Western Washington Grape Growers Workshop
30 March 2011

Winegrape Selections: Puget Sound Area

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Michelle Moyer, WSU-Prosser
Overview of Varietal Selection

1. Site considerations
2. Growing Degree Days: A means for site comparisons
3. Variety Trials at WSU-Mt. Vernon and elsewhere
4. Grape varieties vs. wine-styles
5. Experience with varietals in other cool climates
Matching Grape Variety and Vineyard Site

Site Considerations:

- Growing-season heat accumulation
- Winter temperatures (average and extreme lows)
- Site-specifics (soil type, pH, depth to restriction, WHC, air drainage)
- Pest and disease pressure

More info for cool-climate site considerations:

- http://www.nysaes.cornell.edu/hort/faculty/pool/NYSite-Soils/SiteSelection.html
Long-term GGD for Washington AVAs

[Graph showing cumulative GDD for various AVAs in Washington, with Puget Sound having the least cumulative GDD.]
2009 GGD for Washington AVAs
# Growing Season Heat Accumulation: Viticulture World-Wide

<table>
<thead>
<tr>
<th>Location</th>
<th>GDD (F)</th>
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<tbody>
<tr>
<td>Puget Sound, WA</td>
<td>1,652</td>
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<tr>
<td>Champagne (Reims, France)</td>
<td>1,756</td>
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<tr>
<td>Zürich, Switzerland</td>
<td>1,874</td>
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<tr>
<td>Würzburg, Germany</td>
<td>1,908</td>
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<tr>
<td>Burgundy (Dijon, France)</td>
<td>2,084</td>
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<tr>
<td>Roseburg, OR</td>
<td>2,115</td>
</tr>
<tr>
<td>Finger Lakes (Penn Yan), NY</td>
<td>2,390</td>
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<tr>
<td>Bordeaux (France)</td>
<td>2,464</td>
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<tr>
<td>Finger Lakes (Geneva), NY</td>
<td>2,510</td>
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<tr>
<td>Keckskemét, Hungary</td>
<td>2,588</td>
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<tr>
<td>Canberra, Australia</td>
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<tr>
<td><strong>Yakima Valley, WA</strong></td>
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<td>Udine, Italy</td>
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<td>St. Helena, CA</td>
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<tr>
<td>Fresno, CA</td>
<td>4,684</td>
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</table>

Adapted from Bob Pool, Cornell University
Opportunities in based on comparisons with other regions with 1600-1900 GDD

• Premium sparkling wines

• Early ripening white varieties
  Siegerrebe, Madeline Angevine

• Mid-season white wines with malolactic fermentation
  Müller Thurgau, Chardonnay, Sauvignon Blanc, Auxerrois, Kerner, Cayuga White,
  Regent, Pinot Noir on selected sites
Variety Trials

WSU-Mt. Vernon
Grape Trials at WSU - Mt Vernon
Gary Moulton, Jacky King

• Growing Wine grapes in Maritime Western Washington
• EB2001:

• In addition, more information can be obtained from individual yearly reports.
• http://maritimefruit.wsu.edu/Reports.htm
Pinot Noir clones
Pinot Precoce
Garanoir
Dornfelder
Zweigelt
Iskorka
Italian Merlot
Heroldrebe
St. Laurent
Regent

Sylvaner
Auxerrois
Chardonnay
Sauvignon Blanc
Burmunk
Siegerrebe
Pinot Gris
Muscat
Kerner
Schönburger
Grüner Veltliner
Burmunk
Golubok
Optima
Ortega
Regner
Red Traminer
Pitos
Plaj
Goesji Zumalos
Siewiernyl
Kekoyelve
Golubok
Agria
Rondo
# Climate-Variety Suitability

Variety guidelines (W=white; R=red) for the North Olympic Peninsula based on growing degree-days (F)

<table>
<thead>
<tr>
<th>&lt;1600 GDD</th>
<th>1600-1900 GDD</th>
<th>&gt;1900 GDD</th>
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<tbody>
<tr>
<td>Everything to left, plus:</td>
<td>Everything to left, plus:</td>
<td></td>
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<tr>
<td><strong>Siegerrebe (W)</strong></td>
<td><strong>Chardonnay cl 76 (W)</strong></td>
<td><strong>Sauvingnon Black (W)</strong></td>
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<tr>
<td><strong>Madeleine Angevine (W)</strong></td>
<td><strong>Auxerrois (W)</strong></td>
<td><strong>Pinot Gris [Ruländer] (W)</strong></td>
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<tr>
<td><strong>Burmunk (W)</strong></td>
<td><strong>Kerner (W)</strong></td>
<td><strong>Pinot Blanc (W)</strong></td>
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<td><strong>Iskorka (W)</strong></td>
<td><strong>Sylvaner (W)</strong></td>
<td><strong>Chasselas (W)</strong></td>
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<tr>
<td><strong>Muscat of Norway (R)</strong></td>
<td><strong>Pinot noir cl. Mariafeld (R)</strong></td>
<td><strong>Pinot noir [all cl.] (R)</strong></td>
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<tr>
<td><strong>Rondo (R)</strong></td>
<td><strong>Pinot noir cl Precoce (R)</strong></td>
<td><strong>Dunkelfelder (R)</strong></td>
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<td></td>
<td><strong>Regent (R)</strong></td>
<td><strong>Gamaret (R)</strong></td>
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<td></td>
<td><strong>Garanoir (R)</strong></td>
<td><strong>St. Laurent (R)</strong></td>
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<tr>
<td></td>
<td><strong>Agria (R)</strong></td>
<td><strong>Zweigelt (R)</strong></td>
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<tr>
<td></td>
<td><strong>Leon Millot (R)</strong></td>
<td><strong>Lemberger (R)</strong></td>
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</tbody>
</table>

(adapted from Moulton and King, 2005). (Modified by T. Henick-Kling 2009)
Grape varieties vs. Wine Styles

Experiences in similar locations
Cool-Climate Varieties

Experiences in similar locations
New Grape Varieties for Cool Climates
Weinsberg, Germany

Acolon
Good wine quality, very good in short, cool season

Cabernet Dorsa
High wine quality, also good blender, ripens early

Cabernet Rubin
High wine quality, requires warm ripening conditions
Experience with new grape cultivars in Switzerland
Lake Zürich

Regent
Garanoir
Gamaret
Chardonnay
Müller-Thurgau
Chasselas
Räuschling
Pinot Noir
Experience with new grape cultivars in New York

<table>
<thead>
<tr>
<th>Vitis vinifera</th>
<th>Interspecific hybrids</th>
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<tr>
<td>Pinot Noir clones</td>
<td>Cayuga White</td>
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<tr>
<td>Lemberger</td>
<td>Traminette</td>
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<td>Rotburger</td>
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<td>Shiraz</td>
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<td>Chardonnay clones</td>
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<td>Viognier</td>
<td>Marechal Foch</td>
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<td>Siegerrebe</td>
<td>Leon Millot</td>
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<tr>
<td>Müller-Thurgau</td>
<td>Baco Noir</td>
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<td>Chasselas</td>
<td>Seyval Blanc</td>
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<tr>
<td>Bordeaux reds</td>
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</tbody>
</table>
Experience with new grape cultivars in New York

Chardonnay clones

Tasting notes:

Dijon 75  lots of fruit, peaches, good full mouthfeel
Dijon 76  nectarines, less forward fruit than cl. 75, apple, citrus flavors, nice, rich fruit, good body, strong peach, apricot, apple
Dijon 95  green apple, vegetative, green
Dijon 96  vegetative, grassy, some peach, grassy in mouth
FPMS 7   sl. dusty/moldy aroma (powdery mildew?), sl. bitter, green
Dijon 78  spicy, peach, sl. floral, apple and citrus underneath
Geneva  melons (cantalope, honeydew), apple, lemon
Corton  grassy, white grapefruit, thin
FPMS4   unripe flavors, thin

Auxerrois  ripe fruit middle, pears, spices, nice
Experience with new grape cultivars in New York

*Interspecific hybrids*

Seyval Blanc
Vidal Blanc
Vignoles

Cayuga White
Traminette
Chardonel
Val de Muscat
Experience with new grape cultivars in New York

**Vidal**
Tasting impressions:
Riesling-like with cotton candy hybrid aromas, acidity can be high

**Vignoles**
Tasting impressions:
White grape fruit with or without honey…
High acidity in cool/warm summer climates!
Excellent for late harvest wines with or without *Botrytis*

**Seyval Blanc**
Grassy, citrusy, thin
Very fruitful, needs cluster thinning
Experience with new grape cultivars in New York

**Cayuga White**

Tasting impressions:
Riesling-like, Chardonnay-like. Good mouthfeel.
Easy winemaking chemistry. Excellent blending variety.
Suitable for a range of wine styles.

**Traminette**

Tasting impressions:
Excellent Gewürztraminer and some Muscat spice aromas!
Good texture, no bitterness. Long aftertaste.
Valvin Muscat

- High quality Muscat wine
- Own-rooted vines are small
- Grafting is recommended
- Ripens mid-season
Experience with new grape cultivars in New York

Valvin Muscat (C 299-35 x Muscat Ottonel)

Cold hardiness (Adj. M. LTE): -11.6 to 15.9 °F (-24.2 to -26.6 °C)
Some powdery mildew susceptibility.

Tasting impressions (wine fermented dry):
(1996)
Good Muscat, excellent body and mouth feel; strong Muscat, green, thin palate; crisp acid/citrus, mango, lacks body, acidic, sl. bitter.; Muscat, spicy, thin body, bitterness;

(1998)
nice aromas; beautiful floral+spicy nose, too acid, some green apple aftertaste; muscat, vanilla, pineapple;
Experience with new grape cultivars in New York

Frontenac  (riparia 89 x Landot 4511)

Cold hardiness (adj. M. LTE): -15 to -21.6 °F, -26.1 to -29.8 °C
Very low rot susceptibility

Tasting impressions:
very dark color, wild berry flavors
deep red color, nice dark cherry aromas, berries, good soft
tannins, fleshy, acidity too high
berry cherry fruit, hybrid, lacking texture, some Cabernet Sauvignon character, high acidity, black cherry hybrid aftertaste
unusual fruit flavors, artificial fruit, spicy, ok tannins, ok acidity
Experience with new grape cultivars in New York

**Chambourcin**
Tasting impressions:
very hybridy, Buffalo-like, bitter tannins, wild grape flavors, 
nice berry cherry aromas, lacking tannins, pleasant aftertaste,

**Marechal Foch**
Tasting impressions from Oregon and Ontario:
Jammy, cherry, soft tannins, lacking fine texture, round

**Chelois**
Tasting impressions
Pinot Noir like aromas, middle and finish rather thin
Noiret

- Excellent full-bodied wine with a distinct pepper character and moderate tannin content.
- Vigorous and productive
- Moderate resistance to powdery mildew
- Fruit maturity is Sep/Oct
Experience with new grape cultivars in New York

Noiret
NY65.0467.08 \{NY33277 x Chancellor\} X Steuben

- Excellent red wine - good tannin, pepper, free of hybrid character
- Good vine size, some decline in older vines, may need grafting
- Harvest late September / early October
- Disease resistance: OK for powdery mildew black rot, and Botrytis; downy mildew may need control
**Noiret** (65.0467.08 x Steuben)

Cold hardiness (Adj. M. LTE): -13.2 to 15.2 °F (-25.1 to -26.2 °C)
Very rot resistant.

Tasting impressions:
(1996) FS: purple, musky aroma, sl. bitter; very hybridy, weedy, medicinal, bitter, sour cherries; Black pepper nose, light structure; vegetal, unripe fruit; Baco like, black cherry flavor, yeasty, vegetative, nose; HP: purple, cloudy, berries, pepper, tannins; dark, weedy, wild, very grassy; nice flavors and aromas better structure; grassy/herbal; very purple black, black pepper flavor, black cherry;

(1997) FS: dark color, nice berries, peppery, s. hyb taste, cherry, smokey, Rhone-lk; blk pepper, tannic, big vinif (Lemberger)...bring on the steak.; black pepper Rhone like characteristics; black pepper aroma and taste; some tannin; astringency; smoky/beany aroma, nice mouth+tannins; blueberries, pepper, tannin; HP: berries, some hybird taste, thin; ripe berry flavors, good body and tannins, hybrid taste; more herb nose; pleasant wine, slight bitter aftertaste; sour finish, good mild citrus nose.; FS+1: tannic, bitter, "wild" berry taste; good body, tannins; more astringent; buttery, fruity, sl. green pepper;
Corot Noir
SV 18-307 x Steuben

- Excellent red wine - good fruit and berry aromas, medium body
- Productive and vigorous, may need cluster thinning
- Harvest mid-October
- Disease resistance: broadly tolerant of fungal diseases (including Botrytis)
**Corot Noir (65.0467.08 x Steuben)**

Cold hardiness (Adj. M. LTE): -13.2 to 15.2 °F (-25.1 to -26.2 °C)
Very rot resistant.

Tasting impressions:
(1996) FS: purple, musky aroma, sl. bitter; very hybridy, weedy, medicinal, bitter, sour cherries; Black pepper nose, light structure; vegetal, unripe fruit; Baco like, black cherry flavor, yeasty, vegetative, nose; HP: purple, cloudy, berries, pepper, tannins; dark, weedy, wild, very grassy; nice flavors and aromas better structure; grassy/herbal; very purple black, black pepper flavor, black cherry;

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Conclusions

• Understanding your site is crucial in varietal selection
• The site will dictate what you can and cannot grow
• “Pushing” a variety is okay- but know what the consequences might be
• Compare with other, similar viticulture areas
• What you can, should and want to grow may all be different