



AGROECOLOGY FOR WEEDS

*AN AGROECOLOGICAL WEED MANAGEMENT NETWORK
FOR THE PROMOTION OF THE ADOPTION OF SUSTAINABLE WEED MANAGEMENT STRATEGIES*

ENCUENTRO NACIONAL [ESPAÑA]

Herramienta de gestión de hierbas
AWM TOOLBOX

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CICYTEX

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the European Union

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AWM TOOLBOX *de un vistazo*

AIM

ASISTENTE PARA LA TOMA
DE DECISIONES PARA UN
MANEJO AGROECOLÓGICO
DE ARVENSES

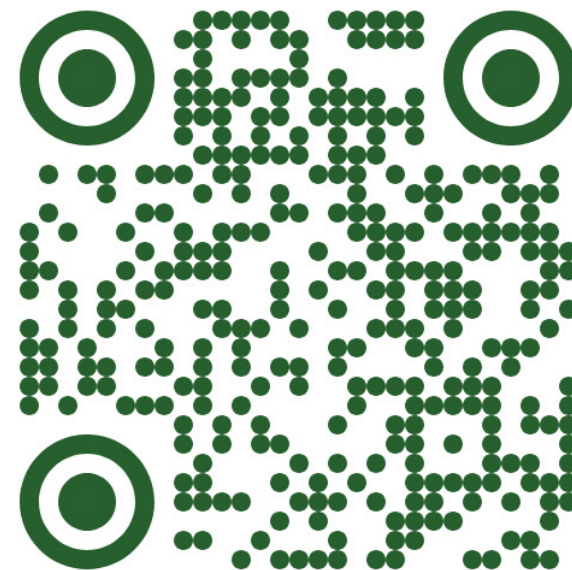
¿Qué es?

Una herramienta digital (GRATIS) que recomendará la siembra/gestión de cubiertas vegetales y su combinación con otras estrategias de manejo agroecológico para reducir el uso de herbicidas y mejorar los indicadores sociales, económicos ambientales y de salud del suelo de nuestras parcelas.



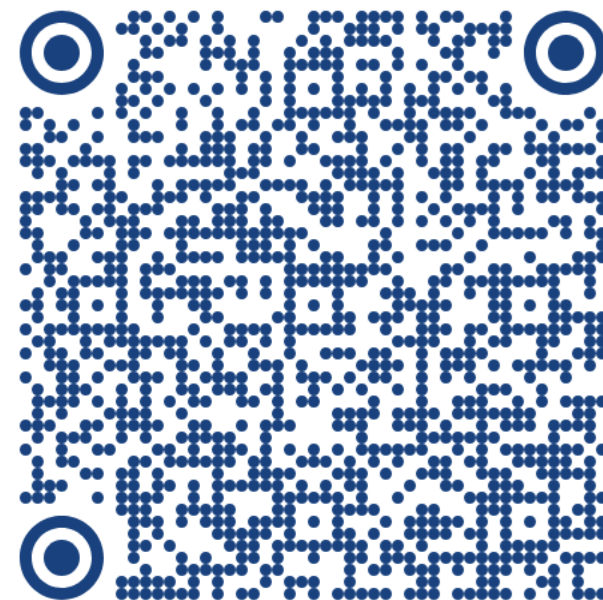


CONSULTA EL MODELO
AQUÍ



TE GUSTARÍA AYUDARNOS
HACER LA AWM TOOLBOX MÁS
FÁCIL DE USAR?

REGÍSTRATE EN NUESTRO
BOLETÍN



Menú de la
Plataforma arriba



WHY JOIN?

What is the Agroecological Weed Management (AWM) Toolbox?

The digital AWM Toolbox is a Decision Support System that supports the user to reduce the use of synthetic herbicides and/or improve weed management by combining different Agroecological Weed Management (AWM) strategies with cover crops.

What do you have to do?

You should provide input on the conditions of the farm/region (location, main crop, targets, weeds, weed management practices, economic values) by replying to a few simple questions.

What should you expect to receive?

The AWM Toolbox will suggest the optimal cover crop(s) for the respective context, including also

aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata

What else should I know about the AWM Toolbox?

- It is free!
- It is simple! It includes pictures and it is translated.

PLEASE REGISTER

Name

Type your email...

Email

Type your email...

Password

Enter your password...

Confirm Password

Enter your password...

☐ I consent to the collection, processing, and storage of my personal data in accordance with the [Privacy Policy](#).

Register

Already have an account ? [Click here](#) to log in

Registro de
usuario

Información general
de la AWM Toolbox

OS ANIMAMOS A REGISTRAROS. En unas semanas recibiréis por email: Manual de Usuario y el aviso de cuando está activo al completo (en español)

AWM Toolbox menu navegación



AWM Toolbox



WELCOME TO THE GOOD AWM TOOLBOX

Here you can learn how to use this tool. You can find guidelines, instructions, and manuals.

Access AWM repository for info about the AWM practices

<https://www.goodhorizon.eu/platform/description/>

ACCESS THE WEED DATABASE OF OUR SISTER PROJECT

<https://agrosus.eu/weeds-database/>

DISCLAIMERS

GDPR: Your privacy and data security are of utmost importance to us. By using the digital AWM Toolbox, you consent to the collection and processing of your personal data in accordance with the General Data Protection Regulation (GDPR). Your information will be handled confidentially and used solely for the purpose of providing tailored recommendations for agroecological weed management and cover crop selection on

Enlaces de interés bases de datos



Follow us in social media



Click or scan the QR code to subscribe to our newsletter!

El repositorio de Manejo Agroecológico de Malas Hierbas

<https://www.goodhorizon.eu/platform/description/>

- Mapa del uso de herbicidas en Europa
- Prácticas de manejo (pdf de 2 páginas)
- Herramienta de búsqueda sobre los beneficios-riesgos-consejos de diferentes combinaciones de prácticas agroecológicas

Crop Diversification



Crop Rotation



Intercropping



Cover Crops

AGROSUS Weeds database

Use the following menu to filter the database. You can search inside the common name or scientific name and filter by crop, country, life cycle (season) and type of weed.

Select language

Used for searching and displaying common name(s)

Crops

Select all the options you want to include in the results

Enter text to search into common names

Countries

Select all the options you want to include in the results

Life cycle

Type

Submit

[Clean filters](#)

SHARES



Picture (vegetative state)	Scientific name	Common name	Type	Life cycle	Crops	European countries	
						<div> AL AT BY BE BA </div> <div> BG HR DK EE FI </div> <div> FR DE GB GR </div>	

Picture (vegetative state)	Scientific name	Common name	Type	Life cycle	Crops	European countries	
	Abutilon theophrasti Medik.	Velvetleaf (GB), Velvet weed (GB), Abutilon-hemp (GB), China-jute (GB)	Annual	<div>Spring</div> <div>Summer</div> <div>Autumn</div>	<div>Maize</div> <div>Beans</div> <div>Cotton</div> <div>Tomato</div> <div>Soybean</div> <div>Sunflower</div> <div>Lettuce</div>	<div>AL</div> <div>AT</div> <div>BY</div> <div>BE</div> <div>BA</div> <div>BG</div> <div>HR</div> <div>DK</div> <div>EE</div> <div>FI</div> <div>FR</div> <div>DE</div> <div>GB</div> <div>GR</div> <div>HU</div> <div>IE</div> <div>IT</div> <div>LT</div> <div>LU</div> <div>ME</div> <div>NL</div> <div>NO</div> <div>PL</div> <div>PT</div> <div>RO</div> <div>RU</div> <div>RS</div> <div>SK</div> <div>SI</div> <div>ES</div> <div>SE</div> <div>CH</div> <div>TR</div> <div>UA</div> <div>MK</div>	<div>Data sheet</div> <div>Contribute!</div>
	Alopecurus myosuroides Huds.	Blackgrass (GB), Mouse foxtail (GB), Slender Meadow-foxtail (GB)	Annual	<div>Winter</div> <div>Spring</div> <div>Autumn</div>	<div>Wheat</div> <div>Triticale</div> <div>Barley</div> <div>Rye</div> <div>Oat</div>	<div>AL</div> <div>AT</div> <div>BG</div> <div>HR</div> <div>CZ</div> <div>DK</div> <div>EE</div> <div>FI</div> <div>FR</div> <div>DE</div> <div>GB</div> <div>GR</div> <div>HU</div> <div>IE</div> <div>IT</div> <div>LU</div> <div>NL</div> <div>NO</div> <div>PL</div> <div>PT</div> <div>RU</div> <div>SI</div> <div>ES</div> <div>SE</div> <div>CH</div> <div>TR</div> <div>UA</div>	<div>Data sheet</div> <div>Contribute!</div>
					<div>Maize</div> <div>Beans</div> <div>Cotton</div> <div>Soybean</div> <div>Sunflower</div> <div>Cabbage</div>	<div>AL</div> <div>AT</div> <div>BY</div> <div>BE</div> <div>BA</div> <div>BG</div> <div>HR</div> <div>DK</div> <div>EE</div> <div>FI</div>	

Images

Vegetative state



Source: Pl@ntNet

Reproductive state



Source: Pl@ntNet

Seedling stage



Source: Pl@ntNet

Agroecological strategies

Cultural strategies

Sowing date

Cover crops GOOD

Row spacing GOOD

False seedbed GOOD

Crop rotation GOOD

Sowing density GOOD

Competitive varieties

Biological strategies

Bioherbicides GOOD

Biological agents GOOD

Allelopathic plants or extracts

Mechanical/Physical strategies

Mulching GOOD

Soil cultivation

Harrowing GOOD

Hot vapor weeding

Green strategies

Electrical weeding GOOD

Robots GOOD

Laser weeding GOOD

Common names

English: Blackgrass (GB), Mouse foxtail (GB), Slender

Hungarian: Parlagi ecsetpázsit (HU)

SHARE





MY PARCELS

Sort by ▾

Add new parcel

Wheat parcel

Edit

Main crop cultivated

Lorem ipsum dolor sit amet

Management type

Organic

Farmer's main goal

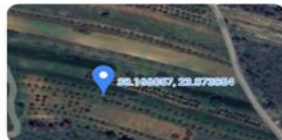
reduce chemical inputs from herbicides



View entries

Location

Lorem ipsum dolor sit amet



Wheat parcel

Edit

Main crop cultivated

Lorem ipsum dolor sit amet

Management type

Organic

Farmer's main goal

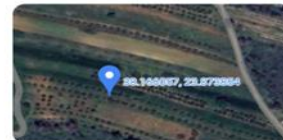
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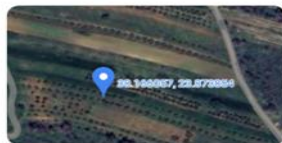
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View entries

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Wheat parcel

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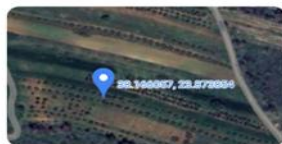
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View entries

Location

Lorem ipsum dolor sit amet



Wheat parcel

Edit

Main crop cultivated

Lorem ipsum dolor sit amet

Management type

Organic

Farmer's main goal

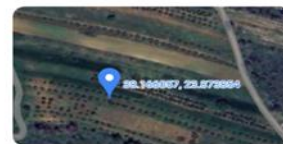
reduce chemical inputs from herbicides



View entries

Location

Lorem ipsum dolor sit amet



Añadir parcelas

Lista de las
parcelas/usuarios



← Go back

Sort by ▾

Wheat parcel

Main crop cultivated: Wheat → Apples

01/01/2024

Download PDF

Wheat parcel

Main crop cultivated: Wheat → Apples

01/01/2024

Download PDF

Wheat parcel

Main crop cultivated: Wheat → Apples

01/01/2024

Download PDF

Wheat parcel

Main crop cultivated: Wheat → Apples

01/01/2024

Download PDF

Vista de las entradas de las parcelas por fechas

Opción de descargar un resumen para cada entrada



STEP 1/2: PARCEL DETAILS

Parcel Name

Type parcel name

Parcel location

Select parcel country

Type your parcel coordinates or use the map

Main crop cultivated

Select main crop

Main goal

Select main goal

Protected area

☐ My field is in a protected area (e.g., NATURA 2000, Biosphere Reserves) and/or urban areas

Management System

Select your management system

Next

El usuario inserta información general para la nueva parcela y pincha en “NEXT”

Localización de la parcela introduciendo coordenadas o eligiendo en un mapa digital

Añadir una nueva parcela



STEP 1/2: PARCEL DETAILS

Parcel Name

Parcel location



Environmental variables

Soil

Temperature

Humidity

Main crop cultivated

Main goal

Protected area

☐ My field is in a protected area (e.g., NATURA 2000, Biosphere Reserves) and/or urban areas

Management System

Después de seleccionar la localización se extraen automáticamente los siguientes parámetros de bases de datos públicas (suelo, temperatura, humedad)

ADD A NEW SCENARIO

How do you want to assign this scenario?

A scenario must belong to a parcel. Select an existing parcel, or create a new parcel and assign this scenario to it.

Assign to an existing parcel

Create a new parcel and assign

Select existing parcel

Each parcel can contain multiple scenarios. Pick one to continue.

Search parcel by name

ensayo convencional

Cherry

Los escenarios en los que trabajamos se asignan a una parcela, pero Podemos asignar varios escenarios a la misma parcela

Continue to scenario



STEP 2

Complete all steps to proceed!

Weeds & Weed Management



6 / 6 Questions

Agricultural Practices



10 / 10 Questions

Economic Indicators



6 / 6 Questions

You've completed all steps!
Click save to continue.

Restart

Save

What is the price of seeds of main crop (per ha) ?

Price of seeds

€ / ha

What is the price of seeds of cover crop (per ha) ?

Price of seeds

€ / ha

What is the price of tillage (labor + fuel + remuneration + rental fees + maintenance) (per ha)?

Price of tillage

€ / ha

What is the price of the product you intend to use/ are currently using per application & per ha?

Price of the product per application & per ha

€ / ha

What is the average cost of applications to manage weeds (based on fuel, labor, inputs, machinery) ?

Cost of applications

€ / ha

Los usuarios deben rellenar la información de los 3 cuestionarios antes de finalizar la nueva entrada (INPUTS)



STEP 2

Complete all steps to proceed!

Weeds & Weed Management



6 / 6 Questions

Agricultural Practices



10 / 10 Questions

Economic Indicators



6 / 6 Questions

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Price of the product per application & per ha

€ / ha

What is the average cost of applications to manage weeds (based on fuel, labor, inputs, machinery) ?

Cost of applications

€ / ha

Después de dar “guardar” se creará una nueva entrada y su pdf descargable en la sección “Mis parcelas” del perfil del usuario.

Agricultural Practices



☐ Mechanical control

☒ Mowing

Economic Indicators



Restart

Save

What weed species are present in your field? *

Select species

All

Lifecycle ▾

Periodicity ▾

Growth rate ▾

Tillage Response ▾

Sort ▾

☐ Chenopodium spp.

☐ Chrysanthemum coronarium

☐ Conyza albida

☒ Conyza sp.

☒ Cynodon dactylon

☐ Cyperus difformis

☐ Datura stramonium

☐ Ecballium elaterium

☐ Echinochloa spp.

☐ Galinsoga parviflora

☐ Leptochloa spp.

☐ Solanum nigrum

☐ Solanum sisymbriifolium

☐ Sorghum halepense

☒ Sonchus sp.

☐ Sonchus arvensis

☐ Alopecurus myosuroides

☐ Anagallis sp.

What is the time window of highest germination? *

Select months

What is usually the economic loss due to weeds? *

Agricultural Practices



- ☐ Allelopathy
- ☒ Weed suppression
- ☒ Mulching
- ☐ Biomass accumulation

Economic Indicators



What species of cover crops could you sow?

<https://www.goodhorizon.eu/wp-content/uploads/2024/09/>



1 selected

All Lifecycle ▼ Type ▼ Periodicity ▼ Usage ▼ Impact to Biodiversity ▼ Favorable Soil pH ▼

Sort ▼

- | | | |
|---|---|--|
| ☐ Phacelia tanacetifolia | ☐ Secale cereale | ☒ Trifolium subterraneum |
| ☐ Linum usitatissimum | ☐ Brassica rapa | ☐ Medicago truncatula |
| ☐ Lolium perenne | ☐ Trifolium alexandrinum | ☐ Avena sativa |
| ☐ Vicia sativa | ☐ Hordeum vulgare | ☐ Sinapis alba |
| ☐ Trifolium repens | ☐ Festuca sp. | ☐ Lolium spp |
| ☐ Lupinus spp | | |

Do you have the necessary equipment for direct seeding (main crop & cover crops)?

Podemos seleccionar las especies de cubiertas que queremos sembrar o el tipo por ciclo, periodicidad, tipo suelo...

Se pregunta por la capacidad y necesidades de implementación (maquinaria, mano de obra...)

OUTPUTS

COVER CROPS

Recommendations

Our recommendations are based on your input for Crop_ID and considering that you ARE/ARE NOT in a protected area, and your farming system is CONVENTIONAL/ORGANIC/AGROECOLOGICAL. You have answered that you could or would like to sow CoverCrop_ID #1, CoverCrop_ID #2, and CoverCrop_ID #3. Based on the goals you set for the cover crops, the selected species in mixture will cover all selected Sustainability Goals (Goal_ID #1 and Goal_ID #2). Additionally, you can check the following mixture of cover crops (CoverCrop_ID #20) as this seems to better address the selected sustainability goals. Please check if you have access to seeds of these species and ask your local advisor and/or other farmers in your region about the performance of these cover crops and management practices.

Timing of Sowing

The optimal time window to sow these cover crops is between Period_ID#1 - Period_ID#2. Please always check the weather conditions and follow the occurrence of extreme events that may make sowing and operations more difficult and ineffective (e.g., heavy precipitation, flooding, drought).

Best Practices

Learn more about the cover crops and their termination, as well as the weeds here: [link](#)

AWM STRATEGIES

Recommendations

Based on your capacity to apply the following practices in the main crop: AWM_ID #1, AWM_ID #2, AWM_ID #3, and the present weeds in your field Weed_ID #1, Weed_ID #2, Weed_ID #3 you could combine AWM_ID #1 with AWM_ID#3. However, the selected weed management practices will not achieve adequate weed management and need to be enhanced and combined with more practices. The following combination of different practices AWM_ID #1, AWM_ID #4, AWM_ID#5, and AWM_ID #6 could be effective in reducing weed pressure. The DSS always recommends the use of AWM_ID #A003 (cover crops) combined with the practices you are more familiar with. The expected results (herbicide reduction if these are applied in your field, weed management costs, impact to sustainability indicators) of the selection of the proposed AWM practices and combinations is justified at a later step in the Impact section of the AWM Toolbox.

Timing of Treatments

The optimal time window to apply these treatments (AWM_ID #1 & AWM_ID #2) is Period_ID #1 - Period_ID #2 when Crop_ID is at BBCH_crop_ID growth stage and the majority of weeds at BBCH_weeds_ID growth stage. The following practices AWM_ID#3 and AWM_ID#4 do not target the control of weeds within the same growing season but instead focus on the long-term weed suppression and should be carefully planned within diversification and/or crop rotation schemes. Please monitor the growth of weeds and the competition with the crop to properly decide when it is the best moment(t) to manage the weeds. Please also take into consideration that AWM practices may be applied at various crop or weed growth stages and target different goals (e.g.,

Después de introducir los “inputs” se generarán los “outputs” (resultados de recomendación de prácticas) así como en IMPACTO (reducción de herbicida, costes de control de hierbas, costes de producción, etc)

IMPACT

Herbicide load reduction

Our estimations for the herbicide load reduction are based on the input you provided and considering that you usually spray herbicides NUMBER-STEP 11 times and the application is TYPE-STEP 11. Please take into account that, AWMToolbox is designed to follow the order of priority bellow (1) crop diversification, (2) cultural, (3) natural, (4) technological-precision, (5) mechanical weed management practices and leaves (6) chemical solutions as the ultimate solution to be used only if it is necessary to deal with a specific type or species of noxious weed present in the field of interest and the other AWM practices cannot provide adequate control or they are increasing the costs or they are not feasible to be applied. The goal is to reduce the herbicide load in the field.

Based on the AWM Toolbox recommendation regarding the proposed AWM practices,
OPTION 1 IN ALGORITHM: There is no need to spray herbicides as weed management is effective with alternative weed management practices

Weed management costs

Considering the proposed AWM practices and combinations that are provided in the Output, the current estimated weed management costs is in the range of XX-XX EUR/ha. The weed management costs in our proposed scenario is higher/lower by XX % from your current expenses for the application of practices for weed management.

These estimations are based on: (i) your input about the economic values of your current weed management costs, and (ii) validated economic data provided by experts from different farming systems and countries. The exact values we anticipated can be found in the Disclaimer Section of the AWM Toolbox. If you think that the costs should be edited to reflect more realistic costs for your scenario, then we would appreciate it if you could contact us regarding that issue and help us improve our database.

The estimated costs are calculated on the basis of the application of the AWM practices. They do not consider purchase, leasing, maintenance, training and other potential secondary costs. These are included in the production costs.

Production costs

Considering the proposed AWM practices and combinations that are provided in the Output, the current estimated production costs is in the range of XX-XX EUR/ha. The production costs in our proposed scenario is higher/lower by XX % from your current production costs.

These estimations are based on your input about the: (i) price of seeds of main crop , (ii) price of seeds of cover-crop, (iii) price of tillage (if user applies it), (iv) price of mycorrhizal product (if user applies it), (v) price of weed management, (vi) other secondary costs (purchase, leasing, maintenance, training etc.), as well as (vii) validated economic data provided by experts from different farming systems and countries. The exact values we anticipated can be found in the Disclaimer Section of the AWM Toolbox. If you think that the costs should be edited to reflect more realistic costs for your scenario, then we would appreciate it if you could contact us regarding that issue and help us improve our database. (input from outside source)

Soil health indicators | Social indicators | Economic indicators | Environmental indicators

The AWM Toolbox is designed and developed for analyzing data that can be used for drawing sustainable and ecologically sound pathways in crop





SIGUE NUESTRAS REDES SOCIALES

@ Agroecology is GOOD



Email: contact@goodhorizon.eu

¡GRACIAS !

Página web

www.goodhorizon.eu

