



NOTULAE BOTANICAE
HORTI AGROBOTANICI
CLUJ - NAPOCA

2008 Volume 36, Issue 2

*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

Romanian Horticulture Society

Transylvania Society for Plant Protection

Abstracted and/or indexed:

- Centre for Agriculture and Biosciences International (CABI), <http://www.cabi.org>
- Chemical Abstracts Service (CAS), <http://www.cas.org>
- Directory of Open Access Journals (DOAJ), <http://www.doaj.org>
- Index Copernicus, <http://www.indexcopernicus.com>
- Russian Scientific and Technical Information Institute (VINITI), <http://www.viniti.ru>
- Scientific Commons, <http://en.scientificcommons.org>
- Bielefeld Academic Search Engine (BASE), <http://www.base-search.net>
- Google Scholar, <http://scholar.google.com>
- Academic research, citation reports and discussion lists getCITED, <http://www.getcited.org>
- Open Archives Initiative Protocol for Metadata Harvesting (OAIster), <http://www.oaister.org>
- The National Science Digital Library (NSDL), <http://nsdl.org>
- China Educational Publications Import and Export Corporation (SOCOLAR), <http://www.socolar.com>
- Ulrich's Periodicals Directory, <http://www.ulrichsweb.com>
- Elton B Stephens Company (EBSCO), <http://www.ebscohost.com>

First published 1965

Print ISSN 0255-965X, Electronic ISSN 1842-4309

<http://www.notulaebotanicae.ro>

Editorial office

Notulae Botanicae Horti Agrobotanici Cluj-Napoca ©
 AcademicPres
 University of Agricultural Sciences and Veterinary Medicine
 3-5 Manastur St., 400372 Cluj-Napoca, Romania
 Phone: +40 264-596 384 ext. 176
 Fax +40 364-819 343
 E-mail: rsestras@notulaeobotanicae.ro

Editorial Committee

General Editor:	Radu E. SESTRĂȘ	University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca (USAMV Cluj-Napoca), 3-5 Mănăstur St., 400372 Cluj-Napoca, Romania; rsestras@notulaeobotanicae.ro
Science Editor:	Doru PAMFIL	USAMV Cluj-Napoca, 3-5 Mănăstur St., 400372 Cluj-Napoca, Romania; dpamfil@usamvcluj.ro
Publisher Director:	Liviu Al. MĂRGHITAȘ	USAMV Cluj-Napoca, 3-5 Mănăstur St., 400372 Cluj-Napoca, Romania; lmarghitas@usamvcluj.ro
Production Editors:		
	Ioan ROTAR	USAMV Cluj-Napoca, 3-5 Mănăstur St., 400372 Cluj-Napoca, Romania; irotar@usamvcluj.ro
	Ioan NEGRUȚIU	Ecole Normale Supérieure, RDP-UMR 9938 CNRS, INRA, ENS, 69364 Lyon, France; ioan.negrutiu@ens-lyon.fr
	Mircea TĂMAȘ	Univ. Medicine and Pharmacy Cluj-Napoca, Pharmacy Faculty, 13 Emil Isac St., Romania; mtamas@umfcluj.ro
	Monica BOSCAIU	Universidad Politécnica de Valencia, EPS Gandia, Carretera Nazaret-Oliva s/n, 467300 Gandia, Spain; mobosnea@eaf.upv.es
	Lorentz JÄNTSCHI	Technical University of Cluj-Napoca, 15 Constatin Daicovicu, 400020, Cluj-Napoca, Romania; lori@academicdirect.org
	Sorana BOLBOACA	University of Medicine and Pharmacy, 13 Emil Isac, 400023, Cluj-Napoca, Romania; sbolboaca@umfcluj.ro
	Ioana POP	USAMV Cluj-Napoca, 3-5 Mănăstur St., 400372 Cluj-Napoca, Romania; ipop@notulaeobotanicae.ro
	Leon MUNTEAN	USAMV Cluj-Napoca, 3-5 Mănăstur St., 400372 Cluj-Napoca, Romania; lmuntean@usamvcluj.ro
Linguistic editor:	Mihaela RUSU	USAMV Cluj-Napoca, 3-5 Mănăstur St., 400372 Cluj-Napoca, Romania; mrusu@notulaeobotanicae.ro
Technical support:	Ionuț GOTEA	USAMV Cluj-Napoca, 3-5 Mănăstur St., 400372 Cluj-Napoca, Romania; igotea@notulaeobotanicae.ro
	Lucica MIHALTE	USAMV Cluj-Napoca, 3-5 Mănăstur St., 400372 Cluj-Napoca, Romania; lmihalte@notulaeobotanicae.ro
	Cătălina DAN	USAMV Cluj-Napoca, 3-5 Mănăstur St., 400372 Cluj-Napoca, Romania; cdan@notulaeobotanicae.ro
	Valentin SINGUREANU	USAMV Cluj-Napoca, 3-5 Mănăstur St., 400372 Cluj-Napoca, Romania; vsingureanu@notulaeobotanicae.ro

Notice

To be cited Not. Bot. Hort. Agrobot. Cluj

The Editorial Board of Not. Bot. Hort. Agrobot. Cluj 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 ABRUDAN	Transilvania University, 1 Sirul Beethoven St., 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
Marin ARDELEAN	USAMV Cluj-Napoca, 3-5 Mănăştur St., 400372 Cluj-Napoca, Romania; mardolean@usamvcluj.ro	Horticultural – plant breeding, biostatistics
Valerian BALAN	State Agrarian University of Moldova, 44 Mirceşti St. 2049 Chişinău, Rep. Moldova, e-mail: v.balan@uasm.moldnet.md	Fruit crops, pomology
Maria YORDANOVA BOROVINOVA	Institute of Agriculture, Kyustendil, 2500, Bulgaria; iz_kn@infotel.bg	Environment – Plant protection
Constantin BOTEZ	USAMV Cluj-Napoca, 3-5 Mănăştur St., 400372 Cluj-Napoca, Romania; cbotez@usamvcluj.ro	Genetics – molecular, transformation
Tomasz BRALEWSKI	Agric. University of Poznań, Baranowo, 28 Szamotulska 62-081 Przeźmierowo, Poland, twbseed@interia.pl	Vegetable – seed production
Ioan BREAZU	Grassland Research Institute, 2200 Braşov, Romania; ioan_breazu@yahoo.com	Grassland, fodder crop
Dan GAFTA	“Babeş-Bolyai” University, Faculty of Biology, 44 Gh. Bilascu St., 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
Ioan HAŞ	Agricultural Research Station, 27 Agriculturii St., 3350 Turda, Romania; ioanhas@yahoo.com	Cereals – breeding, physiology, quality
David HENSLEY	University of Arkansas, Fayetteville, AR 72701, USA; dhensley@uark.edu	Ornamental plants, arboriculture
Imre HOLB	Univ. Agricultural Sciences of Debrecen, 138 Böszörményi St., 4032 Debrecen, Hungary; holb@helios.date.hu	Environment – plant protection
Michel JACOBS	Vrije Universiteit Brussel, 65 Paardenstraat, 1640 Rhode-Saint-Genèse, Belgium; mjacobs@vub.ac.za	Genetics – molecular, transformation
Ioan NEGRUŢIU	Ecole Normale Supérieure, RDP-UMR 9938 CNRS, INRA, ENS, 69364 Lyon, France; ioan.negrutiu@ens-lyon.fr	Biotechnology – <i>in vitro</i> culture
Doru PAMFIL	USAMV Cluj-Napoca, 3-5 Mănăştur St., 400372 Cluj-Napoca, Romania; dpamfil@usamvcluj.ro	Biotechnology – <i>in vitro</i> culture
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 Str. 4, D-79085, Freiburg, Germany; albert.reif@waldbau.uni-freiburg.de	Forestry, vegetation sciences, biodiversity
Radu SESTRAŞ	USAMV Cluj-Napoca, 3-5 Mănăştur St., 400372 Cluj-Napoca, Romania; rsestras@usamvcluj.ro	Horticultural – plant breeding, biostatistics
Carmen SOCACIU	USAMV Cluj-Napoca, 3-5 Mănăştur St., 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
Mircea TĂMAŞ	Univ. Medicine and Pharmacy Cluj-Napoca, Pharmacy Faculty, 13 Emil Isac St., Romania; mtamas@umfcluj.ro	Botanical, pharmaceutical plant
Oscar VICENTE	IBMCP Universidad Politécnica de Valencia, Camino de Vera s/n. 46022 Valencia, Spain; ovicente@ibmcp.upv.es	Biochemistry, molecular biology
Zhang WEIGUANG	College of Food Science, Southwest Agricultural University, 216 Tianshengqiao, Beibei District, Chongqing, 400716, China; zwguang@hotmail.com	Food – fermentation, wine-making

Aims and scope

Notulae Botanicae Horti Agrobotanici Cluj is a peer-reviewed biannual 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. Hort. Agrobot. Cluj) 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.

The Editorial Committee of the Journal NOTULAE BOTANICAE HORTI AGROBOTANICI CLUJ-NAPOCA

Are kindly inviting you to contribute with scientifically papers to our journal Notulae Botanicae Horti Agrobotanici Cluj-Napoca, Print ISSN 0255-965X; Electronic ISSN 1842-4309, first published in 1965 under the care of the University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, Romania.

The journal has been assessed and received national recognition because of its high scientifically quality by the The National University Research Council from Romania (CNCSIS).

Being aware of your interests, we are looking forward to your collaboration and we are waiting for you to join us and help us develop this journal with your high-quality, original articles about all plants domain.

Prof. Dr. Radu SESTRĂȘ
General Editor



Contents

Importance of Leaf Epidermal Characters in the <i>Asteraceae</i> Family ADEDEJI O., JEWoola O.A.....	7
Seasonal Variations in the Atmospheric <i>Chenopodiaceae</i> / <i>Amaranthaceae</i> Pollen Count in Timisoara, Romania IANOVICI Nicoleta.....	17
Quality of Jerusalem Artichoke (<i>Helianthus tuberosus</i> L.) Tubers in Relation to Storage Conditions DANILČENKO Honorata, Elvyra JARIENĚ, Paulina ALEKNAVIČIENĚ, M. GAJEWSKI	23
A Collection of the Dendrological Garden in Glinna (Northwest Poland) KUBUS M.	28
Stimulation of Striking Roots at the Cuttings of Laurel Tree (<i>Laurus nobilis</i>) with the Aid of Bioactive Substances of the Radistim Type VLAD Mariana, I. VLAD	32
Performance of some winter chickpea (<i>Cicer arietinum</i> L.)genotypes in mediterranean conditions YÜCEL Derya, A. E. ANLARSAL	35
Evaluation the Efficiency of Some Egyptian Wheat <i>Triticum aestivum</i> L. Cultivars to Zn Deficiency through Peroxidase Activity and Protein Profile Techniques SALAMA Zeinab A., Mohamed EL FOULY	42
Effect of Pansy (<i>Viola x wittrockiana gams</i>) Seeds Colour and Size on their Germination AGNIESZKA Rosińska, R. HOŁUBOWICZ	47
Cultivation of Wild Species from <i>Goniolimon</i> genera: a Case Study KANINSKI A., S. BISTRICHANOV, Ivanka IVANOVA	51
Assessment of Allelopathic Potential of <i>Melastoma malabathricum</i> L. on Radish <i>raphanus sativus</i> L. and Barnyard Grass (<i>Echinochloa crus-galli</i>) FARAVANI M., H. B. BAKI, A. KHALIJAH	54
Effect of the Ascorbic Acid, Pyridoxine and Hydrogen Peroxide Treatments on Germination, Catalase Activity, Protein and Malondialdehyde Content of Three Oil Seeds DOLATABADIAN Aria, Seyed Ali Mohammad MODARRES SANAVY	61
The Effect of Salt Priming on the Performance of Differentially Matured Cucumber (<i>Cucumis sativus</i>) Seeds GHASSEMI-GOLEZANI K., B. ESMAEILPOUR.....	67

Role of Certain Elicitors on the Chemical Induction of Resistance in Tomato against the Leaf Caterpillar <i>Spodoptera litura</i> Fab. MELVIN JOE M., N. MUTHUKUMARAN.....	71
The Influence of Fructification Managing and Fertilization on Medium-Long Fruit Cucumber Hybrids Cultivated in Greenhouse MANIUTIU Danut, Rodica SIMA, Diana FICIOR	76
Secondary and Primary Plant Metabolites as Chemical Markers for Resistance of Bitter Candytuft (<i>Iberis amara</i>) Plant against Insect Attack KAMEL A. M., SOUAD, E. EL-GENGAIHI	80
Capsaicin Content and Pungency of Different <i>Capsicum spp.</i> Cultivars SANATOMBI K., G. J. SHARMA.....	88
Control of Wilt and Blight Diseases of Cumin through Antagonistic Fungi under in Vitro and Field Conditions DEEPAK P., L. SARAN, G. LAL	91
The Differences among Pear Genotypes to Fire Blight (<i>Erwinia amylovora</i>) Attack, Based on Observations of Natural Infection SESTRAS Adriana, Radu SESTRAS, Adrian BARBOS, Madalina MILITARU	97
Micropropagation of ‘Wild pear’ <i>Pyrus pyrifolia</i> (Burm F.) Nakai. II. Induction of Rooting THAKUR Anirudh, J. S. KANWAR.....	104