



**UNIVERSITY OF BELGRADE - FACULTY OF AGRICULTURE  
DEPARTMENT FOR AGRICULTURAL ENGINEERING**

University of Basilicata, School for Agricultural, Forestry, Food and  
Environmental Sciences, Potenza, Italy  
University of Sarajevo, Faculty of Agricultural and Food Sciences,  
Bosnia and Herzegovina.

# ISAE-2013



**The First International Symposium on  
Agricultural Engineering**

## Book of Abstracts



October, 4-6, 2013.  
Belgrade - Serbia



**ISBN 978-86-7834-186-1**



9 788678 341861



The First International Symposium on Agricultural Engineering  
ISAE-2013



**4th-6th October 2013, Belgrade – Zemun, SERBIA**  
<http://www.isae.agrif.bg.ac.rs>

- Organizer:** University of Belgrade, Faculty of Agriculture, Serbia;
- Co-organizers:** University of Basilicata, School for Agricultural, Forestry, Food and Environmental, Sciences, Potenza, Italy;  
University of Sarajevo, Faculty of Agricultural and Food Sciences, Bosnia and Herzegovina.
- Support:** The European Society of Agricultural Engineers (EurAgEng);  
Association for Medicinal and Aromatic Plants of Southeast European Countries (AMAPSEEC).

# BOOK OF ABSTRACTS



The First International Symposium on  
**Agricultural Engineering**  
**ISAE-2013**

4th-6th October 2013, Belgrade – Zemun, Serbia



**Acknowledgements:** This publication is published with the financial support of the Ministry of Education and Science of Republic of Serbia

**Published by:** Faculty of Agriculture, Department for Agricultural Engineering, Nemanjina 6, 11080 Belgrade, Serbia

**Editors:** Dr Dragan Petrovic  
Dr Rade Radojevic  
Dr Aleksandra Dimitrijevic

**Technical editor:** Strahinja Ajtic

**Printed by:** Dis Public, D. O. O., Beograd

**Circulation:** 300 copies

**ISBN:** 978-86-7834-186-1

CIP - Каталогизација у публикацији  
Народна библиотека Србије, Београд

631.3(048)  
631.17(048)

INTERNATIONAL Symposium on Agricultural  
Engineering (1 ; 2013 ; Beograd)

Book of Abstracts / The First

International Symposium on Agricultural Engineering, ISAE-2013, October, 4-6,  
2013.,

Belgrade, Serbia ; [organizers] University of Belgrade, Faculty of Agriculture ... [et  
al.]; [editors Dragan Petrovic, Rade Radojevic,  
Aleksandra Dimitrijevic]. - Belgrade :  
Faculty of Agriculture, Department for  
Agricultural Engineering, 2013 (Beograd : Dis public). - VI, 66 str. ; 24 cm

Tiraž 300.

ISBN 978-86-7834-186-1

1. Faculty of Agriculture (Beograd)

a) Пољопривредне машине - Апстракти b)

Пољопривреда - Механизација - Апстракти

COBISS.SR-ID 201473036

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ISAE—2013



The First International Symposium on Agricultural Engineering, 4<sup>th</sup>-6<sup>th</sup> October 2013, Belgrade–Zemun, Serbia

## EFFECTS OF CONSERVATION SOIL TILLAGE SYSTEMS ON YIELD OF MAIZE, WINTER WHEAT AND SUNFLOWER IN SREM REGION

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**Abstract.** The paper presents comparison of two soil tillage systems in maize, winter wheat and sunflower growing in Srem region, Serbia, during 2008-2011. Tillage systems and implements were: conventional system (CT) - plough, disc-harrow and combined implement, and conservation system (ST) – vibratory subsoiler, disc-harrow and combined implement. The aim of testing was comparison of different tillage systems energy consumption and its influence on yield and profit. Results indicate that conventional tillage (CT) system was the lower energy consumer with 433.18 MJ·ha<sup>-1</sup>, or conservation (ST) system spent 10.08% energy more. In the first season the greatest yield of maize, 7,083 kg·ha<sup>-1</sup>, achieved conservation tillage (ST) system while conventional tillage (CT) system achieved 9.92% lower yield. Second season the greatest yield of winter wheat, 4,525 kg·ha<sup>-1</sup>, achieved with conservation tillage (ST) system with regard to conventional (CT) system with 3,577 kg·ha<sup>-1</sup>. Third season the greatest yield of sunflower 3,011 kg·ha<sup>-1</sup>, achieved conservation tillage (ST) system again, with regard to conventional (CT) system with 8.56% lower yield.

**Key words:** *soil tillage, conventional tillage, conservation tillage, energy consumption, yield, profit.*