

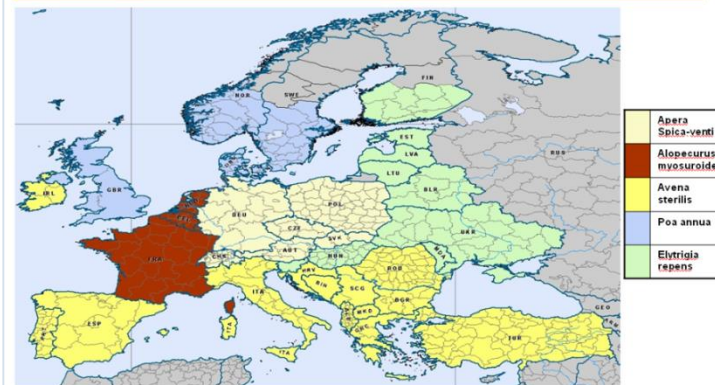


18th EWRS Symposium  
17-21 June, Ljubljana, Slovenia

## Working Group "Weed Mapping"

Professor Garifalia Economou  
Coordinator  
Agricultural University of Athens

Europe: Cereals / most frequent grasses  
(draft, medium certainty level)





# Mission of our working group



- ➔ To provide an overview on the occurrence and spreading of weeds in Europe
- ➔ To exchange data, tools and methods for the assessment and
- ➔ Spatial documentation of species and biotypes on arable and non-crop land, e.g. on amenity areas

# Working action of Weed Mapping WG members and external collaborators

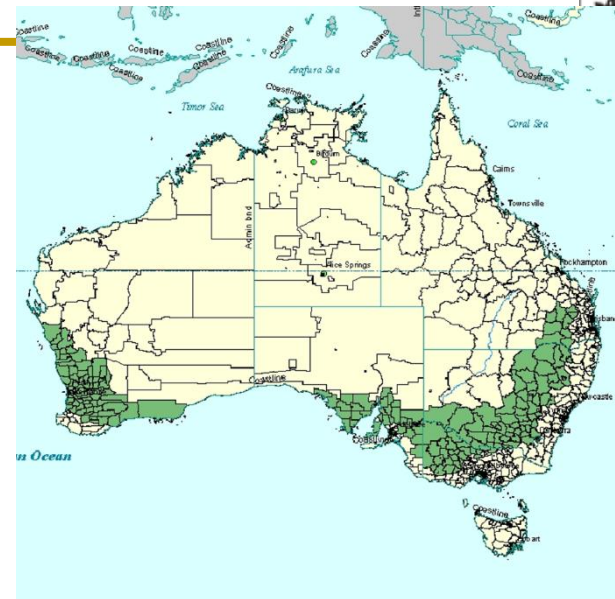
## Examples of Weed Mapping: prioritization according to their frequency

### Europe: Cereals / most frequent grasses

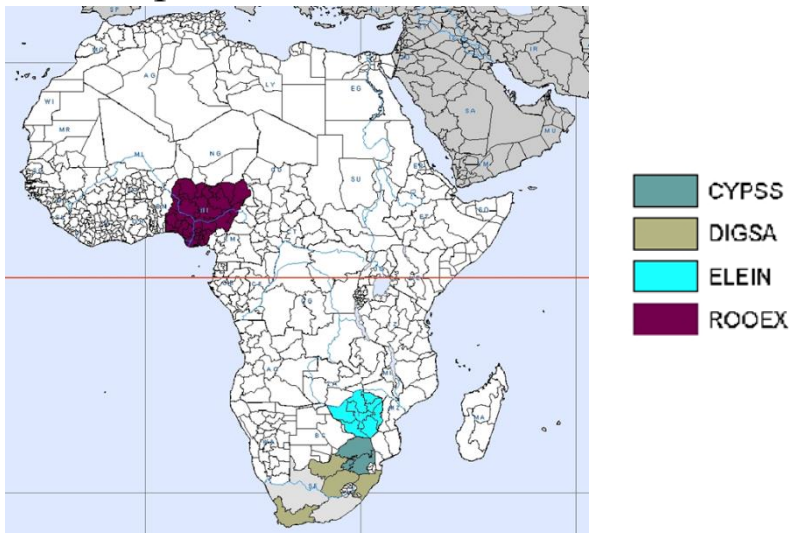
(draft, medium certainty level)



### Most frequent grass weeds of Australian wheat: LOLSS



### Most frequent monocots in corn





# Tasks of the working group



- To compare and combine data from weed surveys in physical maps
- To document population dynamics and regional weed changes
- To derive predictions for weed problems in selected areas and on selected sites
- To communicate developments in defined segments and compare them with developments outside the EU
- To find common and most efficient rules and tools for the assessment and documentation of data



# Principle Considerations



- The best times for **mapping weeds** are before weed control applications (pre and post) and before harvest
- **Weed densities** should be clustered according to Braun-Blanquet
- Every **species**/biotype should be **documented** separately
- The most evident way to **demonstrate weed densities** appears to be a **colored depiction** where a dark color represents high densities and light color low densities
- Several **coordinators** should **guarantee** the consistency of rules



# Past activities

What have we achieved so far?



**Chairperson:**

**H. Krämer**

(hansjoerg.kraehmer@bayercropscience.com)



- Presentation of the project at AK Herbologie in **Braunschweig January** 2009
- Presentation at "Herbicide Resistance" Working Group in **Gent, May** 2009
- Meeting of a project group in **Prague, May** 13th to 15th 2009
- Proposal and acceptance of a new EWRS working group at EWRS SciCom in **Volterra, November 2009**
- Presentation of achievements at AK Herbologie in Frankfurt on February 17th, 2010
- Completion of **website on March** 1st, 2010
- **1st Meeting of the WG in Kaposvar**, July 12th, 2010 with presentations of Regional coordinators
- **2<sup>nd</sup> Official Workshop of the Weed Mapping WG, Jokioninen, Sweeden**, 21-23th September 2011

# What have we achieved so far?



- **Joint Workshop** of EWRS WGs 'WEED MAPPING' and 'NOVEL AND SUSTAINABLE WEED MANAGEMENT IN ARID AND SEMI-ARID AGRO-ECOSYSTEMS', ii) Weed Mapping Round Table entitled '*Status of weeds distribution/rules for data collection and processing*', Chania Crete 2013
- **Brainstorming meeting** of WG members, February Prague 2014
- **Weed Mapping Workshop on standardization on weed mapping methodologies**, practical field assessment exercise and data documentation July , 2014 in Prague
- Participation of Weed Mapping experts in "SITE SPECIFIC WEED MANAGEMENT IN PRACTICE WORKSHOP", July 2015- Israel,
- **Co organizing of the "5th International Symposium on Weeds and Invasive Plant"** by the WGs: 'Weed Mapping', 'Invasive plants' and 'Germination and Early Growth', Chios, Greece. October 2017.



## What have we achieved so far?

---

- Organizing of Summer School on "Weed Mapping as a Tool in Plant Ecology and Weed Management" Czech University of Life Sciences Prague, Czech Republic (16-21 July 2018).
- Advanced Workshop on "Weed Mapping as a Tool in Plant Ecology and Weed Management", Mediterranean Agronomic Institute of Chania (MAICH) Crete (Greece 16 - 18 September 2019)
- Co organizing of Advanced Workshop on "Education & Training: Herbicide Resistance Identification Training, European Weed Research Society (EWRS) (Antalya, Turkey, 5- 7 November 2019).
- Participation in European Weed Research Society Common experiment on 'Variations on the *Echinochloa crus-galli* (L.) P. Beauv. emergence behaviour depending on the population origin and growing site' (2016-2019).

# First meeting of the foundation team in Prague May 13th - 15th 2009



## 2<sup>nd</sup> EWRS WORKSHOP -WEED MAPPING September 21<sup>st</sup>-23<sup>rd</sup> 2011 Jokioinen, Finland



## A "World Café" exercise ( 2<sup>nd</sup> Official Workshop) in which two questions had to be answered:

- a) "Why do we map weeds and what do we want to achieve with the results?"
- b) "What are the databases for our maps, how do we validate and document our data and how do we finally map weeds independent of national borders?"



## Brainstorming meeting in Prague 12-15 /2 2014



# Weed Mapping Workshop 10 - 11<sup>th</sup> July, 2014 in Prague



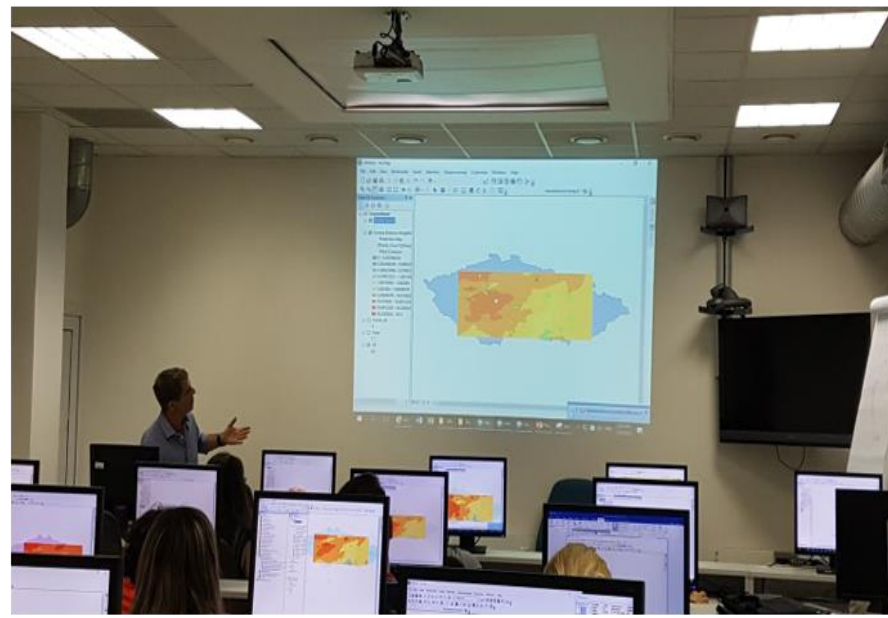
**Objective:** the development of weed mapping methodologies based on data documentation through the practical field assessment exercise organized by Czech University of Life Sciences Prague



# Summer School on "Weed Mapping as a Tool in Plant Ecology and Weed Management" Czech University of Life Sciences Prague, Czech Republic (16-21 July 2018).



Training courses, Czech University of Life Sciences Prague



Summer school on Weed Mapping. Prague 2018

# Advanced Workshop on "Weed Mapping as a Tool in Plant Ecology and Weed Management, Mediterranean Agronomic Institute of Chania (MAICH) Crete (Greece 16 - 18 September 2019)



This event was organized by the Weed Mapping Working Group and the European Weed Research Society (EWRS) in cooperation with two Universities, the Agricultural University of Athens and the Czech University of Life Sciences Prague.



Advanced Workshop on "Weed Mapping as a Tool in Plant Ecology and Weed Management, Mediterranean Agronomic Institute of Chania (MAICH) Crete (Greece 16 - 18 September 2019)

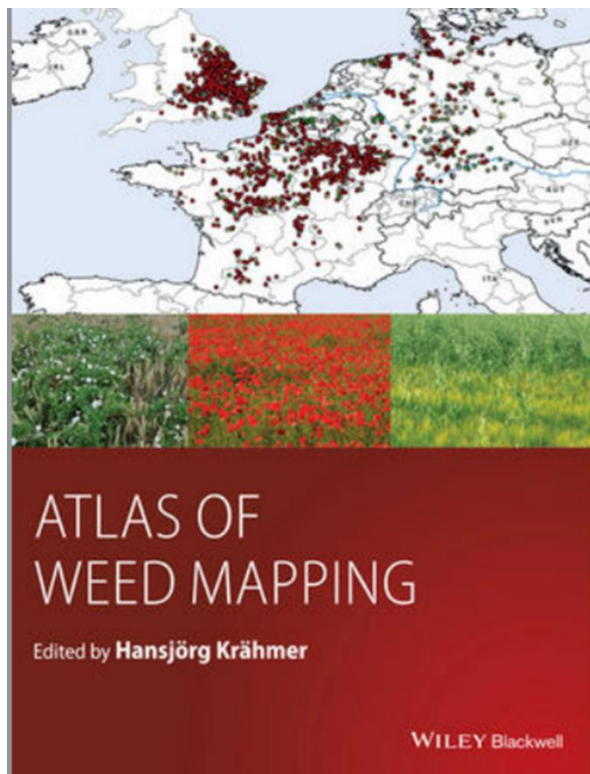


# Published Work



## ➔ Atlas Weed Mapping (Monography). Pages 472

by Hansjörg Krähmer and members of the EWRS Weed Mapping Working Group, 2015



amazon.co.uk Your Amazon.co.uk Today's Deals Gift Cards Sell Help

Shop by Department - Search Books -

Books Advanced Search Browse Genres Best Sellers New & Future Releases Paperbacks Top Offers Textbooks Audiobooks Sell Your Books

**Atlas of Weed Mapping** Hardcover – 18 Sep 2015  
by Hansjörg Krähmer (Author)

+ See all formats and editions

Hardcover  
£182.31

1 New from £182.31

See this image

**Special Offers and Product Promotions**

- Pre-order Price Guarantee: order now and if the Amazon.co.uk price decreases between the time you place your order and the release date, you'll be charged the lowest price. [Here](#)

Customers viewing this page may be interested in these sponsored links [\(What is this?\)](#)

- [Mapping](#)
- [Necron Energy TURKEY](#)
- [Smarty Pins - Google Maps](#)
- [Statistische Analyse von Daten Visuell und Interaktiv. Von SAS](#)
- [Powering The World - UPS, Regulator Inverter, Rectifier, Poser Back Up](#)
- [Guess, Drag, Drop. Put Your Trivia Skills to the Test!](#)

[See a problem with these advertisements? Let us know](#)

**Product details**

Hardcover: 450 pages  
Publisher: Wiley-Blackwell (18 Sep 2015)

# Published Work

---



## ➤ Weed surveys and weed mapping in Europe: State of the art and future tasks.

**Review paper**, by the authors, H KRAEHMER, C ANDREASEN, F ECONOMOU, J HOLEC, D KALIVAS, M KOLÁŘOVÁ, R NOVAK, S PANOZZO, G PINKE, J SALONEN M SATTIN, E STEFANIC  
<https://doi.org/10.1016/j.cropro.2019.105010>

**The primary objectives for the review paper are to demonstrate:**

- Differences in methods employed in various projects and potential consequences
- The outcome of European weed surveys and examples for changes of weed assemblies
- The biodiversity change on European arable land
- The influence of environmental factors and farm management tools on the occurrence of weeds
- Tools for the documentation and mapping of herbicide resistant weeds
- The potential use of predictive models in weed research

➤ **Aim: the comparison of methods and tools of weed distribution models**

# New tasks and goal

---



To improve the tools of weed mapping and develop the practical approaches in order to standardize the documentation of the data derived from the current surveys

## ➔ The approach of the goal

- Mathematical aspect
- Geostatistical tools
- Bioclimatic indices
- Prediction of future weed shifts