Biochemical Conversion
Sustainable Job Creation for Rural Florida

1. Identification of carbohydrate rich crops / feed stocks for fuels and chemicals (Replacement crops for 500,000 acres idled by citrus diseases.)
   Sugar crops -- energy beet, sweet sorhum, sugarcane
   Starch crops – energy tubers, other?
   Cellulosics – Eucalyptus for South FL; pine, oak and sweet gum for North FL
   Agro-industrial waste (fruits, vegetables, and wood processing)
      (Potential oils for biodiesel -- seed crops, Pongamia and algae)

2. Verification of feedstock performance during multi-year cultivation
   (Establishment of Florida version of BCAP for FL certified bioconversion crops)

3. Improvement of germplasms, best practices, and cost estimates for crops.
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4. Stepwise plan to scale up production.
   Sugar platform as intermediate stage.

5. Stan Mayfield Biorefinery and Pilot Plant
   Florida’s regional test facility for bioconversion


7. Development of improved biocatalysts for lignocellulose deconstruction.

8. Development of co-products: nutraceuticals, bio-based plastics, nanotubes, fertilizer, feeds, etc.
Biochemical Conversion -- Benefits to the State

1. Sustainable jobs for rural Florida

2. Replacement crops for former citrus farms

3. Increased energy independence

4. Economic development

5. Water and mineral sustainability – closed loop processes

Closed Loop Processes could borrow water and chemicals allocated for irrigation and crops. Water and chemicals could be used in processing, and as fermentation nutrients. Emerging water and nutrients could be returned to the field for new crops.