Economic Considerations

- **Market**
  - Sold to a winery or other processor
  - Contract
  - What cultivars will they accept
  - Price
Economic Considerations

- Other possible outlets
  - Farmers market or roadside stand
  - Area stores, markets, restaurants
  - Pick-your-own
  - Near a population center
  - Good public access
  - Near a local attraction
  - Is the vineyard/production site attractive
Economic Considerations

- How long can you wait to recover your investment cost?
  - 5 years
  - 7 years
  - 10 years
- Can cost be reduced without sacrificing QUALITY?
- How much time can you commit
Economic Considerations

- Do Your Homework
  - Read books, trade and scientific journals
  - Visit successful vineyards and wineries
  - Attend workshops, seminars, classes
  - Talk to other growers
  - Internet (pros/cons)
  - Develop a business plan
Economic Considerations

- Assumptions
  - No land costs are included
  - Have the necessary equipment
  - Planting proven cultivars
  - All labor is paid at skilled laborer rates
  - Trellis will be a standard 2-wire system
- Additional cost for GDC/VSP or other system
Assumptions

- Machinery costs are operating cost only
- Planting space, 8 feet apart in row, rows 10 feet apart (= 545 vines/acre)
- Treated wooden post, 12.5 gauge high tensile wire & appropriate hardware
- Grass alleys, herbicide treatment under vine
- No interest is included
Economic Considerations

Adapted from “Costs of Establishing a Wine Grape Vineyard” by Bruce Bordelon
Purdue University
Figures are adjusted for inflation and location
## Cost

<table>
<thead>
<tr>
<th>YEAR ONE</th>
<th>Cost/Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site preparation</td>
<td>$ 166</td>
</tr>
<tr>
<td>Plants and planting</td>
<td>2,398</td>
</tr>
<tr>
<td>Trellis materials &amp; installation</td>
<td>1,670</td>
</tr>
<tr>
<td>Weed, disease and insect control</td>
<td>473</td>
</tr>
<tr>
<td><em>(includes mowing row middles)</em></td>
<td></td>
</tr>
<tr>
<td>Fertilizer, canopy management and machinery operating costs</td>
<td>1,010</td>
</tr>
<tr>
<td><strong>TOTAL YEAR ONE</strong></td>
<td><strong>$ 5,717</strong></td>
</tr>
</tbody>
</table>
## Cost

<table>
<thead>
<tr>
<th>Year two</th>
<th>Cost/Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pruning, replanting and canopy management</td>
<td>$ 447</td>
</tr>
<tr>
<td>Weed, disease &amp; insect control</td>
<td>339</td>
</tr>
<tr>
<td>Fertilizer and machinery operating costs</td>
<td>294</td>
</tr>
</tbody>
</table>

**Total Year Two**  $ 1,080

---

*University Of Nebraska Viticulture Program*

http://agronomy.unl.edu/viticulture
## Cost

<table>
<thead>
<tr>
<th>YEAR THREE</th>
<th>Costs/Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pruning and canopy mgt</td>
<td>$ 542</td>
</tr>
<tr>
<td>Weed, disease &amp; insect control</td>
<td>442</td>
</tr>
<tr>
<td>Fertilizer &amp; machinery operating costs</td>
<td>347</td>
</tr>
<tr>
<td>Harvest cost estimated per ton</td>
<td>$150</td>
</tr>
</tbody>
</table>

Total Year Three $1,828

THREE YEAR TOTAL $8,625
Based on one acre and market value of 50 cents per pound.

<table>
<thead>
<tr>
<th>Year</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>$0.00</td>
</tr>
<tr>
<td>Year 2</td>
<td>$0.00</td>
</tr>
<tr>
<td>Year 3</td>
<td>$1000.00</td>
</tr>
<tr>
<td>Year 4</td>
<td>$3000.00</td>
</tr>
<tr>
<td>Year 5</td>
<td>$4000.00</td>
</tr>
<tr>
<td>Year 6</td>
<td>$5000.00</td>
</tr>
<tr>
<td>Year 7</td>
<td>$5000.00</td>
</tr>
</tbody>
</table>
## Return

<table>
<thead>
<tr>
<th>Year</th>
<th>Expenses</th>
<th>Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 3</td>
<td>$8625.00</td>
<td>$1000.00</td>
</tr>
<tr>
<td>Year 4</td>
<td>$10753.00</td>
<td>$4000.00</td>
</tr>
<tr>
<td>Year 5</td>
<td>$12681.00</td>
<td>$8000.00</td>
</tr>
<tr>
<td>Year 6</td>
<td>$14709.00</td>
<td>$13000.00</td>
</tr>
<tr>
<td>Year 7</td>
<td>$16537.00</td>
<td>$18000.00</td>
</tr>
</tbody>
</table>
Conclusions

- Commitment, time and money
- Self gratification or accomplishment
- Do your own business plan
Site Selection

Select a site with good AIR DRAINAGE

- Cold air is heavier than warm air
- Cold air flows downward and settles in low areas
- A 3-5 degree difference may save your crop
- Gradually sloping site higher than the surrounding terrain
- A tree or brush line will form a frost pocket
Site Selection

Image Courtesy of Barclay Poling

University Of Nebraska Viticulture Program
http://agronomy.unl.edu/viticulture
Site Selection

- Surface Water Drainage
  - Water shouldn’t stand for more than a day
  - 2-5 percent slope
- Internal Water Drainage
  - Check for Impervious layers
  - Hole drainage
    - 8 hours very good
    - Over 48 hours poor
Site Selection

- **Soil Fertility**
  - Reasonably fertile (Do soil sampling)
  - Has not had excessive erosion of top soil
  - Has favorable pH, organic content, texture
  - No impervious layers near surface
  - Soil depth of at least 3 feet
Site Selection

- **Fertility**
  - More isn’t better
  - Organic matter 1 to 3%
  - pH 5.5 – 7
  - Phosphorous (P) 20 – 50 ppm
  - Potassium (K) 125 – 150 ppm
## OPTIMAL SOIL CHARACTERISTICS

<table>
<thead>
<tr>
<th>Soil Characteristic</th>
<th>Desired Values (a)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>pH$_w$</strong></td>
<td>5.5-6.5 *</td>
</tr>
<tr>
<td>Organic Matter</td>
<td>2-3%</td>
</tr>
<tr>
<td>Phosphorous (extractable)</td>
<td>40-50 lbs./A</td>
</tr>
<tr>
<td>Potassium (exchangeable)</td>
<td>250-300 lbs./A</td>
</tr>
<tr>
<td>Magnesium (exchangeable)</td>
<td>200-250 lbs./A</td>
</tr>
<tr>
<td>Boron (extractable)</td>
<td>1-2 lbs./A</td>
</tr>
<tr>
<td>Zinc (extractable)</td>
<td>8-10 lbs./A</td>
</tr>
</tbody>
</table>

*a Source: Dami, et al., 2005

- Commonly preferred soil pH$_w$ values are 5.5 to 6.0 for *Vitis labrusca* cultivars, 6.0-6.5 for hybrid cultivars, and 6.0-7.0 for *vinifera* cultivars.
Site Selection

- Exposure
  - Orientation
  - Wind direction
  - Tree lines
  - Isolation
    - Access
    - Herbicide drift
  - Water source