## Introduction

- Owner of Tropical Acres Fa rms, Inc.
- Grew up in south Florida, graduated from USF in Tampa
- Began studying mangos and tropical fruit as a teen
- Began growing commercially in 2011
- Located in West Palm Beach on historic Sturrock family property, previous experience growing in Loxahatchee Groves in central Palm Beach County
- Currently growing about over 290 varieties of mango, along with 10 sapodilla and 40+avocado. Also provide consulting services to other growers.

Farm in West Palm Beach, FL


## The Sapodilla

## Manilkara zapota

- Originated in Yucatan region of modem Mexico, becoming endemic to central America
- Cultivated since ancient times. At one points hundreds of millions of trees likely grew in southem Mexico/central Americ a
- Botanic ally a bemy and In the Sapotaceae family, which includes mamey sapote, a nd ca nistel ("eggfruit")
- Flesh may be gritty or smooth, brown or red in color, often likened to a "brown sugar soaked pear", though this description is dubious for superior cultivars
- Size can range from a couple ounces to several pounds on larger va rieties
- Spread throughout tropical world after being introduced to Asia by Spanish from New World



## The Sapodilla

Martin


## The Sapodilla

## Manilkara zapota

- Now commonly found in India, east Asia, and all over tropical Americas.
- May be grown from seed, but considerably variability and primarily Propagated by grafting.
- Commercial acreage limited to <20,000 acres worldwide. Not a signific ant commercial tropic al fruit crop despite reputation
- The white latex sap from the tree is known as 'Chicle’ and was the primary ingredient in chewing gum at one time (hence the name 'Chiclets). Chicle was chewed by the Aztecs and Mayans whose civilizations occured in the sapodilla's native range.
- Timing from flower to harvest is a pprox. 6 months.


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## The Sapodilla

Fruits


## The Sapodilla

## "Sapodilla": Uncommon name for common fruit

People from different parts of the world rarely know the fruit as "sa podilla"

- "Chiku" - North India/Pa kistan, parts of Asia.
- "Sapota" - Much of central/southem India, parts of Latin America.
- Nispero - Much of Latin America.
- Neesebemy/ Nasebeny - West Indies/C a ribbean


## The Sapodilla

## The Sapodilla in Florida

- Thought to have been introduced to Florida via the Bahamas during the $19^{\text {th }}$ century.
- Ea rly introductions were seedlings and of poor quality.
- Tree was found to perform well in marginal soils; became common in the Keys where many fruit trees did poorly.
- Superior selections began to be made in early 20th century.
- Later introductions were made to Florida from outside regions such as Mexico and Thailand (e.g 'Alano' and 'Hasya').
- While commercial plantings were and remain extremely limited, sapodilla has become a common backyard fruit tree.
- Season here prima rily winter/spring.
- Geographic ally limited to south-central Florida due to climate.

Tree


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## The Sapodilla

Tree


## The Sapodilla

## Why grow sapodilla?

## Pros:

- Excellent ta sting dessert fruit.
- Trees tend to be consistent producers requiring little care.
- Very adaptable to different soil-types and perform well in high pH, nutrient poor soils.
- Very few disease or pest problems.
- Sub-tropical cold tolerance. Mature trees can withstand some freezing temperatures without major damage.
- Potential for very extended season, often with multiple crops.
- Valuable fruit commercially (pricescan exceed \$5/pound)


## The Sapodilla

## Why grow sapodilla?

## Drawbacks:

- Frustratingly Slow to esta blish a nd grow initia lly.
- Brittle wood and prone to limb breakage (*some worse than others).
- Diffic ult to determine maturity of fruit.
- Not a versatile fruit in its consumption; unusable green due to astringency.
- Some varieties may produce poorly without a pollinator (e.g. 'Hasya')


## The Sapodilla

## Tree caretips

- Plant grafted trees of known va rieties.
- Trees should be planted in well draining spot, in full sun wherever possible.
- Prune tree from young age to achieve desired shape and manage size in long term to make harvesting easier.
- Trees can and should be maintained under 15 ft in height.
- Apply a balanced N-P-K fertilizer with minors during first years of tree's life to encourage healthy growth.
- Withhold or eliminate N from tree's diet as it growslarger.
- Imigation beneficial for first few years, unnecessary thereafter but may improve fruit set/retention in dry periods.
- Better production achieved with addition of a second variety.


## The Sapodilla

## Pest

- Most common pests of sapodilla are piercing-sucking insects (a phids, mealybugs, sc ale, etc)
- These are readily controlled with several applications of hortic ultural oil (organic options)
- Young trees may be targeted by chewing insects such as caterpillars and Sri Lankan weevil
- May be physically removed, or killed with insecticides such as Carbyl (Sevin) or Imida cloprid.



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## The Sapodilla

## Determining fruit maturity

- Fruit will often begin losing "scurf" and smooth out.
- Brown color lightens and skin may take on grayish tone.
- Small 'tip' at bottom of fruit will fall off.
- Scratch test undemeath skin color changes from dark green to light green/yellowish color at maturity.
- When harvested fruit bleeds no or little latex, this is a signal fruit is physiologic ally mature.


## Determining fruit maturity

## Scratch test



## Determining fruit maturity



## The Sapodilla

## Recommended Cultivars

- Alano: Originally from Hawaii. A bulletproof tree. Only medium vigor, highly productive and typically multiple cropping. Main Season December-February but often has fruit in late-summer/fall. Small-to-medium sized oval sha ped fruit, extremely sweet.
- Hasya: From Mexico, where it is grown on commercial scale. An outstanding flavored fruit, medium-to-large size, round/oval shaped. Trees may be light producers particularly without other cultivars nearby to pollinate. Can be highly productive under right circumstance. Very vigorous, ha nd some trees.


## The Sapodilla

Fruit



## The Sapodilla

## Recommended Cultivars

- Tikal: From Florida, one of the better local selections. Very good quality fruit with reddish flesh containing no grit. Medium size fruit, ripening in spring.
- Thomas: round shaped fruit, outstanding eating quality with reddish flesh with signific a nt variation in fruit size. Unusual in that Smaller fruits tend to be seedless. Moderate production, season MarchMay. Soon to become available.


## The Sapodilla

Fruit


## The Sapodilla

Thomas


## The Sapodilla

## Recommended Cultivars

- Molix: From Mexico, pronounced "Moleesh". Season March to May, similar flavor to Hasya but fruit tend to be smaller and brown-fleshed, later season.
- Makok: Dwa rf tree with low growth habit, small fruit with brown flesh of excellent, super sweet eating quality. "summer sapodilla", season May October. Best choice for limited space.


## The Sapodilla

Fruit


## Any Questions?



Thank you for your time.


