



INTRUCTIVO DE APLICACIÓN STEP 1, 2 3 Y 4 DE FOCUS

Elaborado por la Unidad de Evaluación
Ambiental de Agroinsumos-DIGECA-MINAE.
Noviembre 2024



**MINISTERIO DE
AMBIENTE Y ENERGÍA**

**GOBIERNO
DE COSTA RICA**

Basado en el manual de FOCUS 2015

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STEP-1

Evaluación de Peor Caso Simple

Filtrar rápidamente los plaguicidas con bajo riesgo.

STEP-2

Evaluación con Patrones de Aplicación Secuenciales

Refinar la evaluación y eliminar la sobreestimación de riesgo.



Click



Step 1 y 2

Doble
Click

STEPS1-2 in FOCUS: Surface Water Tool for Exposure Predictions Step 1 and Step 2

File Edit View Help

STEPS 1-2 in FOCUS
Surface water Tool for Exposure Predictions - Step 1 and Step 2
Version 3.2

Active ingredient: **Dummy 1**
Dummy 2
Dummy 3
Dummy 4

Comment: Potatoes, Southern Europe, spring, 1 app/season, soil incorporation

Step 1 Step 2

PEC_{sw} (µg/L) and PEC_{sed} (µg/kg dry sediment)

Maximum PEC_{sw}: 685.06 occurring on day 0
Maximum PEC_{sed}: 2.36E+03 occurring on day 0

Time (d)	Water		Sediment	
	Actual	TWA	Actual	TWA
0	685.06		2.36E+03	
1	610.32	647.69	2.1E+03	2.23E+03
2	543.73	612.03	1.87E+03	2.11E+03
4	431.56	548.76	1.49E+03	1.89E+03
7	305.16	469.88	1.05E+03	1.62E+03

Save Data
Report
Exit

Click

Steps 1-2 in FOCUS: Substance specific information

Active ingredient: Dummy 1

Comment: Potatoes, Southern Europe, spring, 1 app/season, soil incorporation

Substance specific data

Water solubility (mg/L): 6000.00 DT50 in water (d): 6.00
DT50 in sediment/water system (d): 6.00 DT50 in sediment (d): 6.00

KOC (L/kg): use KOM 344.80
DT50 in soil (d): 6.00

Record
Add
Delete
Copy
Help
Edit

Done

Application pattern
Application rate of a.i. (g/ha): 3000.00
Number of applications per season: 1

Crop interception: no interception
Crop type: no drift (incorp or seed trmt)
Region and season of application: South Europe, Mar. - May

Compound to be calculated:
☒ Active substance
☐ Metabolite

Simulation Level:
☐ Step 1 only
☒ Step 1 and step 2



Step 1 y 2

Steps 1-2 in FOCUS: Substance specific information

Active ingredient:

Comment:

Substance specific data

Water solubility (mg/L)

DT50 in sediment/water system (d):

KOC (L/kg):

Application pattern

Application rate of a.i. (g/ha):

Number of applications per season:

Crop type:

Compound to be calculated

☒ Active substance

☐ Metabolite

Simulation Level

☒ Step 1 only

☐ Step 1 and step 2

Record

Add

Delete

Copy

Help

Cancel

Done

Steps 1-2 in FOCUS: Substance specific information

Active ingredient:

Comment:

Substance specific data

Water solubility (mg/L) DT50 in water (d):

DT50 in sediment/water system (d): DT50 in sediment (d):

KOC (L/kg):

DT50 in soil (d):

Application pattern

Application rate of a.i. (g/ha):

Number of applications per season:

Crop interception:

Crop type:

Region and season of application:

Compound to be calculated

☒ Active substance

☐ Metabolite

Simulation Level

☐ Step 1 only

☒ Step 1 and step 2

Record

Add

Delete

Copy

Help

Cancel

Done

Seleccionar
step 1 y 2



Verificar que estén marcadas
las opciones de ingrediente
activo y pasos 1 y 2



Step 1 y 2

Steps 1-2 in FOCUS: Substance specific information

Active ingredient:

Comment:

Substance specific data

Water solubility (mg/L)	0.00E+00	DT50 in water (d):	0.00E+00
DT50 in sediment/water system (d):	0.00E+00	DT50 in sediment (d):	0.00E+00

KOC (L/kg):

DT50 in soil (d):

Application pattern

Application rate of a.i. (g/ha):

Number of applications per season:

Crop interception:

Crop type:

Region and season of application:

Compound to be calculated

☒ Active substance

☐ Metabolite

Simulation Level

☐ Step 1 only

☒ Step 1 and step 2

Record

Add

Delete

Copy

Help

Cancel

Done

Enter name of active substance to be assessed.



- Se debe completar todos los espacios resaltados en amarillo.
- En “Comment”: indicar el nombre completo del formulado y el cultivo que se va a analizar.
- En “Crop interception” y “Crop type”: se deben completar según las indicaciones del manual de procedimientos.
- En “Region and season of application”: se debe seleccionar SIEMPRE la opción de “South Europe, Mar-May” ya que es la que representa las condiciones climáticas más cercanas a las de Costa Rica.



Step 1 y 2

Steps 1-2 in FOCUS: Substance specific information

Active ingredient:

Comment:

Substance specific data

Water solubility (mg/L): DT50 in water (d):

DT50 in sediment/water system (d): DT50 in sediment (d):

KOC (L/kg):

DT50 in soil (d):

Record

Add

Delete

Copy

Help

Cancel

Done

Application pattern

Application rate of a.i. (g/ha):

Number of applications per season:

Time between two applications:

Crop interception:

Crop type:

Region and season of application:

Choose the suitable crop interception from a list of 4 options.

Compound to be calculated

☒ Active substance

☐ Metabolite

Simulation Level

☐ Step 1 only

☒ Step 1 and step 2

Una vez completa la información >> hacer click dos veces en “Done”

STEPS 1-2 in FOCUS

Surface water Tool for Exposure Preditions - Step 1 and Step 2

Version 3.2

Active ingredient: Speed Wet Xion Active 25 SL
Florpyrauxfen-benzyl
THIFLUZAMIDE
Nombre del Ingrediente Activo

Comment:

Step 1

PECsw (µg/L) and PECsed (µg/kg dry sediment)

Maximum PECsw: occurring on day

Maximum PECsed: occurring on day

Time (d)	Water Actual	Water TWA	Sediment Actual	Sediment TWA
0	90.60		1.79E+03	
1	83.90	87.25	1.83E+03	1.81E+03
2	83.77	85.54	1.83E+03	1.82E+03
4	83.51	84.59	1.82E+03	1.82E+03

Save Data

Report



Siempre se van a seleccionar los valores de Maximum PECsw (para que sea comparable con las unidades de los estudios de toxicidad para organismos acuáticos (mg IA/L).

STEPS 1-2 in FOCUS

Surface water Tool for Exposure Preditions - Step 1 and Step 2

Version 3.2

Active ingredient: Speed Wet Xion Active 25 SL
Florpyrauxfen-benzyl
THIFLUZAMIDE
Nombre del Ingrediente Activo

Comment:

Step 2

PECsw (µg/L) and PECsed (µg/kg dry sediment)

Maximum PECsw: occurring on day

Maximum PECsed: occurring on day

Time (d)*	Water Actual	Water TWA	Sediment Actual	Sediment TWA
0	34.62 (17.73)		741.06 (378.52)	
1	33.92 (17.33)	34.27 (17.53)	739.92 (377.99)	740.49 (378.28)
2	33.86 (17.30)	34.08 (17.42)	738.79 (377.41)	739.92 (377.99)
4	33.76 (17.25)	33.95 (17.35)	736.52 (376.25)	738.79 (377.41)
7	33.60 (17.17)	33.83 (17.29)	733.13 (374.52)	737.09 (376.54)
14	33.24 (16.98)	33.63 (17.18)	725.28 (370.51)	733.14 (374.52)

(*: time after absolute maximum concentrations, numbers in brackets refer to respective single application)

Save Data

Report

Exit

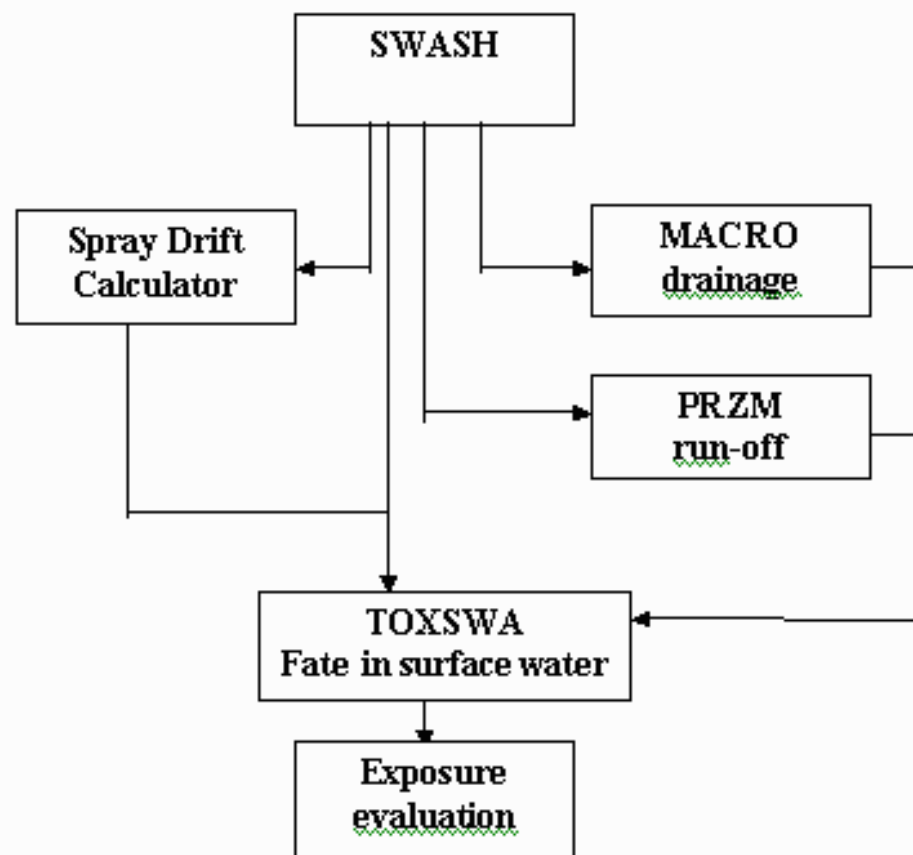
Click en “Exit” para salir y en “YES” para guardar los datos



Step -3



FOCUS_SWASH 5_3

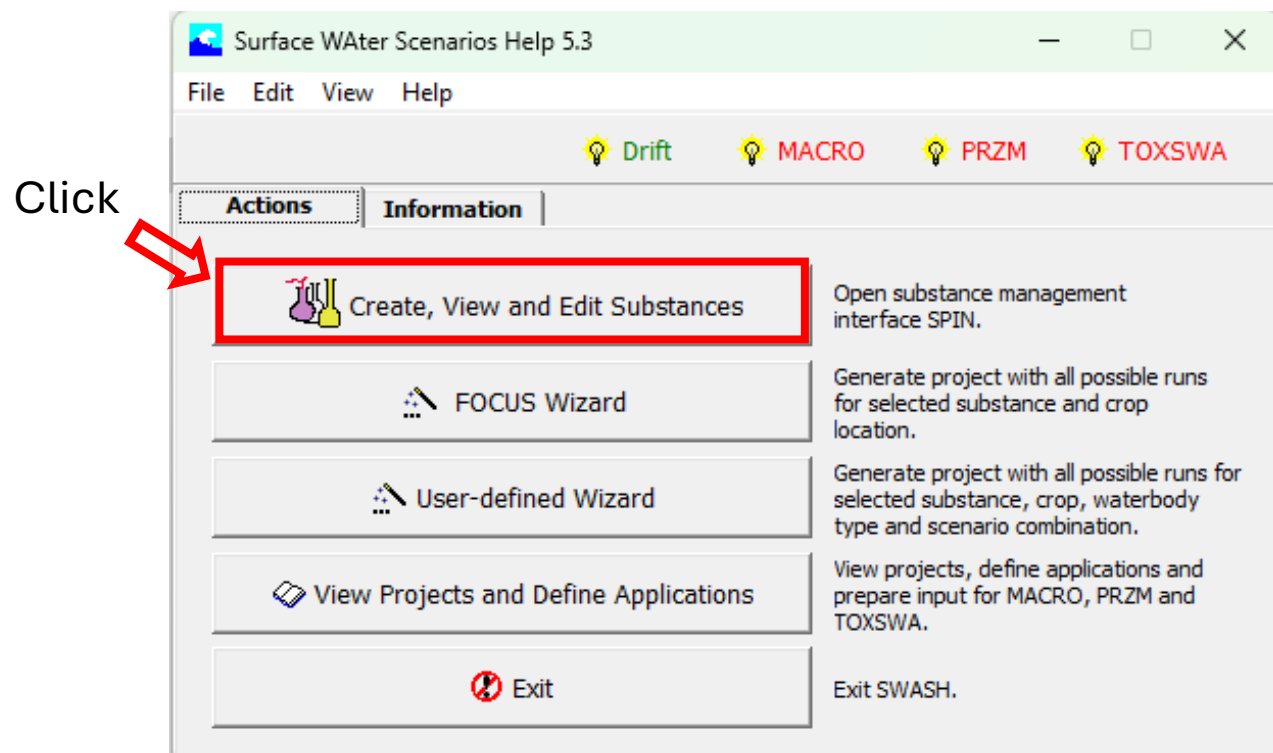




STEP-3

Escenarios de Peor Caso Realista

Evaluar el riesgo bajo condiciones realistas de uso agrícola.



Modelos utilizados en SWASH 5_3:

- **PRZM:** Modela el escurrimiento de pesticidas hacia cuerpos de agua.
- **MACRO:** Modela el drenaje y lixiviación en el suelo.
- **TOXSWA:** Simula el destino de los pesticidas en aguas superficiales



Step 3

SPIN (Substances Plug IN) 3.3 - Data required for MACRO for FOCUS SWASH 5.3, PRZM for FOCUS SWASH 5.3, TOXSWA for FOCUS TOXSWA 5...

File Help

Browse Substances

Locked	SubstanceCode /	Name	CreationDate	LastModified
	EXSW0	FOCUS surface water Default_values	02/10/2023 10:48:33	02/10/2023 10:48:33
	EXSW1	FOCUS surface water Example_Sub_A	02/10/2023 10:48:33	02/10/2023 10:48:33
	EXSW2	FOCUS surface water Example_Sub_H	02/10/2023 10:48:33	02/10/2023 10:48:33
	EXSW3	FOCUS surface water Example_Sub_6	02/10/2023 10:48:33	02/10/2023 10:48:33
	EXSW4	FOCUS surface water Example_Sub_6m_sw, soil metabolite from 6_sw	02/10/2023 10:48:33	02/10/2023 10:48:33
	F_CH	fipronil chile dulce	03/10/2023 08:17:34	03/10/2023 08:27:53
	F_PN	fipronil piña	03/10/2023 10:26:39	03/10/2023 10:29:24
	RINSKOR	XEVELO	23/04/2024 07:53:32	23/04/2024 08:07:53

Edit Substance

General | Sorption | Transformation | Crop processes

SubstanceCode: EXSW0

Name: FOCUS surface water Default_values

Molar mass (g mol⁻¹): <no value given> ⓘ

Saturated vapour pressure (Pa): <no value given> ⓘ Measured at (°C): 20 ⓘ

Molar enthalpy of vaporisation (kJ mol⁻¹): 95 ⓘ

Solubility in water (mg L⁻¹): <no value given> ⓘ Measured at (°C): 20 ⓘ

Molar enthalpy of dissolution (kJ mol⁻¹): 27 ⓘ

Reference diffusion coefficient in water (m² d⁻¹): 4.3E-5 ⓘ } Reference temperature (°C): ⓘ

Reference diffusion coefficient in air (m² d⁻¹): 0.43 ⓘ

Octanol-Water partitioning coefficient (-): ⓘ

Confirm

Do you really want to copy this substance ?

Yes Cancel

Information

The substance "EXSW0" has been copied to "COPY".

Please change the substance code into something that is unique otherwise future copying of substances will fail.

OK

El sistema completa de forma automática los valores "default".

SPIN (Substances Plug IN) 3.3 - Data required for MACRO for FOCUS SWASH 5.3, PRZM for FOCUS SWASH 5.3, TOXSWA for FOCUS TOXSWA 5...

File Help

Browse Substances

Locked	SubstanceCode /	Name	CreationDate	LastModified
	COPY	FOCUS surface water Default_values_copy	18/11/2024 11:51:44	18/11/2024 11:51:44
	EXSW0	FOCUS surface water Default_values	02/10/2023 10:48:33	02/10/2023 10:48:33
	EXSW1	FOCUS surface water Example_Sub_A	02/10/2023 10:48:33	02/10/2023 10:48:33
	EXSW2	FOCUS surface water Example_Sub_H	02/10/2023 10:48:33	02/10/2023 10:48:33
	EXSW3	FOCUS surface water Example_Sub_6	02/10/2023 10:48:33	02/10/2023 10:48:33
	EXSW4	FOCUS surface water Example_Sub_6m_sw, soil metabolite from 6_sw	02/10/2023 10:48:33	02/10/2023 10:48:33
	F_CH	fipronil chile dulce	03/10/2023 08:17:34	03/10/2023 08:27:53
	F_PN	fipronil piña	03/10/2023 10:26:39	03/10/2023 10:29:24
	RINSKOR	XEVELO	23/04/2024 07:53:32	23/04/2024 08:07:53

Edit Substance

General | Sorption | Transformation | Crop processes

SubstanceCode: COPY

Name: FOCUS surface water Default_values_copy

Molar mass (g mol⁻¹): <no value given> ⓘ

Saturated vapour pressure (Pa): <no value given> ⓘ Measured at (°C): 20 ⓘ

Molar enthalpy of vaporisation (kJ mol⁻¹): 95 ⓘ

Solubility in water (mg L⁻¹): <no value given> ⓘ Measured at (°C): 20 ⓘ

Molar enthalpy of dissolution (kJ mol⁻¹): 27 ⓘ

Reference diffusion coefficient in water (m² d⁻¹): 4.3E-5 ⓘ } Reference temperature (°C): ⓘ

Reference diffusion coefficient in air (m² d⁻¹): 0.43 ⓘ

Octanol-Water partitioning coefficient (-): ⓘ

Los valores que no se completan por default deben completarse, por lo que los siguientes pasos es completar toda la información necesaria en "EDIT SUBSTANCE"



Step 3

SPIN (Substances Plug IN) 3.3 - Data required for MACRO for FOCUS SWASH 5.3, PRZM for FOCUS SWASH 5.3, TOXSWA for FOCUS TOXSWA 5...

File Help

Browse Substances

Locked	SubstanceCode /	Name	CreationDate	LastModified
	Nombre del IAGT	Nombre del formulado y el cultivo	18/11/2024 11:51:44	18/11/2024 12:07:38
	EXSW0	FOCUS surface water Default_values	02/10/2023 10:48:33	02/10/2023 10:48:33
	EXSW1	FOCUS surface water Example_Sub_A	02/10/2023 10:48:33	02/10/2023 10:48:33
	EXSW2	FOCUS surface water Example_Sub_H	02/10/2023 10:48:33	02/10/2023 10:48:33
	EXSW3	FOCUS surface water Example_Sub_6	02/10/2023 10:48:33	02/10/2023 10:48:33
	EXSW4	FOCUS surface water Example_Sub_6m_sw, soil metabolite from 6_sw	02/10/2023 10:48:33	02/10/2023 10:48:33
	F_CH	fipronil chile dulce	03/10/2023 08:17:34	03/10/2023 08:27:53
	F_PN	Fipronil piña	03/10/2023 10:26:39	03/10/2023 10:29:24
	RINSKOR	XEVELO	23/04/2024 07:53:32	23/04/2024 08:07:53

Una vez completa la información >> hacer click en el "check" para guardar la información

Edit Substance

General | Adsorption | Transformation | Crop processes

SubstanceCode: Nombre del IAGT

Name: Nombre del formulado y el cultivo

Molar mass (g mol⁻¹): 336.82

Saturated vapour pressure (Pa): 0.00034 Measured at (°C): 20

Molar enthalpy of vaporisation (kJ mol⁻¹): 95

Solubility in water (mg L⁻¹): 2.57 Measured at (°C): 20

Molar enthalpy of dissolution (kJ mol⁻¹): 27

Reference diffusion coefficient in water (m² d⁻¹): 4.3E-5

Reference diffusion coefficient in air (m² d⁻¹): 0.43

Octanol-Water partitioning coefficient (-):

Reference temperature (°C):



La información de "Molar enthalpy of vaporation", "Molar enthalpy of dissolution", "Reference difusión coefficient in water" y "Reference difusión coefficient in air" >> se deja por default



Se deben colocar los valores de temperatura correspondientes



Step 3

SPIN (Substances Plug IN) 3.3 - Data required for MACRO for FOCUS SWASH 5.3, PRZM for FOCUS SWASH 5.3, TOXSWA for FOCUS TOXSWA 5...

File Help

Browse Substances

Locked	SubstanceCode /	Name	CreationDate	LastModified
	ingrediente	nombre del formulado y el cultivo	18/11/2024 11:51:44	18/11/2024 13:27:53
	EXSW0	FOCUS surface water Default_values	02/10/2023 10:48:33	02/10/2023 10:48:33
	EXSW1	FOCUS surface water Example_Sub_A	02/10/2023 10:48:33	02/10/2023 10:48:33
	EXSW2	FOCUS surface water Example_Sub_H	02/10/2023 10:48:33	02/10/2023 10:48:33
	EXSW3	FOCUS surface water Example_Sub_6	02/10/2023 10:48:33	02/10/2023 10:48:33
	EXSW4	FOCUS surface water Example_Sub_6m_sw, soil metabolite from 6_sw	02/10/2023 10:48:33	02/10/2023 10:48:33
	F_CH	fipronil chile dulce	03/10/2023 08:17:34	03/10/2023 08:27:53
	F_PN	Fipronil piña	03/10/2023 10:26:39	03/10/2023 10:29:24
	RINSKOR	XEVELO	23/04/2024 07:53:32	23/04/2024 08:07:53



Una vez completa la información >> hacer click en el “check” para guardar la información

Edit Substance

General **Sorption** Transformation Crop processes

Soil - equilibrium Soil non-equilibrium Surface water Sediment Substrate

Equilibrium sorption

Option: **Kom, pH-independent**

Measured at (°C):

Reference concentration in liquid phase (mg L⁻¹):

Molar enthalpy of sorption (kJ mol⁻¹):

Freundlich sorption exponent (-): 0.9

Kom, pH-independent

Kom (L kg⁻¹): <no value given>



Si no se tiene el dato para Kom, se puede usar el de Koc. Para eso se elige la varita mágica a la derecha de la casilla.

Koc to Kom converter

Formulas used

$Koc (L.kg^{-1}) = 1.724 * Kom (L.kg^{-1})$

$Kom (L.kg^{-1}) = Koc (L.kg^{-1}) / 1.724$

Current

Kom (L kg⁻¹):

Converted to Koc (L.kg⁻¹):

New

Converted to Kom (L kg⁻¹):

Enter Koc value (L.kg⁻¹) ----->

OK Cancel

Completar el valor de Koc y >>Click en “OK”.



SPIN (Substances Plug IN) 3.3 - Data required for MACRO for FOCUS SWASH 5.3, PRZM for FOCUS SWASH 5.3, TOXSWA for FOCUS TOXSWA 5...

File Help

Browse Substances

Locked	SubstanceCode /	Name	CreationDate	LastModified
	ingrediente	Nombre del formulado y el cultivo	19/11/2024 07:43:53	19/11/2024 08:10:21
	EXSW0	FOCUS surface water Default_values	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW1	FOCUS surface water Example_Sub_A	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW2	FOCUS surface water Example_Sub_H	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW3	FOCUS surface water Example_Sub_6	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW4	FOCUS surface water Example_Sub_6m_sw, soil metabolite from 6_sw	23/4/2024 07:51:45	23/4/2024 07:51:45
	RINSKOR	XEVELO	23/4/2024 07:53:41	23/4/2024 08:07:30

Edit Substance

General **Sorption** Transformation Crop processes

Soil - equilibrium **Soil non-equilibrium** Surface water Sediment Substrate

Non-equilibrium sorption

Desorption rate coefficient (d-1):

Factor relating Freundlich coefficient for non-equilibrium sorption and equilibrium sorption (-):



En la pestaña de “*Sorption*” la información para “*Soil non-equilibrium*” >> no se modifica ni se añaden datos



Step 3



En “Surface water” y
“Sediment”

Se debe completar el dato
para el Kom, repitiendo el
uso del convertidor para
ingresar el dato de Koc.

En ambas pestanas es el
único dato que se añade.

SPIN (Substances Plug IN) 3.3 - Data required for MACRO for FOCUS SWASH 5.3, PRZM for FOCUS SWASH 5.3, TOXSWA for FOCUS TOXSWA 5...

File Help

Browse Substances

Locked	SubstanceCode /	Name	CreationDate	LastModified
	ingrediente	Nombre del formulado y el cultivo	19/11/2024 07:43:53	19/11/2024 08:10:21
	EXSW0	FOCUS surface water Default_values	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW1	FOCUS surface water Example_Sub_A	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW2	FOCUS surface water Example_Sub_H	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW3	FOCUS surface water Example_Sub_6	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW4	FOCUS surface water Example_Sub_6m_sw, soil metabolite from 6_sw	23/4/2024 07:51:45	23/4/2024 07:51:45
	RINSKOR	XEVELO	23/4/2024 07:53:41	23/4/2024 08:07:30

Edit Substance

General Sorption Transformation Crop processes

Soil - equilibrium Soil non-equilibrium **Surface water** Sediment Substrate

Equilibrium sorption in suspended solids

Kom (L.kg-1): <no value given>

Freundlich sorption exponent (-): 0.9

Reference concentration (mg L-1): 1

Equilibrium sorption in macrophytes

Coefficient for linear sorption on macrophytes (L.kg-1): 0

SPIN (Substances Plug IN) 3.3 - Data required for MACRO for FOCUS SWASH 5.3, PRZM for FOCUS SWASH 5.3, TOXSWA for FOCUS TOXSWA 5...

File Help

Browse Substances

Locked	SubstanceCode /	Name	CreationDate	LastModified
	ingrediente	Nombre del formulado y el cultivo	19/11/2024 07:43:53	19/11/2024 08:44:27
	EXSW0	FOCUS surface water Default_values	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW1	FOCUS surface water Example_Sub_A	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW2	FOCUS surface water Example_Sub_H	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW3	FOCUS surface water Example_Sub_6	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW4	FOCUS surface water Example_Sub_6m_sw, soil metabolite from 6_sw	23/4/2024 07:51:45	23/4/2024 07:51:45
	RINSKOR	XEVELO	23/4/2024 07:53:41	23/4/2024 08:07:30

Edit Substance

General Sorption Transformation Crop processes

Soil - equilibrium Soil non-equilibrium Surface water **Sediment** Substrate

Equilibrium sorption

Kom (L.kg-1): <no value given>

Freundlich sorption exponent (-): 0.9

Reference concentration (mg L-1): 1

Koc to Kom converter

Formulas used

$Koc (L.kg-1) = 1.724 * Kom (L.kg-1)$

$Kom (L.kg-1) = Koc (L.kg-1) / 1.724$

Current

Kom (L.kg-1):

Converted to Koc (L.kg-1):

New

Converted to Kom (L.kg-1):

Enter Koc value (L.kg-1) ----->

OK Cancel

Completar el
valor de Koc y
>>Click en “OK”.



Step 3

SPIN (Substances Plug IN) 3.3 - Data required for MACRO for FOCUS SWASH 5.3, PRZM for FOCUS SWASH 5.3, TOXSWA for FOCUS TOXSWA 5...

File Help

Browse Substances

Locked	SubstanceCode /	Name	CreationDate	LastModified
	ingrediente	Nombre del formulado y el cultivo	19/11/2024 07:43:53	19/11/2024 08:53:19
	EXSW0	FOCUS surface water Default_values	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW1	FOCUS surface water Example_Sub_A	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW2	FOCUS surface water Example_Sub_H	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW3	FOCUS surface water Example_Sub_6	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW4	FOCUS surface water Example_Sub_6m_sw, soil metabolite from 6_sw	23/4/2024 07:51:45	23/4/2024 07:51:45
	RINSKOR	XEVELO	23/4/2024 07:53:41	23/4/2024 08:07:30

Edit Substance

General **Sorption** Transformation Crop processes

Soil - equilibrium Soil non-equilibrium Surface water Sediment **Substrate**

Equilibrium sorption

K_{ow} (L kg⁻¹):

Una vez completa la información >> hacer click en el “check” para guardar la información de “Sorption”



En la pestaña de “Sorption” la información para “Substrate” >> no se modifica ni se añaden datos



Step 3

SPIN (Substances Plug IN) 3.3 - Data required for MACRO for FOCUS SWASH 5.3, PRZM for FOCUS SWASH 5.3, TOXSWA for FOCUS TOXSWA 5...

File Help

Browse Substances

Locked	SubstanceCode /	Name	CreationDate	LastModified
	ingrediente	Nombre del formulado y el cultivo	19/11/2024 07:43:53	19/11/2024 08:53:19
	EXSW0	FOCUS surface water Default_values	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW1	FOCUS surface water Example_Sub_A	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW2	FOCUS surface water Example_Sub_H	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW3	FOCUS surface water Example_Sub_6	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW4	FOCUS surface water Example_Sub_6m_sw, soil metabolite from 6_sw	23/4/2024 07:51:45	23/4/2024 07:51:45
	RINSKOR	XEVELO	23/4/2024 07:53:41	23/4/2024 08:07:30

Edit Substance

General | Sorption | **Transformation** | Crop processes

Soil - aerobic | Soil - aerobic MACRO & PRZM | Soil - aerobic GeoPEARL | Soil - anaerobic | Surface water | Sediment | Other

Aerobic transformations

Half-life (d):	<no value given>	
Measured at (°C):	20	
Molar activation energy (kJ mol ⁻¹):		
Option moisture conditions (pF=2 or wetter):	☐	
Liquid content in incubation experiment (kg kg ⁻¹):		
Exponent for the effect of liquid		
Walker (-):	0.7	
Calibrated value (-):	0.49	



En “Soil-aerobic” >> Completar el dato de vida media en suelo en días el dato de temperatura se completa si se tiene si no se deja por default 20°C



Step 3

SPIN (Substances Plug IN) 3.3 - Data required for MACRO for FOCUS SWASH 5.3, PRZM for FOCUS SWASH 5.3, TOXSWA for FOCUS TOXSWA 5...

File Help

Browse Substances

Locked	SubstanceCode /	Name	CreationDate	LastModified
	COPY	FOCUS surface water Default_values_copy	19/11/2024 09:41:11	19/11/2024 09:41:11
	EXSW0	FOCUS surface water Default_values	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW1	FOCUS surface water Example_Sub_A	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW2	FOCUS surface water Example_Sub_H	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW3	FOCUS surface water Example_Sub_6	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW4	FOCUS surface water Example_Sub_6m_sw, soil metabolite from 6_sw	23/4/2024 07:51:45	23/4/2024 07:51:45
	RINSKOR	XEVELO	23/4/2024 07:53:41	23/4/2024 08:07:30
	ingrediente	Nombre del formulado y el cultivo	19/11/2024 07:43:53	19/11/2024 09:43:41

Edit Substance

General | Sorption | Transformation | Crop processes

Soil - aerobic | Soil - aerobic MACRO & PRZM | Soil - aerobic GeoPEARL | Soil - anaerobic | Surface water | Sediment | Other

Option for biphasic transformation: ☐

Moisture content (%) at which half-life is measured (%): 100

Option for moisture content in transformation study: Relative to field

Q10 Factor for effect of temperature on transformation: 2.58

pF at which half-life is measured (1,2) (log(cm)): 2

Effect of temperature (K-1): 0.0948

Edit Substance

General | Sorption | Transformation | Crop processes

Soil - aerobic | Soil - aerobic MACRO & PRZM | Soil - aerobic GeoPEARL | Soil - anaerobic | Surface water | Sediment | Other

Option to describe the half-life of transformation in soil:

Edit Substance

General | Sorption | Transformation | Crop processes

Soil - aerobic | Soil - aerobic MACRO & PRZM | Soil - aerobic GeoPEARL | Soil - anaerobic | Surface water | Sediment | Other

Anaerobic transformations

Half-life anaerobic (d):

Measured at (°C):

Molar activation energy (kJ mol⁻¹):



En las pestañas:

“Soil-aerobic MACRO & PRZM”

“Soil-aerobic GeoPEARL”

“Soil anaerobic”

>> no se modifica ni se añaden datos



Step 3

SPIN (Substances Plug IN) 3.3 - Data required for MACRO for FOCUS SWASH 5.3, PRZM for FOCUS SWASH 5.3, TOXSWA for FOCUS TOXSWA 5...

File Help

Browse Substances

Locked	SubstanceCode /	Name	CreationDate	LastModified
	COPY	FOCUS surface water Default_values_copy	19/11/2024 09:41:11	19/11/2024 09:41:11
	EXSW0	FOCUS surface water Default_values	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW1	FOCUS surface water Example_Sub_A	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW2	FOCUS surface water Example_Sub_H	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW3	FOCUS surface water Example_Sub_6	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW4	FOCUS surface water Example_Sub_6m_sw, soil metabolite from 6_sw	23/4/2024 07:51:45	23/4/2024 07:51:45
	RINSKOR	XEVELO	23/4/2024 07:53:41	23/4/2024 08:07:30
	ingrediente	Nombre del formulado y el cultivo	19/11/2024 07:43:53	19/11/2024 10:42:20

Edit Substance

General | Sorption | **Transformation** | Crop processes

Soil - aerobic | Soil - aerobic MACRO & PRZM | Soil - aerobic GeoPEARL | Soil - anaerobic | **surface water** | Sediment | Other

Water layer of water body

Half-life (d): ⓘ

Measured at (°C): ⓘ

Molar activation energy (kJ mol⁻¹): ⓘ

Water layer of paddy field

Half-life in paddy layer (d): ⓘ



En "Surface water" >> Completar el dato de **vida media en agua en días**, el dato de temperatura se completa si se tiene si no se deja por default 20°C



Step 3

SPIN (Substances Plug IN) 3.3 - Data required for MACRO for FOCUS SWASH 5.3, PRZM for FOCUS SWASH 5.3, TOXSWA for FOCUS TOXSWA 5...

File Help

Browse Substances

Locked	SubstanceCode /	Name	CreationDate	LastModified
	COPY	FOCUS surface water Default_values_copy	19/11/2024 09:41:11	19/11/2024 09:41:11
	EXSW0	FOCUS surface water Default_values	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW1	FOCUS surface water Example_Sub_A	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW2	FOCUS surface water Example_Sub_H	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW3	FOCUS surface water Example_Sub_6	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW4	FOCUS surface water Example_Sub_6m_sw, soil metabolite from 6_sw	23/4/2024 07:51:45	23/4/2024 07:51:45
	RINSKOR	XEVELO	23/4/2024 07:53:41	23/4/2024 08:07:30
	ingrediente	Nombre del formulado y el cultivo	19/11/2024 07:43:53	19/11/2024 10:45:58

Edit Substance

General | Sorption | **Transformation** | Crop processes

Soil - aerobic | Soil - aerobic MACRO & PRZM | Soil - aerobic GeoPEARL | Soil - anaerobic | Surface water | **Sediment** | Other

Sediment of waterbody

Half-life (d):	451	
Measured at (°C):	20	
Molar activation energy (kJ mol ⁻¹):	65.4	



En “Sediment” >> Completar el dato de vida media en sedimento en días, el dato de temperatura se completa si se tiene si no se deja por default 20°C



Step 3

SPIN (Substances Plug IN) 3.3 - Data required for MACRO for FOCUS SWASH 5.3, PRZM for FOCUS SWASH 5.3, TOXSWA for FOCUS TOXSWA 5...

File Help

Browse Substances

Locked	SubstanceCode /	Name	CreationDate	LastModified
	COPY	FOCUS surface water Default_values_copy	19/11/2024 09:41:11	19/11/2024 09:41:11
	EXSW0	FOCUS surface water Default_values	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW1	FOCUS surface water Example_Sub_A	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW2	FOCUS surface water Example_Sub_H	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW3	FOCUS surface water Example_Sub_6	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW4	FOCUS surface water Example_Sub_6m_sw, soil metabolite from 6_sw	23/4/2024 07:51:45	23/4/2024 07:51:45
	RINSKOR	XEVELO	23/4/2024 07:53:41	23/4/2024 08:07:30
	ingrediente	Nombre del formulado y el cultivo	19/11/2024 07:43:53	19/11/2024 10:45:58



Una vez completa la información >> hacer click en el "check" para guardar la información de transformación

Edit Substance

General Sorption Transformation Crop processes

Soil - aerobic Soil - aerobic MACRO & PRZM Soil - aerobic GeoPEARL Soil - anaerobic Surface water Sediment **Other**

Greenhouse recirculation water

Half-life in recirculation water (d): ⓘ
Measured at (°C): ⓘ
Molar activation energy (kJ mol⁻¹): ⓘ
Half-life in disinfection tank (d): ⓘ
Measured at (°C): ⓘ

Greenhouse

Half-life on the greenhouse floor (d): ⓘ
Half-life in substrate (d): ⓘ
Half-life in greenhouse air (d): ⓘ
Measured at (°C): ⓘ
Molar activation energy (kJ mol⁻¹): ⓘ



En la subpestaña "Other" >> no se modifica ni se añaden datos



Step 3

SPIN (Substances Plug IN) 3.3 - Data required for MACRO for FOCUS SWASH 5.3, PRZM for FOCUS SWASH 5.3, TOXSWA for FOCUS TOXSWA 5...

File Help

Browse Substances

Locked	SubstanceCode /	Name	CreationDate	LastModified
	COPY	FOCUS surface water Default_values_copy	19/11/2024 09:41:11	19/11/2024 09:41:11
	EXSW0	FOCUS surface water Default_values	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW1	FOCUS surface water Example_Sub_A	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW2	FOCUS surface water Example_Sub_H	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW3	FOCUS surface water Example_Sub_6	23/4/2024 07:51:45	23/4/2024 07:51:45
	EXSW4	FOCUS surface water Example_Sub_6m_sw, soil metabolite from 6_sw	23/4/2024 07:51:45	23/4/2024 07:51:45
	RINSKOR	XEVELO	23/4/2024 07:53:41	23/4/2024 08:07:30
	ingrediente	Nombre del formulado y el cultivo	19/11/2024 07:43:53	19/11/2024 10:45:58

Edit Substance

General | Sorption | Transformation | **Crop processes**

Canopy

Wash-off factor (m-1): 50

Canopy process option: Lumped

Lumped

Half-life on crop canopy (d): 10

Plant root

Coefficient for uptake by plant (TSCF) (-): 0.5



En la pestaña "Crop processes" >> no se modifica ni se añaden datos

Una vez completados todos los datos y guardados >> hacer click en la "X" para cerrar la ventana



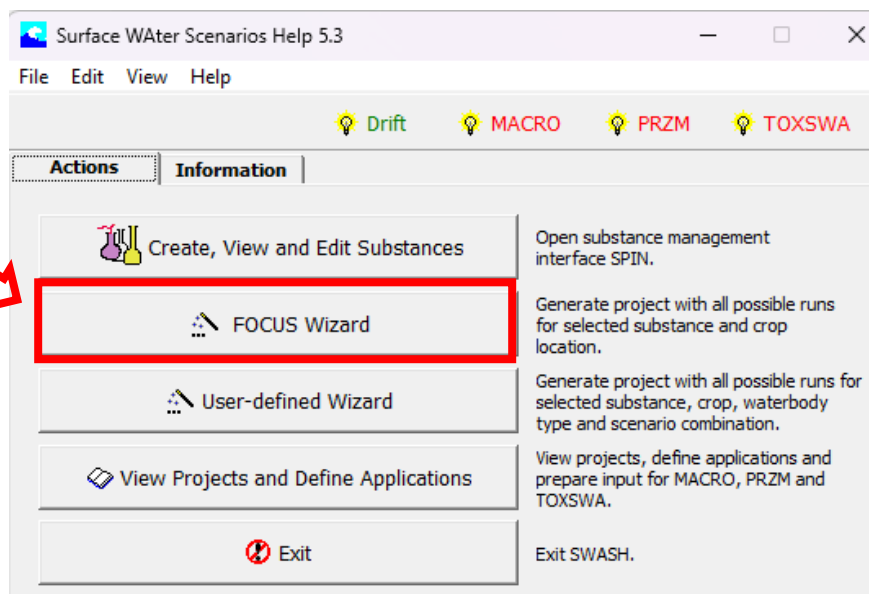
Step 3



El “*FOCUS Wizard*” permite generar nuevos proyectos



- Se debe redactar la información en “*Project Name*” y “*Description*”.
- El ingrediente activo de interés (“*Substance*”) y el tipo de cultivo (“*Crop*”), se deben seleccionar de la lista desplegable.
- La sustancia que se debe seleccionar fue la que se indico en el paso anterior.



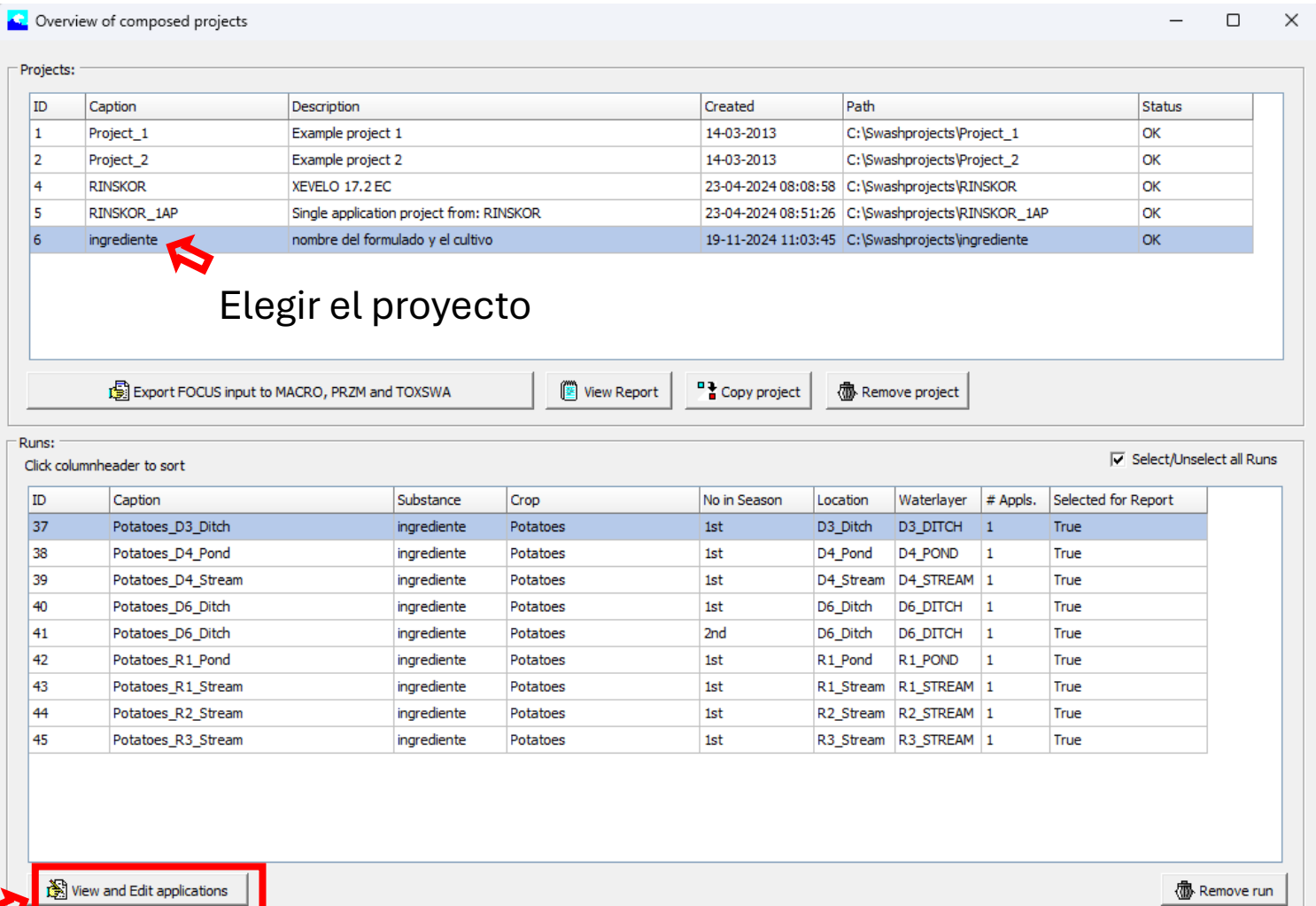
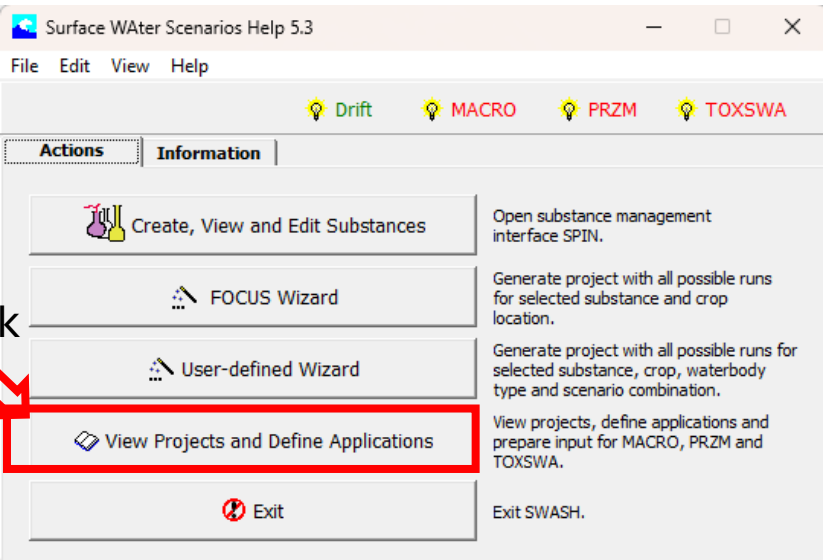
Una vez completados todos los datos >> hacer click en “*Create runs!*” y Click en “OK” en la ventana emergente.



Step 3



“View Projects and Define Applications” permite definir el patrón de uso agrícola.





Step 3

Applications

- Possible days of Applications -

ID	Scenario	Crop	Nr in season	Waterbody	Appl. Method	# Appls.	First	DayNr	Last	DayNr	Min. Interval (d)	Emergence Day	Harvest Day
120	D3_Ditch	Potatoes	1st	D3_DITCH	ground spray	4	12-May	132	12-Aug	224	15	10-May	15-Sep
121	D4_Pond	Potatoes	1st	D4_POND	ground spray	4	8-May	128	8-Aug	220	15	22-May	23-Sep
122	D4_Stream	Potatoes	1st	D4_STREAM	ground spray	4	8-May	128	8-Aug	220	15	22-May	23-Sep
123	D6_Ditch	Potatoes	1st	D6_DITCH	ground spray	4	27-Mar	86	27-Jun	178	15	10-Apr	15-Jul
124	D6_Ditch	Potatoes	2nd	D6_DITCH	ground spray	4	22-Jul	203	21-Oct	294	15	5-Aug	25-Nov
125	R1_Pond	Potatoes	1st	R1_POND	ground spray	4	21-Apr	111	21-Jul	202	15	5-May	8-Sep
126	R1_Stream	Potatoes	1st	R1_STREAM	ground spray	4	21-Apr	111	21-Jul	202	15	5-May	8-Sep
127	R2_Stream	Potatoes	1st	R2_STREAM	ground spray	4	1-Mar	60	1-Jun	152	15	15-Mar	15-Jun
128	R3_Stream	Potatoes	1st	R3_STREAM	ground spray	4	27-Mar	86	27-Jun	178	15	10-Apr	1-Sep

Applications:

<----- PRZM input ----->

Nr of Appl.	Rate (kg/ha)	Chemical application Method	Depth Incorporated
1	1	1 - appln soil linear	4
2	1	1 - appln soil linear	4
3	1	1 - appln soil linear	4
4	1	1 - appln soil linear	4

Application Pattern

Copy selected application pattern (Appl. Method, NrOfApps, Min. Interval and Rate) to all scenarios of the same crop (in season).

Default...

View/edit default appl. pattern of substance: INGREDIENTE

Print Save Close



Antes de aumentar el número de aplicaciones, el usuario debe ampliar la ventana de tiempo entre el primer y el último día posible de aplicación. La ventana mínima de tiempo que se puede usar se determina mediante la siguiente ecuación (FOCUS, 2001):

Ventana = 30 + (número de aplicaciones * intervalo mínimo entre aplicaciones)

>> Cambiar manualmente las fechas en las columnas "First" y "Last".

Por ejemplo. Si la ventana de aplicación da un valor de 90 días (equivale a 3 meses) entonces se debe asegurara de que entre a primera y última aplicación hayan 3 meses de plazo, ya sea modificando manualmente o mediante el calendario indicado en la siguiente diapositiva, seleccionar los días del año al que corresponde la primera y última aplicación y cambiar los DayNr según corresponda (12 may = 132 por lo que se cambian todos los valores de esa columna a 132 y 12 de agosto = 224 por lo que se cambian todos los valores de esa columna a 224)



Step 3

DIA EN EL AÑO CALENDARIO (DayNr)

Day in Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
January	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
February	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59			
March	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
April	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	
May	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151
June	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	
July	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212
August	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243
September	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	
October	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304
November	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	
December	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365



Step 3

Applications

- Possible days of Applications -

ID	Scenario	Crop	Nr in season	Waterbody	Appl. Method	# Appls.	First	DayNr	Last	DayNr	Min. Interval (d)	Emergence Day	Harvest Day
85	D3_Ditch	Potatoes	1st	D3_DITCH	ground spray	1	1-Mar	60	26-May	146	15	10-May	15-Sep
86	D4_Pond	Potatoes	1st	D4_POND	ground spray	1	1-Mar	60	7-Jun	158	15	22-May	23-Sep
87	D4_Stream	Potatoes	1st	D4_STREAM	ground spray	1	1-Mar	60	7-Jun	158	15	22-May	23-Sep
88	D6_Ditch	Potatoes	1st	D6_DITCH	ground spray	1	1-Mar	60	26-Apr	116	15	10-Apr	15-Jul
89	D6_Ditch	Potatoes	2nd	D6_DITCH	ground spray	1	1-Mar	60	21-Aug	233	15	5-Aug	25-Nov
90	R1_Pond	Potatoes	1st	R1_POND	ground spray	1	1-Mar	60	21-May	141	15	5-May	8-Sep
91	R1_Stream	Potatoes	1st	R1_STREAM	ground spray	1	1-Mar	60	21-May	141	15	5-May	8-Sep
92	R2_Stream	Potatoes	1st	R2_STREAM	ground spray	1	1-Mar	60	31-Mar	90	15	15-Mar	15-Jun
93	R3_Stream	Potatoes	1st	R3_STREAM	ground spray	1	1-Mar	60	26-Apr	116	15	10-Apr	1-Sep

Applications:

<----- PRZM input ----->

Nr of Appl.	Rate (kg/ha)	Chemical application Method	Depth Incorporated
1	1	1 - appln soil linear	4

Application Pattern

Copy

Copy selected application pattern (Appl. Method, NrOfApps, Min. Interval and Rate) to all scenarios of the same crop (in season).

Default...

View/edit default appl. pattern of substance: ingrediente

Print

Save

Close



Se debe ajustar los intervalos de aplicación, indicar los días entre cada aplicación



Step 3

Applications



- Possible days of Applications -

ID	Scenario	Crop	Nr in season	Waterbody	Appl. Method	# Appls.	First	DayNr	Last	DayNr	Min. Interval (d)	Emergence Day	Harvest Day
82	D3_Ditch	Potatoes	1st	D3_DITCH	ground spray	4	26-Apr	116	1-Mar	60	15	10-May	15-Sep
83	D4_Pond	Potatoes	1st	D4_POND	ground spray	4	8-May	128	1-Mar	60	15	22-May	23-Sep
84	D4_Stream	Potatoes	1st	D4_STREAM	ground spray	4	8-May	128	1-Mar	60	15	22-May	23-Sep
85	D6_Ditch	Potatoes	1st	D6_DITCH	ground spray	4	27-Mar	86	1-Mar	60	15	10-Apr	15-Jul
86	D6_Ditch	Potatoes	2nd	D6_DITCH	ground spray	4	22-Jul	203	1-Mar	60	15	5-Aug	25-Nov
87	R1_Pond	Potatoes	1st	R1_POND	ground spray	4	21-Apr	111	1-Mar	60	15	5-May	8-Sep
88	R1_Stream	Potatoes	1st	R1_STREAM	ground spray	4	21-Apr	111	1-Mar	60	15	5-May	8-Sep
89	R2_Stream	Potatoes	1st	R2_STREAM	ground spray	4	1-Mar	60	1-Mar	60	15	15-Mar	15-Jun
90	R3_Stream	Potatoes	1st	R3_STREAM	ground spray	4	27-Mar	86	1-Mar	60	15	10-Apr	1-Sep



Se debe ajustar el número de aplicación al año en la columna # Appls.



Step 3



Elegir el método de aplicación.

- *Aerial appl.* (aérea)
- *Air blast* (a nivel de suelo)
- *Granular appl.* (aplicación granular)
- *Soil incorp.* (incorporado al suelo)

Applications



- Possible days of Applications -

ID	Scenario	Crop	Nr in season	Waterbody	Appl. Method	# Appls.	First	DayNr	Last	DayNr	Min. Interval (d)	Emergence Day	Harvest Day
85	D3_Ditch	Potatoes	1st	D3_DITCH	ground spray	4	1-Mar	60	26-May	146	15	10-May	15-Sep
86	D4_Pond	Potatoes	1st	D4_POND	ground spray	4	1-Mar	60	7-Jun	158	15	22-May	23-Sep
87	D4_Stream	Potatoes	1st	D4_STREAM	ground spray	4	1-Mar	60	7-Jun	158	15	22-May	23-Sep
88	D6_Ditch	Potatoes	1st	D6_DITCH	ground spray	2	1-Mar	60	26-Apr	116	15	10-Apr	15-Jul
89	D6_Ditch	Potatoes	2nd	D6_DITCH	ground spray	4	1-Mar	60	21-Aug	233	15	5-Aug	25-Nov
90	R1_Pond	Potatoes	1st	R1_POND	ground spray	4	1-Mar	60	21-May	141	15	5-May	8-Sep
91	R1_Stream	Potatoes	1st	R1_STREAM	ground spray	4	1-Mar	60	21-May	141	15	5-May	8-Sep
92	R2_Stream	Potatoes	1st	R2_STREAM	ground spray	1	1-Mar	60	31-Mar	90	15	15-Mar	15-Jun
93	R3_Stream	Potatoes	1st	R3_STREAM	ground spray	2	1-Mar	60	26-Apr	116	15	10-Apr	1-Sep



Step 3

Applications

- Possible days of Applications -

ID	Scenario	Crop	Nr in season	Waterbody	Appl. Method	# Appls.	First	DayNr	Last	DayNr	Min. Interval (d)	Emergence Day	Harvest Day
85	D3_Ditch	Potatoes	1st	D3_DITCH	ground spray	4	1-Mar	60	26-May	146	15	10-May	15-Sep
86	D4_Pond	Potatoes	1st	D4_POND	ground spray	4	1-Mar	60	7-Jun	158	15	22-May	23-Sep
87	D4_Stream	Potatoes	1st	D4_STREAM	ground spray	4	1-Mar	60	7-Jun	158	15	22-May	23-Sep
88	D6_Ditch	Potatoes	1st	D6_DITCH	ground spray	2	1-Mar	60	26-Apr	116	15	10-Apr	15-Jul
89	D6_Ditch	Potatoes	2nd	D6_DITCH	ground spray	4	1-Mar	60	21-Aug	233	15	5-Aug	25-Nov
90	R1_Pond	Potatoes	1st	R1_POND	ground spray	4	1-Mar	60	21-May	141	15	5-May	8-Sep
91	R1_Stream	Potatoes	1st	R1_STREAM	ground spray	4	1-Mar	60	21-May	141	15	5-May	8-Sep
92	R2_Stream	Potatoes	1st	R2_STREAM	ground spray	1	1-Mar	60	31-Mar	90	15	15-Mar	15-Jun
93	R3_Stream	Potatoes	1st	R3_STREAM	ground spray	2	1-Mar	60	26-Apr	116	15	10-Apr	1-Sep

 ***Atención a las unidades.**

Applications:

Nr of Appl.	Rate (kg/ha)
1	0.24
2	0.24
3	0.24
4	0.24

Application Pattern

 Copy

Copy selected application pattern (Appl. Method, NrOfApps, Min. Interval and Rate) to all scenarios of the same crop (in season).

 Default...

View/edit default appl. pattern of substance: ingrediente

 Print

Save

Close



Escenarios “D”:

- Se debe completar la información de la tasa de aplicación en kg/ha



Step 3

Applications

- Possible days of Applications -

ID	Scenario	Crop	Nr in season	Waterbody	Appl. Method	# Appls.	First	DayNr	Last	DayNr	Min. Interval (d)	Emergence Day	Harvest Day
85	D3_Ditch	Potatoes	1st	D3_DITCH	ground spray	4	1-Mar	60	26-May	146	15	10-May	15-Sep
86	D4_Pond	Potatoes	1st	D4_POND	ground spray	4	1-Mar	60	7-Jun	158	15	22-May	23-Sep
87	D4_Stream	Potatoes	1st	D4_STREAM	ground spray	4	1-Mar	60	7-Jun	158	15	22-May	23-Sep
88	D6_Ditch	Potatoes	1st	D6_DITCH	ground spray	2	1-Mar	60	26-Apr	116	15	10-Apr	15-Jul
89	D6_Ditch	Potatoes	2nd	D6_DITCH	ground spray	4	1-Mar	60	21-Aug	233	15	5-Aug	25-Nov
90	R1_Pond	Potatoes	1st	R1_POND	ground spray	4	1-Mar	60	21-May	141	15	5-May	8-Sep
91	R1_Stream	Potatoes	1st	R1_STREAM	ground spray	4	1-Mar	60	21-May	141	15	5-May	8-Sep
92	R2_Stream	Potatoes	1st	R2_STREAM	ground spray	1	1-Mar	60	31-Mar	90	15	15-Mar	15-Jun
93	R3_Stream	Potatoes	1st	R3_STREAM	ground spray	2	1-Mar	60	26-Apr	116	15	10-Apr	1-Sep

En "Depth incorporated" se indica 0.

Applications: <----- PRZM input ----->

Nr of Appl.	Rate (kg/ha)	Chemical application Method	Depth Incorporated
1	1	1 - appln soil linear	4
2	1	1 - appln soil linear	4
3	1	1 - appln soil linear	4
4	1	1 - appln soil linear	4

Application Pattern

Copy selected application pattern (Appl. Method, NrOfApps, Min. Interval and Rate) to all scenarios of the same crop (in season).

Default...

View/edit default appl. pattern of substance: ingrediente

Print 1 Save 2 Close



ESCENARIOS R

- Se debe completar la información de la tasa de aplicación en **kg/ha**.
- Elegir el método de aplicación química (aplicación al suelo o foliar).
- Completar la profundidad de incorporación al suelo.

Una vez completa la información >> hacer click "Save" y después en "OK" para guardar la información de transformación

Una vez guardada la información >> click en "Close" para cerrar.



Step 3

Overview of composed projects

Projects:

ID	Caption	Description	Created	Path	Status
6	F_PN	fipronil pia	03-10-2023 10:30:11	C:\Swashprojects\F_PN	OK
7	F_PN_1AP	Single application project from: F_PN	03-10-2023 10:36:14	C:\Swashprojects\F_PN_1AP	OK
8	F_PN1	Fipronil pina	03-10-2023 13:46:44	C:\Swashprojects\F_PN1	OK
9	F_PN1_1AP	Single application project from: F_PN1	03-10-2023 13:51:23	C:\Swashprojects\F_PN1_1AP	OK
10	PRUEBA	PRUEBA	03-04-2024 15:08:03	C:\Swashprojects\PRUEBA	OK
11	RINSKOR	XEVELO 17.2 EC	23-04-2024 08:08:49	C:\Swashprojects\RINSKOR	OK
12	RINSKOR_1AP	Single application project from: RINSKOR	23-04-2024 08:51:28	C:\Swashprojects\RINSKOR_1AP	OK
13	INGREDIENTE	FORMULADO Y CULTIVO	25-11-2024 09:40:11	C:\Swashprojects\INGREDIENTE	OK

Export FOCUS input to MACRO, PRZM and TOXSWA View Report Copy project Remove project

Runs:

Click columnheader to sort ☒ Select/Unselect all Runs

ID	Caption	Substance	Crop	No in Season	Location	Waterlayer	# Appls.	Selected for Report
85	Potatoes_D3_Ditch	ingrediente	Potatoes	1st	D3_Ditch	D3_DITCH	4	True
86	Potatoes_D4_Pond	ingrediente	Potatoes	1st	D4_Pond	D4_POND	4	True
87	Potatoes_D4_Stream	ingrediente	Potatoes	1st	D4_Stream	D4_STREAM	4	True
88	Potatoes_D6_Ditch	ingrediente	Potatoes	1st	D6_Ditch	D6_DITCH	2	True
89	Potatoes_D6_Ditch	ingrediente	Potatoes	2nd	D6_Ditch	D6_DITCH	4	True
90	Potatoes_R1_Pond	ingrediente	Potatoes	1st	R1_Pond	R1_POND	4	True
91	Potatoes_R1_Stream	ingrediente	Potatoes	1st	R1_Stream	R1_STREAM	4	True
92	Potatoes_R2_Stream	ingrediente	Potatoes	1st	R2_Stream	R2_STREAM	1	True
93	Potatoes_R3_Stream	ingrediente	Potatoes	1st	R3_Stream	R3_STREAM	2	True

View and Edit applications Remove run

Save Close

Confirm

You have defined runs with multiple applications in combination with either the ground spray, air blast or the aerial application method. In this case a single application assessment is also needed.

Do you want to create a copy of this project for the single application assessment?

Yes No



La presencia o ausencia de ese proyecto copia no afecta la generación del modelo con todas las aplicaciones).

FOCUS_SWASH

The elements of the copied project are:

- All runs are copied but now the number of applications is limited to 1.
- The application rate is set equal to the rate of the first application.
- The application method is set equal to the spray application method in the project.
- The parameters for the application window are set equal to the default values for the crop.

OK



Step 3



Verificar que las 4
opciones estén
marcadas

Create project files

Project path: C:\Swashprojects\INGREDIENTE

Select options

- ☒ Project report
- ☒ files required to run PRZM
- ☒ export FOCUS input to MACRO database
- ☒ FOCUS input for TOXSWA automatically prepared

Are all run specifications, incl. applications, correct?

OK Cancel



Dar "Ok" en todas las ventanas emergentes

Overview of composed projects

Projects:

ID	Caption	Description	Created	Path	Status
6	F_PN	fipronil pia	03-10-2023 10:30:11	C:\Swashprojects\F_PN	OK
7	F_PN_IAP	Single application project from: F_PN	03-10-2023 10:36:14	C:\Swashprojects\F_PN_IAP	OK
8	F_PN1	Fipronil pina	03-10-2023 13:46:44	C:\Swashprojects\F_PN1	OK
9	F_PN1_IAP	Single application project from: F_PN1	03-10-2023 13:51:23	C:\Swashprojects\F_PN1_IAP	OK
10	PRUEBA	PRUEBA	03-04-2024 15:08:03	C:\Swashprojects\PRUEBA	OK
11	RINSKOR	XEVELO 17.2 EC	23-04-2024 08:08:49	C:\Swashprojects\RINSKOR	OK
12	RINSKOR_IAP	Single application project from: RINSKOR	23-04-2024 08:51:28	C:\Swashprojects\RINSKOR_IAP	OK
13	INGREDIENTE	FORMULADO Y CULTIVO	25-11-2024 09:40:11	C:\Swashprojects\INGREDIENTE	OK
14	INGREDIENTE_IAP	Single application project from: INGREDIENTE	25-11-2024 12:11:30	C:\Swashprojects\INGREDIENTE_IAP	OK

Export FOCUS input to MACRO, PRZM and TOXSWA View Report Copy project Remove project

Runs:

Click columnheader to sort ✓ Select/Unselect all Runs

ID	Caption	Substance	Crop	No in Season	Location	Waterlayer	# Appls.	Selected for Report
85	Potatoes_D3_Ditch	ingrediente	Potatoes	1st	D3_Ditch	D3_DITCH	4	True
86	Potatoes_D4_Pond	ingrediente	Potatoes	1st	D4_Pond	D4_POND	4	True
87	Potatoes_D4_Stream	ingrediente	Potatoes	1st	D4_Stream	D4_STREAM	4	True
88	Potatoes_D6_Ditch	ingrediente	Potatoes	1st	D6_Ditch	D6_DITCH	2	True
89	Potatoes_D6_Ditch	ingrediente	Potatoes	2nd	D6_Ditch	D6_DITCH	4	True
90	Potatoes_R1_Pond	ingrediente	Potatoes	1st	R1_Pond	R1_POND	4	True
91	Potatoes_R1_Stream	ingrediente	Potatoes	1st	R1_Stream	R1_STREAM	4	True
92	Potatoes_R2_Stream	ingrediente	Potatoes	1st	R2_Stream	R2_STREAM	1	True
93	Potatoes_R3_Stream	ingrediente	Potatoes	1st	R3_Stream	R3_STREAM	2	True

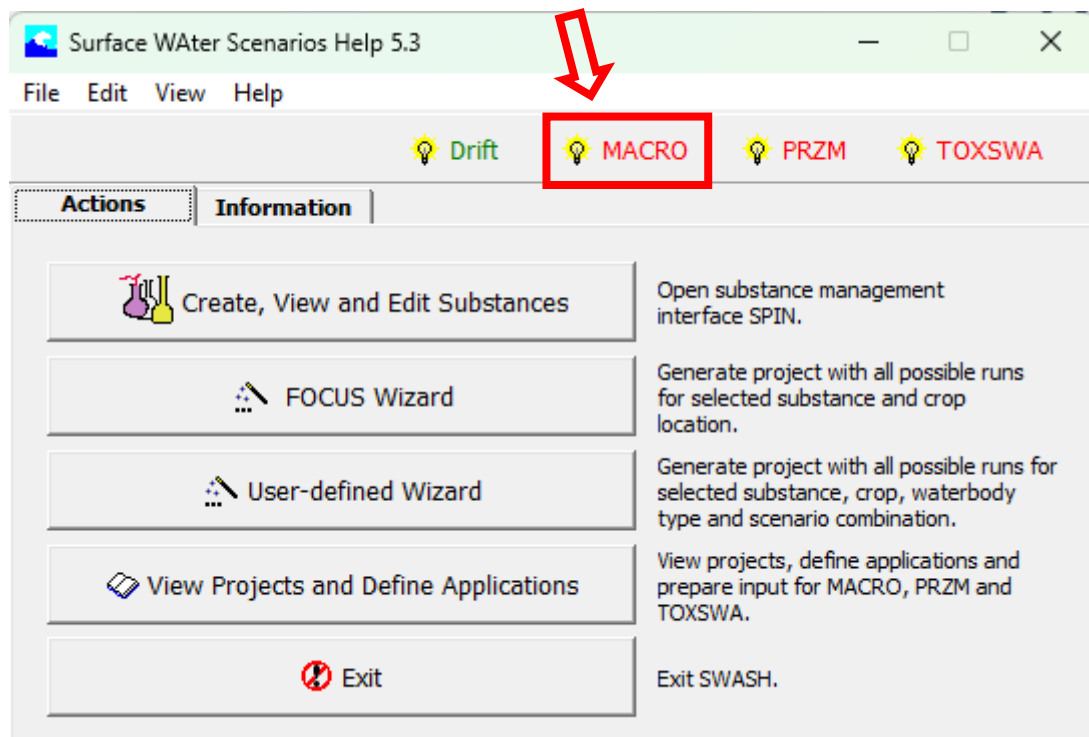
View and Edit applications Remove run

Save Close





Step 3

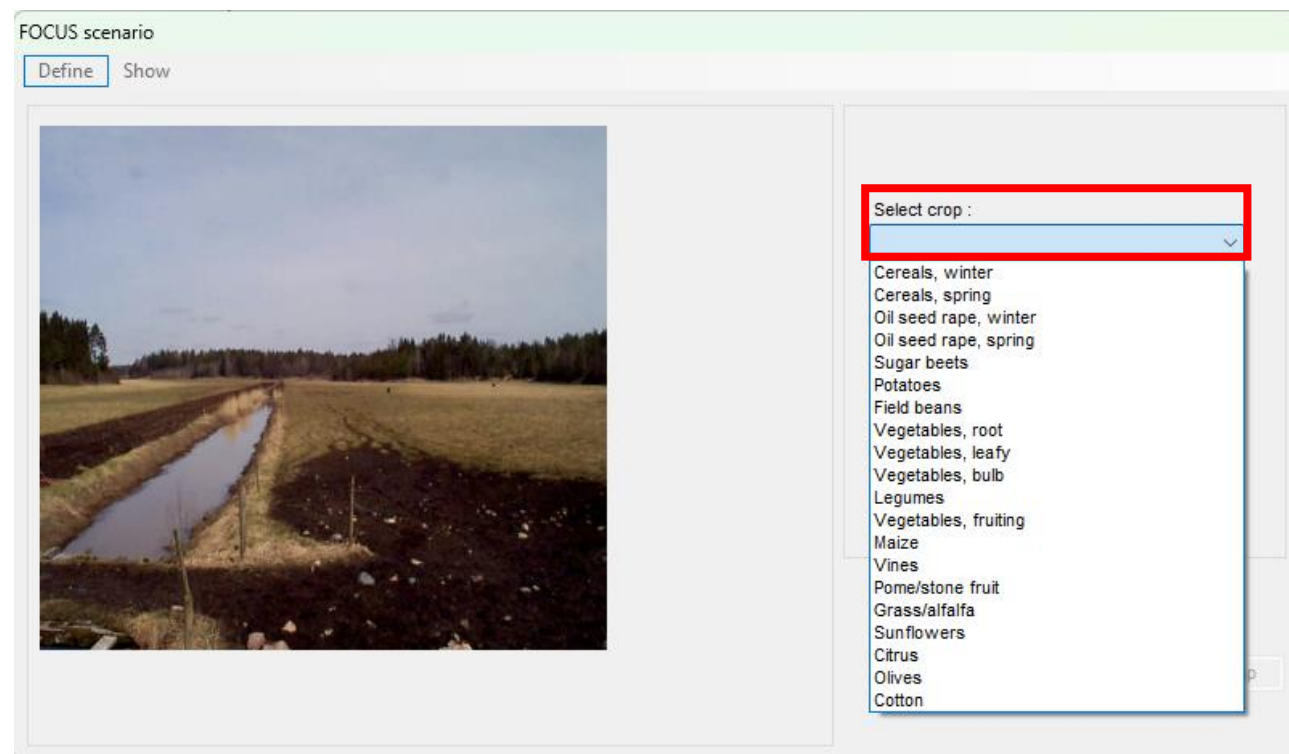
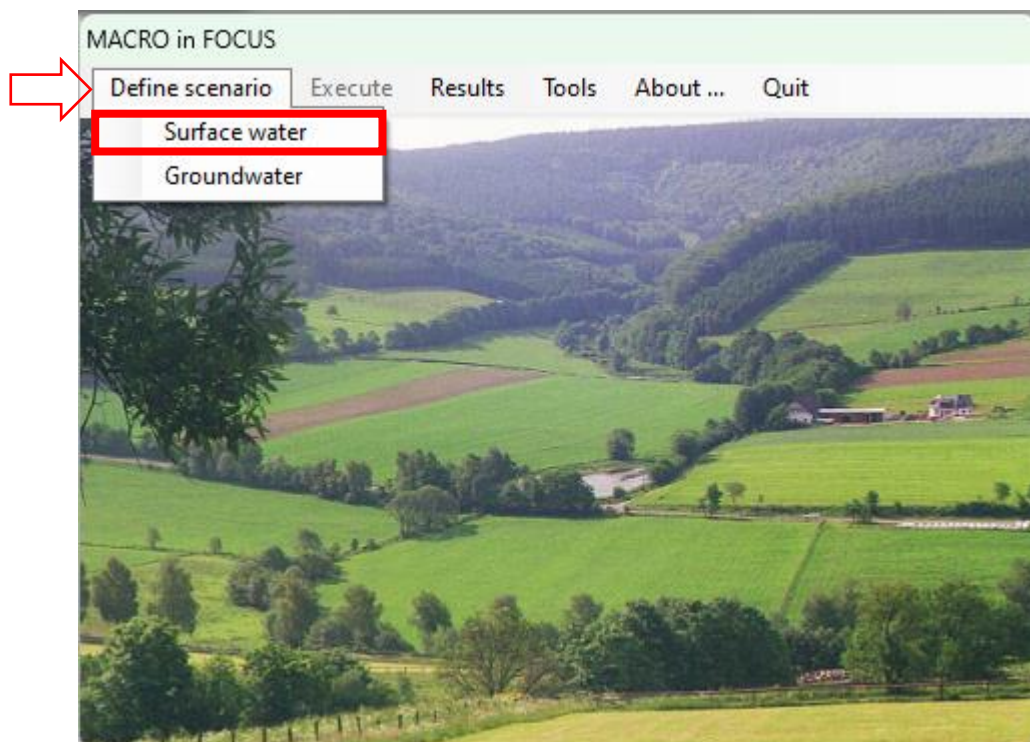


Modelos utilizados en SWASH 5_3:

- **MACRO:** Modela el drenaje y lixiviación en el suelo.



Step 3



Elegir el tipo de cultivo utilizado en Swash



Step 3

FOCUS scenario

Define Show



Los escenarios se
definen por el tipo de
cultivo

Se deben analizar
todos los disponibles

Select crop :

Potatoes

Select scenario :

D3

D3

D4

D6

Rainfall: 747 mm/year

Irrigated : ☒

OK

Quit

Map



Se debe seleccionar
uno de los
escenarios “D” en
caso de que haya
varios.



Step 3

FOCUS scenario

Define Show

.... parent compound

.... applications

....metabolite



Select crop :
Potatoes

Select scenario :
D3

Soil: sand

Rainfall: 747 mm/year

Irrigated : ☒

OK Quit Map

Pesticide properties

Select from database :

ingrediente

EXSW2

EXSW3

EXSW4

F_CH

F_PN

ingrediente

RINSKOR

Select

New

Quit

Delete

Compound properties :

Diffusion coefficient (m2/s) : 4.98E-10

Koc (cm3/g) : 2185

Freundlich exponent : 0.9

Half-life (days) : 367

at temperature (oC) : 20

and pF value : 2

Exponent for temperature response : 0.0948

Exponent for moisture response : 0.49

Crop uptake factor : 0.5

Washoff coefficient (1/mm) : 0.05

Canopy dissipation coefficient (1/days) : 6.93E-02

Vapour pressure (Pa) : 3.40E-04

at temperature (oC) : 20



Se debe seleccionar la base de datos de la sustancia de interés y el programa completa la información de manera automática



Step 3



La opción pestaña “...parent compound” debe aparecer marcada con un “check”.

FOCUS scenario

Define Show

☒ ... parent compound

☐ ... applications

☐ ...metabolite

Defining applications (surface water scenario)

ingrediente on Potatoes at D3

85

Description

FORMULADO Y CULTIVO

Applications

No. Dose (g/ha)

1	240
2	240
3	240
4	240

Application timing calculator

Number of applications (per crop):

4

First possible day of application:

60

Last possible day of application:

146

Minimum interval (days) between applications:

15

Solution found.

Application method

- ☒ Ground spray
- ☐ Air blast
- ☐ Granular
- ☐ Incorporated
- ☐ Aerial

Cancel

OK

Note: the dose given here is the actual applied amount. Interception is calculated internally for surface water scenarios.



Se debe seleccionar en descripción el formulado y cultivo y el programa completa la información de manera automática



Step 3



Verificar que las pestañas “...parent compound” y “...applications” aparezcan marcadas con un “check”.

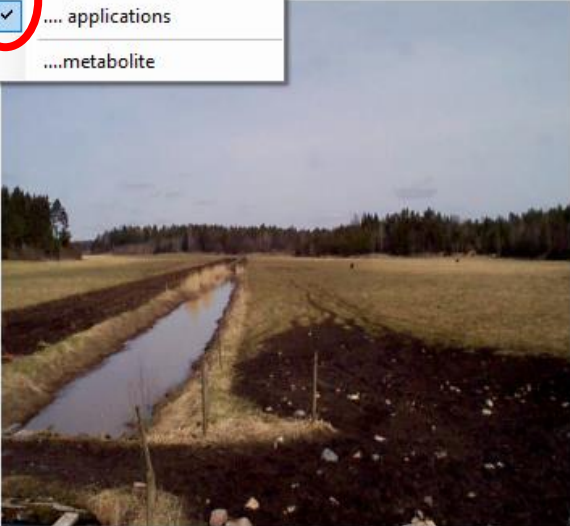
FOCUS scenario

Define Show

☒ ... parent compound

☒ ... applications

☐ ...metabolite



Select crop :
Potatoes

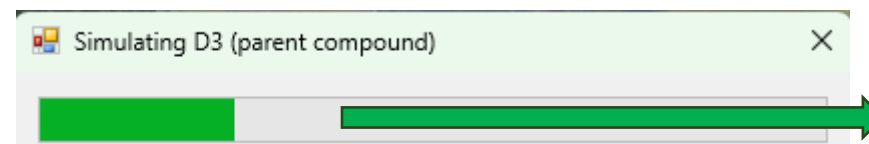
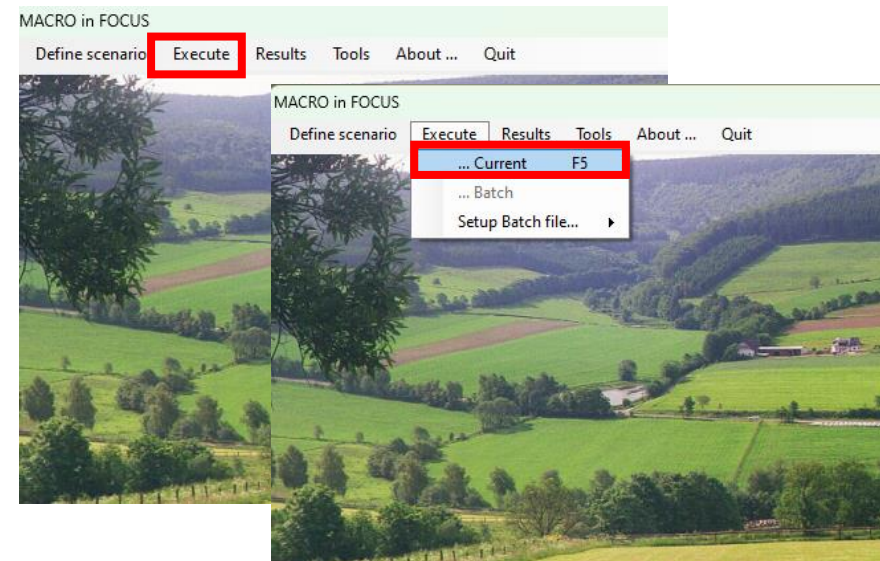
Select scenario :
D3

Soil: sand

Rainfall: 747 mm/year

Irrigated : ☒

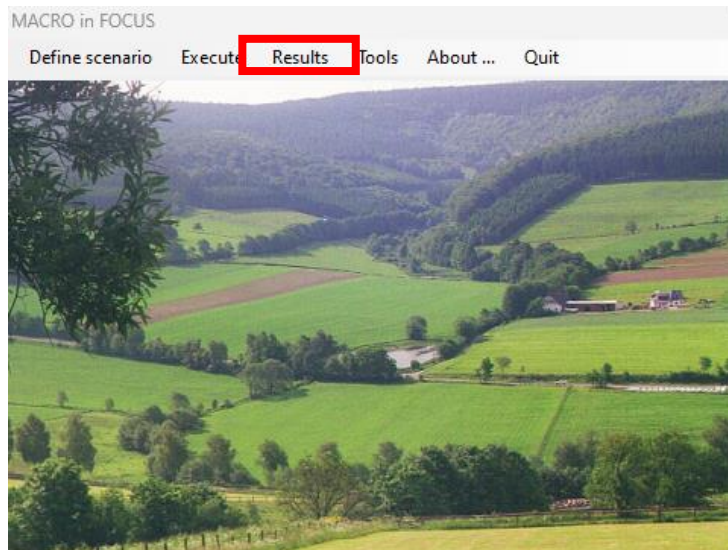
OK Quit Map



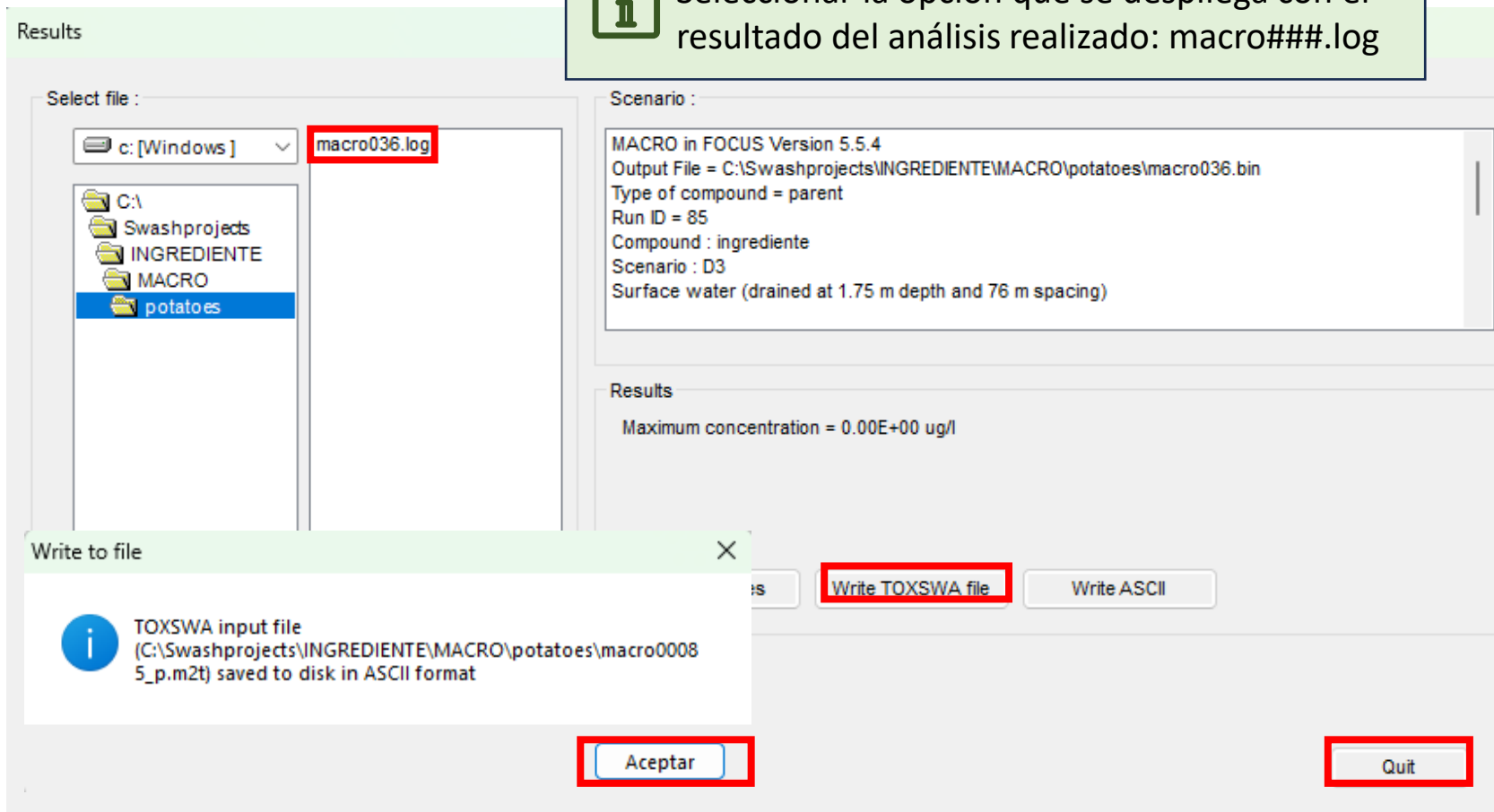
Después de completar la simulación, se debe crear el archivo de salida **.m2t**. Este archivo contiene los datos de entrada de TOXSWA sobre el drenaje y los flujos de plaguicidas que ingresan al agua superficial.



Step 3

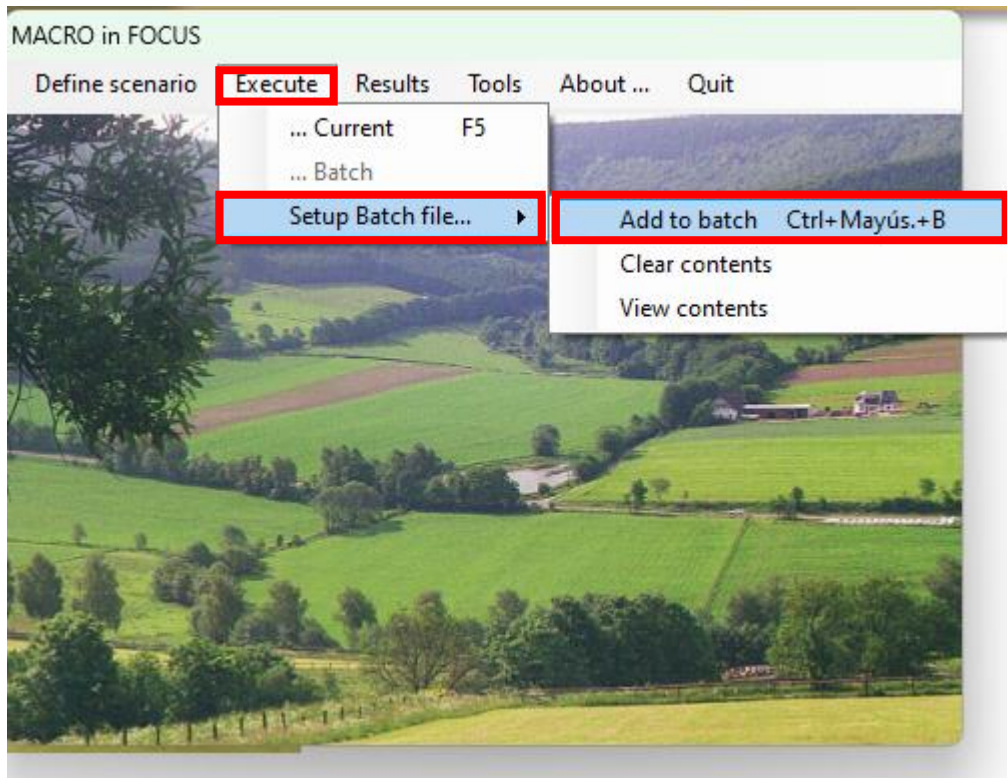


Seleccionar la opción que se despliega con el resultado del análisis realizado: macro###.log





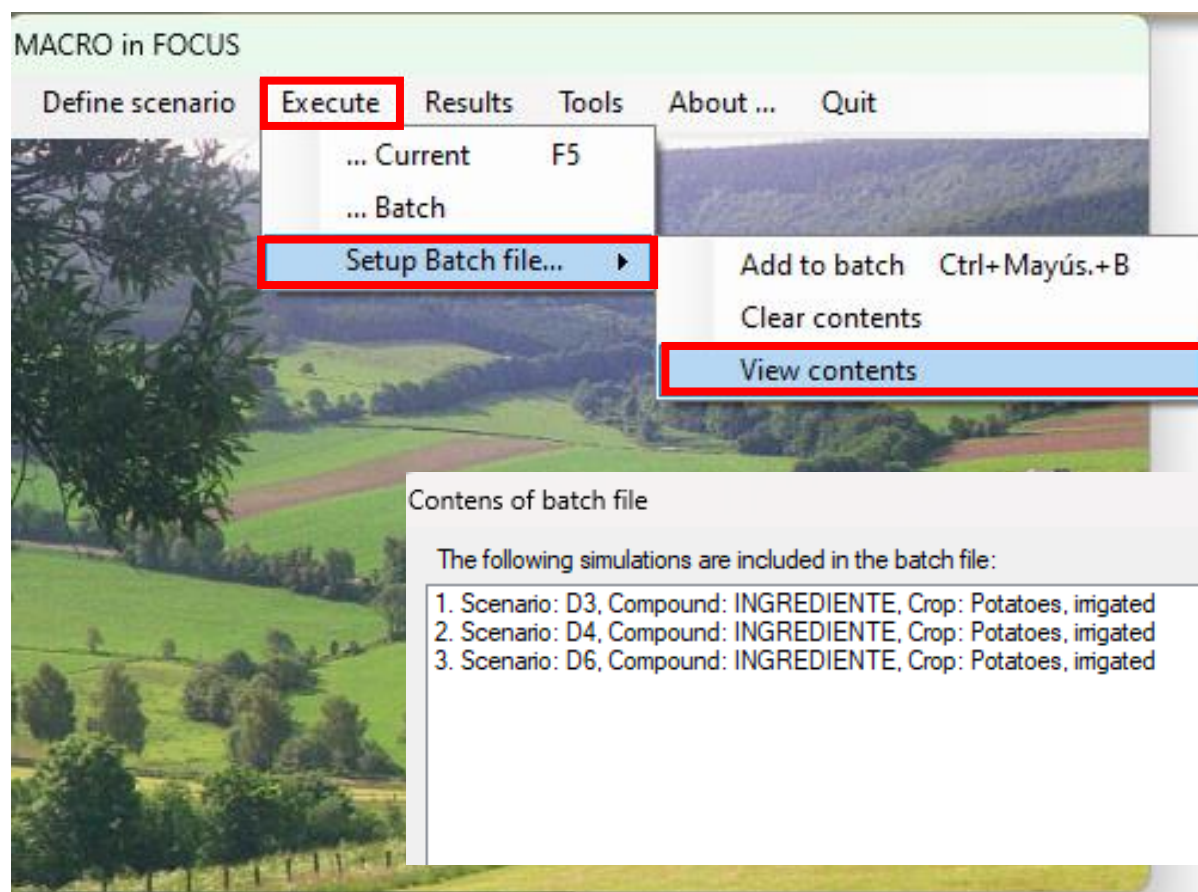
Step 3



RECORDAR: En caso de existen varios escenarios “D” se deben repetir los pasos de la diapositiva 34 a la 39 para cada uno de los escenario

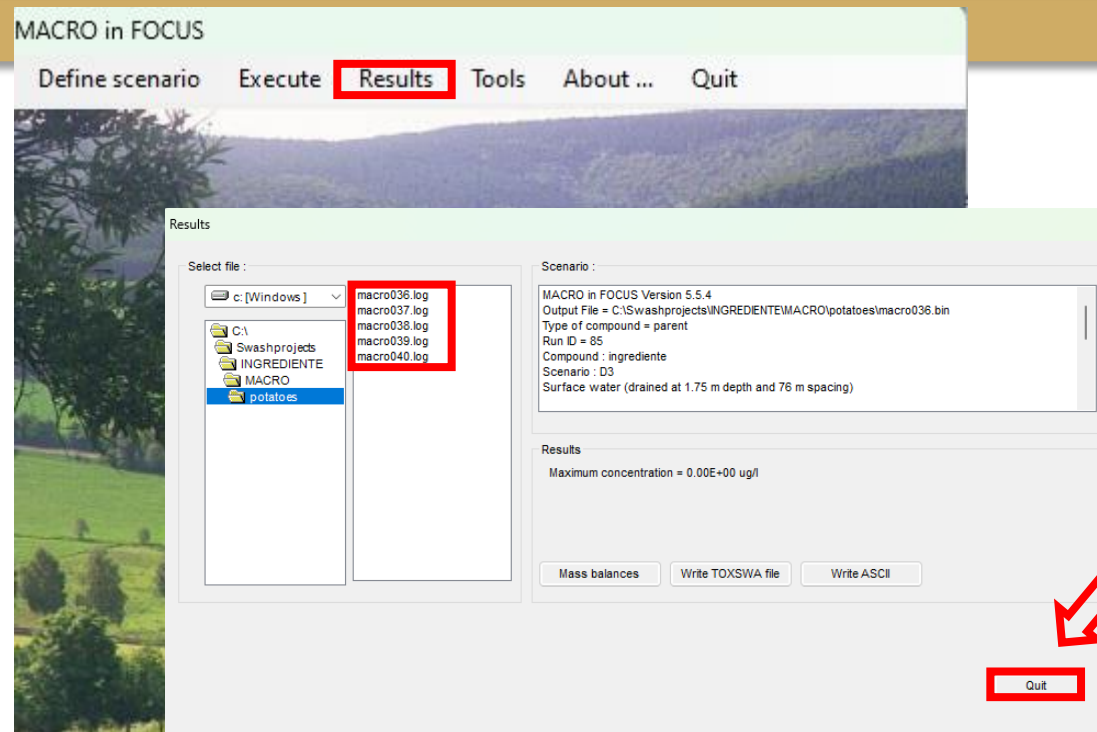
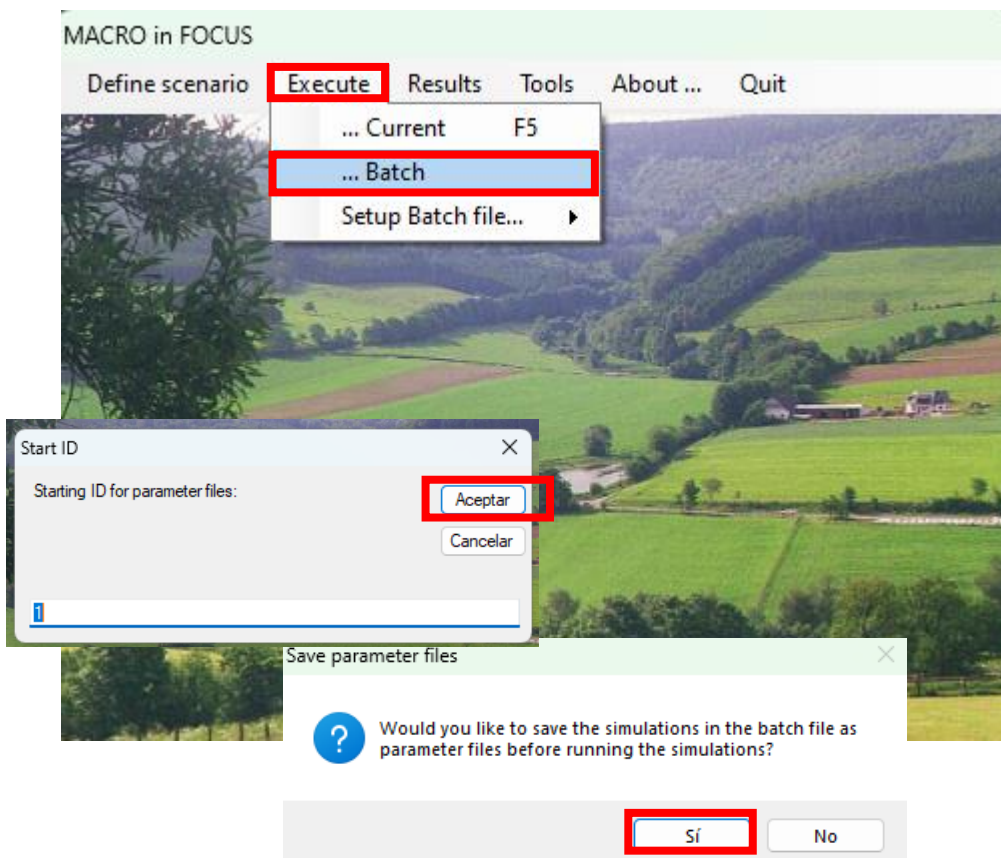


Una vez que se corren y se añaden todas las corridas se puede ingresar a “View contents” para confirmar que ya se incluyeron todos





Step 3



Seleccionar la opción que se despliega con el resultado del análisis realizado: macro###.log

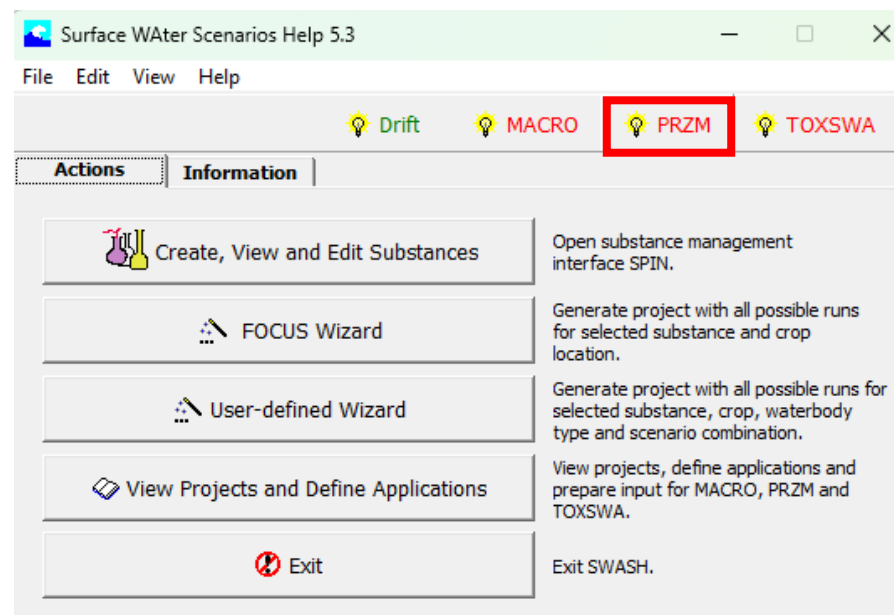
Click en "Write TOXSWA file".

Click en "Aceptar" en la ventana emergente.

Repetir para cada uno de los resultados generados



Step 3

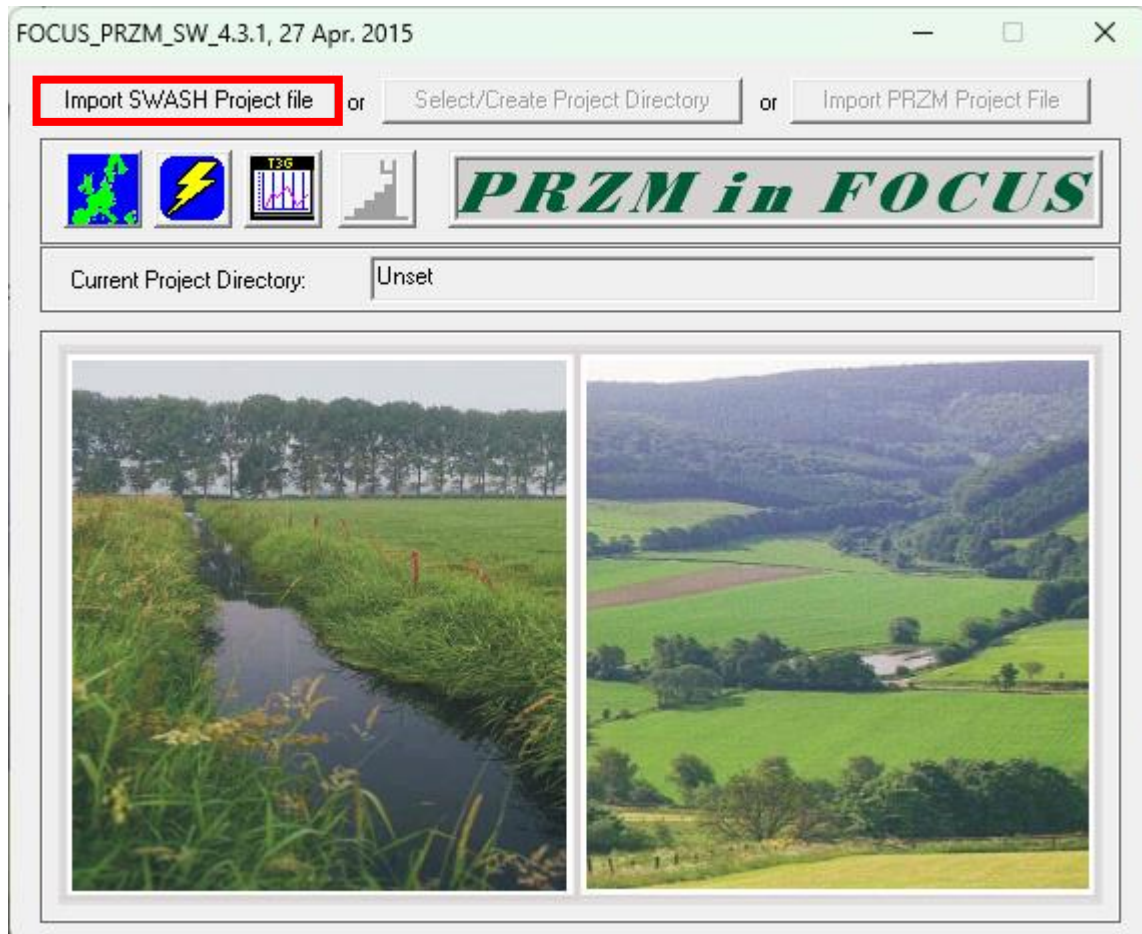


Modelos utilizados en SWASH 5_3:

- **PRZM:** Modela el escurrimiento de pesticidas hacia cuerpos de agua.



Step 3



Select SWASH Project

INGREDIENTE

seleccionar

Available crops for selected project

potatoes

Revisar

Location of SWASH Project

C:\Swashprojects\INGREDIENTE

Creation Date/Time of SWASH Project

25-Nov-2024-00:00

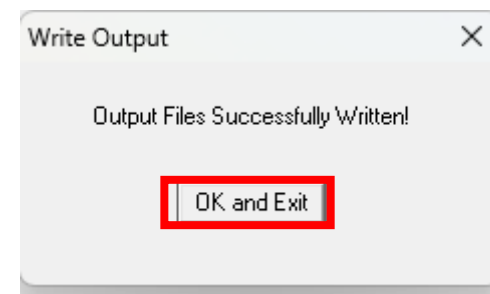
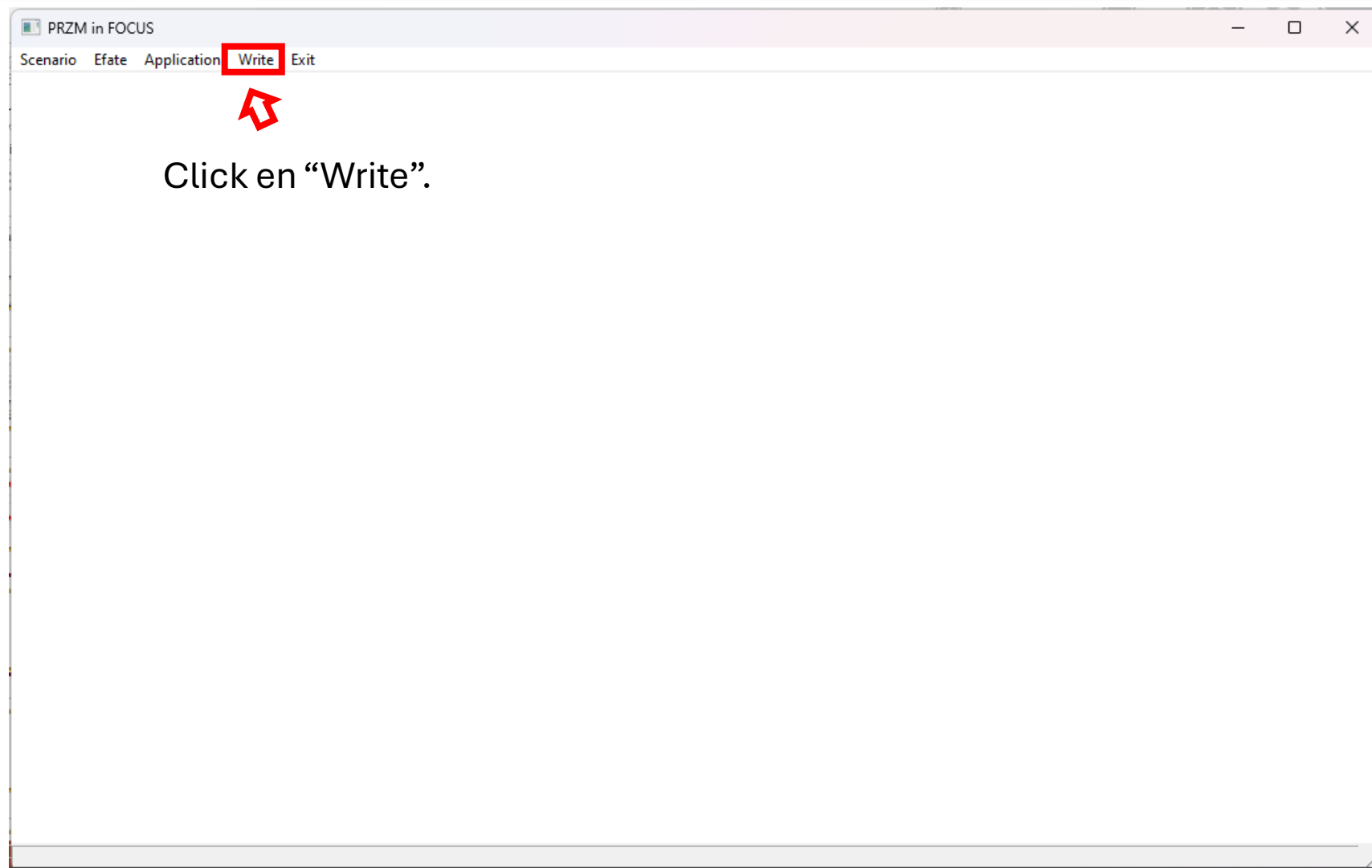
Current Project

5

☒ Perform STEP 3 calculation (default)

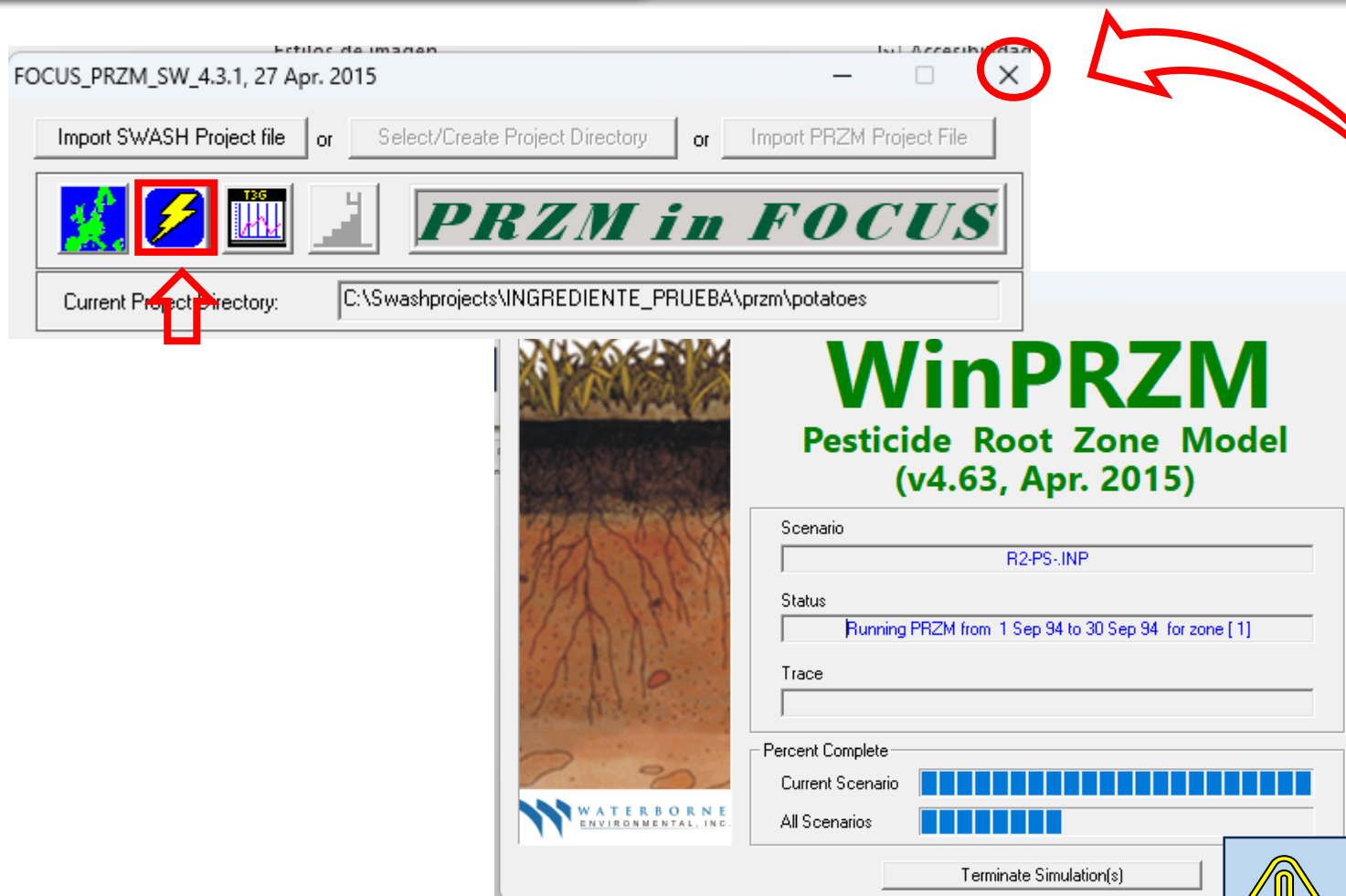
☐ Perform STEP 4 calculation (Allows STEP 3 defaults to be overridden)

OK

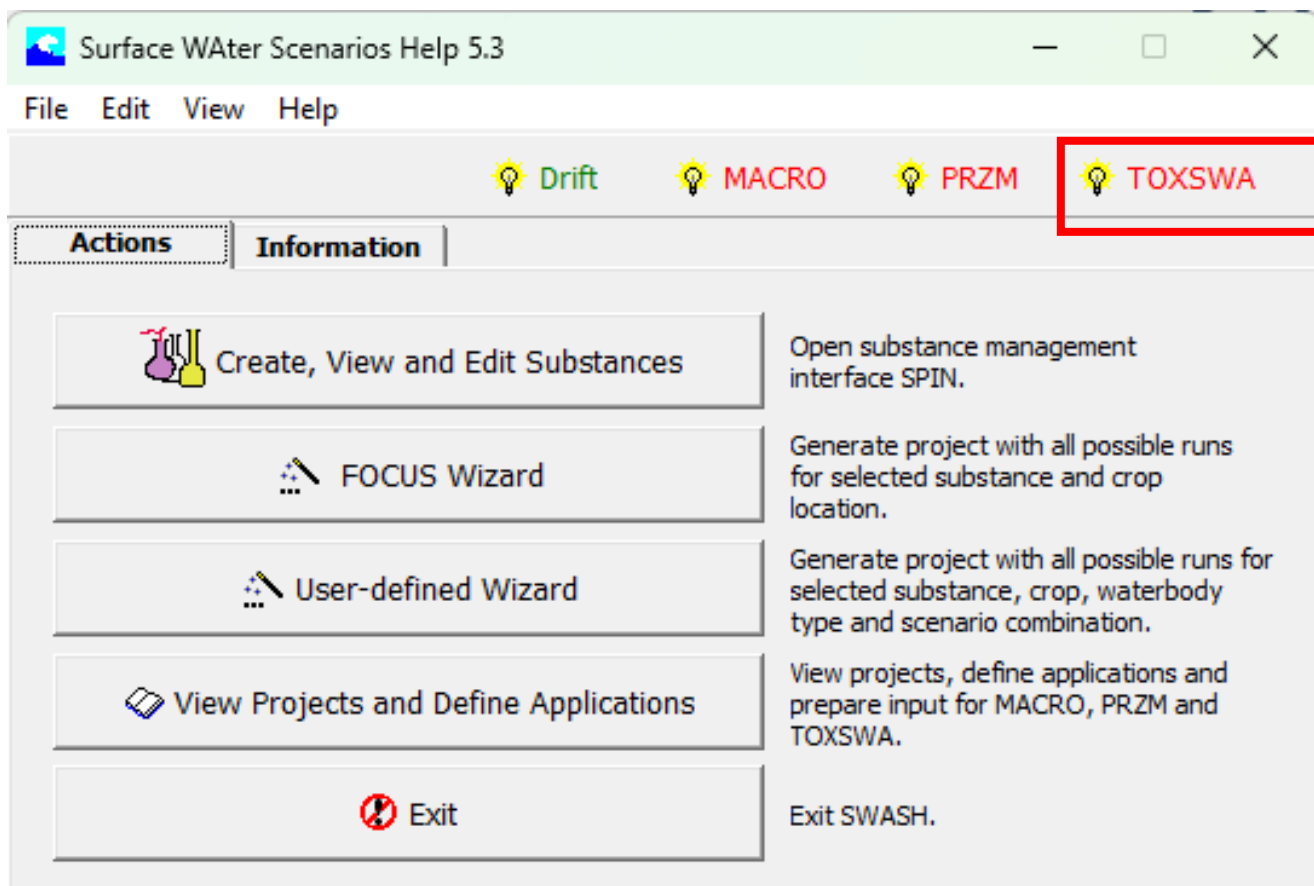




Step 3



Esto abre una ventana que muestra el avance de los cálculos y se cierra de forma automática.



Modelos utilizados en SWASH 5_3:

- **TOXSWA:** Simula el destino de los pesticidas en aguas superficiales.



FOCUS_TOXSWA 5.5.3 Projects, DB: C:\Swash\data\SWASH.FDB

File Help

Browse Projects

Name	Description	CreationDate	ModificationDate	Comment
Project_1	Example project 1	14-03-2013	14-03-2013	
Project_2	Example project 2	14-03-2013	14-03-2013	
Project_0	Example project non-FOCUS	14-03-2013	14-03-2013	
RINSKOR	XEVELO 17.2 EC	23-04-2024 08:08:58	23-04-2024 08:08:58	
INGREDIENTE_PRUEBA	FORMULADO	26-11-2024 10:01:42	26-11-2024 10:01:42	

—

Edit Projects

Main | Comment

Name:

Description:

Path:

Open selected project



Elegir el proyecto, se puede abrir de dos maneras:

- “Doble click”
- Con el botón “Open selected project”.



Step 3

FOCUS_TOXSWA 5.5.3 Runs, project - INGREDIENTE_PRUEBA, DB: C:\Swash\data\SWASH.FDB

File Edit View Runs Graphs Help

Projects **Calculate** View input file Graph user defined Graphs predefined Report file Help manual Exit

Browse Runs

ID	Selected	Name	Description	Results	SubstanceCode	CreationDate	ModificationDate
55	Yes	Potatoes_D3_Ditch	FOCUS Step 3 run		ingrediente	26-11-2024 10:01:42	26-11-2024 10:01:42
56	Yes	Potatoes_D4_Pond	FOCUS Step 3 run		ingrediente	26-11-2024 10:01:42	26-11-2024 10:01:42
57	Yes	Potatoes_D4_Stream	FOCUS Step 3 run		ingrediente	26-11-2024 10:01:42	26-11-2024 10:01:42
58	Yes	Potatoes_D6_Ditch	FOCUS Step 3 run		ingrediente	26-11-2024 10:01:42	26-11-2024 10:01:42
59	Yes	Potatoes_D6_Ditch	FOCUS Step 3 run		ingrediente	26-11-2024 10:01:42	26-11-2024 10:01:42
60	Yes	Potatoes_R1_Pond	FOCUS Step 3 run		ingrediente	26-11-2024 10:01:42	26-11-2024 10:01:42
61	Yes	Potatoes_R1_Stream	FOCUS Step 3 run		ingrediente	26-11-2024 10:01:42	26-11-2024 10:01:42
62	Yes	Potatoes_R2_Stream	FOCUS Step 3 run		ingrediente	26-11-2024 10:01:42	26-11-2024 10:01:42
63	Yes	Potatoes_R3_Stream	FOCUS Step 3 run		ingrediente	26-11-2024 10:01:42	26-11-2024 10:01:42

Edit Run

Run Components Entries Simulation Control Output Control Run Status Comment

Name: Potatoes_D3_Ditch

Description: FOCUS Step 3 run

Scenario

Location: D3_Ditch

Crop: Potatoes

Pesticide and Scenario

Substance: ingrediente

Application scheme: 54 Potatoes_D3_Ditch

Initial conditions for pesticide

Initial concentration water layer (mg/L): 0

Initial content sediment...

Confirmar que todos los escenarios están seleccionados.

Step 3

Multiple run options

Output options

- ☒ Output for predefined graphs
- ☐ Output for all graphs
- ☐ No output for graphs
- ☐ User defined output

Execution options

Multi core options

Number of cores:

- ☒ Generate input files and execute the model
- ☐ Generate only input files, but do not execute the model

Window type for model execution

- ☒ Normal
- ☐ Minimized
- ☐ Hidden

```

#####  #####  ##  ##  #####  ##  ##  #####  (c)
##  ##  ##  ##  ##  ##  ##  ##  ##  ##  Wageningen
##  ##  ##  ##  ##  ##  ##  ##  ##  ##  University & Research
##  ##  ##  ###  #####  ##  ##  ##  ##  ##
##  ##  ##  ##  ##  ##  ##  ##  ##  #####
##  ##  ##  ##  ##  ##  ##  ##  ##  ##
##  #####  ##  ##  #####  ###  ##  ##  ##
=====
TOXSWA TOXic substances in Surface WAters                www.toxswa.pesticidemodels.nl
FOCUS_TOXSWA_5.5.3  [17-Dec-2017]                        Contact:  toxswa-swash@wur.nl
=====

Working directory: C:\Swashprojects\INGREDIENTE_PRUEBA\TOXSWA
The run ID is: 55; substance(s): ingrediente

Loading on the water body at 04-Apr-1992
Cumulative substance input from spray drift is 0.834 mg/m2

Mass balance simulated: 15-May-1992 ;      Mass in water layer :   0.005 mg
Done                   :   27.78 % ;      Mass in sediment   :   0.82 mg
Calc. time step (wl)  :  600.00 s ;      Flow velocity     :  83.56 m/d

```

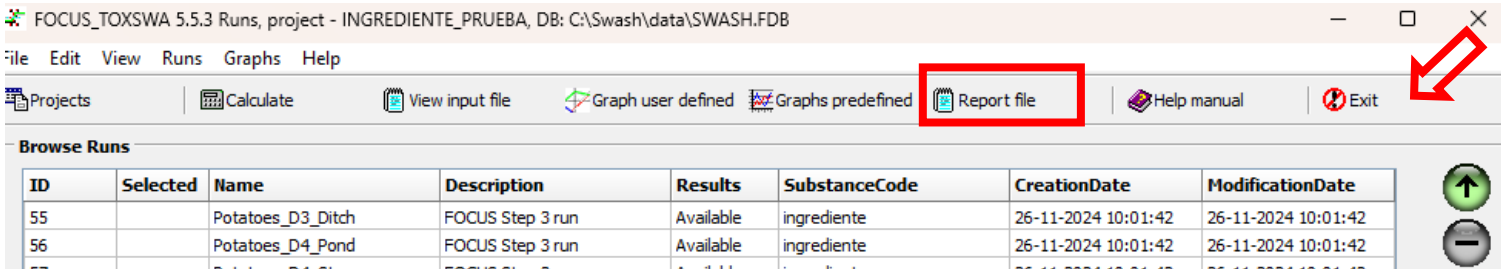


El programa abrirá una o varias ventana de color negro por cada escenario, las cuales se cierran de manera automática.

Una vez se cierran todas ya están los resultados



Step 3



Una vez que se tenga los resultados se pueden cerrar todas las ventanas dando click en "EXIT"

* Table: PEC in water layer of substance: ingrediente			

	Concentration	Date	Daynr
	µg.L-1		(since start simulation)

Global max	0.9106	04-Apr-1992-09h00	95
(incl. suspend.solids	0.9138	04-Apr-1992-09h00	95)
PECsw 1 dav	0.3890	05-Apr-1992-09h00	96



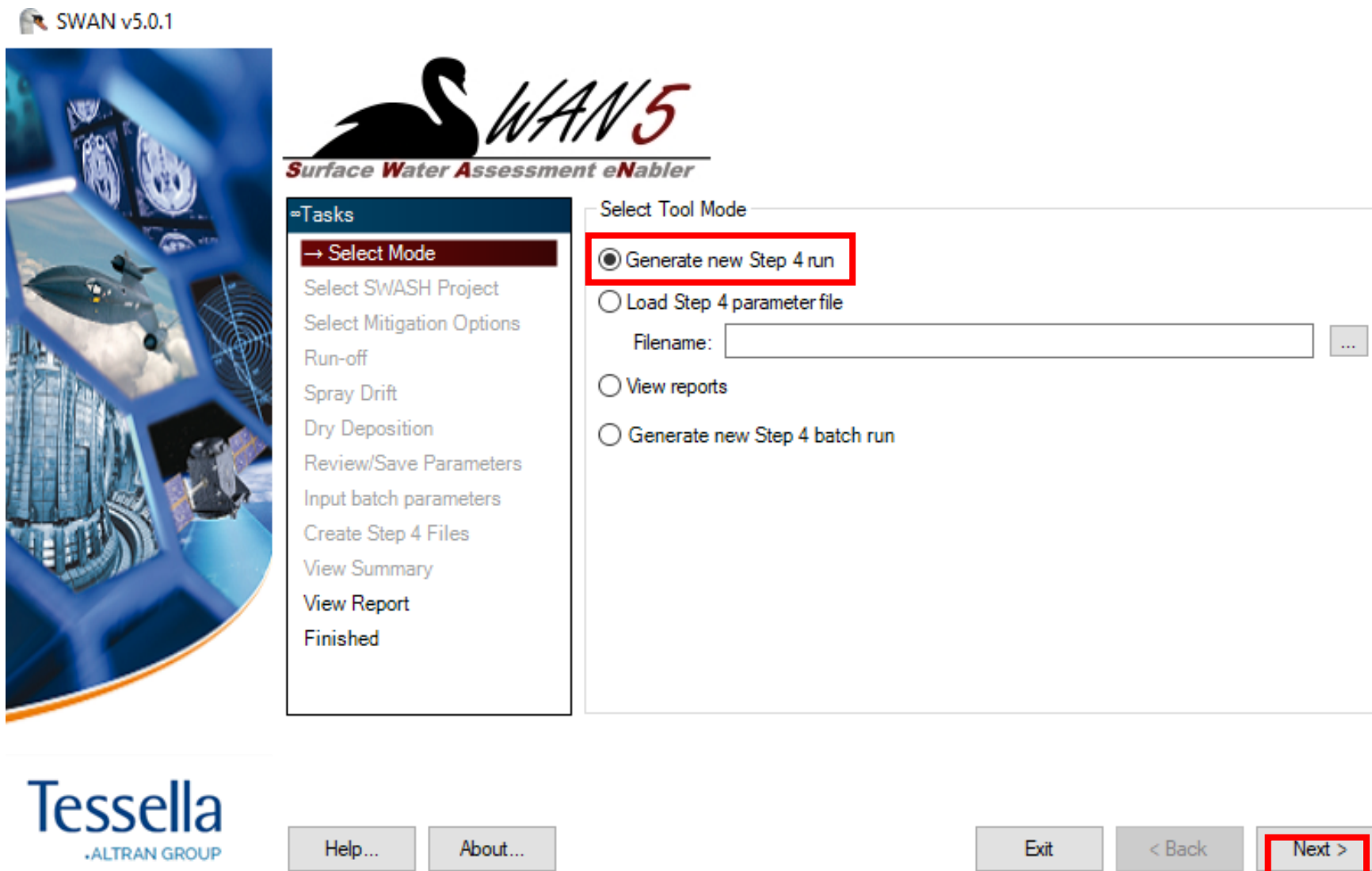
Step -4



SWAN 5



STEP-4
Refinamiento del Riesgo
aplicar medidas de
refinamiento para mejorar
la precisión de las
estimaciones y reducir la
exposición en organismos
acuáticos





Step-4

SWAN v5.0.1



- =Tasks
- Select Mode
- Select SWASH Project
- Select Mitigation Options
- Run-off
- Spray Drift
- Dry Deposition
- Review/Save Parameters
- Input batch parameters
- Create Step 4 Files
- View Summary
- View Report
- Finished

Select SWASH Project

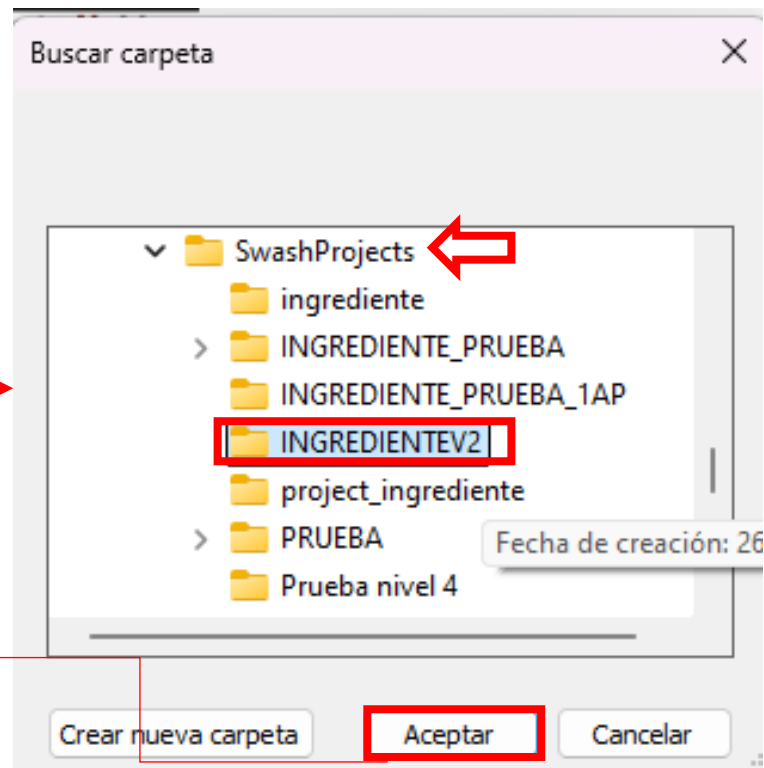
Source SWASH project:

Output project name:

SWASH Projects folder is C:\SwashProjects



En el menú de (C:): buscar la carpeta llamada "SwashProjects" y elegir la carpeta que tiene el proyecto que se trabajo en el Step-3





Step-4

SWAN v5.0.1



SWAN 5
Surface Water Assessment eNabler

=Tasks

- Select Mode
- Select SWASH Project**
- Select Mitigation Options
- Run-off
- Spray Drift
- Dry Deposition
- Review/Save Parameters
- Input batch parameters
- Create Step 4 Files
- View Summary
- View Report
- Finished

Select SWASH Project

Source SWASH project: C:\SwashProjects\INGREDIENTEV2

Output project name:

SWASH Projects folder is C:\SwashProjects



En el menú de (C:): buscar la carpeta llamada "SwashProjects" >> Click en "Crear nueva carpeta" e indicar el nombre del proyecto del Step-4

Buscar carpeta

- ▼ SwashProjects
- > ingrediente_taller
- ingrediente_taller_1AP
- ingrediente_taller_prueba
- > PRUEBA
- Prueba nivel 4
- PRUEBA_1AP
- > RINSKOR

Crear nueva carpeta

Aceptar

Cancelar

Help...

About...

Exit

< Back

Next >



Step-4

SWAN v5.0.1



=Tasks

- Select Mode
- Select SWASH Project
- Select Mitigation Options
- Run-off
- Spray Drift
- Dry Deposition
- Review/Save Parameters
- Input batch parameters
- Create Step 4 Files
- View Summary
- View Report
- Finished

Select Mitigations to Apply

Scenario	Water Body	Run-off	Spray Drift	Deposition
D6	Ditch	☐	☒	☐
R2	Stream	☒	☒	☐
R3	Stream	☒	☒	☐
R4	Stream	☒	☒	☐

Double-click mitigation column headers to invert selection

Data for project: PRUEBA

Substance: PRUEBA1 (4 applications, vapour pressure = 1.1E-10 Pa)

Crop: Vegetables, fruiting



Seleccionar las casillas de
"Run-off" para los
escenarios R



Step-4

SWAN v5.0.1

SWAN5
Surface Water Assessment eNabler

Tasks

- Select Mode
- Select SWASH Project
- Select Mitigation Options
- Run-off**
- Spray Drift
- Dry Deposition
- Review/Save Parameters
- Input batch parameters
- Create Step 4 Files
- View Summary
- View Report
- Finished

Enter Run-off Mitigation Values

☒ Enter values manually

Fractional reduction in run-off volume: 0.6

Fractional reduction in run-off flux: 0.6

Fractional reduction in erosion mass: 0.85

Fractional reduction in erosion flux: 0.85

☐ Get using VFSmod

Filter strip buffer width: 0.75 m

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Help... About...

Exit < Back **Next >**



Completar los valores de mitigación de escorrentía con los valores obtenidos a partir del documento del FOCUS Working Group “Landscape and mitigation factors in aquatic ecological risk assessment”.



La ley 7575 – Ley Forestal – en su artículo 33 declara como área de protección una franja de quince metros en zona rural y de diez metros en zona urbana.

Buffer distance (m)	10 metros	15 metros	20 metros
Fractional reduction in run-off volume	0,6	0,7	0,8
Fractional reduction in run-off flux	0,6	0,7	0,8
Fractional reduction in erosion mass	0,85	0,9	0,95
Fraction reduction in erosion flux	0,85	0,9	0,95



Step-4

SWAN v5.0.1



- Tasks
- Select Mode
- Select SWASH Project
- Select Mitigation Options
- Run-off
- Spray Drift**
- Dry Deposition
- Review/Save Parameters
- Input batch parameters
- Create Step 4 Files
- View Summary
- View Report
- Finished

Enter Spray Drift Mitigation Values

Nozzle reduction: 0 %

- ☐ Use FOCUS (Step 3) mass loadings
- ☒ Select buffer width (mass loadings will be calculated)

Buffer width: 0.75 m

- ☐ Enter mass loadings directly (for first application)

Pond mass loading: 0 mg/m²

Ditch mass loading: 0 mg/m²

Stream mass loading: 0 mg/m² ☐ Includes upstream catchment

Data for project: PRUEBA

Substance: PRUEBA1 (4 applications, vapour pressure = 1.1E-10 Pa)

Crop: Vegetables, fruiting



Se ajusta el valor de buffer según los datos del cuadro anterior (por legislación nacional seria 10 o 15m)

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Help...

About...

Exit

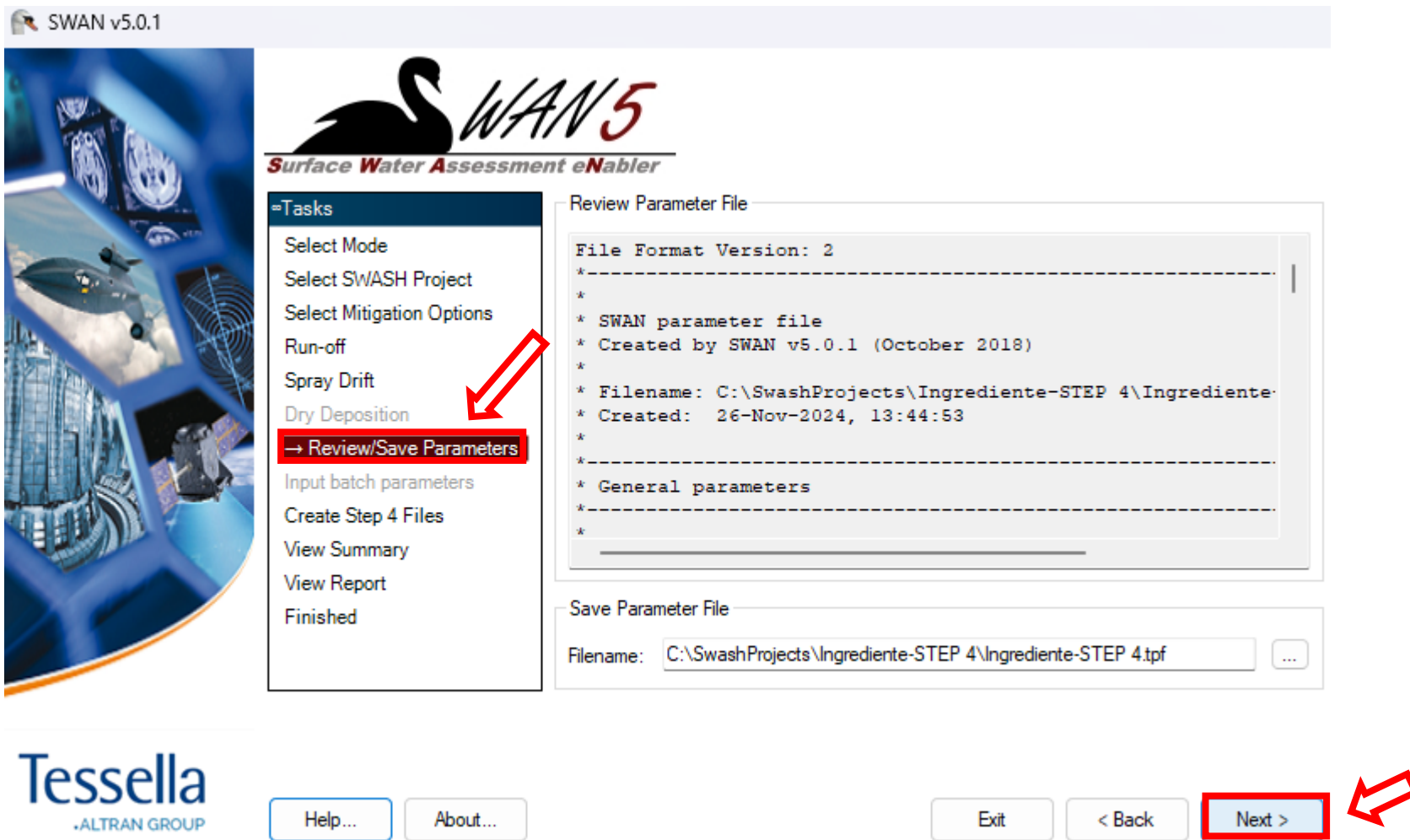
< Back

Next >



Step-4

SWAN v5.0.1



The image shows the SWAN v5.0.1 software interface. On the left is a vertical sidebar with a blue background and a collage of images related to water and environment. The sidebar contains a list of tasks: Select Mode, Select SWASH Project, Select Mitigation Options, Run-off, Spray Drift, Dry Deposition, Review/Save Parameters (highlighted with a red box and a red arrow pointing to it), Input batch parameters, Create Step 4 Files, View Summary, View Report, and Finished. The main area of the interface is titled 'SWAN 5 Surface Water Assessment eNabler'. It contains a 'Review Parameter File' section with a text area showing file details: File Format Version: 2, SWAN parameter file, Created by SWAN v5.0.1 (October 2018), Filename: C:\SwashProjects\Ingrediente-STEP 4\Ingrediente-STEP 4.tpf, Created: 26-Nov-2024, 13:44:53. Below this is a 'Save Parameter File' section with a text input field for the filename, which already contains 'C:\SwashProjects\Ingrediente-STEP 4\Ingrediente-STEP 4.tpf'. At the bottom of the interface are several buttons: 'Help...', 'About...', 'Exit', '< Back', and 'Next >'. The 'Next >' button is highlighted with a red box and a red arrow pointing to it.

Tasks

- Select Mode
- Select SWASH Project
- Select Mitigation Options
- Run-off
- Spray Drift
- Dry Deposition
- Review/Save Parameters**
- Input batch parameters
- Create Step 4 Files
- View Summary
- View Report
- Finished

Review Parameter File

File Format Version: 2

* SWAN parameter file

* Created by SWAN v5.0.1 (October 2018)

* Filename: C:\SwashProjects\Ingrediente-STEP 4\Ingrediente-

* Created: 26-Nov-2024, 13:44:53

* General parameters

Save Parameter File

Filename: C:\SwashProjects\Ingrediente-STEP 4\Ingrediente-STEP 4.tpf

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Help... About... Exit < Back **Next >**



Step-4

SWAN v5.0.1



Tasks

- Select Mode
- Select SWASH Project
- Select Mitigation Options
- Run-off
- Spray Drift
- Dry Deposition
- Review/Save Parameters
- Input batch parameters
- Create Step 4 Files**
- View Summary
- View Report
- Finished

Configure TOXSWA

TOXSWA location: ...

☐ Run TOXSWA after creating batch file

Create Step 4 Files

1) Load and validate files	4) Apply dry deposition mitigation
2) Apply run-off mitigation	5) Save changes and create batch file
3) Apply spray drift mitigation	6) Finished

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Step-4

SWAN v5.0.1

SWAN5
Surface Water Assessment eNabler

Tasks

- Select Mode
- Select SWASH Project
- Select Mitigation Options
- Run-off
- Spray Drift
- Dry Deposition
- Review/Save Parameters
- Input batch parameters
- Create Step 4 Files**
- View Summary
- View Report
- Finished

Configure TOXSWA

TOXSWA location: C:\SWASH\TOXSWA\towswa_focus_3.exe

☒ Run TOXSWA after creating batch file

Create Step 4 Files

- 1) Load and validate files
- 2) Apply run-off mitigation
- 3) Apply spray drift mitigation
- 4) Apply dry deposition mitigation
- 5) Save changes and create batch file
- 6) Finished

Go

Exit < Back **Next >**



Una vez que se complete la barra verde >> Click en "Next"

Se abrirán de maneja automática pantallas negras similares a las de STEP 3, una por cada escenario, las cuales se cierran de manera automática.

```
C:\WINDOWS\system32\cmd. X + v
#####  #####  ##  ##  #####  ##  ##  #####  (c)
##  ##  ##  ##  ##  ##  ##  ##  ##  ##  Wageningen
##  ##  ##  ##  ##  ##  ##  ##  ##  ##  University & Research
##  ##  ##  ##  ##  ##  ##  ##  ##  ##
##  ##  ##  ##  ##  ##  ##  ##  ##  ##
##  ##  ##  ##  ##  ##  ##  ##  ##  ##
##  #####  ##  ##  #####  #####  ##  ##

-----
TOXSWA TOXic substances in Surface WAters      www.toxswa.pesticidemodels.nl
FOCUS_TOXSWA_5.5.3 [17-Dec-2017]               Contact: toxswa-swash@wur.nl

-----
Working directory: C:\SwashProjects\ultima_prueba_4\TOXSWA
The run ID is: 157; substance(s): INGREDIENTE

Loading on the water body at 05-Feb-1980
Cumulative substance input from spray drift is 13.626 mg/m2

Mass balance simulated: 25-Sep-1980 ;      Mass in water layer : 0.0002 mg
Done : 98.36 % ;      Mass in sediment : 0.69 mg
Calc. time step (wL) : 200.00 s ;      Flow velocity : 470.83 m/d
```



Step-4

SWAN v5.0.1



Tasks

- Select Mode
- Select SWASH Project
- Select Mitigation Options
- Run-off
- Spray Drift
- Dry Deposition
- Review/Save Parameters
- Input batch parameters
- Create Step 4 Files
- View Summary
- View Report
- Finished

View Modification Summary

```
*-----*
*
* SWAN log file
* Created by SWAN v5.0.1 at 26-Nov-2024, 13:49:50
*
* Processing parameter file: C:\SwashProjects\Ingrediente-S
*
*-----*
*
Loaded parameter file: C:\SwashProjects\Ingrediente-STEP 4\

Loading source project: C:\SwashProjects\PRUEBA
Loaded TOXSWA file: 10.twx
Loaded TOXSWA file: 11.twx
Loaded TOXSWA file: 12.twx
Loaded TOXSWA file: 9.twx
Loaded support file: 00010-C1.p2t
```

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Help...

About...

Exit

< Back

Next >

Una vez que se
complete el
análisis >> Click
en "Next"



Step-4

SWAN v5.0.1



Surface Water Assessment eNabler

Tasks

Select Mode

Select SWASH Project

Select Mitigation Options

Run-off

Spray Drift

Dry Deposition

Review/Save Parameters

Input batch parameters

Create Step 4 Files

View Summary

→ View Report

Finished

View TOXSWA Summary Reports

TOXSWA SUM file: 10

10

11

12

9

* -----

* TOXSWA REPO

* Results from the TOXSWA model (c) Wageningen University

* FOCUS TOXSWA version : 5.5.3

* TOXSWA model version : 3.3.6

* TOXSWA created on : 17-Dec-2017

* Working directory : C:\SwashProjects\Ingrediente-STI

* Run ID : 10

* Input file generated on : 26-11-2024

* -----

* Scenario : R2_Stream

* Meteo Station : Porto

Seleccionar el escenario a revisar.

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Help...

About...

Exit

< Back

Next >

Click en "Next" para volver a la primera pantalla o en "Exit" para salir

STEP 4



SWAN v5.0.1



SWAN 5

Surface Water Assessment eNabler

Tasks

- Select Mode
- Select SWASH Project
- Select Mitigation Options
- Run-off
- Spray Drift
- Dry Deposition
- Review/Save Parameters
- Input batch parameters
- Create Step 4 Files
- View Summary
- View Report**
- Finished

View TOXSWA Summary Reports

TOXSWA SUM file: 10

* occurring 1, 2 etc days after the global maximum concentration
* The Time Weighted Average Exposure Concentrations (TWAE)C
* for a moving time frame and have been allocated to the last day

* Table: **PEC in water layer of substance: PRUEBA1**

	Concentration µg.L-1	Date
Global max	0.6783	03-Apr-1977-02h00
(incl. suspend.solid	0.6786	03-Apr-1977-02h00
PECsw_1_day	0.001194	04-Apr-1977-02h00
PECsw_2_days	0.5997	05-Apr-1977-02h00
PECsw_3_days	0.002596	06-Apr-1977-02h00
PECsw_4_days	0.4666	07-Apr-1977-02h00

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Help...

About...

Exit

< Back

Next >



MUCHAS GRACIAS.....



**MINISTERIO DE
AMBIENTE Y ENERGÍA**

**GOBIERNO
DE COSTA RICA**