

Acta Scientiarum Polonorum – ogólnopolskie czasopismo naukowe polskich uczelni rolniczych, publikuje oryginalne prace w następujących seriach tematycznych:

Agricultura – Agronomia

Wydawnictwa Uczelniane Uniwersytetu Technologiczno-Przyrodniczego w Bydgoszczy
ul. Ks. A. Kordeckiego 20, 85-225 Bydgoszcz, tel. 52 374 94 36, fax 52 374 94 27

Biologia – Biologia

Wydawnictwo Uniwersytetu Przyrodniczo-Humanistycznego w Siedlcach
ul. Bema 1, 08-110 Siedlce, tel. 25 643 15 20, fax 25 644 20 45

Biotechnologia – Biotechnologia

Geodesia et Descriptio Terrarum – Geodezja i Kartografia

Medicina Veterinaria – Weterynaria

Wydawnictwo Uniwersytetu Przyrodniczego we Wrocławiu
ul. Sopocka 23, 50-344 Wrocław, tel./fax 71 328 12 77

Technica Agraria – Inżynieria Rolnicza

Hortorum Cultus – Ogrodnictwo

Wydawnictwo Uniwersytetu Przyrodniczego w Lublinie
ul. Akademicka 13, 20-033 Lublin, tel. 81 445 67 11, fax 81 533 37 52

Piscaria – Rybactwo

Zootechnica – Zootechnika

Wydawnictwo Uczelniane Zachodniopomorskiego Uniwersytetu Technologicznego w Szczecinie
al. Piastów 50, 70-311 Szczecin, tel. 91 449 40 90, 91 449 41 39

Silvarum Colendarum Ratio et Industria Lignaria – Leśnictwo i Drzewnictwo

Technologia Alimentaria – Technologia Żywności i Żywnienia

Wydawnictwo Uniwersytetu Przyrodniczego w Poznaniu
ul. Witosa 45, 61-693 Poznań, tel. 61 848 78 07, fax 61 848 78 08

Administratio Locorum – Gospodarka Przestrzenna

Wydawnictwo Uniwersytetu Warmińsko-Mazurskiego w Olsztynie
ul. Heweliusza 14, 10-724 Olsztyn, tel. 89 523 36 61, fax 89 523 34 38

Architectura – Budownictwo

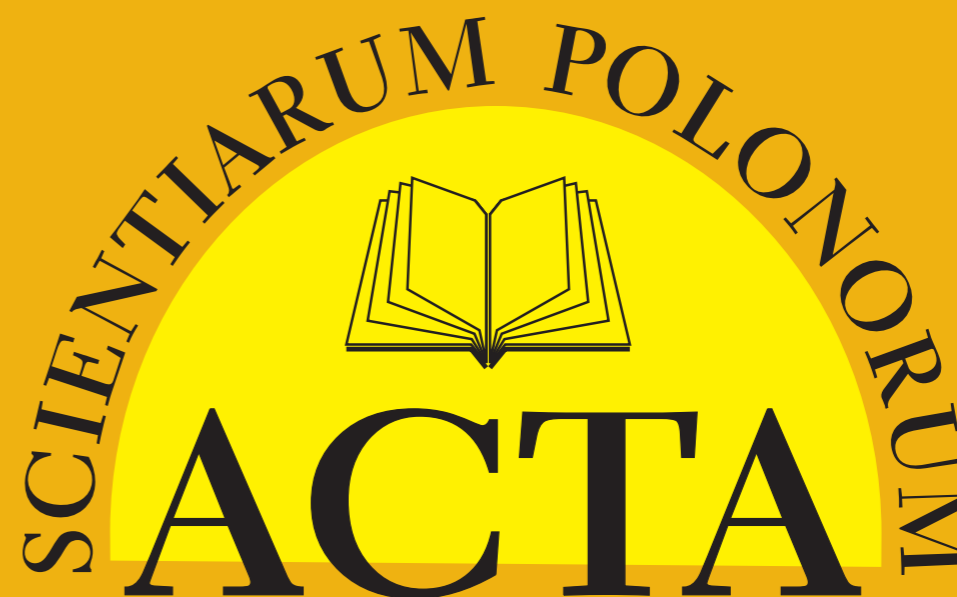
Oeconomia – Ekonomia

Wydawnictwo Szkoły Głównej Gospodarstwa Wiejskiego w Warszawie
ul. Nowoursynowska 166, 02-787 Warszawa, tel. 22 593 55 20, fax 22 593 55 21

Formatio Circumiectus – Kształtowanie Środowiska

Wydawnictwo Uniwersytetu Rolniczego w Krakowie
al. 29 Listopada 46, 31-425 Kraków, tel. 12 662 51 57, 12 662 51 59

ISSN 1644-0757



Oeconomia

Oeconomia



13 (2) 2014

13 (2) 2014

INSTRUCTIONS TO AUTHORS

The journal *Acta Scientiarum Polonorum – Oeconomia* features original scientific articles related to all aspects of environmental processes.

General and technical requirements for the elaboration of papers:

1. **Size of the research paper** including tables, figures and photographs should not exceed 12 pages of A-4 format.
2. **Materials to be published** in *Acta Scientiarum Polonorum* should be prepared in accordance with the rules of the publishing process binding at the publishing office of a given series of the Journal.
3. **Style of documents** – the text of the paper should be typed with Times New Roman font 12 points, 11 of space between the lines, setting parts of the text in special typeface is allowed, e.g. italic or bold, but without underlining letters, words and sentences.
4. **Size of tables and figures** cannot exceed B-5 format (12.5 cm × 19.5 cm); descriptions of tables should be typed with Times New Roman 9 points, content of tables 8 points, single space, if possible without vertical lines, table format – doc. or rtf.

The following paper setting is binding:

1. **Title of the article** in Polish (or in English if the whole paper is in English; the same refers to the summary and key words).
2. **First name and surname** of the author (-s).
3. **Paper abstract** (from 600 to 1000 characters).
4. **Key words** – 6 words useful when indexing and searching.
5. **The main text of the research paper** should include: introduction with the aim and research hypothesis, material and methods, results, discussion, conclusions (or summary) and references.
6. **Title, abstract** (600–1000 characters) as a translation of the summary and **key words** in English.
7. **Address** of the author's (authors') place of work – post and e-mail address.
8. **Titles of tables** and their content, and captions of figures and legends must be provided in Polish and in English, while the numbers of tables and figures – with Arabic numerals.

Units and spelling – the international SI system is binding, e.g. $\text{g}\times\text{dm}^{-3}$ (and not g/dm^3).

References – when referring to the publications of other authors in the text of the paper, a surname and a year should be provided in brackets [Kowalski and Lewandowski 2000, Lewandowski 2001, Zalewski et al. 2001] or ... according to Kowalski [2000]...

The list of references should be presented in the alphabetical order in the following way: author's (authors') surname, initials of first names; year of publishing if there is more than one paper of the same author published in a given year, after the year it is necessary to mark particular items a, b, c, etc.; title of the paper, bibliographical abbreviation of the publishing house and place of publishing, No of volume, book and numbers of pages, e.g.:

Chełkowski Z., 1966. Introdukcja troci do rzeki Gowienicy. *Gospod. Ryb.* 1 (2), 18–19.

Greń J., Kowalski Z., 1972. *Statystyka matematyczna*. PWN, Warszawa.

Turski W., 1972. Projektowanie oprogramowania systemów liczących. *Mat. Konf. Projektowanie maszyn i systemów cyfrowych*. Warszawa 2–5 czerwca 1971. PWN, Warszawa, 132–139.

The author sends the text of the paper in 2 copies to the editorial office. After he/she receives a review, the Author sends an editorial copy to the editorial office including the reviewer's comments, a corrected copy of the paper including an electronic carrier (diskette, CD or e-mail) and a response to the reviewer's and editor's comments. The main part of the publication (abstract, the text of the article proper and references) should be saved in one file. The editorial office reserves a right to make cuts and corrections, and to suggest changes and substantive supplementations agreed with the author. The graphic material (figures, diagrams, charts) should be prepared and sent as a separate electronic file (source files) in programs working in Windows environment (e.g. in Excel, Corel Draw, Photoshop etc.).

The author of the paper published is obliged to transfer his/her copyright to the publisher and submit a declaration that the paper has not been published in another journal.

The authors of the papers participate in the costs of their publishing. Information about fees and additional information for authors are available at the website

www.acta.media.pl

ACTA SCIENTIARUM POLONORUM

Czasopismo naukowe założone w 2001 roku przez polskie uczelnie rolnicze

Oeconomia

Economics

Ekonomia

13 (2) 2014



Bydgoszcz Kraków Lublin Olsztyn
Poznań Siedlce Szczecin Warszawa Wrocław

Acta Scientiarum Polonorum Programming Board

Wiesław Nagórko (Warszawa), Ryszard Żróbek (Olsztyn), Józef Bieniek (Kraków),
Krzysztof Szkucik (Lublin), Ewa Sobecka (Szczecin),
Janusz Prusiński (Bydgoszcz), Jerzy Sobota (Wrocław) – chairman,
Stanisław Socha (Siedlce), Waldemar Uchman (Poznań)

Oeconomia Scientific Board

Carol J. Cumber (South Dakota State University, Brookings, USA), Michael Ireland
(University of Plymouth, UK), Roman Kisiel (University of Warmia and Mazury
in Olsztyn), Vera Majerova (Czech University of Life Sciences, Prague),
Wiesław Musiał (University of Agriculture in Kraków),
Janina Sawicka (Faculty of Economic Sciences – Warsaw University of Life Sciences
– SGGW) – chairperson, Barbara Kutkowska (Wrocław University of Life Sciences),
Harun Ucak (Mugla Sitki Kocman University, Turkey),
Dorota Witkowska (University of Łódź)

Editing committee

Mirosława Braja (Warsaw University of Life Sciences – SGGW) – *Oeconomia* Secretary
e-mail: mirosława_braja@sggw.pl
Renata Marks-Bielska – University of Warmia and Mazury in Olsztyn – thematic editor,
Tomasz Wojewodziec – Agricultural University in Kraków – thematic editor,
Wojciech Pizło – WULS-SGGW – thematic editor,
Joanna Baran – WULS-SGGW – thematic editor,
Aleksandra Matuszewska-Janica – WULS-SGGW – statistical editor,
Kuo-Liang “Matt” Chiang – South Dakota State University – language consultant

***The printed version of Acta Sci. Pol. seria Oeconomia is an initial version
of the journal***

Editorial staff

Anna Dołomisiewicz, Violetta Kaska

ISSN 1644-0757



© Copyright by Warsaw University of Life Sciences Press
Wydawnictwo SGGW, ul. Nowoursynowska 166, 02-787 Warszawa
tel. 22 593 55 20 (-22; -25 – sprzedaż), fax 22 593 55 21
e-mail: wydawnictwo@sggw.pl
www.wydawnictwosggw.pl

Print: Agencja Reklamowo-Wydawnicza A. Grzegorzcyk, www.grzeg.com.pl

From the Scientific Board

There has been the thirteenth year of the Acta Scientiarum Polonorum Oeconomia publishing. The Acta is the periodical including several thematic series with uniform graphics and similar format. The publication was set up by group of enthusiasts – employees of agricultural universities and has been published under the patronage of rectors of these universities. Current involvement of academic society in increasing substantive and editorial level of the series, with efforts of the authors, the Programming Board and the Scientific Boards, has contributed to placing the Acta Scientiarum Polonorum (and our Oeconomia series) on the noticeable position in academic research society. Articles can be prepared in Polish with English titles, abstract and keywords. Moreover, we publish also issues in English only. The Scientific Board of the Oeconomia series, concerning the publication range, focus their attention both on substantive content and precision of the form. The articles are revised in “double-blind review” process. All issues of the Acta Scientiarum Polonorum Oeconomia are available in electronic version on the following website http://acta_oeconomia.sggw.pl and abstracts on <http://www.acta.media.pl>. We are glad to inform that Acta Scientiarum Polonorum Oeconomia are indexed within the AGRIS-FAO, EBSCO, SIGŻ, Copernicus Index, AGRO. Since 2013 each article published in Acta Sci. Pol. Oeconomia has 10 points at the Ministry of Science and Higher Education ranking list.

Please send the articles on one of following e-mail addresses:

*janina_sawicka@sggw.pl
acta_oeconomia@sggw.pl*

While sending a printout, please attach also the electronic version on CD or DVD. Letters including note “the Acta Scientiarum Polonorum Oeconomia” should be sent on the following address:

*Prof. dr hab. Janina Sawicka
Department of European Policy, Public Finances and Marketing
Faculty of Economic Sciences
Warsaw University of Life Sciences
Nowoursynowska 166, 02-787 Warsaw, Poland
tel.: (+4822) 593 40 70; fax: (+4822) 593 40 77*

*Yours sincerely,
Janina Sawicka
Chairperson of the Scientific Board
of the Acta Sci. Pol. Oeconomia series*

