

Yard Waste and Biosolids: Perfect Partners in Composting

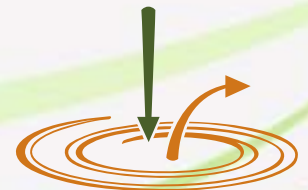
Mitch Kessler

President, Kessler Consulting, Inc.

SWANA FL Summer Conference

Tampa, FL

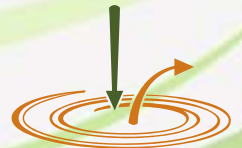
July 25, 2016



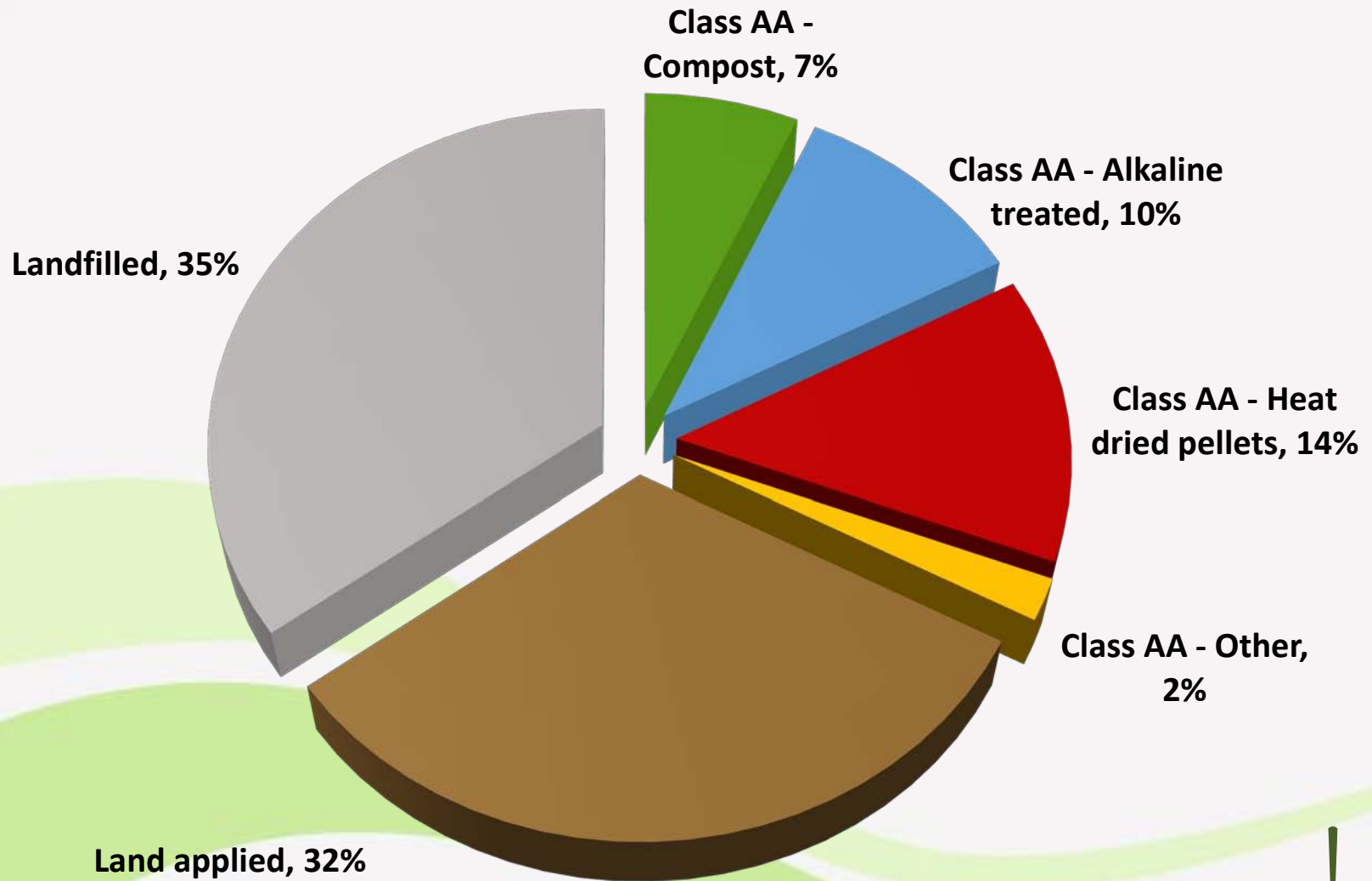
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Challenges of Managing Organics

- Emerging infrastructure and market place
- Collection, processing, and marketing not yet integrated
- Inexpensive disposal
- Inconsistent regulations and laws
- “Ick” factor of managing biosolids
- Public perception

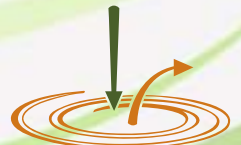


The State of Biosolids in Florida



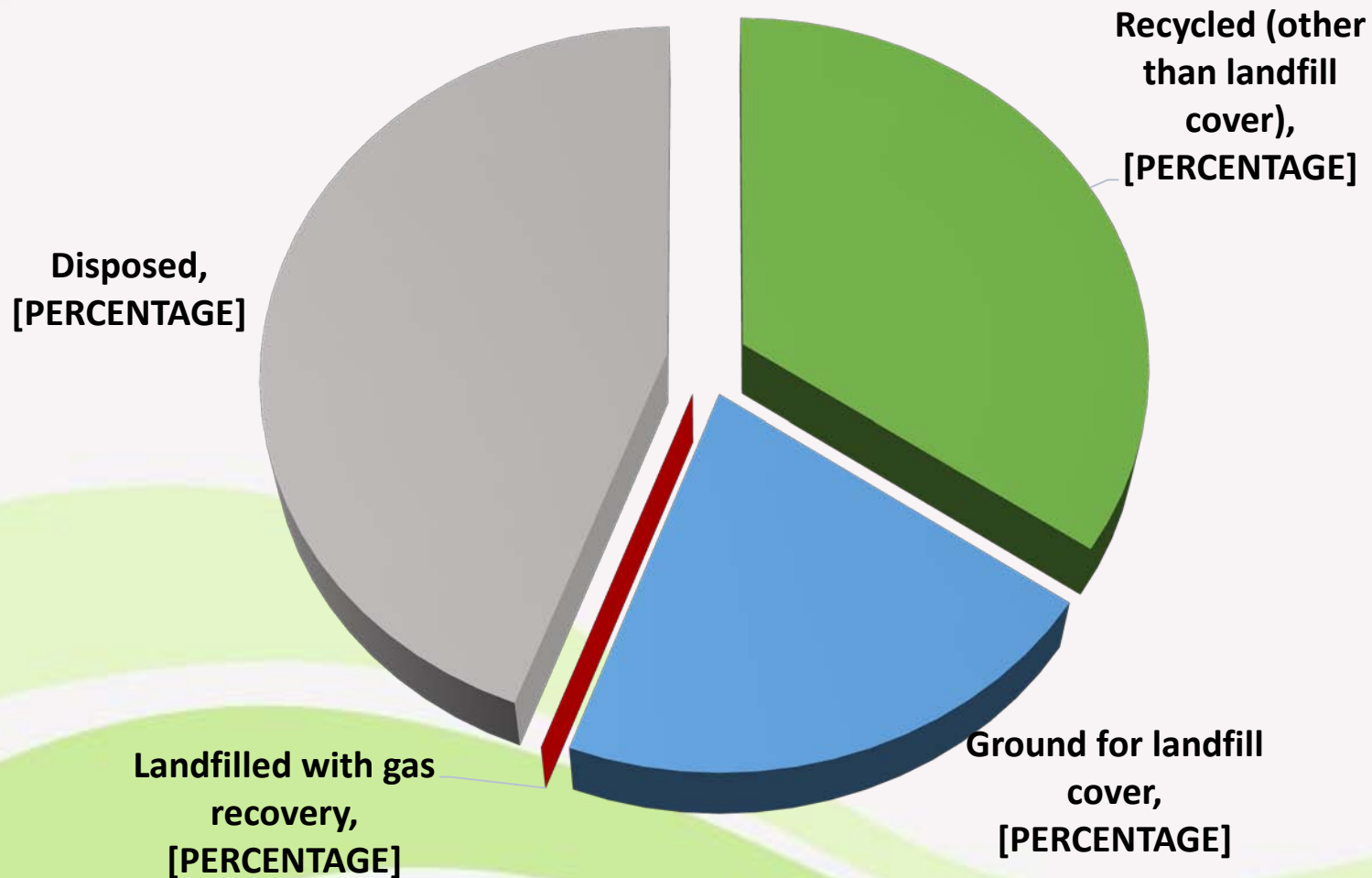
Source: FDEP 2013

Total: ~2 million wet tons



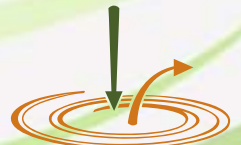
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The State of Yard Waste in Florida



Total: 3.8 million tons

Source: FDEP 2015



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Composting: Putting Biosolids and Yard Waste to a Higher Use

- Yard waste: high carbon, dry, high porosity
- Biosolids: high nitrogen, wet, low porosity
- Most environmentally-beneficial option for biosolids
- Puts yard waste to best and highest use
- Creates value-added material



Compost Benefits

- Higher quality end product with diverse uses
- Increased soil moisture holding capacity
- Stable, slow-release nutrients
- Adds organic matter to soil
- Beneficial microorganisms
- Disease suppression
- Erosion control



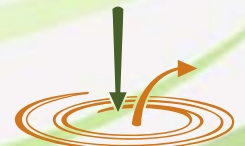
Stories of Pilot to Program Implementation in Florida



Emerald Coast
Utilities Authority
(ECUA)



Hillsborough County



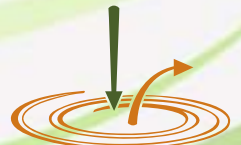


- Pilot: March to Nov. 2015
- Implement full-scale composting late 2016
- Constructed on closed landfill cell
- Will compost ~18,600 tons/yr of biosolids from Falkenburg
- Expected savings \$300,000/yr (36%) in biosolids transport and disposal





- Service provider of water, wastewater, and sanitation
- Produces ~33,000 wet tons/yr of biosolids
- Collects ~17,000 tons of yard waste
- Drying cost of biosolids
- Disposal cost for yard waste

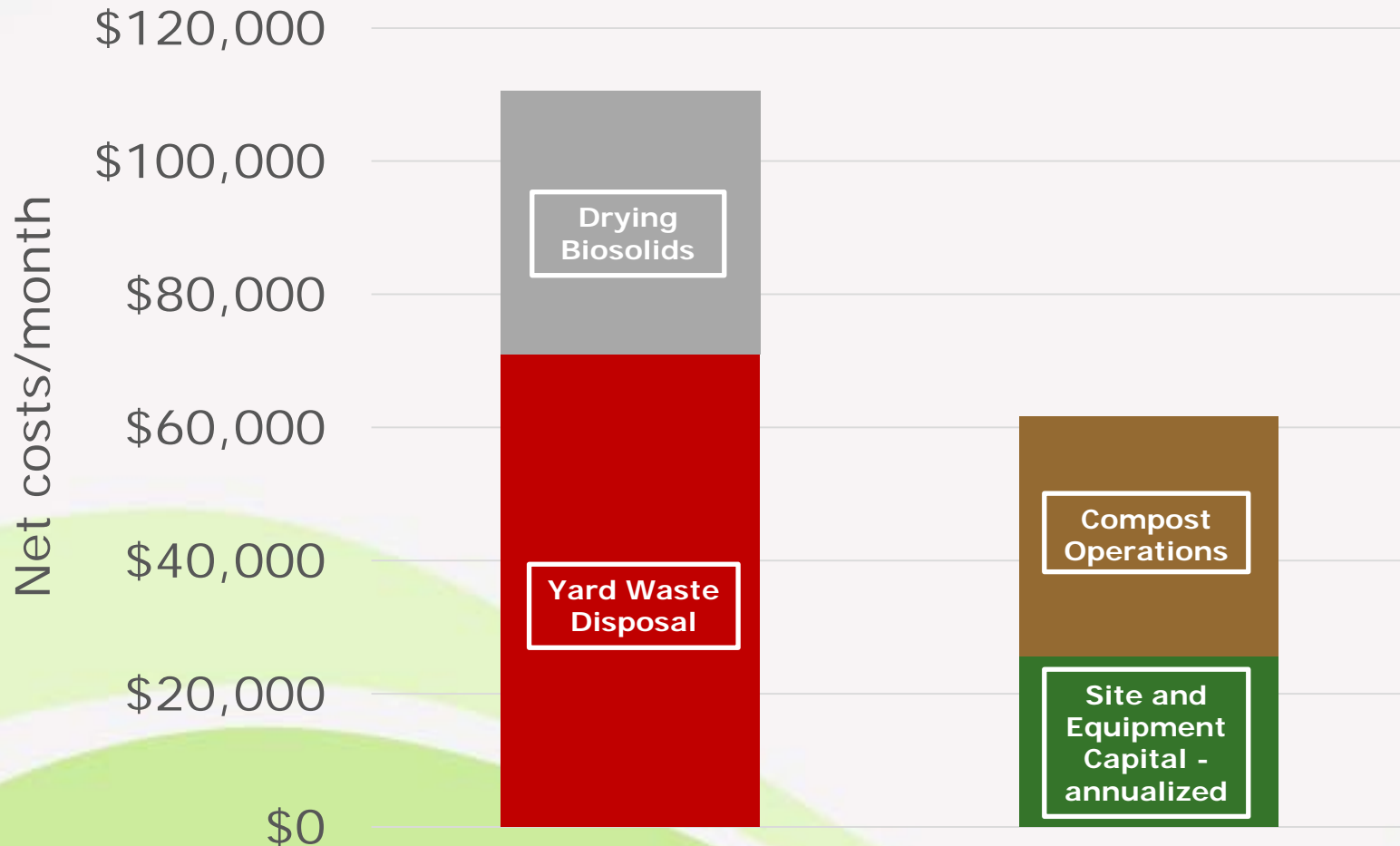


ECUA's Biosolids Compost Facility

- Pilot started in Nov. 2015
- Pilot exceeded all expectations
- Full-scale Jan. 2016
- 25-acre site adjacent to treatment plant
- Composting over half of ECUA's biosolids and all residential yard waste
- Fully integrated program:
collection, processing,
and marketing

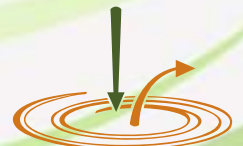


ECUA's Cost Savings



Composting saves ~ \$50,000 per month!

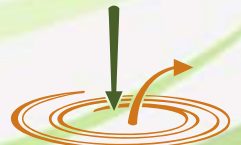
Source: KCI



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ECUA's Results

- High quality compost produced
- No odor issues
- Operating costs ~\$25/ton
- Composting solves 2 problems for ECUA:
 - Yard waste disposal
 - Biosolids treatment
- Next steps:
 - Expanding facility to all biosolids
 - Planning for commercial food waste



Marketing for Compost: Two-Pronged Approach

1. You need *clean* yard waste

- Educate before you build
- Outreach and education to residential customers
- Plastic bags are major problem
- Containers and paper bags are preferable



Marketing for Compost: Two-Pronged Approach (con't)

2. You need to sell your product

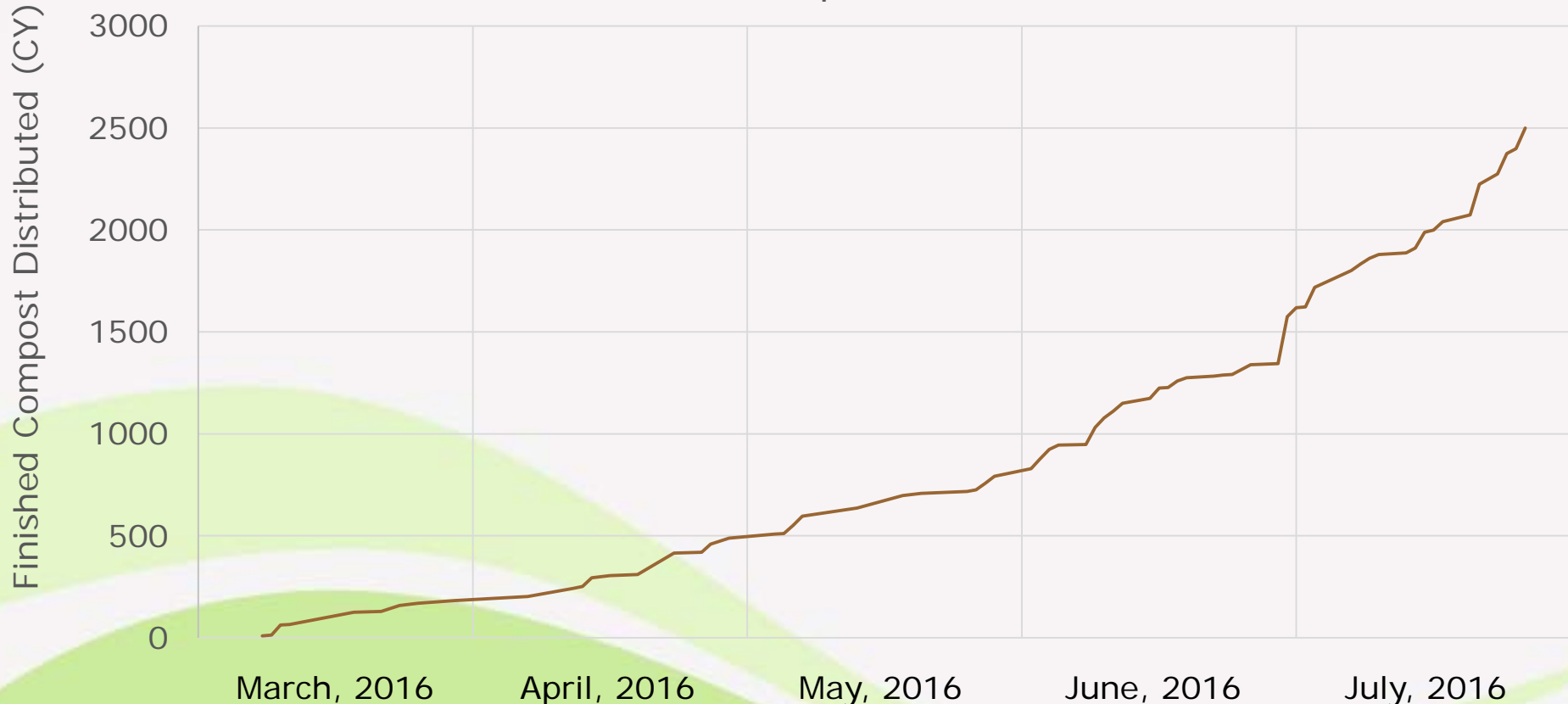
- Create product awareness
- Target industries and end-users in your area
- Sales for end user trials
- Develop end-user educational literature:
test results, usages, etc.

Emerald Coast
bloom
• The Most in Bio-Compost •



Success of ECUA's Marketing Program

Cumulative Compost Distribution



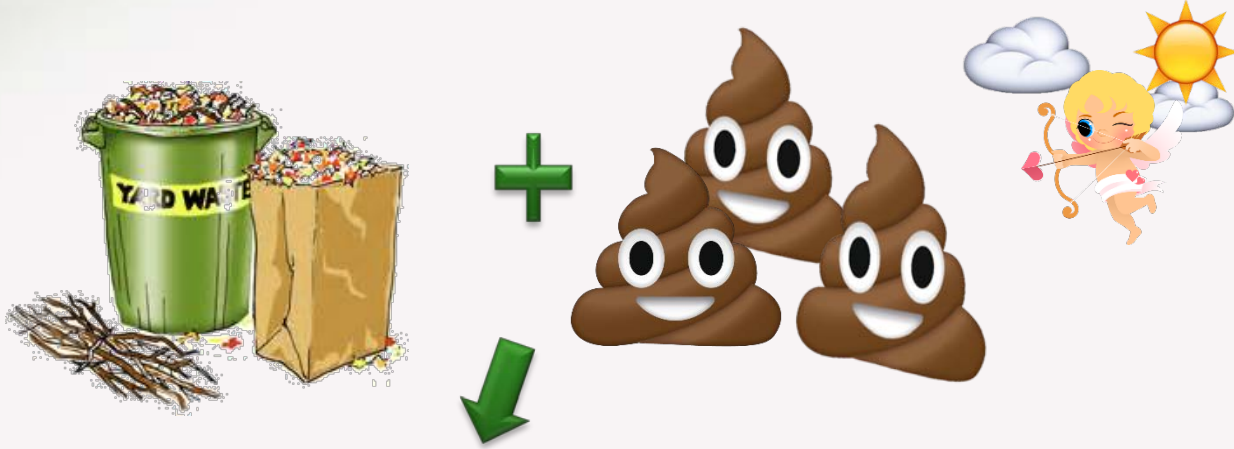
Source: KCI

Total Compost: ~2,500 CY
Sales to-date: ~\$15,000



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A Match Made in Heaven



Thank you!

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