Innovation in Chilean Wine Industry

Vinnova S.A./Tecnovid S.A.

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Managing Director
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ITC, WEDEF
WINE INDUSTRY
OLD ESTABLISHING ACTIVITY

• Wines in Chile - Pedro de Valdivia - 1540 (460 years)
• Introduction of fine vines - 1850 (150 years)
• Consumption percápita 58 lts/año - 1950 (60 years)
• International Markets - 1990 (20 years)
10º in surface planted

Fuente: International Organization of Vine and Wine, 2009
<table>
<thead>
<tr>
<th>7º producer</th>
<th>5º exporter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>mm hl</strong></td>
<td><strong>MM hl</strong></td>
</tr>
<tr>
<td>Francia</td>
<td>Italia</td>
</tr>
<tr>
<td>46</td>
<td>19</td>
</tr>
<tr>
<td>Italia</td>
<td>España</td>
</tr>
<tr>
<td>48</td>
<td>14</td>
</tr>
<tr>
<td>España</td>
<td>Francia</td>
</tr>
<tr>
<td>33</td>
<td>13</td>
</tr>
<tr>
<td>E.E.U.U.</td>
<td>Australia</td>
</tr>
<tr>
<td>21</td>
<td>8</td>
</tr>
<tr>
<td>Argentina</td>
<td>Chile</td>
</tr>
<tr>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>Australia</td>
<td>E.E.U.U.</td>
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<tr>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Sudáfrica</td>
<td>Argentina</td>
</tr>
<tr>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Alemania</td>
<td>Sudáfrica</td>
</tr>
<tr>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>Chile</td>
<td>Alemania</td>
</tr>
<tr>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>NZ</td>
<td>Portugal</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>China</td>
<td>NZ</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Portugal</td>
<td>China</td>
</tr>
<tr>
<td>6</td>
<td>Otros</td>
</tr>
<tr>
<td>Otros</td>
<td>Total</td>
</tr>
<tr>
<td>59</td>
<td>86</td>
</tr>
</tbody>
</table>

Fuente: International Organization of Vine and Wine, 2009
Chilean Wine Industry Growth

- Exports Growth
  - 5° exporter (France, Italy, Spain, Australia)
  - Exports 60% of total production in volume 609 MM Ltrs
  - Exports Growth: US$ 182,000 to 1,381,000 US$ 1995-2009 (17%)
  - Production: 382 mill lts. to 961 mill lts 1996-2009 (8.9%)

- Market diversification
  - 116 countries (last 12 month)
  - 300 exporters (>US$10,000)
Exports Growth

EXPORTACIONES TOTALES DE VINO 1985-2006

US$000

AÑOS

US$0

US$10MM

US$962MM

Volumen

Valor

VOLUMEN

US$000

1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
Export Growth

- Chile is the country with higher proportion exports/production: 68%
Keys of Growth

- Institutional and political stability
- Natural Comparative Advantages
- External markets opportunities
- Adaptation Technology from main countries
2000 Change of Scenery

- Lost of competitiveness
- Margin profit reduction
- Internal consume reduction
Wine Consumption

Liters per capita 1950-2003
So Chile needs to continue the exports growth:

From the Industry side

- Consumers seduction
- Profitable quality
- Competitive innovation
So Chile needs to continue the exports growth: Government/Industry Collaboration

1. Market Access: International Trade Agreements
2. Promotion Collaboration-Wines of Chile
3. Innovation Collaboration-Wine Consortiums
1. Market Access: International Trade Agreements

Comercial Agreements in Force

Free Trade Agreements

ACE Nº 16 Argentina
ACE Nº 22 Bolivia
ACE Nº 42 Cuba
ACE Nº 65 Ecuador
ACE Nº 35 MERCOSUR
ACE Nº 23 Venezuela
AAP India
AAE P-4 (Nueva Zelanda, Singapur, Brunei y Chile)
AAE U.E.
TLC Australia
TLC Canadá
TLC Centroamérica
TLC China
ALC Colombia
TLC Corea
TLC EFTA (Suiza, Noruega, Lichtenstein, Islandia)
TLC EE.UU.
TLC Japón
TLC México
TLC Panamá
ALC Perú Panamá
ALC Perú
2. Wines of Chile- Government/Industry Collaboration for Promotion
3. Innovation Collaboration-Wine Consortiums

- Vineyards
- Universities
- Innova Chile-CORFO
- Elaboration & Commercialization
- Research & Development
- Vinnova S.A.
- Tecnovid S.A.
Sustainable Model

Innovation in the complete elaboration process:

R&D + i

• from the vineyards/wineries
• with the vineyards/wineries
• for the vineyards/wineries
Wine Industry Innovation

MODEL-24 PROJEC R&D: 10 MM US$ 5 years 2006
2 PROJECTS R & D 2007
ALIANCE UC DAVIS I & D 2008
7 NEW PROJECTS 2009
SUSTAINABILITY PROGRAM/CONSORTIUMS 2.0 2010
Vinnova and Tecnovid Financing

Initial Investment (5 years, 24 projects) US$ 10 mill.

Government (Innova Chile-CORFO) 60%

Private (Vineyards and Universities) 40%
Structure Composition

- 95 Vineyards
- 98% national sales
- 95% exports
- 78 Researchers
- 24 Support Committees (12 projects)
- US$ 10 mill. initial budget
Structure Organization

- Director Board Vinnova
- Advisor Technical Committee
- Staff
- Project 1
  - Support Committee: Vineyard/Researcher
- Project 2
  - Support Committee: Vineyard/Researcher
- Project 25
  - Support Committee: Vineyard/Researcher
Vinnova Research Fields

I: Consumer Preference
   Project 1: Consumer Preference and sensorial characterization

II: Vegetative material y viticulture management
   Project 2: Foundation block-germ plasma
   Project 3: Virus resistant material

III: Maturation and enology
   Project 4: Sauvignon Blanc aroma
   Project 5: Wine quality: color, astringency and stability
   Project 6: Fermentative capacity
   Project 7: Flavonols y chemical markers

IV: Viticulture y environment
   Project 8: Dynamics of pesticides
   Project 9: Fungi and micotoxines
   Project 10: Liquid Industrial Residues (Riles)
I: Viticulture
Clones
Terroir
Maturity
Metabolic Engineering

II. Oenology
Biosensores
E-nose
Tannins

III. Food Safety
Biogen Amines
Pesticides
Brettanomyces

IV. General
Benchmarking
Ph.D and Magister Scholarships
9 New Projects

Sustainability Program

Genomics II

Cooperation Agreement with UC Davis

Cooperation with AWRI
Nuestro objetivo es potenciar la industria vitivinícola chilena en la generación de conocimientos y tecnologías innovadoras necesarias para fortalecer la competitividad de la industria del vino en los mercados globales y aumentar las exportaciones.