



NOTULAE BOTANICAE HORTI AGROBOTANICI CLUJ-NAPOCA

2020 Volume 48, Issue 3

*A journal of the University of Agricultural Sciences and Veterinary Medicine,
Cluj-Napoca, Romania*

Published by AcademicPres on behalf of
University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca
Romanian Academy of Agricultural and Forestry Sciences
Horticulture and Forestry Society from Transylvania

Abstracted and/or indexed:

- Clarivate, [Master Journal List](http://mjl.clarivate.com/) - SCIE, JCR, <http://mjl.clarivate.com/> (IF 2019=1.168)
- Scopus - Elsevier, <https://www.scopus.com/sourceid/17700156420> (CiteScore 2019=1.40)
- ProQuest, <http://www.proquest.com/>
- Centre for Agriculture and Biosciences International (CABI), <https://www.cabdirect.org/>
- Chemical Abstracts Service (CAS), <https://www.cas.org/>
- Russian Scientific and Technical Information Institute (VINITI), <http://www.viniti.ru>
- Bielefeld Academic Search Engine (BASE), <http://www.base-search.net>
- Google Scholar, <http://scholar.google.com>
- British Library Direct (BLD), <http://explore.bl.uk/>
- Mendeley, <https://www.mendeley.com>
- The European Library, <http://www.theeuropeanlibrary.org>
- Harvard Library, <http://hollis.harvard.edu>
- Tianjin University of Finance and Economics (TJUFE), <http://en.tjufe.findplus.cn>
- Open Archives Initiative Protocol for Metadata Harvesting (OAIster), <http://www.oaister.org>
- Ulrich's Periodicals Directory, <http://www.ulrichsweb.com>
- Elton B Stephens Company (EBSCO), <http://www.ebscohost.com>
- Information Matrix for the Analysis of Journals (MIAR), <http://miar.ub.edu/>

First published 1965
Print ISSN 0255-965X, Electronic ISSN 1842-4309
www.notulaebotanicae.ro

EDITORIAL BOARD

Editor-in-Chief

- [Radu E. SESTRAS](#), University of Agricultural Sciences and Veterinary Medicine (UASVM), 3-5 Manastur St., 400372, Cluj-Napoca, Romania

Advisory Editors

- [Cornel CĂTOI](#), University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, Romania
- [Doru C. PAMFIL](#), University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, Romania
- [Viorel MITRE](#), University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, Romania

Associate Editors

- [Sorana D. BOLBOACĂ](#), 'Iuliu Hatieganu' University of Medicine and Pharmacy, Cluj-Napoca, Romania
- [Monica BOSCAIU](#), Universitat Politècnica de València, Spain
- [Liviu HOLONEC](#), University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, Romania
- [Lorentz JANTSCHI](#), Technical University of Cluj-Napoca, Cluj-Napoca, Romania
- [Kamil KUČA](#), University of Hradec Králové, Czech Republic
- [Felicia LOGHIN](#), 'Iuliu Hatieganu' University of Medicine and Pharmacy, Cluj-Napoca, Romania
- [Leon MUNTEAN](#), University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, Romania
- [Ioan NEGRUTIU](#), Ecole Normale Supérieure, Lyon, France
- [Ioana Delia POP](#), University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, Romania
- [Agnieszka SEKARA](#), Agricultural University of Kraków, Kraków, Poland
- [Adriana F. SESTRAS](#), University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, Romania
- [Dan C. VODNAR](#), University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, Romania

Editorial Board - Scientific Members & Editors

- [Ioan Vasile ABRUDAN](#), Transilvania University, Brasov, Romania
- [Douglas D. ARCHBOLD](#), University of Kentucky, Lexington, United States
- [Valerian BALAN](#), State Agrarian University of Moldova, Chişinău, Moldova
- [Dimitrios J. BILALIS](#), Agricultural University of Athens, Athens, Greece
- [Maria Yordanova BOROVIANOVA](#), Institute of Agriculture, Kyustendil, Bulgaria
- [Anca Dana BUZOIANU](#), 'Tuliu Hatieganu' University of Medicine and Pharmacy, Cluj-Napoca, Romania
- [Dănuț CHIRA](#), National Institute for Research and Development in Forestry, Romania
- [Sorin Mihai CÎMPEANU](#), Univ. Agronomic Sciences and Veterinary Medicine, Bucharest, Romania
- [Gheorghe CIMPOIES](#), State Agrarian University of Moldova, Chişinău, Moldova
- [Kamal CHOWDHURY](#), Claflin University, Orangeburg, United States
- [Valeriu V. COTEA](#), University of Agricultural Sciences and Veterinary Medicine, Iaşi, Romania
- [Lucian A. CURTU](#), Transilvania University, Brasov, Romania
- [Sezai ERCISLI](#), Ataturk University, Erzurum, Turkey
- [Francisco FUENTES](#), Pontificia Universidad Católica de Chile, Macul, Santiago, Chile
- [Marek GAJEWSKI](#), Warsaw University of Life Sciences, Warszawa, Poland
- [Imre HOLB](#), Univ. Agricultural Sciences of Debrecen, Debrecen, Hungary
- [Maurizio LAMBARDI](#), National Research Council (CNR), IBE, Sesto Fiorentino, Firenze, Italy
- [Andrea LUVISI](#), University of Salento, DiSTeBA, Lecce, Italy
- [Amarendra Narayan MISRA](#), Fakir Mohan University, Vyasa Vihar, Balasore, India
- [Jaime PROHENS](#), Universitat Politècnica de València, Spain
- [Chen QIN](#), School of Life Science, Shanghai Univ., Baoshan D, Shanghai, China
- [Albert REIF](#), University of Freiburg, Freiburg, Germany
- [Adrián RODRÍGUEZ-BURRUEZO](#), Universitat Politècnica de València, Spain
- [Klaus SCHALLER](#), Hochschule Geisenheim University, Geisenheim, Germany
- [Velibor SPALEVIC](#), University of Montenegro, Niksic, Montenegro
- [Silvia STRAJERU](#), Genetic Resources Bank of Suceava, Suceava, Romania
- [Ioan TĂUT](#), University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, Romania
- [Oscar VICENTE](#), COMAV, Universitat Politècnica de València, Valencia, Spain
- [Vasile VÎNTU](#), University of Agricultural Sciences and Veterinary Medicine, Iaşi, Romania
- [Qiang-Sheng WU](#), Yangtze University, Jingzhou, China

Technical and Administrative Editors

- [Adriana D. BACIU](#), UASVM, Cluj-Napoca, Romania
- [Cătălina DAN](#), UASVM, Cluj-Napoca, Romania
- [Mihail KANTOR](#), USDA, ARS, Beltsville, United States
- [Laura Ioana MACAVEI](#), Università degli Studi di Modena e Reggio Emilia, Modena, Italy
- [Lucica MIHALTE](#), UASVM, Cluj-Napoca, Romania
- [Corina F. SERBAN](#), Washington State University, IAREC, Prosser, United States
- [Alina M. TRUȚĂ](#), UASVM, Cluj-Napoca, Romania

Journal Secretary

- Roxana L. STOIAN, UASVM, Cluj-Napoca, Romania
- Silviu L. MIC, UASVM, Cluj-Napoca, Romania

Linguistic Editors

- Mihaela RUSU, UASVM, Cluj-Napoca, Romania
- Rodica STAN, UASVM, Cluj-Napoca, Romania

Technical Support

- Diana-Maria MIRCEA, UASVM, Cluj-Napoca, Romania
- Andreea D. ONA, UASVM, Cluj-Napoca, Romania
- Ioana Maria PLEȘA, UASVM, Cluj-Napoca, Romania
- Diana Alexandra POP, UASVM, Cluj-Napoca, Romania
- Paula STAN (GAVRIS), UASVM, Cluj-Napoca, Romania
- Irina M. TODĒA (MORAR), UASVM, Cluj-Napoca, Romania

Notice

The Editorial Board of **Notulae Botanicae Horti Agrobotanici Cluj-Napoca** is not responsible for statements and opinions published; they represent the views of the authors or persons to whom they are credited. Publication of research information does not constitute a recommendation or endorsement of products involved.

Material Disclaimer

The authors are fully responsible for their work and they hold sole responsibility for the articles published in the journal. The editors, editorial board and publisher do not assume any responsibility for the article's contents and for the authors' views expressed in their contributions.

Indexation, relevance, metrics

You can find information about journal score and metrics here: [impact and relevance](#).

Aims and scope

[Notulae Botanicae Horti Agrobotanici Cluj-Napoca](#) is a peer-reviewed quarterly (beginning in 2019) journal aimed at disseminating significant research and original papers on plant breeding, genetics, diversity and development of new methodologies that can be of interest to a wide audience of plant scientists in all areas of plant biology, agriculture, horticulture, and forestry. The journal encourages authors to frame their research questions and discuss their results in terms of the major questions of plant biology and agriculture, thereby maximizing the impact, spreading and value of their research. The papers must be of potential interest to a significant number of scientists and, if specific to a local situation, must be relevant to a wide body of knowledge in biology and agronomy. Articles should make a significant contribution to the advancement of knowledge or toward a better understanding of existing biological and agricultural concepts. An international Editorial Board advises the journal. There are no publishing fee and no pay for submission. The total content of the journal may be used for educational, non-profit purposes without regard to copyright. The distribution of the material is encouraged with the condition that the authors and the source (**Notulae Botanicae Horti Agrobotanici Cluj-Napoca** or **Not Bot Horti Agrobo**) are mentioned.

Submission

The journal offers to authors a fully web-enabled online manuscript submission, instructions for authors and review system available at <http://www.notulaebotanicae.ro>. Papers are published in English (British spelling) and the authors are fully responsible for the originality of their papers and for the correctness of their subject-matter, language and formal attributes. A language reviewer revises English, but authors are strongly urged to have the papers reviewed linguistically prior to submission. Manuscripts submitted must be edited, for clarity and conformity purposes according to Authors guidelines, and must not have been previously published or simultaneously submitted elsewhere. The papers can be submitted online by the corresponding author (or the person who takes responsibility for the integrity of the work as a whole, from submission to the published article). The submission process is described on the web site. An Author Statement, available on the website, should be enclosed by corresponding author declaring that the paper has not been published anywhere else, permission to reproduce the material, authorship credit, contributors and creditors for the integrity of the work as a whole, to avoid the conflicts of interest and scientist fraud, and respecting the ethical principles of publishing, research and scientific rights.

Publication Frequency

Quarterly (four issues per volume/year). Beginning in 2019, the journal appears quarterly, with the next coverage over the four annual numbers (combined months):

Issue 1: January-March

Issue 2: April-June

Issue 3: July-September

Issue 4: October-December

Publication Ethics and Publication Malpractice Policy

The journal respects the publication ethics norms, based on internationally accepted best practice guidelines for journal editors, notably the Committee on Publication Ethics ([COPE](#)), the World Association of Medical Editors ([WAME](#)), the International Committee of Medical Journal Editors ([ICMJE](#)), Consolidated Standards of Reporting Trials ([Consort](#)).

Prof. dr. Radu E. SESTRAS

Editor-in-Chief

[Notulae Botanicae Horti Agrobotanici Cluj-Napoca](#) ©

AcademicPres

University of Agricultural Sciences and Veterinary Medicine

3-5 Mănăştur, 400372 Cluj-Napoca, Romania

Phone: +40 264-596 384; Fax +40 364-819 343

rsestras@notulaebotanicae.ro

Table of Contents

Editorial

[Introduction pages](#)

Radu E. SESTRAS

I-X

[PDF](#)

Review Article

[A friendly-environmental strategy: application of arbuscular mycorrhizal fungi to ornamental plants for plant growth and garden landscape](#) 1100-1115

[PDF](#)

Miao-Miao XIE, Yu WANG, Qiu-Shuang LI, Kamil KUČA, Qiang-Sheng WU

Research Articles

[Iconography of domesticated sunflower](#)

Jules JANICK

1116-1129

[PDF](#)

[Plants used as medicinal in Güémez, Tamaulipas, north-eastern Mexico](#)

Sindi N. JASSO-GÁNDARA, Eduardo ESTRADA-CASTILLÓN, Juan A. ENCINA-DOMÍNGUEZ, José A. VILLARREAL-QUINTANILLA, José R. ARÉVALO SIERRA

1130-1140

[PDF](#)

[Variation in *Nigella sativa* quality and its standardization via instrumental analysis: A study based on geographical origin](#)

Rizwan AHMAD, Niyaz AHMAD, Mohd AMIR, Fatima ALJHISI, Marwah H. ALAMER, Heba R. AL-SHABAN, Bayan M. ALSULTAN, Zainab A. ALSADAH, Noor A. ALDAWOOD, Shahanas CHATHOTH, Aslam KHAN

1141-1154

[PDF](#)

[Pharmacological and ADMET-based pharmacokinetic properties of *Syzygium samarangense* var. *parviflorum* leaf extract in *in vitro*, *in vivo* and *in silico* models](#)

Rahni HOSSAIN, Md A. RAHMAN, Md. K. J. RAFI, Tanvir A. SIDDIQUE, Abdullah A. NOMAN, Arwa MAKKI, Walla ALELWANI, Dina HAJJAR, Jitbanjong TANGPONG

1155-1175

[PDF](#)

[The genotypic response towards haploid induction in Turkish onion \(*Allium cepa* L.\) germplasm](#)

Faika YARALI KARAKAN

1176-1184

[PDF](#)

[Identification of ontogenetic and diurnal variability in oregano \(*Origanum onites* L.\)](#)

Emel KARACA ÖNER, Merve SONKAYA

1185-1193

[PDF](#)

[The role of light in the adaptation of *Thymus praecox* Opiz subsp. *praecox* for diverse habitat conditions](#)

Beata BARABASZ-KRASNY, Katarzyna MOŹDŹEŃ, Anna SOŁTYS-LELEK, Ingrid TURISOVÁ

1194-1209

[PDF](#)

[Comparative study on *in vitro* micropropagation response of seven globe artichoke \[*Cynara cardunculus* var. *scolymus* \(L.\) Fiori\] cultivars: open-pollinated cultivars vs F1 hybrids](#)

Tugce OZSAN, Ahmet N. ONUS

1210-1220

[PDF](#)

- [Agronomic biofortification with selenium improves the yield and nutraceutical quality in tomato under soilless conditions](#) 1221-1232 [PDF](#)
Jazmín M. GAUCIN-DELGADO, Luis G. HERNÁNDEZ-MONTIEL, Esteban SÁNCHEZ-CHAVEZ, Hortensia ORTEGA-ORTIZ, Manuel FORTIS-HERNÁNDEZ, Juan Jose REYES-PÉREZ, Pablo PRECIADO-RANGEL
- [Effect of mycorrhizal inoculations on physiological traits and bioactive compounds of tomato under water scarcity in field conditions](#) 1233-1247 [PDF](#)
Kitti Z. HORVÁTH, Bulgan ANDRYEI, Lajos HELYES, Zoltán PÉK, András NEMÉNYI, Eszter NEMESKÉRI
- [Effect of ecophysiological characteristics of tomato \(*Lycopersicon esculentum* L.\) in response to organic fertilizers \(compost and vermicompost\)](#) 1248-1259 [PDF](#)
Raheleh AHMADPOUR, Nezam ARMAND
- [Effects of cobalt oxide nanoparticles \(Co₃O₄ NPs\) on ion leakage, total phenol, antioxidant enzymes activities and cobalt accumulation in *Brassica napus* L.](#) 1260-1275 [PDF](#)
Malihe JAHANI, Ramazan Ali KHAVARI-NEJAD, Homa MAHMOODZADEH, Sara SAADATMAND
- [Expression of thaumatin, a new type of alternative sweetener in rice](#) 1276-1291 [PDF](#)
Shahina AKTER, Md. Amdadul HUQ, Yu-Jin JUNG, Kwon-Kyoo KANG
- [NDT, a new soilless growing system without substrate suitable for Mediterranean conditions](#) 1292-1305 [PDF](#)
Ioannis LYCOSKOUFIS, George MAVROGIANOPOULOS
- [Nutritional value and antioxidant activity of the maguey syrup \(*Agave salmiana* and *A. mapisaga*\) obtained through three treatments](#) 1306-1316 [PDF](#)
Lyzbeth HERNÁNDEZ-RAMOS, Rosario GARCÍA-MATEOS, Ma. Carmen YBARRA-MONCADA, María T. COLINAS-LEÓN
- [Ionic responses of bean \(*Phaseolus vulgaris* L.\) plants under salinity stress and humic acid applications](#) 1317-1331 [PDF](#)
Nurdilek GULMEZOGLU, Ezgi İZCI
- [Molecular phylogeny based on its sequences of nrDNA of some species belonging to dodder \(*Cuscuta* L.\) genus from various ecological sites of Turkey](#) 1332-1340 [PDF](#)
Ilhan KAYA, Ibrahim DEMIR, Mustafa USTA, Hikmet M. SIPAHIOĞLU
- [Molecular and phytochemical characterization of F1 *Streptocarpus hybrids* and antioxidant potential of their flower extracts](#) 1341-1356 [PDF](#)
Monica HÂRȚA, Doru PAMFIL, Orsolya BORSALAI, Rodica POP, Doina CLAPA, Zorița DIACONEASA, Cristian R. SISEA
- [Morpho-physiology and *Pht1* gene expressions in native maize plants with AM fungi and phosphorus](#) 1357-1368 [PDF](#)
Sergio VALERIO-LANDA, Ramon ZULUETA-RODRIGUEZ, Evangelina E. QUINONES-AGUILAR, Liliana LARA-CAPISTRAN, Carlos ANGULO, Pablo PRECIADO-RANGEL, Luis G. HERNANDEZ-MONTIEL
- [Grain size and other agronomical traits variation in a winter wheat population of doubled haploid lines](#) 1369-1386 [PDF](#)
Sorin CIULCA, Aurel GIURA, Adriana CIULCA

- [Stability of the expression of the maize productivity parameters by AMMI models and GGE-biplot analysis](#) 1387-1397 [PDF](#)
 Dragan BOŽOVIĆ, Vera POPOVIĆ, Vera RAJIČIĆ, Marko KOSTIĆ, Vladimir FILIPOVIĆ, Ljubiša KOLARIĆ, Vladan UGRENOVIĆ, Velibor SPALEVIĆ
- [Influence of pulsed electromagnetic field as a pre-sowing treatment on germination, plant growth and yield of broad beans](#) 1398-1412 [PDF](#)
 Nikolaos KATSENIOS, Panagiotis SPARANGIS, Ioanna KAKABOUKI, Aspasia EFTHIMIADOU
- [Research on the morphology, biology, productivity and yields quality of the *Amaranthus cruentus* L. in the southern part of Romania](#) 1413-1425 [PDF](#)
 Maria TOADER, Alina M. IONESCU, Cosmin SONEA, Emil GEORGESCU
- [Rapid detection of walnut and pumpkin oil adulteration using Raman spectroscopy and partial least square methodology](#) 1426-1438 [PDF](#)
 Anca BECZE, Dorina SIMEDRU
- [Optimization cultivation of *Chlamydomonas reinhardtii* in a tubular photobioreactor \(2000 Liter\) for biomass and green bioenergy \(biodiesel\) production](#) 1439-1457 [PDF](#)
 Hanaa H. ABD EL BAKY, Gamal S. EL BAROTY
- [Effect of low frequency magnetic field \(LFMF\) on seed quality of radish \(*Raphanus sativus* L.\) seeds](#) 1458-1464 [PDF](#)
 Xian-Zong XIA, Gregorio PADULA, Leszek KUBISZ, Roman HOŁUBOWICZ
- [The effectiveness of herbicidal desiccants and application times on seed yield and earliness of soybean](#) 1465-1472 [PDF](#)
 Nurgül ERGİN, Mehmet D. KAYA
- [Anatomical, morphological and phytochemical properties of *Aegopodium alpestre* Ledeb.: a case study of Kazakhstan](#) 1473-1482 [PDF](#)
 Elzira A. KYRBASSOVA, Akmaral A. SARTAYEVA, Elmira M. IMANOVA, Nurdana N. SALYBEKOVA, Gulraikhan E. ZHANTEYEVA, Sholpan S. SHYNYBEKOVA, Kuralay A. ASKARBAYEVA
- [Longevity of organic pepper \(*Capsicum annuum* L.\) seeds](#) 1483-1494 [PDF](#)
 Kutay C. YILDIRIM, Eren ÖZDEN, Zeynep GOKDAS, Ibrahim DEMIR
- [Impact of row spacing and seed rate on the production characteristics of the perennial ryegrass \(*Lolium perenne* L.\) and their valorisation](#) 1495-1503 [PDF](#)
 Marijana JOVANOVIĆ TODOROVIĆ, Vera POPOVIĆ, Savo VUČKOVIĆ, Snežana JANKOVIĆ, Andreja MIHAILOVIĆ, Maja IGNJATOV, Vladimir STRUGAR, Velimir LONČAREVIĆ
- [Seed germination, micropropagation from adult and juvenile origin explants and address of hyperhydricity of the Cretan endemic herb *Calamintha cretica*](#) 1504-1518 [PDF](#)
 Georgia VLACHOU, Maria Maria PAPAFOTIOU, Konstantinos F. BERTSOUKLIS
- [Cytogenetic polymorphism of seed progeny of walnut \(*Juglans regia* L.\) during introduction in the Central Chernozem Region](#) 1519-1533 [PDF](#)
 Vladislav N. KALAEV, Svetlana S. KARPOVA, Firas R. H. AL-HACHAMI, Irina V. IGNATOVA, Vasilij A. SLAVSKIY

- [Allelopathic potential of *Acacia pennata* \(L.\) Willd. leaf extracts against the seedling growth of six test plants](#) 1534-1542
[PDF](#)
 Ei H. KYAW, Hisashi KATO-NOGUCHI
- [Polyphenolic composition of grape stems](#) 1543-1559
[PDF](#)
 Bozena PRUSOVA, Josef LICEK, Michal KUMSTA, Mojmir BARON, Jiri SOCHOR
- [Physiological and biochemical responses of Damask rose \(*Rosa damascena* Miller\) to potassium silicate application under water deficit stress](#) 1560-1572
[PDF](#)
 Hossein FARAHANI, Nour Ali SAJEDI, Hamid MADANI, Mehdi CHANGIZI, Mohammad R. NAEINI
- [Responses of physiological activities and lateral root anatomical structure of *Cercis glabra* to waterlogging stress](#) 1573-1584
[PDF](#)
 Jie LUO, Long-Yi YUAN
- [Physicochemical characteristics, minerals, phenolic compounds, and antioxidant capacity in fig tree fruits with macronutrient deficiencies](#) 1585-1599
[PDF](#)
 Carlos A. GARZA-ALONSO, Guillermo NIÑO-MEDINA, Adriana GUTIÉRREZ-DÍEZ, Josué I. GARCÍA-LÓPEZ, Rigoberto E. VÁZQUEZ-ALVARADO, Alfredo LÓPEZ-JIMÉNEZ, Emilio OLIVARES-SÁENZ
- [Biochemical profile, antioxidant capacity and allelopathic effects from five *Ziziphus spina-christi* \(L.\) provenances growing wild in Saudi Arabia](#) 1600-1612
[PDF](#)
 Souheila NAGHMOUCHI, Moodi ALSUBEIE
- [Understanding physiological and molecular mechanisms of *Populus deltoides* 'DanHongYang' tolerance to waterlogging by comparative transcriptome analysis](#) 1613-1636
[PDF](#)
 Gang LI, Qiusheng FU, Zhongbin LIU, Jiabao YE, Weiwei ZHANG, Yongling LIAO, Feng XU, Zhongcheng ZHOU
- [Effects of lead on growth, osmotic adjustment, antioxidant activity and photosynthetic responses in *Phoebe chekiangensis* seedlings](#) 1637-1648
[PDF](#)
 Yujie YANG, Wenjie LI, Xinru HE, Die HU, Yongjun FEI
- [Occurrence of invasive insects on woody plants in the main green areas from Bucharest city](#) 1649-1666
[PDF](#)
 Flavius BĂLĂCENOIU, Andrei BUZATU, Dragoș TOMA, Alina ALEXANDRU, Constantin NEȚOIU
- [Counting fuel properties as input in the wildfire spreading capacities of vegetated surfaces: case of Albania](#) 1667-1682
[PDF](#)
 Artan HYSA, Zydi TEQJA
- [The relationships between forestry sector standardization, market evolution and sustainability approaches in the communist and post-communist economies: the case of Romania](#) 1683-1698
[PDF](#)
 Aureliu-Florin HĂLĂLIȘAN, Adelin-Ionuț NICORESCU, Bogdan POPA, Nikolay NEYKOV, Viorel MARINESCU, Ioan Vasile ABRUDAN

[Structural characteristics of the mixed spruce - fir - beech forests on Mountain Bjelasica in Montenegro](#) 1699-1708
Milic CUROVIC, Aleksandar STIJOVIC, Velibor SPALEVIC, Branislav DUDIC, Milos PAJIC [PDF](#)

Note

[Chorological data regarding the presence of *Corylus colurna* species in Romania](#) 1709-1718
Daniel RĂDUȚOIU, Sina COSMULESCU [PDF](#)

Editorial office
[Notulae Botanicae Horti Agrobotanici Cluj-Napoca](#) ©
AcademicPres
University of Agricultural Sciences and Veterinary Medicine
3-5 Mănăștur, 400372 Cluj-Napoca, Romania
Phone: +40 264-596 384; Fax +40 364-819 343
rsestras@notulaebotanicae.ro