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How the misleading labeling of herbicides can affect the pollution of groundwaters and contribute to the herbicide resistance

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TOPICS

- Pesticides in Serbia
- Method
- Results
- Conclusion



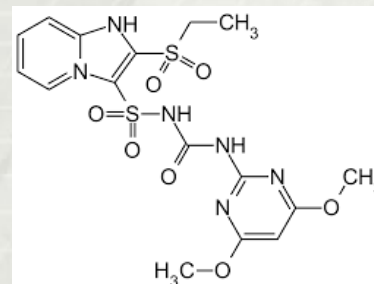
PESTICIDES IN SERBIA

Numerous registered pesticide formulations with one, two, and even three active substances in the same formulation

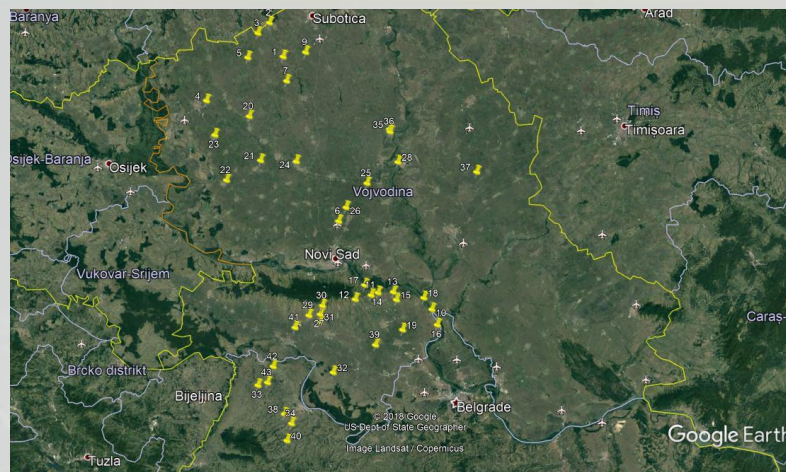
More than 300 registered active substances.

Pesticide leaching:

- Properties
- Rate of application
- Soil organic matter



METHODS



41 locations in Vojvodina
65 pesticides and their metabolites
21 herbicides.

SPE Disc extraction C-18
HPLC MS MS
GC-MS



RESULTS

Low application rate herbicides:

- metsulfuron methyl
- prosulfuron
- Iodosulfuron-methyl
- tritosulfuron
- rimisulfuron

In more than 10 % of groundwater samples

CONCLUSIONS

🌐 Low application rate



- 🌐 Low ground water pollution?
- 🌐 YES but....

🌐 MSDS of one pesticide:

Labelling according Regulation (EC) No 1272/2008

Pictogram	
Signal word	Warning
Hazard statement(s)	
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
Precautionary statement(s)	
P273	Avoid release to the environment.

- 🌐 Is it possible to use pesticides and achieve this requirement?



Thank you for your attention

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