AGROSUS

Funded by
the European Union

AGROecological strategies for SUStainable weed management in key European crops

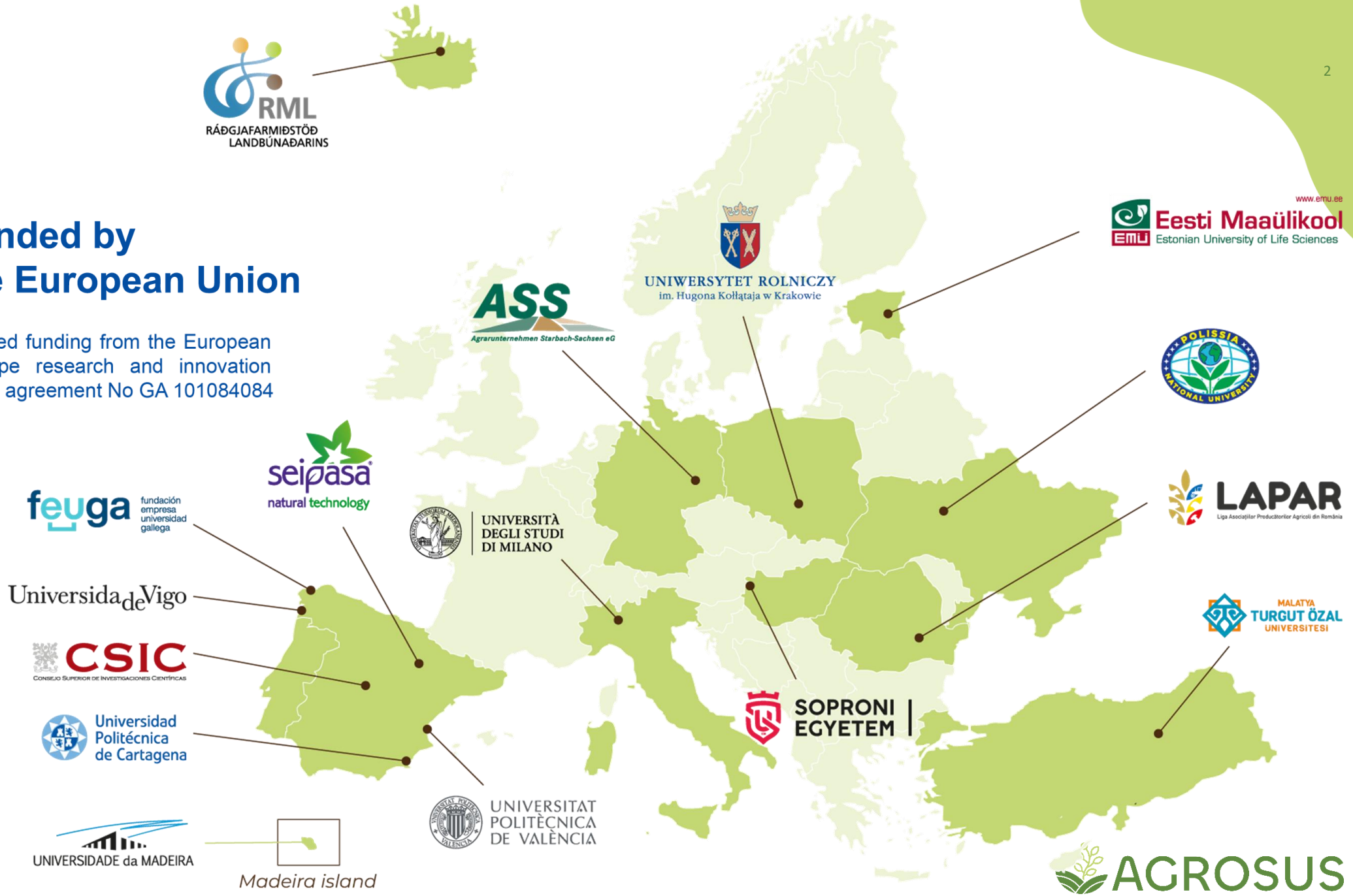
Yedra Vieites Álvarez

23/04/2026. XVI SEAE, Pamplona

RML
RÁÐGJAFARMIÐSTÖÐ LANDBÚNAÐARINS

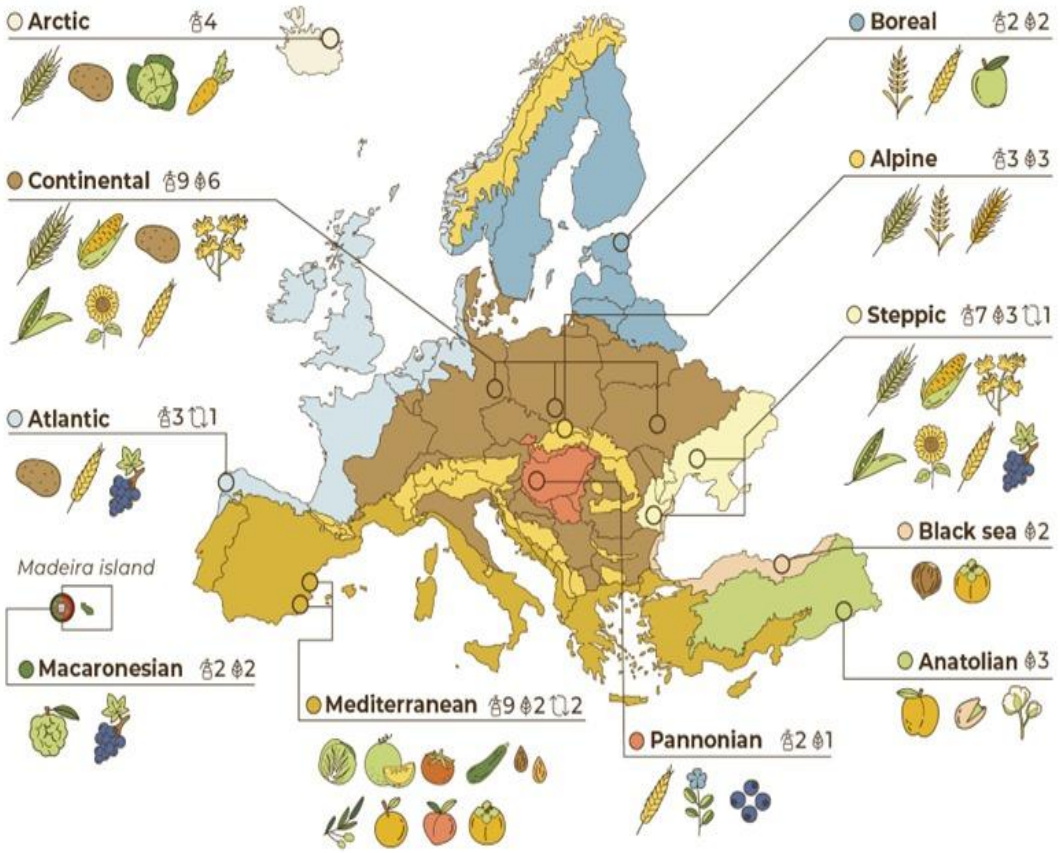
Funded by the European Union

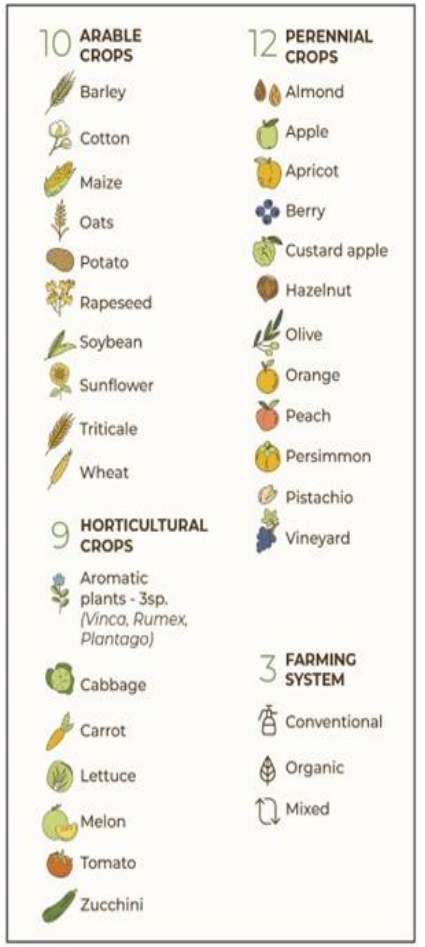
This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No GA 101084084



Descripción y enfoque

- 11 Regiones biogeográficas
- 3 tipos de agrosistemas
- 31 cultivos de relevancia económica





AGROSUS

Objetivos

Proporcionar herramientas de manejo sostenible de cultivos

Construir redes locales

Incrementar la digitalización

Identificar las principales arvenses y problemas de los agricultores

Evaluar el potencial agronómico de las estrategias

Iniciar un cambio en la gestión de las arvenses en Europa

Búsqueda de nuevas estrategias

Evaluar el impacto ambiental y socioeconómico

AGROSUS

02 Experimentos de Viñedos en Galicia

A corto plazo y a largo plazo

AGROSUS

Cultivos en Galicia-Región Atlántica

Ensayos corto plazo

Implantación de diferentes estrategias agroecológicas

Ensayos largo plazo

Ecológico vs Convencional

AGROSUS

¿Cómo se deciden las estrategias?

- Encuestas y entrevistas
- Talleres de co-creación
- Talleres de validación

Asesores

Científicos

Políticos

Industria

Asociaciones

Agricultores

Sociedad civil

AGROSUS

¿Qué medimos?

Análisis de salud vegetal

- Estado fenológico
- Detección de plagas o enfermedades
- Análisis elemental e isotópico
- Fluorescencia de la clorofila *a*
- Tamaño tallos, área foliar, altura planta, altura corona, diámetro tronco
- % Brotación
- Nº de racimos/rama
- Índice Ravaz
- Producción

Análisis de flora espontánea

- Cobertura de malezas
- Densidad
- Biomasa
- Banco de semillas

Análisis de suelo

- Densidad aparente
- Contenido hídrico
- C y N totales
- pH, Conductividad eléctrica, Intercambio de iones
- Análisis de elementos esenciales
- Biodiversidad
- Impacto eco-toxicológico

Análisis producto agrícola

- Peso de racimo y tamaño de uva
- Peso de 200 uvas
- Peso medio de una uva
- Nº de uvas/racimo
- Grados brix
- Acidez, acidez total y pH
- Contenido de solidos solubles totales
- Contenido de L-malato, tartárico, antocianinas, polifenoles

AGROSUS

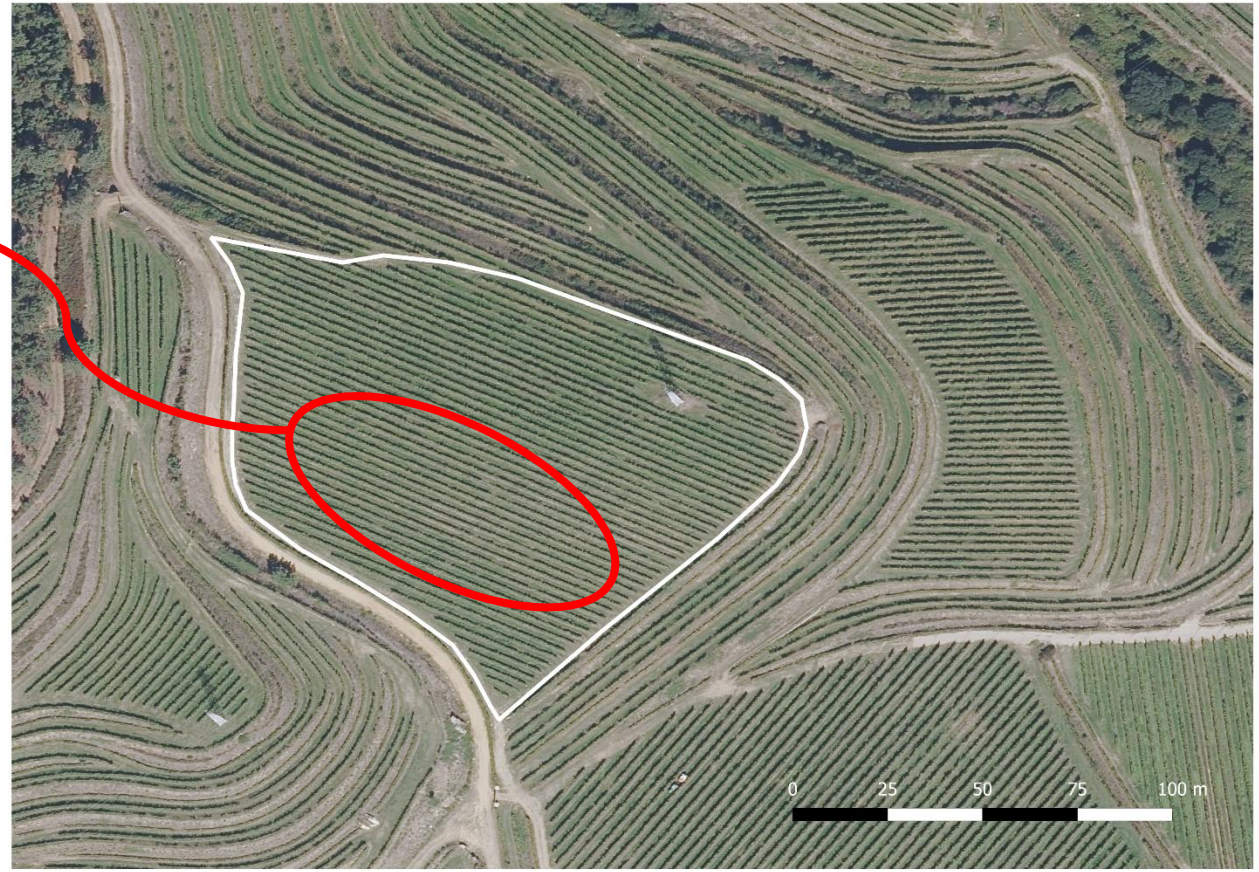
03 Experimento Corto Plazo

Vilachán-Tomiño

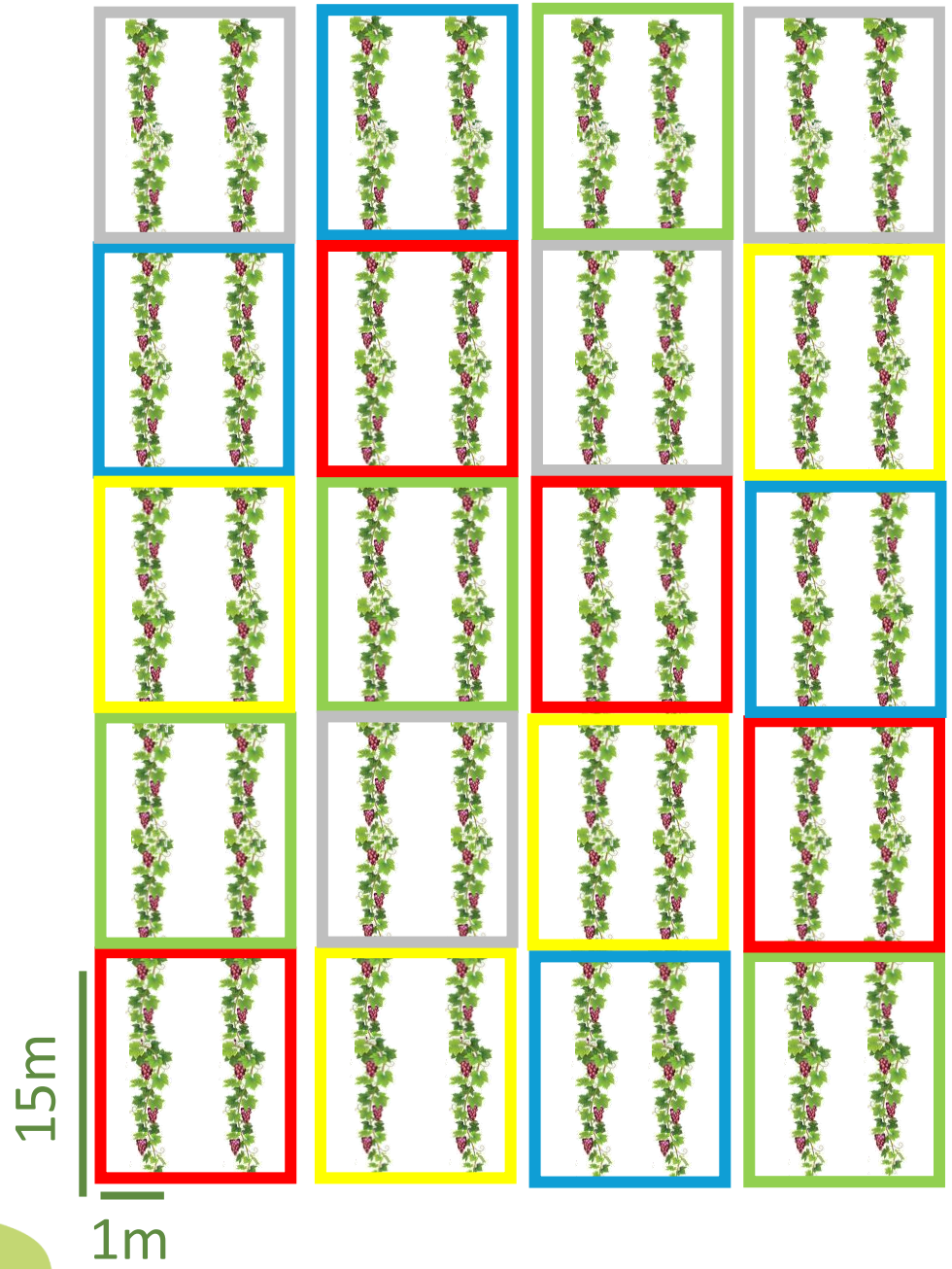
Viñedo Corto Plazo

Parcela Viñedo en Vilachán – Tomiño (Galicia)

También convencional largo plazo



Experimento Corto Plazo



- Siembra controlada (*Poa* sp., *Agrostis* sp. *Trifolium* sp. y *Festuca* sp.)
- Corteza de pino
- Biofilm
- Herbicida - Glifosato
- Bioherbicida – Beloukha + Control mecánico

4 rep/trat: 2 líneas con 10 plantas

Cada tratamiento= 80 plantas

AGROSUS

Resultados – Flora espontánea

Siembra Controlada

1 mes

Final

Cobertura: 90%
Predominan especies controladas

AGROSUS

Resultados – Flora espontánea

Biofilm

1 mes

Final

Cobertura: 80%

Predomina *Chenopodium* spp., *Erygeron* spp, *Plantago lanceolata* y *Trifolium* spp

AGROSUS

Resultados – Flora espontánea

Corteza de pino

1 mes

Final

Cobertura: 70%
Focos más aislados y menos desarrollados

AGROSUS

Resultados – Flora espontánea

Bioherbicida

1 mes

Final

Cobertura: 90%
Flora arvense de menor envergadura

AGROSUS

Resultados – Flora espontánea

Herbicida

1 mes

Final

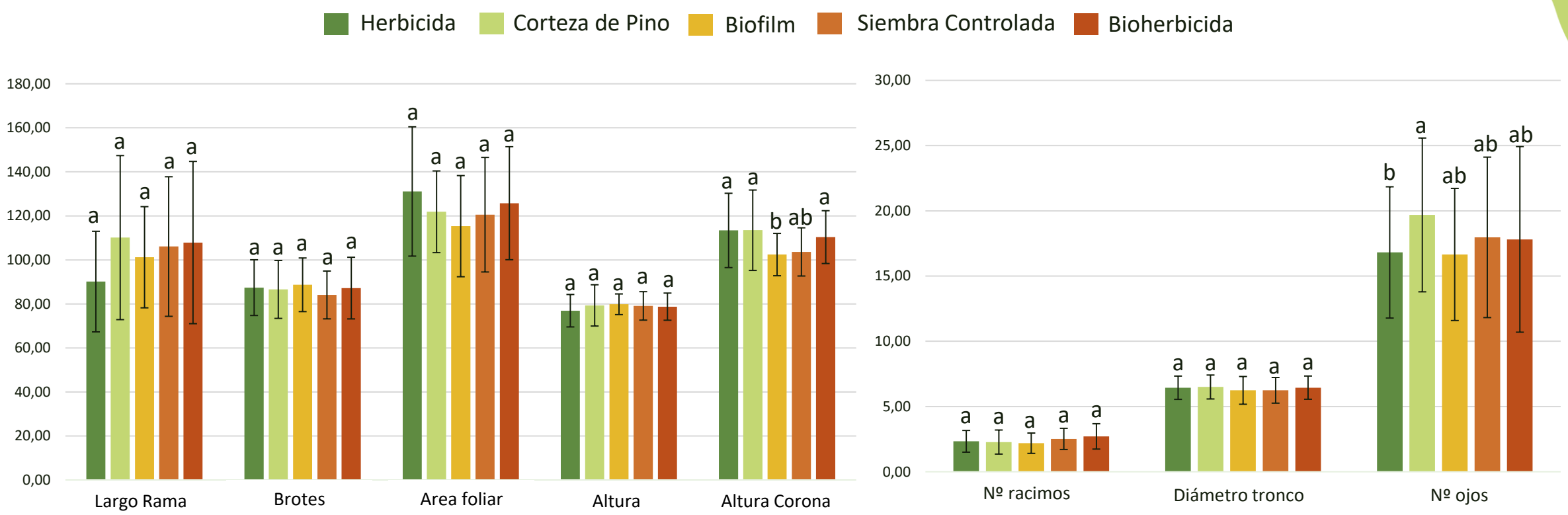
Cobertura: 40%

Presencia de especies resistentes: *Erygeron* spp y *Chenopodium* spp

AGROSUS

Resultados – Experimento Corto Plazo

Salud de la Planta

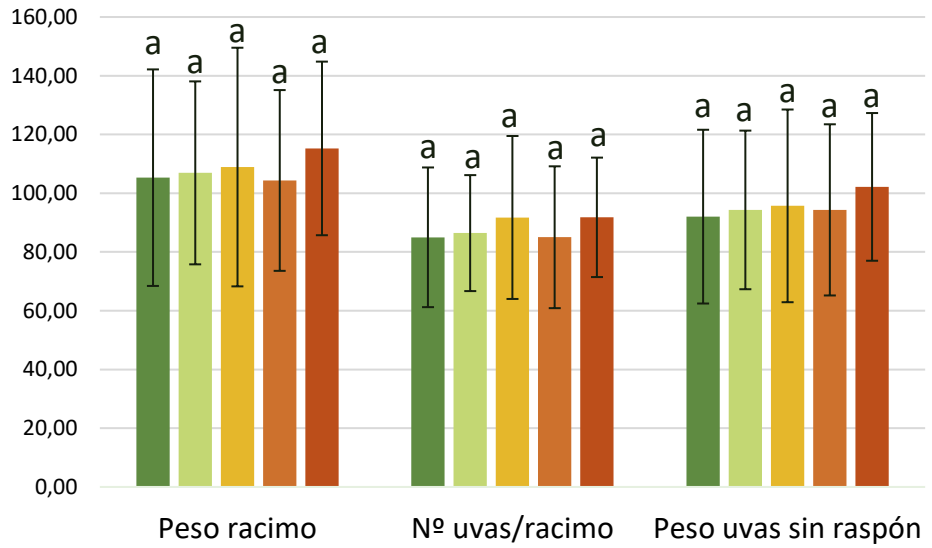


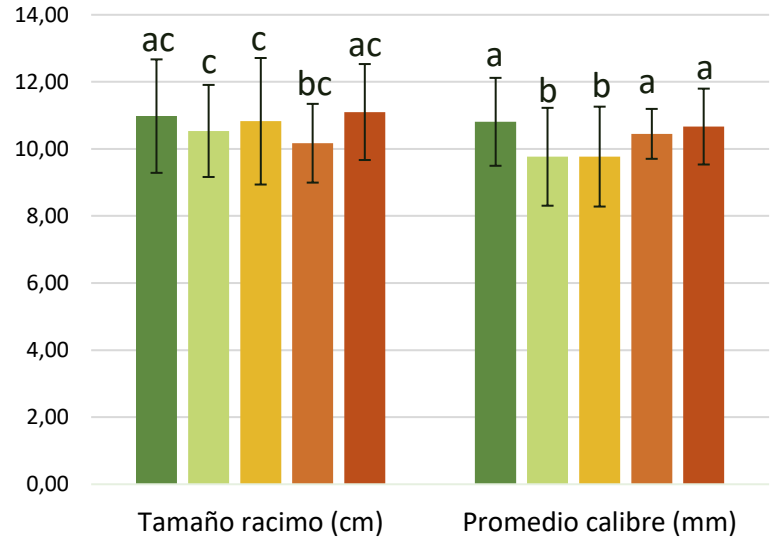
Diferencias significativas con respecto al herbicida:

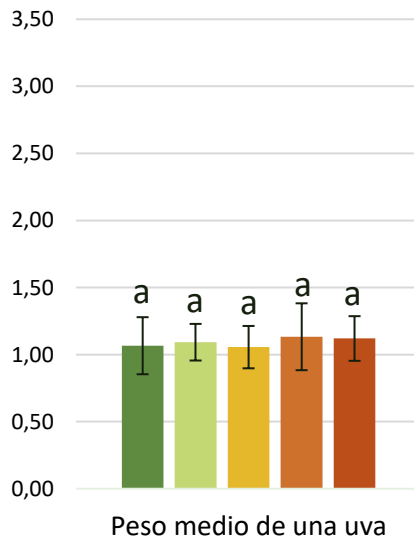
- Altura Corona
- Nº Ojos

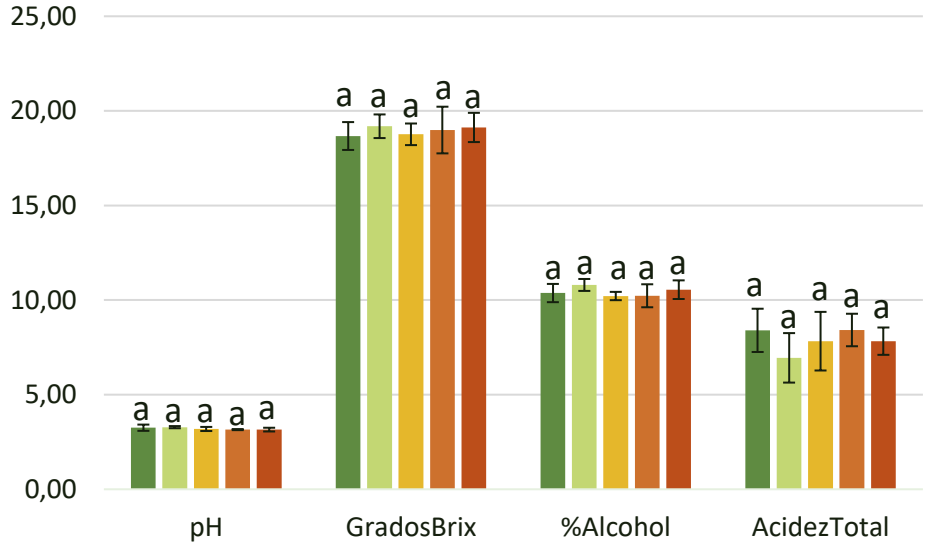
AGROSUS

Resultados – Experimento Corto Plazo









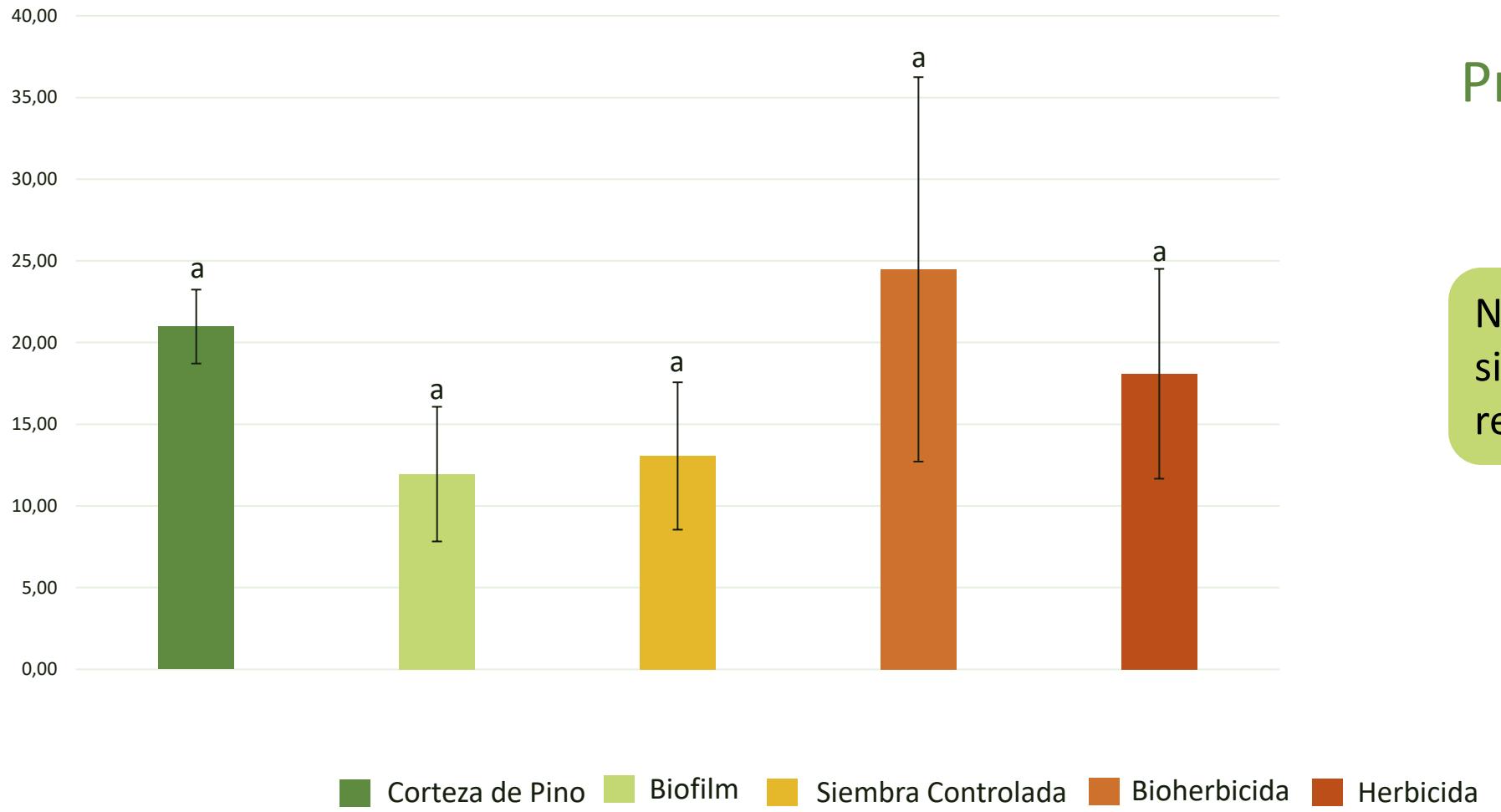
Producto

Diferencias significativas con respecto al herbicida:

- Calibre

AGROSUS

Resultados – Experimento Corto Plazo



Producción

No hay diferencias significativas con respecto al herbicida

AGROSUS

04 Experimento Largo Plazo

Baldráns - Tui – Tomiño – Salvaterra do Miño

Viñedos Largo Plazo - Ecológicos

Espaldera

Parra

CONV

ECO

AGROSUS

Resultados Flora Espontánea - Ecológico vs Convencional

Ecológico Espaldera

Cobertura: 45%
Predomina *Mentha sp.*

Convencional Espaldera

Cobertura: 40%
Presencia de especies resistentes: *Erygeron* spp. y *Chenopodium* spp.

AGROSUS

Resultados Flora Espontánea - Ecológico vs Convencional

Ecológico Parra

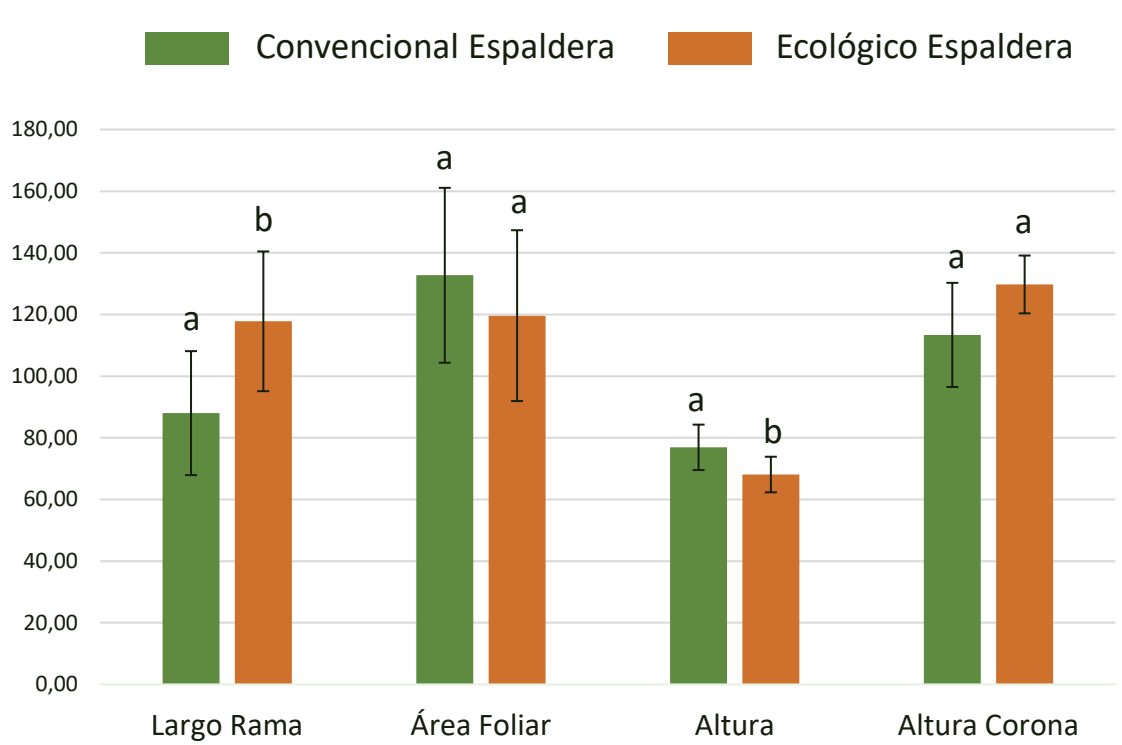
Cobertura: 70%
Predominan monocotiledóneas como *Cynodon* sp. o *Paspalum* sp.

Convencional Parra

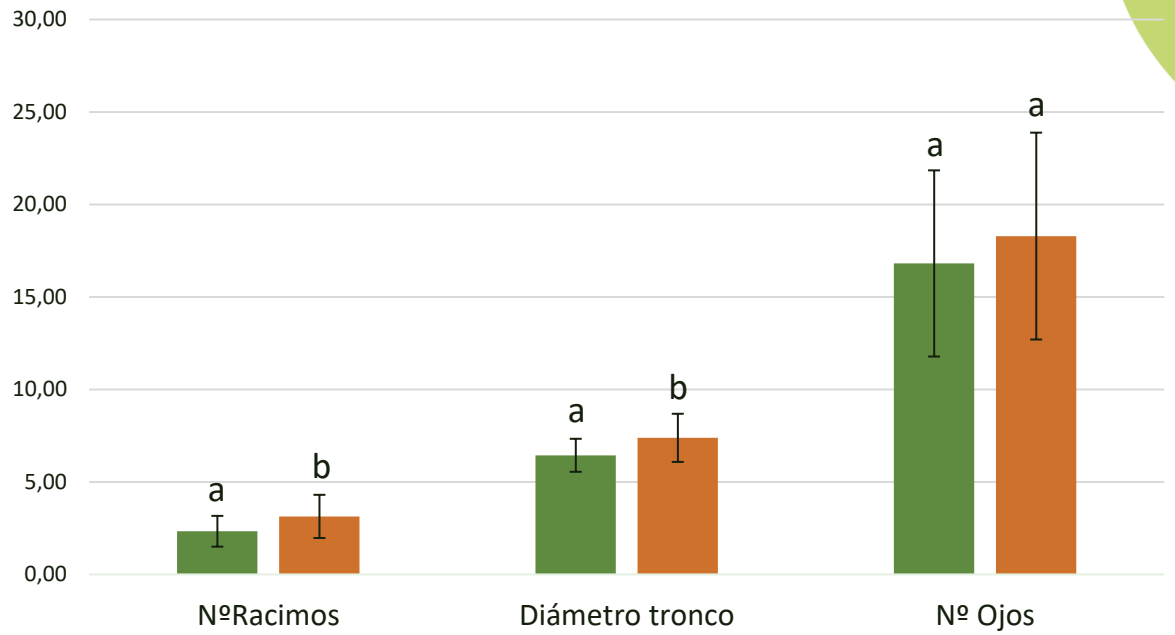
Cobertura: <5%
Mayor presencia en las zonas de fertirrigación por goteo

AGROSUS

Resultados – Largo Plazo Espaldera – Ecológico vs Convencional



Salud de la Planta

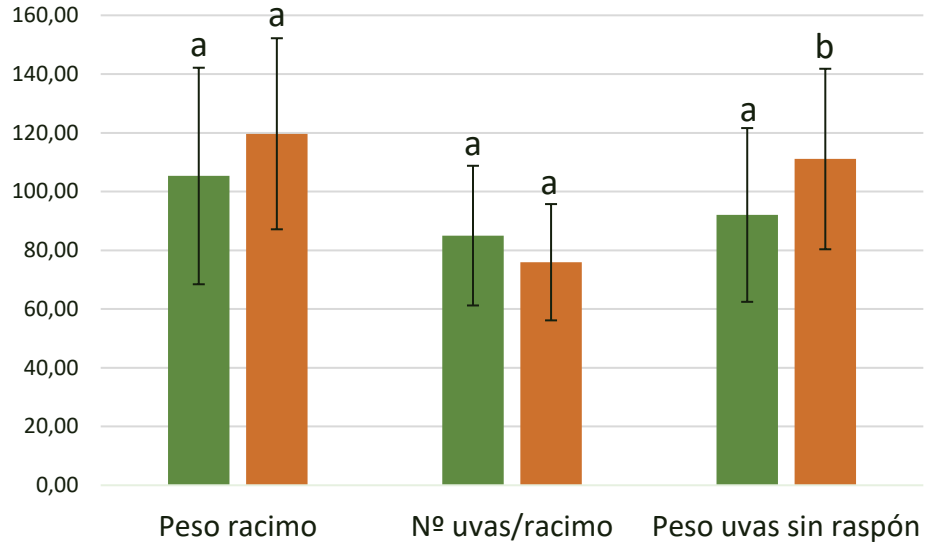


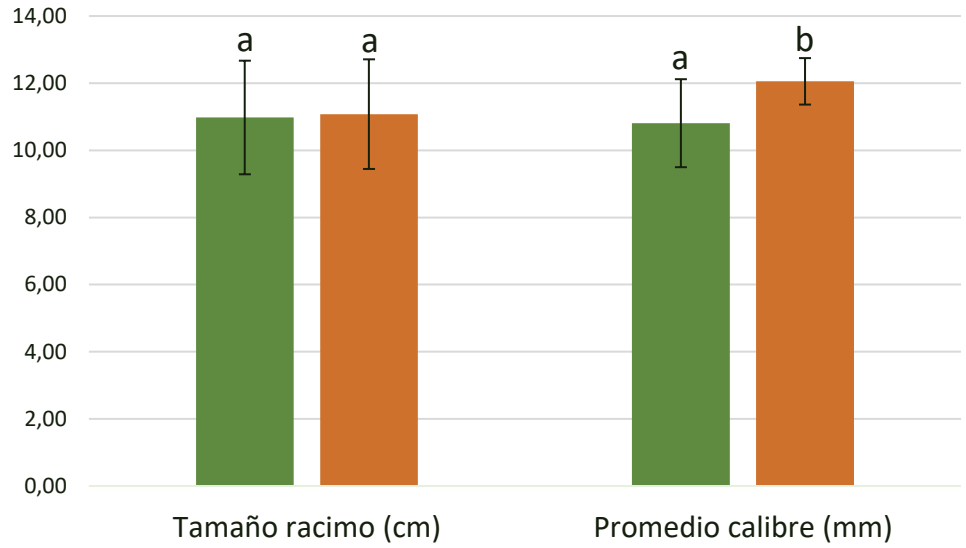
Diferencias significativas en:

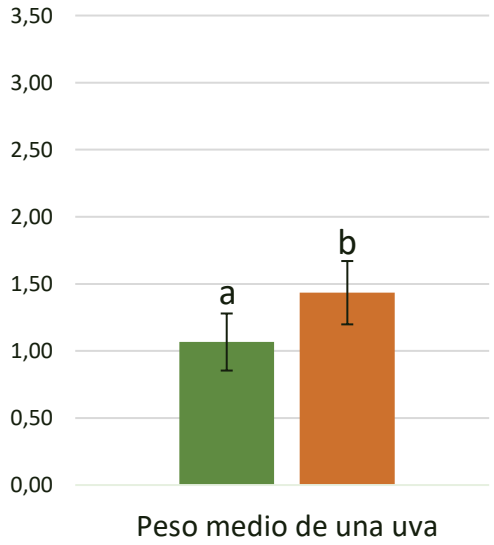
- Largo Rama
- Altura
- Nº Racimos
- Diámetro tronco

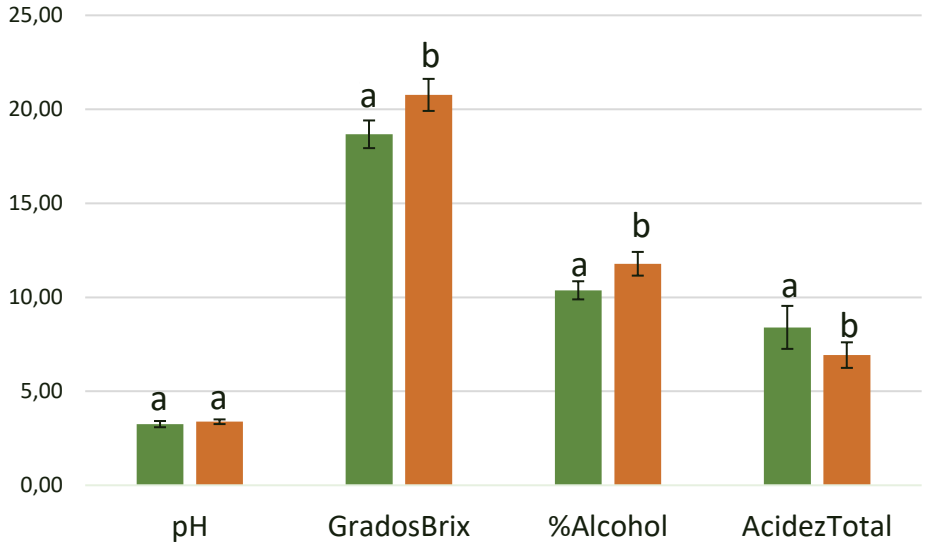
AGROSUS

Resultados – Largo Plazo Espaldera – Ecológico vs Convencional









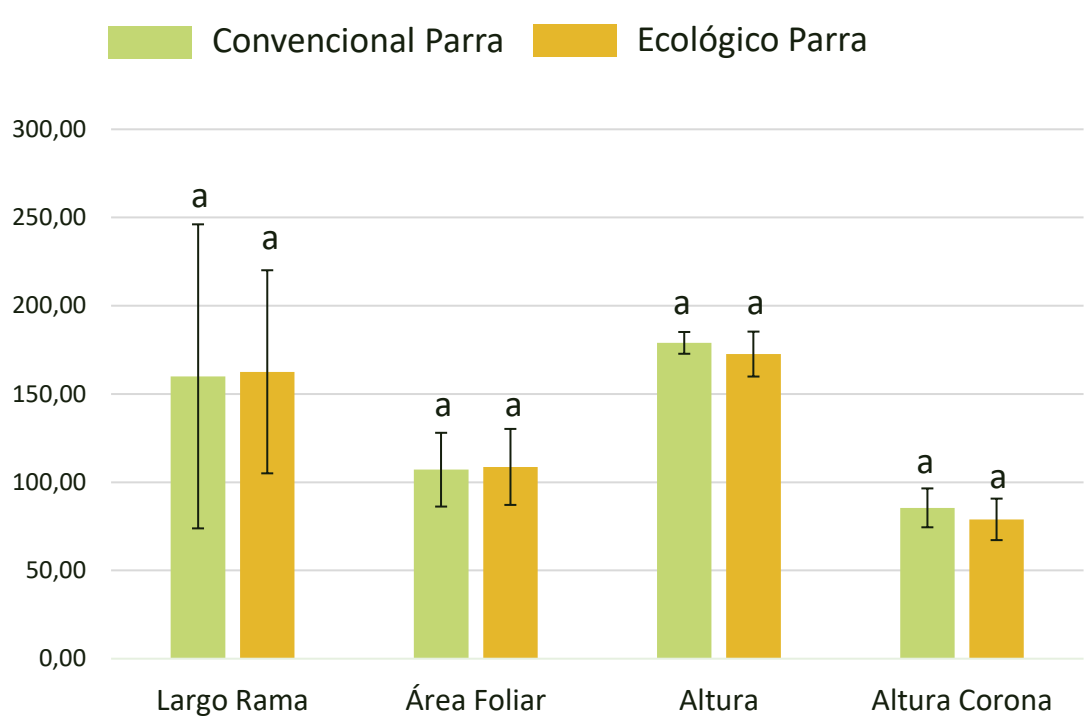
Producto

Diferencias significativas en:

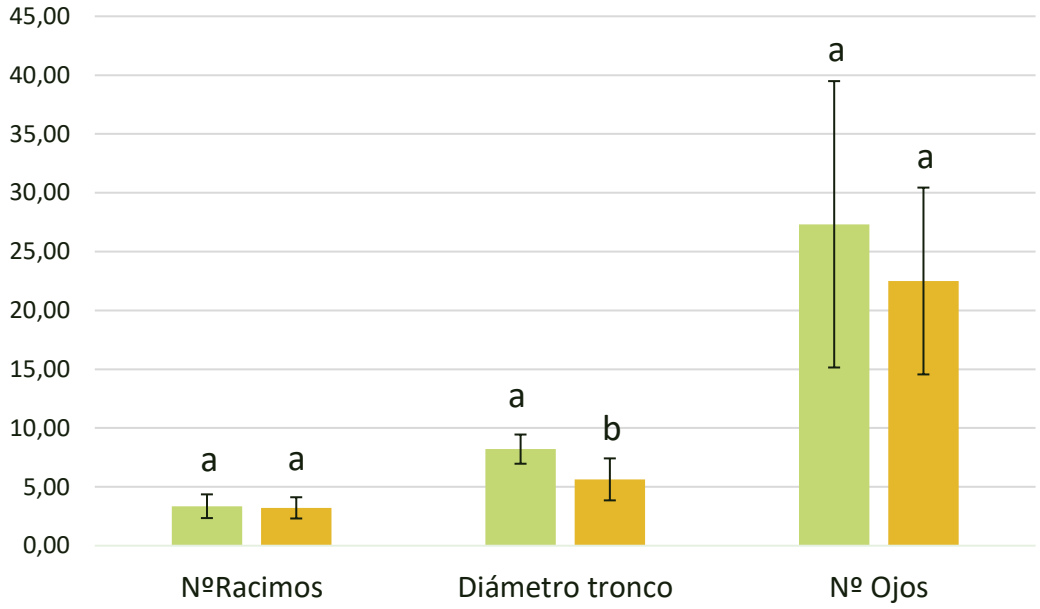
- Peso Uvas sin Raspón
- Calibre
- Peso Medio Uva
- Grados Brix
- % Alcohol
- Acidez Total

AGROSUS

Resultados – Largo Plazo Parra – Ecológico vs Convencional



Salud de la Planta

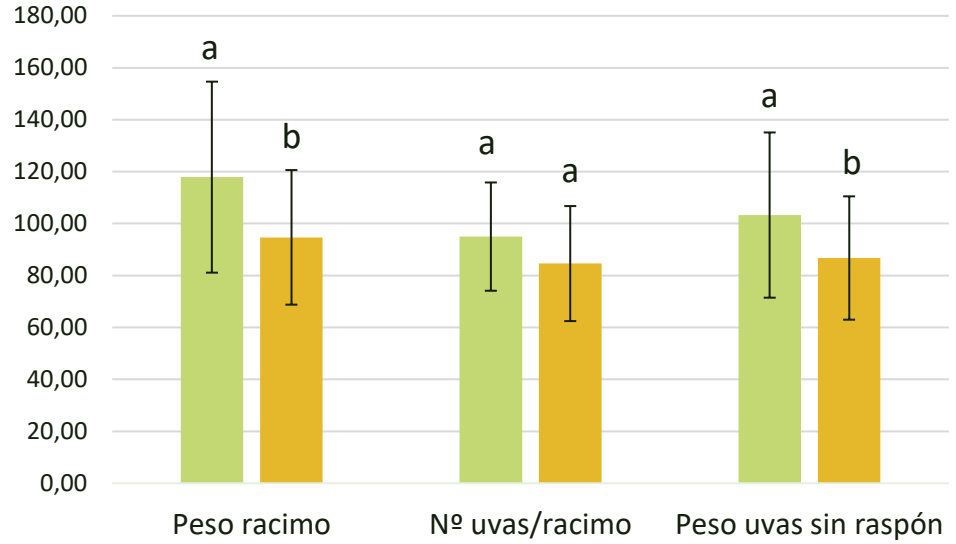


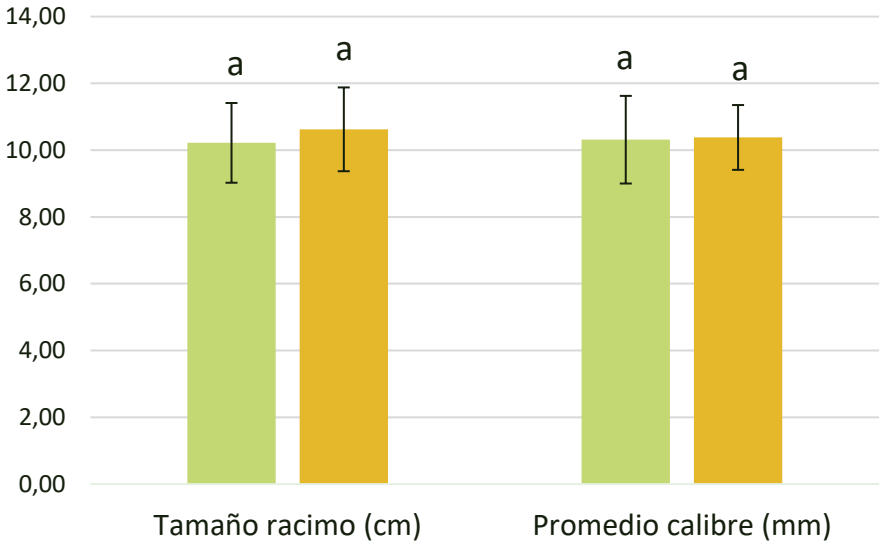
Diferencias significativas en:

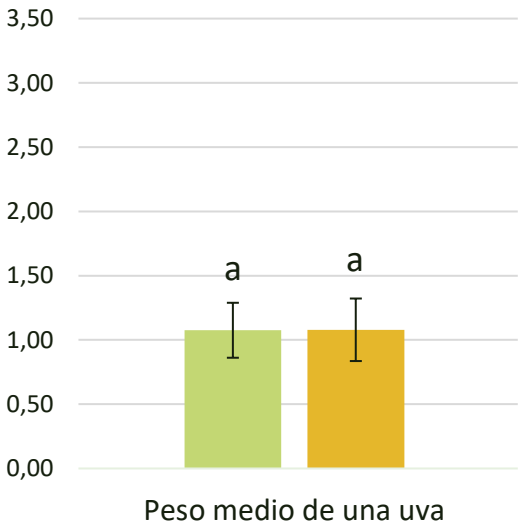
- Diámetro tronco

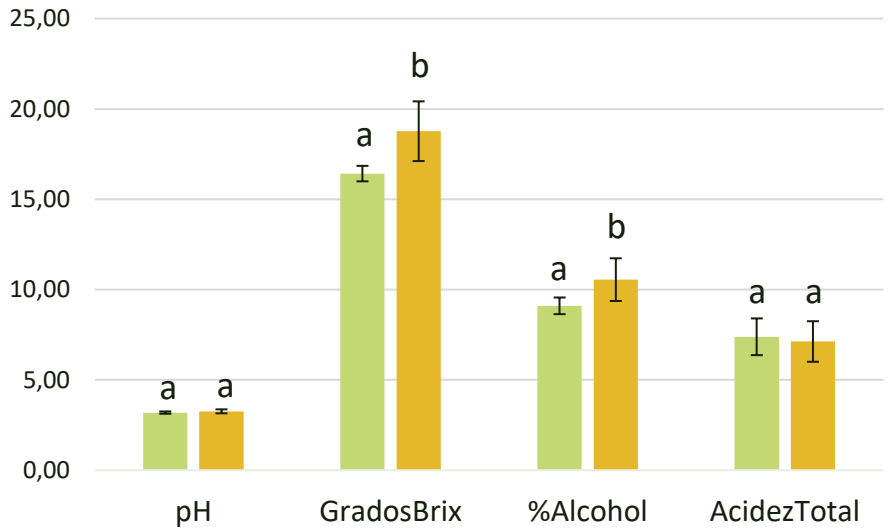
AGROSUS

Resultados – Largo Plazo Parra – Ecológico vs Convencional







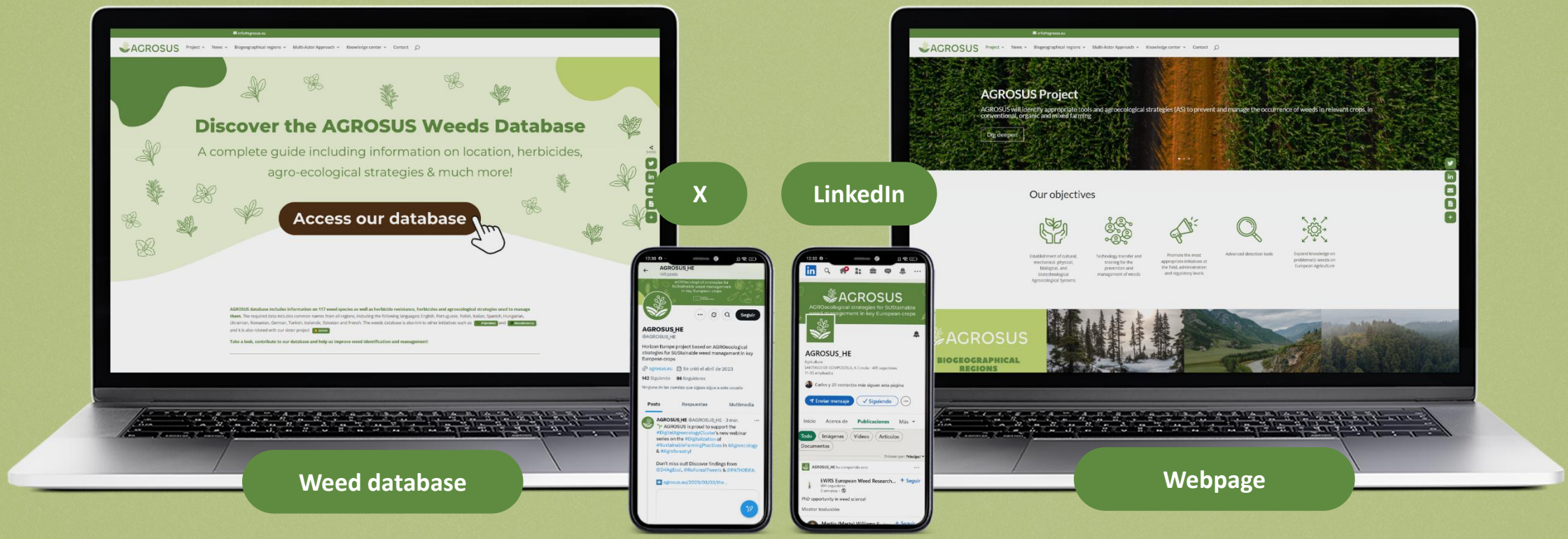


Producto

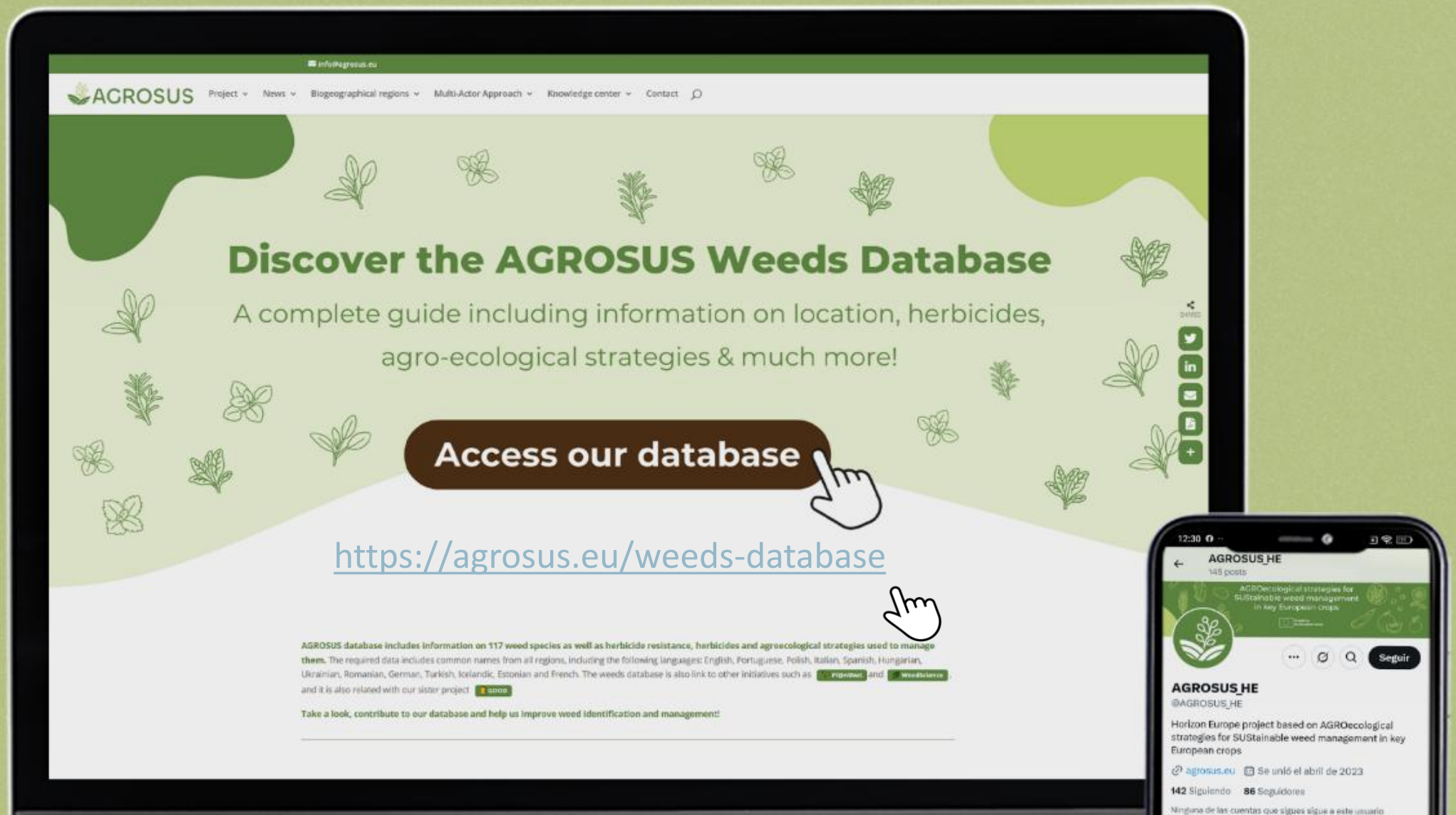
Diferencias significativas en:

- Peso Racimo
- Peso Uvas sin Raspón
- Grados Brix
- % Alcohol

AGROSUS



https://agrosus.eu/weeds-database


info@agrosus.eu
AGROSUS
Project
News
Biogeographical regions
Multi-Actor Approach
Knowledge center
Contact
Discover the AGROSUS Weeds Database
A complete guide including information on location, herbicides,
agro-ecological strategies & much more!
Access our database
https://agrosus.eu/weeds-database
AGROSUS database includes information on 117 weed species as well as herbicide resistance, herbicides and agroecological strategies used to manage them. The required data includes common names from all regions, including the following languages: English, Portuguese, Polish, Italian, Spanish, Hungarian, Ukrainian, Romanian, German, Turkish, Icelandic, Estonian and French. The weeds database is also link to other initiatives such as and and it is also related with our sister project
Take a look, contribute to our database and help us improve weed identification and management!
12:30
AGROSUS_HE
145 posts
Seguir
AGROSUS_HE
@AGROSUS_HE
Horizon Europe project based on AGROecological strategies for SUStainable weed management in key European crops
agrosus.eu
Se unió el abril de 2023
142 Siguiendo
86 Seguidores

info@agrosus.eu

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

-- Click to select language --

Used for searching and displaying common name(s)

Enter text to search into common names

Enter text to search into scientific name

Crops

Select all the options you want to include in the results

Countries

Select all the options you want to include in the results

Life cycle

Winter | Spring | Summer | Autumn

Type

Annual | Biennial | Perennial

Submit | Clean filters

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	Spring, Summer, Autumn	Maize, Soybean, Beans, Sunflower, Cotton, Lettuce, Tomato	AL AT BY BE BA BG HR DK EE FI FR DE GB GR HU IE IT LT LU ME NL NO PL PT RO RU RS SK SI ES SE CH TR UA MK	Data sheet, Contribute!
				Winter		AL AT BG HR CZ DK EE FI FR DE	

SHARES

Scientific name

Abutilon theophrasti Medik.

Access more info at PI@ntNet WeedScience

Send your suggestions!
If you have any additional information about this weed, please let us know!
Fill in the form!

Basic information

Type: Annual

Life cycle: Spring Summer Autumn

Crops: Maize Soybean Beans Sunflower Cotton Lettuce Tomato

Location

Countries: AL AT BY BE BA BG HR DK EE FI FR DE GB GR HU IE IT LT LU ME NL MK NO PL PT RO RU RS SK SI ES SE CH TR UA Notes: Few incidence in Luxembourg, Lithuania, Albania, Belarus, Montenegro, North Macedonia,

Main european biogeographic regions: Continental Black Sea Mediterranean Alpine Atlantic Boreal Macaronesian Pannonian Steppic Anatolian Notes: Few incidence in Alpine region

Herbicides

Active ingredients: Glyphosate, Pendimethalin, Bentazon, Mesotrione, Dimethenamid-P, Rimsulfuron (aka renriduron), Flumioxazin, Pyridate, Sulcotrione, MCPA, Thifensulfuron-methyl, 2,4-D, Dicamba, Imazamox, Nicosulfuron, Fluroxypyr, Florasulam

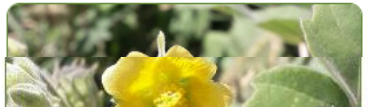
Commercial names: Roundup Ultra Plus, Banvel-D, Casper, Callisto Plus, Pulsar 40, Basagran L, Stomp Aqua, Spectrum, Tensira 200 Ec, Crew, Onyx, Dragster, Decano Od

Resistances developed to herbicides: HRAC 5 PSII inhibitors – Serine 264 Binders

Images

Vegetative state

Reproductive state



Agroecological strategies

Cultural strategies

Cover crops GOOD

Crop rotation GOOD

Mechanical/Physical strategies

Mulching GOOD

Solarization

Belarus, Montenegro, North Macedonia,

Main european biogeographic regions: Continental Black Sea Mediterranean Alpine Atlantic Boreal Macaronesian Pannonian Steppic Anatolian Notes: Few incidence in Alpine region

Images

Vegetative state

Source: Pl@ntNet

Reproductive state

Source: Pl@ntNet

Seedling stage

Source: PlantwisePlus Knowledge Bank

Agroecological strategies

Cultural strategies

Cover crops GOOD

Crop rotation GOOD

Mechanical/Physical strategies

Mulching GOOD

Solarization

Harrowing GOOD

Biological strategies

Grazing GOOD

Biological agents GOOD

Green strategies

Robots GOOD

Weed maps

Common names

English: Velvetleaf (GB), Velvet weed (GB), Abutilon-hemp (GB), China-jute (GB)

French: Abutilon d'Avicenne (FR), Abutilon de Theophraste (FR), Abutilon à pétales jaunes (FR), Abutilon (FR), Jute de Chine (FR)

Spanish: Yute Chino (ES), Cenciomolle (ES), Abutilón de la China (ES)

Italian: Cencio molle (IT), Luta cinese (IT)

Portuguese: Folhas-de-veludo (PT), Juta-da-china (PT), Malvão (PT)

Polish: Zaślaz mieszańcowy (PL)

Hungarian: Selyemmályva (HU)

Ukrainian: Абутілон теофраста (UA)

Romanian: Crucea-pîinii (RO), Floarea-crucii (RO), Pristolnic (RO), Teișor (RO)

German: Chinesische Jute (DE), Chinesische Samtpappel (DE), Chinesischer Hanf (DE), Europäische Samtpappel (DE), Samtmalve (DE)

Turkish: Imamkavuğu (TR)

Icelandic: –

Estonian: Kanep-abuutilon (EE)

SHARES

Belarus, Montenegro, North Macedonia,

Main european biogeographic regions: Continental, Black Sea, Mediterranean, Alpine, Atlantic, Boreal, Macaronesian, Pannonian, Steppic, Anatolian Notes: Few incidence in Alpine region

Images

Vegetative state

Source: Pl@ntNet

Reproductive state

Source: Pl@ntNet

Seedling stage

Source: PlantwisePlus Knowledge Bank

Agroecological strategies

Cultural strategies

Cover crops GOOD

Crop rotation GOOD

Mechanical/Physical strategies

Mulching GOOD

Solarization

Harrowing GOOD

Biological strategies

Grazing GOOD

Biological agents GOOD

Green strategies

Robots GOOD

Weed maps

Common names

English: Velvetleaf (GB), Velvet weed (GB), Abutilon-hemp (GB), China-jute (GB)

French: Abutilon d'Avicenne (FR), Abutilon de Theophraste (FR), Abutilon à pétales jaunes (FR), Abutilon (FR), Jute de Chine (FR)

Spanish: Yute Chino (ES), Cenciomolle (ES), Abutilón de la China (ES)

Italian: Cencio molle (IT), Luta cinese (IT)

Portuguese: Folhas-de-veludo (PT), Juta-da-china (PT), Malvão (PT)

Polish: Zaślaz mieszańcowy (PL)

Hungarian: Selyemmályva (HU)

Ukrainian: Абутилон теофраста (UA)

Romanian: Crucea-pîinii (RO), Floarea-crucii (RO), Pristolnic (RO), Teișor (RO)

German: Chinesische Jute (DE), Chinesische Samtpappel (DE), Chinesischer Hanf (DE), Europäische Samtpappel (DE), Samtmalve (DE)

Turkish: Imamkavuğu (TR)

Icelandic: –

Estonian: Kanep-abuutilon (EE)

SHARES

GOOD_03-cover-crops-v2.pdf 1 / 2 100%

1

2

GOOD

AGROECOLOGY FOR WEEDS

www.goodhorizon.eu

AGROECOLOGICAL WEED MANAGEMENT REPOSITORY

The Agroecological Weed Management (AWM) Repository (https://www.goodhorizon.eu/platform/awm-practices/) is a virtual space where you can freely and openly find information and educational material on current and agroecological weed management practices in the European Union. You can browse and learn about several weed management practices and crops.

#@Agroecology is GOOD

Version 1.0 – April 2024

03

COVER CROPS

DESCRIPTION & BENEFITS

Cover crops are plant species grown between cash crop cycles or as companion crops in permanent plantations to:

- **improve soil health** by covering and protecting the soil, often during periods when the land would otherwise be left fallow
- **reduce the weed pressure** due to their ability to compete with weeds for resources. Some cover crops release allelopathic compounds that inhibit weed growth, providing natural weed suppression
- **enhance overall agroecosystem resilience**
- **provide an alternative income** resource for farmers

HERRAMIENTAS DE DETECCIÓN

1. Robot autónomo terrestrepara la recopilación de datos: Robot móvil inteligente de monitorización (i-MMR)

2. Mecanismo de almacenamiento de datos en la nube: parte del Smart Operation Manager (SOM), con tecnología de FIWARE

3. Análisis de datos mediante estrategias de inteligencia artificial: el módulo de estimación de maleza (WEM), basado en conjuntos de datos y modelos de acceso abierto

Combinación de robótica, plataformas en la nube e inteligencia artificial para mejorar la vigilancia y la detección de malas hierbas a gran escala

AGROSUS

GRACIAS

Universidade de Vigo
yedra.vieites.alvarez@uvigo.gal

https://agrosus.eu/

https://twitter.com/AGROSUS_HE

https://www.linkedin.com/company/agrosus-he/posts/?feedView=all

AGROSUS

Funded by
the European Union