

## Myriant Succinic Acid Biorefinery (MySAB) Demonstration Facility

The demonstration biorefinery will validate the production of succinic acid using proprietary, integrated, biocatalytic processes to displace petroleum based production of this platform chemical

The demonstration facility will be located in Lake Providence, Louisiana on an existing site that will also be the future site of a fully commercial operation. The project will prove Myriant's ability to rapidly commercialize and replicate technology to produce biobased products such as succinic acid. After demonstrating the scale on sorghum grain grits at 55.1 dry tons/day, the demonstration facility will evaluate production of succinic acid using lignocellulosic derived sugars.

### Technology & Project Description

Myriant's technology will enable the production of succinic acid, an industrial organic chemical building block that can be used in the production of polymers, solvents, and pigments. Succinic acid is also a starting or intermediate material for a number of commercially significant specialty chemicals and chemical processes (e.g., butanediol), and can be substituted directly into commercially existing processes. Myriant's technology is based on a proprietary platform that involves modified (non GMO) *Escherichia coli* strains to produce succinic acid. The overall process has been demonstrated at pilot scale and this project will develop the scaling factors needed for developing commercial sized operations. The overall fermentation process has been developed by a team



*Myriant Succinic Acid Biorefinery Lake Providence, Louisiana site*

with previous experience in commercializing similar biobased production facilities such as D(-)lactic acid and riboflavin. The process uses carbon dioxide as a reagent and pilot-scale data demonstrates lower energy requirements per ton of product than the petroleum based process.

### Potential Impact

Bio-derived succinic acid can serve as a platform chemical that can be converted to a suite of chemical intermediates that are currently produced from petrochemical sources. These biobased substitutes would displace imported oil that is currently used to make commercial fibers, solvents and even fuel additives. The intent is to help move the U.S. closer

towards petroleum independence and reduce emissions of greenhouse gases.

Myriant's intention is also to use lignocellulosic derived sugars, further benefiting United States' agriculture and forestry industries by providing them with additional markets for their waste products such as wood or agricultural residues, as well as enhancing economic and environmental sustainability.

### Other Participants

Myriant will be supported in the engineering design and construction phases of the project by CH2MHill, UCA and AECOM.

Prime	Myriant Technologies, Inc.
Locations	Quincy, MA (Offices); Woburn, MA (Labs); Lake Providence, LA (Project Site)
Feedstock (s)	Sorghum grain grits and lignocellulosic
Size	50 dry metric tonnes per day (55.1 short tons/day)
Primary Products	Organic acids such as succinic and others and ammonium sulfate fertilizer
Capacity	30 million lb/year of succinic acid
Award Date	March 31, 2010
GHG Reduction	greater than 60% reduction versus fossil product
Anticipated Job Creation	Up to 50 permanent operations jobs and up to 250 temporary jobs during construction at peak
Company Point of Contact	Sam McConnell, smcconnell@myriant.com (617) 657-5200