بسم الله الرحمن الرحيم

Curriculum Vitae

Muwaffak Ramadan Karajeh

الأستاذ الدكتور موفق رمضان كراجه

(تخصص علم أمراض النبات وعلم النيماتودا)

قسم الوقاية والمكافحة المتكاملة

كلية الزراعة- جامعة مؤتة

Professor of Plant Pathology & Nematology

Dept. of Protection and IPM

Faculty of Agriculture – Mutah University

Birth day and place: 22/01/1972, Amman, Jordan

***Nationality*:** Jordanian

Current address

Home: Eastern residence of Mutah University, Mu'tah, Karak, Jordan.

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Research Interests

I am mainly interested in conducting laboratory and field experiments in the area of plant diseases caused by fungi and nematodes, in which traditional and molecular diagnostic techniques, environmentally sound management measures and chemical pesticide alternatives are usually used. Providing local plant disease samples or cultures are possible for international research collaborative work.

Education

1. General Secondary School Certificate (1990), Qotiba Bin Muslim Public School, Amman, Jordan.

2. B. Sc. in Plant Protection (1994), Faculty of Agriculture, University of Jordan, Amman, Jordan.

3. M. Sc. in Plant Protection/ Plant Pathology (1997), Control of Verticillium Wilt of Olive Trees in Jordan. Supervisor: Prof. Ahmad Al-Momany, Faculty of Graduated Studies, University of Jordan, Amman, Jordan.

4. Ph. D. in Plant Pathology-Nematology (2004), Identification, Distribution, and Genetic Variability of the Root-knot Nematodes (*Meloidogyne* spp.) in Jordan. Supervisor: Prof. Walid Abu-Gharbieh, Co-supervisor: Dr. Sameer Masoud, Faculty of Graduated Studies, University of Jordan, Amman, Jordan.

Professional and Academic Experience

1. **Head of Protection and IPM department** (Feb. 2020-Aug. 2021)**,** Faculty of Agriculture, Mutah University, Karak, Jordan.
2. **Head of Protection and IPM department** (Feb. 2018-Aug. 2019)**,** Faculty of Agriculture, Mutah University, Karak, Jordan.
3. **Professor of Plant Pathology-Nematology** (Since Oct. 2015) at Faculty of Agriculture, Mutah University, Karak, Jordan.
4. **Head of Protection and IPM department** (Feb. 2015- Aug. 2016)**,** Faculty of Agriculture, Mutah University, Karak, Jordan.
5. **Associate Professor of Plant Pathology** (Feb. 2010- Oct. 2015) at Faculty of Agriculture, Mutah University, Karak, Jordan.
6. **Head of Protection and IPM department** (Aug. 2013 - Aug. 2014)**,** Faculty of Agriculture, Mutah University, Karak, Jordan.
7. **Vice Dean** (Sept. 2013 – Sept. 2014), Faculty of Agriculture, Mutah University, Karak, Jordan.
8. **Assistant Dean** (Aug. 2010 - Aug. 2012), Faculty of Agriculture, Mutah University, Karak, Jordan.
9. **Assistant Professor of Plant Pathology** (Feb. 2005 - Feb. 2010) at Faculty of Agriculture, Mutah University, Karak, Jordan.
10. **Teaching Assistant** (Dec. 1997 - Aug. 2005) at Faculty of Agriculture, Mu'tah University, Karak, Jordan.
11. **Supervisor of plant protection** (Jun. to Nov. 1997) on field crops and fruit trees in Rum Agricultural Company, Desi, Jordan.

12. **Research Assistant** (1995-1997) at Faculty of Agriculture, University of Jordan.
13. **Agri. Engineer of Plant Protection** (1994-1995) in Private Sector, Jordan.

Professional Accomplishments

Taught courses at Faculty of Agriculture/ Mutah University:

1. General Microbiology
2. Principles of Plant Pathology
3. Principles of Integrated Pest Management
4. Principles of Plant Protection
5. Plant Pests and Economic Insects
6. Practices in Agricultural Experiments
7. Plant Tissue Culture (for students of Plant Production Dept.)
8. Under-graduate Student Seminar in Plant Production
9. Under-graduate Student Seminar in Plant Protection and IPM
10. Agricultural Statistics (for all faculty students)
11. Diseases of Field Crops and Horticulture
12. Pesticides
13. Economic Plant Diseases
14. Meteorology
15. Plant Disease Resistance
16. Field Practices in Plant Protection
17. Field Practices in IPM of Plant Diseases and Weeds.
18. Field Practices in Organic IPM
19. Seminar in Plant Protection and IPM
20. Seminar in Plant Production
21. IPM for Plant Diseases and Weeds.

☒ External examine or co-supervisor of many M.Sc. students in Mutah University, The University of Jordan and Jerash University and one Ph. D. student in The University of Jordan, Jordan.

☒ Founder or evaluator for B. Sc. and M. Sc. degree programs in agriculture in three universities in Jordan and another two Arab countries.

☒ Reviewer for research papers submitted for publication in journals or for

professional promotion.

☒ Member or head of many local or international committees.

☒ Supervisor for the following Master degree students:

1. Tasneem A. Al-Adaileh, M. Sc. thesis (2020) entitled 'Production of Apple Vinegar through Fermentation Technique using Baker's Yeast, Dept. of Nutrition and Food Industries, Faculty of Graduated Studies, Mutah University.
2. Nayel T. Al Kawalit, M. Sc. thesis (2020) entitled 'Influence of Different Rootstocks on Watermelon Growth and Yield and its Resistance to Fusarium Wilt and Root-Knot Nematode', Dept. of Plant Production, Faculty of Graduated Studies, Mutah University.

☒ **Laboratory Experience**

- ✓ Pathogen isolation, culturing, inoculation and disease assessment.
- ✓ DNA extraction, purification and analysis using molecular and biotechnical techniques.
- ✓ Use and application of plant tissue culture techniques.

Membership of Scientific Societies

- ❖ A member of ***Mediterranean Phytopathological Union***, Italy, Europe.
- ❖ A member of ***International Society of Plant Pathologists***, Worldwide.
- ❖ A member of ***Agricultural Engineer Association***, **Amman**, **Jordan**.
- ❖ A member of ***Jordan Society for Scientific Research, Entrepreneurship and Creativity,*** Amman, Jordan.

IPM-based and Communication Experience

1*An IPM based experience was formed during the last academic time period (15 years) using different IPM based control strategies e.g. use of resistant cultivars, early disease diagnosis based on traditional and molecular techniques, use of environmentally sound control measures of plant disease caused by fungi and nematodes.

2* A workshop lecturer on integrated pest management (IPM) of fruit trees was prepared by the Agricultural Engineer Association, Jordan (2010).

3* A workshop lecturer on integrated pest management (IPM) of fruit trees was prepared by the Agricultural Engineer Association, Jordan (2007).

4*A trainer for agricultural engineers of Ministry of Agriculture, Jordan in a training course entitled "IPM of wheat and barley" prepared by Faculty of Agriculture, Mutah University (2007).

5* A workshop lecturer on olive tubercular (bacterial olive knot) disease was prepared by

the national center for agricultural research and extension (2008).

6*A trainer for agricultural engineers (teachers of Ministry of Education, Jordan) in a training course entitled “Plant Tissue Culture" prepared by the Agricultural Engineer Association and National Center of Agricultural Research and Extension, Amman, Jordan (2009).

6*A trainer for agricultural engineers in a training course entitled “Diseases of Fruit trees and Grapevines" prepared by the Agricultural Engineer Association, Karak branch, Karak, Jordan (2010).

7* A committee member (**expert**) of Jordanian Society of Scientific Research in the field of plant protection in Saudi-PWC agricultural strategies and policies project for one year.

8* A lecturer and/or participant in the following conferences:

1. 9th Conference on Scientific Research in Jordan, University of Jordan, 2019, JJSREC, Amman, Jordan.
2. 2nd Jordan International Date Palm Festival, 2019, Amman, Jordan.
3. Biodiversity of wheat and Barley workshop, 2019, Amman, Jordan.
4. 8th Scientific Agricultural Conference. Mutah University, 2018, Karak-Jordan.
5. 11th Arab Congress of Plant Protection. Al-Balqa Applied University, 2014, Amman Jordan 9-13 November, 2014.
6. 6th Scientific Research conference in Jordan, 2013, Amman-Jordan.
7. 2013 National Agricultural Conference, 2013, Amman-Jordan.
8. 7th Scientific Agricultural Conference, Jordan University of Science and Technology, 2012, Irbid-Jordan.
9. 10th Arab congress of Plant Protection, 26-30 October, 2009, Beirut-Lebanon.
10. 6th Jordanian Agricultural Scientific Conference, 9-12 April 2007, Amman-Jordan.
11. 4th Scientific Agricultural Conference, 24-26 April, 2001. Jerash Private University, Jerash-Jordan.
12. 7th Arab Conference of Plant Protection, University of Jordan, 2000, Amman-Jordan.
13. 3rd Jordanian Agricultural Scientific Conference, Mutah University, 1999, Karak-Jordan.

Grants: A grant (1000 euros), in the memory of Professor Franco Lamberti, was awarded to me as an acknowledgement of high quality research in Plant pathology/ Nematology on the 12th Congress of the Mediterranean Phytopathological Union, June 12, 2006, Rhodes Island, Greece.

Certificates

SAS certificate, Academic Development and Quality Assurance Center, Mutah University, 2011.

International Computer Drive License (ICDL) from Computer center of Mutah University-the English ICDL exam on 5/1/2010.

Statistical Packages for Social Sciences (SPSS) certificate, Faculty Development Center, Mutah University, 2006.

E-learning certificate, Faculty Development Center, Mutah University, 2008.

Moodle Educational Portal. Faculty Development Center, Mutah University, 2009.

Participation certificate of 10th Arab congress of Plant Protection, 26-30 October, 2009, Beirut-Lebanon.

Participation certificate of 6th Arab congress of Plant Protection, 26-30 October, 2009, Beirut-Lebanon.

Participation certificate of 6th Scientific Research conference in Jordan, 2013, Amman-jordan.

Participation certificate of 8th Scientific Agricultural Conference. Mutah University, 2018, Karak-Jordan.

An expert certificate in academic agricultural education, The council of professional qualification and Assurance, Jordanian Agricultural Engineers Association, 2017, Amman-Jordan.

Funded Projects

1* Project "Diagnosis of *Verticillium dahliae* Latent Infection on Olive using DNA-Fingerprinting Techniques in Jordan" accomplished by Sameer Masoud and Muwaffaq Karajeh and financed by the Higher Council for Science and Technology, Amman, Jordan, 7000JD, (2000-2003).

2* Project "Survey of Plant-Parasitic Nematodes and their Natural Enemies in Karak Province" accomplished by Muwaffaq Karajeh and Nofal Al-Ameiri, and financed by the Deanship of Academic Research /Mutah University, 4500JD, (2007-2009).

3* Project "Utility of Nitrogen Fertilizers as Applicable and Environmentally Acceptable Mean for Controlling Root-Knot Nematodes in Jordan" under research by Muwaffaq Karajeh and Farah Al-Nasir, and financially supported by Scientific Research Support Fund, Ministry of Higher Education and Scientific Research, Jordan, 22000JD (2009-2015).

4* Project "Effects of Irrigation Regimes on Root-Knot Nematode and Its Host Plants; Tomato and Eggplant" under research by Osama Mohawesh and Muwaffaq Karajeh, and financially supported by Scientific Research Support Fund, Ministry of Higher Education and Scientific Research, Jordan, 32000JD (2010-2015).

Extension Activities

Supervisor of plant protection for many years (about 20 years experience in pest and disease diagnosis and control) on the field and vegetable crops and fruit trees in Rum private company, Desi, Jordan and at the Agricultural Research Station of Faculty of Agriculture, Mu'tah University and advisor for the farmers of the local community of Karak Province.

Publications

BaniMustafa, A., Qattous, H. Ghabeish, I. and **M. Karajeh**. 2023. A machine learning hybrid approach for diagnosing plant bacterial and fungal diseases. ***International Journal of Advanced Computer Science and Applications*** 14(1): 912-921.
Al-Rawashdeh, Z.B., **Karajeh, M.R.**, and E.M. Al-Ramamneh. 2022. A comparative study of onion purple blotch (caused by *Alternaria porri*) and tomato early blight (caused by *A. solani*) diseases in Southern Ghors of Jordan. ***Jordan Journal of Biological Sciences*** 15(1): 37-34.
Karajeh, M.R., Abu-Gharbieh, W.I. and S.A. Masoud. 2020. Cytogenetic status of root-knot nematodes in Jordan. ***International Journal of Agriculture, Environment and Bioresearch*** 5(6): 53-59.
Al-Ramamneh, E.M., S. Dura, H. Asoufi, M. Al-Syouf, M. Salameh, A. Al-Tawaha, and **M.R. Karajeh**. 2020. Molecular characterization of Jordanian Pomegranate (*Punica granatum* L.) genotypes using RAPD Markers in Ma'an region. ***Fresenius Environmental Bulletin*** 29(12):11761-11767.
Karajeh, M.R., Al-Rawashdeh, Z.B. and S.A. Al-Dalain. 2018. High efficacy of Sulfur compared to other measures in controlling post-harvest blue mold of apple. ***Jordan Journal of Agricultural Sciences*** 14(2): 242-253.
Karajeh, M.R. 2018. Pre-harvest bagging of grape clusters as a non-chemical physical control measure against certain pests and diseases of grapevines. ***Organic Agriculture*** 8: 259-264.
Karajeh, M.R. and Mohawesh, O. 2016. Root-Knot Nematode (*Meloidogyne Javanica*)–Deficit Irrigation Interactions on Eggplant Cropped under Open Field Conditions. ***Journal of Horticultural Research*** 24(1): 73-78.
Karajeh, M.R. 2015. Checklist of Host Range of Root-Knot Nematodes (Meloidogyne species and races) in Jordan. ***Jordan Journal of Agricultural Sciences*** 11(3): 761-769.
Al-Ameiri N.S., **Karajeh, M.R.** and S.Y. Qaraleh. 2015. Molds Associated with Olive Fruits Infested with Olive Fruit Fly (*Bactrocera oleae*) and their Effects on Oil Quality. ***Jordan Journal of Biological Sciences*** 8(3): 217-220.
Karajeh, M.R. and N.M. Salameh. 2015. Evaluation of okra landraces and accessions response to the root-knot nematode, *Meloidogyne javanica*. ***Jordan Journal of Agricultural Sciences*** 11(3): 735-745.
Mohawesh, O. and **M.R. Karajeh**. 2015. Greenhouse evaluation of deficit irrigation on the growth of tomato and eggplant and their interactions with *Meloidogyne javanica*. ***South African Journal of Plant and Soil*** 32: 55-60.
Al-Rawashdeh, Z.B., E.M. Al-Ramamneh and **M.R. Karajeh**. 2015. Efficacy of Non-Chemical Alternatives on Blue Mold of Apple under Controlled Cold

Storage Conditions. ***Journal of Agricultural Science*** 7(2): 112-117.

Karajeh, M.R. 2014. Enhancement of tomato growth, yield and resistance to the root-knot nematode (*Meloidogyne javanica*) after the field application of *Saccharomyces cerevisiae*. ***Hellenic Plant Protection Journal*** 7: 35-42.

Karajeh, M.R. and F.M. Al-Nasir. 2014. Field utilization of nitrogen fertilizers for controlling root-knot nematode and improving growth and yield of cucumber**.** ***International Journal of Agriculture and Forestry*** 4: 34-40.

Al-Ramamneh E., Z. Al-Rawashdeh, **M.R. Karajeh** and S. Abu-Romman. 2014. Plant Response of Strawberry to Intra-row Spacing and Growing Conditions in South of Jordan. ***Asian Journal of Plant Sciences*** 12 (50): 201-207.

Al-Rawashdeh, Z.B. and **M.R. Karajeh.** 2014. Post-harvest control of apple blue mold under cold storage conditions. ***American Journal of Agricultural and Biological Sciences*** 9: 167-173.

Shadiadeh, A.N., **M.R. Karajeh**, A.S. Al-Alawi, S.M. Abu Bakr, M.A. Shatnawi and H.S. Hassan. 2013. Knowledge level in tomato diseases among tomato growers in Southern Gours. ***Arab Journal of Plant Protection*** 31(1): 83-90.

Karajeh, M.R. 2013. Efficacy of *Saccharomyces cerevisiae* on controlling the root-knot nematode (*Meloidogyne javanica*) infection and promoting cucumber growth and yield under laboratory and field conditions. ***Archives of Phytopathology and Plant Protection*** 46: 2492-2500.

Karajeh, M.R. and F.M. Al-Nasir. 2013. Field Assessment of efficacy of nitrogen salts to control the root-knot nematode (*Meloidogyne javanica*) on tomato. ***Archives of Phytopathology and Plant Protection*** 47(16): 1912-1920.

Karajeh, M.R. and F.M. Al-Nasir. 2013. Ability of nitrogen containing salts to control the root-knot nematode (*Meloidogyne javanica*) on tomato. ***Hellenic Plant Protection Journal*** 6: 19-27.

Karajeh, M.R. and F.M. Al-Nasir. 2012. Effects of nitrogen fertilizers on the Javanese root-knot nematode *Meloidogyne javanica* and its interaction with cucumber. ***Archives of Phytopathology and Plant Protection***: 45 (18), 2177-2188.

Karajeh, M.R., Z.B. Al-Rawashdeh, and E.M. Al-Ramamneh. 2012. Occurrence and control of strawberry powdery mildew in Al-Shoubak/ Jordan. ***Jordan Journal of Agricultural Sciences*** 8(3): 380-390.

Karajeh M.R., Owais S.J. (2012): Reaction of selected apple cultivars to wilt pathogen *Verticillium dahliae*. ***Plant Protection Science*** 48: 99–104.

Karajeh, M.R., A.H. Abdel-Ghani and N. Al-Majali. 2011. Response of wheat, barley and oat cultivars and accessions to *Meloidogyne javanica*.

Nematologia Mediterranea 39: 85-89.

Karajeh, M.R. and N.S. Al-Ameiri. 2010. Extensive survey of plant-parasitic nematodes in Karak Province of Jordan. ***DIRASAT, Agricultural Sciences*** 36(2): 77-81.

Karajeh, M.R., Abu-Gharbieh, W.I. and S.A. Masoud. 2010. DNA extraction and PCR-based diagnosis of the root-knot nematodes (*Meloidogyne* species) of Jordan. ***Jordan Journal of Agricultural Sciences*** 6(3): 342-352.

Karajeh, M.R. 2008. Interaction of root-knot nematodes (*Meloidogyne javanica*) and tomato as affected by hydrogen peroxide. ***Journal of Plant Protection Research*** 48 (2): 181-188.

Karajeh, M.R. and F.M. Al-Nasir. 2008. Salt suppression of root-knot nematode (*Meloidogyne javanica*) in tomato. ***Nematologia Mediterranea*** 36: 185-190.

Karajeh, M.R. and A.R. Al-Momany. 2008. Effect of post-planting soil solarization and solar chamber on *Verticillium* wilt of olive. ***Jordan Journal of Agricultural Sciences*** 4(4): 335-342.

Abdel-Ghani, A.H., N.S. Al-Ameiri, and **M.R. Karajeh**. 2008. Resistance of barley landraces and wild barley populations to powdery mildew in Jordan. ***Phytopathologia Mediterranea*** 47 (2): 92-97.

Karajeh, M.R., Abu-Gharbieh, W.I. and S.A. Masoud. 2005. Virulence of root-knot nematodes, *Meloidogyne* spp., on tomato bearing the Mi gene for resistance. ***Phytopathologia Mediterranea*** 44 (1): 24-28.

Karajeh, M.R., Abu-Gharbieh, W.I. and S.A. Masoud. 2005. First report of the root-knot nematode *Meloidogyne arenaria* race 2 from several vegetable crops in Jordan. ***Plant Disease*** 89 (2): 206.

Abu-Gharbieh, W.I., Karajeh, M.R. and S.A. Masoud. 2005. Current distribution of the root-knot nematodes (Meloidogyne species and races) in Jordan. ***Jordan Journal of Agricultural Sciences*** 1(1):43-48.

Karajeh M.R. 2004. Identification, Distribution, and Genetic Variability of the Root-knot Nematodes (*Meloidogyne* spp.) in Jordan. Ph. D. Thesis, ***University of Jordan***, Amman, Jordan, 152 pp.

Masoud, S.H. and **M.R. Karajeh.** 2003. Diagnosis of *Verticillium dahliae* Kleb. Latent Infection on Olive using DNA-Fingerprinting Techniques in Jordan. ***The Higher Council for Science and Technology***, Jordan, 31 p (Booklet).

Karajeh, M.R. and A. R. Al-Momany. 1999. Effect of VA mycorrhizal fungus (*Glomus mosseae*) on *Verticillium dahliae* of olive. ***Dirasat, Agricultural Sciences*** 26: 338-341.

Karajeh M.R. 1997. Control of *Verticillium* Wilt of Olive Trees in Jordan. M. Sc. Thesis, ***University of Jordan***, Amman, Jordan, 61 pp.

كراجه، موفق رمضان. 2015. لمحة عن المكافحة المتكاملة للآفات. البحث العلمي، ***مجلة صادره عن الجمعية الأردنية للبحث العلمي***، العدد 7، كانون أول، عمان، الأردن. ص 35-45.

كراجه، موفق رمضان وسميرة حمدان سلامي.2010. نيماتودا تعقد الجذور: 1. الأنواع والسلالات والتوزيع. الفصل السابع، ص 215-244، الجزء الأول، في **كتاب: أبو غربية، وليد إبراهيم، وأحمد سعد الحازمي، وأحمد عبد السميع دوابة** .2010. **نيماتودا النبات في البلدان العربية**. الطبعة الأولى، ***الجمعية العربية لوقاية النبات***، دار وائل للنشر، 1183 صفحة.

إسماعيل، أحمد السيد، و**موفق رمضان كراجه**، وعبد المجيد ياسين .2010. النيماتودا خارجية التطفل على الجذور. الفصل الرابع عشر، ص 507-552، الجزء الأول، في **كتاب: أبو غربية، وليد إبراهيم، وأحمد الحازمي، وأحمد عبد السميع دوابة** .2010. **نيماتودا النبات في البلدان العربية**. الطبعة الأولى، ***الجمعية العربية لوقاية النبات***، دار وائل للنشر، 1183 صفحة

الحازمي، أحمد سعد، وخليفة حسين دعباج، و**موفق رمضان كراجه**، وصالح نعمان النظاري .2010. نيماتودا تعقد الجذور: إحيائية النيماتودا. الفصل الثامن، ص 245-284، الجزء الأول، **في كتاب: أبو غربية، وليد إبراهيم، وأحمد سعد الحازمي، وأحمد عبد السميع دوابة .2010. نيماتودا النبات في البلدان العربية**. الطبعة الأولى، ***الجمعية العربية لوقاية النبات***، دار وائل للنشر، 1183 صفحة.

كراجه، موفق رمضان. 2018. تكييس قطوف العنب للوقاية من الآفات والأمراض: مناقشة دراسة تطبيقية. نقابة المهندسيين الزراعيين. ***مجلة المهندس الزراعي*** عدد 94: 49-51.