

## **DURIAN-FEST & THE ECONOMIC IMPACTS OF TROPICAL FRUITS**

### **Supplies: Buy**

- ☐ plastic tablecloth
- ☐ paper towels
- ☐ plastic cups for serving durian and water to drink
- ☐ small (“shot”) cups to trying juices
- ☐ plastic spoons
- ☐ gallons of drinking water (some poured out in jug to drink, remainder serve to mix juice)
- ☐ rubber gloves
- ☐ ice
- ☐ fruit juices
- ☐ sugar / simple syrup for juice mixes
- ☐ biscoito maria / palmier
- ☐ Prizes: jams, coconut candies, canned juices

### **Supplies: Home/Lab**

- ☐ container to serve water
- ☐ chef’s knife
- ☐ machete
- ☐ cutting board
- ☐ print-outs for taste-test of labels, posters, game sheets
- ☐ Hand blender
- ☐ funnel (to get juices in label-free bottles)
- ☐ ice chest
- ☐ cameras
- ☐ Speaker

### **Fruit Pulp/Juice**

- ☐ Guanábana
- ☐ Guava
- ☐ Passion Fruit
- ☐ Mango
- ☐ Mamey
- ☐ Papaya
- ☐ Cashew
- ☐ Lulo
- ☐ Tamarind
- ☐ Nance
- ☐ Tamarillo
- ☐ Açaí

### **Email to students**

1. Reminder with Readings, Location, Poster

## Notes for Class

### Florida Crops

- **Guanábana**, *Annona muricata* (Annonaceae). graviola, guyabano, soursop. native to the tropical regions of the Americas and the Caribbean.
- **Guava**, *Psidium guajava* (Myrtaceae). native to Mexico, Central America, the Caribbean and northern South America.
- **Passion Fruit**, *Passiflora edulis* (Passifloraceae). native to southern Brazil through Paraguay and northern Argentina
- **Mango**, *Mangifera indica* (Anacardiaceae). believed to have originated in the region between northwestern Myanmar, Bangladesh, and northeastern India.
- **Mamey**, *Pouteria sapota* (Sapotaceae). Mexico and Central America
- **Papaya**, *Carica papaya* (Caricaceae). southern Mexico and Central America; also considered native to southern Florida, introduced by predecessors of the Calusa no later than 300 CE. Spaniards introduced papaya to the Old World in the 16th century. Papaya cultivation is now nearly pantropical, spanning Hawaii, central Africa, India, and Australia.
- Others: Avocado, Longan, Pitaya, Carambola/Starfruit

### Other common fruits imported to Florida/important to Florida residents

- **Cashew**, *Anacardium occidentale* (Anacardiaceae). Northeastern Brazil & Southeastern Venezuela; in 1500s distributed globally by Portuguese explorers (Goa, India ca. 1560; from there to Southeast Asia and Africa). Cashew Apple Marañon, cajuil (Puerto Rico), mereh (Venezuela), caju (Portuguese), acajou (French), mamuang himmalphan (central Thailand), jambu monet (Malay)
- **Tamarind**, *Tamarindus indica* (Fabaceae). likely from tropical Africa
- **Lulo**, *Solanum quitoense* (Solanaceae). northwestern South America.
- **Nance**, *Byrsonima crassifolia* (Malpighiaceae). maricao cimun, craboo, golden spoon, hogberry. open pine forests and grassy savannas, from central Mexico, through Central America, to Colombia, Peru, Bolivia and Brazil; it also occurs in Trinidad, Barbados, Curaçao, St. Martin, Dominica, Guadeloupe, Puerto Rico, Haiti, the Dominican Republic and throughout Cuba and the Isle of Pines.
- **Tamarillo**, *Solanum betaceum* (Solanaceae). tree tomato, tomate de árbol, tomate andino, tomate serrano, blood fruit, tomate de yuca, tomate de España, sachatomate, berenjena, chilito and tamamoro in South America, and terong Belanda (Dutch eggplant) in Indonesia. native to the Andes of Ecuador, Colombia, Peru, Chile, Argentina and Bolivia.
- **Açaí**, *Euterpe oleracea* (Aracaceae). native to eastern Amazonia, especially in Brazil

**Primary Global Market in Tropical Fruit (2020): \$35.2B**

1. Bananas \$13.9B
2. Cashew Nuts: \$6.87B
3. Avocados: \$6.7B
4. Mango/Guava/Mangosteen: \$3.6B
5. Pineapples: \$2.11B
6. Coconut: \$1.45B
7. Papaya: \$320M
8. Brazil Nuts: \$275M

**2020 US Tropical Fruit Imports/Exports**

1. Mango, Mangosteen, & Guava (USA Imports: 26% of global total, #1)
2. Pineapple (37% of total global imports, #1; note that dropped due to covid because 60% in USA is hospitality/food service sales)
3. Avocado (USA: 48% of imports; #1)
4. Papaya (51%)
5. Bananas (18.6%, #1)

**USA Banana imports: >\$2.7B [source](#)**

1. Guatemala: 1.1 billion
2. Ecuador: \$455M
3. Costa Rica: \$448M
4. Colombia: \$250
5. Mexico: \$246
6. Honduras \$156M
7. Peru: \$51M
8. Panama: \$45.6
9. Nicaragua: \$8.8M
10. Dom Rep: \$3.2M

**Primary Exporters of Trop. Fruits:**

1. Central America & Caribbean
2. The combined slightly more than South Am. + Asia

**Top Florida Tropical Fruit Crops**

1. Oranges (S China, NE India, Myanmar): \$708,581,000
2. Tomatoes (South America): \$323,534,000
3. Grapefruit (hybrid originating in Barbados) \$72,081,000
4. Tangerines (SE Asia) \$22,089,000
5. Avocados (Tropical America): \$13,350,000
6. Mango (India): \$2.1M 2014, possible 2021: 20.49 million

**Sources**

1. [FAO trop. fruits](#)
2. [FAO -Banana 1](#) and [FAO Banana -2](#)
3. [OEC](#)

**Student Readings**

1. Karen Weintraub (2019) [They're Smelly and Spiky, and They Need Bats to Pollinate Them.](#) *New York Times*.
2. Chris Hunt and Rathnasiri Premathilake (2018) [Prehistoric people started to spread domesticated bananas across the world 6,000 years ago..](#) *The Conversation*
3. Rachel Wharton (2020) [How the Tip of Florida Became a Tropical-Fruit Paradise.](#) *Atlas Obscura*

**To prepare for class**

- [2021 USDA FL AGRICULTURE OVERVIEW](#)
- Blare, T. et al. [PROFITABILITY AND COST ESTIMATES FOR PRODUCING MANGO \(MANGIFERA INDICA L.\) IN SOUTH FLORIDA](#)
- [IPM Centers- FL Mango 2014\)](#)
- [Durian: \*Durio zibethinus\* \(Malvaceae\)](#)
- [Ask Pablo: What's the Impact of Imported Tropical Fruit?](#) [Treehugger](#)
- Grüter R, Trachsel T, Laube P, Jaisli I (2022) Expected global suitability of coffee, cashew and avocado due to climate change. PLoS ONE 17(1): [e0261976](#).
- [IFAS - Trop Fruit Acreage in FL](#)
- [USDA Florida Ag](#)