Commercial Bio Succinic Acid Production

Alif Saleh
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Head of Succinic Acid & Derivatives Business Unit
Agenda

• Myriant at a glance
• Commercial production of Bio Succinic Acid
  - Leuna, Germany
  - Lake Providence, LA.
  - US expansion project
• Bio Butanediol
• Product value proposition
Using a Proprietary Technology Platform, To Produce Bio Succinic Acid

Not All Chemicals Are Created Equal™
Myriant’s DNA: Our People

R&D
48 Professionals, 27 PhDs
All core biotechnology developed in-house

Engineering
Process engineers
Full scale-up capabilities
Integrated with ThyssenKrupp-Uhde

Sales & Marketing
14 senior sales managers
Customer service
Application specialists

Manufacturing
54 plant operators
3 shift supervisors
Full QA/QC capabilities

Myriant
Global product roll out

- Headquarters: Boston, MA
- Production Plants: Lake Providence, LA, Leuna, Germany
- Distribution Agreements: SEA Joint Venture, PTT Global Chemical
Leuna, Germany Production Plant

- In production at **3 million lbs/yr** Bio Succinic Acid design capacity
- In collaboration with **ThyssenKrupp Uhde**
- Provides data to substantiate **process and performance warranty** provided by ThyssenKrupp Uhde.
Lake Providence, Louisiana Production Plant

- **30 million lbs/yr** Bio-Succinic Acid capacity
- **Successfully started up plant**
- **Largest** Bio Succinic Acid plant in the world.
- Project partner: Uhde ThyssenKrupp
Lake Providence, Louisiana Production Plant
Process and Quality Guaranteed

ThyssenKrupp-Uhde guarantees process scale-up and product quality
U.S. Expansion Plant: 140 Million Lbs of Production Volume

- **Site Selection Process** – Site selected by Q3 2013
- **Basic Engineering Package** – Underway
- **Detailed Engineering Package**
- **Procurement and Construction**
- **Start-Up**

Timeline:
- **2013**: Site Selection Process – Site selected by Q3 2013
- **2015**: Start-Up
Bio-Butanediol

- Over **0.8 million MT/yr** capacity installed globally using Davy BDO technology
- **Myriant and Davy have partnered** to enable the production of bio BDO.
- Davy is **guaranteeing** the production of market grade bio BDO from Myriant’s bio SAC.
Value proposition

- LOWER CARBON FOOTPRINT
- NO GREEN PRICE PREMIUM
- NON-FOOD BASED
- HIGHER PERFORMANCE
Thank you!