Processes Leading to Commercialization

Susan Hager
SVP, Corp. Communications & Gov’t Affairs

2013 BIO Pacific Rim Summit: Renewable Chemicals Platform
Myriant – Key Facts

The Company

- Formed in 2009; 140 Employees in 2013
- HQ in Quincy, MA
- 18,000 sq.ft. R&D in Woburn, MA
- Scale and Pilot Plant in Leuna, Germany
- Commercial Plant in Lake Providence, LA

Bio-Based Chemical Strategy

- Convert Renewable Feedstocks to High Value Chemicals
- Focus on C3-C6 Chemicals
- Leverage Deep Biotech Experience to Further Pipeline
- Build-Own-Operate Model
- Strategic Partnerships to Accelerate Growth
Using a Proprietary Technology Platform, to produce Bio-based Chemicals (Bio-Succinic, Bio-Acrylic, and Bio-Muconic).

Not All Chemicals Are Created Equal™
Succinic Acid Platform – Proven Chemistry Provides Access to High-Value Markets

Succinic Acid

$7.5B Market

Current Succinic Acid Applications

BDO Drop-in Applications i.e. Maleic Anhydride in BDO

Replacements for Adipic and Phthalic Anhydride

Proven Chemistry Provides Easy Access to High-Value Markets

SOLVENTS

BUTANEDIOL

PLASTICIZERS

URETHANES

BIODEGRADABLE PLASTIC

Proven Chemistry Provides Easy Access to High-Value Markets
Myriant Operations: Succinic Acid Plant
Lake Providence, Louisiana
30M lbs/yr
Myriant’s Process is Cost-Competitive with Petroleum-Based Substitutes Down to $45 per Barrel

Note: All costs based on North American market from IHS data
Strategic Partnerships Accelerate Market Access in Key Growth Geographies

Finance/Production Partners
- $100 M+ Investment
- Auria BioChemicals Joint Venture in Southeast Asia
- MOU for 220M Lbs. Succinic Acid Plant
- 80% of Capacity Captive for BDO Production

Technology/Integration Partners
- Global Alliance
- Process Guarantees & EPC Wrap
- BDO Process Guarantees
- Immediate Access to 1.8B Lb. Market
- Exclusive Integrated Process

Select Customers and Distributors
- Succinic Acid Bio-Based Resins and Adhesives
- Succinic Acid for PBS Production
- Distribution Agreement for Germany, Austria and Switzerland
- Requirements Contract Agreement; Turkey and Middle East
- Exclusive Marketing Partner for Japan and Korea
Succinic Acid Growth Strategy

- Joint Venture with PTT Global Chemicals
- Cassava/cane sugar as feedstock
- Basic engineering on going

140M Lbs/Year 2nd North American Plant

- Most likely corn based sugars as feedstock
- Site selection is in advanced stage
- Basic engineering on going

Capital Light Growth

- Partnering/licensing opportunities for selected geographies/products
Succinic Acid Development Success Criteria

**COMMERCIAL**
- 30M lb. Plant Started Up in Q3 ’13
- Plant Fully Financed with Significant Committed Demand
- Sales and Marketing Teams Have Started Selling U.S. Expansion Capacity

**PARTNERS**
- Global Alliance with Uhde for R&D, Scale-Up and Engineering
- Significant Partnerships with Global Leaders

**FINANCING**
- $85M of State and Federal Govt. Awards/ Loan Guarantees
- $100M+ Investment by PTTGC

**R&D**
- Technology licensed from University of Florida
- State-of-the-Art Lab in Woburn, MA
- Numerous Development and Scaling Milestones Achieved
  - 5,000L Fermentation Run
  - 20,000L Bio-Succinic Acid
Myriant’s Blueprint for Commercialization

**COMMERCIALIZED PRODUCT**
Lake Providence, LA Plant Has Started up, Expansion Strategy with Two Projects

**LARGE MARKETS**
$7.5B (Succinic Acid) Growing to Addressable $40B

**LEADING CUSTOMERS/ PARTNERS**
Building Demand Ahead of Capacity

**COST/PLATFORM ADVANTAGE**
Robust Pipeline and Cost Advantage for Multiple Bio Chemicals – Apply Commercial Blueprint to Pipeline

**PARTNERSHIPS**
Existing Partnerships Enable Global Reach and Accelerate Growth
Not All Chemicals Are Created Equal™