Organic and Biodynamic Grape Production

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Biodynamic Farming

• Follows a strict set of guidelines/rules based on preparations handed down from Rudolph Steiner (1920s).

“Actively work with the health-giving forces of nature: spiritual science”
Building Soil Health—A Key Element of Organic & Biodynamic Farming
# Dr. Reganold’s Soil Data

**Washington State University**

## Soils Data

*(New Zealand farms)*

<table>
<thead>
<tr>
<th>Soil Property</th>
<th>Biodynamic</th>
<th>Conventional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulk density (Mg/m³)</td>
<td>1.07</td>
<td>1.15</td>
</tr>
<tr>
<td>Penetration resistance (0-20 cm) (MPa)</td>
<td>2.84</td>
<td>3.18</td>
</tr>
<tr>
<td>Penetration resistance (20-40 cm) (MPa)</td>
<td>3.55</td>
<td>3.52</td>
</tr>
<tr>
<td>Soil Structure Index</td>
<td>7.4</td>
<td>5.7</td>
</tr>
</tbody>
</table>
McNabb Organic Vineyard

Southeast slope; open landscape

Biodiversity across the farm landscape
Frey Wine
Mendocino, California

http://www.freywine.com/
Grapes In Iowa

- Iowa was the sixth largest producer of grapes in the U.S. in early 1900s (9,795 acres)
- Grapes were raised organically (no synthetics)
- Rapid expansion of petrochemicals post-1940 led to decline of vineyards
- 2,4-D herbicide damage and other factors reduced vineyard acreage
- Resurgence of interest in grapes and organic fruit in Iowa since 1999—government support for research and development
U.S. and Iowa Organic Production in 2002

- $13 billion total U.S. industry sales in 2002
- Annual growth rate exceeding 20%
- 2.3 million acres in U.S. (2001)
- 14,532 acres of organic grapes
- 12,189 acres of organic apples
- 500 organic farmers in Iowa
- 150,000 organic acres

S. Nissen-Orgnic Grapes, Ames
USDA Organic Wine Rules
Effective October 21, 2002

• “Made from organically grown grapes” are wines made from organically grown grapes with sulfur dioxide used in the winemaking process (up to 100 ppm). Other label: “Made from organic grapes”

• “Organic Wine” is made from 100% organic ingredients with no sulfur dioxide added.
Largest constraint (same as for conventional):
- Herbicide drift (deforms leaves; reduces yields; can cause de-certification for one year; results in law suits)