Chardonnay
Winemaking Techniques

Brief discussion of the history, climate, winegrowing, viticultural cycles and winemaking of Chardonnay – followed by a component winemaking tasting
Kendall-Jackson
Chardonnay Seminar

- History
- Climate
- Winegrowing
- Winemaking
- Wine Tasting
Chardonnay

- Chardonnay’s appeal reaches from wine novice to wine connoisseurs.
- The Chardonnay grape originates in France and is primarily grown in the Burgundy and Champagne regions.
- Traditional descriptors: creamy, buttery, toasty, tropical, pear, apple, citrus fruit notes. Medium-bodied.
- Chardonnay is the most popular varietal representing 27% of all dollars spent on table wine.
  (Source: IRI $ Sales 52 wpe 11/27/05)
- Secondary or “Malolactic Fermentation” adds a creamy, buttery flavor with a rounded mouthfeel. Oak aging creates flavors of vanilla, toast and spice.
Chardonnay Styles

1. Crisp lean and clean.
Examples: Chablis (France), Fruili (Italy), Anderson Valley (California), Yarra Valley (Australia)

2. Fruit forward.
Examples: Pouilly-Fuisse, Macon (France), Trentino-Alto Adige (Italy), Santa Barbara, Alexander Valley (California), Coonawarra (Australia), Casablanca (Chile)

3. Concentrated and complex:
Examples: unique climatic and/or mountainous sub-appellations, Cote de Beaune (France), California
Climate:
The Fog is Our Friend for Grape Growing
Climate
- Fog intrusions
- Cool climate
- How?
What Causes the Marine Influence in the North Coast?

- The high inland temperatures cause the warmer air to rise.
- Air from the offshore area moves onshore.
- The air movement is perceivable as wind.

The warm moist air interacts with the cold water to produce our summer fog.
Coastal Grapes
Cost More

Higher Risk But Greater Reward

Fog and breezes create an extended growing season.

- Develops more concentrated fruit flavors
- Optimum aroma
- Even ripening
- High acid
Appellations or AVA’s

- Mendocino
- Sonoma
- Napa
- Monterey
- Santa Barbara
Agrilink Weather stations

Accumulated Heat Units (4/1 - 10/31/01)

Date (m/d)

Lakeport
Keyes
Knights Cross
Oakville
AME 82
Vinwood
Cameros West
Shiloh
Jackson Park
Seascape
Bloomfield
A soil’s composition has long been theorized to impact unique flavor characteristics to the grapes and the wines made from them.

Great vineyard sites are similar in that they are NOT very fertile and have good drainage.
SOIL VARIABILITY

- Significant soil variability within a harvest unit is detrimental to quality.

- Designing vineyard blocks (shape, size) to minimize soil variability is critical choice.

- Blocks designed to fit a site allow for better use of soil amendments, fertilizers and irrigation.
Dormancy
Pruning the Vines
Budbreak
Leaf Pulling
Green-drop
Ready for Harvest
Picked by Flavor
Winemaking Chart - White

Grapes → Whole-Cluster Press → Tank

- Primary fermentation (alcohol)
- Secondary “Malolactic” fermentation
- Aging

Yeast Inoculation → Barrel → Fining & Filtration → Bottling
Chardonnay Winemaking: Gentle delivery and handling

- No Crushing or destemming
- Whole Cluster Press
Chardonnay Winemaking: Barrel Fermentation

- Native Yeast or Indigenous Yeast fermentation
- Sur Lie Aged
- Malolactic Fermentation
- Barrel aging
Why Use Oak Barrels?

- Barrels concentrate wine.
- Barrels soften tannins
- Barrels impart flavor; vanilla, spice, creaminess and toastiness.

Key Facts:
- Cost per barrel: French-$850+
  American-$450+

- Winemakers use barrels like a chef uses spices.
Differences Between French Oak and American Oak Barrels

- **American Oak** - pronounced sweet vanilla, hints of coconut, spice and dill.

- **French Oak** - subtle vanilla, toasted bread, cedar box and spice.

- **The Kendall-Jackson Technique**
KJ French Oak Stave Mill

- Only American-owned oak barrel company
- Quality and Consistency
# Oak Character at Various Toast Levels

<table>
<thead>
<tr>
<th><strong>Light Toast</strong></th>
<th><strong>Medium Toast</strong></th>
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</thead>
<tbody>
<tr>
<td>200-300 degrees</td>
<td>240-360 degrees</td>
</tr>
<tr>
<td>Vanilla</td>
<td>Vanilla</td>
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<tr>
<td>Butter</td>
<td>Almond</td>
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<tr>
<td>Coconut</td>
<td>Nutmeg</td>
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<tr>
<td>Seasoned Wood</td>
<td>Cinnamon</td>
</tr>
<tr>
<td>Pine</td>
<td>Butterscotch</td>
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<td></td>
<td>Roasted Bread</td>
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</tbody>
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<table>
<thead>
<tr>
<th><strong>Heavy Toast</strong></th>
<th><strong>Light Char</strong></th>
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</thead>
<tbody>
<tr>
<td>320-480 degrees</td>
<td>400-500 degrees</td>
</tr>
<tr>
<td>Coffee</td>
<td>Burnt Toast</td>
</tr>
<tr>
<td>Caramel</td>
<td>Smoke</td>
</tr>
<tr>
<td>Toast, Smoke</td>
<td>Chocolate</td>
</tr>
<tr>
<td>Anise</td>
<td>Coffee</td>
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<tr>
<td>Clove</td>
<td></td>
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<tr>
<td>Cedar</td>
<td></td>
</tr>
<tr>
<td>Chocolate</td>
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</tr>
</tbody>
</table>
Oak Toasting Chart

Source: World Cooperage and Tatlock & Thomson
Kendall-Jackson Stave Mill; Epinal, France
Oak Ready to be Quartered and Split
Oak Split Into Quarters
Oak Quarters Cut Into Staves
Staves Air-dry and Season for 36 Months
Master Cooper Building a Barrel
Barrels Being Toasted
Finishing Hoops
Blending

- Tasting
- “Lots”
- Flavors
Stainless Steel Fermented, no Malolactic:

- Shows a fresh, fruity character without other influences.
- Note the acid level.
- Cool fermentation temperature of 50-60°F
- Absence of oak and Malolactic fermentation changes the wine’s texture.
Wine # 2

Stainless Steel Fermented with Malolactic:

- Shows full effect of Malolactic fermentation.
- Note the textural change in your mouth, slightly more rounded.
- The acid has also mellowed, making the wine less tart.
- Taste the addition of a buttery character.
Wine # 3

Barrel Fermented, Neutral Oak:

- The color of the wine is a deeper color because of the oak influence.
- Note how the barrel fermentation integrates fruit, malolactic character and oak.
- Neutral oak adds light, refined flavors and tannins that effect texture.
Wine # 4

Barrel Fermented, French Oak:

- Smell the difference in oak aromas derived from the French barrel.

- French oak exhibits vanillin, clove, butterscotch, toast and nutmeg flavors.

- Note the difference in the finish. It has a long lingering sensation.
Wine # 5

Barrel Fermented, American Oak Barrels:

- Smell and taste the differences of a different oak barrel.
- American oak exhibits coconut, vanilla, cinnamon, caramel, toasty flavors.
Kendall-Jackson, Estates Grown

Vintner’s Reserve Chardonnay

Key Points

• 100% Jackson Estates Grown Chardonnay
• Grown in California’s cool coastal vineyards
  - Santa Barbara County for mango and pineapple flavors
  - Monterey County for citrus and lime flavors
  - Mendocino County for apple and pear flavors
• Handcrafted in small vineyard lots throughout the entire winemaking process.
• Whole cluster pressed to retain the fresh fruit qualities without the bitterness from stems and seeds.
• Barrel fermented in French and American oak barrels for richness, toastiness and complexity.
• *Sur lie* aged for our signature velvety texture and creamy flavor.
Thank You