

Invitation to submit to a Special Section of papers in JEQ: “Antibiotics in Agroecosystems: State of the Science”



Guest Editors:

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Invitation to submit short abstracts for consideration before February 27, 2015

We invite authors to provide abstracts of papers they intend to submit for the Special Section before February 27, 2015. These abstracts should include a list of contributory authors and their affiliations, an appropriate title, and a brief abstract of < 250 words.

Suitable abstracts invited to submit full manuscripts by May 31, 2015

Submitted abstracts will be considered by the Guest Editors and Technical Editor. Those deemed suitable will be invited to submit full manuscripts to the Journal of Environmental Quality before May 31, 2015. Abstracts must reflect original research related to objectives in Special Section Rationale, below. All full manuscript submissions will be subject to the JEQ peer review process.

JEQ Author Instructions can be found at <https://dl.sciencesocieties.org/publications/jeq/author-instructions>

Special Section Rationale

In order to assess the transfer of antibiotic resistance from agroecosystems to human settings, it is essential to better understand natural background levels, and the persistence and mobility of specific types of resistance. Currently, consensus does not exist on which antibiotics, types of resistance, or specific antibiotic resistance genes are most relevant to the study of how agricultural antibiotic use impacts human health. For example, these impacts may occur directly through the presence of residual antibiotics in meat consumed by humans, or indirectly through antibiotics and genes in biosolids and manures used for soil amendment or wastewater used for irrigation.

The World Health Organization recently called for development of “internationally recognized principles for risk assessment....related to antimicrobial resistance owing to non-human use of antimicrobials”. Consequently, there is a need for the research community involved in environmental tracking of antibiotics, resistant bacteria and resistance genes, to develop a standardized and rigorously validated suite of methods that can be used across the farm-to-fork continuum to inform public health risk assessment models.

This collection of papers will be led by a group of five review papers that define and summarize the current state of knowledge to address potential connections between antibiotic use and the development of resistance that will be critical in defining risks. Invited technical papers must consist of research that critically examines the detection, transport, and fate of antibiotics and antibiotic resistance in agroecosystems. Submission of empirically-based papers is encouraged, although high-quality modeling papers that include model validation are also welcome. Monitoring and observation papers will be considered if they test a hypothesis that will advance our knowledge and understanding of existing environmental concepts.

Please send abstracts to the Technical Editor, Dr. Robert Dungan at robert.dungan@ars.usda.gov