



Welcome to the Department of

**Agricultural and Biosystems Engineering**



**Graduate Student:** Name: Maitri Thakur  
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PHOTO

**Major Professor:** Dr. Charles Hurburgh Jr.

**Degree Sought:** PhD (Fall 2009)

**Research Project Title:**

Developing operational techniques for tracking bulk agricultural material through handling systems and supply chains

**Research Objectives / Purpose:**

The objectives of this study are:

1. To develop a conceptual model of a fully traceable supply chain for bulk agricultural commodities.
2. To design traceability systems database for a grain elevator.
3. Optimization of grain handling costs in an elevator by minimizing lot aggregation.
4. Simulation based cost analysis of implementing traceability system in a grain elevator.

**Anticipated Benefits or Goals of Research:**

The stated objectives will lead to development of a traceability management system for handling bulk agricultural commodities. It would be possible to adapt this system to various food and feed handling and processing environments.

**Recent Publications / Posters / Presentations:**

NC213: Conceptual Design of Fully Traceable Supply Chain for Bulk Agricultural Commodities, *Omaha, Nebraska (February, 2008)*

Class Project: Supply Chain Management: Multiple Route Optimization (*November 2007*)

Iowa State University: Operational Techniques for Tracking Bulk Grain through Handling Systems and Supply Chains, Traceability in U.S. grain and livestock markets, *Ames, Iowa (August, 2007)*

JAOCS: Quality of US Soybean Meal Compared to the Quality of Soybean Meal from Other Origins, *Publication (July, 2007)*

<http://www.springerlink.com/content/65qrkk5324974h87/>



Class Project: Dynamic simulation model for tracking grain lots in an elevator (May 2007)

AOCS Annual Meeting: Quality of US Soybean Meal Compared to the Quality of Soybean Meal from Other Origins, *St. Louis, Missouri (May, 2006)*

Class Project: Quantification of Oil Present in Corn Masa By-product Stream (May 2004)

**Other Education Degrees:**

Master of Science, Agricultural and Biosystems Engineering, Iowa State University, Ames, IA

Bachelor of Technology, Agricultural Engineering, Punjab Agricultural University, India

**Professional Affiliations:**

American Society of Agricultural and Biological Engineers

American Oil Chemists Society

Alpha Epsilon (Honor Society for Agricultural Engineers)

Iowa State University Agricultural and Biosystems Engineering Graduate Organization

Iowa State University MIS Club

**Vita or Resume:**