# EOS – Software para la evaluación del riesgo de contaminación de los equipos de aplicación de fitosanitarios

**EOS – Environmentally Optimised Sprayer**

**www.topps-eos.org**
**www.topps-life.org**



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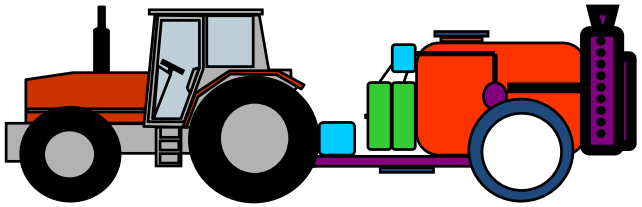
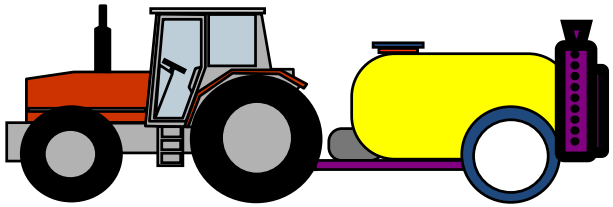
TOPPS Water Protection

TOPPS- EOS

European Crop Protection





**EOS = ENVIRONMENTALLY OPTIMISED SPRAYER**

**EQUIPO CANDIDATO A EVALUAR**

**EQUIPO DE REFERENCIA**

**EVALUACION MEDIOAMBIENTAL**

**INDICE EOS = 100**

**INDICE EOS??**

# Gran variedad de equipos de aplicación …






Los principales problemas están relacionados con…

**CONTAMINACIÓN INTERNA**

**CONTAMINACIÓN EXTERNA**

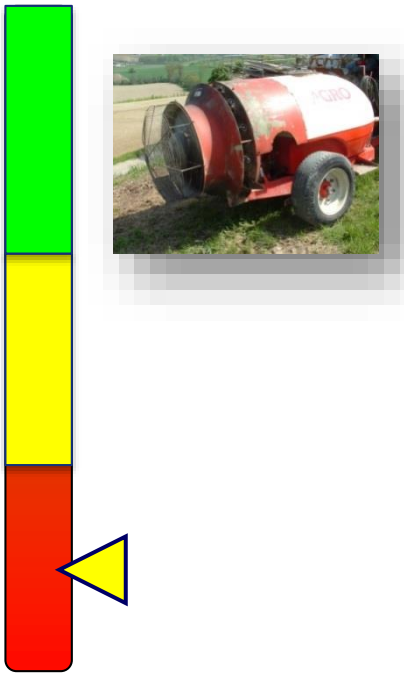
**LLENADO**

**PERDIDAS INCLUÍDA DERIVA**

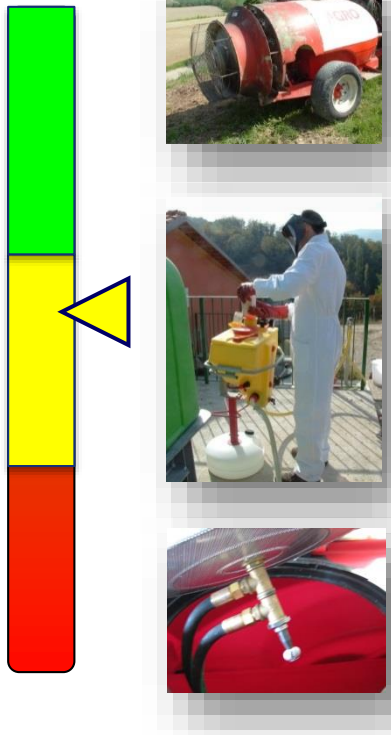
**RESIDUOS**


Existen dos herramientas **EOS** diferentes
($EOS_{barras}$ y $EOS_{atomizadores}$)

# Ejemplo: Atomizador sin elementos de prevención de contaminación puntual o difusa

# Atomizador equipado con dispositivos de prevención (incorporador de producto, limpieza, boquillas anti deriva,…)

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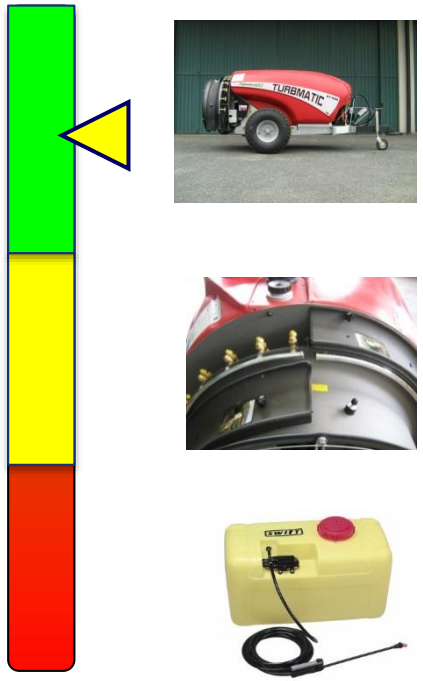

TOPPS Water Protection

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Contaminación interna 0 % | Contaminación externa 0 % | Llenado 0 % | Pérdidas de producto (incluida deriva) 0 % | Residuos 0 % | Evaluation results 0 %

- Limpieza interior completa del pulverizador
- Limpieza de producto fitosanitario concentrado
- Homogeneidad del liquido a pulverizar
- Limpieza de filtros

## EOS = Environmentally Optimised Sprayer

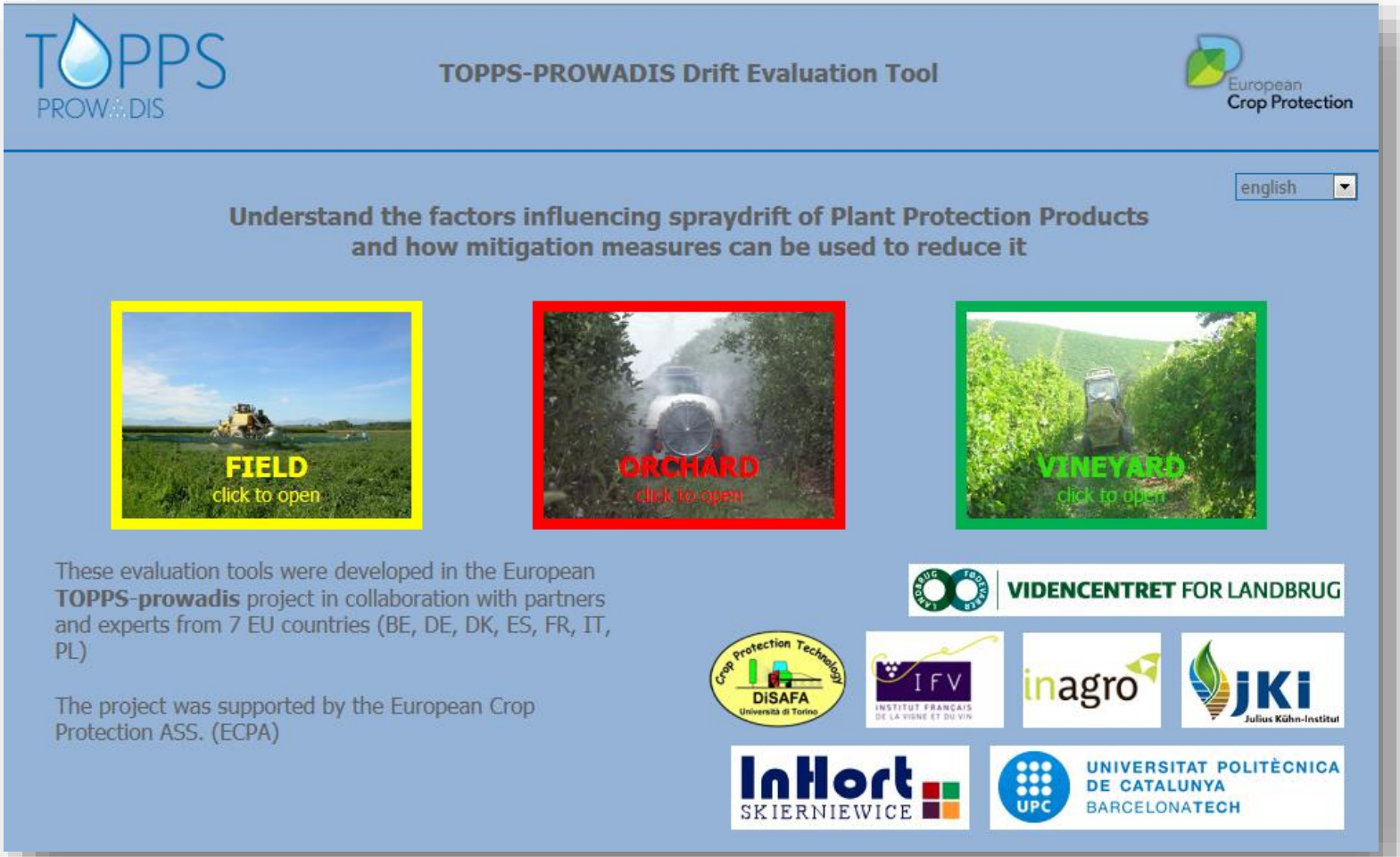
### Evaluates technologies of Crop Protection sprayers on their risk mitigation capabilities to protect water and the environment

Top menu bar indicates relavant **evaluation areas** – click: if green it is active

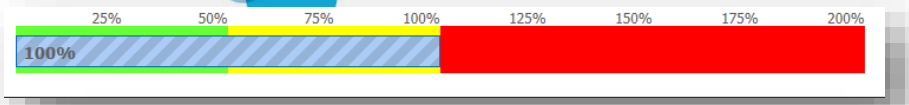
1. Click on **„problem" menu bar** below to open evaluation questionaire
2. Technologies are listed in blue
3. Click on **one technical solution** between each of the blue headlines (click on question marks to see an explaination (picture / comment)
4. Go through the questionaire and complete all 5 areas indicated on top bar (after the completion of one area: click next button or next problem menu bar
5. Technical solutions selected are compared with best available option by the EOS index (best is 100%). Results are shown by clicking on **Evaluation results** or in the buttons of the evaluation areas
6. Results can be saved by clicking on save symbol: Enter a name and the E-Mail

# Drift Evaluation Tools

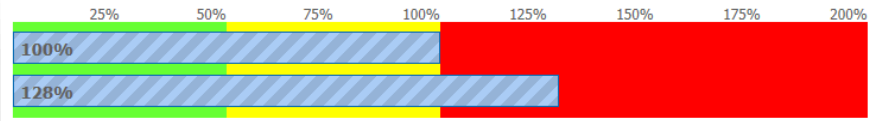
http://topps-drift.org



TOPPS
Water Protection




European
Crop Protection




**WIND:** Direction

- TOWARDS sensitive area
- PARALLEL to sensitive area
- AWAY FROM the sensitive area

**AIR:** Temperature

- < 15°C
- 15 - 25°C
- > 25°C

**CROP:** Canopy density

- 10%
- 25%
- 50%
- 75%
- 90%

**DRIFT REDUCTION TECHNOLOGY CLASSIFICATION:**

- NO CLASSIFICATION
- 25 %
- 50 %
- 75 %
- 90 %
- 95 %
- 99 %
- other: % 

**APPLICATION PARAMETERS:** Driving velocity

- 3 - 4,5 km/h
- 4,6 - 6 km/h
- 6,1 - 8 km/h
- > 8 km/h

**SPRAYER ADJUSTMENT:** Spray output adjustment

- No special adjustment
- Number of nozzles visually adjusted to crop height
- Above + output of nozzles visually adjusted to tree height
- Spray range and distribution adjusted by sprayer test service

**SPRAYER ADJUSTMENT:** Air -flow adjustment

- No special adjustment
- Airflow velocity visually adjusted to crop density
- Above + air direction/deflection visually adjusted to crop density
- Airflow velocity and direction adjusted by sprayer test service

**WIND:** Velocity

- CALM < 0,5 m/s
- LOW 0,5 - 1,5 m/s
- MEDIUM 1,6 - 3,0 m/s
- HIGH 3,1 - 4,0 m/s
- VERY HIGH > 4,0 m/s

**AIR:** Humidity

- < 40%
- 40 - 60%
- > 60%

**VINEYARD:** Adjacent structure

- BARE GROUND
- MEADOW
- HIGH VEGETATION, WINDBREAK

**APPLICATION METHOD:** Sprayer type

- AXIAL FLOW
- CROSS FLOW
- MULTI-SPOUT SPRAYER
- MULTI-Row sprayer
- TUNNEL / REFLECTION / RECYCLING
- CANNON sprayer
- SPRAYLANCE (handheld)

**APPLICATION METHOD:** Nozzle type & pressure

- HOLLOW CONE @ < 10 bar
- HOLLOW CONE @ > 10 bar
- AIR-IND. HOLLOW CONE @ < 10 bar
- AIR-IND. HOLLOW CONE @ > 10 bar
- AIR-IND. FLAT FAN @ < 10 bar
- AIR-IND. FLAT FAN @ > 10 bar
- PNEUMATIC ATOMISER

**APPLICATION SCENARIO:** Spray scenario

- STANDARD TWO-SIDED APPLICATION
- ONE-SIDED APPLICATION on ROW 1
- ONE-SIDED APPLICATION on ROWS 1+2
- ONE-SIDED APPLICATION on ROWS 1+2+3