

Constantinos Ehaliotis
Curriculum Vitae

Current Address: Agricultural University of Athens,
Dept. of Natural Resources and Agricultural Engineering
Soil Science and Agricultural Chemistry Lab.,
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Date of Birth: 12th April 1962
Place of Birth: Athens, Greece
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EDUCATION

Sept. 1974 - June 1980
Varvakios High School, Athens

Oct. 1980 - June 1988
B.Sc., M.Sc. in Agronomy (spec. Plant Science)
Agric. Univ. of Athens, Botanikos, Athens

Oct. 1991 – Sept. 1992
M.Sc. in "Conservation of Soil Fertility"
Wye College, Dept of Biological Sciences, University of London, UK
Dissertation Project: Nitrogen mineralization induced by the disturbance of soils from adjacent old pastures and arable fields.

Oct. 1992 - June 1996
Ph.D. in Soil Microbiology
Wye College, University of London, UK
Title: "Nitrogen turnover, during decomposition of recalcitrant plant residues in acid soils".
Wye College, University of London
Supervision: Prof. K. E. Giller, Dept. of Biological Sciences

EMPLOYMENT

Undergraduate:
Jan. 1987 - June 1988
Urban garden design and management
Athens, Greece.

Graduate:
June 1989 – Oct. 1989
Monitoring and control of *Dacus Oleae* populations in olive groves, Lesbos island,
Greece. Greek Ministry of Agriculture

Postdoc Researcher:

Jan. 1997 – Sept. 1998

Study of the effects of composts derived from olive mill wastes and by-products, on the soil ecosystem under bench scale and pilot-plant scale conditions. EU-LIFE programme “*Bioremediation of Solid and Liquid Wastes Derived from Olive and Olive-Press Cake Extraction Processes*”. NAGREF-Institute of Kalamata.

Oct. 1998 – June 1999

Research Associate at NAGREF-Institute of Kalamata.

Research responsibilities: Experimental design and monitoring in organic farming focusing on the evaluation of alternative fertilizer sources.

University staff member:

Feb. 2000 –Sept. 2005

Lecturer on Soil Fertility and Land Evaluation, Agric. Chemistry and Soil Science Lab., Dept. of Natural Resources and Agric. Engineering, Agric. Univ. of Athens

Sept. 2005 – Oct. 2013

Associate Professor on Soil Fertility and Biology, Agric. Chemistry and Soil Science Lab., Dept. of Natural Resources and Agric. Engineering, Agric. Univ. of Athens (tenure Feb. 2010)

Oct 2013 –

Assistant Professor on Soil Fertility and Biology, Agric. Chemistry and Soil Science Lab., Dept. of Natural Resources and Agric. Engineering, Agric. Univ. of Athens

RESEARCH INTERESTS AND ACTIVITIES

- Biological treatment and valorization of agro-industrial wastes and by-products with emphasis on composting processes and lignin/polyphenol-rich materials
- Biodegradation of lignin, polyphenols and agrochemicals by microorganisms with emphasis on the role and use of white rot fungi and biobeds
- Production, application and qualitative evaluation of organic fertilizers – Compost production methods
- Fluxes of carbon and nutrients in olive groves vegetable and natural agroecosystems
- Suppression of soil-borne pathogens by environment friendly methods with emphasis on the application of organic materials and microbial inocula
- Effects of chemical and organic inputs on N-cycling in soils - use of ¹⁵N isotope methodologies
- Soil fertility and quality indicators
- Rhizosphere microbiology and plant – microbe interactions
- Microbial survival and microbial community structure and dynamics in the soil environment
- Endomycorrhizae

RESEARCH PROJECTS

“Bioremediation of Solid and Liquid Wastes Derived from Olive and Olive-Press Cake Extraction Processes” (1996-1998). NAGREF-Institute of Kalamata. Funded by EU-LIFE.

“Design, Instalation and Monotoring of Bioremediation Plants for Wastes from the Green Olive Debittering and the Olive Oil Extraction Processes” (1995-1998). NAGREF-Institute of Kalamata. Funded by the EU *via* the General Secretariat for Science and Technology, Ministry of Development, Greece.

“Improvements of Treatments and Validation of the Liquid-Solid Waste from the Two-Phase Olive Oil Extraction” (1997-1999), Agric. Microbiology Lab, Agric. Univ. of Athens – NAGREF-Institute of Kalamata. Funded by the EU, Framework IV, Environment.

“Bioethical Aspects of Biotechnology in the Agrofood Sector (BABAS)” (1996-1998), NAGREF-Institute of Kalamata, EU, Framework IV, ELSA.

“Development of an Information Exchange Network on Research and Applications Related to Organic Farming” (2000-2001) NAGREF-Institute of Kalamata. Funded by the General Secretariat for Science and Technology, Ministry of Development, Greece.

“Fertigation for improved crop production and environmental protection” (2001-2004), Funded by the International Atomic Energy Agency (IAAE), Coordinator: Dr Lee K. Heng, Vienna, Austria

“Recycling Horticultural Wastes to Produce pathogen suppresant composts for sustainable vegetable crop production” (RECOVEG)” (2002-2005) Funded by the EU-Quality of Life and Management of Living Resources. Coordinator: Horticulture Research International, Plant Pathology and Microbiology Department, Warwick, U.K.

Integrated management and decomposition of toxic agricultural and industrial wastes with high content of polyphenols and dye chemicals. (2003-2004). Bilateral Greek-Czech Republic collaboration. Fundend by the General Secretariat for Science and Technology, Ministry of Development, Coordinators: G. Zervaikis & F. Nerud

Partner Leader (Agric. Univ. of Athens) in the project: ***“Biological treatment and valorization of olive-mill liquid wastes and by-products -Mechanisms and integrated applications”*** (2003-2006). Environment and Sustainable development Programme, Funded by the EU-General Secretariat for Science and Technology, Ministry of Development, Greece.

Coordinator of the project: ***“Effects of nitrogen fertilizers on the environment and evaluation of environment-friendly processes leading to NO₃-N leaching reduction during winter in Western mainland Greece by the use of ¹⁵N labeled fertilizers”*** (2004-2007). Pythagoras project, EPEAEK II, Greece.

Partner Leader (Agric. Univ. of Athens) in the project: ***“Use and optimization of glucosinolate production in Brassicaceae for the application of soil bio-fumigation in production systems”*** (2006-2009). Bilateral project (Greece-Cyprus) funded by the

Research Promotion Foundation of Cyprus.

Partner Leader (Agric. Univ. of Athens) in the project: "*Use and evaluation of biobeds for the remediation of agro-industrial wastewaters*" 2008-2011). Bilateral project (Greece-Cyprus) funded by the Research Promotion Foundation of Cyprus.

Coordinator of the project: "*Contribution of Mycorrhizae to the sustainability of marginal Mediterranean ecosystems – development of mycorrhizal inocula*" Starting date 01/02/2012. Thalys Project, EU-Greek Ministry of education, lifelong learning and religious affairs.

Coordinator (in collaboration with the Univ. of Thessaly) in the project: "*Isolation of indigenous arbuscular mycorrhizal fungi and development of mycorrhizal inocula for rhizosphere inoculation and production of soil improvers*" (2013-2015). Industrial partner *Phytothreptiki S.A.*. Funded by the General Secretariat for Science and Technology, Ministry of Development

OTHER ACTIVITIES

Manuscript referee for:

Soil Biology and Biochemistry (over 40 manuscripts), Journal of Hazardous Materials, Chemosphere, Water Research, Australian Journal of Soil Research, Archives of Agronomy and Soil Science, Annals of Applied Biology, Biological Agriculture and Horticulture, Scientia Horticulturae, HortScience, Journal of Environmental Management, Biological Control, Journal of Plant Pathology, Frontiers in Microbiology.

Member of the special committee of the Ministry of Rural Development and Food for the adaptation of legislation regarding organic and inorganic fertilizer soil inocula and soil improver products (2008 - today).

PUBLICATIONS

Giller KE, Cadisch G, **Ehaliotis C**, Adams E, Sakala WD and Mafongoya PL (1997). **Building soil nitrogen capital in Africa. Ch. 7** in: *Replenishing Soil Fertility in Africa* (Buresh R. J. and Sanchez P. A. Eds), American Society of Agronomy and Soil Science Society of America, Special Publication no. 51, Madison, WI, pp 151 - 192.

A1. Ehaliotis, C, Cadish G and Giller K E* (1998). Substrate amendments to alter microbial dynamics and N availability from recalcitrant maize residues to subsequent crops. *Soil Biology and Biochemistry* 30 (10-11): 1281-1292. DOI: 10.1016/S0038-0717(98)00035-2

A2. Ehaliotis C, Papadopoulou K*, Kotsou M, Mari I and Balis C (1999). Adaptation and population dynamics of *Azotobacter vinelandii* during aerobic bioremediation of olive-mill wastewater. *FEMS Microbiology-Ecology* 30 (4): 301-311. DOI: 10.1016/S0168-6496(99)00066-5

Ehaliotis C (2000). **Pollution**. In: *Encyclopedia of Greece and the Hellenic Tradition* (G.

Speake Ed.), pp 1380-1382. Fitzroy Deaborn Publishers, London Chicago.

A3. Aggelis, G, **Ehaliotis C***, Nerud F, Stoychiev I, Lyberatos G and Zervakis G (2002). Evaluation of white-rot fungi for detoxification and decolorization of effluents from the green olives debittering process. *Applied Microbiology and Biotechnology* 59 (2-3): 353-360. DOI: 10.1007/s00253-002-1005-9

A4. Papadopoulou, K*, **Ehaliotis C**, Tourna M, Kastanis P, Karydis I and G Zervakis (2002). Genetic relatedness among dioecious *Ficus carica* L. cultivars by Random Amplified Polymorphic DNA analysis, and evaluation of agronomic and morphological characters. *Genetica* 114, 183-194. DOI: 10.1023/A:1015126319534

A5. Mari I, **Ehaliotis C***, Kotsou M, Balis C and Georgakakis D (2003). Respiration profiles in monitoring the composting of by-products from the olive oil agro-industry. *Bioresource Technology* 87 (3): 331-336. DOI: 10.1016/S0960-8524(02)00238-9

A6. Ntougias S, Zervakis GI, Kavroulakis N, **Ehaliotis C**, and Papadopoulou KK*. (2004). Bacterial diversity in spent mushroom compost assessed by amplified rDNA restriction analysis and sequencing of cultivated isolates. *Systematic and Applied Microbiology* 27 (6): 746-754. DOI: 10.1078/0723202042369857

A7. **Ehaliotis C*** Zervakis G and Karavitis P, (2005). Residues and by-products of olive-oil mills for root-zone heating and plant nutrition in organic vegetable production. *Scientia Horticulturae* 106 (3): 293-308. DOI: 10.1016/j.scienta.2005.04.006

A8. Kavroulakis N, **Ehaliotis C**, Ntougias S, Zervakis GI, and Papadopoulou KK* (2005). Local and systemic resistance against fungal pathogens of tomato plants elicited by a compost derived from agricultural residues *Physiological and Molecular Plant Pathology* 66 (5): 163-174. DOI: 10.1016/j.pmp.2005.06.003

A9. Mari I, **Ehaliotis C***, Kotsou M, Chatzipavlidis L, and Georgakakis D (2005). Use of sulfur to control pH in composts derived from olive processing by-products. *Compost Science and Utilization* 13 (4): 281-287.

A10. Ntougias S, **Ehaliotis C***, Papadopoulou KK, and Zervakis G. (2006). Application of respiration and FDA hydrolysis measurements for estimating microbial activity during composting processes. *Biology and Fertility of Soils* 42 (4): 330-337. DOI: 10.1007/s00374-005-0031-z

A11. Ntougias S*, Zervakis GI, **Ehaliotis C**, Kavroulakis N. and Papadopoulou KK (2006). Ecophysiology and molecular phylogeny of bacteria isolated from alkaline two-phase olive mill wastes. *Research in Microbiology* 157 (4): 376-385. DOI: 10.1016/j.resmic.2005.09.010

A12. Kavroulakis N*, Papadopoulou KK, Ntougias S, Zervakis GI and **Ehaliotis C**. (2006). Cytological and other aspects of pathogenesis-related gene expression in tomato plants grown on a suppressive compost. *Annals of Botany* 98 (3): 555-564. DOI: 10.1093/aob/mcl149

- A13.** Baldrian P*, Zervakis GI, Merhautova V, Ntougias S, **Ehaliotis C** and Nerud F. (2006). The use of hydroxyl-radical-generating systems for the treatment of olive mill wastewaters. *Folia Microbiologica* 51 (4): 337-341. DOI: 10.1007/BF02931827
- A14.** Pavlou GC*, **Ehaliotis CD** and Kawadias VA (2007). Effect of organic and inorganic fertilizers applied during successive crop seasons on growth and nitrate accumulation in lettuce. *Scientia Horticulturae* 111 (4): 319-325. DOI: 10.1016/j.scienta.2006.11.003
- A15.** Kavroulakis N, Ntougias S, Zervakis G, **Ehaliotis C**, Haralampidis K and Papadopoulou KK* (2007) Role of ethylene in the protection of tomato plants against fungal pathogens conferred by an endophytic *Fusarium solani* strain. *Journal of Experimental Botany*, 58 (14) 3853-3864. DOI: 10.1093/jxb/erm230
- A16.** Ntougias S., Papadopoulou KK, Zervakis GI, Kavroulakis N. and **Ehaliotis C*** (2008) Suppression of soil-borne pathogens of tomato by composts derived from agro-industrial wastes abundant in Mediterranean regions, *Biology and Fertility of Soils*, 44, 1081-1090. DOI: 10.1007/s00374-008-0295-1
- A17.** Massas I*, Ehaliotis C, Gerontidis S and Sarris E (2008) Elevated heavy metal concentrations in top soils of an Aegean island town (Greece): total and available forms, origin and distribution. *Environmental Monitoring and Assessment*, 151 (1-4):105–116 DOI: 10.1007/s10661-008-0253-2
- A18.** Omirou M, Papastylianou I, Iori R, Papastephanou C, Papadopoulou K.K, **Ehaliotis C** and Karpouzas DG* (2008) Microwave-assisted extraction of glucosinolates from *Eruca sativa* seeds and soil: comparison with existing methods, *Phytochemical Analysis*, 20 (3): 214–220. DOI: 10.1002/pca.1117
- A19.** Omirou M, Papadopoulou K, Papastylianou I, Constantinou M, Karpouzas D, Asimakopoulos I, and **Ehaliotis, C*** (2009). Impact of nitrogen and sulfur fertilization on the composition of glucosinolates in relation to sulfur assimilation in different plant organs of broccoli. *Journal of Agricultural and Food Chemistry* 57 (20): 9408–9417. DOI: 10.1021/jf901440n
- A 20.** Karpouzas DG, Rousidou C, Papadopoulou KK, Bekris F, Zervakis GI, Singh B and **Ehaliotis C*** (2009). Effect of continuous olive mill wastewater applications, in the presence and absence of N fertilization, on the structure of rhizosphere-soil fungal communities. *FEMS Microbiology Ecology* 70 (3): 388-401. DOI: 10.1111/j.1574-6941.2009.00779.x
- A 21.** Ipsilantis I, Karpouzas DG*, and **Ehaliotis C***, Papadopoulou KK (2009). Effects of soil application of olive mill wastewaters on the structure and function of the community of arbuscular mycorrhizal fungi. *Soil Biology and Biochemistry* 41 (12): 2466-2476. DOI: 10.1016/j.soilbio.2009.09.003
- A 22.** Rousidou C, Papadopoulou K, Zervakis G, Singh BK, **Ehaliotis C*** and Karpouzas DG* (2010) Repeated application of diluted olive mill wastewater induces

changes in the structure of the soil microbial community. *European Journal of Soil Biology* 46 (1): 34-40. DOI: 10.1016/j.ejsobi.2009.10.004

A 23. Massas, I*, **Ehaliotis C**, Kalivas D and Panagopoulou G (2010) Concentrations and Availability Indicators of Soil Heavy Metals; the Case of Children's Playgrounds in the City of Athens (Greece). *Water, Air and Soil Pollution* 212: 51-63. DOI: 10.1007/s11270-009-0321-4

A24. Karpouzas DG*, Ntougias S, Iskidoua E, Rousidou C, Papadopoulou KK, Zervakis GI, 2 **Ehaliotis C*** (2010). Olive mill wastewater affects the structure of soil bacterial communities. *Applied Soil Ecology* 45 (2): 101-111. DOI:10.1016/j.apsoil.2010.03.002

A 25. Kavroulakis N, Ntougias S, Besi MI, Katsou P, Damaskinou A, **Ehaliotis C**, Zervakis GI, and Papadopoulou KK* (2010) Antagonistic bacteria of composted agro-industrial residues exhibit antibiosis against soil-borne fungal plant pathogens and protection of tomato plants from *Fusarium oxysporum f.sp. radicis-lycopersici*. *Plant and Soil* 333 (1) 233-247. DOI: 10.1007/s11104-010-0338-x

A26. **Ehaliotis C***, Massas I, Pavlou G (2010) Efficient urea-N and KNO₃-N uptake by vegetable plants using fertigation. *Agronomy for Sustainable Development*, DOI: 10.1051/agro/2010016

A 27. Ntougias S, Kavroulakis N, Papadopoulou KK, **Ehaliotis C** and Zervakis GI* (2010) Characterisation of Cultivated Fungi Isolated from Grape Marc Wastes Through the Use of Amplified rDNA Restriction Analysis and Sequencing. *Journal of Microbiology* 48 (3) 297-306. DOI: 10.1007/s12275-010-9193-y

A 28. Karas PA, Perruchon C, Exarhou K, **Ehaliotis C**, and Karpouzas DG* (2010) Potential for bioremediation of agro-industrial effluents with high loads of pesticides by selected fungi. *Biodegradation* 22 (1): 215-228. DOI: 10.1007/s10532-010-9389-1

A 29. Karanasios E, Tsiropoulos N,* Karpouzas DG,* **Ehaliotis C**, (2010) Degradation and adsorption of pesticides in compost-based biomixtures as potential substrates for biobeds in south Europe. *Journal of Agricultural and Food Chemistry* 58 (16): 9147-9156. DOI: 10.1021/jf1011853

A 30. Omirou M, Rousidou C, Bekris F, Papadopoulou KK, **Ehaliotis C***, Menkissoglu-Spiroudi U, and Karpouzas DG* (2011) The impact of biofumigation and chemical fumigation methods on the structure and function of the soil microbial community. *Microbial Ecology* 61 (1): 201-213. DOI: 10.1007/s00248-010-9740-4

A 31. Karpouzas DG*, Karatasas A, Spyridaki E, Rousidou C, Bekris F, **Ehaliotis C**, Papadopoulou KK* (2011) Impact of a beneficial and of a pathogenic *Fusarium* strain on the fingerprinting-based structure of microbial communities in tomato (*Lycopersicon esculentum* Mill.) rhizosphere. *European Journal of Soil Biology* 47(6): 400-408. DOI: 10.1016/j.ejsobi.2011.07.011

A32. Omirou M,* Papastefanou Ch, Katsarou D, Papastylianou I, Passam HC, **Ehaliotis C**, Papadopoulou KK* (2012) Relationships between nitrogen, dry matter accumulation

and glucosinolates in *Eruca sativa* Mills. The applicability of the critical NO₃-N levels approach. *Plant and Soil*: (354 (1-2): 347-358) DOI 10.1007/s11104-011-1071-9

A33. Ntougias S, Baldrian P, **Ehaliotis C**, Nerud F, Antoniou T, Merhautová V, Zervakis G.I.* (2013) Biodegradation and detoxification of olive mill wastewater by selected strains of the mushroom genera *Ganoderma* and *Pleurotus*. *Chemosphere* 88 (5): 620-626. <http://dx.doi.org/10.1016/j.chemosphere.2012.03.042>

A34. Omirou M,*, Dalias P, Costa C, Papastefanou C, Dados A, **Ehaliotis C**, Karpouzas DG (2012) Exploring the potential of biobeds for the depuration of pesticide-contaminated wastewaters from the citrus production chain: Laboratory, column and field studies. *Environmental Pollution* 166 31-39. DOI: 10.1016/j.envpol.2012.03.001

A35. Omirou M.* Ioannides I. **Ehaliotis C**. (2012). Mycorrhizal inoculation affects arbuscular mycorrhizal diversity in watermelon roots, but leads to improved colonization and plant response under water stress only. *Applied Soil Ecology* 63: 112–119. <http://dx.doi.org/10.1016/j.apsoil.2012.09.013>

A36. Dousis P. Anastopoulos I. Gasparatos D. **Ehaliotis C**. Massas I.* (2013) Effects of Time and Glucose-C on the Fractionation of Zn and Cu in a Slightly Acidic Soil. *Communications in Soil Science and Plant Analysis* 44 (1-4): 722-732. DOI: 10.1080/00103624.2013.748123

A37. Omirou M. Karpouzas D.G. Papadopoulou K.K. **Ehaliotis C**.* (2013) Dissipation of pure and broccoli-released glucosinolates in soil under high and low moisture content. *European Journal of Soil Biology* 56: 49-55. <http://dx.doi.org/10.1016/j.ejsobi.2013.01.005>

A38. Massas I. Kalivas D. **Ehaliotis C**. Gasparatos, D. (2013) Total and available heavy metal concentrations in soils of the Thriassio plain (Greece) and assessment of soil pollution indexes. *Environmental Monitoring and Assessment* 185 (8): 6751-6766. DOI 10.1007/s10661-013-3062-1

A39. Anastopoulos I. Massas I.* **Ehaliotis C**. (2013) Composting improves biosorption of Pb²⁺ and Ni²⁺ by renewable lignocellulosic materials. Characteristics and mechanisms involved. *Chemical Engineering Journal* 231: 245-254. <http://dx.doi.org/10.1016/j.cej.2013.07.028>

Citation Index: over 500 citations (source: ISI WEB of SCIENCE and SCOPUS)
h-index = 14