

Environmental Science & Technology

To the editor

Eduard Szöcs

*University of Koblenz-Landau
Institute for Environmental Sciences
Fortstr. 7
76829 Landau - GERMANY
Phone: +49 6321 280 31552
E-mail: szoecs@uni-landau.de*

Submission of article

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Dear Editor,

enclosed is a manuscript to be considered for publication in Environmental Science & Technology titled
Large scale risks from pesticides in small streams

Pesticides enter freshwater ecosystems from agricultural areas and may have adverse effects on biota. However, relatively little is known about their large-scale distribution and dynamics. Especially, small streams may be at high risk because of adjacency to fields and small water columns.

We compiled and homogenized monitoring data from all German Federal States with a focus on small streams. Our results show that:

1. there is currently a lack of knowledge for small streams
2. the influence of agricultural land use is non-linear with a threshold at 25%
3. measured pesticide concentrations increase by precipitation before sampling and therefore current monitoring underestimates risks
4. show compound specific yearly dynamics that corresponds to applications
5. especially, neonicotinoids pose a risk to small agricultural freshwaters.

Our study should be of general interest and adds valuable information on chemical monitoring, pesticide dynamics and ecological risk arising from them.

If you have any further questions do not hesitate to contact me.

Yours sincerely,

Eduard Szöcs