

Tools for a coherent risk assessment for pesticides

Theme: Water Framework Directive

BO-06-006-001

Problem

Risk assessment for pesticides within the context of 91/414/EEC has its main focus on relatively small water bodies in the direct vicinity of agricultural fields. It considers mainly short-term exposure and follows a tiered approach. The Water Framework Directive (WFD) has its main focus on larger water bodies, where risks prevail due to long-term exposure to low concentrations of pesticides. Current knowledge of long-term risks is only limited. There is an urgent need for a harmonized coherent risk assessment framework. Instruments and tools are necessary to predict effects on different spatial and temporal scales.

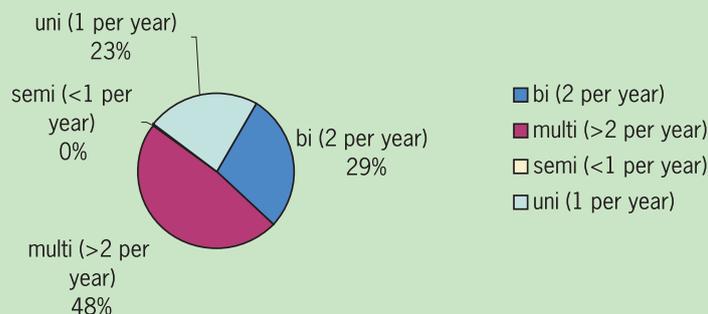
Approach

- Development of risk assessment tools for quantifying effects of pesticides on (meta)population and ecosystem level
- Assessment of risks of long-term exposure to low concentrations of pesticides in mesocosms
- Description of a ditch target community in terms of Life-History-Traits and quantitative species composition



Output PERPEST model.

Macroinvertebrates in agricultural ditches: number of generations per year (9590 individuals)



Volturnism of macroinvertebrates characteristic for agricultural ditches.

Results

- PERPEST model on ecosystem level
- MASTEP model on metapopulation level
- Experimental dataset on long-term effects in mesocosms, to be analyzed in 2008
- Traits dataset of characteristic ditch species

Future use in risk assessment

The tools and instruments contribute to a harmonization of the risk assessment within the context of 91/414/EEC and WFD.

Communication 2008

- Paper describing the long-term effects of exposure to low concentrations of the herbicide metsulfuron-methyl
- A prototype for effect models on (meta)population and ecosystem level

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