PERSPECTIVES on TURKISH CITRUS INDUSTRY

Ayşe Özler

International Citrus & Beverage Conference

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ADANA, TURKEY

- 5th largest city in Turkey close to 2M population
- Located on delta of 2 rivers and between 2 major ports
- Always has been very important agricultural area: cotton was the most important crop till 70’s
- Today 72% of all citrus is grown in this region
ÖZLER ZİRAAT A.Ş.

- Farming in Adana since early 1900’s
- Cotton and field crops
- Late 50’s citrus production starts
- Özler Family pioneer to develop citrus production in the region
- Biggest citrus grower in Turkey
- 1982 family company established as a corporation; packing and export starts
- 90’s Russian market opens; established company in Novorossysk
- 2000’s expansion to Middle & Far East markets; land investments in Romania
AGENDA

I. Turkey’s Citrus Production Overview
II. Turkey’s Citrus Export Overview
III. Quick Look at the Turkish Beverage Market
IV. Conclusions
V. Q&A’s
FACTS ABOUT TURKEY

- 37th largest country by area: 783,562sq km (300,948sq mi)
- 17th largest population: 81M (17% is 18-24 age group, EU zone largest young population)

ECONOMY:

- 17th largest nominal GDP $1.167 trillion
- Annual growth rate 3.8%
- GDP per capita $11,277
- Labor force: 28 million
- Agriculture accounts for 25-30% of employment
- 40M tourists visit: 6th most popular tourist destination in the world
I. PRODUCTION
Çukurova region: 72% of all citrus production
Adana: 96% grapefruit, 62% orange, 75% mandarins
Mersin: 86% of all lemon production
İzmir: 12% of all mandarin
Antalya: 24% of all orange
# PRODUCTION CALENDAR

<table>
<thead>
<tr>
<th></th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
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</thead>
<tbody>
<tr>
<td>Lemons</td>
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<tr>
<td>Grapefruits</td>
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<tr>
<td>Oranges</td>
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<tr>
<td>Mandarins</td>
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CITRUS PRODUCTION

- Planted Area: 127K ha (313K ac)
- Total production: 3.57M tons
- Volumes have been increasing since 2005:
  - orange 27%
  - mandarins 29%
  - lemons 18%
  - grapefruit 40%
- Growth driven by fresh local consumption 1.65M tons and export 1.44M tons
2013 Production (in tons)
Total Production: 3.57M tons

Oranges: 1,700,000 (48%)
Mandarins: 880,000 (25%)
Lemons: 726,000 (20%)
Grapefruit: 235,000 (7%)
## WORLD CITRUS FIGURES

**USDA 2014 FIGURES for CITRUS FRUITS (1.000 Tons)**

<table>
<thead>
<tr>
<th>Country/Origin</th>
<th>Production</th>
<th>Domestic Consumption</th>
<th>Processing</th>
<th>Exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. China</td>
<td>29.570</td>
<td>27.274</td>
<td>1.380</td>
<td>1.010</td>
</tr>
<tr>
<td>2. Brazil</td>
<td>17.340</td>
<td>5.788</td>
<td>11.547</td>
<td>x</td>
</tr>
<tr>
<td>4. United States</td>
<td>8.678</td>
<td>3.204</td>
<td>5.471</td>
<td>805</td>
</tr>
<tr>
<td>5. Mexico</td>
<td>6.320</td>
<td>4.370</td>
<td>1.398</td>
<td>550</td>
</tr>
<tr>
<td><strong>6. Turkey</strong></td>
<td><strong>3.575</strong></td>
<td><strong>1.652</strong></td>
<td><strong>160</strong></td>
<td><strong>1.445</strong></td>
</tr>
<tr>
<td>7. Egypt</td>
<td>2.570</td>
<td>1.435</td>
<td>x</td>
<td>1.050</td>
</tr>
<tr>
<td>8. South Africa</td>
<td>2.255</td>
<td>x</td>
<td>552</td>
<td>1.700</td>
</tr>
<tr>
<td>9. Morocco</td>
<td>2.160</td>
<td>1.525</td>
<td>x</td>
<td>575</td>
</tr>
<tr>
<td>10. Argentina</td>
<td>1.450</td>
<td>x</td>
<td>769</td>
<td>390</td>
</tr>
<tr>
<td>11. Japan</td>
<td>930</td>
<td>949</td>
<td>121</td>
<td>x</td>
</tr>
<tr>
<td>12. Korea-South</td>
<td>645</td>
<td>576</td>
<td>65</td>
<td>x</td>
</tr>
<tr>
<td>13. Israel</td>
<td>265</td>
<td>x</td>
<td>150</td>
<td>148</td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td><strong>86.283</strong></td>
<td><strong>56.568</strong></td>
<td><strong>23.603</strong></td>
<td><strong>8.453</strong></td>
</tr>
</tbody>
</table>

The processing figure for **Turkey** is highlighted in red with a value of **160**.
ADVANTAGES as PRODUCTION ORIGIN:

- Abundant fresh water, high precipitation rate & good distribution infrastructure for irrigation
- Large and young labor force
- Technology: use of modern equipment, machinery, etc.
- Government support & protection
DISADVANTAGES as PRODUCTION ORIGIN:

- Small production units: avg. farm is 2 ha
- High land costs
- Climate
- Lack of guidance from official and academic authorities:
  * Govt.: not enough legislative infrastructure and agricultural policy planning
  * Univ.: lack of research & extension programs
II. FRESH EXPORT
GEOGRAPHICAL LOCATION

LAND DISTANCES FROM MERSIN

<table>
<thead>
<tr>
<th>City</th>
<th>Km</th>
<th>Mi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Astana</td>
<td>1212</td>
<td>752</td>
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<tr>
<td>Madrid</td>
<td>4200</td>
<td>2608</td>
</tr>
<tr>
<td>Beirut</td>
<td>333</td>
<td>206</td>
</tr>
<tr>
<td>UAE</td>
<td>3119</td>
<td>1937</td>
</tr>
<tr>
<td>Hamburg</td>
<td>3450</td>
<td>2142</td>
</tr>
<tr>
<td>Krakow</td>
<td>2686</td>
<td>1668</td>
</tr>
<tr>
<td>Libya</td>
<td>4403</td>
<td>2734</td>
</tr>
<tr>
<td>London</td>
<td>3988</td>
<td>2477</td>
</tr>
<tr>
<td>Moskow</td>
<td>2902</td>
<td>1800</td>
</tr>
<tr>
<td>Mosul</td>
<td>876</td>
<td>544</td>
</tr>
<tr>
<td>Riyadh</td>
<td>2599</td>
<td>1614</td>
</tr>
<tr>
<td>Tehran</td>
<td>1950</td>
<td>1210</td>
</tr>
</tbody>
</table>
2013 EXPORT VOLUMES (in tons)

Total Export: 1.490M tons

- Oranges: 261,000 tons (18%)
- Lemons: 424,000 tons (30%)
- Grapefruits: 114,000 tons (7%)
- Mandarins: 690,000 tons (45%)
TOP 11 EXPORT MARKETS (Tons)

- RUSSIAN FDR. 539,000 (36%)
- UKRAINE 278,000 (22%)
- S.ARABIA 48,000 (3%)
- IRAQ 250,000 (17%)
- POLAND 32,400 (2%)
- ROMANIA 46,600 (3%)
- GERMANY 25,000 (2%)

- CZECH RPL 19,600 (1.3%)
- HOLLAND 18,700 (1.2%)
- UAE 15,200 (1%)
- UK 23,000 (2%)
2013 EXPORT VALUE ($ Million)

Total Value: $1.02 Billion

- Lemons: $312.4M (31%)
- Oranges: $166.5M (16%)
- Grapefruits: $75M (7%)
- Mandarins: $469.2M (46%)
ADVANTAGES as EXPORT ORIGIN:

- Geographical position
- Labor
- Technology
- Entrepreneurship
- High adaptibility to economical fluctuations
DISADVANTAGES as EXPORT ORIGIN:

- High FOB costs:
  * producers dominate prices
  * lack of trust & cooperation between producers and exporters
  * difficult buying structure

- Lack of consistency in fruit quality

- Unorganized commercial structure: over 2000 exporters!

- Political instability of surrounding countries and markets
WHAT ABOUT CITRUS FOR PROCESSING?

- Only 4.4% of 3.57M ton total citrus production goes to juice processing:
  * 100K tons orange (6% of 1.7M tons)
  * 60K tons lemon (8% of 760K tons)
  * NO mandarins (880K tons)
  * NO grapefruit (235K tons)

WHY?
Why is the % of Turkish grown citrus for processing so low?

MAIN REASON:
- The varieties grown are not suitable for juicing: brix levels are low
- The climate is not suitable to grow varieties for juicing!

OTHER CHALLENGES:
- Small unit production: high costs and lack of uniformity of fruit
- Difficulties of buying structure
- Lack of accurate inventory of fruit production in Turkey
III. TURKISH BEVERAGE MARKET
Turkish Juice Market

Figures and Insights

Ebru AKDAĞ
Secretary General, MEYED
Member of Executive Committee, IFU
# Turkish Beverage Landscape

<table>
<thead>
<tr>
<th>Category</th>
<th>Market Size</th>
<th>Market Share</th>
<th>Growth Rate 09-13</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HOT TEA</strong></td>
<td>2.5 BN</td>
<td>40% of Total</td>
<td>0.8%</td>
<td>CAGR 09-13: 0.8%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>RTD Tea: 33%</td>
</tr>
<tr>
<td><strong>TOTAL WATER</strong></td>
<td>1.9 BN</td>
<td>31% of Total</td>
<td>3.7%</td>
<td>CAGR 09-13: 3.7%</td>
</tr>
<tr>
<td><strong>PACKAGED WATER</strong></td>
<td>643 M</td>
<td>34% of Total</td>
<td>11.0%</td>
<td>CAGR 09-13: 11.0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Water</td>
</tr>
<tr>
<td><strong>BULK WATER</strong></td>
<td>1.2 BN</td>
<td>66% of Total</td>
<td>0.8%</td>
<td>CAGR 09-13: 0.8%</td>
</tr>
<tr>
<td><strong>SPARKLING</strong></td>
<td>592 M</td>
<td>10% of Total</td>
<td>3.6%</td>
<td>CAGR 09-13: 3.6%</td>
</tr>
<tr>
<td><strong>DAIRY</strong></td>
<td>597 M</td>
<td>10% of Total</td>
<td>1%</td>
<td>CAGR 09-13: 1%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>RTD Dairy: 66%</td>
</tr>
<tr>
<td><strong>ALCOHOLIC</strong></td>
<td>186 M</td>
<td>3% of Total</td>
<td>-0.1%</td>
<td>CAGR 09-13: -0.1%</td>
</tr>
<tr>
<td><strong>FRUIT JUICES</strong></td>
<td>162 M</td>
<td>3% of Total</td>
<td>4.1%</td>
<td>CAGR 09-13: 4.1%</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td>NRTD Juices: 29 M</td>
</tr>
<tr>
<td><strong>COFFEE</strong></td>
<td>81 M</td>
<td>1.3% of Total</td>
<td>1.6%</td>
<td>CAGR 09-13: 1.6%</td>
</tr>
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<td></td>
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<td></td>
<td>RTD Coffee: 41%</td>
</tr>
</tbody>
</table>

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The table above illustrates the market landscape of Turkish beverages, highlighting the dominant categories such as Hot Tea, Total Water, and Sparkling water, along with their respective market shares and growth rates.
TURKISH JUICE INDUSTRY

- EU&TR: 3 categories (100% juice-nectar-still drinks)
  - US: 2 categories (100% juice-still drinks)
- 32 processors & 43 juice producers
- Processed fruit 1.13M tons (51% up from 2006): citrus accounts only 6%
- Fruit concentrate production 96K ton (53% up from 2006): citrus accounts 5%
- Fruit puree production 121K ton (44% up from 2006)

### JUICE INDUSTRY

<table>
<thead>
<tr>
<th>Value ($Million)</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Export</td>
<td>103.6</td>
<td>160.3</td>
<td>131.3</td>
<td>105.5</td>
<td>174.2</td>
<td>220.4</td>
<td>214.4</td>
</tr>
<tr>
<td>Import</td>
<td>23.5</td>
<td>34.5</td>
<td>35.6</td>
<td>17</td>
<td>23.7</td>
<td>28.9</td>
<td>27.8</td>
</tr>
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</table>
TURKISH JUICE INDUSTRY

- 60% of $28M import value is orange juice
- **TOP 5 flavor preference for 100% juice:**
  apple 57%, orange 16%, tomato 6%, grape 6%
- **TOP 5 flavor preference for nectar:**
  peach 36%, mixed 20%, sour cherry 18%, apricot 15%, orange 10%
Consumption by Category

Juices, Nectars and Still Drinks

CAGR : 9%

Source: Canadean
NECTAR

Turkish Local Market:
- 2013 consumption 607M liters
- 8 liter/cap

100%JUICE

Turkish Local Market:
- 2013 consumption 50,7M liters
- 0,71 liter/cap
- 83% from concentrate
STILL DRINKS

Turkish Local Market:
- 2013 consumption 286M liters
- 3.7 liter/cap
- New trend- low fruit content refresher

Success Story of Lemonade (10% juice)

Lemonade launch (2007) : Beginning of a new era

- 2014 forecast %16
- Share from 0.5% to 38%

Source: Canadean
F. Juice & Nectar & Still Drinks Consumption (liter)

Low per capita consumption reveals the high potential for further growth.

Source: Canadean
IV. CONCLUSIONS
CONCLUSIONS:

- Turkey is an important origin for citrus production and fresh export
- Production volumes will continue to increase despite serious challenges—mainly the climate and high land costs
- Growth is driven mostly by its local consumption; export performance and potential
- The climate is NOT suitable to grow high brix varieties for juicing
CONCLUSIONS:

- The juice industry will have to continue to import processed citrus.
- The share of processed juice consumption in the local beverage market is very low.
- Low per capita processed juice consumption reveals high potential for further growth.
- Turkey’s growing economical strength, young population, and geographic position makes her attractive for many industries, including citrus & beverage industries.
REFERENCES:

- TUİK (Turkish Statistics Institution)
  http://www.tuik.gov.tr

- USDA (U.S. Department of Agriculture)
  http://www.usda.gov

- MEYED (Turkish Juice Industry Association)
  http://www.meyed.org.tr

- AKİB (Mediterranean Exporters Union)
  http://www.akib.org.tr
THANK YOU!