

**AGRICULTURAL UNIVERSITY
PLOVDIV**



**SCIENTIFIC
WORKS**

Volume LVIII, 2014

**Academic Publishing House of the Agricultural University
Plovdiv, 2014**

EDITORIAL BOARD

Prof. Krasimir Ivanov, DSc – Editor-in-Chief
Prof. Dimo Penkov, DSc
Prof. Mariana Nakova, DSc
Prof. Vili Harizanova, PhD
Prof. Zhivko Geshev, PhD
Assoc. Prof. Nurettin Tahsin, PhD
Assos. Prof. Stoyan Filipov, PhD
Assos. Prof. Elena Georgieva, PhD
Assos. Prof. Dimitar Zyapkov, PhD
Tania Tsvetkovska – Executive Editor

The Scientific Works are fully referred to in CAB Abstracts, EBSCO Publishing, AGRIS and partially – in other 30 databases of CAB International.

© *Scientific Works of the Agricultural University, Plovdiv, 2014*

© *Academic Publishing House of the Agricultural University, Plovdiv, 2014*

Agricultural University – Plovdiv

**SCIENTIFIC WORKS
Volume LVIII, 2014 г.**

Editor-in-Chief

Prof. Krasimir Ivanov, DSc

Executive Editor
Tania Tsvetkovska

Editor of the English Abstracts
Vania Simeonova

Format 32/70x100
Quires 20,4

Academic Publishing House of the Agricultural University
Plovdiv, 2014

<http://nauchnitrudove.au-plovdiv.bg/>

**ISSN 1312-6318 (Print)
ISSN 2367-5845 (Online)**