EVALUATING CHOICES for PERMANENT CROPS

Karen Klonsky
Dept. of Ag. & Resource Economics
University of CA - Davis

STARTING POINT

- Decision to plant an orchard has already been made
- Physical requirements are all there: climate, water, soil
- Decision: what to plant, what to pull
FACTORS TO CONSIDER

- Expected Revenue
- Costs of Production
- Consumption
- Domestic & international competition
- World trade position
- Treaties, tariffs, and subsidies

FACTORS TO CONSIDER

- Expected Revenue
EXPECTED REVENUE per ACRE

Source: CASS, California Agricultural Statistics 2003

FACTORS to CONSIDER

- Expected Revenue
- Costs of Production
COSTS per ACRE to PRODUCE TREE CROPS in the SACRAMENTO VALLEY

- Almonds: $1,881
- Walnuts: $2,177
- Prunes: $3,281
- Peaches: $3,690

PRIME INTEREST RATE

- Interest rates from 0% to 20% from 1960 to 2005.
FACTORS to CONSIDER

- Expected Revenue
- Costs of Production
- Consumption

US TREE NUT CONSUMPTION
1996 - 2003

Lbs/Person

Source: USDA Fruit Situation and Outlook Yearbook, 2003

Others includes hazelnuts, macadamias, pistachios, Brazil nuts, cashews, and mixed nuts
US PER CAPITA ANNUAL FRUIT CONSUMPTION

Source: USDA Fruit Situation and Outlook Yearbook, 2003

CHINA PER CAPITA ANNUAL FRUIT CONSUMPTION

Source: Hongqi Shi and Thomas Wahl. “Recent Developments in the Chinese Fruit Industry: Implications for the US Fruit Industry”
Growth in Almond Markets

- Established markets showing strong growth
  - U.S.A. 22% Growth
  - Western Europe 17% Growth
  - Japan 9% Growth
- Tremendous opportunity in emerging growth markets
  - Russia 23% Increase
  - India 10% Increase
  - China 28% Increase

Source: Almond Board

FACTORS to CONSIDER

- Expected Revenue
- Costs of Production
- Consumption
- Domestic & international competition
ALMOND and PISTACHIO PRODUCTION
CHINA and CA, 2000

Walnut and Peach Acreage
China, US, and CA - 2000
FACTORS to CONSIDER

- Expected Revenue
- Costs of Production
- Consumption
- Domestic & international competition
- World trade position

Almond In–shell World Trade, 2003

- USA, 90%
- Spain, 4%
- Australia, 2%
- ROW, 4%

Dried Plums World Trade, 2003

USA 50%

ROW 9%

Chile 14%

France 13%

Argentina 12%

Germany 2%

Data in Trade Value U.S. $


Canned Peaches World Trade, 2003

Greece 24%

ROW 24%

South Africa 11%

China 11%

Spain 17%

USA 6%

Chile 7%

Data in Trade Value U.S. $

**FACTORS to CONSIDER**

- Expected Revenue
- Costs of Production
- Consumption
- Domestic & international competition
- World trade position
- Treaties, Tariffs, and subsidies

---

**Tree Crop Tariffs in the US**

<table>
<thead>
<tr>
<th>Crop</th>
<th>Tariff Rates</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almonds</td>
<td>In shell</td>
<td>$0.077/kg</td>
</tr>
<tr>
<td></td>
<td>Shelled</td>
<td>$0.24/kg</td>
</tr>
<tr>
<td>Walnuts</td>
<td>In shell</td>
<td>$0.07/kg</td>
</tr>
<tr>
<td></td>
<td>Shelled</td>
<td>$0.265/kg</td>
</tr>
<tr>
<td>Dried Plums</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cling Peaches</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Converted to % using 2002 Prices, ERS/USDA
### TREE CROPS TARIFFS FACING the US

<table>
<thead>
<tr>
<th></th>
<th>China</th>
<th>Korea</th>
<th>Japan</th>
<th>EU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almonds</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In shell</td>
<td>24%</td>
<td>45%</td>
<td>2.4%</td>
<td>5.6%</td>
</tr>
<tr>
<td>Shelled</td>
<td>10%</td>
<td>21%</td>
<td>2.4%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Walnuts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In shell</td>
<td>25%</td>
<td>45%</td>
<td>10%</td>
<td>4%</td>
</tr>
<tr>
<td>Shelled</td>
<td>20%</td>
<td>30%</td>
<td>10%</td>
<td>5.1%</td>
</tr>
<tr>
<td>Prunes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>25%</td>
<td>18%</td>
<td>2.4%</td>
<td>9.6%</td>
</tr>
<tr>
<td>C. Peaches</td>
<td>10%</td>
<td>54%</td>
<td>6.7% -</td>
<td>15.2% -</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>29.8%</td>
<td>46.5%</td>
</tr>
</tbody>
</table>

Source: WTO