TOPPS Water Protection Project in SLOVAKIA 2015 to 2018

„Making a difference in the field“
Outline
• TOPPS projects overview
• What we do in SK ?
• How we do it ?
• Why we do it ?
Crop Protection Products are most regulated chemicals in Europe

EU - Legislation framework

- Water Framework Directive
  - Ground water
  - Surface water
  - Marine water

- Placing of Plant Protection Products to the Market
  - Access to Market
  - Hazard reduction
  - Risk assessment

- Directive on Sustainable Use of Pesticides
  - Focus on use phase
  - Sales & training
  - Risk reduction
  - Sprayer testing

- Intensive monitoring
- Classification of water bodies (Status)
- Good chemical + biological status by 2015
- Thresholds for drinking water 0.1µg/l
  “Polluter pays principle”

- Precautionary principle:
  Identification of potentially adverse effects;
  evaluation of the scientific data available;
  risk assessment

- Risk Management
  Includes also application equipment through obligatory sprayer testing, harmonized standards and training obligations
Water is a key resource to keep clean by reducing entry from contamination sources

- Fertilizers and pesticides
- Human and animal waste
- Plastics and heavy metals
- Other manmade and natural chemicals

Generally water contamination can be prevented / strongly reduced by implementing a framework of Best Management Practice (BMP)

We follow in TOPPS the strategic triangle
TOPPS highlights the significance of the entry routes of PPP to water.

If the problems are known solutions can be found and priorities can be defined!
TOPPS a longterm commitment of the Crop Protection Industry in EU to protect water

.... THIS NOVEMBER TOPPS HAS IT’S 10 YEARS ANNIVERSARY

ECPA + EU funding
Others ECPA funding
Average annual investment 630T€

Train Operators Promote best Practices & Sustainability
TOPPS projects are Europe wide

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**TOPPS – point sources**
BMPs / Materials developed
Europe wide (23 countries)

**TOPPS – EOS**
Environmentally optimized sprayer
Expert information tool.

**TOPPS-prowadis**
7 countries
BMPs + materials developed to
reduce diffuse PPP losses to water

**TOPPS water protection**
12 countries
Dissemination and implementation
of BMPs
Point sources

Critical factors
• Cleaning of sprayers
• Filling of sprayers
• Management of contaminated residuals

Mitigation priorities
1. Sprayer cleaning and improved technologies
2. Filling systems with less risk for spills
3. Consistent approach and solutions for remnant management
Runoff

Critical factors

• Volume and intensity of rainfall
• Soil conditions
• Proximity to water
• Landscape
• Agronomic practise

Mitigation priorities

1. In field measures
2. Out of field measures
3. Retention in catchment
Spray drift

Critical factors
• Wind and temperature conditions
• Proximity to water / sensitive areas
• Vegetation

Mitigation priorities
1. Avoid droplets < 100µ
2. Reduce distance to target
3. Adjust sprayer correctly
... what we do?

• Transfer of developed BMPs, to SK and adapt it to local situation in consulting with local experts

• Develop training materials to be offered for use by local advisers and stakeholders

• Disseminate BMPs through information, training and demonstration to farmers, advisers and stakeholders
... what we do?

2 Steps:
2015 – Foundation
- Adaption of BMPs to reduce spray drift and runoff
- Develop materials for information training and demonstration
- Stakeholder survey

2016 /2017/2018 - Dissemination
Best Management Practices for Water Protection to Farmers
Information Training Demonstration
If you consider surface water pollution originating from agriculture, what would you consider the main problem? (rank in order of importance 1= most important….5 = least important (only respondents with correct ranking)

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- PPP and organic fertilizer considered main water pollution problem
- Most divers perception on PPP between FR and DE
Cluster analysis separates three different groups of respondents in their evaluation of main water pollutants.

Average ranks in clusters (1 most important …. 5 least important)

Stakeholder Perception study winter 2011 / 2012
PROBLEM PERCEPTION DIFFERS STRONGLY
... how we do it?

Project will be executed by local experts in partnership with ECPA

Local partners:
• Water Research Institute, Bratislava
• Agroinstitute

• Spray drift training / demonstration: Profesional servis GmbH
• Runoff training / demonstrations: NN
• Point source training /demonstrations will be a topic in all dissemination activities

• Slovak Crop Protection Association
... why we do it

• Clean water is of great public concern and keeping water clean is seen as a key pillar for sustainable and productive agriculture at ECPA.

• PPP findings are a threat to Product registrations and result in increasing use restrictions (keep broad choice for solutions)

• With the implementation of BMPs we can strongly reduce losses of PPP to water.

• Farmer and adviser awareness on measures how to protect water is the first step to efficient water protection.
Basic TOPPS concept:
Diagnosis + Measures = BMPs

Step 1
Risk diagnosis
TOPPS tools
TOPPS check lists
TOPPS – dashboards
TOPPS – drift evaluation tool

Step 2
Select effective measures
TOPPS
Mitigation measures toolbox

Step 3
Implement BMPs

from Diagnosis + Measures to
….. Today he is not aware that he pollutes water! tomorrow he will consider water protection!!!
PPP losses to water can be largely reduced if BMPs are implemented

- **point sources can be largely avoided**
  (no external factors e.g. weather interfere)

- **Spray drift can largely be reduced**
  (optimized sprayers, application planning)

- **Runoff can be reduced**
  (implementation of BMPs and optimized landscape management)
Thanks
For your attention
Questions ?
For more Information
www.TOPPS-life.org

... a happy TOPPS partner !