




Risk Management for Weed Control on Railways in Germany

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Outline

- **Introduction**
- **Regulatory Framework in Germany**
- **Environmental Risk Assessment**
- **Special Risk Mitigation Measures**
- **Conclusions**

Introduction

- **Herbicide application on railways – special conditions**
 - **No harmonised scenarios on EU level**
 - **no natural soil profile**
 - **degradation**
 - **sorption**
 - **special application technique**
-  **not covered by standard studies and guidance**

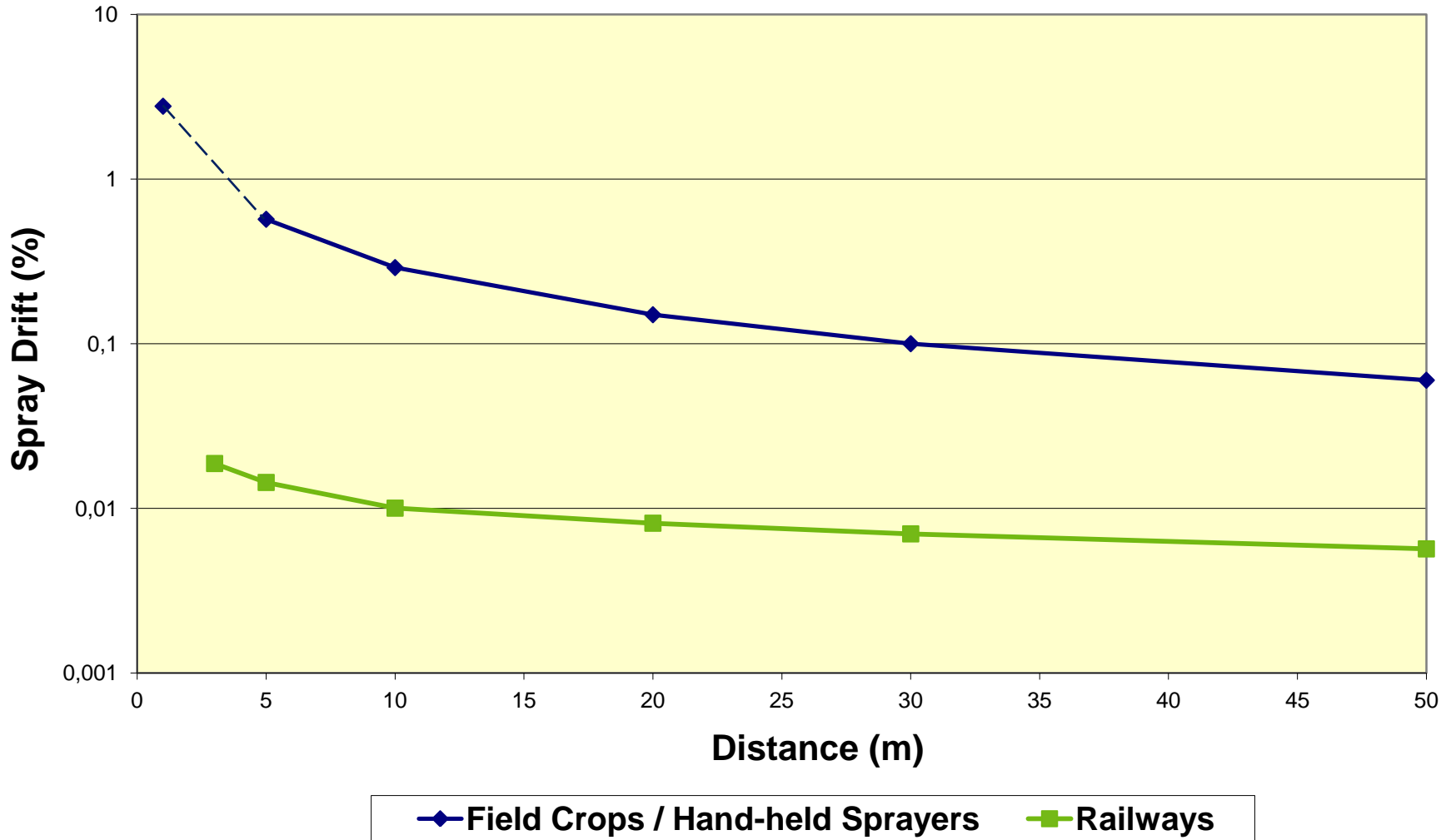
Regulatory Framework in Germany

- **Regulation (EC) No 1107/2009 - placing on the market of PPPs**
- **German Plant Protection Act**
- **Regular authorisation as plant protection product**
- **For 10 years (Directive 91/414/EEC) / until renewal of active substance in EU**
- **Authorisation for special uses on railways necessary**
- **Permission for each use by Federal Railway Authority**
- **Currently 3 actives: glyphosate, flazasulfuron, flumioxazin**

Data Requirements

- **Environmental Fate:**
 - **Degradation in soils from 3 selected railway locations**
 - **Sorption in soils from 3 selected railway locations**
 - **PEC-calculations with specific railway scenarios**
- **Health and Ecotoxicology:**
 - **According to Regulation (EU) No 284/2013 for herbicides**
 - **Specific drift values**
- **Efficacy:**
 - **Tests according to EPPO Standard PP1/117 or former BBA Guidelines**

Specific Drift values



Risk Assessment - Groundwater



Higher concentration in leachate as compared to agricultural use

Special Groundwater Scenarios:

- **High content of coarse material**
- **Low water capacity**
- **Low content of organic carbon**
- **Reduced sorption of actives**
- **High annual rainfall (up to 1826 mm/year)**

Risk Assessment - Groundwater

- **Special scenarios for modelling leaching for railway applications - 3 selected locations**
 - **Input parameters from studies with soils from these locations**
 - **Soil profiles:**
 - Texture
 - Organic Carbon Content
 - pH
 - **Special climate data from these locations**

Risk Management - Groundwater

- **Protection of groundwater in its entirety, irrespective of its use**
- **No special restrictions for water protection areas by BVL**
- **Stipulation of maximum annual amount of active substance on the same area (taking into consideration all products containing the active substance)**
- **Stipulation of frequency (e.g. every 2nd year) of applications on the same area (taking into consideration all products containing the active substance)**
- **Additional restrictions for vulnerable areas possible by Federal Railway Authority (consultation of Federal State authorities during process of permission for use)**

Risk Assessment – Aquatic Organisms

- **Calculations of PEC-Values for Surface Waters**
 - **Standard water body (1 m wide, 30 cm deep)**
 - **Exposure by**
 - drift (specific drift values)
 - volatilisation (national assessment)
 - runoff (national assessment)
 - drainage (national assessment)
- **Use of Toxicity Exposure Ratios according to Regulation (EU) No 546/2011**

Risk Assessment– Terrestrial Organisms

- **Calculations of PEC-Values for adjacent areas**
 - **Exposure by drift**
 - **Exposure by volatilisation (national assessment)**
- **Use of Toxicity Exposure ratios according to Regulation (EU) No 546/2011**

Risk Management – Non-Target Organisms

- **Risk mitigation measures:**
 - **No additional drift reducing technique available**
 - **Buffer zones**
 - **Stipulation of frequency (e.g. every 2nd year) of applications on the same area**
 - **Restriction of application rate or number of applications on the same area per year**

Reporting

- **Federal Railway Authority is requested to report all permissions given during each year to BVL**
 - **Number of permissions**
 - **Products or active substances**
 - **Validity period of permission**
 - **Category of use (e.g. railways, invasive species)**

Conclusions

- **Specific risk assessment and mitigation is necessary for applications differing from usual agricultural use**
- **Long experience in Germany with risk management for herbicide use on railways**
- **Specific and effective risk management is needed to allow vegetation management on railways**

Thank you for your attention!

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