



NOTULAE BOTANICAE  
HORTI AGROBOTANICI  
CLUJ-NAPOCA

2019 Volume 47, Issue 1

*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 Analytics, Master Journal List - Science Citation Index Expanded and Journal Citation Reports/Science Edition, <http://ip-science.thomsonreuters.com/mjl> (IF 2017=0.648)
- Scopus - Elsevier, <http://www.scopus.com> (CiteScore 2017, metrics 2018=0.78: <https://www.scopus.com/sourceid/17700156420>)
- 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](http://www.notulaebotanicae.ro)

## Editorial Committee

---

Editor-in-Chief:	Radu E. SESTRAS	rsestras@notulae.ro
Advisory Editors:	Cornel CĂTOI	cornel.catoi@usamvcluj.ro
	Viorel MITRE	mitre.viorel@usamvcluj.ro
	Doru PAMFIL	dpamfil@usamvcluj.ro
Executive Editors:	Cătălina DAN	editor5@notulae.ro
	Lucica MIHALTE (CRIŞAN)	lmihalte@notulae.ro
Associate Editors:	Sorana BOLBOACĂ	sbolboaca@umfcluj.ro
	Monica BOSCAIU	mobosnea@eaf.upv.es
	Liviu HOLONEC	lholonec@yahoo.com
	Lorentz JÄNTSCHI	lori@academicdirect.org
	Mihail KANTOR	catrisu@yahoo.com
	Felicia LOGHIN	floghin@umfcluj.ro
	Leon Sorin MUNTEAN	lmuntean@usamvcluj.ro
	Ioan NEGRUȚIU	ioan.negrutiu@ens-lyon.fr
	Ioana POP	popioana@usamvcluj.ro
	Ioan ROTAR	irotar@usamvcluj.ro
	Adriana F. SESTRAS	adriana.sestras@usamvcluj.ro
	Alina M. TRUȚA	editor7@notulae.ro
	Dan Cristian VODNAR	dan.vodnar@usamvcluj.ro
Journal Secretary:	Roxana L. STOIAN	editor6@notulae.ro
	Silviu L. MIC	editor2@notulae.ro
Linguistic editors:	Mihaela RUSU	miky1000ro@yahoo.com
	Rodica Silvia STAN	ro7si@yahoo.com
Technical support:	Adriana D. BACIU	ady.baciu@yahoo.com
	Meda DINCA	editor3@notulae.ro
	Diana MIRCEA	editor4@notulae.ro
	Maria GIURGEA	editor2@notulae.ro
	Dorottya DOMOKOS	ddomokos@usamvcluj.ro
	Oana PERNES	editor1@notulae.ro
Irina Maria TODEA	editor3@notulae.ro	

---

### Notice

To be cited **Not Bot Horti Agrobo**

The Editorial Board of Not Bot Horti Agrobo 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.

## Editorial Board

Name	Address	Field of Competence
Ioan Vasile ABRUDAN	Transilvania University, 1 Sirul Beethoven, 500123 Brasov, Romania; abrudan@unitbv.ro	Forestry, biodiversity, ecology
Douglas D. ARCHBOLD	University of Kentucky, Lexington, KY 40546-0091, USA; darchbol@uky.edu	Fruits and vegetables, postharvest storage
Valerian BALAN	State Agrarian University of Moldova, 44 Mirceşti 2049 Chişinău, Rep. Moldova; v.balan@uasm.moldnet.md	Fruit crops, pomology
Dimitrios BILALIS	Agricultural University of Athens, Department of Crop Science, Iera Odos 75, 11855 Athens, Greece; bilalisdimitrios@yahoo.gr	Organic agriculture
Maria Y. BOROVINOVA	Institute of Agriculture, Kyustendil, 2500, Bulgaria; iz_kn@infotel.bg	Environment-plant protection, pomiculture
Anca Dana BUZOIANU	"Iuliu Hatieganu" University of Medicine and Pharmacy Cluj-Napoca, 8 Victor Babes, Cluj-Napoca, Romania; abuzoianu@umfcluj.ro	Pharmacology and toxicology
Sorin Mihai CIMPEANU	University of Agronomic Sciences and Veterinary Medicine, 59 Bulevardul Mărăşti, 011464 Bucharest; sorin.cimpeanu@usamv.ro	Soil ecology, land reclamation, environmental engineering
Gheorghe CIMPOIES	State Agrarian University of Moldova, 44 Mirceşti St., 2049 Chişinău, Rep. Moldova; cimpoies@uasm.md	Horticulture, fruit crops, pomology
Kamal CHOWDHURY	Claflin University, Orangeburg, SC, USA, United States; kchowdhury@claflin.edu	Biotechnology, molecular genetics
Valeriu COTEA	"Ion Ionescu de la Brad" University of Agricultural Sciences and Veterinary Medicine, 3 Alea Mihail Sadoveanu, 700490 Iaşi, Romania; vvcotea@yahoo.com	Viticulture, grape ecology, wine-making
Lucian A. CURTU	Transilvania University, 1 Sirul Beethoven St., 500123 Brasov, Romania; lucian.curtu@unitbv.ro	Forestry, genetics, population and evolutionary
Sezai ERCISLI	Ataturk University, Horticulture Dept., 25240 Erzurum, Turkey; sercisli@atauni.edu.tr	Horticulture, fruit genetic resources, biotechnology
Francisco FUENTES	Pontificia Universidad Católica de Chile, Facultad de Agronomía e Ingeniería Forestal, Av. Vicuña Mackenna 4860, Macul, Santiago, Chile; frfuentes@uc.cl	Molecular genetics, epigenetics
Dan GAFTA	"Babeş-Bolyai" University, Faculty of Biology, 44 Gh. Bilascu, Romania; dgafta@bioge.ubbcluj.ro	Biodiversity, ecology, conservation
Marek GAJEWSKI	Warsaw Agricultural University, 166 Nowoursynowska, 02-787 Warsaw, Poland; marek_gajewski@sggw.pl	Vegetables and medicinal plants
Imre HOLB	Univ. Agricultural Sciences of Debrecen, 138 Böszörményi, 4032 Debrecen, Hungary; holb@helios.date.hu	Environment-plant protection
Maurizio LAMBARDI	CNR, NRC, IVALSA, Polo Scientifico, 10 via Madonna del Piano 10, 50019 Sesto Fiorentino, Firenze, Italy; lambardi@ivalsa.cnr.it	Plant biotechnology, tissue culture, <i>in vitro</i> conservation
Andrea LUVISI	University of Salento, DiSTeBA, via Prov. le Monteroni, 73100 Lecce, Italy; andrea.luvisi@unisalento.it	Plant pathology, plant virology, viticulture
Amarendra NARAYAN MISRA	Fakir Mohan University, Vyasa Vihar, Balasore-756019, India; misraan@yahoo.co.uk	Bioinformatics, tissue cultures
Ioan NEGRUȚIU	Ecole Normale Supérieure, RDP-UMR 9938 CNRS, INRA, ENS, 69364 Lyon, France; ioan.negrutiu@ens-lyon.fr	Biotechnology- <i>in vitro</i> culture
Jaime PROHENS	Instituto de Conservación y Mejora de la Agrodiversidad Valenciana, Spain; jprohens@btc.upv.es	Plant breeding, statistics
Chen QIN	School of Life Science, Shanghai Univ., 99 Shangda R., Baoshan District, Shanghai, 200436, China; chenqincc@yahoo.com.cn	Plant physiology, biotechnology
Albert REIF	Faculty of Forestry and Environmental Sciences, Univ. Freiburg, Tennenbacher 4, D-79085, Freiburg, Germany; albert.reif@waldbau.uni-freiburg.de	Forestry, vegetation sciences, biodiversity
Klaus SCHALLER	Research Center Geisenheim, P.O. Box 1158, D-65358 Geisenheim, Germany; k.schaller@fa-gm.de	Ecology, viticulture
Carmen SOCACIU	University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, 3-5 Mănăştur, 400372 Cluj-Napoca, Romania; csocaciu@usamvcluj.ro	Chemistry-plant and food quality
Silvia STRĂJERU	Genetic Resources Bank of Suceava, 17 Bd. 1 Decembrie 1918, 5800 Suceava, Romania; genebank@suceava.astral.ro	Bioconservation, genetic resources
Oscar VICENTE	BMCP Universidad Politécnica de Valencia, Camino de Vera s/n. 46022 Valencia, Spain; ovicente@ibmcp.upv.es	Biochemistry, molecular biology
Vasile VÎNTU	"Ion Ionescu de la Brad" University of Agricultural Sciences and Veterinary Medicine, 3 Alea Mihail Sadoveanu, 700490 Iaşi, Romania; vvintu@uaiasi.ro	Grassland, ecology, fodder crops, turfgrass
Qiang-Sheng WU	Yangtze University, College of Horticulture and Gardening, 88 Jingmi Road, 434025 Jingzhou, China; wuqiangsh@163.com	Mycorrhiza, phytohormones, stress tolerance of plants

## 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 “senior author” (the main 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 “senior 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

Vol 47, No 1 (2019)

## Table of Contents

---

### Editorial

[Introduction pages](#) [PDF](#)  
Radu E. SESTRAS I-XI

### Review Articles

[Advances of the Flowering Genes of Gymnosperms](#) [PDF](#)  
Dun MAO, Jiabao YE, Feng XU 1-9

[Importance, Utilization and Health of Urban Forests: A Review](#) [PDF](#)  
Alexandra D. SOLOMOU, Eleni T. TOPALIDOU, Rafaelia GERMANI, Apostolia ARGIRI, George KARETSOS 10-16

### Research Articles

[The Proteome Response of Salt-Sensitive Rapeseed \(\*Brassica napus\* L.\) Genotype to Salt Stress](#) [PDF](#)  
Nima DOLATABADI, Mahmoud TOORCHI, Mostafa VALIZADEH, Ali BANDEHAGH 17-23

[Genetic Association between Foliage Yield and Contributing Traits in Vegetable Chenopods: Implications for Genetic Improvement](#) [PDF](#)  
Atul BHARGAVA, Francisco FUENTES, Sudhir SHUKLA, Shilpi SRIVASTAVA, Deepak OHRI 24-33

[BBX32 Interacts with AGL24 Involved in Flowering Time Control in Chinese Cabbage \(\*Brassica rapa\* L. ssp. \*pekinensis\*\)](#) [PDF](#)  
Guan-Peng MA, Da-Qin ZHAO, Tian-Wen WANG, Lin-Bi ZHOU, Gui-Lian LI 34-45

[Genetic Study of Native Grapevine Varieties of Northern, Western and Central Greece with the Use of Ampelographic and Molecular Methods](#) [PDF](#)  
Katerina BINIARI, Maritina STAVRAKAKI 46-53

[DNA Barcoding in Selected Species and Subspecies of Rye \(\*Secale\*\) Using Three Chloroplast Loci \(\*matK\*, \*rbcL\*, \*trnH-psbA\*\)](#) [PDF](#)  
Lidia SKUZA, Izabela SZUĆKO, Ewa FILIP, Anastazja ADAMCZYK 54-62

[Cryopreservation of \*Vasconcellea quercifolia\* St.-Hil \(Caricaceae\) Zygotic Embryos](#) [PDF](#)  
Cibele M. GALLO, Renato PAIVA, Rodrigo T. FREITAS, Michele V. REIS, Diogo P.C. SILVA, Luciano C. SILVA 63-69

[Prolonged Water Deficit Stress and Methyl Jasmonate-Mediated Changes in Metabolite Profile, Flavonoid Concentrations and Antioxidant Activity in Peppermint \(\*Mentha × piperita\* L.\)](#) [PDF](#)  
Gholamreza ABDI, Majid SHOKRPOUR, Leila KARAMI, Sayed Alireza SALAMI 70-80

[The Enhancing Effect of Plants Growth Biostimulants in Garlic Cultivation on the Chemical Composition and Level of Bioactive Compounds in the Garlic Leaves, Stems and Bulbs](#) [PDF](#)  
Elżbieta JĘDRSZCZYK, Aneta KOPEĆ, Piotr BUCKI, Anna M. AMBROSZCZYK, Barbara SKOWERA 81-91

[Comparison of Chemical Composition and Colour Parameters of Different \*Mentha\* Genus Plants Grown under Organic Conditions](#) [PDF](#)  
Živilė TARASEVIČIENĖ, Aloyzas VELIČKA, Elvyra JARIENĖ, Aurelija PAULAUSKIENĖ, Anna KIELTYKA-DADASIEWICZ, Barbara SAWICKA, Marek GAJEWSKI 92-99

<a href="#">Extracts of Cherry and Sweet Cherry Fruit as Active Ingredients of Body Wash Formulations</a>	<a href="#">PDF</a>
Zofia NIZIOŁ-ŁUKASZEWSKA	100-107
<a href="#">Assessment of Chemical and Antioxidant Properties of Fresh and Dried Rosehip (<i>Rosa canina</i> L.)</a>	<a href="#">PDF</a>
Dragana PAUNOVIĆ, Ana KALUŠEVIĆ, Tanja PETROVIĆ, Tijana UROŠEVIĆ, Dušica DJINOVIĆ, Viktor NEDOVIĆ, Jelena POPOVIĆ-DJORDJEVIĆ	108-113
<a href="#">Effects of Nitrogen and Potassium Fertilization on Nutrient Content and Quality Attributes of Sweet Cherry Fruits</a>	<a href="#">PDF</a>
Kadir UCGUN	114-118
<a href="#">Content of Capsaicinoids and Physicochemical Characteristics of Manzano Hot Pepper Grown in Greenhouse</a>	<a href="#">PDF</a>
Mario PÉREZ-GRAJALES, Maria Teresa MARTÍNEZ-DAMIÁN, Oscar CRUZ-ALVAREZ, Sandra Miryam POTRERO-ANDRADE, Aureliano PEÑA-LOMELÍ, Victor Arturo GONZÁLEZ-HERNÁNDEZ, Angel VILLEGAS-MONTER	119-127
<a href="#">Nutritional and Biological Value of Five Edible Flower Species</a>	<a href="#">PDF</a>
Anna STEFANIAK, Monika Elżbieta GRZESZCZUK	128-134
<a href="#">Contributions to the Classification of <i>Capsicum annuum</i> L. and <i>Capsicum frutescens</i> L. in West Africa Using Morphological Traits</a>	<a href="#">PDF</a>
Tomi Lois OLATUNJI, Anthony Jide AFOLAYAN	135-142
<a href="#">Qualitative and Quantitative Study of Quercetin and Glycyrrhizin in <i>In Vitro</i> Culture of Liquorice (<i>Glycyrrhiza glabra</i> L.) and Elicitation with AgNO<sub>3</sub></a>	<a href="#">PDF</a>
Farnaz TAHOORI, Ahmad MAJD, Taher NEJADSATTARI, Hamideh OFOGHI, Alireza IRANBAKHSH	143-151
<a href="#">First Report of Krymsk<sup>®</sup> 5 (cv. VSL 2) Cherry Rootstock <i>In Vitro</i> Propagation: Studying the Effect of Cytokinins, Auxins and Endogenous Sugars</a>	<a href="#">PDF</a>
Athanasios TSAFOUROS, Peter A. ROUSSOS	152-161
<a href="#">Micropropagation of 'Chester thornless' Blackberry Cultivar using Axillary Bud Explants</a>	<a href="#">PDF</a>
Sina KEFAYETI, Ebru KAFKAS, Sezai ERCISLI	162-168
<a href="#">Applying Dickson Quality Index, Chlorophyll Fluorescence, and Leaf Area Index for Assessing Plant Quality of <i>Pentas lanceolata</i></a>	<a href="#">PDF</a>
Kuan-Hung LIN, Chun-Wei WU, Yu-Sen CHANG	169-176
<a href="#">Studies on the Gall Characteristics of <i>Dryocosmus kuriphilus</i> in Chestnut Genotypes in Yalova and Bursa Provinces of Turkey</a>	<a href="#">PDF</a>
Nimet S. GENÇER, Cevriye MERT	177-182
<a href="#">Determination of the Effect of Humic Acid on Growth and Development Parameters of Parsley (<i>Petroselinum sativum</i> Hoffm.) Grown in Boron Soil</a>	<a href="#">PDF</a>
Tuncay TURSUN, Sener AKINCI, Esin BOZKURT	183-193
<a href="#">Allelopathic Effects of Water Extracts of Maize Leaf on Three Chinese Herbal Medicinal Plants</a>	<a href="#">PDF</a>
Xiaobang PENG	194-200
<a href="#">Effect of Environmentally Friendly Nutrition Supply on Stevia (<i>Stevia rebaudiana</i> B.) Production</a>	<a href="#">PDF</a>
Mária TAKÁCS-HÁJOS, Tímea RUBÓCZKI, Fruzsina M. SZABÓ, Annamária KISS	201-206
<a href="#">Assessment of Some Sweet Cherry Cultivars in Comparison with Their Genitors under the Conditions of the North-Eastern Area of Romania</a>	<a href="#">PDF</a>
Elena IUREA, Sorina SIRBU, Margareta CORNEANU, Mădălina BUTAC, Irina TITIRICĂ, Mădălina MILITARU	207-212



- [Influence of Different Encapsulation Types of Arbuscular Mycorrhizal Fungi on Physiological Adaptation and Growth Promotion of Maize \(\*Zea mays\* L.\) Subjected to Water Deficit](#) [PDF](#)  
213-220  
Suravoot YOOYONGWECH, Suriyan CHA-UM, Rujira TISARUM, Cattarin THERAWITAYA, Thapanee SAMPHUMPHUNG, Supatida AUMTONG, Jeerun KINGKAEW, Muenduen PHISALAPHONG
- [Effects of Arbuscular Mycorrhizal Fungi on \*Gazania rigens\* Pot Plant Cultivation in a Mediterranean Environment](#) [PDF](#)  
221-226  
Leo SABATINO, Fabio D'ANNA, Livio TORTA, Giorgio FERRARA, Giovanni IAPICHINO
- [Growth, Nutrient Uptake, and Foliar Gas Exchange in Pepper Cultured with Un-composted Fresh Spent Mushroom Residue](#) [PDF](#)  
227-236  
He ZHU, Shujie ZHAO, Jingmin YANG, Lingquan MENG, Yunqing LUO, Bo HONG, Wei CUI, Minghui WANG, Wencong LIU
- [Variability of Soil Erosion Intensity Due to Vegetation Cover Changes: Case Study of Orahovacka Rijeka, Montenegro](#) [PDF](#)  
237-248  
Gojko NIKOLIC, Velibor SPALEVIC, Milic CUROVIC, Abdulvahed KHALEDI DARVISHAN, Goran SKATARIC, Milos PAJIC, Ataollah KAVIAN, Vjekoslav TANASKOVIK
- [Forest Soil Respirations are More Sensitive to Nighttime Temperature Change in Eastern China](#) [PDF](#)  
249-254  
Zhaoyong SHI, Ke LI, Yongming WANG, Bede S. MICKAN, Weikang YUAN, Yan YANG
- [A Negative Feedback Regulation of Replanted Soil Microorganisms on Plant Growth and Soil Properties of Peach](#) [PDF](#)  
255-261  
Li-Hui LÜ, A. K. SRIVASTAVA, Yun-Lou SHEN, Qiang-Sheng WU
- Note**
- [Soils of Tropical Dry Forest and with Different Crops Presenting Ascospores of \*Monosporascus cannonballus\*](#) [PDF](#)  
262-267  
Rui SALES JÚNIOR, Rosemberg F. SENHOR, Erika V. MEDEIROS, Andreia M.P. NEGREIROS, Roberto BELTRÁN, Sami J. MICHEREFF
- 

Editorial office  
[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 ext. 176; Fax +40 364-819 343  
 E-mail: [rsestras@notulae.ro](mailto:rsestras@notulae.ro)