



**18th
European
Weed
Research
Society
Symposium**

EWRS 2018

17-21 June 2018
Ljubljana, Slovenia



**New approaches for
smarter weed management**

Book of Abstracts

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Published by

Kmetijski inštitut Slovenije, 2018

The publication is published e-only – <http://www.ewrs.org>

Kataložni zapis o publikaciji (CIP) pripravili v Narodni in univerzitetni knjižnici v Ljubljani
COBISS.SI-ID=295336960
ISBN 978-961-6998-21-5 (pdf)

Long-Term Winter Wheat Cropping Influence on Weed Seedbanks

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Winter wheat is one of the most important crops on the Balkans. To access the wheat-based cropping effect on weed seedbanks, data were used from a long-term experiment »Crop rotation« located on experimental field of the Institute of Field and Vegetable Crops in Novi Sad. The selected study treatments were as follows: wheat monocultures, 2-year crop rotation (wheat-corn) and 3-year crop rotation (wheat-corn-soybean). In order to determine the weed seedbank, soil samples were taken in the autumn from three depths: 0-15 cm, 15-30 cm and 30-40 cm. By the method of physical extraction, the presence of weed species in the weed seedbank is established, while the seedling emergence method showed the species whose seeds had passed the state of dormancy and were able to germinate in the next period. Seeds were extracted from the soil by washing and they were determined and counted. The obtained results showed that in all three wheat cultivation systems and three depths, the number of species is similar (9-11), only in the 3-year rotation in the under plow depth 7 species were found. There are differences in species diversity as well as in the number of present seeds. It is estimated that in the plow layer of monoculture wheat there are about 281250 seeds m⁻², 2-year crop rotation of 102750 seeds m⁻², while in the rotation of wheat with maize and soya the smallest number is shown (75000 seeds m⁻²). By the seedling emergence method in controlled conditions of greenhouses, the best germination in the monoculture and the 2-year crop rotation had the species *Papaver rhoeas* L., *Bilderdykia convolvulus* L., *Chenopodium hybridum* L., *Consolida regalis* S.F.Gray, while in the samples of 3-year crop rotation seedling of *Anagalis arvensis* L. and *Sorghum halepense* L. appeared.