

## **A Study on the Utilization of Biomass at the University of Central Missouri (UCM)**

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The University of Central Missouri (UCM) is located in Warrensburg, MO, in west central Missouri. There is a great deal of interest in biofuels in the region evident by biomass to fuel facilities in Malta Bend and Centerview, which are all in close proximity to UCM. Five areas of the UCM campus are being investigated for potential biomass production by the Center for Alternative Fuels and Environmental Systems: UCM proper (58 acres plus 35.7 acres for the south athletic fields), Pertle Springs (489.7 acres), Sky Haven Airport (748.4 acres), Mitchell Farm (122.7 acres), and Prussing Farm (90.5 acres). The acreages were found using GIS analysis and the "improved" areas were eliminated from the total available acreage. The potential energy that UCM could produce and the cost savings realized from farmgate prices were estimated using data generated from *CAFES* and/or recent literature. From our calculations, UCM could potentially produce ~35 million total kWh per year from the combined biomass produced at UCM which more than enough to power UCM while sequestering more than 1,000 tons of C per year. This study also includes extensive seasonal chemical analysis of the soil, water and biomass candidates.

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