Grape Dehydration
“Passito Wines”
A New World Approach
Objective

• To concentrate sugars and flavors through dehydration

• Reduce dilution in order to make a more concentrated varietal wine

• Produce a dessert wine

• To create a sweet reserve for bending
Traditional Old World Method

• Typically grapes are dried on mats, racks or suspended in air

• Slow processes 120 days usually without supplemental air

• Primarily used to produce sweet wines or for blending with drier style wines
The Virginia Method

- Tobacco Barns - Self contained units on a concrete pad with heating, constant forced air and ventilation
- Grapes can be dried in standard picking lugs, special racks are not necessary
- Regulating heat and airflow to determine rate of drying
Tobacco Barns
How They Work

Floors are vented to allow air to flow vertically through the drying lugs.

Walls have side vents flaps to allow internal air to be released.

Most come with heating unit either LP gas or oil burners, which reduce moisture.

Access through rear swing doors.
Protocol

• Lugs are filled no more than two thirds full to allow sufficient air flow

• According to barn size, lugs should be stacked in equal layers to prevent unequal air distribution

• Barn is loaded based on designated time of drying per varietal
Fruit Parameters

• Clean and sanitary fruit, no rot
• Skins must be in good condition, durable
• Grapes must have achieved reasonable maturity
Potential Risks

- Botrytis
- Volatile Acidity
- Oxidation
- High Alcohol
Wine Characteristics

• High tannin to juice ratio
• Elevated V.A.
• Elevated Alcohol
• Dried Fruit notes, raisin flavors
Rain, rot and dilution

Decision to bring in diluted or underripe fruit versus waiting to dry/ripen on the vine and potentially suffer further damage

Early season varietals and whites fared better
<table>
<thead>
<tr>
<th></th>
<th>Non Dried Fruit</th>
<th>Dried Fruit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harvest</td>
<td>9/29/11</td>
<td>Time - 6 days</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.074</td>
<td>Specific Gravity - 1.097</td>
</tr>
<tr>
<td>pH Pre/Post</td>
<td>3.39/3.85</td>
<td>pH - 3.61/3.98</td>
</tr>
<tr>
<td>TA Pre/Post</td>
<td>6.45/5.23g/l</td>
<td>TA - 7.8/6.48g/l</td>
</tr>
<tr>
<td>Alc</td>
<td>12.0%</td>
<td>Alc% - 13.5%</td>
</tr>
</tbody>
</table>
2011 Cabernet Sauvignon
Carter’s Mountain

- **Non Dried Fruit**
  - Harvest - 10/13/11
  - Specific Gravity 1.091
  - pH -3.34/3.68
  - TA 7.40/6.34g/l
  - Alc- 11.5%

- **Dried Fruit**
  - Time - 8 days
  - Specific Gravity-1.134
  - pH-3.92/4.20
  - TA- 7.95/7.96g/l
  - Alc% - 14.2%
2011 Petit Manseng
Mt. Juliet Vineyard

- Non Dried Fruit
  - Harvest - 10/01/11
  - Specific Gravity 1.096
  - pH -3.30/3.30
  - TA 6.80/6.60g/l
  - Alc% 14.1

- Dried Fruit
  - Time - 7 days
  - Specific Gravity 1.148
  - pH 3.66/4.08
  - TA 6.80/8.15g/l
  - Alc% - 15.8%
Pollak Vineyards

- **Non Dried Fruit**
  - Harvest - 9/20/11
  - Specific Gravity - 1.096
  - pH - 3.96/3.37
  - TA - 4.80/5.86g/l
  - Alc% - 12.9

- **Dried Fruit**
  - Time - 15 days
  - Specific Gravity - 1.158
  - pH - 4.15/4.21
  - TA - 5.20/7.35g/l
  - Alc% - 14.8
Special Thanks

- Kevin Trent - Pinehaven Vineyards
- Chris Hill - Vineyard Consultant
- Virginia Wineworks Staff