# Myriant Succinic Acid Biorefinery (MySAB)

**Myriant's flagship facility will produce 30 million pounds of bio-succinic acid annually.**

The biorefinery is located in the Port of Lake Providence, Louisiana. Currently, the facility is under construction and scheduled to start up in the first quarter of 2013. More information is available on Myriant's website.

## Project Description

Myriant's technology will enable the production of bio-succinic acid—an industrial organic chemical building block that can be used in the production of polymers, solvents, and pigments. Bio-succinic acid is also an intermediate material for a number of commercially significant specialty chemicals and chemicals processes (e.g., butanediol), and it can be substituted directly into commercially existing processes. Myriant's technology is based on a proprietary platform that involves modified (non-genetically modified organisms) *Escherichia coli* strains to produce bio-succinic acid. The overall process has been demonstrated at increasingly larger scales, and this project will confirm the design parameters for even larger commercial-sized operations. The overall fermentation process has been developed by a team 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 data demonstrated lower energy requirements per ton of product than the petroleum-based process.

## Potential Impacts

Myriant displaces petroleum-derived chemicals by making the same chemicals from renewable feedstocks with no green premium and reduced environmental impact. Bio-succinic acid can serve as a platform chemical, which can be converted to a suite of chemical intermediates that are currently produced from petrochemical sources, with its performance being as good or better. Bio-succinic acid represents a $7.5 billion market as a replacement of current succinic acid applications; butanediol drop-in applications; and also replacements for adipic and phtalic acid.

MySAB is a multi-feedstock facility that is built to process a variety of renewable feedstocks, including sugars derived from grain sorghum and other commercially available sugars. Myriant's goals for this project are to help move the United States closer to petroleum independence and reduce the nation's carbon footprint.

*Myriant Lake Providence Bio-Succinic Acid Biorefinery; Louisiana site as of July 2012.*

## Participants

Engineering, design, and construction partners include the following: Uhde Corporation of America; PCE Constructors, Inc.; Shaw Engineering; Leading local contractors; CH2MHill; and the Port of Lake Providence.

Funding sponsors include the following: U.S. Department of Energy Bioenergy Technologies Office; U.S. Department of Agriculture Rural Development; Louisiana Department of Transportation and Development; Lake Providence Commission; and Heartland Bank.

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| **Prime** | Myriant Corporation |
| **Location** | Quincy, Massachusetts (Headquarters); Woburn, Massachusetts (Research Facility); Lake Providence, Louisiana (Commercial Facility) |
| **Feedstock (s)** | Multi-feedstock capability |
| **Primary Products** | Bio-succinic acid |
| **Capacity** | 30 million pounds per year of bio-succinic acid |
| **Award Date** | March 31, 2010 |
| **GHG Reduction** | Greater than 60% reduction versus petroleum-based product |
| **Anticipated Job Creation** | 50 direct jobs, more than 250 jobs during construction peak, and more than 250 indirect jobs |
| **Company Contact** | Susan Hager, shager@myriant.com, (617) 657-5222 |

DOE/EE-0824 • December 2012

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