

Contact: Patrice Sayre

ECONOMIC DEVELOPMENT PRESENTATION AT THE UNIVERSITY OF NORTHERN IOWA
“MICROWAVE PROCESSING TECHNOLOGY COMMERCIALIZATION”

Action Requested: Receive the presentation.

Executive Summary: The National Ag-Based Lubricant (NABL) Center, formerly the University of Northern Iowa Ag-Based Industrial Lubricants Research Program, was established in 1991 with a grant from the Iowa Soybean Promotion Board. Specializing in the research and development of vegetable-based lubricants, NABL has successfully developed and licensed to market more than 30 products ranging from multi-grade hydraulic fluids, to niche-market greases, to gear lubricants - proving that vegetable formulations are not only feasible, but offer specific performance advantages, and are environmentally preferable. NABL has successfully eliminated barriers that once kept soybean-based products from capturing a portion of the existing 2.4 billion gallon lubricants market.

Dr. Lou Honary, director of UNI's NABL Center, will describe a new microwave grease production technology that is being commercialized by Marion Mixers with assistance from another Iowa company – AMTek Microwaves. This technology promises to reduce energy consumption while improving safety and competitiveness of the American process industry. Microwaves are directly applied to the products, not the cooking (reaction) vessels, resulting in a more efficient process. The invention came about after a devastating fire in 2007 that destroyed a biobased lubricant company that used conventional hot oil heating for processing. The idea has been presented at national and international conferences and published in several technical journals receiving spectacular reactions. This technology transfer offers an excellent example of universities working with Iowa based companies towards improving the economic competitiveness of our industry

Joining the UNI faculty in 1982 to teach fluid power and engineering classes, Dr. Honary founded what is now the NABL Center nine years later. As director of NABL, Dr. Honary is responsible for coordinating all activities and functions of the center. This includes the research and development of new products, fee-based training and testing, and overall market advocacy and promotion of the biobased industry. In addition, Dr. Honary works to cultivate solid relationships with industrial and academic partners. These efforts continue to produce mutually-beneficial collaborations between NABL and its associates.