

Latin American Mango

- Introduction of Carrière
 - Main crop areas, production and yields
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- Reasons for using Mango as a beverage ingredient
 - Mango nectars
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Introduction of Carrière

- Based in Hamburg/Germany, in the juice business since 1988
- From 2000 onwards active as Carrière GmbH – committed to taste
- Trading in citrus, non-citrus and tropical products
- Focussed on 4 pillars: Conventional, Organic, Fairtrade and Derivates (FTNF Aromas, water phases, citrus oils, etc.)
- Worldwide network of renowned suppliers
- In 2006, Hero won the World Juice Innovation Award for its product Fruit 2Day® Mango/Peach, which was developed in conjunction with Carrière

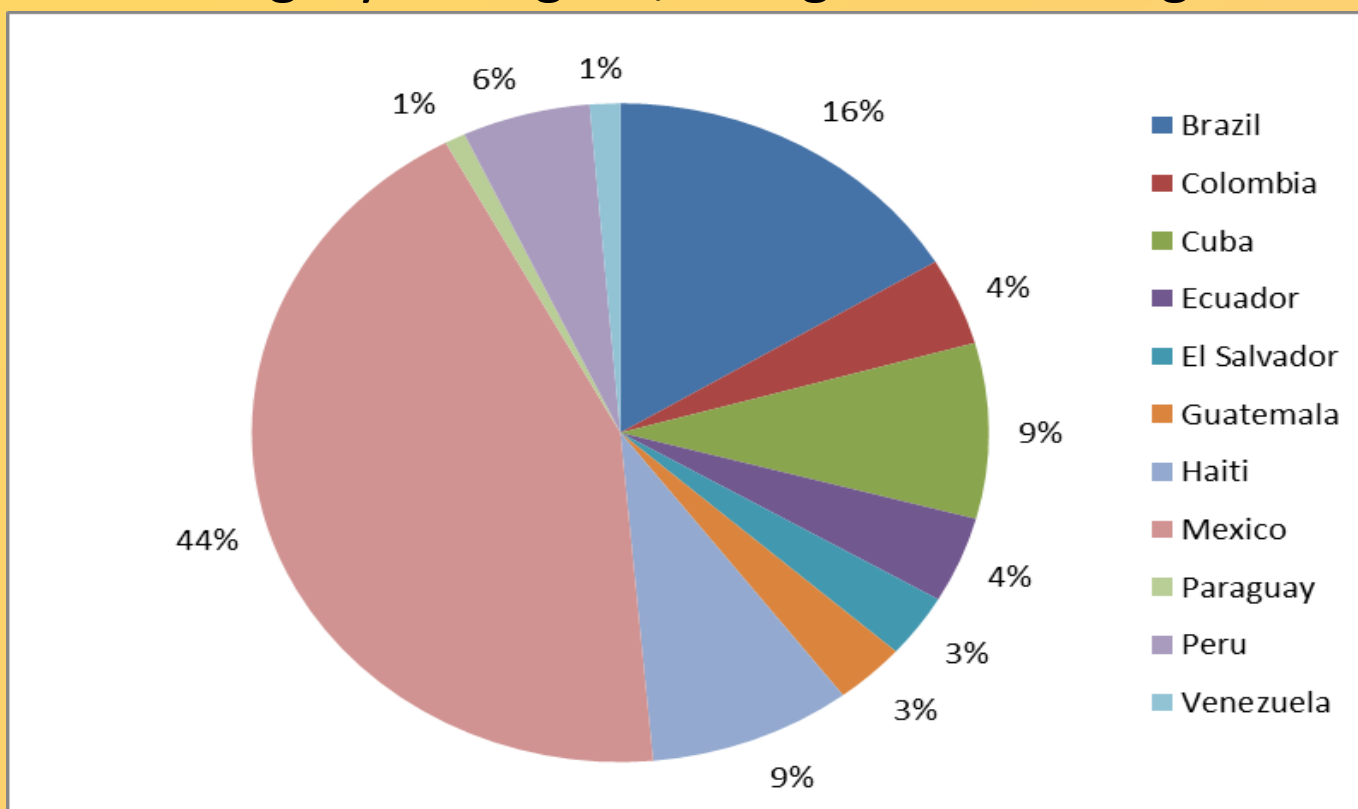


Main crop areas production and yields (2012)

- Fairly consistent data obtained from FAO (www.faostat.fao.org)
- Based partially on estimates and figures, gathered and sent to FAO by the national statistic offices
- Limitation to Latin American countries, percentage shown in pie charts refers to the database of main 11 LatAm exporting countries
- Term „*production*“ applies to total fresh fruit, incl. fruit for processing
- Yield expressed in MT/ha. I obtained this figure by using the equation
$$\text{Production in MT} / \text{Areas harvested in ha}$$

Areas harvested in ha (2012)

FAO Category: Mangoes, mangosteens and guavas

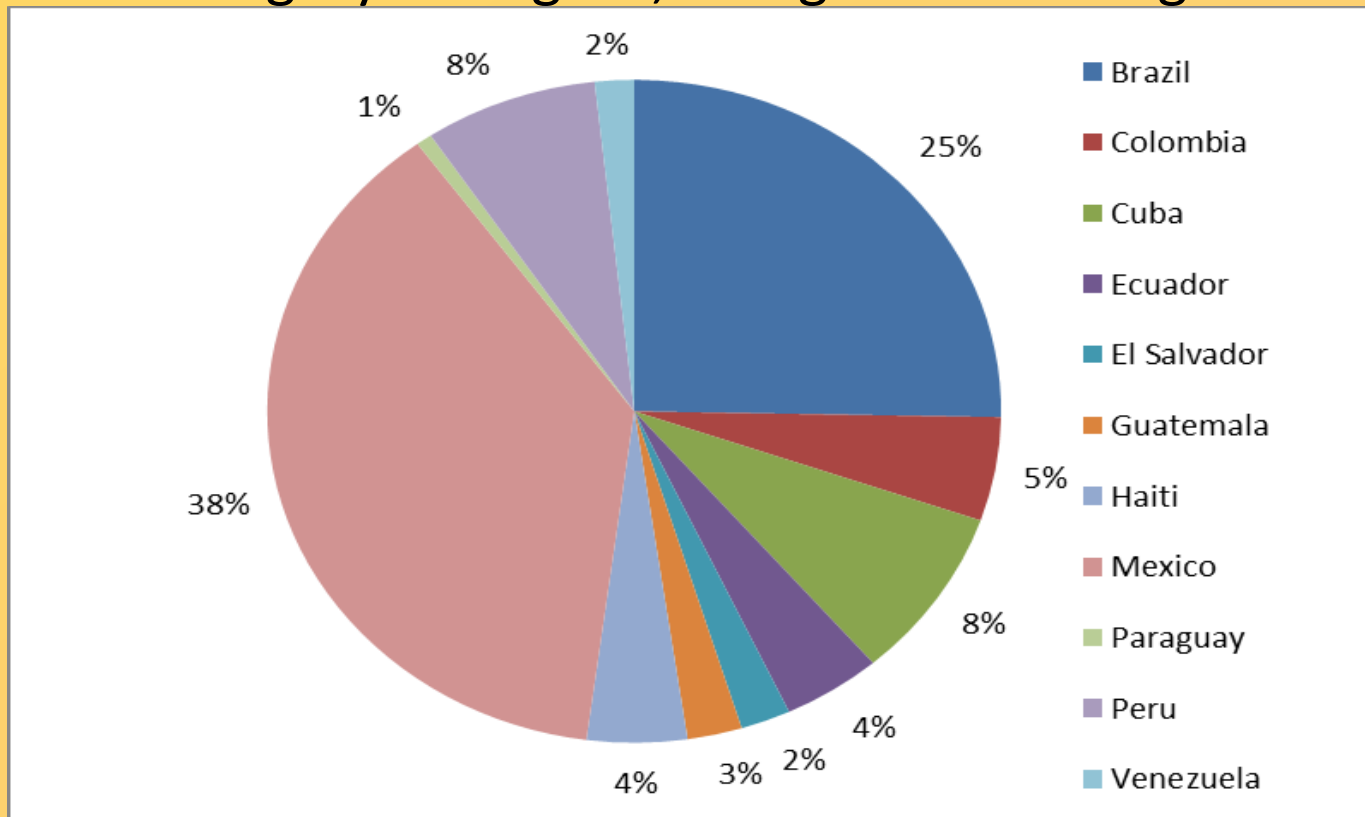


Source: FAO (2014)
www.faostat.fao.org

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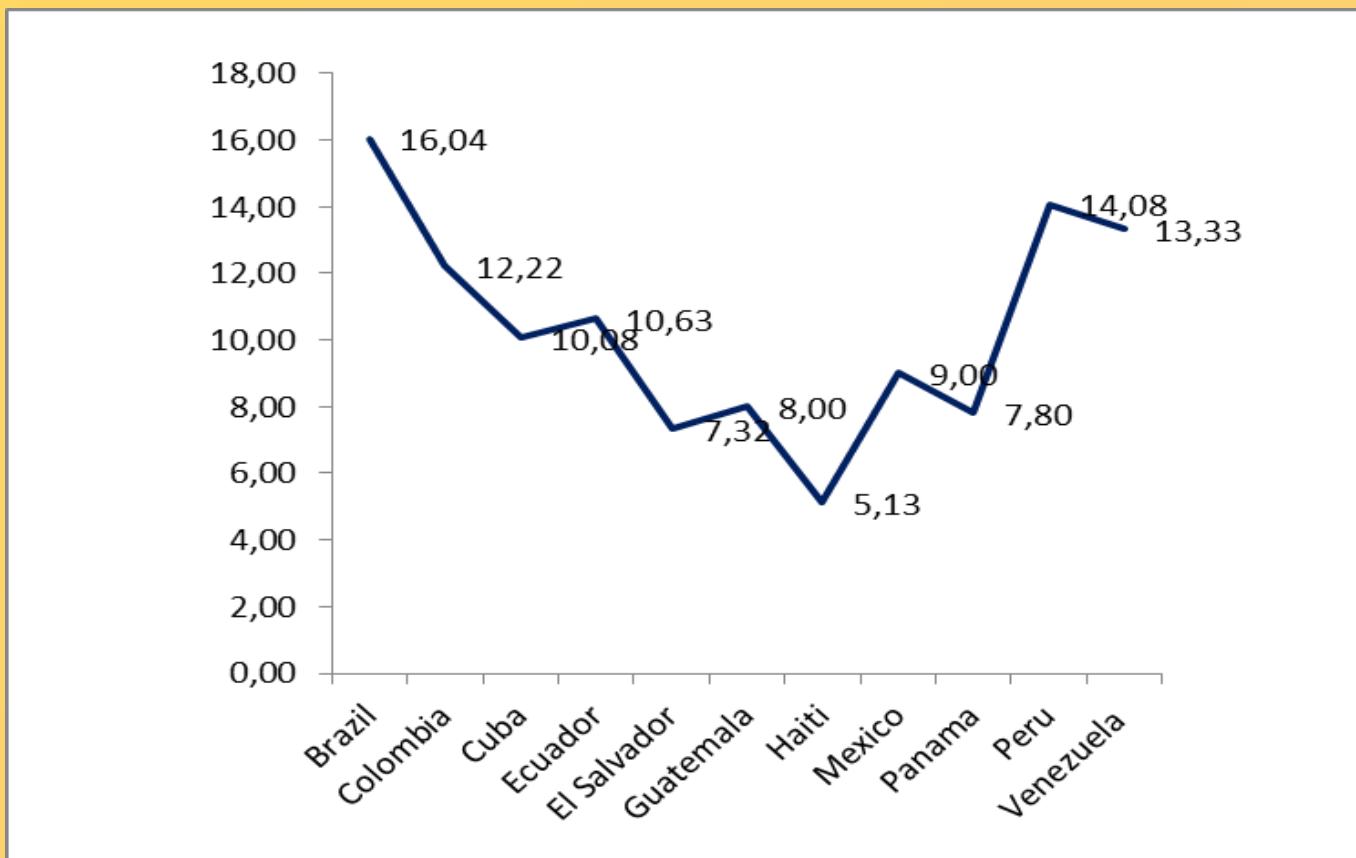
Production in MT (2012)

FAO Category: Mangoes, mangosteens and guavas



Source: FAO (2014)
www.faostat.fao.org

Yield in MT/ha (2012)



Source: FAO (2014)
www.faostat.fao.org

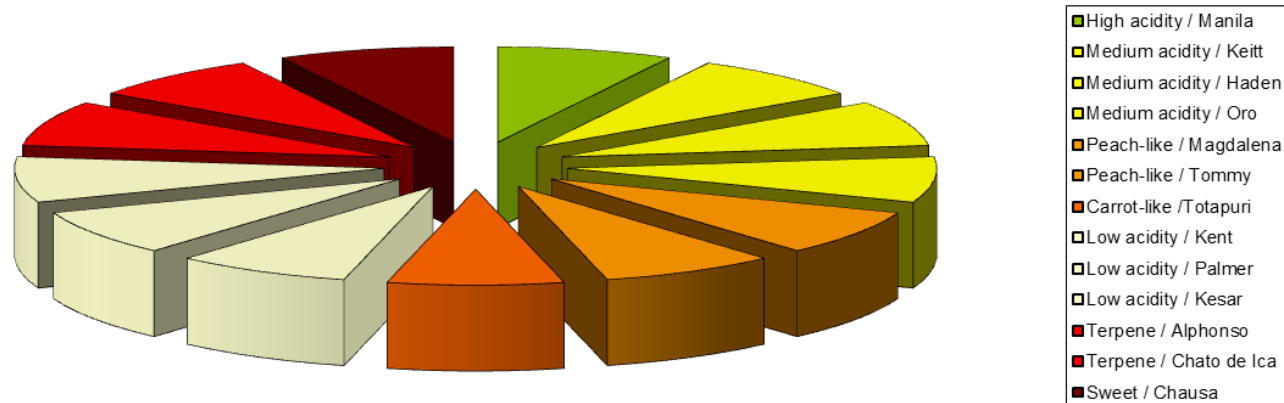
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Industrially processed varieties and taste profile

- Most probably, more than 2.000 cultivars of the genus *Mangifera indica* exist in the world
- Out of these, 50-100 varieties are destined for industrial purposes and processed as pulp/purée, concentrate, IQF
- Narrowing down this range , we are able to identify and allocate 7 different taste profiles to 13 main varieties
- Out of these 13 varieties, we can find 9 in Latin America

Industrially processed varieties and taste profile

Mango Taste Profile linked to industrially processed varieties



Varieties in Latin America

Tommy, Oro, Manila ←

Magdalena ←

Tommy, Haden, Kent ←

Tommy, Kent, ←
Edward, Chato

→ Haden

→ Palmer, Kent



Varieties in Latin America



- Named after Leith D. Kent , Florida. Planted in 1933
- Cross between Haden and Brooks
- Lack of fibre, excellent mild flavour and sweet taste
- Contrary to Tommy Atkins, shelf life is rather poor

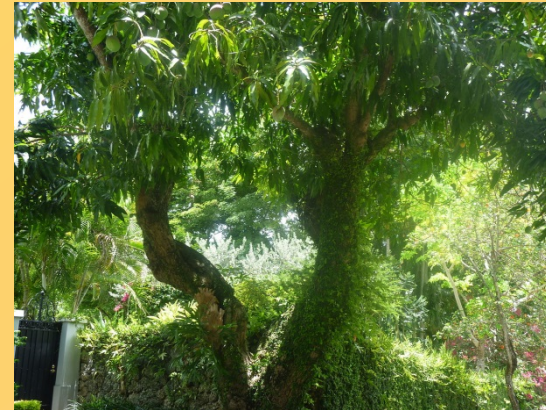


- Planted around 1925 in Florida
- In 2005, pedigree analysis supported the Haden parentage of Palmer
- Flesh orange-yellow, flavour mild and aromatic
- Low fibre content



- Tommy Atkins, named after Thomas H. Atkins
- Originally derived from Haden seed planted in Florida around 1922
- Not as sweet as Kent or Palmer, peach-like flavour
- Tolerance of handling and long shelf life

Varieties in Latin America



Haden is considered to be the ancestor of several varieties, such as Kent, Tommy Atkins, Palmer, Edward, Van Dyke and others

The original tree stands in Coconut Grove, Florida where Captain Haden planted Indian Mulgoba mango seedlings in 1901

Full, sweet flavour and slightly fibrous

Reasons for using mango as an ingredient

- Diversity → many different varieties with colours ranging from pale yellow and yellow-orange to bright orange, different degrees in viscosity and fiber
- Multi-use → nectars, ice cream, milk shakes, smoothies, marmelades/jams, sweets, fruit bars, green mango with salt & vinegar, canned products, toppings, desserts, cocktails, etc.
- Marketing → well-known as fresh fruit, associated with „*tropical*“

...but the most important reason is....

Reasons for using mango as an ingredient

...the fantastic taste and flavour profiles!

- These profiles encourage the innovator to develop unique and creative combinations such as dual flavours, ice teas, smoothies, energy drinks, etc.
- Apple, grape and pear juice concentrates act as a good aroma carrier and serve as a starting point for “*natural building blocks*” in dual flavours with a specific taste profile, e.g. pear/grape combined with a high or at least medium acid mango variety; apple with a low acid mango

The New Mango Nectar?



Are we now getting into fragrances or shall we better call somebody from the phone box in our tropical island?

These are real Mango Nectars!



Room for innovation

The “*innovative playground*” goes beyond dual flavours/
nectars



Room for innovation

The “*innovative playground*” goes beyond dual flavours/
nectars



Conclusions

- Mexico, Brazil, Cuba and Peru are the major players in the Latin American mango market
- In Latin America, at least 9 important varieties of industrially processed mangoes can be found
- From a botanical perspective, the main varieties derive from Haden – with some exceptions, like Chato de Ica
- Mango nectars as single flavour or dual – with guava, orange, strawberry, etc.
- Multifold taste and flavour profiles of mango are an “*intrinsic*” value and a reservoir for innovation

Thank you very much!

Vielen Dank!

Muchas gracias!

Muito obrigado!

Merci beaucoup!



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