Dr Aram Ali

Address: Soil and Water Department, College of Agricultural Engineering Sciences, Salahaddin University-Erbil, Erbil, 44001, Kurdistan Region.

Specialisation: Soil Physics & Pedometrics

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Ethnicity: Kurdish

Marital status: Married

Date of Birth: 21/10/1986

Gender: Male

EDUCATION

2016–2020	Doctor of philosophy (PhD) in soil physical and chemical properties University of Southern Queensland, Australia
Thesis Topic:	Strategic use of alkaline irrigation water: Soil structural constraints and predictive amendment management
Supervisors:	Prof. John McLean Bennett Dr Andrew Biggs Dr Alla Marchuk
2012–2014	Master of Engineering Science (MENS), Agricultural Engineering University of Southern Queensland, Australia
Dissertation title:	Using Soil Amendments to Address Land Application of Coal Seam Gas Water: Efficacy and Legacy Effects
Supervisor:	Prof. John McLean Bennett
2005–2009	Bachelor of Science (BSc.), Soil and Water Sciences Salahaddin University-Erbil, College of Agricultural Engineering Sciences, Soil and Water Sciences Department, Kurdistan, Iraq

EMPLOYMENT

Oct. 2021–Present	lecturer Salahaddin University-Erbil, College of Agricultural Engineering Sciences, Soil and Water Science Department, Kurdistan, Iraq
December 2022–current	Adjunct Research Fellow University of Southern Queensland, Centre for Sustainable Agricultural Systems. Toowoomba, QLD. Australia
Oct. 2014–March 2016	Assistant lecturer Salahaddin University-Erbil, College of Agricultural Engineering Sciences, Soil and Water Science Department, Kurdistan, Iraq
Oct. 2009–Dec. 2011	Research assistant/ Tutor Salahaddin University-Erbil, College of Agricultural Engineering Sciences, Soil and Water Science Department, Kurdistan.

GRANTS AND AWARDS

2020	Research publication award from soil science Australia, QLD branch in 2020. The award was presented at the World Soil Day Luncheon event on 26 Nov 2020.
2016–2019	UniSQ Postgraduate Research Scholarship (UniSQ-PRS), University of Southern Queensland to study PhD
2012–2014	Human Capacity and Development Program (HCDP) scholarship from Kurdistan Regional Government, study Master's degree in Australia.
2007–2009	Kurdistan Region Prime Minister scholarship for 10 top undergraduate students

RESEARCH PUBLICATIONS

1. **Ali, A.,** Bennett, J.M., Roberton, S., Krwanji, D., Zhu, Y. and West, D., 2024. Selection of a stress-based soil compaction test to determine potential impact of machine wheel loads. European Journal of Soil Science, 75(3), p.e13501.
2. Zhang, H., Ghahramani, A., **Ali, A.** and Erbacher, A., 2023. Cover cropping impacts on soil water and carbon in dryland cropping system. Plos one, 18(6), p.e0286748.
3. Bartley, R., Abbott, B.N., Ghahramani, **A., Ali**, A., Kerr, R., Roth, C.H. and Kinsey-Henderson, A., 2023. Do regenerative grazing management practices improve vegetation and soil health in grazed rangelands? Preliminary insights from a space-for-time study in the Great Barrier Reef catchments, Australia. The Rangeland Journal.
4. **Ali, A.,** Bennett, J.M., Biggs, A.J. and Marchuk, A., 2022. Incorporating solution alkalinity into a hydraulic reduction model to account for disaggregation and dispersion. Geoderma, 413, p.115742.
5. Zhu, Y., **Ali, A.**, Bennett, J.M., Guppy, C. and McKenzie, D., 2022. Targeting Subsoil Constraints in Southern Queensland: Concept Proof of Spraying Polyacrylamide for Subsoil Stabilisation during Tillage. Sustainability, 14(20), p.13147.
6. Ghahramani, A., Bennett, J.M., **Ali, A.**, Reardon-Smith, K., Dale, G., Roberton, S.D. and Raine, S., 2021. A risk-based approach to mine-site rehabilitation: use of Bayesian Belief Network Modelling to manage dispersive soil and spoil. Sustainability, 13(20), p.11267.

7. **Ali, A.**, Bennett, J.M., Biggs, A.A., Marchuk, A. and Ghahramani, A., 2021. Assessing the hydraulic reduction performance of HYDRUS-1D for application of alkaline irrigation in variably-saturated soils: Validation of pH driven hydraulic reduction scaling factors. Agricultural Water Management, 256, p.107101.
8. Zhu, Y., **Ali, A.**, Dang, A., Wandel, A.P. and Bennett, J.M., 2019. Re-examining the flocculating power of sodium, potassium, magnesium and calcium for a broad range of soils. Geoderma, 352, pp.422-428.
9. **Ali, A.**, Biggs, A.J., Marchuk, A. and Bennett, J.M., 2019. Effect of irrigation water pH on saturated hydraulic conductivity and electrokinetic properties of acidic, neutral, and alkaline soils. Soil Science Society of America Journal, 83(6), pp.1672-1682.
10. **Ali, A.**, Biggs, A.J., Šimůnek, J. and Bennett, J.M., 2019. A pH-Based Pedotransfer Function for Scaling Saturated Hydraulic Conductivity Reduction: Improved Estimation of Hydraulic Dynamics in HYDRUS. Vadose Zone Journal, 18(1), p.190072.
11. **Ali, A.**, McLean Bennett, J., Marchuk, A. and Watson, C., 2018. Laboratory evaluation of soil amendments to limit structural degradation under a sequential irrigation with coal seam gas and rain water. Soil Science Society of America Journal, 82(1), pp.214-222.

Publications Submitted or in Preparation

- Rawat, M., Huy, T., **Ali, A.**, Ghahramani, A., (*Submitted*). Uncertainties in Plant Available Water Content Estimation with a Water Balance Model and Satellite Data. Remote Sensing for Environment.

Technical Report Publications

1- **Ali, A.**, Zhu, Y., West, D., Jamali, H., Bennett, J., Roberton, S. (2022) Increased yield through improved management of soil constraints in cotton farming systems. Centre for Sustainable Agricultural Systems Publication. Misc/22/9, University of Southern Queensland, Toowoomba. UniSQ1903, Cotton Research & Development Corporation project.

2- Bennett, J.McL., Roberton, S., Zhu, Y., **Ali, A.**, Lobsey, C., West, D., Lester, D., Guppy, C., Birchall, C., Flavel, R., Knox, O., McKenzie, D., (2022). Economics of ameliorating soil constraints in the northern region: Soil constraint management and amelioration. Centre for Sustainable Agricultural Systems Publication. Misc/22/6, University of Southern Queensland, Toowoomba. UniSQ1903-002RTX, Grain Research & Development Corporation project.

3- Ghahramani, A., Zhang, H., **Ali, A.**, 2022. Soil health indicators in regenerative grazing systems in Burdekin catchment. Centre for Sustainable Agricultural Systems. A technical report for NQ Dry Tropics. The University of Southern Queensland, Centre for Sustainable Agricultural Systems, Toowoomba, Australia. [Report].

4- Ghahramani, A., **Ali, A.**, (2022) Enabling analytics for grain crop monitoring applications- High temporal and spatial resolution measures of plant available soil water (PAW). WP11: Application of finer resolution ET products (draft). Grain Research & Development Corporation- Nowcasting plant available water project.

5- Bartley, R., Ghahramani, A., Abbott, B., **Ali, A.**, Henderson, A., Kerr, R., Hawdon, A., (2021) Do innovative regenerative grazing management practices improve land condition, runoff and water quality in grazed rangelands draining to the Great Barrier Reef? Methods Report to the GBR Foundation, January 2021. CSIRO, Australia.
6- Bartley, R., Ghahramani, A., Abbott, B., **Ali, A.**, Henderson, A., Kerr, R., Hawdon, A., (2021) Do innovative regenerative grazing management practices improve land condition, runoff and water quality in grazed rangelands draining to the Great Barrier Reef? Methods Report to the GBR Foundation, July 2021. CSIRO, Australia.
7- Bennett, J.McL., Redmond, T.W., **Ali, A.,** and Roberton, S.D. (2020) Innovative approaches to soil-water relational forecasting to improve productivity: 2019/20 Technical Report. Centre for Sustainable Agricultural Systems Publication 1006920/20/1, University of Southern Queensland, Toowoomba. TPC project-Tanzania.
8- Bennett, J.McL., and **Ali, A.** (2019) Thermodynamic modelling for treatment and application of coal seam gas associated water. Centre for Sustainable Agricultural Systems Publication Misc/19/4, USQ, Toowoomba. Verterra Ltd. Project.

CONFERENCES

New Zealand Society of Soil Science & Soil Science Australia joint Conference. 12–16 December 2016. Queenstown, New Zealand. Poster presentation titled
(Land amendment for irrigation with coal seam gas water and subsequent rainfall).

National Soils Conference 2018. 18–23 November 2018. Canberra, Australia. Oral presentation titled (Impact of pH of irrigation wastewater on saturated hydraulic conductivity of acidic, neutral, and alkaline Kaolinitic soils).

2021 Joint Conference - Soil Science Australia. 27 June – 2 July 2021 in Cairns, Australia. Oral presentation titled (Development of a soil specific function for scaling hydraulic conductivity reduction using alkaline irrigation water in HYDRUS model).

2022 National Landcare Conference. 23–25 August 2022 in Sydney, Australia. Poster presentation titled (Effects of grazing management on soil hydrology in dry tropical catchments of the Great Barrier Reef).

20th Australian Agronomy Conference. 18–22 September 2022 in Toowoomba, Australia.

PROJECTS INVOLVED AT UniSQ, Australia

- SENEX Energy, Verterra Ecological Engineering
- Horizon Laboratory
- Tanzanian Planting Company (TPC), for soil structural assessment
- Grain Research & Development Corporation project (GRDC) soil constraint management projects
- Grain Research & Development Corporation project (GRDC) Nowcasting plant available water project
- Australian Coal Association Research Program (ACARP) project, with Verterra Ecological Engineering.
- Cotton Research & Development Corporation project (CRDC) improving yield project
- Great Barrier Reef Foundation Project, Grazing land management with CSIRO.
- Northern Queensland Dry Tropics Project, soil health in grazing lands
- Broadacre Cropping Initiative Project, soil carbon and moisture improvement

CURRENT MEMBERSHIPS

1. Soil Science Australia, Queensland Branch. Australia
2. American Society of Agronomy. USA
3. Crop Science Society of America. USA
4. Soil Science Society of America. USA
5. Kurdistan Agricultural Syndicate
6. Kurdistan Teachers Union

COURSES and CERTIFCATES

- Machine Learning course, Stanford University, United States of America, Online certificate, 2018.
- Teaching Methodology (Pedagogy) course, Salahaddin University-Erbil, 1st February to 15 March 2015.
- Statistics SPSS tool workshop. University of Southern Queensland. Toowoomba. 2014.
- The use of MATLAB in engineering sector. Information Technology Centre, Salahaddin University-Erbil. November 2010

Tools and Software Proficient

R studio tool, SPSS tool, Minitab statistical tool, Matlab, Google Earth Engine Tool, and APSIM, HowLeaky, HYDRUS programs etc.

LANGUAGES SPOKEN

languages	Speaking	Listening	Writing	Reading
English	Fluent	Fluent	Excellent	Excellent
Kurdish (Mother Tongue)	Fluent	Fluent	Excellent	Excellent
Arabic	Good	Good	Very Good	Excellent

PROFFESSIONAL SOCIAL NETWORK ACCOUNTS:

Research Gate: https://www.researchgate.net/profile/Aram-Ali

Google Scholar: Aram Mohemed Ali - Google Scholar

LinkedIn: https://www.linkedin.com/in/dr-aram-ali-6a72135a/

ORCID ID: https://orcid.org/0000-0003-2986-9220