

# Evaluating eTuber and Energybeets as Feedstocks for Biofuels & Biogas in South Florida

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Sweetpotato



Energy Beet

## Objectives

- Field trials with eTuber™ industrial sweetpotato and energybeet varieties to determine yield potential & growing protocol.
- Determine if crops can be economically produced on fallow citrus land.
- Document input costs and cultural practices need for profitable production.
- Economic analysis of costs and potential returns to growers.

## Coopeators & Partners



# eTuber Planting

plugs, rooted cuttings, & slips



## Comparisons

- Plugs – rooted cuttings – slips
- Beds vs. flat
- Fertilizer rate
- Pest control

## Irrigation

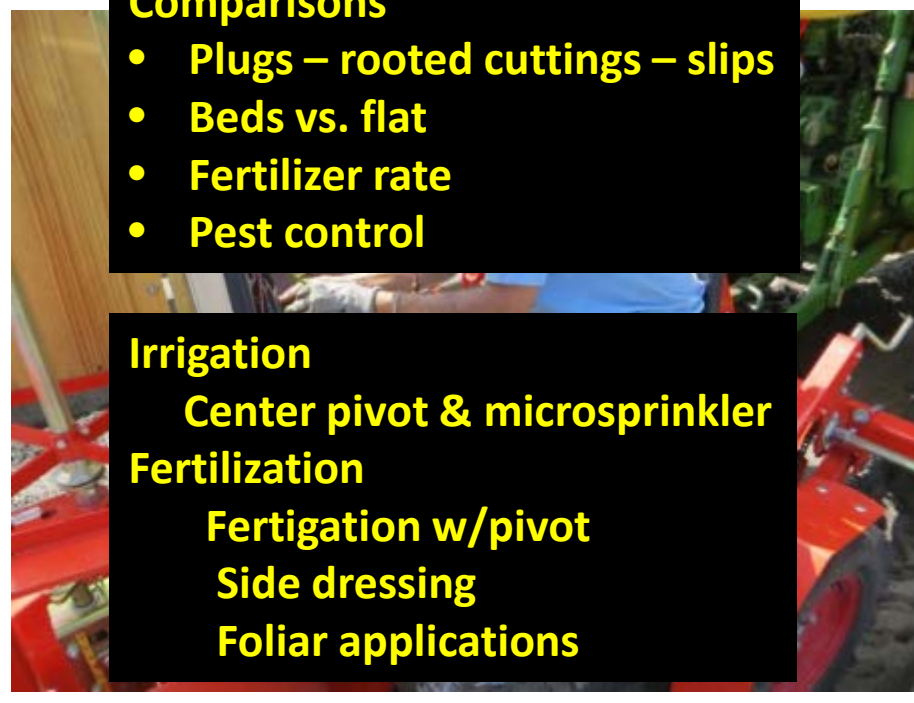
Center pivot & microsprinkler

## Fertilization

Fertigation w/pivot

Side dressing

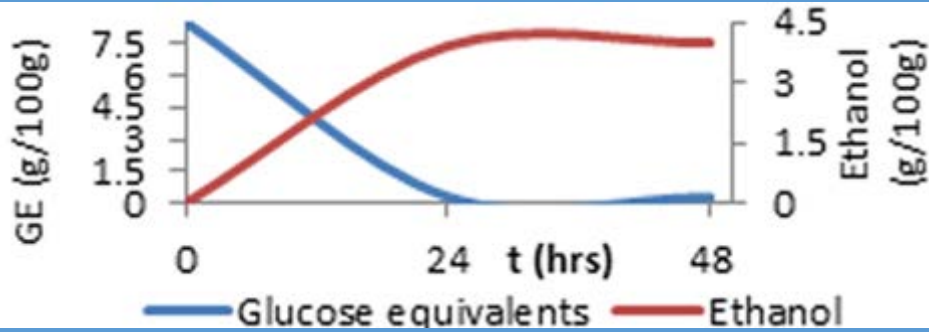
Foliar applications





fresh mash Sweet Potato with 10% solid loading resulted in the best liquefaction and homogenous slurry for fermentation

0.34 gr EtOH/g dry Sweet Potato (48 hours)



45 tons/ac = 1400 gal EtOH/ac



# Sweetpotato harvest



## Results from June planting (harvested Feb.)

Var.	Plant type	Beds	Supp. Fert.	Wt. per ft of row (lb)	Yield @ 30" rows (tons/ac)
CX1	Rooted	bedded	+	4.6	49.4
CX1	Unrooted	bedded	+	4.5	45.8
CX1	Rooted	bedded	0	2.5	27.0
CX1	Unrooted	bedded	0	2.4	26.5
Beau.	Rooted	bedded	+	2.9	31.3
CX1	Rooted	non-bedded	0	4.3	46.9





## Winter 2013/14 trials

- Plant date: December 18-20
- Three commercial varieties
- Pre-plant broadcast 62 lb/ac N
- Fertigation: 106, 158, 211 lb/ac N
- Harvest April 24, May 14, June 27







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## Acknowledgement

st (15 tons/ac)

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ertilize

potential rains