Jordan University of Science and Technology



Faculty of Agriculture

Department of Plant Production

Curriculum vitae

Dr. Zakaria I. Al-Ajlouni

Dept. of Plant Production/Faculty of Agriculture. Jordan University of Science and Technology

Irbid-22110, Jordan

Email: <u>ziajlouni@just.edu.jo</u>

Phone: ++962-27201000 ex. 22053; ++962795231625

Fax ++962-2-70201078



EDUCATION

Ph.D. Agronomy, Dept. of Agronomy and Horticulture,	2003-2008
University of Nebraska-Lincoln, USA.	
M.Sc., Plant Production, Jordan University of Science and	1998-2001
Technology	
B.Sc. Plant Science,	1993-1997
Jordan University of Science and Technology	

Ph.D. Dissertation

Al-Ajlouni (2008). The Effect of Semidwarfing Genes in Wheat on Plant Height in Diverse Environment in Nebraska. Ph.D. thesis, University of Nebraska-Lincoln, USA. Under supervision, Prof. P. Stephen Baenziger, Department of Agronomy and Horticulture. University of Nebraska, Lincoln.

M.Sc. Thesis

Al-Ajlouni (2001). Callus Induction and *In Vitro* Regeneration Systems in Barley (*Hordeum vulgare* L.): Influence of Genotype. MS. Thesis, Jordan University of Science and Technology.

EMPLOYMENT August 2024— Present	Professor, Dept. of Plant Production Sciences, Jordan University of Science and Technology -Irbid-Jordan.
September 2023 – September 2024	Vice Dean of the Faculty of Agriculture, Jordan University of Science and Technology, Irbid, Jordan.
September 2023 – September 2024	Acting Chairmen of Plant Production Department, Faculty of Agriculture, Jordan University of Science and Technology (Irbid-Jordan)
September 2023 – September 2024	Acting Director of the College of Agriculture's Research and Training Department, Jordan University of Science and Technology (Irbid-Jordan)
September 2022 – September 2023	Vice dean of student affairs, Jordan University of Science and Technology -Irbid-Jordan.
September 2021 – September 2022	Vice dean of student affairs, Jordan University of Science and Technology, Irbid, Jordan.
September 2020 – September 2021	Vice dean of student affairs, Jordan University of Science and Technology, Irbid, Jordan.
September 2019–September 2020	Acting Chairmen of Plant Production Department, Faculty of Agriculture, Jordan University of Science and Technology (Irbid-Jordan)
September 2018 – September 2019	Sabbatical leave at Agronomy department- Nebraska State University. Funded from an Arab fund program in Kuwait.
September 2017 – September 2018	Vice dean of student affairs, Jordan University of Science and Technology -Irbid-Jordan.
May 2016 – August 2024	Associate Professor, Dept. of Plant Production Sciences, Jordan University of Science and Technology -Irbid-Jordan.
September / 2009 - May /2016	Assistant Professor, Dept. of Plant Production

September 2013 - September 2015

Sciences,

Technology -Irbid-Jordan.

Jordan University of Science and

Assistant Dean, Faculty of Agriculture, Jordan University of Science and Technology -Irbid-Jordan

September 2011 - September 2012	Assistant Dean, Faculty of Agriculture, Jordan University of Science and Technology -Irbid-Jordan
September 2008- September 2009	Full-time lecturer- Dept. of Plant Production, Jerash Private University -Jerash -Jordan
February 2002 – August 2003.	Researcher - National Center for Agricultural Research and Technology Transfer, Jordan, Amman. Water Resources and Environment Management Program. Using Treated Wastwater in Agriculture (Wood and Forage Production)
June 2001 - February 2002	Research Assistant - Dept. of Plant Production, Jordan University of Science and Technology, Irbid-Jordan. Supervisor: Prof. Dr. Rida Shibli, Duties included: <i>In vitro</i> Plant culture and multiplication.
September 1997 - September 2008	Research Assistant – Agriculture Research Center, Jordan University of Science and Technology, Irbid- Jordan. Supervisor: Prof. Dr. Rida Shibli,

PUBLICATIONS:

- 1. Rania M. Jammal, Abdul Latief Al-Ghzawi, Mohamad Shatnawi, **Zakaria I. Al-Ajlouni**, Shifaa Abbas, Mohammad M. Al Salem, Ghaith S. Bani Hani, Nisreen M. Awad, Abdel Rahman Al-Tawaha. **2025.** Micropropagation and in Vivo Antibacterial Activity of Different Extracts of Rue (Ruta graveolens l). JJBS. Accepted.
- 2. **Zakaria I. Al-Ajlouni,** Nisreen A. AL Quraan, Hala Y. Al-Saqqar, Abdul Latief Al-Ghzawi and Abdel Rahman Al-Tawaha. **2024**. GABA Metabolism and MDA Production in Barley (Hordeum vulgare L.) Seedlings under Salinity and Osmotic Stresses. The Open Agriculture Journal, V 18, e18743315287408. http://dx.doi.org/10.2174/0118743315287408231227073515
- 3. **Zakaria I. Al-Ajlouni**, Hana` Sleit, Mohammad M. Al-Gharaibeh, Abdul Latief A. Al-Ghzawi, Ammar Albalasmeh, Yahya Bani Khalaf, Ayed M. Al-Abdallat. **2024**. Evaluating the Impact of Pre-Anthesis Water Deficit on Yield and Yield Components in Triticale (X Triticosecale wittmak) Genotypes under Controlled Environmental Conditions. J. Ecol. Eng. 25(3), 96–106. https://doi.org/10.12911/22998993/178344
- 4. Ammar Albalasmeh, Osama Mohawesh, Ahmad Alqudah, Koichi Unami, **Zakaria Al-Ajlouni**, Amani Klaib. **2023**. The Potential of Biochar Application to Enhance Soil Quality, Yield,

- and Growth of Wheat and Barley Under Rainfed Conditions. Water Air Soil Pollut. 234:463. https://doi.org/10.1007/s11270-023-06493-4
- 5. **Zakaria Al-Ajlouni**, Shifa abbas, Abdul Lateef al-ghzawi, Ibrahim Al-Makhadmeh, Randa n. albdaiwi, Mohamad Shatnawi, Ayed M. Al-Abdallat, abdel rahman Al-tawaha. **2023**. Evaluation of antimicrobial activity of callus, in vitro and ex vitro extracts of Ruta graveolens L. FARMACIA, 71 (4): 818 825. https://doi.org/10.31925/farmacia.2023.4.18
- 6. **Zakaria Al-Ajlouni**, Osama Migdadi, Ibrahim Makhadmeh, Abdallah Aldahadha, Shireen Hasan, Ayed M Al-Abdallat. **2022**. Assessment of Genetic Diversity among Wild *Ruta chalepensis* L. from the North of Jordan. Diversity. 14(11): 969. Diversity 2022, 14, 969. https://doi.org/10.3390/d14110969
- 7. Jamal Abu-Elenein, Rabea Al-Sayaydeh, Zahera Akkeh, **Zakaria Al-Ajlouni**, Abd Raheem A Al-Bawalize, Shireen Hasan, Tareq Alhindi, Randa N Albdaiwi, Jamal Y Ayad, Ayed M Al-Abdallat. **2021**. Agronomic performance and flowering behavior in response to photoperiod and vernalization in barley (Hordeum vulgare L.) Genotypes with contrasting drought tolerance behavior. Environmental and Experimental Botany. 192: 104661. https://doi.org/10.1016/j.envexpbot.2021.104661
- 8. Nisreen A AL-Quraan, **Zakaria I Al-Ajlouni**, Nima F Qawasma. **2021**. Physiological and Biochemical Characterization of the GABA Shunt Pathway in Pea (*Pisum sativum* L.) Seedlings under Drought Stress. Horticulturae. 6(7): 125. https://doi.org/10.3390/horticulturae7060125
- 9. **Zakaria Al-Ajlouni**, Ibrahim Elbasyoni, Vikas Belamkar, Stephen Baenziger. **2021**. Heading date effect on winter Triticale (X Triticosecale Witttmack) grain yield production. Mu'tah Lil-Buhuth wad-Dirasat, Natural and Applied Sciences Series Vol. 36. No.2.
- 10. AL-Quraan N.A, **AL-Ajlouni Z.**I, Obedat D. **2019**. The GABA shunt pathway in germinating seeds of wheat (*Triticum aestivum* L.) and barley (*Hordeum vulgare* L.) under salt stress. Seed Science Research. 29 (4): 250-260. https://doi.org/10.1017/s96025819000230
- 11. Elbasyoni I.S, El-Orabey W.M, Morsy S, Baenziger P.S, **Zakaria Al-Ajlouni**, Dowikat I. **2019**. Evaluation of a global spring wheat panel for stripe rust: Resistance loci validation and novel resources identification. PloS one. 14 (11): e0222755. https://doi.org/10.1371/journal.pone.0222755
- 12. Al-Sayaydeh R, Al-Bawalize A, **Zakaria Al-Ajlouni**, Akash M.W, Abu-Elenein J, Al-Abdallat A.M. **2019**. Agronomic Evaluation and Yield Performance of Selected Barley (Hordeum vulgare L.) Landraces from Jordan. International Journal of Agronomy. 2019, 9575081, 12. https://doi.org/10.1155/2019/9575081

- 13. Al-Ghzawi A.A, **Zakaria Al-Ajlouni**, Al Sane K.O, Bsoul E.Y, Musallam Y, Bani Khalaf Y, Al-Hajaj N, Al-Tawaha A, Aldwairi Y, Al-Saqqar H. **2019**. Yield stability and adaptation of four spring barley (Hordeum vulgare L.) cultivars under rainfed conditions. Research on Crops. 20 (1): 10 18. https://DOI:10.31830/2348-7542.2019.002
- 14. Al-Ghzawi, A. Bani Khalaf, Y. **Zakaria Al-Ajlouni**, AL-Quraan, N. Musallam, I and Bani Hani, N. **2018**. The Effect of Supplemental Irrigation on Canopy Temperature Depression, Chlorophyll Content, and Water Use Efficiency in Three Wheat (Triticum aestivum L. and T. durum Desf.) Varieties Grown in Dry Regions of Jordan. Agriculture, 8(67): 1-23. https://doi.org/10.3390/agriculture8050067
- 15. **Zakaria Al-Ajlouni**. Al-Ghzawi, A. Al-Abdallat, A. Ayad, J. Abu Elenein, J Al-Quraan, N and Baenziger, P.S. **2017**. Effect of Pre-Anthesis Water Deficit on Plant Height, Peduncle Length and Spike Length in 13 (Hordeum vulgare L.) Genotypes. Jordan Journal of Agricultural Sciences. Volume 13, No.1: 163-173.
- 16. **Zakaria Al-Ajlouni**. Al-Abdallat, A. Al-Ghzawi, A. Ayad, J. Abu Elenein, J Al-Quraan, N and Baenziger, P.S. **2016**. Impact of Pre-Anthesis Water Deficit on Yield and Yield Components in Barley (Hordeum vulgare L.) Plants Grown under Controlled Conditions. Agronomy, 6 (2) 33: 1-14.
- 17. **Zakaria Al-Ajlouni.** Abbas, S. Shatnawi, M. and Al-Makhadmeh, I. **2015**. *In vitro* propagation, callus induction, and evaluation of active compounds on *Ruta graveolens*. Journal of Food, Agriculture & Environment. Vol.13 (2): 101-106.
- 18. Al Abdallat A. M, J.Y. Ayad, J.M. Abu Elenein, **Zakaria Al-Ajlouni** and W. A. Harwood. **2014**. Overexpression of the transcription factor HvSNAC1 improves drought tolerance in barley (Hordeum vulgare L.). Mol Breeding. 33:401–414
- 19. Issam M. Qrunfleh1, M. Shatnawi and **Zakaria Al-Ajlouni**. **2013**. Effect of different concentrations of carbon source, salinity and gelling agent on *in vitro* growth of fig (*Ficus carica* L.) African Journal of Biotechnology. Vol. 12(9), pp. 936-940.
- 20. Wesam G Shahrour, Mohamad A Shatnawi, Samih Abubaker, Zakaria Al-Ajlouni, Ahmad N Shadaideh, Hanee M Al-Dmoor, Khalaf Alhussaen. 2013. Identification of Phytophthora infestans from infected potato and tomato plants using molecular techniques. Journal of Food, Agriculture and Environment. Vol.11 1 2 1 6 1 2 2 1.

- 21. **Zakaria Al-Ajlouni**, M. Ajlouni, M. Shatnawi, R. Shibli, I. Makhdmeh, S. Abu-Romman and A Al-Ghzawi. **2012**. Callus Induction, Plant Regeneration, and Growth on Barley (*Hordeum vulgare* L.). Southwest J Hortic Biol Environ Vol.3: 25-39
- 22. M. Liakat Ali, P. Stephen Baenziger, Zakaria Al-Ajlouni, B. Todd Campbell, K. S. Gill, K. M. Eskridge, A. Mujeeb-Kazi, and Ismail Dweikat. 2011. Mapping QTL for Agronomic Traits on Wheat Chromosome 3A and a Comparison of Recombinant Inbred Chromosome Line Populations. Crop Sci. Vol: 51. 553-566.
- 23. M. A. Shatnawi1, R. A. Shibli, S. M. Abu-Romman, M. S. Al-Mazra'awi, Zakaria Al-Ajlouni, W. A. Shatanawi and W. H. Odeh. 2011. Clonal propagation and cryogenic storage of the medicinal plant *Stevia rebaudiana*. Span J Agric Res 9(1), 213-220.
- 24. Abdul Latief A. Al-Ghzawi, E. Bsoul, F. Aukour, Zakaria Al-Ajlouni, M. Al-Azzam and M. M. Ajlouni. 2011.Genetic Variation for Quantitative Traits in Jordanian Lentil Landraces. Advances in Environmental Biology, 5(11): 3676-3680.
- 25. Weiss A., P.S. Baenziger, G.S. McMaster, W.W. Wilhelm and **Zakaria Al-Ajlouni**. **2009**. Quantifying phenotypic plasticity using genetic information for simulating plant height in winter wheat. NJAS. Wageningen Journal of Life Sciences. 57: 59–64.
- 26. **Zakaria Al-Ajlouni**. **2008**. The Effect of Semi-dwarfing Genes in Wheat on Plant Height in Diverse Environment in Nebraska. (Ph.D., dissertation).
- 27. Rida A. Shibli, M.J. Mohammad, and **Zakaria Al-Ajlouni. 2002**. Growth and Micronutrient Acquisition of In Vitro Grown Bitter Almond and Sour Orange in Response to Iron Concentration from Different Iron Chelates. J. Plant Nutr. 25: 1599–1606.

CONFERENCES AND WORKSHOPS:

- Participating in the workshop titled "Droughts and Water (In)security in a Changing Climate." Cell Press. 11-June-2025.
- Participate in the national workshop on Farmer Filed Schools in Land Degradation and Climate Smart Agriculture. Hosted by FAO and Royal Scientific Society On Sunday 25th Aug. 2024 at Corp Amman Hotel.
- Attending the national symposium on university violence, causes, and solutions, hosted by the Amman group, in the conference hall of the Royal Cultural Center in 2023 on behalf of the university.

- Attending the First Arab Conference on "Developing volunteer work in the educational process" to speak on behalf of the Jordan University of Science and Technology regarding volunteer work. In Amman in 2022, the Al-Kaloti Development Center.
- The National Center for Agricultural Research workshop on nationally approved novel varieties of wheat and barley in 2020.
- High Plains Ag Lab Wheat and Field and Pea Field Day, Nebraska, Sidney, USA, June 20, 2019.
- June Wheat Field Days at Grant County, Nebraska, USA, June 19. 2019.
- Annual Wheat Breeding Field Day in Different States (Nebraska), USA, June 11, 2019.
- Wheat Nebraska University, Poster for Graduate Posters session. Judge, Nebraska, USA, April 19, 2019.
- Design and analysis of unreplicated field experiments in the workshop. UNL, USA, March 19– 20, 2019
- Nebraska Plant Science Symposium. Training 21st Century Plant Breeders in the 'Omics" Era. UNL, Nebraska Innovation Center, Campus Conference Center. Nebraska. The USA. March 12, 2019.
- UNL Plant Science Retreat, Judge, Lied Lodge and Conference Center Nebraska City, NE. The USA. October 12 13 2018.
- 15th International Agriculture Fair. 11 15 October 2017. Bursa. Turkey.
- 2nd Agriculture and Climate Change Conference (Climate-ready resource use-efficient crops to sustain food and nutritional security). 26 28 March 2017, Melia Sitges, Spain.
- VII International Scientific Agriculture Symposium "Agrosym 2016". Jahorina, 06-09 October 2016, Bosnia and Herzegovina.
- The Evolution of Agriculture Research Symposium. 6 11 February 2016. Damanhour University. Egypt.
- Annual meetings of the American Society of Agronomy (ASA), Crop Science Society of America (CSSA), and Soil Science Society of America (SSSA) in November 15 – 18, (2015) Minnesota, Minneapolis, U.S.A.

- Participation in 'Seed Extraction coursework. Bakker Brothers Jordan Co. Amman- Jordan, Septemper 1-30, 2015.
- Invited participant in the Arab American Frontiers Conference hosted by The Government of Oman. Muscat, Oman, December 13 -15, 2014.
- The International Conference on Agriculture and Forestry. June 10-11, 2014.Colombo, Sir Lanka.
- A workshop on "The role of ionizing radiation to achieve Arab food security". Arab Atomic Energy in April 12 – 17 (2014) Cairo, Egypt.
- Participating in the sixteenth joint coordination meeting between Jordan and ICARDA in 2014.
- Annual meetings of the American Society of Agronomy (ASA), Crop Science Society of America (CSSA), and Soil Science Society of America (SSSA) on November 3–6, (2013) Florida, Tampa, U.S.A.
- Workshop on Canopy Sensors Instrumentation. workshop on the Canopy Sensors instrumentation during 25-27/3/2013 at NCARE.
- Annual meetings of the American Society of Agronomy (ASA), Crop Science Society of America (CSSA), and Soil Science Society of America (SSSA) on October 21–24, (2012) Cincinnati, OH, U.S.A.
- Workshop on Climate Change Impact on Biodiversity. Al al-Bayt University 9th of June 2011.
- A 2011 symposium hosted by the Jordan Wilderness Center in Amman focused on developing
 a strategy to prevent the loss of biodiversity due to climate change in and around protected
 areas.
- Annual meetings of the American Society of Agronomy (ASA), Crop Science Society of America (CSSA), and Soil Science Society of America (SSSA) on Nov 4– 8 (2007), New Orleans, LA, U.S.A.
- Wheat breeding field day in different states (Nebraska, 2004).

- Wheat breeding field day in different states (Oklahoma, 2005).
- Wheat breeding field day in different states (Kansas, 2006).
- Wheat breeding field day in different states (Colorado 2007).
- Annual meetings of the American Society of Agronomy (ASA), Crop Science Society of America (CSSA), and Soil Science Society of America (SSSA) in Nov 12–16 (2006), Indianapolis, IN. U.S.A.

AWARDED SCHOLARSHIPS AND FELLOWSHIPS:

- A fellowship was granted by the Arab Fund Program in Kuwait to spend a sabbatical leave in the Department of Agronomy and Horticulture, University of Nebraska, Lincoln (Sep 2018 – Sep 2019).
- Al Mosmen Fellowship (2007): This award is designated for graduate students in the Agronomy graduate program with an interest in international agriculture and world food development.
- Scholarship of Channing B. & Katherine W. Baker Fund #3524 (2006 and 2007), for breeding and genetics of food and feed grains including germplasm and cultivar development (for two years).
- Ph. D. Research assistantship from the Department of Agronomy and Horticulture, University of Nebraska, Lincoln (2003).
- The 4th Scientific Day Award for College of Agriculture, 2001, Jordan University of Science and Technology.

FINANCIAL SUPPORT (Research Grants awarded, 2011-2024)

Zakaria Al Ajlouni. 2024. An investigation on the growth and proliferation of jojoba (Simmondsia chinensis (Link) Schn.) In Vitro and Ex Vitro. \$ 12570.

Zakaria Al Ajlouni. 2024. The influence of seeding rate on yield components and forage quality of Triticale (Triticosecale spp. Wittmack) under different environments. \$8050

Zakaria Al Ajlouni. 2024. Planting dates' impact on Triticale and Wheat crop production, quality and protein: implications for food security. \$ 7133.

Zakaria Al Ajlouni. 2024. The effect of Rht genes on plant height and agronomic characteristic of different Triticale (x Triticoscale sp. Wittmach) Genotypes). \$ 7840.

Zakaria Al Ajlouni. 2024. The Influence of different environments on yield components and quality of triticale and barley. Jordan University of Science and Technology. \$ 7800.

Zakaria Al Ajlouni. 2022. In Vitro propagation of Salvia indica L. for conservation purposes- a locally critically endangered native plant species. Jordan University of Science and Technology, \$ 11000.

Zakaria Al Ajlouni. 2022. Evaluation of Drought Effect on Triticale (x Triticosecale wittmack) Yield Under Different Environments. Jordan University of Science and Technology. \$ 7800.

Zakaria Al Ajlouni. (C.P.I) 2021: Agronomic Evaluation and Yield Performance of Improved Barley (Hordeum vulgare L.) Genotypes Carrying a Novel Photoperiod Insensitive Allele. Scientific Research Support Fund (JORDAN). \$ 35000.

Zakaria Al Ajlouni. 2016. Genetic Variation among Ruta chelapensis Populations from North Jordan Using Morphological Assessment and AFLP Markers. Jordan University of Science and Technology, \$9,366.

Zakaria Al Ajlouni. 2016. The effect of differential water regimes on the yield of wheat (Triticum aestivum L., T. durum Desf.) under dry condition of Jordan as indicated by chlorophyll content. Jordan University of Science and Technology. \$8,450.

Zakaria Al Ajlouni. 2013. Effect of planting date and sowing depth on yield and yield components of barley genotypes under different environments in Jordan. Jordan University of Science and Technology. \$13,660.

Zakaria Al Ajlouni. 2012. Callus Induction Chemical Analysis and Antimicrobial Activity of the Common Rue (Ruta Graveolens L. Jordan University of Science and Technology. \$10,845.

Zakaria Al Ajlouni. 2011. Selecting Jordanian semi-dwarf wheat genotypes with long coleoptiles to cope drought stress. Jordan University of Science and Technology. \$20,140.

GRADUATE STUDENTS:

Raghad Heilat: The influence of seeding rate on yield components and forage quality of Triticale (Triticosecale spp. Wittmack) under different environments.

Mariam Bataineh: The influence of different environments on yield components and quality of Triticale and Barley (2024)

Saba Fayyad: Planting date effects triticale grain yield, protein, and Starch accumulation. (2024).

Nirmin Al Araj: Rht 12 affected the performance of agronomic traits in triticale. (2024).

Hana Slait: Evaluation of Drought Effect on Triticale (X Triticosecale wittmack) Yield Under Different Environments (2023)

Nima Qawasmah: Physiological and Biochemical Characterization of GABA Shunt pathway in Pea (Pisum sativum L.) Seedlings under Drought Stress (CA)2019/08

Dana Obedat: GABA shunt pathway in germinating seeds of wheat (Triticum aestivum L.) and barley (Hordeum vulgare L.) under salt stress 2018/08.

Hala Al Saqqar: The influence of salt and osmotic stress on GABA metabolism and ROS accumulation in barley (Hordeum vulgare L.) seedlings 2017/04

Yahia Bani Khalaf: The effect of differential water regimes on the yield of wheat (Triticum aestivum L., T. durum Desf.) under dry conditions of Jordan as indicated by chlorophyll content 2016/05.

Osama Miqdadi: Genetic Variation among Ruta chalepensis Populations from North Jordan Using Morphological Assessment and AFLP Marker 2016/05.

Shifaa Abbas: Callus induction Chemical Analysis and Antimicrobial Activity of the Common Rue (Ruta Graveolens L) 2013/08.

GRADUATE STUDENTS COMMITTEE MEMBER:

INTERNATIONAL:

Ali gharaibeh (2025). Attitudes of Vegetable Farmers towards Risk in Jordan: An Applied Study in the Northern Jordan Valley District. National Institute of Agronomy of Tunisia. University of Carthage. (Ph.D. Degree).

MARYAM IBRAHEM HASOON (2025). The Relationship Of Growth Stages, Thermal Cumulation And Estimation Of Genetic Parameters For Yield And Its Components For Maize (Zea Mays L.) Genotypes At Different Sowing Dates. University of Kirkuk. Iraq. (M.Sc. Degree).

NATIONAL (JORDAN):

Mustafa Hayajneh (2025). Morphological, Physiological and Yield Traits of Several Quinoa (Chenopodium quinoa Wild.) Cultivars as Influenced by Drought Stress. Jordan University of Science and Technology. (M.Sc. Degree).

Ghaith banihani (2025). Effect of salinity on morphological and physiological characteristics of quinoa cultivars. Jordan University of Science and Technology. (M.Sc. Degree).

Mayes Issa (2025) Identification of drought-tolerant bacteria collected from harsh soils and assess its effect "as a plant growth-promoting rhizobacteria (PGPR)" on Triticale growth, yield and yield components. Hashemite University. (M.Sc. Degree).

Abeer Qudah (2024). Efficacy of seed priming with silicon and chitosan on drought tolerance of Jordanian durum wheat (Triticum durum L) landraces. **Yarmouk University.** (M.Sc. Degree).

Roa'a Shawaheen (2024). The Relationship between GABA Content of Wheat Seeds (Triticum durum L.) and Desiccation Tolerance at Five Developmental Stages. Jordan University of Science and Technology. (M.Sc. Degree).

Rafif Al Momani (2024). The effect of different water regimes on barley yield under arid conditions of Jordan as indicated by chlorophyll content, GABA metabolism, and MDA Production. **Hashemite University**. (M.Sc. Degree).

Alaa AlShanayneh (2023). Reclamation of saline – sodic soil by using biochar and evaluating its effect on plant growth performance. Jordan University of Science and Technology. (M.Sc. Degree).

Osama Migdadi (2023). QTL Mapping of Kernel Characteristics in Norsi, a Durum Wheat (triticum turgidum ssp.durum) Landrace from Jordan. **University of Jordan.** (Ph.D. Degree).

Farah Abu Siam (2023). Molecular Cloning, Sequence Analysis and Expression of Ascorbate Peroxidase Gene in Common Vetch (Vicia sativa). Al-Balqa Applied University. (M.Sc. Degree).

Sarah Malkawi (2023). inheritance and association of several morphological characteristics in twenty crosses of squash (cucurbita pepo l.). **Jordan University of Science and Technology.** (M.Sc. Degree).

Maison Ababneh (2023). phenotypic Analysis of Temperature effects on Wild Wheat (Triticum turgidum ssp. dicoccoides) Population Under Different Environments. Jordan University of Science and Technology. (M.Sc. Degree).

Amani Klaib (2022). Effect Of Biochar as A Soil Amendment on Soil Properties and Plant Growth Performance Under Rainfed Conditions. **Jordan University of Science and Technology**. (M.Sc. Degree).

Eman I. Rasheed (2021): The Role of Chitosan Priming in Induction of GABA Shunt Pathway during Wheat (Triticum durum L.) Seed Germination under Salt Stress. Jordan University of Science and Technology. (M.Sc. Degree).

Dua'a Talafha (2017). The Influence of Laser Beams and Light Intensities on Jordan Cultivated Lentil (Lens Culinaris MEDIK) and Wheat (Triticum Aestivum L) Growth and Metabolism. **Jordan University of Science and Technology**. (M.Sc. Degree).

Jamal Abu El Einein (2015) Genomics of Flowering Time Trait in Barley Genotypes Adapted to Drought Conditions. **University of Jordan.** (Ph.D. Degree).

Zaherra Akkah (2014) Selective Genotyping of Major Flowering-Time Genes in a Set of Diverse Barley (Hardeum vulgare) Germplasm. **University of Jordan.** (M.Sc. Degree).

Walaa Al Darabseh (2013). Genetic Variation Among Jordanian Tomato Landraces Using Simple Sequence Repeats (SSRs) and Their Drought Resistance at Germination and Seedling stages. Jordan University of Science and Technology. (M.Sc. Degree).

PROJECTS, PROMOTION, AND MANUSCRIPT REVIEWER

- 1 Evaluator for Academic Promotions at Tikrit University Iraq.
- 2 Evaluator for Academic Promotions at Palestine Technical University Kadoorie.
- 3 Reviewer for the joint project between Turkey (TÜBİTAK) and the Jordanian National Center for Research and Development (NCRD) in 2025.
- 4 Al-Balqa Applied University (Thesis evaluation)
- 5 Crop Science
- 6 Asian Journal of Agriculture and Biology
- 7 Arabian Journal of Chemistry
- 8 Acta Ecologica Sinica.
- 9 Universal Journal of Agricultural Research
- 10 Journal of Agricultural Research.
- 11 Jordan Journal of Agricultural Sciences.
- 12 Mutah Journal for Research.
- 13 Jordan Journal of Biological Sciences.
- 14 Shoman Research Fund (AHSF).
- 15 Scientific Research Support Fund (JORDAN).
- 16 Jerash Journal of Research and Studies Jerash University.

MEMBERSHIPS in SCIENTIFIC SOCIETIES AND ACTIVITIES:

- Entrepreneurship and Agri-Innovation Association
- American Society of Agronomy (ASA), and Crop Science Society of America (CSSA).
- Sigma XI (The Scientific Research Society) USA.
- Representative of agronomy graduate students in the graduate committee at the Agronomy and Horticulture Department / University of Nebraska for 2006 2007.
- Representative of agronomy graduate students in the safety committee at the Agronomy and Horticulture Department / University of Nebraska for 2005 2006.
- Member of JUST faculty society.

UNIVERSITY AND COMMUNITY SERVICES:

A. Department of Plant Production Committees:

- Graduate Comprehensive Exams Committees
- Graduate Studies Committee
- Student Affairs Committee
- Research Committee
- Academic quality committee at the Plant Production Department
- Curriculum evaluation and improvement committee
- Curriculum committee at the Department of Plant Production Department
- Plant Micropropagtion (PP326) Course Committee
- Transfer of equivalent course committee at the Plant Production Department
- Summer Training-Practical (PP 400) Course Committee
- Social Committee Advisor
- Extracurricular Activities Committee
- In charge of establishing a central laboratory focused on genetic research (Biodiversity)
- Guidance and Orientation for newly accepted students

B. Faculty of Agriculture Committees:

- Graduate Studies Committee
- Students Affairs Committee Advisor
- Faculty Council member
- Academic Quality Committee at the Faculty of Agriculture
- Curriculum evaluation and improvement committee
- Social Committee Advisor
- Extracurricular Activities Committee
- Graduation Day Committee Advisor
- Steering Committee for Alumni Affairs
- Supervised and followed duties for the Agriculture Festival 2017.

- Supervised and followed duties for the Agriculture Festival 2018.
- Supervised and followed up on duties for the pomegranate festival 2018.
- Supervision and follow-up duties for the pomegranate festival 2020.

C. Jordan University of Science and Technology and Community Services Committees:

- A member of the preparation committee for the initiative called "My Farming is My Responsibility" aims to plant one million trees in the Irbid Governorate (2023 present).
- Engaged in coordinating and overseeing the Jordan University of Science and Technology's Graduation ceremonies c for the academic years 2017, 2018, 2022, and 2023.
- A member of the Genetically Modified Foods Committee Which can authorize the entrance and distribution of genetically modified food into Jordan for human consumption (2020 Present).
- Supervision and follow-up duties for the Career and Alumni Guidance Office of King Abdullah II Fund for Development from the year 2021 to 2023 (Deanship of Student Affairs).
- Supervision and follow-up duties for the Athletic Activities for years (Sep 2017 to Sep 2018 and Sep 2020 Sep 2022 (Deanship of Student Affairs).
- A committee advisor was established to investigate any problems arising from the students on the university campus for years (2018 and 2022) (Deanship of Student Affairs).
- Representative of the Deanship of Student Affairs for the strategic and executive plans for 2022-2023.
- Supervision and Follow-Up The 15th Arab and Foreign Communities Exhibition in the university for the year 2018
- In charge of overseeing the Jordan University of Science and Technology's COVID-19 vaccination program (Deanship of Student Affairs).
- Member of University Council (JUST) for Sep. 2015 Sep. 2016.
- Member of University Council (JUST) for Sep. 2021 Sep. 2022.
- Agriculture Technology Club Consultant
- Graduation Day Committee Member
- University Student Affairs Committee Member
- ERASMUS PLUS committees for students' selection
- Web site development committee at JUST.
- Member of the Expert National Committee within the Ministry of Agriculture, we were responsible for selecting the most outstanding wheat farmer in Jordan in 2015.
- European project MEDOLICO Committees evaluate employment applications.
- Organizer Committees of the 7th Scientific Agricultural Conference. Jordan University of Science and Technology. 8-10 October 2012.

Accredited Committees and Workshops

- Member of the committee that is responsible for the Jordanian Accreditation program for the plant production department at Jerash Private University. 2025.
- A committee member of the Accreditation Council tasked for developing learning outcomes (knowledge, skills, competences) by Jordan's National Qualifications Framework for the Bachelor's Program in Agricultural Biotechnology and Genetic Engineering. Prepare questions

for the university competence examination pertaining to the same program. Translate examination questions from English to Arabic..2025

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- Supervise and direct a committee that is responsible for placing qualifications in the Jordanian National Qualifications Framework (JNQF) for all agriculture faculty departments at Jordan University of Science and Technology for the year 2023 -2024.
- Supervise and direct a committee that is responsible for Placing qualifications in the Jordanian National Qualifications Framework (JNQF) at Plant Production Department at Jordan University of Science and Technology for year 2023 -2024.
- Supervise and direct a committee that is responsible for the establishment of a specialization in the Department of Plant Production in collaboration with the Faculty of Architecture at the Jordan University of Science and Technology. The Bachelor of Urban Landscape and Gardens Design will be the name of this specialization (2024).
- I have been designated as one of the university faculty members who will be participating in a meeting with the Institutional Quality Assurance Certification Expert Committee on Tuesday, October 15, 2024.
- Attending a workshop on Jordanian accreditation at the University of Science and Technology in August 2024, which was organized by JORDAN ACCREDITATION FOR ACADEMIC PROGRAMS (JAAP).
- Member of a committee responsible for the development of a Module Handbook for the Plant Production degree program (B.Sc.) in order to obtain ASIIN accreditation for the year 2021.
- A member of a committee appointed by the Jordanian Higher Education Accreditation Commission to establish and develop outcomes (knowledge, skills, and competencies) in accordance with the Jordanian National Qualifications Framework (JNQF) for the specialization of (Agricultural Biotechnology and Genetic Engineering / bachelor's Program) for the year 2024.
- Delegate of the Deanship of Student Affairs to the International Organization for Standardization's (ISO) Deanship of Academic Development and Quality Assurance for the academic year 2021-2022.
- Delegate of the Deanship of Student Affairs to the International Organization for Standardization's (ISO) Deanship of Academic Development and Quality Assurance for the academic year 2022-2023.

TEACHING EXPERIENCE (2009-202024):

Courses developed and taught at Jordan University of Science and Technology (JUST)

Course Title		
Number	Undergraduate Courses	
1.	Principles of Plant Science (PP205)	
2.	Introduction to Biostatistics (PP213)	
3.	Field Crop Production (Laboratory) (PP311)	
4.	Plant Micropropagation (PP326)	
5.	Plant Micropropagation (Laboratory) (PP326)	
6.	Summer Practical Training (PP400)	
7.	Summer Training (PP400)	
8.	Plant Breeding (PP411)	
9.	Plant Biotechnology (PT421)	
10.	Plant Biotechnology (Laboratory) (BT421)	
11.	Biotechnology in Agriculture (PP431)	
12.	Seminar (PP 491)	
13	Plant Science Laboratory (PP203)	
14	Forage Crops Production (PP332)	
Graduate		
1	Experimental Design and Statistical Analysis (PP701)	
2	Advance Plant Breeding (PP715)	
3	Plant Tissue Culture (PP725)	
4	Legume and Cereal Crops (PP712)	

REFERENCES:

Prof. P. Stephen Baenziger,

Eugene W. Price Distinguished Professor Small Grains Breeding and Genetics.

Department of Agronomy and Horticulture.

University of Nebraska, Lincoln. 68583-0937.

E-mail: <u>pbaenziger1@unl.edu</u>

Prof. Rida A. Shibli,

Professor of Plant Biotechnology and Biodiversity,

The University of Jordan- Amman-Jordan.

Former Member of Senate Council

Former Minister of Agriculture

Former President of Mu'tah University

Amman 11942 Jordan Mobile: +962 796862222;

E-mail: <u>r.shibli@uj.edu.jo</u>

Prof. Saeb Khresat

Professor of Soil Science

Former President of Jordan University of Science and Technology

Faculty of Agriculture

Jordan University of Science and Technology

phone: +962-2-7201000 Ext.: (22200)

Fax: +962-2-7201078

Email: skhresat@just.edu.jo

Prof. Munir Turk

Professor of Agronomy.

Department of Plant Production

Former Dean of Faculty of Agriculture

Jordan University of Science and Technology

Irbid, Jordan.

phone: +962-2-7201000 Ext.: (22200)

Fax: +962-2-7201078

E-mail: munatur@just.edu.jo