

**Contract No. R-008-018**  
**“Biomass Testing Laboratory for Physical & Thermal Characteristics of ND Feedstock”**

Submitted by North Dakota State University  
Principal Investigators: Gustafson and Cannayen

**PARTICIPANTS**

<b>Sponsor</b>	<b>Cost Share</b>
NGPRL USDA-ARS	\$125,053
NGPRL USDA-ARS	\$ 99,947 (in-kind)
North Dakota Industrial Commission	<u>\$225,000</u>
Total Project Cost	\$450,000

Project Schedule – 24 months  
Contract Date – November 23, 2010  
Start Date – June 1, 2010  
Completion Date – June 30, 2012

Project Deliverables:  
Status Report: November 30, 2010 ✓  
Status Report: April 30, 2012  
Final Report: June 30, 2012

**OBJECTIVE/STATEMENT OF WORK:**

The goal of this project is to establish a Biomass Testing Laboratory to evaluate physical and thermal characteristics of diverse ND feedstock and the densified biomass products. The lab will be a joint venture between NDSU and USDA-ARS in Mandan. The lab will provide North Dakota with a way to measure quality of biomass feedstocks, producing a unique industry and market database of performance characteristics. The funding provided by the North Dakota Industrial Commission/Renewable Energy Program will be utilized to purchase four pieces of equipment: Thermo Gravimetric Analyzer; MTI Universal Testing Machine; Environmental Control Chamber; Bomb Calorimeter.

**STATUS**

Contract has been executed and the matching funds have been verified.

March, 2011

Additional time (March 1) was granted to the Contractor to provide the first Status Report. The report was received in March and detailed information was provided regarding the purchasing process and actual purchasing of the four pieces of equipment. A number of outreach activities have taken place highlighting the capabilities of the Biomass Testing Laboratory: NDSU Agriculture Communication News; Customer Focus Group; 2010 Annual Highlights of NDSU ND Agricultural Experiment Station and NDSU Extension Service; Renewable Energy Day at the Capitol; and 2010 Research Results & Technology Conference

April, 2012

Due to a number of factors--flooding, installation delays, faulty equipment components that required additional time in working with the equipment supplier to determine cause and then replacement of the faulty component(s)--NDSU was delayed in submitting their second status report. An amendment has been requested and approved extending the date for the second status report and also extending the date for the final report.