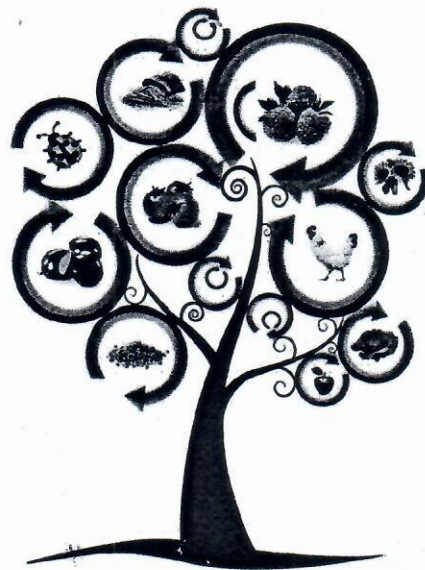




University of Novi Sad  
Faculty of Agriculture



**ORGANIC AGRICULTURE FOR AGROBIODIVERSITY PRESERVATION**  
**3<sup>rd</sup> International Conference Agrobiodiversity**  
**Novi Sad, Serbia, 1<sup>st</sup> – 3<sup>rd</sup> June 2017**

**BOOK OF ABSTRACTS**



CIP - Каталогизacija y publikaciji  
Библиотека Матице српске, Нови Сад  
631.147:574(048.3)

INTERNATIONAL Conference Agrobiodiversity "Organic Agriculture for Agrobiodiversity Preservation" (3 ; 2017 ; Novi Sad)  
Book of abstracts / 3rd International Conference Agrobiodiversity "Organic Agriculture for Agrobiodiversity Preservation", 1st-3rd June 2017 Novi Sad, Serbia. - Novi Sad : Faculty of Agriculture, 2017 (Novi Sad : Alfagraf). - 140 str. ; 30 cm  
Tiraž 100. - Registar.

ISBN 978-86-7520-398-8

a) Пољопривреда - Органска производња - Биодиверзитет - Апстракти

COBISS.SR-ID 314689799

*Organic Agriculture for Agrobiodiversity Preservation. 3<sup>rd</sup> International Conference Agrobiodiversity (2017; Novi Sad)*

BOOK OF ABSTRACTS

Editor: Maja Manojlović

**Publisher**

Web: <http://polj.uns.ac.rs/>

Sq. D. Obradovica 8, 21000 NOVI SAD, Serbia

Tel.: +381(0)21 4853-500; Fax: +381 (0)21 454-442

e-mail: dean@polj.uns.ac.rs



**EFFECT OF INDIGENOUS *Pseudomonas* sp. AND *Bacillus* sp. STRAINS ON YIELD AND MAIN CHEMICAL GROWTH PARAMETERS OF RADICCHIO**

Aleksandra Stanojković-Sebić<sup>1</sup>, Radmila Pivić<sup>1</sup>, Zoran Dinić<sup>1</sup>, Renata Iličić<sup>2</sup>,  
Dragana Latković<sup>2</sup>, Dragana Jošić<sup>1</sup>

<sup>1</sup>Institute of Soil Science, Teodora Dražera 7, Belgrade, Serbia

<sup>2</sup>University of Novi Sad, Faculty of Agriculture, Trg Dositeja Obradovića 8, Novi Sad, Serbia

Email: [astanojkovic@yahoo.com](mailto:astanojkovic@yahoo.com)

Fluorescent *Pseudomonas* sp. and *Bacillus* sp. belong to plant growth promoting rhizobacteria (PGPR) which are able to colonize the plants roots and stimulate growth. These bacteria use various mechanisms for their action: production of antibiotics, HCN, plant hormones, the ability to solubilize mineral phosphates and other nutrients and antagonism towards phytopathogenic microorganisms. In this study, the effect of two indigenous plant growth promoting rhizobacterial strains *Pseudomonas* sp. Q4 and *Bacillus* sp. Q10 and their mixture (mix Q4+Q10) on the main chemical growth parameters and the yield of dry biomass of radicchio (*Chicorium* spp. var. *rossa di treviso*) aerial parts and root, was investigated. The study was carried out with stagnosol type of soil in pot experiments under controlled conditions in the Institute of Soil Science (Belgrade), in the period from June to October in 2013. Phosphorus was determined by spectrophotometer, potassium - by flame emission photometry and total nitrogen and carbon - using elemental CNS analyzer Vario EL III, while calcium and magnesium were determined by AAS. The data on yield of both aerial parts and root dry biomass of radicchio showed that its treatment with Q4 and Q10 strains, as well as with their mixture, had statistically significant effect at  $P < 0.05$  on this parameter in relation to the control, whereby the strain Q4 was slightly more effective than Q10 and mix Q4+Q10. The obtained data on the studied chemical parameters of radicchio were in accordance with the yield of radicchio root and aerial parts, meaning that their content was the highest in treatment with Q4 strain. It can be concluded that studied *Pseudomonas* sp. Q4 and *Bacillus* sp. Q10 strains have high potential in promoting the biomass yield and main chemical growth parameters of both aerial parts and root of radicchio.

**Key words:** *Pseudomonas* sp., *Bacillus* sp., *Chicorium* spp. var. *rossa di treviso*, dry biomass yield, chemical growth parameters

**Acknowledgment:** This work was supported by the Ministry of Education, Science and Technological Development, Republic of Serbia, Project III46007.