CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

WORKSHOP OF THE EWRS WORKING GROUP 'WEED VEGETATION AND BIODIVERSITY'

Prague, Czech Republic, 10th to 12th of May 2023

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SCIENTIFIC PROGRAMME

TUESDAY MAY 9, 2023

19.00 - 21.00	**Welcome reception at the Czech University of Life Sciences Prague campus**

WEDNESDAY MAY 10, 2023

9.00 - 9.20	Opening speech and welcome to the workshop by Prof. Josef Soukup, EWRS President and Matthias Schumacher, Leader of the Working Group Weed Vegetation and Biodiversity
9.20 - 10.20	**KEYNOTE LECTURE: "Weed surveys – a window to changes in agriculture"** Jukka Salonen (LUKE, Finland)
10.20 - 10.40	**Coffee Break**
Session 1	***Weed community changes and biodiversity conservation***
10.40 - 11.00	"Lessons from the losers of biodiversity change in Central European arable fields" Michael Glaser; Swen Follak; Zdeňka Lososová; Stefan Dullinger; Franz Essl
11.00 - 11.20	"The status of 102 segetal plant species across 37 European red lists reveals their drastic state of conservation" Guillaume Adeux; Jocelyne Cambecèdes
11.20 - 11.40	"Can road verges act as a natural refuge for weeds?" Mariana Fernandes; Paula Matono; Anabela Belo
11.40 - 12.00	"Promoting plant diversity in vineyard agroecosystems: flagship species selection and conservation measures at Yvorne (Switzerland)" Matteo Mota; Serena Fantasia; Sébastien Meylan; Dorothea Noll; Thierry J Heger; Jean-Philippe Burdet; Raymond Delarze
12.00 - 13.30	**Lunch**
Session 2	***Weed surveys, mapping and beyond***
13.30 - 13.50	"Weed vegetation in cultivated sage (*Salvia officinalis* L. and *Salvia fruticosa* Mill.) in Türkiye: diversity and species composition" Esra CIGNITAS; Fatma UYSAL; Tuba BESEN; Kadriye YUKSEL; Yasin Emre KITIS
13.50 - 14.10	"Weed occurrence on soil deposits in sugar factory" J. Holec; M. Jursík; D. Hiřmanová; J. Soukup
14.10 - 14.30	"The aggregated spatial pattern of weeds: insights from maize, onion, and pasture" Gal Rozenberg; Yohay Carmel; Lior Blank
14.30 - 14.50	"Beyond weed distribution maps" Mona Schatke; Lena Ulber; Talie Musavi; Jana Wäldchen; Christoph von Redwitz
14.50 - 15.10	"Biodiversity and weed control in railway networks: insights from a plant inventory" Rakotoson Tiana, Mediene Safia, Meynard Jean-Marc, Valantin-Morison Muriel
15.10 - 15.30	**Coffee Break**

Weed vegetation in cultivated sage (*Salvia officinalis* L. and *Salvia fruticosa* Mill.) in Türkiye: diversity and species composition

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Salvia is the largest genus of Lamiaceae family distributed throughout the world, with some species having economic importance. Two important species cultivated in Türkiye are *Salvia officinalis* L. and *Salvia fruticosa* Mill. The aim of this study has been to identify weed flora in sage cultivated areas to plan further weed management strategies at agroecosystem level. Surveys were carried out in a total of 105 sage fields corresponding to an area of about 38 hectares in Mediterranean region. The surveys were conducted according to the systematic sampling method depending on the size of the fields. The collected data were analysed by means of quantitative measures such as frequency (%) and density (plant/m^2). Ninety different weed species including 77 dicotyledons and 13 monocotyledons were found at the end of the surveys. The first three families with the highest number of species were Asteraceae family with 14 species, Poaceae with 13 species, and Fabaceae with 9 species. The highest frequency values were recorded by *Avena sterilis* L. (83%), by *Convolvulus arvensis* L. (61.9%), and by *Trifolium pratense* L. (60%). The highest plant densities per square meter were found in *Glebionis segetum* (L.) Fourr. (27.23 plant/m^2), *Alopecurus myosuroides* L. (13.01 plant/m^2) and *Anthemis arvensis* L. (10.69 plant/m^2). Simpson's diversity index showed high weed diversity in the sage cultivation areas with different density of weed species; the family with the highest number of species in this survey was the Asteraceae family. Considering this important role of the wild ornamental flowers on biodiversity and ecosystem services of the plant-pollinator communities and their interactions, in the Mediterranean agroecosystems sage growers could use combining multiple tools and techniques in an Integrated Weed Management strategy to manage weeds. The ambition should be not the eradication of weeds, rather to limit their negative effects, conserving diversity. This is the first study on weed vegetation in cultivated sage in Türkiye.

Keywords : sage weed, biodiversity, integrated weed management

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