

USAD Economic Research Service Economist– GS 13-15 Level – Kansas City, MO

USDA's Economic Research Service has a high priority need for an Economist at the GS 13-15 level to work with the Regional Environment and Agriculture Programming (REAP) model in our Kansas City, MO office. REAP was born of the movement towards large-scale mathematical programming models of agricultural production. Programmed in GAMS, the main function of REAP is to simulate the regional allocation of resources (land and other inputs, such as fertilizer and water) used by production agriculture in the U.S. and how those allocations change in response to changes in policy, market, or bio-physical conditions. The products included in REAP are commodity crops, livestock, and several specialty crops, like fruits and nuts. REAP is a partial equilibrium, price endogenous model that solves for an optimal intersection of supply and demand at the national level, allowing for regional variation according to differing resource endowments, inputs and production. The optimization allocates agricultural production into regions, crop rotations, production methods (tillage and irrigation options), and livestock and processed goods production pathways that maximize national economic surplus. An important and distinguishing feature of REAP is the inclusion of environmental impact drivers and outcomes, such as nutrient loss, soil erosion, and GHG emissions that are specific to the crop rotation, soil type, tillage system, and more. These measures can be used to inform potential consequences to air and water quality from changes in U.S. agricultural production.

ERS has been the home to REAP since the 1980s, and the model is used extensively to inform reports, journal publications, and important policy discussions. While experience with GAMS, R, database management, and/or biophysical modeling is useful, more important is a willingness to take on the modeling challenges and an ability to formulate analysis of complex policy issues and communicate results through writing, briefings, seminars, and more. Training is provided. This is an exciting opportunity to do policy relevant work in a supportive research environment. Please go to <https://www.usajobs.gov/GetJob/ViewDetails/568710600> and apply before the June 9, 2020 deadline. ERS is a great place to work and we are interviewing and on-boarding new staff throughout the COVID-19 crisis, so please consider applying and share widely with your networks! For more information contact Kelly Maguire, Chief of the Conservation and Environment Branch, Kelly.maguire@usda.gov.