Citrus Industry in Mexico, Central America & the Caribbean

José Ángel Guajardo

JBT FoodTech
Overview of the Region

- Produces 270 million boxes or about 10% of the world citrus production
- Main crop is orange, representing 60% of total production
- Processes about 44.1 million boxes of oranges and exports about 100K metric tons of FCOJ

Sources: SAGARPA, FAOSTAT, Direct customer data, UN Comtrade Database
Overview of the Region

Main processors (all citrus varieties):
- Mexico: over 24.4 M boxes
- Costa Rica: 5.9 M boxes
- Belize: 5.7 M boxes
- Venezuela: 4.5 M boxes

Main Exporters FCOJ (MT):
- Mexico: 52,500
- Costa Rica: 19,300
- Belize: 19,500

Average Production 2000-2006

- GF: 7%
- L&L: 20%
- Oranges: 59%
- Other: 6%
- tan/man/clem: 8%

*2007/08 Season
++Sources: Direct customer data, FAO, USDA
Mexico
Production Areas

About 500,000 ha:
• 320K Orange
• 140K limes
• 15K GF
• 30K Tangerines

Source: USDA Gain Report 2007, SAGARPA
Mexico
Production and Processing

Orange production by State 04-06

Persian and Key Limes Production by State 04-06

Grapefruit Production by State 04-06

## Mexico
### Main Products and Markets

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<th>Products</th>
<th>Markets</th>
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<td>• <strong>FCOJ (52,500 MT annually)</strong>&lt;br&gt;  – Still the main product produced. Over 95% of the production.&lt;br&gt;• <strong>NFC</strong>&lt;br&gt;  – Increasing in importance, some producers starting to go to aseptic bins.&lt;br&gt;• <strong>Oil</strong>&lt;br&gt;  – Cold pressed oil is made by most important producers. Distilled oil made by key lime producers.&lt;br&gt;• <strong>Pulp</strong>&lt;br&gt;  – Main producers are making frozen pulp, there is interest in high density aseptic pulp.&lt;br&gt;• <strong>Peel Products</strong>&lt;br&gt;  – Compost, animal feed, washed peel</td>
<td>• <strong>Local</strong>&lt;br&gt;  – Only 10% of the production of FCOJ goes to local markets. The other 90% is exported&lt;br&gt;• <strong>US</strong>&lt;br&gt;  – Main market for FCOJ and NFC&lt;br&gt;• <strong>Europe and Japan</strong>&lt;br&gt;  – Small buyers of FCOJ and pulp.</td>
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Costa Rica
Production Areas

- About 20,000 ha are planted and there is an estimation that 4,000 more ha will be planted in the next couple of years.
- Plantations are in the north part of the Guanacaste and Alajuela provinces

Sources: USDA Costa Rica Gain Report 2007; Google maps
Costa Rica
Production and Processing

- Costa Rica processes most of its fruit
- Last season (2007/08) production reached 7.3M boxes of which 5.9M were industrialized
- Considered a difficult season due to weather conditions and extensive replanting
  - Production in the 2006/07 season set a record that reached 9.8M boxes tons of which 8.1M were processed

Source: USDA Gain Report 2007 and direct customer data
Costa Rica
Main Product and Markets

• 85% of the juice is used for FCOJ; 15% is turned into aseptic NFC
• Practically all the production is exported to the US and Europe but Central American markets are also served
• Additionally produce pulp cells, cold pressed oil, peel pellets, among other products

Source: Direct customer data
Belize Production Areas

- Concentrated in Stan Creek District near the town of Dangriga
- Many Growers are in the Belize Citrus Growers Association and have investment participation in the factories

Source: Belize Citrus Growers Association.  
Belize

Production and Processing

• Last season Belize produced:
  – 235K tons (5.7M boxes) of orange
  – 52K tons (1.4M boxes) of grapefruit

• Most of this fruit was processed in the two facilities of Citrus Products of Belize Ltd located in Stan Creek

Sources: FAO Stat and direct customer data
Belize
Main Product and Markets

• 95% of the juice is used for FCOJ, the rest is turned into pasteurized juice to serve the local market

• About a fifth of the concentrate stays for the local market, the rest is exported to the US (57%), and regional markets (22%)

• Also produce orange and grapefruit high density aseptic and frozen pulp cells, cold pressed oil, essences and frozen concentrate (freeze concentration)

Source: Direct customer data
Honduras
Production Areas

The main production area is in the department of Colon in the valley of the Aguan river

Source: Direct customer data
Honduras

- Normally the orange production according to FAO estimates is around 285K tons (7M boxes), local people estimate about 200K tons (4.9M boxes)
- Varieties:
  - 70% pineapple
  - 30% Valencia
- Grapefruit production is about 15K tons (388K boxes)
- Of this fruit, normally 20-40% goes to processing. Last season was a bad one and only 35K tons were processed (850K boxes).
- Between 3.5K and 8K tons of concentrate are produced every year.
- 40% of this production is exported to the US, the rest is used in the local market
- Pasteurized Pulp is recovered for domestic use

Sources: FAO Stat, Direct customer data
Cuba Production Areas

- About 31K ha of oranges are cultivated and 21K ha of grapefruit
- Jaguey “El Grande” in Matanzas represents about 60% of the country’s production (40,000 ha)

Source: FAO Stat, Del Valle, Amaury.
Cuba
Production and Processing

- Orange production is about 400,000 tons (9.8M boxes)
- Grapefruit production is about 235,000 tons (5.8M boxes)
- Production has decreased substantially from the level it had in the 1990’s and a recovery is not expected until 2012
- About 80% of the fruit is sent to processing plants to make concentrate

Sources: FAO Stat, Del Valle, Amaury.
Citrus production is centered in the NW of the country.

85% of the production is oranges, the rest are limes.

Sources: FAO Stat, Direct customer data.
Venezuela
Production and Processing

- Orange production around 375K tons (9.2M boxes)
- Last season about 175K tons (4.3M boxes) of fruit were sent to processing. The rest of the fruit is either sold in local market or exported to Colombia.
- Government is promoting citrus production.

- Main product is FCOJ
- Production mainly to satisfy internal demand
- Country is a net importer of FCOJ

Sources: FAO Stat, Direct customer data
Dominican Republic Production Areas

- Production centered in the province of Hato Mayor at the east and Duarte San Cristobal, M. Nouel & S. Ramirez at the Center of the Country
- Most production is orange (70%) the rest are limes and very few grapefruit

Sources: Direct customer data
Dominican Republic
Production and Processing

- 70% of the 100K tons (2.5M boxes) of the orange production is processed into concentrate
- The rest of the fruit is mainly consumed fresh and few is exported
- The concentrate is further processed and consumed on the island (although there is a small amount that is sold in the regional market).
- The other main product sold in the international markets is cold pressed oil

Sources: FAO Stat, Direct customer data
Jamaica Production Areas

- Production is centered near the factories in the St. Catherine and Clarendon Provinces

Sources: Google Earth, Direct customer data
Jamaica
Production and Processing

• Last crop was 112K tons (2.7M boxes) of oranges
• The industry processed 31K tons (760K boxes) or about 30% of total production
• Other citrus like grapefruit, orantique (a tangelo), and ugli are rarely processed
• Most juice is turned into concentrate and then into ready-to-drink beverages
• There is a small amount of NFC juice that has been just recently introduced
• Processors are also the packers of the juice
• By product recovery is starting to be analyzed

Sources: FAO Stat, Dr. Percy Miller JCGA
• Production is concentrated in the provinces of Chiriqui and Cocle
Panama Production and Processing

- Production of 70K tons (1.7M boxes) of oranges in the 2006/07 season
- Of this amount 60% is Valencia and 40% is criolla
- 90% of the production is concentrated in the provinces of Coclé and Chiriquí in equal amounts
- Processors mainly satisfy the needs of the internal market
- No by-product recovery is currently done

Source: FAOSTAT, “ESTUDIO DEL MERCADO NACIONAL DE LA NARANJA DE JUGO”, Secretaría Técnica de Desarrollo de Mercados y Agronegocios de Panama
Colombia
Production Areas

• Atlántico: Mainly lime production 14K tons (343K boxes)
• Tolima has both limes and oranges. (588K boxes or 1.96M box)
• Cesar: 23K tons (564K boxes); Antioquia: 30K tons (735K boxes). Mostly orange production
• Other states have smaller volumes

Sources: Agronet Colombia. http://www.agronet.gov.co/
Colombia
Production and Processing

• 100-120K MT (2.9M boxes) of orange production in the 2000-2006 period
• About 100K (2.5M boxes) of limes produced in the same period

• Importer of both fresh oranges and juice concentrates
• Small processors making fresh juice for local distribution
• No known by-product recovery efforts

Technological Trends in the Region

- Plant Automation and Clean up
- Small scale modular by-product recovery systems (READYGo™)
  - D-Limonene
  - Pulp recovery
  - Pulp wash
  - Juice
  - Puree
Technological Trends in the Region

Aseptic Technologies. Produce commercially aseptic products that have longer storage lives under refrigerated (or not) conditions.

– High Density Pulp 850 gr/l
– NFC Juice
Conclusions

• Processors in the region are starting (or continue) to modernize to be able to compete in a globalized marketplace
• Processors are highly interest in by-product recovery to get more from the fruit
• Highly interested in aseptic technologies to:
  • Serve a growing market
  • Reduce energy costs
  • Produce products with extended shelf life
Thank You

Questions?

Jose.Guajardo@JBTC.com
Office +52 81 83576684