MANHATTAN — A Kansas State University expert will serve on a National Research Council committee studying the economic and environmental impacts of increasing biofuels production.

"It is a very big honor to be appointed to this committee and suggests a recognition that social scientists have an important contribution to make in these environmental and energy policy debates," said Theresa Sella, assistant professor of sociology at K-State.

Sella will join approximately 15 other experts from across the country to examine the Renewable Fuels Standard, biofuel tax and tariff policy, and production costs on biofuel and petroleum refining capacity. The committee will look at current and future biofuels that are projected to be used by 2022 under different policy scenarios. The study, which was called for by the U.S. Congress, also will examine the effect of biofuels production on the number of U.S. acres used for crops and forestry, and the associated changes in the price of rural and suburban land.

Other factors associated with biofuel production that Sella will help review are U.S. exports and imports of grain crops, forest products and fossil fuel and how the price of domestic animal feedstocks, forest products and food grains are affected. Cost analyses include the effect of biofuel production on federal revenue and spending through costs or savings to commodity crop payments, biofuel subsidies and tariff revenue.

The committee also will help conduct environmental analysis of biofuels, such as how they impact land use, fertilizer use, runoff, water quality and greenhouse gas emissions. The review board will look at the differences between corn ethanol and other biofuels and renewable energy sources for the transportation sector based on life-cycle analyses, cost, energy output and environmental impacts.

To aid in the group's analysis, the committee will seek input from feed grain producers, food animal producers, energy producers, forest owners, individuals interested in nutrition, users of renewable fuels and experts in agricultural economics.

Sella said the group was formed in December 2009 and is in the process of research. The project is to be completed in summer 2011. She said it is important for several reasons.

"It will assess scenarios and their impacts of future advanced biofuels production, which is currently one of the main policy thrusts for renewable energy production and use," she said.
Selfa has a doctorate in development sociology from Cornell University. Her research interests include rural, environmental, agricultural and development sociology. She has a keen interest in biofuels production.

"My particular interest is in the social dimensions of biofuels production, which has not been given as much attention as many other technical aspects related to production," she said. "How will this affect our energy-use patterns, but more importantly, how will it affect communities in which the production is located?"

Currently, Selfa is the principal investigator on a study funded by the U.S. Department of Energy on the impacts of biofuels on rural communities in Kansas and Iowa. She is a co-principle investigator on a National Science Foundation Experimental Program to Stimulate Competitive Research project "Biofuels and Climate Change — Farmers' Decisions to Grow Crops for Fuel," examining farmers' land use and decision-making related to biofuels feedstock production in Kansas.

Selfa is an adviser on a National Science Foundation Integrative Graduate Education and Research Traineeship at K-State, "From Crops to Commuting: Integrating the Social, Technological, and Agricultural Aspects of Renewable and Sustainable Biorefining, or I-STAR." She also works on the social dimensions of other agricultural and environmental issues in the U.S. and abroad.