

The sugar industry: feedstock supplier?

Bioplastics Roundtable Discussion
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Steve Davis
Research and Development Manager
Sugar Milling Research Institute NPC



Overview of current activities

- SMRI undertakes R&D for entire SA sugarcane processing industry
- Industry is looking for SMRI guidance on opportunities to add value to sugarcane
 - Current products: crystal sugar and molasses
 - Possible products: ethanol and electricity
 - Potential products: carbohydrate/organic acid/
other chemical feedstock

Overview of current activities

- Actively investigating opportunities for bio-based chemicals from sugarcane
- Leading DST/industry funded STEP-Bio Programme (R19m, 3 ½ years)
 - Collaborative projects with UKZN, SUN, UCT, UP
- Developing Sugarcane Biorefinery Techno-economic Model
 - Core is “New Products Greenhouse” to evaluate potential “winners” for further research

Opportunities for a local bioplastics industry

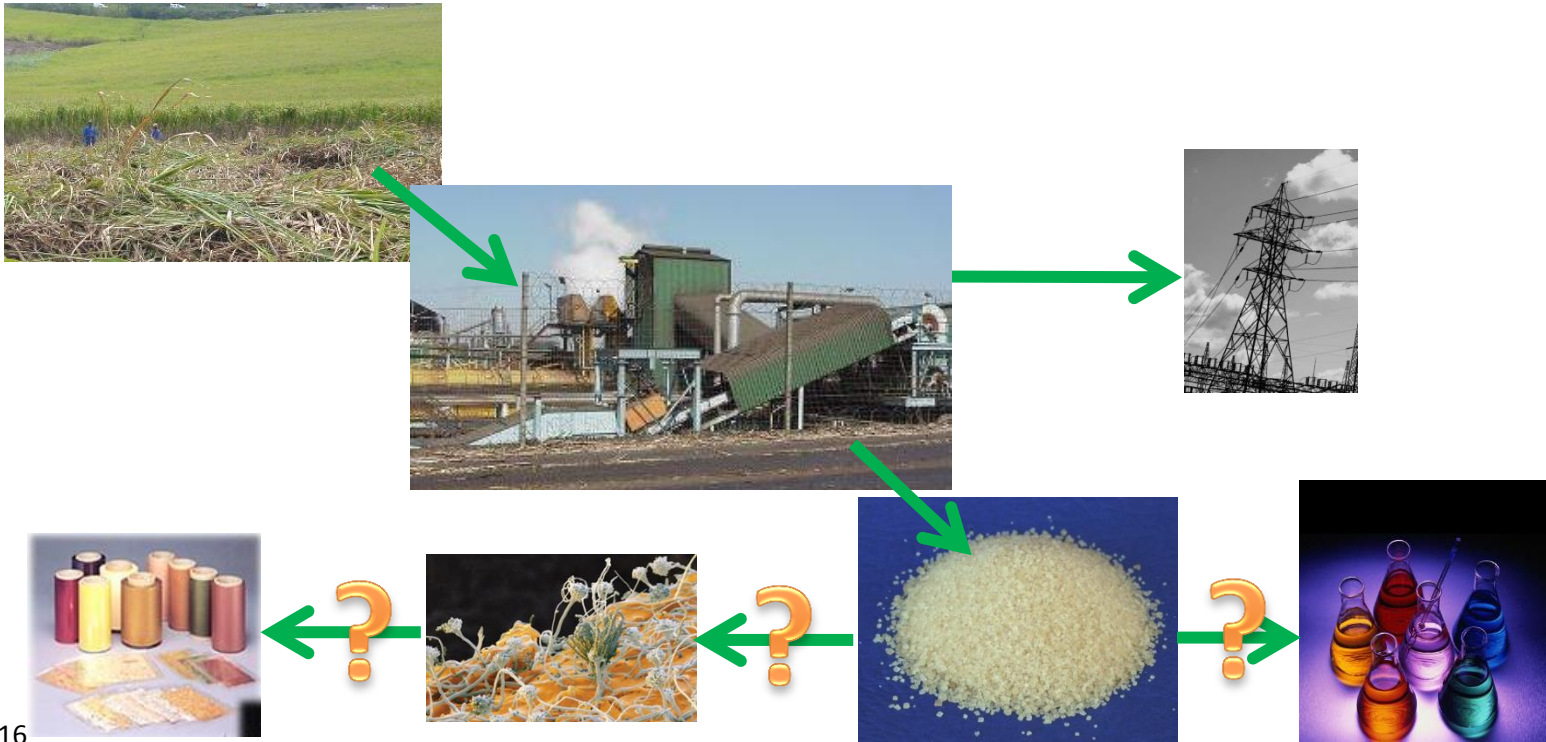
- Sugar industry is a well-established bulk agro-processor
- Seeking better returns in depressed world sugar market
- Willing to diversify product base (bulk chemicals)
- Potential local source of bio-based chemical feedstocks (carbohydrates, lignocellulose)

Obstacles to a local bioplastics industry

- Feedstock suppliers need to know what bioplastics manufacturers need
 - chemical type, specifications, tonnage
- Need to have mutually favourable pricing structure
- Need to have long-term off-take agreements
- Need capital to invest in manufacturing facilities

Current gaps in knowledge

- Established (commercially viable) process routes and technologies from raw feedstock to chemical intermediate?



THANK YOU

Steve Davis

E-mail: sdavis@smri.org

Tel: 031 2731354

Fax: 031 2731302

Skype: steve.davis16

Web: www.smri.org

The SA Sugarcane Industry

Sugarcane production

- 26 000 registered growers
- 372 000 ha under cane
- 20 Mt of cane per annum
- 17.4% of total SA field crop production

Sugarcane processing

- 14 sugar mills
- 2 Mt of sugar
- 725 kt of molasses (committed)
- 3 Mt of bagasse (used for CHP)

Size of industry

- R12 billion pa
- Export earnings: R2 billion pa
- 60% of sugar marketed in SACU

Major employer:

- Direct jobs: 79 000
- Indirect employment: 350 000
- Dependent on industry: ~ 1 million

Strategically important industry

