

Position – Multiple Graduate Research Fellowships (Economic Land Use and Pollination Services) – University of North Dakota, Department of Earth System Science and Policy (Grand Forks, ND)

Graduate research assistantship is available to support student pursuing M.S. or Ph. D. degrees in the Department of Earth System Science and Policy (ESSP) at the University of North Dakota (UND). ESSP provides a student-centered learning environment with expertise in hydrology, climate change, terrestrial ecosystem, physical geography, economics and policy.

The project is to assess the impact on honey bee health and mortality, pollination services, and multiple Northern Plain ecosystem services of economic land-use decisions driven by the crop market, agricultural policy, and conservation programs. The research team will: 1) Apply a geospatial model to identify landscape suitability for commercial-scale apiary sites; 2) Develop spatially explicit economic model of land use and management practices; 3) Conduct a broad-scale field study to determine the influence of habitat quality on colony survival and provision of pollination services; 4) quantify changes in pollinator habitat and other related ecosystem services under alternative land use change scenarios. The outcome from the analysis we propose on foraging scale, colony survival, resource availability, and agricultural profitability from different management schemes can be used to determine better practices in managing agricultural landscapes for pollination function within the matrix of more conventional cropland. The graduate assistants will have opportunities to participate in the field study and communicate with commercial apiaries in summers.

The fellowships are initially guaranteed for 3 years at approximately \$1,500 per month for a M.S. candidate and \$1,800 per month for a Ph. D. candidate. Candidates should have a B.S. or M.S. degree, preferably in Economics, Agricultural Economics, Geography, Biology, or related fields with strong GIS, spatial, and quantitative analytical skills.

To apply for our graduate program, you have to meet the minimum requirements on academics and English proficiency (for international students). Please refer to the UND's graduate school website (<http://graduateschool.und.edu/graduate-students/new/>) for further information.

If you meet the minimum qualifications and would like to know more about the positions, please contact **Dr. Haochi Zheng** (hzheng@aero.und.edu<<mailto:hzheng@aero.und.edu>>). **Review of applications will continue until the positions are filled.**