The May/June issue of *Journal of Environmental Quality* features in-depth USGS investigations in five agricultural watersheds across the United States.

Findings highlight how natural environmental processes and agricultural practices interact to determine the transport and fate of agricultural chemicals in the environment. The holistic study design focuses on the catchment scale and addresses several environmental compartments, including surface water, ground water, the unsaturated zone, the streambed, and the atmosphere. The study areas were selected to represent major agricultural settings and, therefore, findings are relevant throughout much of the Nation.

The papers can be accessed at http://jeq.scijournals.org/content/vol37/issue3/ by selecting "Special Submissions." Highlights include:

- **Capel** and others provide an overview of the holistic study design, descriptions of the study areas, data-collection methods and water budgets.
- **Domagalski** and others discuss the downstream transport of agricultural chemicals and show how hydrologic and landscape modifications—such as irrigation and enhanced soil drainage—change the magnitude and timing of water flux and transport into and through the system.
- **Vogel** and others report on the frequent occurrence of pesticides, including parent compounds and their degradates, in precipitation.
- **Alvarez** and others demonstrate a passive sampling method to conduct chemical and toxicological assessments of organic agricultural contaminants for aquatic biota.
- **Fisher and Healy** explore the movement of water in the unsaturated zone and provide the basis for **Green** and others to characterize and compare the downward movement of nitrogen from the land surface to ground water in different agricultural settings.
- **Hancock** and others, **Steele** and others, **Bayless** and others, and **Webb** and others present data and model simulations that highlight the abundance and persistence of pesticides and their degradates in the unsaturated zone and their movement to ground water.
- **Green** and others assess the potential for natural attenuation of nitrate, and conclude that although attenuation by denitrification occurs to some degree at all sites studied, rates are often too slow to prevent nitrate transport and contamination of ground water and discharge to streams.
- **Essaid** and others use heat as a tracer to quantify water flux through streambeds to help define interactions between surface and ground water. Building on this work, **Puckett** and others explore biochemical processes in the streambed and other site-specific factors that can affect nitrate attenuation.
- **Duff** and others investigate how whole-stream processes—such as photosynthesis and transient storage—and stream conditions can change nitrate loads in surface water receiving agricultural runoff.

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