

## Risk management of As in the agricultural soils of Europe

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Arsenic-rich drinking water and food causes health risks in many parts of the world. The AgriAs project has investigated the speciation and transformation of As in soil, its uptake by plants and the impact on the quality of both surface water and groundwater. The goal has been to evaluate the risks and compile recommendations. In addition, water purification and soil remediation technologies have been developed.

The As concentrations in soil are higher on average in southern and central Europe than in the northern parts of Europe. The experimental work of AgriAs was focused on two study sites, one close to Verdun, France, and the other in Freiberg, Germany. Verdun: Over one billion shells and projectiles were fired in Europe during the World War I. After the war, 3Mt of ammunition had to be destroyed in northeast France. Freiberg: After 800 years of mining in Saxony, Germany, agricultural soils show values exceeding the German action value of 50 mg/kg As in a region of > 1,000 km<sup>2</sup>. Recommendations are given by the German authorities for the management of As-rich soils used for agriculture and gardening.

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