

Florida's Emerging Compost Markets:

# Developing a Market for Compost in a Barren Landscape

USCC 21<sup>st</sup> Annual Conference

January 28-31, 2013

Orlando, FL

# Overview

- Background
- State of Florida Marketplace
- Lee County's Marketing Efforts



# Why Composting

- Lee County Utilities evaluating regional sludge drying facility
  - “free” steam
  - High capital
  - Assumed beneficial use over economics
- Disposal at heart (resource recovery)



# Pilot Program



# Pilot Program

- Reached out to UF IFAS group
- Initial Testing Positive
- ....I think we can do this!



# Florida Regulations

- 62-709 – Solid Waste Rules
  - Modified in 2010 to make startup of a facility easier
  - Reduced permitting requirements for yard trash, manure and source separated organics; allowed pilot programs
- 62-640 – Biosolids Management Rule
  - Updated 2010
    - Increased restrictions for Class B land application
- 5E-1 F.A.C. and Ch. 476 F.S.
  - The “Fertilizer” Rules

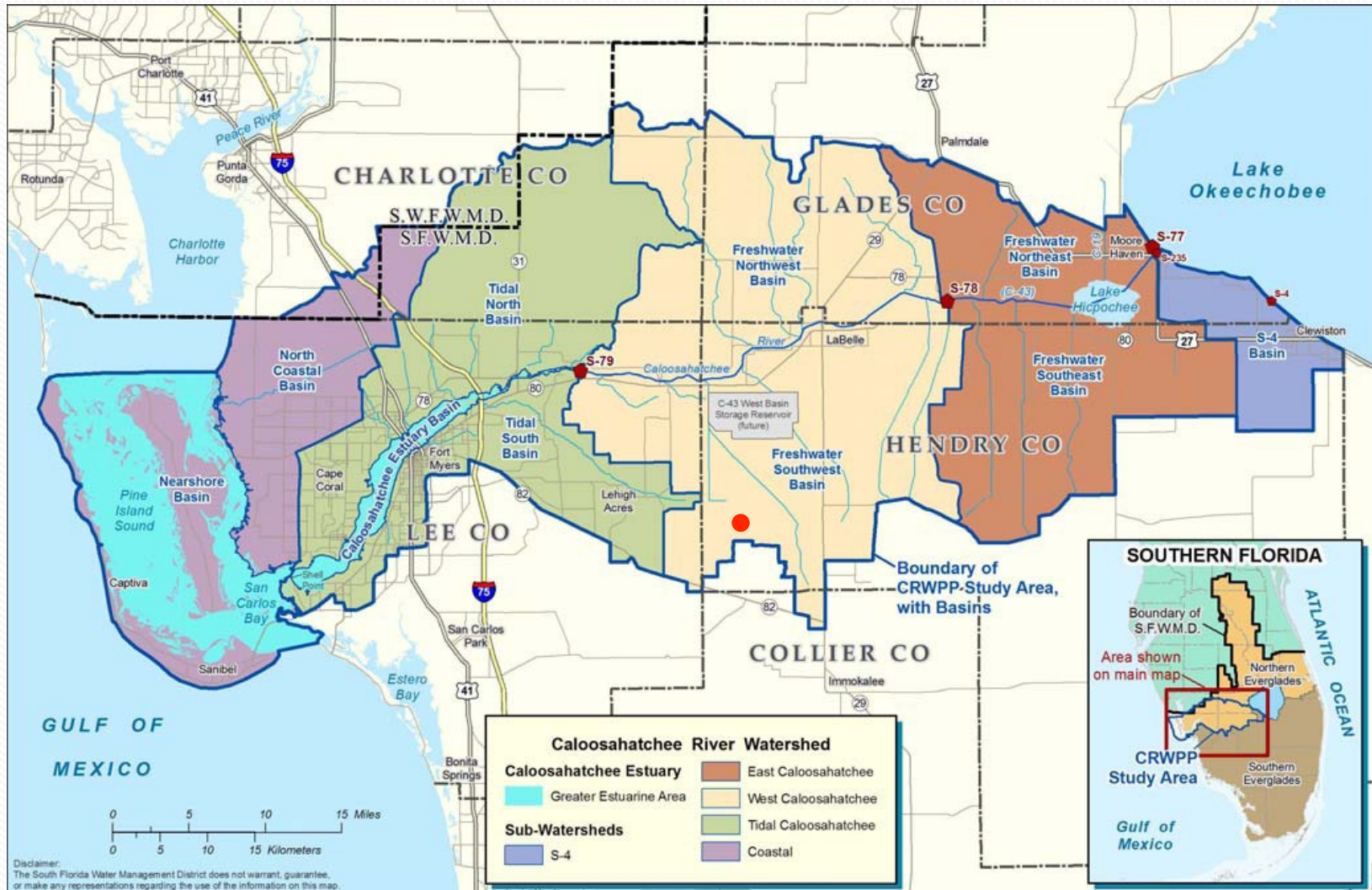


# 62-640 Changes

- Modified land application protocols
  - Nutrient Management Plans
- Restricted application in the Okeechobee watershed
- Storage requirements for Class AA
- Increased recordkeeping and reporting
- Exempted USCC STA program enrollees outside of Lake Okeechobee watershed from fertilizer rules



# Northern Everglades and Estuary Protection Program





# 62-640 Other Requirements

- Class A wastewater operator
- Must provide recommendations on storage and use
- Agreements with biosolids source
  - Currently 4 agreements in place
    - Lee County Utilities (original)
    - City of Fort Myers
    - City of Cape Coral
    - City of Naples



# Fertilizer Rules

- Labeling
  - Guaranteed analysis
  - Meets regulatory requirements
  - License number
  - Use recommendations and max. application rate
  - 5 copies to bulk customers
  - Must sell by weight
- Fees
  - \$1.00/ton inspection fee
  - \$0.50/ton Nitrogen/Phosphorus fee





# Who's Composting In Florida?

# Compost Facilities

- 1998 Study
  - 3 food waste facilities
  - 9 biosolids facilities (includes 2 of the food sites)
  - No source separated facilities
  - Noted most agri-waste used as fuel or feed
    - Sugarcane bagasse
    - Citrus processing waste
    - Tomatoes, watermelon, cantaloupe, strawberries, etc.

## Compost Use In Florida



# Other Recent Sources

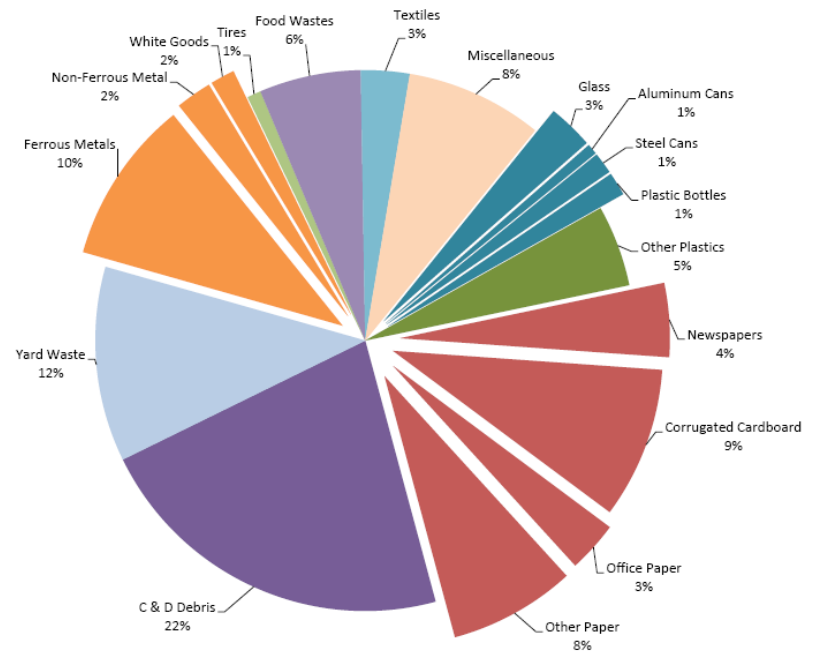
- FORCE – 8 sites (Lee Co. not incl.)
- Findacomposter.com – 10 sites (not all actually compost, ~4-5)
- Recent Biocycle article – 24 facilities
- FDEP database – 10 -20
  - source separated registration
  - data difficult to assemble



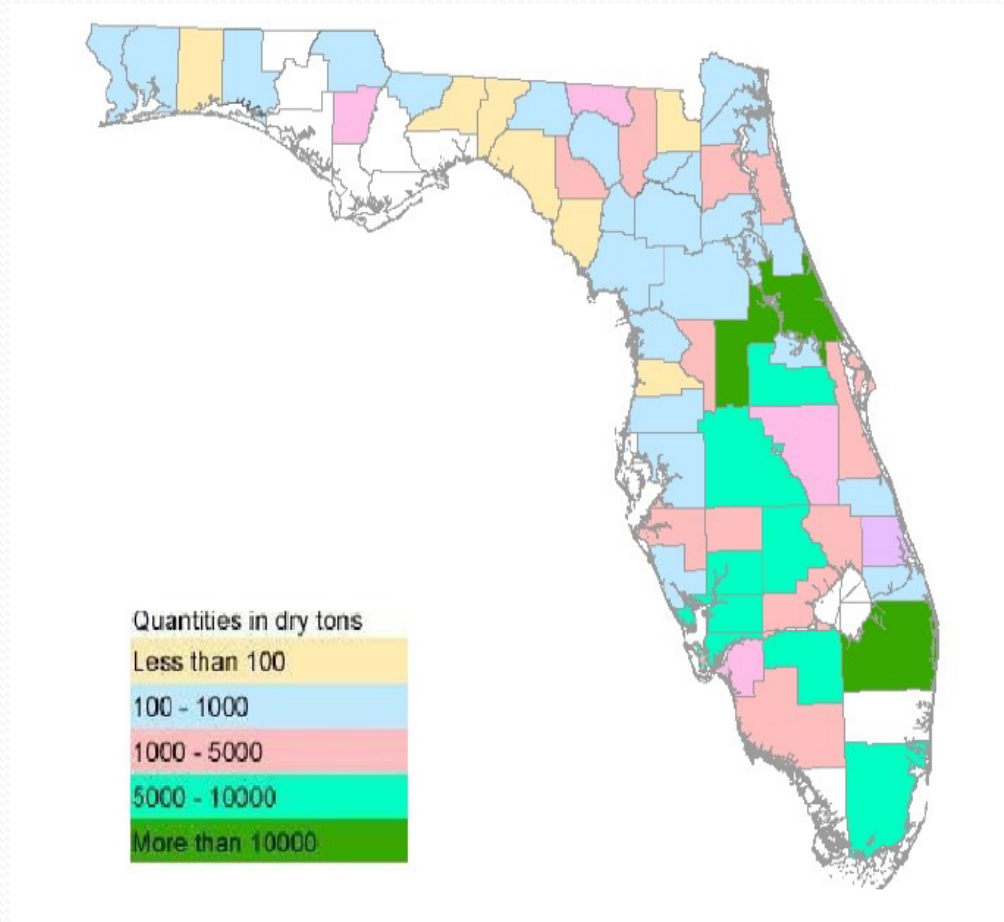
# MSW Generation

- 2010 Data
  - 3,132,505 tons of Yard Waste (12%)
  - 1,636,743 tons of Food Wastes (6%)
- Potential for 5MM tons of feedstock (not incl. biosolids)
- Net approx. 1-2MM tons of compost

Florida Municipal Solid Waste Collected (2010)  
(26.9 million tons)



# Class AA Biosolids Distribution



# Biosolids Composting

- 7 permitted facilities
- Approx. 35,000 dry tons distributed (2011)
  - Assuming 50% moisture (and a bulking agent), 70,000 wet tons of compost, or about 140,000 cy
- 121,000 total Class AA dry tons distributed
  - Compost (29%)
  - Pellets
  - Alkaline Treatment





# Compost Production

- No accurate totals available
  - No central collection of data
- Estimates range from 100k to 300k tons per year statewide
- In our market area, only one known bulk operator, approx. 51,000 cy per year (25,000 tons)
- No biosolids composting in area



# Who's Buying Compost

- Agriculture – Citrus, vegetables
  - 550,000 acres of citrus statewide
  - 1,100,000 tons of compost needed at 2 tons per acre as a supplement to existing nutrient use
  - 120,000 acres of citrus in surrounding 4 counties (Lee, Hendry, Collier, Charlotte)
- Residential
  - Bags (Black Kow, Atlas, Oldcastle)
  - Bulk? – Nutri-Source, CycleLogic, Bio-Resource Management, others?
- How do we reach these markets?



# Hurdles

- Stigma of Biosolids Compost
  - San Francisco Utilities
  - Wu et al.
  - “Ick” factor for retail
  - Metals, metals, metals....
  - PPCP’s
  - Politics – “you won’t sell any of that stuff”
  - Not “Organic”
- No distribution for first year as we “stabilized”
  - On site use only



# Full Disclosure



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Sample ID:	121204COMP																																																																								
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\* Reference 40 CFR Table 1 of 503.13 for Ceiling Concentrations.  
\* Sample was prepared for EPA 6010 analysis by EPA Method 3050b.



# Need a Name...

- **OrganicLee® Compost**
- Notable honorable mentions:
  - **Soil 'n' Green**
  - Human Humus
  - People Castings
- Use of word organic allowed under fertilizer rules if material is greater than 60% insoluble Nitrogen

You can't  
name it  
that!!!



# Local Fertilizer Ordinance

- OrganicLee® is permitted for use during the summer months under Lee County and Cape Coral's fertilizer Ordinances
  - Organic matter
  - Largely insoluble



# What's It Worth?

- Information not readily available
- Bagged materials
  - Ranged \$200 - \$300/ton (\$1.50 to \$5.00 per bag)
  - Noticeable quality difference with lower priced materials
- One unsolicited distribution proposal for 50% net of freight, estimated to net around \$3-4/cy (\$6 - \$10/ton)
- Internally decided \$5/ton (~\$2.50/cy) was reasonable to start (late 2010) – FDACS requires we sell by weight
  - Note our initial concern was getting the material off site not income



# Marketing Campaign

- “Black Pile” Advertising
  - Right place at the right time
  - If they see it they will come...
- Early engagement with Lee County Extension office

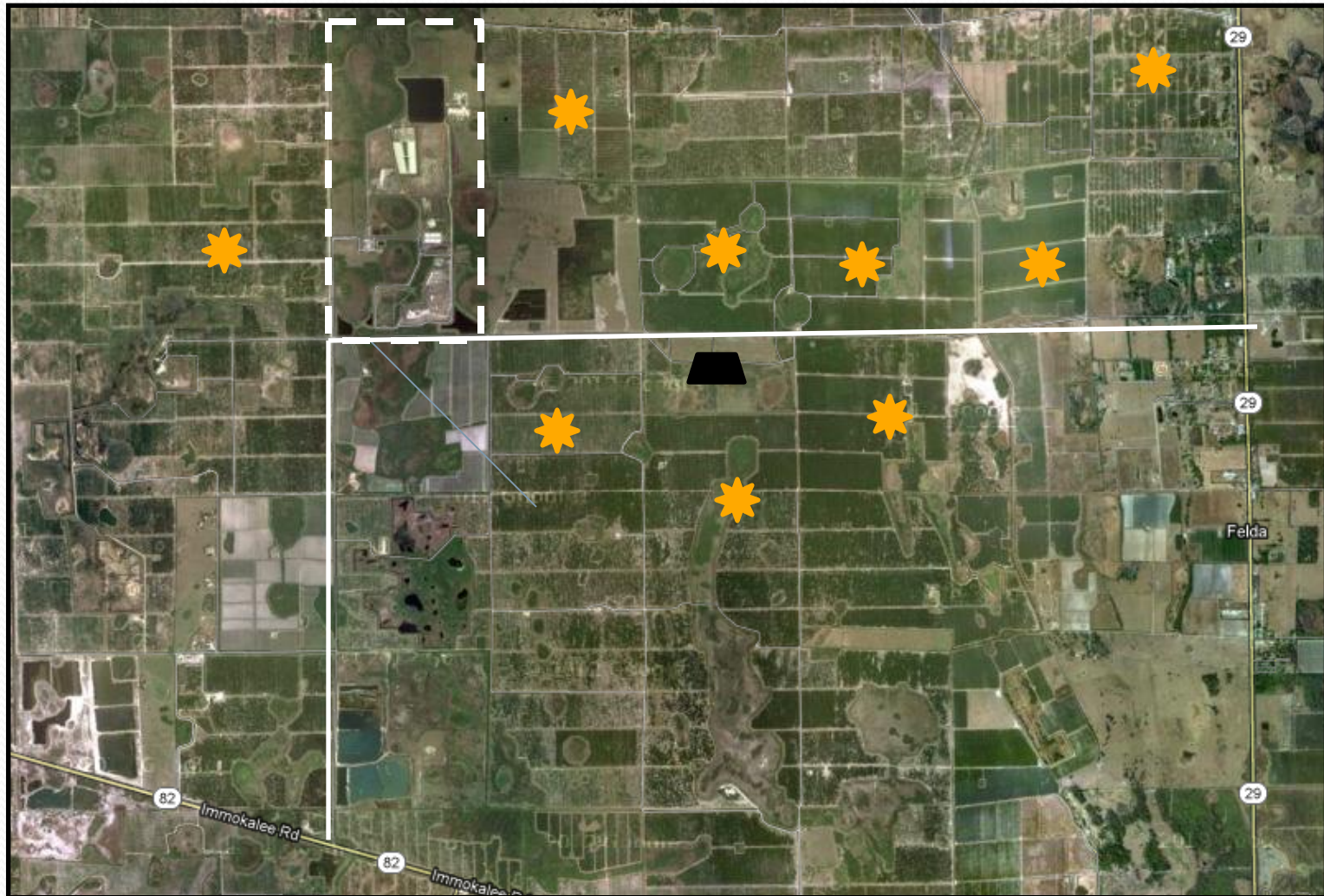


Report a problem Image Date: June 2011





# Location, Location, Location...

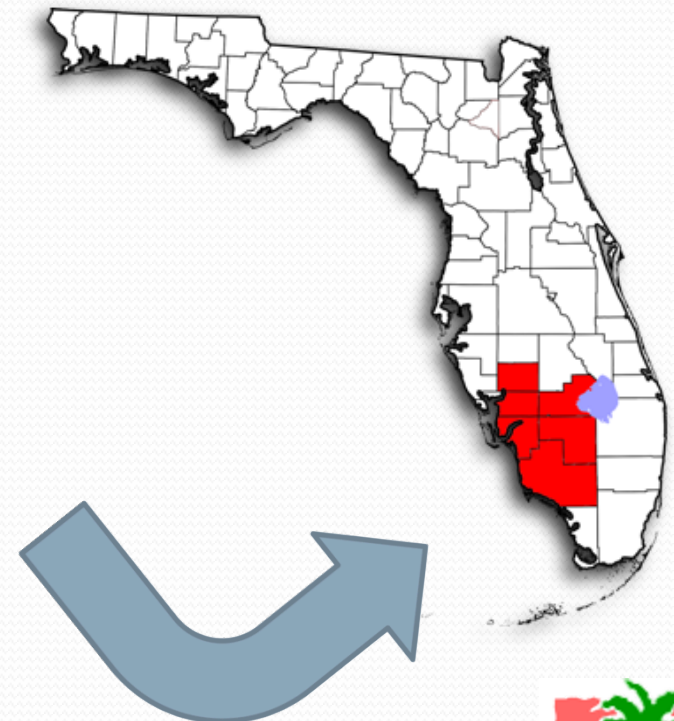
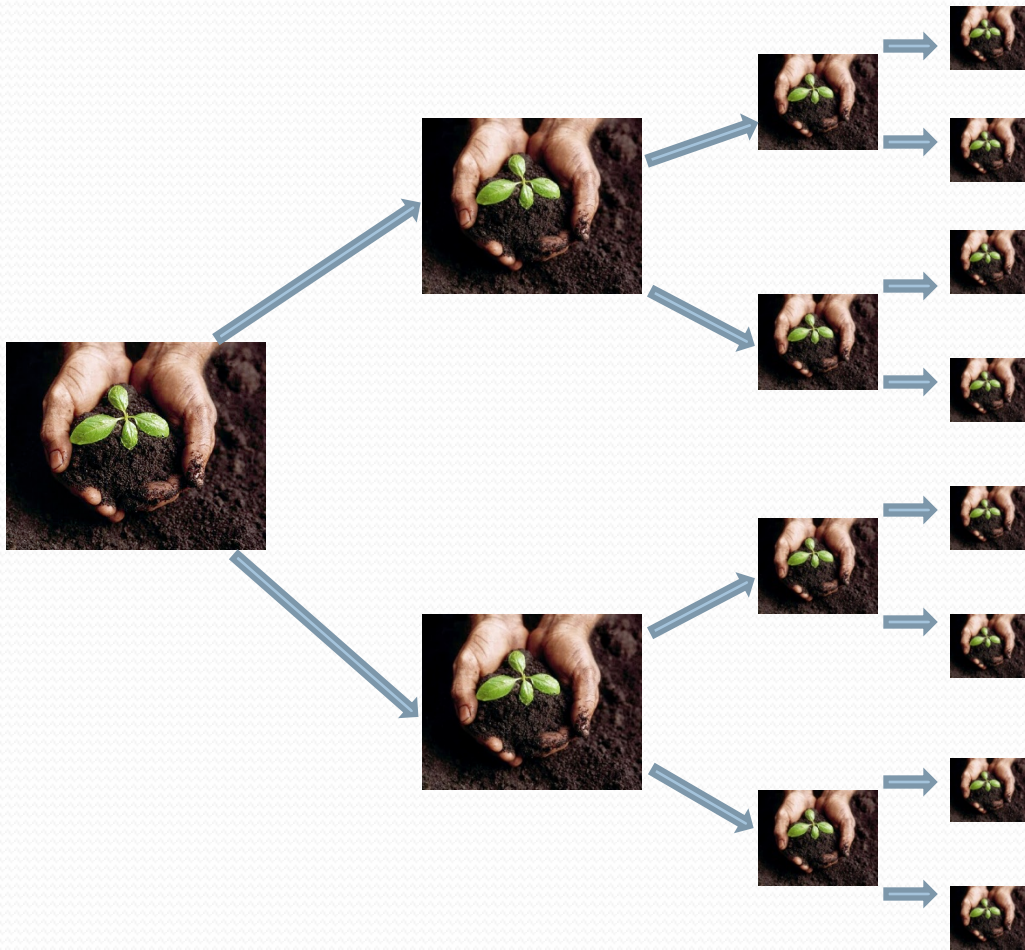


# Retail - Look for Friends

- Master Gardeners
- Community Gardens
  - Must be a 501(c)(3)
  - Must have an educational program
    - Improving soils/healthy soils
    - Growing food
- Plant Events
  - Edison Estates Garden Sale
  - ECHO Farm Day
  - Mango Mania
- Presentations
- Avoid the 5%'ers



# Friends tell friends... and so on, and so on...



# Some of our friends

- Roots Heritage Garden
- Lehigh Edible Food Group
- Heartland Gardens
- Edison/Ford Winter Estates
- Lee County Parks
- SunCoast Community Garden
- Ft Myers Women's Shelter
- Holton EcoPreserve
- Women in Construction Service Project
- Child Care Center of SW Florida



# Living Advertisements



# A Friendly Plug...



# On the Radar...

- Several Resellers approached us about distribution
- Most desired exclusivity
- County Commissioners phones began ringing
- Issued an RFP
  - Bagging and Distribution
  - Bagging Only
  - Bulk Sales Delivered
  - Bulk Sales Pick up
- Pricing ranged around \$4 to \$8/cy
- Selected one vendor for negotiations and 6 month pilot



# Current State of Affairs

- Have steadily increased our wholesale pricing
- Reduced bulk retail rate in 2012 – huge jump in interest
  - CH<sub>2</sub>M Hill/R. Alexander & Associates Biosolids Compost Study
  - We were one of the highest
  - Lowered to average from study at \$10/cy (down from \$20)
  - Bulk Retail accounts for 15% of sales (by vol.)
  - Agriculture – 85% of sales (by vol.)
  - Bags negligible – mostly PR/outreach





# A Good Problem

- More demand than supply
- Still getting exclusivity demands from resellers and a few customers
- Evaluating facility capacity
- Testing efficiencies in process to increase capacity



# Lee County's Facility



# Lee County's Facility



# Building Windrows



# Compost Turner



# Screen



# Questions?



# Thank You



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239-533-8000

