

Jordan University of Science and Technology



Faculty of Agriculture
Department of Plant Production

Curriculum Vitae

Name: Ibrahim M. Makhadmeh, Ph.D., Plant Production and Resources
Horticulture/Vegetables.



Nationality: Jordanian

Date of Birth: Dec. 16, 1962

Place of Birth: Ramtha, Jordan

Present academic rank: Associate Professor

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Biographical Data:

Vice Dean – College of Agriculture, Jordan University of Science and
Technology, Irbid-Jordan (2012 – present)

Vice Dean- Deanship of Student Affairs, Jordan University of Science and
Technology, Irbid-Jordan (2009- 2010)

Assistant Dean- Deanship of Student Affairs, Jordan University of Science and Technology, Irbid-Jordan (2008- 2009)

Associate Professor- Department of Plant Production, Faculty of Agriculture, Jordan University of Science and Technology, Irbid-Jordan (2008).

Department Head- Department of Plant Production, Jordan University of Science and Technology. Irbid-Jordan. (2004 till 2006)

Assistant Dean- Faculty of Agriculture, Jordan University of Science and Technology, Irbid-Jordan (2002-2004).

Assistant Professor- Department of Plant Production, Faculty of Agriculture, Jordan University of Science and Technology, Irbid-Jordan (August, 7, 2000).

Ph.D.- Mississippi State University, Starkville, MS, USA. 1/96-5/2000.

Dissertation: Reduction of Chilling Injury in Sweet Potato (*Ipomea batata* Lam.)

M.Sc.- University of Jordan-Amman, Jordan. 10/86-6/90.

Thesis: Effects of different factors on germination, establishment, growth and monthly variation in chemical composition of different *Atriplex* species in Mwaqar.

B. Sc. in Horticulture, University of Sallah Edden, Irbel, Iraq.1985

Previous Employment:

- **Graduate Research Assistant**, Mississippi State University. 1998-2000
- **Research and Teaching Assistant**, Department of Plant Production, Jordan University of Science and Technology 1991-1995
- **Research Assistant**, Department of Plant Production, University of Jordan 1986-1988

Publications:

1. **Ibrahim M Makhadmeh**, Ammar Albalasmeh, Mohammed Ali, Samar G Thabet, Walaa Darabseh, Saied Jaradat and Ahmad M Alqudah. **2022**. Molecular characterization of tomato (*Solanum lycopersicum* L.) accessions under drought stress. *Horticulturae*, 8:600.
<https://doi.org/10.3390/horticulturae8070600>.
2. **Ibrahim M Makhadmeh**, Samar G Thabet, Mohammed Ali, Basmah Alabbadi, Ammar Albalasmeh, Ahmad M Alqudah. **2022**. Exploring genetic variation among Jordanian *Solanum lycopersicon* L. landraces and their performance under salt stress using SSR markers. *Journal of Genetic*

Engineering and Biotechnology, 20:45 <https://doi.org/10.1186/s43141-022-00327-2>.

3. **Ibrahim Makhadmeh**, Khaled Abu Rashed, Ammar A Albalasmeh. **2022**. Treated wastewater as a partial nutrient source for Lily grown in a soilless system in presence of Arbuscular Mycorrhizal Fungi. International journal of recycling organic waste in agriculture, <https://doi.org/10.30486/IJROWA.2022.1950291.1405>.
4. **Ibrahim M Makhadmeh**, Seba F Gharaiebeh, Ammar A Albalasmeh. **2021**. Impact of Irrigation with Treated Domestic Wastewater on Squash (*Cucurbita pepo* L.) Fruit and Seed under Semi-Arid Conditions. Horticulturae 7, 226; <https://doi.org/10.3390/horticulturae7080226>.
5. Nezar H. Samarah, Mu'awia M. Bany Hani, **Ibrahim M Makhadmeh**. **2021**. Effect of Magnetic Treatment of Water or Seeds on Germination and Productivity of Tomato Plants under Salinity Stress. Horticulturae, 7, 220; <https://doi.org/10.3390/horticulturae7080220>.
6. Ahmad M Al-Far, Maher J Tadros, **Ibrahim M Makhadmeh**. **2019**. Evaluation of different soilless media on growth, quality, and yield of cucumber (*'Cucumis sativus'* L.) grown under greenhouse conditions. Australian Journal of Crop Science 13: 1388-1400 <https://doi:10.21475/ajcs.19.13.08.p2122>.
7. Abdel Razzaq Al-Tawaha, Ghazi Al-Karaki, Abdel Rahman Al-Tawaha, Sitti Nurani Sirajuddin, **Ibrahim Makhadmeh**, Puteri Edaroyati Megat Wahab, Refat A Youssef, Wael Al Sultan, Adnan Massadeh. **2018**. Effect of water flow rate on quantity and quality of lettuce (*Lactuca sativa* L.) in nutrient film technique (NFT) under hydroponics conditions. Bulgarian Journal of Agricultural Science, 24: 791-798.
8. **Ibrahim M Makhadmeh**, Abdelrazzaq Al-Tawaha, Puteri Edaroyati, Ghazi Al-Karaki, Abdel Rahman Al Tawaha, Siti Aishah Hassan. **2017**. Effects of different growth media and planting densities on growth of lettuce grown in a closed soilless system. Research on Crops, 18: 294-298.
9. Wesam Al Khateeb, May Abu Serdane, Ahmad El-Oqlah, **Ibrahim Makhadmeh**. **2016**. Evaluation of in Vitro Salt Tolerance in

- Cucumis prophetarum L., A Crop Wild Relative. Jordan Journal of Agricultural Sciences, 12: 1095-1113.
10. Tareq M Osaili, Abbas F Al Jamali, **Ibrahim M Makhadmeh**, Mohammad Taha, Sukiena K Jarrar. **2016**. Heavy metals in vegetables sold in the local market in Jordan. Food Additives & Contaminants: Part B, 9:223-229.
 11. Laith M Rousan, **Ibrahim M Makhadmeh**, Hussein S Abu-Alsheeh. **2016**. Adoption of Integrated Pest Management (IPM) Practices to Control Capnodes Pests on Stone Fruit Trees in Irbid Governorate in Jordan. Jordan Journal of Agricultural Sciences, 12: 521-533.
 12. Firas Abu-El Samen, Saba J Goussous, Anas Al-Shudifat, **Ibrahim Makhadmeh**. **2016**. Reduced sensitivity of tomato early blight pathogen (*Alternaria solani*) isolates to protectant fungicides, and implication on disease control. Archives of Phytopathology and Plant Protection, 49: 120-136.
 13. Firas Abu-El Samen, SJ Goussous, AA Jendi, **IM Makhadmeh**. **2015**. Evaluation of tomato early blight management using reduced application rates and frequencies of fungicide applications. International journal of pest management, 61:320-329.
 14. Nidal Q Daradkeh, Rida A Shibli, **Ibrahim M Makhadmeh**, Feras Alali, Tamara S Al-Qudah. **2012**. Callus Culture and Somatic Embryogenesis in Wild (*Colchicum Hierosolymitanum* Feib.). Jordan Journal of Agricultural Sciences, 8: 536-555.
 15. Aktham Abu-Khadejeh, Rida Shibli, **Ibrahim Makhadmeh**, Munir Mohammad. **2012**. Influence of Increased Salinity on Physiological Responses of Hydroponic Grown Tomato\ *Lycopersicon Esculentum* Mill. Jordan Journal of Agricultural Sciences, 8: 321-331.
 16. Hana J Al-Mahmood, Mohamad A Shatnawi, Rida A Shibli, Ibrahim M Makhadmeh, Samih M Abubaker, Ahmed N Shadiadeh. **2012**. Clonal propagation and medium-term conservation of *Capparis spinosa*: a medicinal plant. Journal of Medicinal Plants Research, 6: 3826-3836.
 17. Hmoud S Al-Debei, **Ibrahim Makhadmeh**, Ibrahim Abu-Al Ruz, Ayed M Al-Abdallat, Jamal Y Ayad, Noor Al Amin. **2012**. Influence

- of different rootstocks on growth and yield of cucumber (*Cucumis sativus* L.) under the impact of soil-borne pathogens in Jordan. *Journal of Food, Agriculture & Environment*, 10: 343-349.
18. SA Azzam, NS Karam, KM Hameed, SJ Goussous, AD Maraqa, **IM Makhadmeh**. 2012. Investigation of indigenous plant root associated bacteria and yeast isolates for plant growth promoting ability. *Jordan Journal of Agricultural Sciences*, 8: 1-13.
19. Nidal Q Daradkeh, Rida A Shibli, **Ibrahim M Makhadmeh**, Feras Alali, Tamara S Al-Qudah. 2012. Cell suspension and in vitro production of colchicine in wild colchicum hierosolymitanum Feib. *The Open Conference Proceedings Journal*, 3: 52-59.
20. Savinaz H Baghdadi, Rida A Shibli, Maha Q Syouf, Mohammad A Shatnawai, Arabia Arabiat, **Ibrahim M Makhadmeh**. 2011. Medium term preservation of wild Crocus (*Crocus hyemalis* and *Crocus moabiticus*) embryogenic callus. *Jordan Journal of Agricultural Sciences*, 7: 1-28.
21. Khaled W. Nazzal, Rida A. Shibli, **Ibrahim M. Makhadmeh** and Maha Q. Syouf. 2011. Amplified Fragment Length Polymorphism (AFLP) Analysis in *Crocus* spp. Collected from Northern Jordan. *Jordan Journal of Agricultural Sciences*, 7: 1-8.
22. Aktham Abu-Khadejeh, **Ibrahim Makhadmeh** , Rida A. Shibli and Munir J. Mohammad. 2011. Physiological Responses of Tomato Microshoot Cultures to in vitro Induced Salinity Stress. *Jordan Journal of Agricultural Sciences*, 7: 260-272.
23. Rida A. Shibli , Aktham Abu-Khadejeh , Ibrahim Makhadmeh and Munir J. Mohammad. 2011. Growth and Physiological Responses of Tomato (*Lycopersicon esculentum* Mill.) Callus and Cell Suspension to in Vitro Induced Salinity. *Jordan Journal of Agricultural Sciences*, 7: 300-311.
24. S. H. Baghdadi, R. A. Shibli , M. Q. Syouf , M. A. Shatanawi4 , A. Arabiat, and I. M. Makhadmeh. 2010. Cryopreservation by Encapsulation-vitrification of Embryogenic Callus of Wild Crocus (*Crocus hyemalis* and *Crocus moabiticus*) (Research Note) *Jordan Journal of Agricultural Sciences*, 6: 436-443.

25. Azzam, S. A.; Karam, N. S.; Hameed, K. M.; Goussous, S. J.; Makhadmeh, I. M.; Maraqa, A. D. **2010**. Enhanced Growth of Marigold (*Tagetes erecta* L.) Upon Inoculation with Selected Indigenous Isolates of Bacteria and Yeast. (S14.018) 28th International Horticultural Congress. Lisboa
26. **Ibrahim Makhadmeh**, Siham Al-Lozi, Mahmud Duwayri, Rida A. Shibli and Hussein Migdadi. **2010**. Assessment of Genetic Variations in Wild Arum Species from Jordan Using Amplified Fragment Length Polymorphism (AFLP) Markers. *Jordan Journal of Agricultural Sciences*, 6: 224-239.
27. Hani Ghosheh, Mohammad Al-Kawamleh, **Ibrahim Makhadmeh**. **2010**. Weed Competitiveness and Herbicidal Sensitivity of Grafted Tomatoes (*Solanum Lycopersicon* Mill.). *Journal of Plant Protection Research*, 50: 307-313.
28. Rida A. Shibli, Nidal Q. Daradkah, **Ibrahim M. Makhadmeh** and Savinaz H. Baghdadi. **2010**. Colchicine Production from *Colchicum* and the Role of in vitro Cultures: A Review. *Jordan Journal of Agricultural Sciences*, 6: 208- 223
29. M. Shatnawi, A. Fauri, R. Shibli, M. Al-Mazraawi, H. Megdadi and **I. Makhadmeh**. **2009**. Tissue Culture and Salt Stress in *Chrysanthemum morifolium* . *Acta Hort.* 829, ISHS 189-194
30. R. Shibli, S. Baghdadi, M. Syouf, M. Shatnawi, A. Arabiat and **I. Makhadmeh**. **2009**. Cryopreservation by Encapsulation-Dehydration of Embryogenic Callus of Wild Crocus (*Crocus hyemalis* and *C. moabiticus*) *Acta Hort.* 829, ISHS 197-204.
31. **Ibrahim Makhadmeh**, E. Taye, R. Shibli and G. Al-Karaki. **2008**. Nodulation and morphological responses of Faba bean (*Vicia faba*) to water stress. *American-EuroAsian journal of Agricultural and Environmental Sci.* 4(5): 646-654.
32. **Ibrahim Makhadmeh** and M. Shatnawi. **2008**. In vitro propagation of threatened *Pimelea spacata* from mature plant material. *Adv. Hort. Sci.*, 22(3). 212-217.
33. Siham Al-Lozi, **Ibrahim Makhadmeh**, Mahmud Duwayri, Rida Shibli and Hussein Migdadi. **2008**. Assessment of Phenotypic

Variation of Arum Species in Jordan. Jordan Journal of Agricultural Sciences, 4: 367-379.

34. Mohamad Shatnawi, N. Frehat, **I. Makhadmeh**, R. Shibli and A. Abu Ein. **2007**. Influence of sugar source on growth and sugar uptakes of *in vitro* grown wild pear (*Pyrus syriaca*). Adv. Hort. Sci., 21(3): 133-140.
35. Ahmad Ztaimeh, R. Shibli, Nabeela Karam and **Ibrahim Makhadmeh**. **2007**. Physiological responses of Muskmelon (*Cucumis melo* L.) to NaCl salinity *in vitro* and hydroponic cultures. Jordan Journal of Agricultural Sciences, 3 (3):213-221.
36. Hail Shannag, Jafar Al-Quda, **Ibrahim Makhadmeh** and N. Freihat. **2007**. Differences in growth and yield responses to *Aphis gossypii* between different Okra varieties. Plant Protect. Sci. 43: 109-116.
37. Naji Ebrahim, Rida Shibli, **Ibrahim Makhadmeh**, M. Shatnawi and A. Abu-Ein. **2007**. In vitro propagation and In vivo acclimatization of three coffee cultivars (*Coffea Arabica* L.) from Yemen. World Applied Science Journal, 2(2): 142-150.
38. Hail Shannag, **Ibrahim Makhadmeh**, Jafar Al-Quda. **2006**. Impact of *Aphis gossypii* Glover (Homoptera: Aphididae) on growth rate of Okra plants (*Abelmoschus esculentus* L.). Belgian Journal of Entomology 8: 83-90.
39. Hani Saoub, M. El-Shatnawi, **I. Makhadmeh**, N. Haddad and F. Aukour. **2005**. Clipping of *Avena sterilis* under sub-humid Mediterranean condition. Crop Res. 29(1): 77-86.
40. Mai M. Abu-Shama, Rida A. Shibli, Khalil I. Ereifej and **Ibrahim M. Makhadmeh**. **2005**. Growth and physiological responses of tomato landrace 'Rohaba' (*Lycopersicon esculentum* Mill.) to in Vitro induced water deficit. Jordan Journal of Agricultural Sciences. 1:107-118.
41. Abdul-Majeed A. Al-Ghzawi, Shahera T. Zaitoun, **Ibrahim Makhadmeh** and Abdel-Rahman Al-Tawaha. **2005**. The impact of wild bees on the pollination of eight okra genotypes under semi-arid mediterranean conditions. International Journal of Agriculture and Biology, 4 :408-410.

42. **I. M. Makhadmeh**, and Khalil I. Ereifej. **2004**. Geometric Characteristics and Chemical Composition of Okra (*Hibiscus esculentus* L.) Grown Under Semi-Arid Conditions. International J. of Food Properties. 7: 83-90.
43. Moh'd Khair J. El-Shatnawi, Taoufik Ksiksi, **I. M. Makhadmeh** and N. I. Haddad. **2003**. Physiological impacts of increasing global carbon dioxide on terrestrial vegetation-A review. Crop Res. 25 (1) 1-11.
44. El-Shatnawi and **I. Makhadmeh**. **2002**. Growth and development of wild oat and dual-purpose barley seedlings. J. Agronomy & Crop Science 188:141-145.
45. El-Shatnawi and **I. Makhadmeh**. **2001**. Ecophysiology of the plant-rhizosphere system. J. Agronomy & Crop Science 187: 1-9.

Activities

Teaching:

A. Undergraduate Courses:

- Vegetable Production (PP 321)
- Vegetable Production Lab. (PP 321)
- Special Topics in Vegetable Production (PP 492)
- Practical Training 1 & 2. (PP 401; 402)
- Seminar (PP 491)
- Home Gardening (PP 200)

B. Graduate Courses:

- Design and Analysis of Experiments (PP 701; AS 701)
- Advanced Vegetable Production (PP 721)
- Graduate Comprehensive Exams (PP 792)

Graduate Students (Advisor and co-advisor):

1. **Alqasem Almakhadmeh**. 2022. Evaluation of the effect of silicon on improving the growth of lettuce in a floating hydroponic system.
2. **Muawyah BaniHani**. 2019. Effect of magnetic treatments of seeds or saline water on seed germination seedling growth and productivity of tomato plants.

3. **Ahmad Alfar.** 2019. Evaluation of Different Soilless Media on Growth Quality and Yield of two Cucumber Cultivars *Cucumis sativus* L Grown under Greenhouse Conditions.
4. **Abdulrahman Alfawaaz.** 2017. Effect of foliar application of amino acid and micronutrients mixture on growth yield and physiological responses in sweet peppers *Capsicum annum* L.
5. **Seba Gharaibeh.** 2016. Potential uses of Treated Wastewater to irrigate Squash *Cucurbita pepo* L plants.
6. **Osama Meqdadi.** 2016. Genetic Variation among *Ruta chalepensis* populations from north Jordan using morphological assessment and AFLP marker.
7. **Khaled Abu-Rashed.** 2015. The effect of Arbuscular Mycorrhiza fungi on tolerance of hybrid lily to salinity in closed soilless culture.
8. **Husain Abu-Sheh.** 2014. Adoption of integrated pest management IPM practices by farmers for control of *Capnodes* on stone fruit trees in Irbid Governorate in Jordan.
9. **Christina Bnian.** 2014. Water users associations WUAs performance in irrigation management in northern Jordan valley from farmers point of view.
10. **Walaa Darabseh.** 2013. Genetic Variation Among Local Tomato Landraces Using Simple Sequence Repeats SSRs and their drought resistance at germination and seedling stages.
11. **Ibrahim Abu Ruz.** 2009. Effect of different root stocks on growth, production, and nematode resistant of cucumber (*Cucumis sativus*).
12. **Abir Jendi.** 2009. The effect of the application frequency and doses of Mancozeb and Azoxystrobin on the management of Tomato early blight (*Alternaria solani*).
13. **Basma Abadi.** 2008. Genetic Variations among Jordanian Local Tomato Landraces using Simple Sequence Repeat (SSR) and their salt tolerance during germination and seedling stage.
14. **Mohamad Kawamleh.** 2008. Evaluation of Weed Competitiveness and Herbicidal Sensitivity of Grafted Tomatoes (*Lycopersicon esculentum* Mill).
15. **Siham Al-Lozi.** 2007. Phenotypic and Genetic Variation of *Arum* Species in Jordan.
16. **Khalid Nazal.** 2007. AFLP Analysis in Crocus species collected from northern Jordan.
17. **Mohamad Al-Omouh.** 2007. Gross Chemical Composition, Mineral Content, Phenolics, Anthocyanins and Antioxidants Determination in some Wild Plants with Medicinal Potential from Jordan.
18. **Nedal Dradkah.** 2007. Callus, Cell Suspension culture and Colchicine production in *Colchicum hierosolymitanum*.
19. **Basim Essa.** 2006. Comparative responses of eggplant (*Solanum Melongena* L.) microshoots to salinity in vitro and in hydroponic cultures.
20. **Emad Shnikat.** 2006. Response of Bell Pepper (*Capsicum annum* L.) Plant to Carbon Dioxide Enrichment Under Soilless culture Conditions.

21. **Hadeel Bataineh.** 2006. Chemical composition and seed germination of *Rhus coriaca* L. collected from Ajlun area.
22. **Azhar Hourani.** 2004. Influence of Organic and Inorganic Fertilizer on Yield and Yield components of Irrigated Corn (*Zea mays* L.) in northern Jordan.
23. **Jaffar Qudah.** 2004. Effect of Melon Aphid, *Aphis Gossypii* Glover, on Different Okra Varieties, *Abelmoschus Esculentus* (L.).
24. **Yousef Omari.** 2003. Influence of Potassium and Salinity on Cucumber Plants (*Cucumis sativus* L.) Grown in Hydroponics Culture.
25. **Endale Taye Wondim.** 2002. Morphological, Physiological, & Yield Traits of Faba Bean (*Vicia fabae* L.) Genotypes as Influenced by Drought Stress.

Graduate Students (more than 40 examining committees):

1. **Majda al Harbi.** 2022. Farmers opinions toward replacing new vegetable varieties that achieve agriculture sustainability under Corona pandemic in Jordan valley. Jarash University.
2. **Zainab AboAloush.** 2022. The effect of magnetized water and Fe₃O₄ nanoparticles on seed germination and seedling growth of wheat Triticum durum Land barley Hordeum vulgare L. Jordan University of Science and Technology.
3. **Batool Alwraikat.** 2022. Ultrasonic treatment to enhance seed germination and vigor of wheat in association with GABA shunt pathway. Jordan University of Science and Technology.
4. **Wafa Obada.** 2021. Effect of salinity on morphological, physiological characteristics and leaf ultrastructure in corn (*Zea mays* L.). Jordan University of Science and Technology.
5. **Ayah Tanash.** 2021. Effect of Drought Stress on Wheat Triticum durum L Growth and Metabolism Insight from GABA shunt Reactive Oxygen Species and Dehydrin genes expression. Jordan University of Science and Technology.
6. **Hamed Alkhatatbeh.** 2021. Comparative Analysis of the Complete Chloroplast Genome of Two Prosopis Species Prosopis juliflora and Prosopis farcta in Jordan. Jordan University of Science and Technology.
7. **Majd Abusalem.** 2019. Effect of green synthesized iron nanoparticle on growth and physiological responses of tomato (*Solanum lycopersicum* L). University of Jordan.
8. **Arwa Mehdawe.** 2019. Effect of Foliar Application of Moringa Leaf Extract on Growth and Yield of sweet Pepper Under greenhouse conditions. Mutah University, 2019.
9. **Tojan Al-Rawashdeh.** 2019. Growth and Yield of Sweet Pepper (*capsicum annum* L.) as Influenced by Seaweed Extract and Humic acid under greenhouse Conditions., M.Sc. Mutah University.
10. **May Abu Serdane.** 2015. Evaluation of in Vitro Salt Tolerance in *Cucumis prophetarum* L., A Crop Wild Relative. Yarmouk University.

University Services (Last 5 years)

Department of Plant Production Committees:

- Graduate Comprehensive Exams Committees
- Graduate Studies Committee
- Students Affairs Committee
- Research Committee
- Instruments and supplies committee advisor
- Greenhouses committee
- University farm (Jordan Valley) committee
- Greenhouses management committee

Faculty of Agriculture Committees:

- Faculty Tenders Committee Advisor
- Faculty Supplies Committee Advisor
- Graduate Studies Committee
- Students Affairs Committee Advisor

Jordan university of Science and Technology Committees:

- Agriculture Technology Club Consultant
- Graduation Day Committee Member
- JUST yearbook Committee Member
- University Student Affairs Committee Member
- University accreditation committee member
- International Student Club Advisor
- Disciplinary Board Member

Peer Reviewing:

Peer reviewed for many local and international journals.

Community Services:

- Chairman of BoD (MIRRA) Methods for Irrigation and Agriculture.
- Accreditation committee of Plant Productions at the Jordanian Universities (Ministry of Higher Education).
- Member of National team of Organic Farming (Jordan Valley Foundation)
- Member of Technical Panel Committee of Horticultural Product Export Promotion Project (NCARTT & Ministry of Planning and international cooperation)
- Member of Irrigated Agriculture Production Council (NCARTT, National Center of Agriculture research and technology Transfer)
- Member of Agro Biodiversity Project (JUST, JU, NCARTT, JIF, UNDP, ICARDA)

- Member of Water Harvesting Project (JUST and ICARDA)
- Member of JUST faculty society.
- Member of Agriculture engineering society.
- Participation of several other committees for the Jordanian Ministry of Agriculture and NCARTT, all concerning issues dealing with horticulture.