

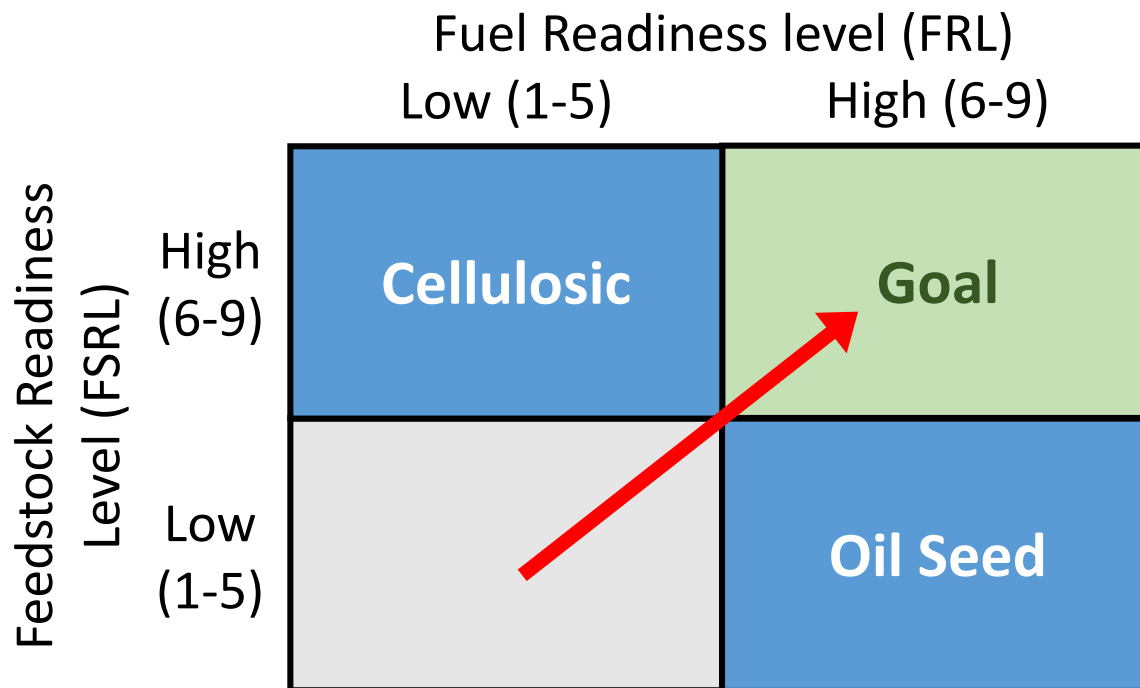
Feedstock & Feedstock Systems

**CAAFI General Meeting
Washington DC Convention Center**

**Scott Turn
Hawaii Natural Energy Institute
University of Hawaii
October 25, 2016**

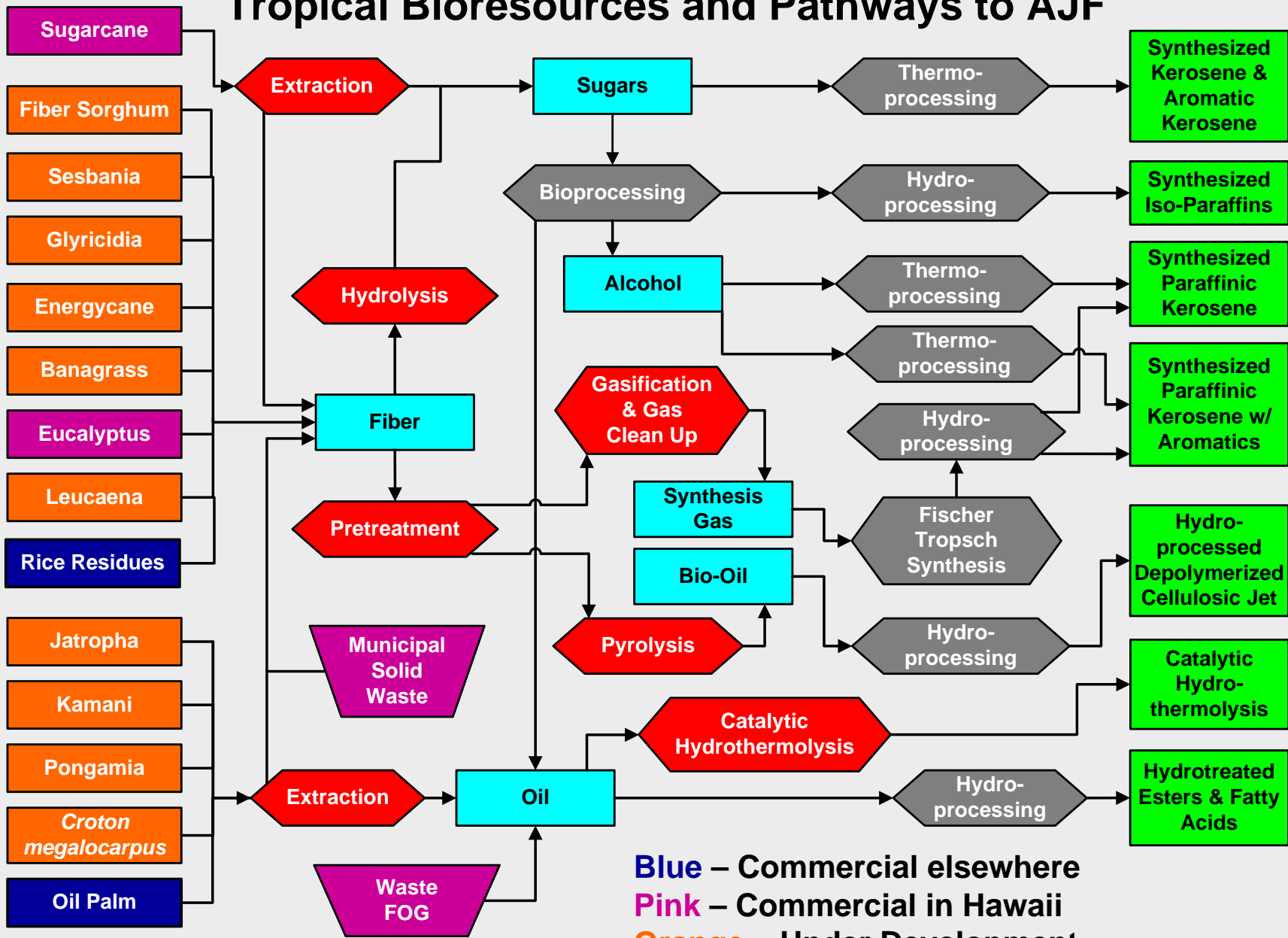


Feedstock and Feedstock Systems For “Island Scale” in Hawaii (10-20mgy)



Contributed by University of Hawaii Applied Research Laboratory

Tropical Bioresources and Pathways to AJF



Blue – Commercial elsewhere
 Pink – Commercial in Hawaii
 Orange – Under Development

Tropical Bioresources and Pathways to AJF

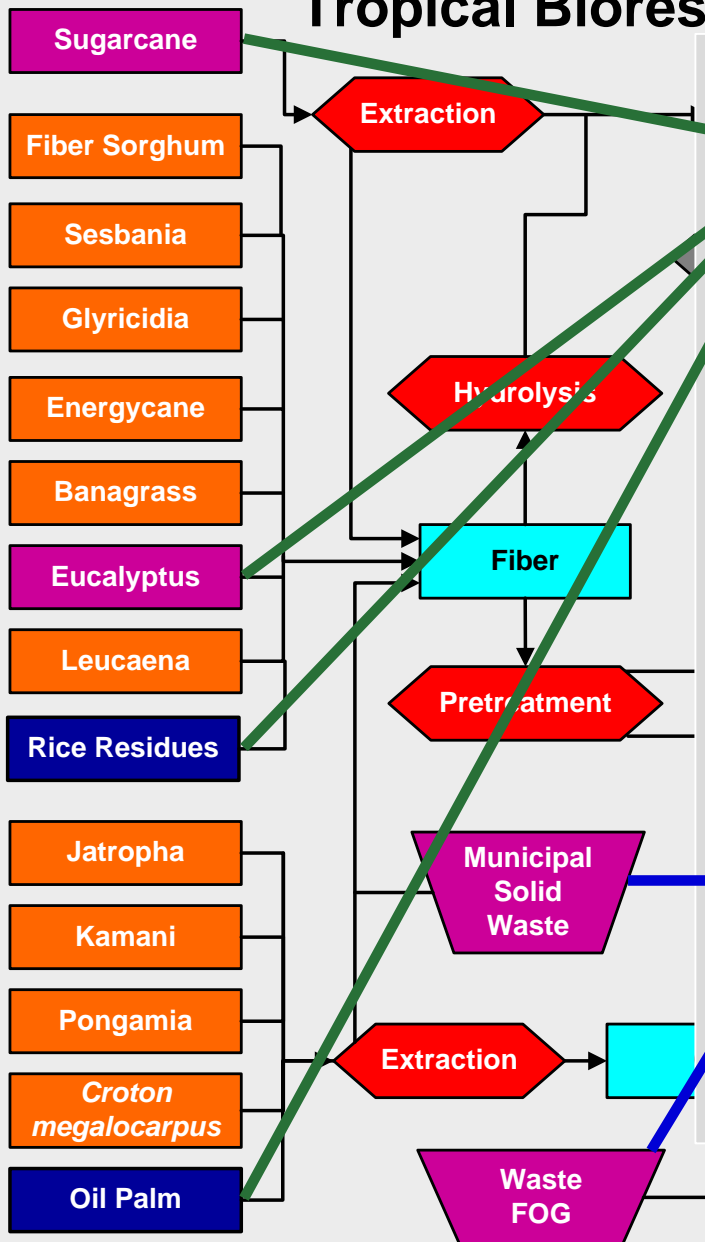
Cost Considerations

Agri/Forestry Residues
 $\$ \geq 0$

Purpose Grown Feedstocks
 $\$ \gg 0$ (?)

Urban Residues
 $\$ < 0$

Blue – Commercial elsewhere
Pink – Commercial in Hawaii
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Crops

Intermediate Products & Conversion Technologies

Alternative Jet Fuel

Physicochemical Characteristics

- **Thermochemical – ultimate, proximate, heating value, ash composition**
- **Biochemical – cellulose, hemicellulose, lignin composition**
- **Oil content and composition**
- **Feedstock handling -- bulk density, grinding/densification energy requirements, etc.**



Resource Availability

*Feedstock
Production*

*Feedstock
Logistics*

Conversion

Distribution

End Use



Agriculture ---- Industry ---- Investors ---- Government ---- Community

- Land
- Water
- Infrastructure
- Technology

- Financial Incentives
- Human Resources
- Sustainability
- Policy



How do crops/feedstocks fit on the landscape and what are their technical potentials based on climatic/soils/political/geographic constraints?

