



## PERSONAL INFORMATION:

**Full Name:** Dr. Elham Malekzadeh

**Nationality:** Iranian

**Academic Level:** Assistant Professor

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## EDUCATION:

**Ph.D.:** Tabriz University, Iran - Soil Biology and Biotechnology (2011-2015).

**M.Sc.:** Tehran University, Iran - Soil Biology and Biotechnology (2007-2009).

**B.Sc.:** University of Mohaghegh Ardabili (UMA), Iran - Soil Science Engineering (2003-2007).

## RESEARCH INTEREST:

- Soil Biology and Biotechnology
- Bioremediation of contaminated soils
- Biodegradation
- Soil improvements
- Biofertilizers and plant Nutrition
- Mycorrhizal Fungi

## PUBLICATION (ISC and ISI):

1. **Malekzadeh E**, Alikhani HA, Savaghebi-Firoozabadi GR and Zarei M. 2010. Resistance to nickel and cadmium of indigenous and non-indigenous plant growth promoting rhizobacteria (PGPRs) to heavy metal contaminated soils .Iranian Journal of Soil and Water Research2(41), 257-263. [In Persian].
2. **Malekzadeh E**, Alikhani HA, Savaghebi-Firoozabadi GR and Zarei M. 2011. Influence of arbuscular mycorrhizal fungi and an improving growth bacterium on Cd uptake and maize growth in Cd-pollute soil. Spanish Journal of Agricultural Research. 9(4), 1213-1223. DOI:<http://dx.doi.org/10.5424/sjar/20110904-069-11>.
3. **Malekzadeh E**, Alikhani HA, Savaghebi-Firoozabadi GR and Zarei M. 2011. Interaction between Arbuscular Mycorrhizal Fungi and Cd-Resistant PGPR in Phytoremediation of Cadmium. Journal of Water and Soil 25(2), 226-274. [In Persian].

4. **Malekzadeh E**, Alikhani HA, Savaghebi-Firoozabadi G R and Zarei M. 2012. Bioremediation of cadmium-contaminated soil through cultivation of maize inoculated with plant growth-promoting rhizobacteria. *Bioremediation Journal*. 16(4), 204–211. DOI: 10.1080/10889868.2012.703258.
5. **Malekzadeh E**, Alikhani HA, Savaghebi-Firoozabadi G R and Zarei M. 2013. Influence of *Bacillus mycoides* and *Glomus mosseae* , Indigenous to Contaminated Areas, on Nutrients and Cd Uptake by Maize in Cd-Polluted Soil. *Water and Soil Science*. 22(4), 117-133. [In Persian]
6. **Malekzadeh E**, Alikhani HA, Savaghebi-Firoozabadi GR and Zarei M. 2016. Role of Ni-resistant rhizobacteria in the growth and Ni-uptake of maize in a calcareous soil. *Iran Agricultural Research*. 35(2), 35-40. DOI: [10.22099/iar.2016.3767](https://doi.org/10.22099/iar.2016.3767)
7. **Malekzadeh E**, Majidi J, Aliasghar zad N and Abdolalizadeh J. 2016. The effect of lead on the glomalin content of hypha and root reactive with monoclonal antibody and Bradford in both in vitro and pot culture conditions. *Journal of Water and Soil*. 30(2), 605-618. DOI: <https://doi.org/10.22067/jsw.v30i2.47802> [In Persian]
8. **Malekzadeh E**, Aliasghar zad N and Majidi J. 2016. Glomalin production by *Rhizophagus irregularis* in vitro condition and pot culture of white clover and its role in Pb-sequestration. *Journal of Soil Biology*. 3(2), 93-106. DOI: [10.22092/sbj.2016.105960](https://doi.org/10.22092/sbj.2016.105960) [In Persian]
9. **Malekzadeh E**, Aliasghar zad N, Majidi J, Abdolalizadeh J and Aghebati-Maleki L. 2016. Contribution of glomalin to Pb sequestration by arbuscular mycorrhizal fungus in a sand culture system with clover plant. *European Journal of Soil Biology*. 74, 45-51. DOI: <http://dx.doi.org/10.1016/j.ejsobi.2016.03.003>
10. **Malekzadeh E**, Aliasghar zad N, Majidi J, Aghebati-Maleki L and Abdolalizadeh J 2016. Cd-induced production of glomalin by arbuscular mycorrhizal fungus (*Rhizophagus irregularis*) as estimated by monoclonal antibody assay. *Environmental Science and Pollution Research*. 23, 20711-20718. DOI: 10.1007/s11356-016-7283-z
11. **Malekzadeh E**, Aliasghar zad N and Majidi J. 2016. Contribution of glomalin produced by *Rhizophagus irregularis* to root stabilization of Cd by white clover (*Trifolium repens* L.). *Applied Soil Research*. 4(1), 1-13. [In Persian]
12. **Malekzadeh E** and Aliasghar zad N. 2019. The effect of glomalin on root stabilization of lead in clover plant inoculated with *Rhizophagus irregularis* fungus. *Journal of Soil management and Sustainable production*. 9(3), 69-90. DOI: 10.22069/ejsms.2020.16109.1859 [In Persian]
13. Amanifar S, Hajiloo Z, Vatankhah E and **Malekzadeh E**. 2019. The effect of methyl jasmonate application on *Rhizophagus intraradices* symbiosis efficiency in alfalfa plant under water deficit

- stress. Journal of Soil management and Sustainable production. 9(1), 23-43. DOI: 10.22069/ejsms.2019.15907.1848 [In Persian]
14. **Malekzadeh E.** 2021. The effect of Cadmium on growth and some nutrient uptake in alfalfa plant inoculated by *Rhizophagus intraradices*. Applied Soil Research. 8(4): 98-115. [In Persian]
  15. **Malekzadeh E.** Glomalin produced by arbuscular mtcorrhizal fungi: A key molecule in the sequestration of toxic metals in the contaminated soil. Human and Environment. [Accepted]
  16. Ghorbani Nasrabadi Gh, Dordipour E, Barani motlagh M, **Malekzadeh E** and Gharanjiki A. 2020. The effect of salicylic acid and nitrogen consumption on the concentration of nutrients in wheat at different salinity levels. Journal of Agricultural Engineering. 43(3): 389-404. DOI:10.22055/AGEN.2020.34475.1576 [In Persian]
  17. Ghorbani Nasrabadi Gh, Dordipour E, Barani motlagh M, **Malekzadeh E** and Gharanjiki A. 2021. Interactive effect of salicylic acid and nitrogen application management on wheat growth and yield in salin soils-A case study in Anbar Olum, Golestan Province. Journal of Soil Management and Sustainable Production. 11(1): 149-164. DOI: 10.22069/ejsms.2021.18596.1995 [In Persian]
  18. Karimpour R, Ebrahimi S, **Malekzadeh E** and Hassanpour-bourkheili H .2022. Bioremediation of total petroleum hydrocarbons in oil sludge-polluted soil using active carbon remediator. International Journal of Environmental Science and Technology. DOI: <https://doi.org/10.1007/s13762-022-03964-9>
  19. Adim GHR, **Malekzadeh E**, Dordipour E, Kiani F, Mokhtarpour H and Moazzemi S. 2022. The effect of chemical, organic, biological and integrated fertilizer systems on soil fertility and nutritional status of rapessed (*Brassica napus* L.). Journal of Soil Management and Sustainable. 11(4): 99-119. DOI: 10.22069/ejsms.2022.19588.2042 [In Persian]
  20. Adim GHR, **Malekzadeh E**, Dordipour E, Kiani F, Mokhtarpour H and Moazzemi S. 2022. Evaluation of the integrated effect of chemical and bio-organic fertilizers on yield and yield components of rapeseed. Agricultural Engineering (Scientific Journal of Agriculture), 45 (2): 119-135. [In Persian]
  21. **Malekzadeh E**, Tatari A, and Deghani Firouzabadi M. D. 2023. Preparation, characteristics, and soil-biodegradable analysis of corn starch/nanofibrillated cellulose (CS/NFC) and corn starch/nanofibrillated lignocellulose (CS/NFLC) films. Carbohydrate Polymers, 309, 120699.

## **ACADEMIC TEACHING EXPERIENCE:**

**B.Sc.:** Fundamental of soil science, knowledge and management of soil in plant production, general biology, entrepreneurship, water and wastewater microbiology, soil biology, plant nutrition, soil fertility and fertilizers

**M.Sc.:** Biofertilizer preparation technology, plant nutrition management, soil and water bioremediation

**Ph.D.:** Bioremediation of soil and water

## **SERVICE AND PROFESSIONAL MEMBERSHIP:**

- 2017-present: Assistant Professor, Department of Soil Science Engineering, Gorgan University of Agricultural Sciences and Natural Resources.
- 2017-2022: Supervisor of the Scientific Association, Department of Soil Science Engineering, Gorgan University of Agricultural Sciences and Natural Resources.
- 2017-2022: Entrepreneurial advisor, Department of Soil Science Engineering Department of Gorgan University of Agricultural Sciences and Natural Resources.
- Educational Supervisor for B.Sc Students (2020-21-22 entry), Department of Soil Science Engineering, Gorgan University of Agricultural Sciences and Natural Resources.
- Reviewer of scientific-research, Journal of Soil Management And Sustainable Production.
- Reviewer of the Scientific-Research, Journal of Water and Soil Science.
- Reviewer of Iran Agricultural Research Journal.
- Reviewer, Harekat Festival, Gorgan University of Agricultural Sciences and Natural Resources.

## **LANGUAGES:**

Persian (Native)

English