M.S. Assistantship: Carbon and Nitrogen Dynamics in Developing Bioenergy Agroforest Plantations

The School of Forest Resources, University of Arkansas, Monticello has a M.S. Assistantship available beginning in the summer or fall of 2011. The assistantship is half time and carries a stipend of $15,000+tuition.

Project: The assistantship will work on a project developing cottonwood/switchgrass agroforest systems for supplying cellulosic bioenergy feedstocks in the Lower Mississippi Alluvial Valley (LMAV). The intent of this project is to develop a range of agroforest systems that can produce cellulosic feedstocks on marginal land as well as ecosystems services such as wildlife habitat, carbon sequestration, nutrient retention, and soil sustainability. Funding for this project is through USDOT Sungrant, USDA Sustainable Agriculture Research and Education, and USDA Agriculture and Food Research Initiative. The project is a coordinated effort between scientists in Arkansas and Louisiana. The MS assistantship will focus on carbon and nitrogen dynamics in these developing agroforests (cottonwood, switchgrass, and combined cottonwood/switchgrass cropping systems) compared to that in traditional agriculture ecosystems that are grown on marginal soils in the LMAV. The student will investigate these dynamics in relation to carbon sequestration and nitrogen retention by these crops. Nitrogen mineralization, nitrogen loss, and CO$_2$ gas flux are being monitored within this the study area to support the project. More project details can be found at the following site http://www.afrc.uamont.edu/liechtyh/Bioenergy%20Agroforest.htm

Requirements: A 2.7 overall undergraduate GPA or 3.0 GPA in the last 60 semester hours of undergraduate courses and satisfactory GRE scores (verbal+quantitative ~1000). A B.S. degree in environmental science, biology, soils, agriculture, forestry or a related field is also required. Be able to drive an automobile in the U.S.

Location: The School of Forest Resources and Arkansas Forest Resources Center are regionally and nationally recognized for their Natural Resource Research and Education activities. The SFR and the AFRC performs research on a variety of topics and issues and is currently undergoing a $6 million dollar building expansion. The SFR has a number of high quality laboratories (water quality/soil, Spatial Analysis Laboratory, and wildlife management) that are utilized on a daily basis by graduate students.

Contact Information: For additional information or to apply contact Dr. Hal O. Liechty School of Forest Resources http://www.afrc.uamont.edu/liechtyh/, UAM, P.O. Box 3468, Monticello AR 71656. Phone:870-460-1452, E-Mail: Liechty@uamont.edu. Graduate materials and information can be found at the following websites: http://www.afrc.uamont.edu/sfr/graduate_education.htm