanne probably gets its name from the light-brownish russet cast of its ripe berries. It is the only other white variety, besides Marsanne, allowed in France's mostly-red-wine-producing northern Rhone appellations of Crozes-Hermitage, Hermitage and St. Joseph. It is also grown in Châteauneuf-du-Pape to the south. There are limited plantings in a few other French regions and in Italy's Liguria and Tuscany and also in Australia. As of the 2002 California Grape Acreage Report, there are 177 acres in the state.</p> <p>Roussanne can be thin and tart and is not often bottled on its own in Europe, being blended with Marsanne in the Rhone and in other areas with Chardonnay. Roussanne will perform well using barrel fermentation and oak aging and some California winemakers release varietal bottlings.</p> <p>The aroma of Roussanne, not as overtly fruity as some types, can suggest wild flowers or herbal tea.</p> <p>Roussanne wines and blends seem to hold up well with cellaring and may be enjoyable a decade or more past the vintage.</p> <p><i>[from www. WinePros.org]</i></p> | |

| White Grape Variety | Herbal and Other Aromatic Elements | Structural/Tactile and other Features and Characteristics | Additional Varietal Notes (and Blending Effects, if applicable) | Selected Food Pairings |
|------------------------|--|---|--|--|
| Savagnin | Citrus | Fresh, crisp, mineral elements. Medium weight. | Native to the Jura Mountains in France. Related to Traminer. Very late ripening, temperamental and low yielding. Used in the famous Vin Jaune. Also produced in Australia. | Seafood generally. Cow's milk cheeses. |
| Sauvignon Blanc | An aromatic white. Grassy and herbaceous (New Zealand, Chile, Washington State, Texas, and Touraine and Haut-Poitou from the Loire, some California) to mineraly, flinty and slightly smoky (Mondavi and other fume blancs from California, Sancerre, Pouilly Fume and similar Loire wines) to richly aromatic, perfumed with honey or floral overtones (Graves, some California). Also: <ul style="list-style-type: none"> • cat's pee • gooseberries • pear • grapefruit | One of the best food pairing varieties in the world, with bracing acidity producing crispness and freshness that enliven food on the palate. Most successful as a cool climate variety. New Zealand Sauvignon Blanc (like some of the better Chilean versions, but unlike Sancerre, Pouilly-Fume and other Loire wines, white Bordeaux, and most American versions) is vibrant, intense, more forward and less subtle and mineraly than the Loire wines, and less richly oaked and textured and less floral than many California versions. The New Zealand Sauvignon Blanc generally sees no or very limited oak aging and the varietal flavors at the grassy end of the spectrum come through strongly. | In the United States, Robert Mondavi successfully rescued the variety in the 1970s by labeling it Fumé Blanc (denoting the wine's smoky overtones). Mondavi generously allowed the phrase "fumé blanc" to be used by all winemakers to describe those sauvignon blancs with a characteristic smoky overtone. The key to success is in taming its overt varietal intensity, which at its extreme leads to overly pungent grassy, vegetal and herbaceous flavors. Sauvignon Blanc pairs well with oak. It is often blended with Semillon (to add richness and fullness). Such Semillon blends are found in California (such as Mondavi Reserve Fumé Blanc) and very often in Bordeaux (to produce great white wines such as Chateau Haut Brion), and in its greatest manifestation as a blend, to produce the greatest sweet wine in the world, Chateau d'Yquem. Many vintners add a touch of Chardonnay for extra body and opulence. The wine drinks well in its youth, and sometimes will benefit from up to 20 years of cellaring. As a late-harvest wine, it can be extraordinary, capable of amazing complexity and richness. | Seafood and shell fish generally, Thai food, artichokes, avocado (in vinaigrette or salad), guacamole, ceviche, Stilton cheese, goat cheeses (esp. Pouilly-Fumé, Sancerre and New Zealand versions), dim sum and other Chinese food, smoked eel, fishcakes, cheese fondue, gazpacho, smoked haddock, smoked salmon and similar smoked fish, hummus, jambalaya, onion tart, prawns, sushi, tempura (esp. Sancerre), tomatoes, tripe (Pouilly-Fumé), trout <u>Foods to be Avoided:</u> With grassy or herbaceous Sauvignon Blancs, avoid herbaceous green vegetables such as broccoli, asparagus and spinach and spicy foods. |

| White Grape Variety | Herbal and Other Aromatic Elements | Structural/Tactile and other Features and Characteristics | Additional Varietal Notes (and Blending Effects, if applicable) | Selected Food Pairings |
|---------------------|---|--|---|---|
| Semillon | <ul style="list-style-type: none"> • honey • orange • lime • "noble rot" • fig | <p>Rich in intensity and perfume, often viscous. Primary varietal for some of the greatest dessert wines in the World – notably the great French Sauternes, including Chateau d'Yquem. When infected with Botrytis cineria (noble rot fungees), it achieves an elegance almost unparalleled.</p> | <p>Classic white wine grape varietal widely grown in Bordeaux and elsewhere. In France, Australia and California it is often blended with Sauvignon Blanc which cuts some of the "gooseberry" flavor of the Sauvignon Blanc and creates better balance. Many winemakers use Semillon to create dry, single-varietal white wines. Australian grapes, particularly those grown in the Hunter Valley region where the fruit has also been historically known as Hunter (River) Riesling, are famous for producing dry and sweet wines from this varietal that will age well for decades. Also called Boal/Bual as one of at least four varieties using the same name for use in fortified wines Madeira. In France, it has the synonym names Chevrier, Columbier, Malaga and Blanc Doux. When grown in South Africa, where the grape is known as the Green Grape and also as Semillion, it has not done as well.</p> | <ul style="list-style-type: none"> • Foie Gras • Many desserts |
| Tarrentez | <ul style="list-style-type: none"> • honey | <p>Tarrantez has the potential to make rich full-bodied wines with highly perfumed bouquet. According to wine expert Oz Clarke, in older bottles of Madeira Tarrantez has shown an ability to age well in developing wines with long finishes and layers of complexity.</p> | <p>Commonly found in Portugal and the Azores. Often the basis of sweet fortified wines in Madiera. Low yields of high quality grapes.</p> | <p>Food matches include:</p> <p>Europe: Walnut bread with manchego cheese and dry-cured Spanish ham (jamon de serrano); roast duck with dark chocolate jus.</p> <p>Africa/Middle East: Honey-glazed spiced nuts with figs and dates; toasted flatbreads with olive oil and aromatic dukkah.</p> |

| White Grape Variety | Herbal and Other Aromatic Elements | Structural/Tactile and other Features and Characteristics | Additional Varietal Notes (and Blending Effects, if applicable) | Selected Food Pairings |
|---------------------|---|---|---|--|
| Torrontes | <p>Fresh, aromatic wines with distinctive peach and apricot aromas on the nose.</p> <p>Spice and floral notes.</p> | <p>Moderate acidity, smooth texture and mouthfeel.</p> <p>Fruity, floral and yet still quite dry.</p> | <p>Argentine varietal. Three Torrontés varieties exist in Argentina: Torrontés Riojano, the most common, Torrontés Sanjuanino, and Torrontés Mendocino. It is primarily Torrontés Riojano that has received attention for the quality of its wines, and is the variety used for most Argentine wines simply labeled Torrontés. aromas reminiscent of Viognier, Gewürtztraminer wines. Jancis Robinson says Torrontés are "wines for early drinking that are not too heavy, are high in acidity, and are intriguingly aromatic in a way reminiscent of but not identical to Muscat"</p> | <p>smoked meats,</p> <p>mild to medium-strong cheeses, and seafood.</p> <p>Great partner for spicy food and Thai as well.</p> |
| Viognier | <p>An aromatic white.</p> <ul style="list-style-type: none"> • Peaches, pear, apricot, melon • nutmeg • ripe, exotic tropical fruits • Honeysuckle · • jasmine · • gardenia · • other aromatic flowers | <p>At its best, it is noble, exotic, floral and spicy, complex yet clean and rich on the palate, with solid acidity and intriguing texture.</p> | <p>One of the great Rhone varietals, manifesting at its best in Condrieu in the Rhone, and to a lesser degree in Chateau-Grillet, with excellent examples being produced in California and South Africa as well.</p> <p>In addition to its use in Condrieu's rare whites, it is sometimes blended with reds in the Northern Rhone. There are also a variety of bottlings available from southern France, most of them somewhat light.</p> <p>Fragile and requiring late harvesting to achieve its extraordinary potential, this varietal is difficult to produce. Virtually extinct in Condrieu in 1965, its popularity is growing rapidly, and viognier production is quickly growing in southern France, as well as in California and South Africa.</p> | <ul style="list-style-type: none"> • Freshly grilled white fleshed fish and octopus. Roasted turkey or other fowl with dried fruit stuffing or fruit glaze. Glazed pork loin. Couscous, and other middle eastern cuisines. • Can be good with Spicy Indian and Southeast Asian cuisine (particularly California Viogniers) |

| White Grape Variety | Herbal and Other Aromatic Elements | Structural/Tactile and other Features and Characteristics | Additional Varietal Notes (and Blending Effects, if applicable) | Selected Food Pairings |
|---------------------|------------------------------------|---|---|--|
| Viura | A moderately aromatic white. | Relatively high in acid, capable of great age. | Also known as Macabeo, Macabeo Alcanol (Maccabeu in France). Two theories exist as to the origin of this varietal, one is that it is from the Middle East, the other is from Aragon in Spain. Whatever the origins, generally the wines made from this grape today are lighter in style, drier, relatively higher in acid, not easily oxidized, and are aromatic. In the Penedés region of Spain (located in the area around Barcelona), Viura/Macabeo is a predominant grape used in the production of cava. There are over 125,000 acres (50,000 hectares) planted in Northern Spain alone, with only a very small amount of acreage under vine in Southern France and in Algeria and Morocco, where it does very well in arid climate. | <ul style="list-style-type: none"> • Seafood • Chicken • Cheese |

RED WINE: VARIETAL AND MERITAGE COMPONENTS ANALYSIS

Robert L. Cunningham

| Red Grape Variety | Herbal and Other Aromatic Elements | Fruit Characteristics | Structural/Tactile and other Features and Characteristics | Other Effects in a Blend and Additional Varietal Notes | Selected Food Pairings |
|---------------------------|---|--|---|---|---|
| Barbera | <ul style="list-style-type: none"> • cedar • lavender • cola | <ul style="list-style-type: none"> • blackberries • plums | Can be fruity and chewy. Firm acidity. | Primarily a varietal of Piedmont in Italy. | |
| Cabernet Franc | <ul style="list-style-type: none"> • clove • dill • black pepper • other spices | <ul style="list-style-type: none"> • red cherry • raspberry • blueberry • occasionally cranberry | Leaner and lighter generally, but some can be more tannic than Cabernet Sauvignon. Greener and grassier than Cabernet Sauvignon. At its most famous in Cheval Blanc. | More intensely aromatic and spicier than Cabernet Sauvignon and Merlot. When blended with Merlot, it produces violet, raspberry, pencil lead and cedar overtones. Used notably in Pomerol, Saint-Emilion and the Medoc. | Lamb, beef and other red meats, grilled or broiled. Mature hard cheese. Full flavored meat stews. |
| Cabernet Sauvignon | <ul style="list-style-type: none"> • spicy oak • cedar • pencil lead • tobacco • mint • eucalyptus • green olive • green pepper • green bean | <ul style="list-style-type: none"> • currants • cassis • blackberries • black cherry • black currents • blue plums | Richer mouth feel and fuller body. Provides solid, sometimes hard, tannins and tight structure for greater longevity. Needs to be blended with less tannic varieties such as Merlot and Cabernet Franc. | Develops a big bottle bouquet and big, forward fruity presence, particularly so in New World wines. More nuanced impact in Bordeaux | Lamb, beef and other red meats, grilled or broiled. Mature hard cheese. Full flavored meat stews. |

| Red Grape Variety | Herbal and Other Aromatic Elements | Fruit Characteristics | Structural/Tactile and other Features and Characteristics | Other Effects in a Blend and Additional Varietal Notes | Selected Food Pairings |
|-------------------------|------------------------------------|-----------------------|---|--|------------------------|
| Carignan (or Carignane) | | | <p>The most widely-planted red wine grape in France is Carignan (sometimes spelled Carignane in the US, a.k.a. Carignano in Italy and Carinena or Mazeulo in Spain). Planting became widespread in France during the 1960s, when Algeria gained its independence and was no longer an inexpensive source of ripe grapes. Most Carignan is confined to the Languedoc and southeastern France and is gradually being replaced with more distinctive and aromatic varieties.</p> <p>Carignan buds and ripens quite late, so is not prone to spring frosts, but requires a long season.</p> <p>A vigorous, though not really hardy vine, it is very sensitive to downy mildew and powdery mildew (a.k.a. oidium). Carignan has but a single characteristic to recommend it for planting: high yields. An acre of Carignan may easily produce 10 to 12 tons of grapes.</p> <p>The berries are bluish-black, round and fairly large, with fairly thick, astringent skins. They hang in large, rather compact clusters that are short-stemmed, difficult to harvest, and susceptible to grape worms. They also rot easily.</p> <p>Like Pinot Noir, Sangiovese, and Grenache, Carignan is a somewhat unstable species, with the tendency to mutate. The French recognize and approve over 25 separate clones.</p> <p>Thus, Carignan frequently becomes a wine for blending or, on its own, for inexpensive everyday consumption. The whole cluster fermentation technique of carbonic maceration can somewhat improve its tendency toward harshness. Oak treatments, on the other hand, seem merely to exacerbate the variety's underlying toughness, while adding little to either its complexity or interest.</p> <p><i>[from www.WinePros.org]</i></p> | | |

| Red Grape Variety | Herbal and Other Aromatic Elements | Fruit Characteristics | Structural/Tactile and other Features and Characteristics | Other Effects in a Blend and Additional Varietal Notes | Selected Food Pairings |
|-------------------|--|---|--|---|---|
| Grenache | <ul style="list-style-type: none"> Some spicy nuances black pepper | Variable, from light fruity aroma to jammy fruit | Low in acidity, light in color but full in texture and big in alcohol. Light fruity aroma. | Not long lived. Grenache is at its best in the south of France, particularly the Southern Rhone. Here, in Chateauneuf-du-Pape, Grenache, the principal varietal, is blended with as many as a dozen other varietals, including Syrah, Mourvedre and Cinsault. The nearby southern Rhone communes of Gigondas, Lirac and Vacqueras produce similar wines, often at a lower price. "Côtes du Rhone" wines are similar to those of Chateauneuf-du-Pape in their blends (notably with Grenache and Syrah) and their accessibility when young. It is also found in Spain, as Garnacha (the most widely planted varietal in Spain), and recently in the "Rhone Ranger" wines from California. | <p>Grenache based wines are generally less sophisticated and subtle than many other varietals, and the foods they work with should be chosen accordingly. Simple spicier dishes, such as barbecue, spare ribs, chorizo, pepperoni and other spicier pizzas, sausages, chile con carne, ratatouille, goulash.</p> <ul style="list-style-type: none"> Works well with spicy foods. |
| Lagrein | Anise; violets; chocolate | Intense black fruit, including blackberries, black cherries, blueberries and blue plums | Dunkel style is a medium to full bodied but richly flavored and tannic wine, opaque in color, with often strong tannins and high acidity. Very fruit driven. | Grown exclusively in the Trentino-Alto Adige region of Northern Italy. The Alto Adige, aka Südtirol, was once part of the Southern Tyrolean state of Austria. There are two primary styles: "Lagrein Dunkel" which is the dark red style or "Kretzer" which is a light rosé style. The Dunkel is the more highly regarded style. Occasionally blended in cuvées with Cabernet, Merlot or both. | Speck (smoked pork), bread dumplings, and braised meat. |
| Malbec | <ul style="list-style-type: none"> Some can provide a spice element | Variable – depends on vineyard and vintage | In some cases adds color and tannin | Classic styles produced in Cahors in the south of France. The greatest red varietal in Argentina. Mostly unproven in California. | Grilled meats and sausages |

| Red Grape Variety | Herbal and Other Aromatic Elements | Fruit Characteristics | Structural/Tactile and other Features and Characteristics | Other Effects in a Blend and Additional Varietal Notes | Selected Food Pairings |
|----------------------|--|---|---|---|---|
| Mataro | | | Mataro, a.k.a. Mourvèdre, is a grape that adds the structure of acidity and tannin to lots of Rhnestyle blends. When bottled solo, it makes a wine that stands up well to meats garnished in acidic sauces. [from www.WineJudging.com] | | |
| Merlot | Offers softer fruit and floral elements | <ul style="list-style-type: none"> • red cherry • plums • milk chocolate aroma | Supple and lower in tannin than CS and other bigger varieties, Merlot softens the tannins and mouthfeel, adding a fleshy texture. | Gives and added dimension to the aromatics and flavor profile. Dominant in Pomerol, particularly Petrus. | Lamb, beef and other red meats. |
| Mourvedre | <ul style="list-style-type: none"> • earthy • gamey • leathery | Less overtly “fruity” in its profile than many other varieties | In the best examples, shows depth of flavor and complexity | Adds earthy, gamy and leathery character to blends. Widely grown in Spain, also in Provence, and Languedoc-Roussillon | |
| Nebbiolo | <ul style="list-style-type: none"> • leather • chocolate | <ul style="list-style-type: none"> • prunes | Capable of intense depth and color. High acidity and tannin levels produce extreme longevity. Can be high in alcohol. | At its most intense and long lived in Barolo, gentler in Barbaresco. | |
| Pedro Ximenez | <ul style="list-style-type: none"> • molasses • dark coffee • burnt toffee • cacao | <ul style="list-style-type: none"> • dried figs • raisins | Often viscous, with rich mouth feel. Powerful, intense flavors. Capable of great age and intensity. Dark mahogany color. | Grown in the Montilla-Moriles area near Jerez this variety is blended with Palomino to add sweetness in some styles of Sherry. On its own it makes a dark, viscous desert wine. | <ul style="list-style-type: none"> • chocolate • drizzle on ice cream |
| Petite Syrah | <ul style="list-style-type: none"> • pepper • spices • brambles | <ul style="list-style-type: none"> • plums • blackberry • black cherry | Often dense, intensely extracted and black in color. Ranges from richly layered, complex wines to monodimensional fruit bombs. | Adds depth of color, body and intensity of fruit. | Couscous, Indian curries, chile con carne, duck and similar game birds, Thanksgiving turkey, venison, wild boar and other game meat dishes, goulash, spicy sausages, pasta with meat sauce, goulash, steak. |

| Red Grape Variety | Herbal and Other Aromatic Elements | Fruit Characteristics | Structural/Tactile and other Features and Characteristics | Other Effects in a Blend and Additional Varietal Notes | Selected Food Pairings |
|----------------------|---|-----------------------------|--|--|------------------------|
| Petite Verdot | <ul style="list-style-type: none"> • Some black pepper | Not much charm in the fruit | Provides tannins, density and intensity | Adds color (the darkest Bordeaux variety) | |
| Pinot Meunier | | | <p>Pinot Meunier, like Pinot Blanc and Pinot Gris, is one of the many mutations of Pinot Noir. The name comes from the appearance of its leaf undersides, which look as though they've been dusted with flour (meunier is French for "miller"). It is also simply called Meunier in France. In Germany, it is known as <i>Müllerrebe</i> (miller grape) and also <i>Schwarzriesling</i>.</p> <p>The home turf for Meunier is the region of Champagne. Its value there is due to the fact that it buds later and ripens earlier than Pinot Noir.</p> <p>Pinot Meunier thusly avoid damage from early spring frosts or from coulure and can be more reliably productive than either Pinot Noir or Chardonnay in this regard.</p> <p>Pinot Meunier has a slightly higher natural acidity than Pinot Noir and gives some brightness and fruitiness to Champagne blends. It is, on the other hand, lower in color and tannin than Pinot Noir and wines that use Meunier in their blend are not as long-lived. This also keeps it from being a candidate for wide use as a varietal red wine, although some is used in some areas of France for rose.</p> <p>A little Meunier is planted in Australia, where it occasionally does appear as a varietal red, and also in California, used mostly as a component in sparkling wines.</p> <p><i>[from www.WinePros.org]</i></p> | | |

| Red Grape Variety | Herbal and Other Aromatic Elements | Fruit Characteristics | Structural/Tactile and other Features and Characteristics | Other Effects in a Blend and Additional Varietal Notes | Selected Food Pairings |
|-------------------|--|--|--|---|--|
| Pinot Noir | <ul style="list-style-type: none"> • Delicately to richly perfumed • savory • exotic spices • gamey • barnyard • roses and other floral aromas • sandalwood • incense • manifests its terrior | <ul style="list-style-type: none"> • raspberries • strawberries • cherries • cranberries | The most sensual and seductive, and the most food friendly, of red varieties. Dramatic variation in style and weight, from German and Alsatian styles, to the medium weight Pommards, Volnays and Santinays from Côte de Beaune, to the bigger wines of the Côte de Nuit (Vevrey-Chambertin, Vosne-Romanee, etc. to the big, rich, spicy Californian versions. Silky smooth to rich and spicy. | Generally not blended with other varieties except, most notably, with chardonnay for the making of Champagne. | <p>French/other Old World (light to medium weight): Wild game (meat and fowl). Roasted or grilled poultry. Saucisson sec and other charcuterie. Sweetbreads and veal kidneys. Heavier fish such as salmon and red mullet. Some with Chinese cuisine but generally not great with spicy cuisine.</p> <p>California/New World (medium to heavy body): More flavorful fish, such as arctic char with truffles, wild salmon, tuna. Wild game (meat and fowl); Charcuterie. Often works well with many spicier cuisines, such as Indian, Moroccan and Middle Eastern (spicier varieties).</p> |
| Sagrantino | <ul style="list-style-type: none"> • Intense bouquet • coffee • cacao | <ul style="list-style-type: none"> • Reminiscent of small woodland fruits • blackberry • cherry | Intense, fairly tannic, mouth-filling | An Italian variety almost lost until a rather recent revival, notably in Umbria. | |
| Sangiovese | <ul style="list-style-type: none"> • Herbal and spicy overtones | <ul style="list-style-type: none"> • Moderately fruity • Black cherry | Low in tannin, moderate in alcohol, with good acidity and rustic character. | The most widely planted variety in Italy. | Often works well with spicier cuisines. |

| Red Grape Variety | Herbal and Other Aromatic Elements | Fruit Characteristics | Structural/Tactile and other Features and Characteristics | Other Effects in a Blend and Additional Varietal Notes | Selected Food Pairings |
|---------------------|---|--|--|--|--|
| Shiraz/Syrah | <ul style="list-style-type: none"> • eucalyptus • violets • mint • brambles • wild herbs • spice • black pepper • tar • smoke • sweaty saddle leather | <ul style="list-style-type: none"> • raspberry • blackberry • cassis • cherry jam • plums • black cherry | <p>Syrah is perhaps the most exotic and varied of red wines and one of the richest and most full bodied. Dense, intensely extracted, purple to black in color. Can be very tannic and sometimes chewy.</p> | <p>Adds depth of color, body, richness, intensity of fruit, longevity. Long-lived in the Rhone and in Australia, where it produces some of the finest wines in the world. It is also taken increasingly seriously in the U.S. where a group of wine makers, dubbed the "Rhone Rangers" are making excellent Syrahs. The Australian and U.S. versions are often more accessible at a younger age than their Rhone and Southern French counterparts. In the Rhone, Syrah generally has greater concentration and tannin than elsewhere and shows tarry, leathery and spicy flavors. The finest Rhone versions come from the north, in Hermitage and Côte Rotie. In Côte Rotie a little white Viognier is sometimes added to inject an exotic muskiness to the richness of the fruit. Lighter and more accessible versions are found in St-Joseph and Crozes-Hermitage, while the Cornas version is immense, sometimes chewy, and tarry. In the southern Rhone, in Chateauneuf-du-Pape, Syrah is blended with Grenache and a number of other varietals. The nearby Southern Rhone communes of Gigondas, Lirac and Vacqueras produce similar wines, often at a lower price. "Côtes du Rhone" wines are similar to those of Chateauneuf-du-Pape in their blends (notably with Grenache and Syrah) and their accessibility when young.</p> <p>In Australia, where Syrah manifests itself in a softer, more accessible and suppler manner, it often shows mint and eucalyptus overtones in addition to plummy, spicy fruit of great extraction, and is often blended with Cabernet Sauvignon. In the U.S., Syrah is generally highly extracted, plummy, spicy and rich with blackberry and raspberry.</p> | <p>Mature goat cheeses, smoky cheeses (Australian Shiraz), chile con carne (Australian Shiraz), Indian curries, duck and similar game birds, venison, wild boar and other game meat dishes, goulash, spicy sausages, steak.</p> <p>Often works well with spicier cuisines.</p> |

| Red Grape Variety | Herbal and Other Aromatic Elements | Fruit Characteristics | Structural/Tactile and other Features and Characteristics | Other Effects in a Blend and Additional Varietal Notes | Selected Food Pairings |
|-------------------|---|--|---|--|---|
| Schiava | <ul style="list-style-type: none"> • tobacco • bitter almonds | <ul style="list-style-type: none"> • blueberry • plum • sour cherries | Light bodied, medium to high acidity. | <p>Schiava, aka Vernatsch, is the most commonly grown and consumed red grape of the Alto-Adige. Often relegated to the local pubs, its work horse status has occasionally been elevated to acclaim and respectability by producers (Tiefenbrunner and Josephus Mayr) who strive to express the potential of this grape. The best Schiava-based wines come from the DOC's Lago di Caldaro (<i>Kalterersee</i>, in German) and Santa Maddalena (or <i>St. Magdalener</i>). This variety is also cultivated in Germany's Württemberg region where its called <i>Trollinger</i>.</p> | Works with many varieties of meat, fish and matches exceptionally well with sausage and speck. Also goes with antipasti, mushroom-based dishes and light game dishes. |

| Red Grape Variety | Herbal and Other Aromatic Elements | Fruit Characteristics | Structural/Tactile and other Features and Characteristics | Other Effects in a Blend and Additional Varietal Notes | Selected Food Pairings |
|--------------------|---|---|--|---|--|
| Tempranillo | <ul style="list-style-type: none"> • leather • earth • minerality • tobacco • vanilla • aromatic spices • licorice • black olives | <ul style="list-style-type: none"> • very ripe strawberries (particularly Rioja) • dried cherries • black currents • blue plums | <ul style="list-style-type: none"> • Capable of great elegance • Medium light to full bodied • Low to medium alcohol levels • Low to medium acidity and sugar • High in tannin • Capable of long aging | <p>Tempranillo is a variety of black grape widely grown to make full-bodied red wines in its native Spain. It is the main grape used in Rioja and is extensively used in Ribero del Duero as well as other regions, and is often referred to as Spain's "noble grape". Its name is the diminutive of the Spanish temprano ("early"), a reference to the fact that it ripens several weeks earlier than most Spanish red grapes. In the last 100 years it has been planted in South America, USA, South Africa and Australia.</p> <p>Tempranillo wines can be consumed young, but the most expensive ones are aged for several years in oak barrels, and can age beautifully for many decades.</p> <p>Until recently Tempranillo was thought to be related to the Pinot Noir grape, but recent genetic studies tend to discount this possibility. Tempranillo also has many different regional identities, including aragon, cencibel, extremadura, valdepeñas and many derivatives of each.</p> | <p>An excellent food friendly wine, pairing well with a wide variety of meat, fowl, pasta and other dishes, including mushroom-based dishes.</p> |

| Red Grape Variety | Herbal and Other Aromatic Elements | Fruit Characteristics | Structural/Tactile and other Features and Characteristics | Other Effects in a Blend and Additional Varietal Notes | Selected Food Pairings |
|-------------------|---|--|--|--|--|
| Teroldego | <ul style="list-style-type: none"> • smoked meat • white pepper • brambles | <ul style="list-style-type: none"> • blackberry • other black fruits | <p>Medium to full bodied (the style varies widely) with significant minerality and good acidity.</p> <p>Many feel Teroldego bears a great resemblance to Zinfandel with its deep color, brambly blackberriness, vivacious acidity and moderate tannin.</p> | <p>There is no certain evidence as to the origins of the "princely wine" of the Trentino, as Teroldego Rotaliano has been described for many centuries. However, various hypotheses have been formulated. There are some experts who argue that the variety originated in the Trentino on the hills of Sorni. Others suggest that the name Teroldego is derived from the German term "Tiroler Gold" or "gold of the Tirol." According to some recent etymological interpretations, it seems that the root "teer," which in German means "tar," refers precisely to one of the characteristics of the wine's flavor.</p> <p>Teroldego Rotaliano made its first appearance in literature with the publication toward the middle of the 17th century of the book Trento con il sacro Concilio ed altri notabili (Trent with the Sacred Council and Other Notable Events) by Michelangelo Mariani, historian of the Council of Trent. In the book, Mariani expresses a highly favorable judgment of the wine and warmly praises its excellent quality. In addition, some other historical documents of that period indicate that the wine had already won a place on a wide market. Because of Teroldego Rotaliano's fine sensory qualities and the outstanding techniques applied in cultivating the grapes and making the wine, its reputation has grown throughout the centuries, as was recognized in 1971 with the assignment of the official Denominazione di Origine Controllata.</p> <p>The production zone includes Campo Rotaliano within the communal territories of Mezzolombardo and Mezzocorona and including the area of the Grumo hamlet in the commune of San Michele all'Adige in the province of Trent.</p> | Rabbit and other simply prepared game, and speck |

| Red Grape Variety | Herbal and Other Aromatic Elements | Fruit Characteristics | Structural/Tactile and other Features and Characteristics | Other Effects in a Blend and Additional Varietal Notes | Selected Food Pairings |
|-------------------|--|---|---|---|--|
| Zinfandel | <ul style="list-style-type: none"> • spicy aroma • black pepper • brambles <p>(unlike Cabernet Sauvignon, Zinfandel's varietal aroma is less generally associated with specific aromatic compounds)</p> | <ul style="list-style-type: none"> • ripe blackberry • raspberry • mulberry • black cherry • red cherry • raisins | <p>Generally big and powerful but soft and supple, ranging from highly extracted, richly intense broodingly aromatic wines, almost black in color, to lighter, delicately spiced and layered wines.</p> <p>Can be tannic and alcoholic, but usually good acidity.</p> | <p>Less often used in a blend than many other varietals, though some Zinfandels (such as Mondavi's) may contain small blended amounts of other varietals, such as Syrah or Petite Syrah. Adds intense aromatic spice and fruit, body, richness and color. Provides fullness, spice and, often, high alcohol levels in the mouth. A very versatile grape. It has softer more accessible tannins than Cabernet Sauvignon when young, and has greater depth, layering, complexity and interesting spiciness than many Merlots. Capable of substantial longevity.</p> | <p>Barbecue, barbecued spare ribs, spicy meat kebabs, chile con carne, pepper steak and other spicy grilled meat dishes, Thanksgiving turkey, German red cabbage with sausages, Sabodet Lyonnais and other sausages and sausage dishes, roasted or stuffed peppers, rich casseroles and stews such as Cocido Madrilenio, dark meat game birds (aged zinfandels are preferable), venison, wild boar and other rich game meat dishes, steak, goulash, ratatouille, pasta with spicy meat sauces, Chilean empanadas, couscous, Indian curries (lower tannin, less spicy versions are preferable).</p> |

100173821_3.DOC