Contact Information:

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BIOGRAPHY:

Dr. Mohammad Haghaninia is a researcher at the Agricultural Research, Education and Extension Organization (AREEO), Iran, holding a Ph.D. in Agrotechnology (Plant Ecology). His research interests encompass plant physiology, agroecology, crop ecology, sustainable agriculture, abiotic stress physiology, agricultural nanotechnology, biostimulants, and plant nutrition. His research primarily focuses on elucidating the morphological, physiological, and biochemical responses of plants to environmental stresses and developing innovative and sustainable strategies to enhance crop productivity, quality, and resource-use efficiency under climate change, thereby contributing to global food security. As of 2025, Dr. Haghaninia has authored more than 45 scientific publications in national and international journals, including over 15 papers published in Q1 journals. He has extensive experience in scientific peer review, having reviewed more than 80 manuscripts for over 20 international journals, including Industrial Crops and Products, Plant Stress, Environmental and Experimental Botany, Agricultural Water Management, Scientia Horticulturae, Biocatalysis and Agricultural Biotechnology, Scientific Reports, Discover Nano, BioNanoScience, and BMC Plant Biology. He also serves as an Editorial Board Member for international journals and has contributed as a Guest Editor for international special issues. He is committed to fostering scientific collaboration, interdisciplinary research, and international partnerships, and actively welcomes collaborative research opportunities with researchers and institutions worldwide.

EDUCATION:

- Ph.D. in Agrotechnology (Plant Ecology); University of Maragheh, Iran; Graduated: 2023
- M.Sc. in Agroecology; University of Maragheh, Iran; Graduated: 2018
- B.Sc. in Agronomy; University of Shiraz, Iran; Graduated: 2016

PERSONAL PROFILE:

- Researcher in Plant Production and Genetics with expertise in plant physiology, crop ecology, sustainable agriculture, abiotic stress biology, nanotechnology, biostimulants, and plant nutrition. Experienced in conducting multidisciplinary research, publishing in international journals, and reviewing manuscripts for leading journals in plant science and agriculture.

CURRENT POSITION:

- Researcher; Agricultural Research, Education and Extension Organization (AREEO), Iran

RESEARCH INTERESTS:

- Plant Physiology; Plant Production; Plant Genetics; Crop Ecology; Sustainable Agriculture; Abiotic Stress; Drought Stress; Salinity Stress; Nanotechnology in Agriculture; Bio-stimulants; Plant Nutrition; Plant–Microbe Interactions; Biofertilizers; Medicinal and Aromatic Plants; Oilseed Crops; Agricultural Biotechnology

Professional Skills:

- Design and execution of field and greenhouse experiments for cereal, oilseed, medicinal plants, etc.
- Measurement and evaluation of physiological and biochemical traits in plants.
- Advanced statistical analysis and data interpretation (ANOVA, regression, multivariate analysis, data modeling).
- Proficiency in specialized software including SAS, R, SPSS, and Excel.
- Project management from planning to reporting and publication.
- Scientific writing and publishing in Q1 and international journals.
- Collaboration and management of multidisciplinary and international research teams.

PUBLICATION METRICS:

- More than **50** scientific publications.
- More than **15** publications in Q1 journals.
- Publications in journals published by Elsevier and Springer.
- H-index: **9**
- Reviewer of more than **20** international journals.
- More than **80** completed peer-review reports.

SELECTED INTERNATIONAL JOURNALS AS REVIEWER:

- Industrial Crops and Products
- Plant Stress
- Environmental and Experimental Botany
- Agricultural Water Management
- Scientia Horticulturae

- Biocatalysis and Agricultural Biotechnology
- Scientific Reports
- Discover Nano
- BioNanoScience
- BMC Plant Biology

TECHNICAL SKILLS:

- Experimental Design
- Plant Physiology Techniques
- Nanotechnology Applications
- Statistical Analysis (SPSS, SAS, R)
- Microsoft Office
- Reference Management Software (EndNote, Mendele)

EDITORIAL EXPERIENCE:

- Editorial Board Member: Journal of Applied Research in Plant Science; Global Science Today;
- Guest Editor: Frontiers in Sustainable Food Systems

PROFESSIONAL MEMBERSHIPS:

- Iranian Society of Agronomy and Plant Breeding
- Iranian Society of Plant Physiology
- Iranian Society of Medicinal Plants
- Iranian Society of Agricultural Economics
- Iranian Society of Plant Pathology
- Iranian Society of Agricultural Extension

HONOURS AND AWARDS:

- Member, Iran National Elites Foundation (INEF)
- Outstanding Ph.D. Researcher Award
- Third Place Award, National Scientific Festival (Article Category)
- Outstanding Educational Achievement Award, University of Maragheh

Some Representative Publications:

- Haghaninia, Mohammad, et al. "Impact of silicon nanoparticle priming on metabolic responses and seed quality of chia (*Salvia hispanica* L.) under salt stress." *Food Bioscience* 65 (2025): 106119.
- Haghaninia, Mohammad, et al. "Adoption of arbuscular mycorrhizal fungi and biochar for alleviating the agro-physiological response of lavander (*Lavandula angustifolia* L.) subjected to drought stress." *Plant Stress* 12 (2024): 100461.
- Haghaninia, Mohammad, et al. "Combined effects of zinc oxide nanoparticles and arbuscular mycorrhizal fungi on soybean yield, oil quality, and biochemical responses under drought stress." *Future Foods* 11 (2025): 100594.
- Haghaninia, Mohammad, et al. "Nanoformulated rosemary essential oil in chitosan matrix alleviates salinity-induced physiological and biochemical damages in lettuce." *Scientia Horticulturae* 350 (2025): 114325.

- Haghaninia, Mohammad, et al. "Enhancement of Drought Tolerance and Essential Oil Quality in Grapefruit Mint via PGPR and ZnO Nanoparticles." *Biocatalysis and Agricultural Biotechnology* (2025): 103841.
- Haghaninia, Mohammad, et al. "Impact of carbon quantum dots (CQD) on the growth, essential oil content, and composition of grapefruit mint (*Mentha suaveolens× piperita*) under water deficit stress conditions." *Iranian Journal of Medicinal and Aromatic Plants Research* 41.3 (2025): 411-430.
- Haghaninia, Mohammad, et al. "Improvement of physiological features and essential oil content of Thymus vulgaris after soil amendment with chitosan nanoparticles under chromium toxicity." *Horticulturae* 10.6 (2024): 659.
- Haghaninia, Mohammad, et al. "Optimizing camelina performance under drought conditions through the combined action of nanochitosan-encapsulated rosemary oil and arbuscular mycorrhizal fungi." *Biocatalysis and Agricultural Biotechnology* (2025): 103682.
- Haghaninia, Mohammad, et al. "Optimizing oil quantity and quality of camelina (*Camelina sativa* L.) with integrative application of chemical, nano and bio-fertilizers under supplementary irrigation and rainfed condition." *Plant Stress* 11 (2024): 100374.
- Haghaninia, Mohammad, et al. "Utilization of chitosan nanoparticles to alleviate chromium stress and improve biochemical properties and essential oil profile in *Thymus vulgaris*." *Journal of Soil Science and Plant Nutrition* (2025): 1-16.

CONFERENCE PRESENTATIONS:

- Evaluation of Various Biostimulant Applications on Growth, Physiology, and Secondary Metabolites of Satureja hortensis under Saline Conditions. Publish place: The 9th InterNational Congress of New Findings in Agricultural and Natural Resources, Environment and Tourism.
- Mitigating Chromium Toxicity in Hibiscus sabdariffa: Role of Foliar-Applied Putrescine in Regulating Oxidative Damage and Biomass Production. Publish place: 3third National Conference on Medicinal Plants, Entrepreneurship and Commercialization.
- Impact of Sustainable Nutritional Strategies on Physiological, Biochemical, and Performance Indicators of *Lallemantia iberica* under Drought Stress. Publish place: The 3rd International and 4th National Conference on Agriculture, Environment and Food Security.
- Role of Humic Acid and Pseudomonas in Enhancing Antioxidant Defense and Ion Homeostasis in Triticale under Salinity Stress. Publish place: The 3rd International and 4th National Conference on Agriculture, Environment and Food Security.
- Assessing the Efficacy of Titanium Dioxide Nanoparticles in Enhancing *Camelina sativa* L. Performance under Water Limitation. Publish place: 18th Iranian National and the 4th International Crop Sciences Congress.