Presentación proyectos
TOPPS-PROWADIS & EOS

PROtection **WA**ter from **DI**fuse **S**ources
Environmental **O**ptimized **S**prayer

Emilio Gil
Universidad Politécnica de Cataluña

Unidad de Mecanización Agraria
UNIVERSITAT POLITÈCNICA DE CATALUNYA

Departament d'Enginyeria Agroalimentària i Biotecnologia
UNIVERSITAT POLITÈCNICA DE CATALUNYA

EU Regulatory challenges and drivers:

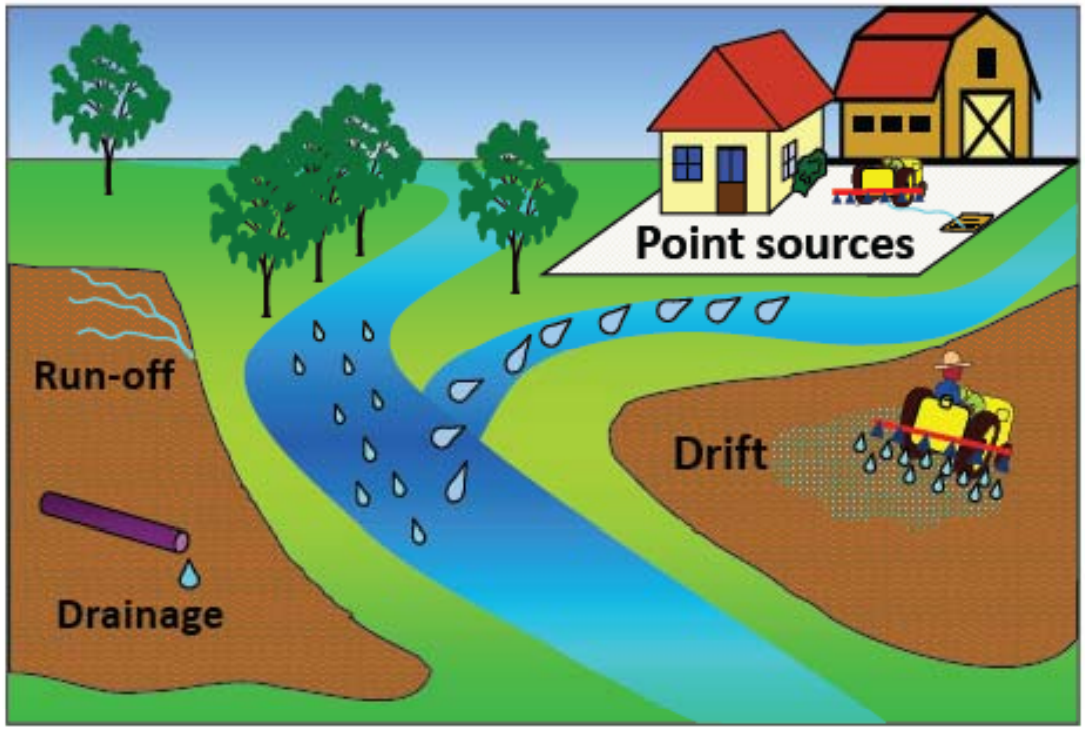
1. PPP authorisation legislation 91/414 and replacing Reg 1107/2009
2. Water Framework Directive 2000/60/EC
3. Sustainable Use of PPPs Directive 2009/128/EC
4. Legislative framework schematic

How to address legislative challenges?

Working with partners and stakeholders

Building on and continuing TOPPS project work: Bridge and TOPPS-prowadis

Two main entry routes into surface water: point + diffuse



5 % Drift
30 % Run-off

Diffuse entries can be reduced

> 50 % Point source

Point sources can be largely avoided

- TOPPS marked start of a logical step-wise multi-annual stewardship programme:
  - Largest and quickest gains for point sources ➡ TOPPS
  - Next, technical approaches could be deepened ➡ AIM; EOS
  - Now, complex/challenging diffuse sources ➡ TOPPS-prowadis

- These various objectives have been/ are being pursued over the last 6 or 7 years under the following projects:

  - TOPPS-Life
  - Bridge & AIM
  - TOPPS-prowadis

  } together known as the "Umbrella concept"

PROYECTO TOPPS:

Train the **O**perators to **P**revent pollution from **P**oint **S**ources.

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TOPPS

Spain | Inicio | Mapa web | Buscadora | Contacto

- Sobre el TOPPS
- Socios
- Colaboradores
- Comité de Orientación
- Noticias y actividades
- Ayuda

Inicio

TOPPS – Formación de usuarios para prevenir la contaminación procedente de fuentes puntuales - es una iniciativa de colaboración entre la industria de fitosanitarios y de la Comisión de las Comunidades Europeas para prevenir la contaminación del agua por el uso de productos fitosanitarios.

El programa de tres años, que comenzó en noviembre de 2005, lo apoya y financia el *Programa Europeo LIFE* y *ECPA* (European Crop Protection Association).

Estos últimos años ha aumentando el interés por la presencia de productos fitosanitarios (PPP) en el medio ambiente y su impacto en la calidad del agua (superficial y subterránea). La necesidad de

Expert community

Usario | ••••• | Usario

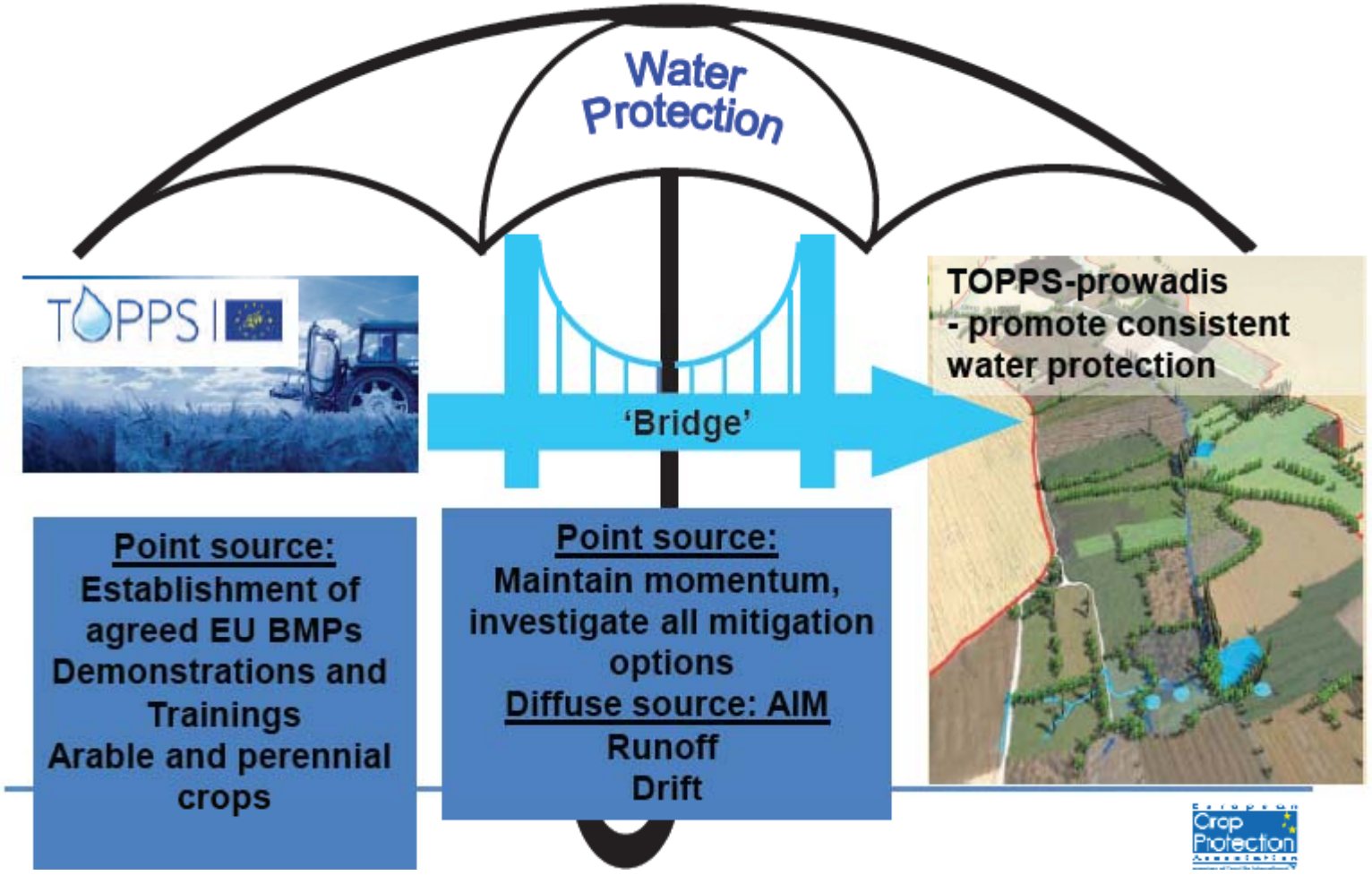
Olvidaste tu clave? ►

Publicaciones

TOPPS charter

More publications & guidelines ►

Subscribete aqui para recibir las ultimas noticias por correo electronico ►


Water Protection
TOPPS
'Bridge'
TOPPS-prowadis
- promote consistent water protection
Point source:
Establishment of agreed EU BMPs
Demonstrations and Trainings
Arable and perennial crops
Point source:
Maintain momentum, investigate all mitigation options
Diffuse source: AIM
Runoff
Drift
European Crop Protection Association

Basic concept

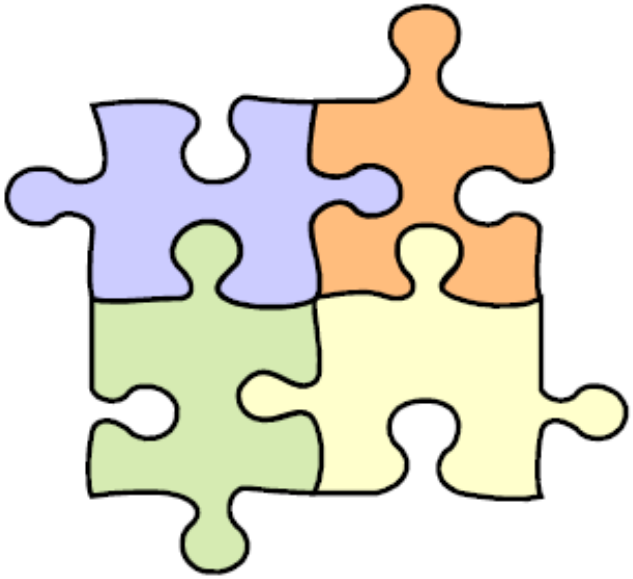
Develop practical and accepted Best Management Practices to mitigate PPP losses to surface water from diffuse sources

PROtect
WAter from
DIffuse
Sources

STAKEHOLDER INVOLVMENT

4. Overview of the PPP/ Water EU legislative framework

Pesticide Authorisation (placing on the market 2009/1107
repl. Directive 91/414



Framework Directive on **sustainable use of pesticides (SUD) 2009/128**

Revision of Machinery Directive
(Pesticide application equipment)
2009 / 127

Water Framework Directive (WFD)
2000 / 60 / EC

TREND: INCREASING FOCUS ON USE PHASE OF PESTICIDES

TOPPS Bridge: the start of an integrated approach

- ✓ Started November 2008, running until 1Q 2011
- ✓ Key ECPA objectives:
  - Recognising that the end of the TOPPS project did not mean the end of the work
  - Maintain positive TOPPS momentum and expert network to address current and future water-related challenges
  - Ensure sustainability of TOPPS achievements
  - Integrate diffuse source BMPs (AIM)
  - Progress EOS concept
  - Lay foundations for TOPPS-prowadis; to be launched in: Spain, Italy, France, Belgium, Germany, Denmark, Poland

Scope + Partners

7 countries , 14 partners

BE, DE, DK, ES, FR, IT, PL

POVLT (BE)
Julis Kühn Institut (DE)
Landesanstalt für Land-wirtschaft Bavaria (DE)
Danish Agri. Adv. Service
University Catalunya (ES)
Crop Prot. Service Aragon
Cemagref (FR)
ARVALIS Institut du vegetal (FR)
ENTAV (FR)
University Turin DEIAFA
University Turin
Agroselvitier (IT)
Inst. Horticulture Skierniewize (PL)
Cropprot Inst. Poznan (PL)

Budget – about 2,1 mio € financed by ECPA and partner contributions

Point sources	➢ Sustainability of TOPPS project ➢ Using established networks ➢ Continuing work on the EOS project
Diffuse sources	➢ Dissemination and demonstration of diffuse source mitigation (run-off, spray-drift) ➢ Fit within regulatory environment ➢ Demonstration/ implementation/ maintenance of mitigation options e.g. vegetative buffer strips

Fuentes puntuales / fuentes difusas

Fuentes puntuales

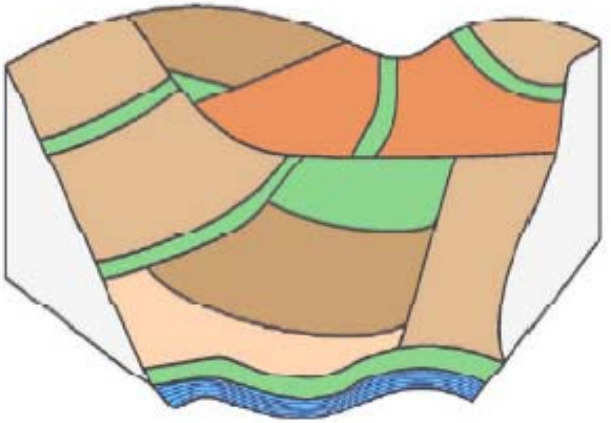
- Vertidos de producto (concentrado o diluido)
  - *Directamente del depósito*
  - *Durante el proceso de mezcla/carga*
  - *Durante el lavado del equipo*
- Mantenimiento inadecuado del equipo
- Malas prácticas de regulación

≠

Fuentes difusas

- Deriva, escorrentía
- Evitables con buenas prácticas

TOPPS



Mitigation challenge for run-off

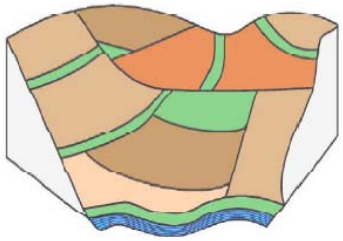
.... **Increase infiltration of water**

Mitigation challenge for drift

.... **avoid small droplets**

get droplets to target

Run-off (escorrentía)



GOBIERNO DE ARAGON
Departamento de Agricultura y Alimentación

Deriva

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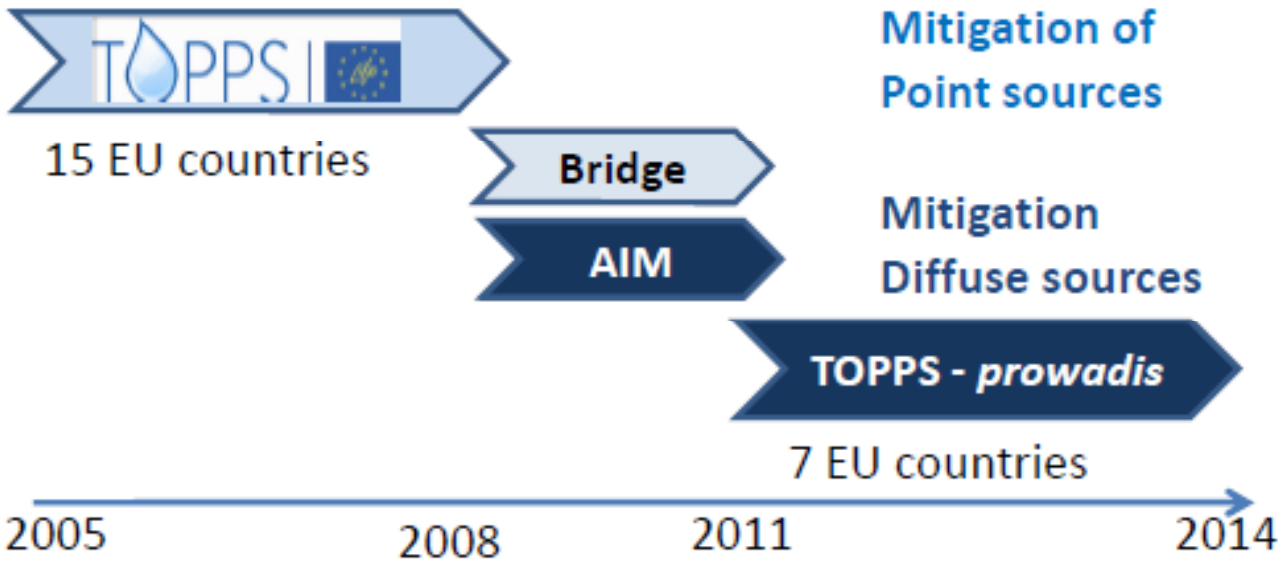

TOPPS – prowadis will start now and will end beginning of 2014

ENVIRONMENTALLY
OPTIMIZED
SPRAYER

EOS - tool

Methods and practical applications

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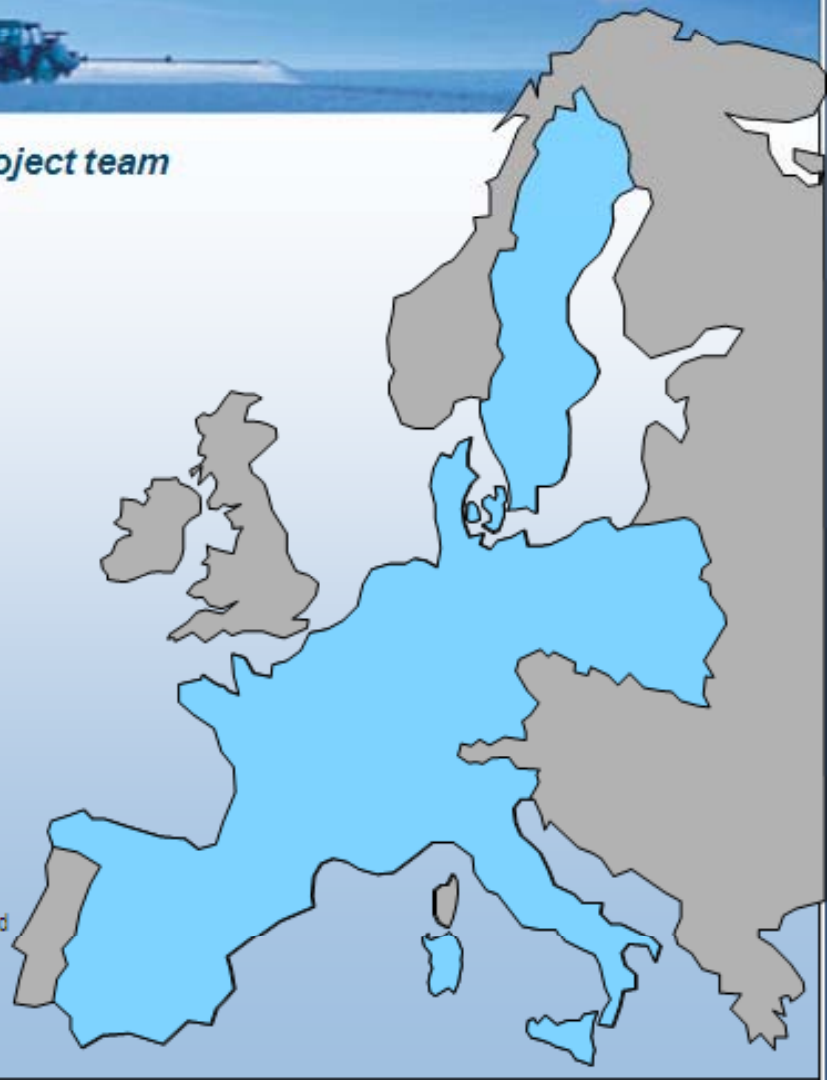
EOS

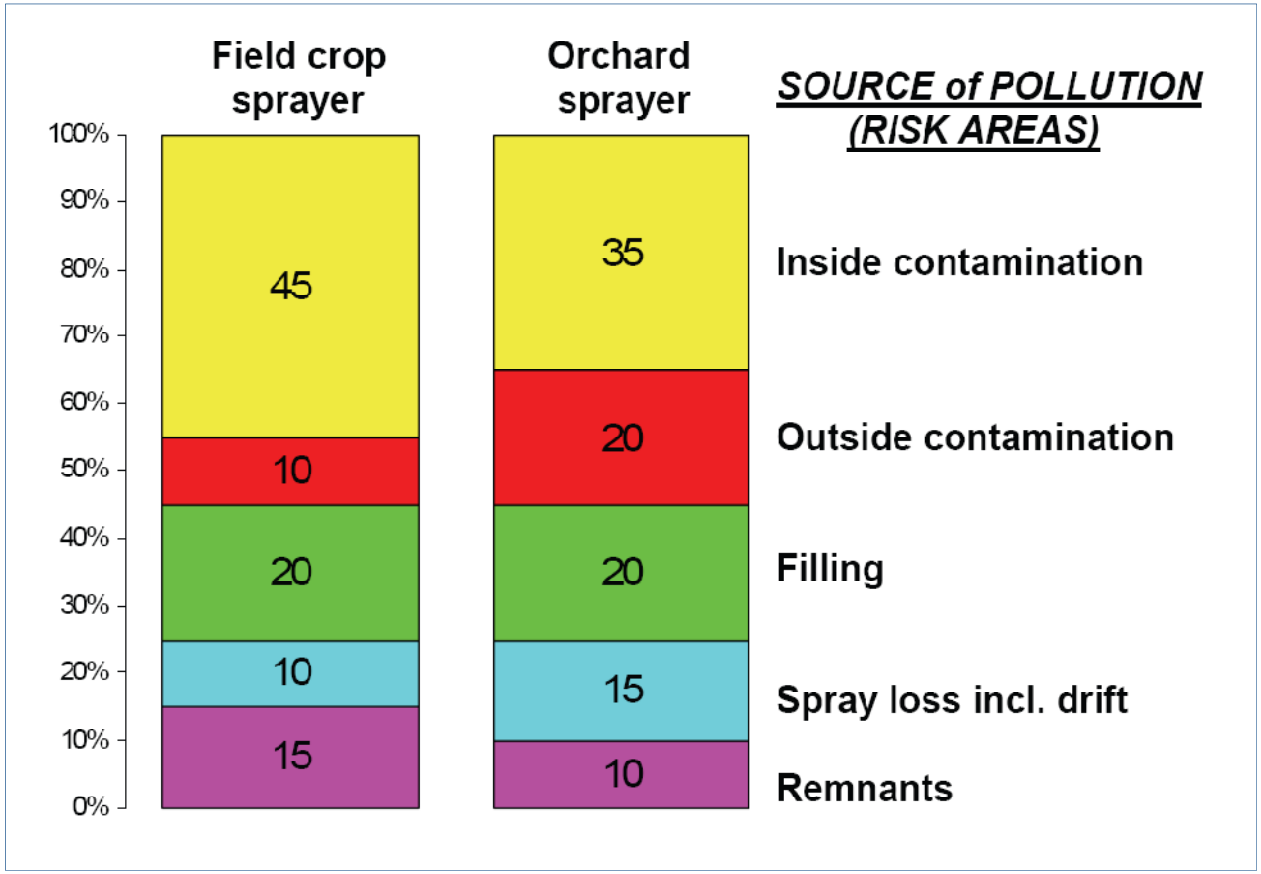
Project team

Research	
University Turin - DEIAFA	Italy
University Politectnica Catalunya, Barcelona	Spain
Institut Français de la Vigne et du Vin, Davaye	France
POVLT, Rumbeke	Belgium
Julius Kühn Institut (JKI), Braunschweig	Germany
Landwirtschaftskammer NRW, Münster	Germany
Inst. Pomology & Floriculture (ISK), Skierniewice	Poland
Advisory	
Danish Agricultural Advisery Service, Aarhus	Denmark
Visavis, Vellinge	Sweden
BetterDecisions, Projectmanagement, Dülmen	Germany
Sprayer Manufacturers	
ARAG, Rubiera	Italy
Caffini, Verona	Italy
Amanzone, Hasberge	Germany
PPP Manufacturers	
BASF, Limburgerhof	Germany
Bayer Cropscience, Monheim	Germany
Syngenta, Basel,	Switzerland
European Crop Protection Ass. (ECPA), Brussels	Belgium



Two different **EOS** tools have been developed (EOS_{field} and $EOS_{orchard}$)

Step 1: Risk areas related to mitigation potentials of sprayers to protect water and weighted on their significance (%)



Differences

- Field sprayers > residual volume (booms, pipes)
- Orchard sprayers higher deposits on outside (air assisteance)
- Drift losses in orchards applications higher
- Remnants higher in Field applications (higher volumes, more frequent cleanings)

STRUCTURE

Step 1 – RISK AREA *(RA)*

5 different Risk Areas have been defined and weighed (%)

INSIDE CONTAMINATION

OUTSIDE CONTAMINATION

FILLING

SPRAY LOSSES INCLUDING DRIFT

REMNANTS

Step 2 – PROBLEM *(Ps)*

For each one of the risk areas, "problems" have been identified and weighed (%)

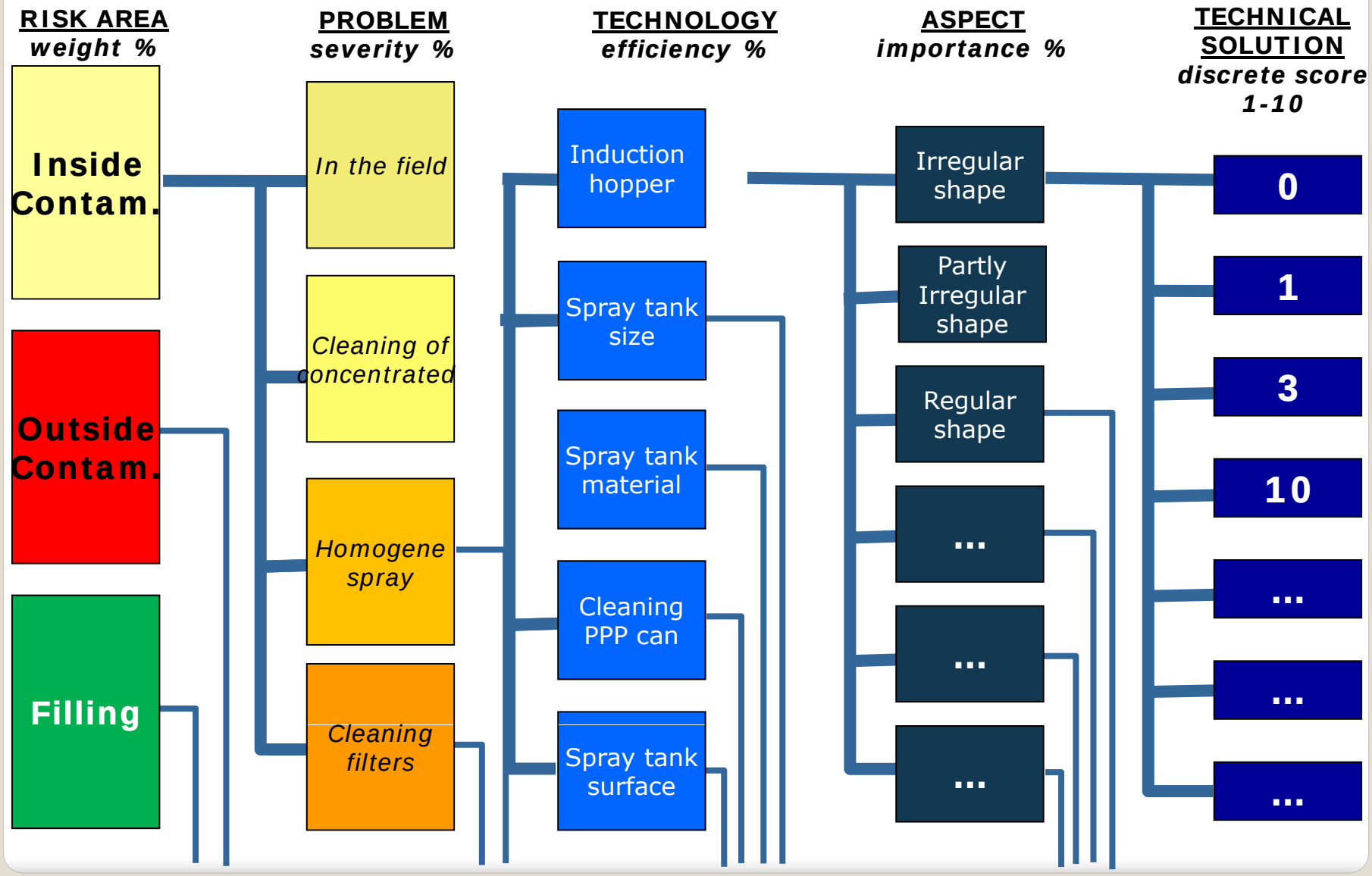
Step 3 – TECHNOLOGY (aspect) *(Te)(Ai)*

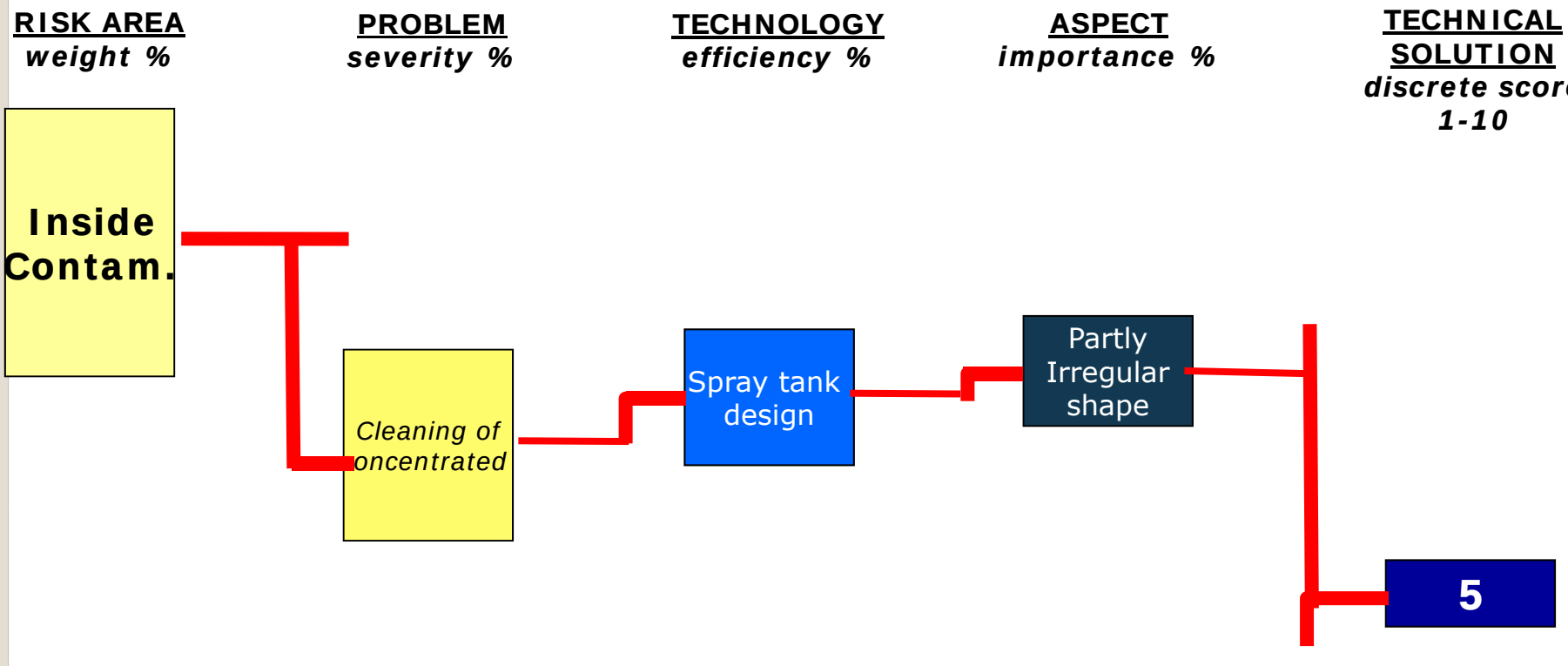
Different technologies available to solve any individual problem has been included and weighed (%). Particular aspects or way of action have been added (and weighed) when needed

Step 4 – *TECHNICAL SOLUTION* *(TSds)*

Discrete value have been assigned from 0 (not available) to 10 ("best in class")

EVALUATION MATRIX



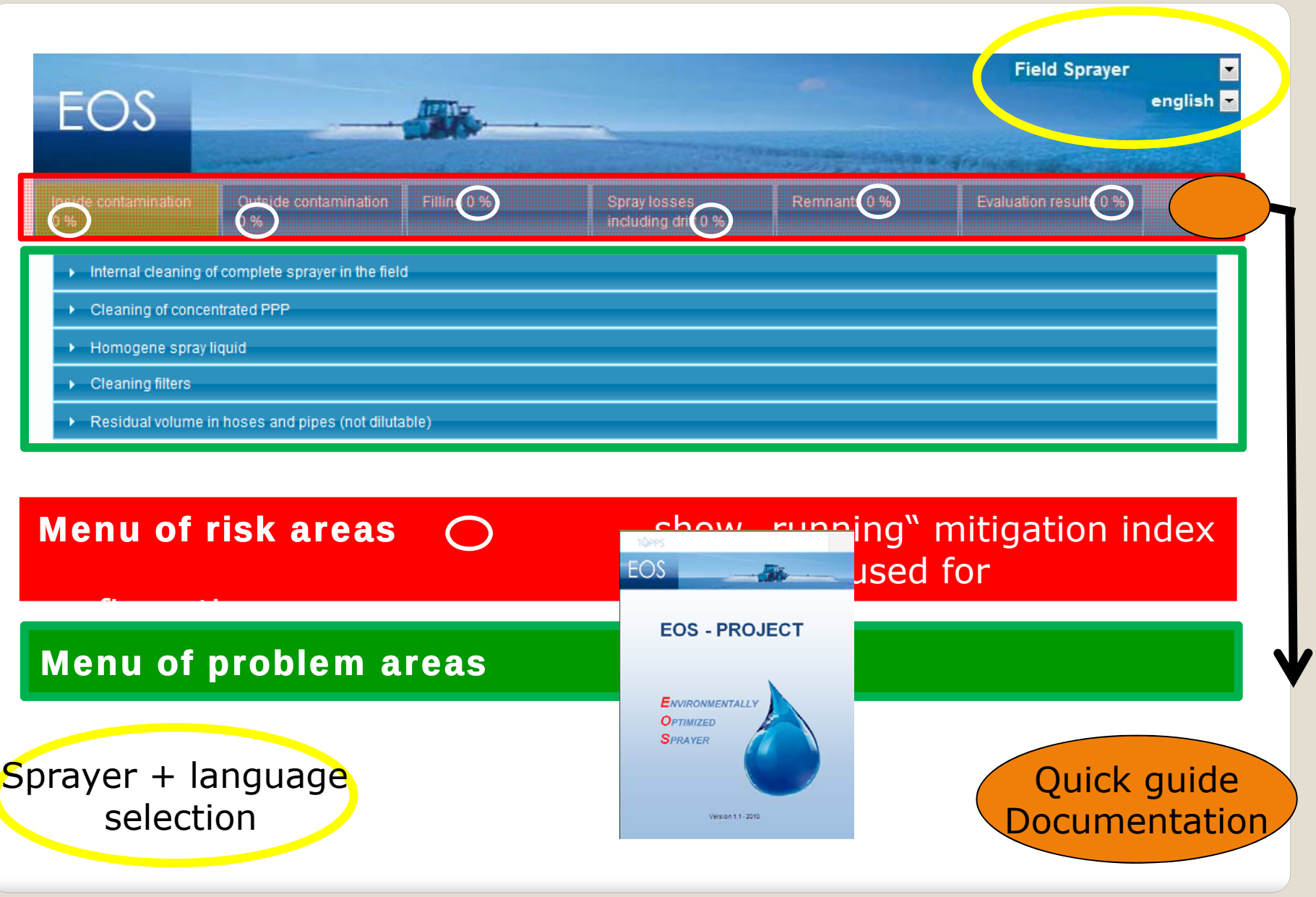


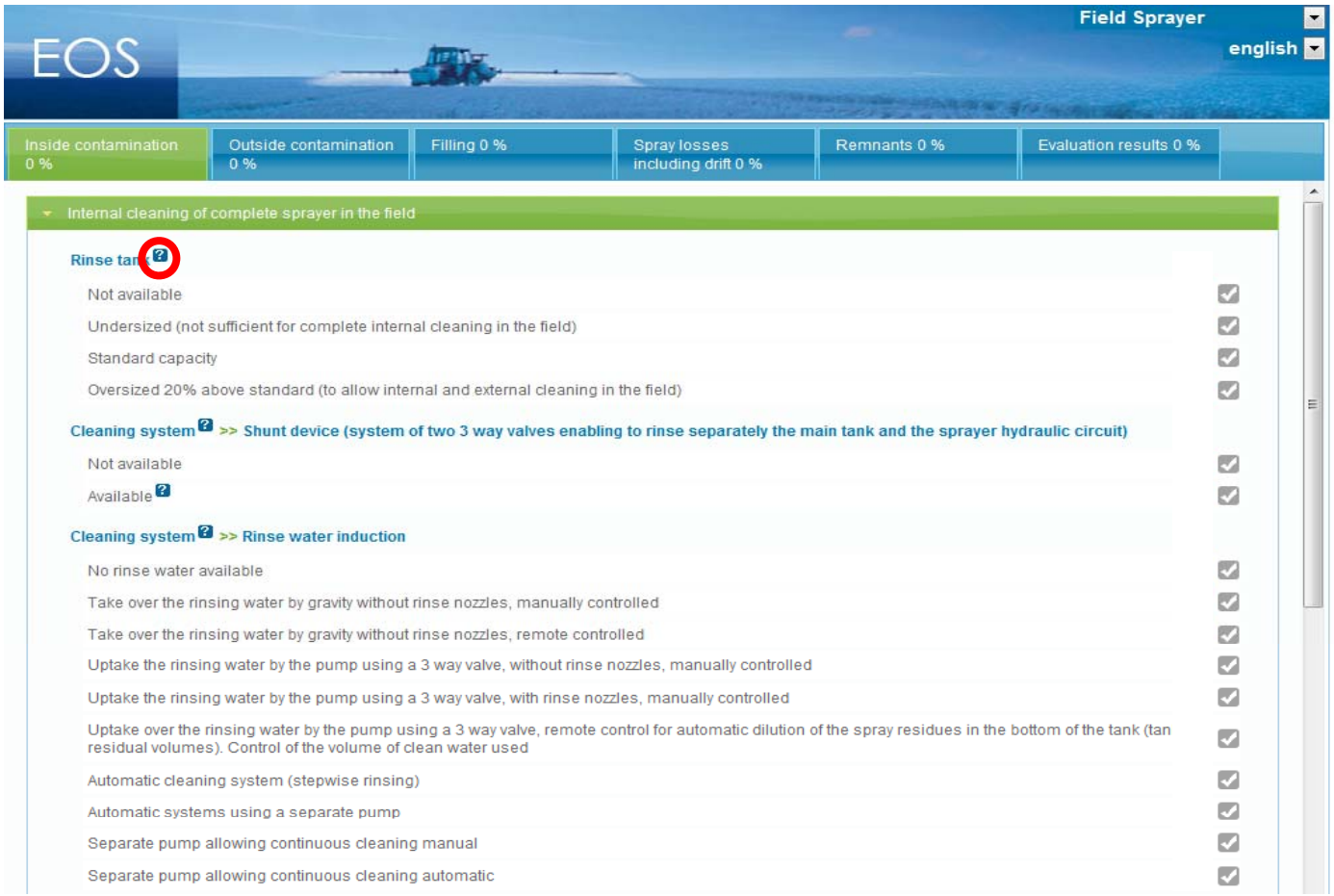
EOS Index

$$I_{EOS} = \frac{\sum EP}{\sum BP}$$

Evaluated sprayer performance

Best in class performance (EOS)


EOS
Field Sprayer
english
Inside contamination
Outside contamination
Filling 0 %
Spray losses including dri 0 %
Remnant 0 %
Evaluation result 0 %
Internal cleaning of complete sprayer in the field
Cleaning of concentrated PPP
Homogene spray liquid
Cleaning filters
Residual volume in hoses and pipes (not dilutable)
Menu of risk areas
ing" mitigation index
used for
Menu of problem areas
EOS
EOS - PROJECT
ENVIRONMENTALLY
OPTIMIZED
SPRAYER
Version 1.1 - 2010
Sprayer + language selection
Quick guide Documentation



Risk area

Problem area

Technologies+ Aspects

Technical solutions

? Help function reference to Standard Comments Pictures