Biomass Heating for Poultry Research Project Reduces Costs, Improves Flock Production at Albany, MN Operation

Lessons learned can advance biomass heating for poultry barns across the region

FOR IMMEDIATE RELEASE

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Viking Company owner Bill Koenig of Albany, MN with a handful of wood chips (left) to be burned in the biomass furnace heating one of his broiler chicken barns (right).

Wed., Jan. 17, Albany, MN – Viking Company of Albany, MN, along with partners Clean Energy Resource Teams and the Agricultural Utilization Research Institute, are pleased to announce the findings of the “Advantages of Wood Heat for Poultry” field study.

The demonstration project field-tested a 1.65 million Btu (British thermal unit) wood chip furnace in a live commercial poultry operation. The wood furnace demonstrated considerable fuel cost savings against historically low liquid propane prices, saving an average of $8,029 per year against liquid propane prices just above $1.00 per gallon. As anticipated, fuel cost savings from using woody biomass were highest in the colder months when thermal demand is greatest.
Viking Company observed additional flock production benefits beyond fuel cost savings, including **reduced bird losses and improved feed conversion**. These indicators point to an effective cost savings for poultry producers and their integrators. Though beyond the scope of this energy project, future studies that prove out these benefits could make this technology a “no brainer.”

**About the field study:** The project, funded by the Minnesota Department of Agriculture’s Agricultural Growth, Research and Innovation Program (AGRI), spanned 23 months and 12 flock rotations. Viking Company, an experienced poultry growing operation, hosted and operated the wood furnace in its two-story broiler chicken barn as a test. An identical barn heated with liquid propane immediately adjacent to the test barn served as an experimental control to observe differences in operability, fuel costs, and flock production.

Following the successful pilot project, Bill Koenig of Viking Company is actively pursuing the design and financing of a more universally applicable biomass heating plant in their remaining conventionally LP heated chicken barn. “Lessons learned are telling us the **overall initial cost can be significantly lower while retaining the positive benefits** realized in the prototype system and securing safety and insurability,” Koenig noted.

**Results and future use:** This project provided detailed insight into the use of wood heat to meet the thermal needs of poultry production. The data collected demonstrates woody biomass is a viable, cost-effective fuel for producers looking for alternatives to liquid propane. According to Koenig, Pilgrim’s (home of Gold’n Plump and Just BARE brand chicken) continues to show interest in biomass heat exchange as a desirable choice of poultry house heat and Pilgrim’s is in discussions with Viking Company to develop ways to provide support and collectively benefit from the outcomes.

**For more information about the project and technology applications:** Contact Fritz Ebinger, Program Manager for Rural Energy Development with the Clean Energy Resource Teams (CERTs) at University of Minnesota Extension Regional Sustainable Development Partnerships at 612-626-1028. The final report can be downloaded at [http://mncerts.org/vikingbiomass](http://mncerts.org/vikingbiomass).

**About the Project Partners:**

**Viking Company**

Viking Company is a broiler chicken growing operation in Albany, MN. It is a limited partnership family farm, owned and operated by managing partner Bill Koenig and his family. Mr. Koenig has been raising broiler chickens for over 36 years, primarily as a contract grower for the Gold’n Plump and Just BARE brands owned by Pilgrim’s.
**Clean Energy Resource Teams (CERTs)**
The Clean Energy Resource Teams are a statewide partnership with a shared mission to connect individuals and their communities to the resources they need to identify and implement community-based clean energy projects. CERTs partners include University of Minnesota Extension Regional Sustainable Development Partnerships, Great Plains Institute, Southwest Regional Development Commission, and the Minnesota Department of Commerce, Division of Energy Resources. | mncerts.org

**Agricultural Utilization Research Institute (AURI)**
The Minnesota Legislature created the Agricultural Utilization Research Institute to generate economic impact in Minnesota by helping develop new uses for agricultural products through science and technology. AURI accomplishes this by helping businesses take advantage of innovative opportunities in four focus areas: biobased products, renewable energy, coproducts and food. AURI’s mission is to foster long-term economic benefit for Minnesota through value-added agricultural products. | auri.org

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**Photos from the project:**
Select photos with captions below. To download full-resolution photos and find more images, visit the Flickr album at https://www.flickr.com/photos/mncerts/sets/72157682190126600.

Viking Company owner Bill Koenig of Albany, MN shows tour participants the wood fuel storage bunker containing two types of fuel used in the biomass heating system for one of his broiler chicken barns. Submitted photo.
Viking Company owner Bill Koenig of Albany, MN with a handful of wood chips that will soon be used to heat one of his broiler chicken barns. Submitted photo.

Tour participants take a close look at the biomass furnace heating a barn at Viking Company, a broiler chicken growing operation in Albany, MN. Submitted photo.
A peek into the biomass furnace at broiler chicken operation Viking Company in Albany, MN during a recent tour. Submitted photo.

This photo shows the relatively small pile of ash resulting from burning seven semi-truck loads of biomass in the furnace at Viking Company in Albany, MN. Submitted photo.