Mexican Lime and Lemon Essential Oils
Production and Utilization

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Colima, Col., MEXICO
Mexico: An important citrus grower

- **Brazil**
- **China**
- **U.S.A.**
- **Mexico** (5.9%)
- **India**

Mexico: An important consumer

Source: FAOSTAT 2003

Per capita consumption of limes and lemons

Kg/Yr
Lemons and Limes top growers

Source: FAOSTAT
A wide variety of citrus is grown in Mexico
Mexico: Production of citrus (2007)
Total: 7,033,158 MT

- Oranges: 60.4%
- Limes & Lemons: 27.5%
- Grapefruits & Pomelos: 4.5%
- Tangerines, Mandarines & Clemetines: 6.7%
- Other, n.e.s.: 0.9%

Source: FAOSTAT
Lemons and limes grown in Mexico

- Lemons (C. *limon* Risso)
  - Sweet limes (C. *limetta* Risso)
  - Large fruit limes (C. *latifolia* Tanaka)
  - Small fruit limes (C. *aurantifolia* Swingle)
Lemons and limes grown in Mexico

Lemons (C. limon Risso)

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Lemon
Sweet Lime
Persian Lime
Key Lime
Limes and Lemons
Mexican production (2006)

- Lemon: 54,828 MT
- Sweet lime: 15,643 MT
- Persian lime: 523,946 MT
- Mexican lime: 1,273,356 MT

ca. 1870
Beginnings of the Mexican lime industry
Beginnings of the Mexican lime industry

ca. 1870
1975
Beginnings of the lemon industry
ca. 1980

Beginnings of the Persian lime industry

[Map of Mexico highlighting the Yucatan region]
Production trends (1980 - 2007)

Source: SIACON, SAGAR
Uses
Sweet Limes

100% of the crop consumed fresh
Uses
Lemons

30% of the crop consumed fresh
Uses
Persian limes

87% of the crop consumed fresh
Uses
Mexican limes

73% of the crop consumed fresh
Growing areas
Growing areas
Growing areas

Map showing growing areas in Mexico.
Growing areas
Seasonality of crops

- **Mexican lime**
- **Persian lime**
- **Lemon**

Source: SIAP, SAGAR; Veracruz Gvt; Valdez, F.
Essential Oils
Share of the World’s Production
Mexican Lime Oil

Peru 28.4%

Cuba 0.6%

India 0.6%

Mexico 70.3%

Source: author’s estimate
Share of the World’s Production
Persian Lime Oil

Brazil 46.6%

Mexico 53.4%

Source: Rodriguez, N, IFEAT 2008 & Lawrence, B.
Share of the World’s Production
Lemon Oil

USA 14%
Argentina 50%
Brazil 5%
RSA 4%
Mexico 3%
Italy 11%
Spain 13%

Source: Nolan, S, IFEAT 2008
Processing
DISTILLED OIL

Peel

Emulsion

Oil
Processing
CENTRIFUGED OIL TYPE A

- Peel
- Emulsion
- Oil
Processing
CENTRIFUGED OIL TYPE B

Emulsion

Oil
CENTRIFUGED OIL TYPE B
3 Subtypes

1. Rasping
(Pelatrice or Raspatrice)
CENTRIFUGED OIL TYPE B
3 Subtypes

2. Squeezing
3. Puncturing
WINTERIZING

“Waxes”
DIFFERENCES DUE TO THE PROCESS
UTILIZATION
Soft drinks 80%

Juices 10%

Confectionery and pastry 6%

Perfumery & cosmetic 1%

Aromatherapy 1%

Other 2%

Source: Author’s estimate