

Résumé

Masood Iqbal Awan (PhD)

Associate Professor (Agronomy)

University of Agriculture, Faisalabad | Constituent College

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Trained in agronomy and crop physiology, I hold a current position of Tenured Associate Professor (Agronomy) at the Constituent College Depalpur, University of Agriculture, Faisalabad. My research focus is on cropping systems, specifically understanding how different elements (plants, soils and people) interact and how to improve the robustness, productivity, and sustainability for desirable outcomes. My aim is engaging in applied research for the benefit of farming community. Key research interests include resource use efficiency, GHG quantification and mitigation in agro-ecosystems, alternative and climate-smart production systems, and robust cropping systems. My work is strongly oriented toward generating practical outcomes that support sustainable intensification and improve livelihoods within Pakistan's farming communities.

Personal Details

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| Date of Birth | 7 September 1984 |
| Place of Birth | Khushab, Pakistan |
| Nationality | Pakistani |

Employment History

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|--------------------------------------|--|
| January 2024 – current (on-going) | University of Agriculture, Faisalabad (UAF), Pakistan Tenured Associate Professor (Agronomy) at UAF Constituent College Depalpur, Okara |
| September 2014 – January 2024 | UAF, Pakistan Assistant Professor (Agronomy) at Constituent College Depalpur, Okara |
| January 2015 – December 2017 | University of Tasmania, Australia University Associate in the School of Land and Food - TIA |
| March – September 2014 | Assistant Professor at the department of Environmental Sciences, Vehari campus, COMSATS Institute of Information Technology, Vehari, Pakistan |

University Education

| | |
|-------------|---|
| 2007 – 2013 | PhD in Plant Sciences Wageningen University, The Netherlands Centre for Crop Systems Analysis <i>Supervisors:</i> Prof. H. Meinke, Dr. L. Bastiaans and Dr. P. van Oort <i>Thesis:</i> Improving resource-use efficiency in rice-based systems of Pakistan (ISBN 978-94-6173-752-6). |
| 2005 –2007 | MSc (Hons) in Agronomy University of Agriculture, Faisalabad, Pakistan Faculty of Agriculture <i>Supervisor:</i> Prof. Rashid Ahmad |

Thesis: Sunflower (*Helianthus annuus* L.) response to foliar fertilisation under water stress conditions (CGPA 3.90/4.00)

2001 – 2005

BSc (Hons) in Agriculture

University of Agriculture, Faisalabad, Pakistan

Faculty of Agriculture (CGPA 3.90/4.00)

Professional Trainings/Visits

A) Foreign Trainings/Visits

| Title | Year | Organiser | Country | Type |
|--|------|---|-------------|---|
| Information literacy including endnote | 2008 | Wageningen Graduate Schools Phd/Postdoc Training | Netherlands | Competence Strengthening/Skill Course |
| Interpersonal communication for Phd students | 2008 | Wageningen Graduate Schools Phd/Postdoc Training | Netherlands | Competence Strengthening/Skill Course |
| Career assessment | 2011 | Wageningen Graduate Schools Phd/Postdoc Training | Netherlands | Competence Strengthening/Skill Course |
| Project and time management | 2011 | Wageningen Graduate Schools Phd/Postdoc Training | Netherlands | Competence Strengthening/Skill Course |
| Mobilising your scientific network | 2011 | Wageningen Graduate Schools Phd/Postdoc Training | Netherlands | Competence Strengthening/Skill Course |
| Techniques for writing and presenting a scientific paper | 2011 | Wageningen Graduate Schools Phd/Postdoc Training | Netherlands | Competence Strengthening/Skill Course |
| Interdisciplinary research: crucial knowledge and skills | 2011 | Wageningen Graduate Schools Phd/Postdoc Training | Netherlands | Competence Strengthening/Skill Course |
| Imaging science | 2012 | C.T. de Wit Graduate School for Production Ecology & Resource Conservation (PE&RC), Wageningen University | Netherlands | Postgraduate Course |
| Improving the robustness, sustainability, productivity and eco-efficiencies of rice systems throughout Asia funded by Asia-Pacific Network for Global Change Research (APN); Project Reference ARCP-2012-09-NMY-Meinke; Role: Member | 2013 | University of Tasmania (Australia) | Sri Lanka | Inception Meeting of the APN funded Project |

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|--|------|--|-------------|---|
| Improving the robustness, sustainability, productivity and eco-efficiencies of rice systems throughout Asia funded by Asia-Pacific Network for Global Change Research (APN); Project Reference ARCP-2012-09-NMY-Meinke; Role: Member | 2013 | University of Tasmania (Australia) | Indonesia | Mid-Project Meeting of the APN funded Project |
| Improving the robustness, sustainability, productivity and eco-efficiencies of rice systems throughout Asia funded by Asia-Pacific Network for Global Change Research (APN); Project Reference ARCP-2012-09-NMY-Meinke; Role: Member | 2016 | University of Tasmania (Australia) | Indonesia | Concluding Meeting of the APN funded Project |
| GHG emissions in rice systems: basics of mechanisms and standards for measurements | 2024 | The International Rice Research Institute, Philippines | Philippines | Capacity Building Training funded by the Asian Development Bank (ADB) |

B) Local Trainings as Trainee

| Training | Year | Organiser | Type |
|---|---------|---|-----------------------------------|
| Vertical poly tunnel farming system | 2025 | University of Agriculture Faisalabad (UAF) | Training of Trainers (ToT) |
| Outcome-based education (OBE) | 2023-24 | University of Agriculture Faisalabad (UAF) | Competence Strengthening/Brush-up |
| Application of GPS data collection tools and RS/GIS mapping | 2023 | WRAP Program Component 1 by the International Water Management Institute (IWMI) | Capacity Building Training |

C) Local Trainings as Trainer

| Training | Year | Organiser | Type |
|---|------|--|---|
| Training on GHG Measurement and Alternate Wetting and Drying (AWD) in Rice-Wheat Cropping System of Punjab, Pakistan [08-10 April, WMRF-Okara) | 2025 | University of Agriculture Faisalabad (UAF), Asian Development Bank (ADB) & Centre for Agriculture and Biosciences International (CABI) | Capacity building training |
| Modern Production Technology of Rice | 2021 | In-Service Agricultural Training Institute (IATI), Sargodha | Four Week Mandatory Training under 4Tier Service Structure for Field Investigator |
| Modern Production Technology of Raya | 2021 | In-Service Agricultural Training Institute (IATI), Sargodha | Four Week Mandatory Training under 4Tier Service Structure for Field Investigator |
| Modern Production Technology of Sesame | 2021 | In-Service Agricultural Training Institute (IATI), Sargodha | Four Week Mandatory Training under 4Tier Service Structure for Field Investigator |
| Challenges and Opportunities to Enhance Production of Wheat Crop | 2021 | In-Service Agricultural Training Institute (IATI), Sargodha | Two-Days Online Training of Field Assistants of Agriculture Extension |
| Challenges and Opportunities for Wheat Production | 2021 | UAF Sub-Campus Depalpur, Okara under the University Outreach Program | Kissan Convention 2021 |

Professional Competencies

- Greenhouse Gases Measurement
- Water-saving Rice Production Systems
- Basic Statistics
- Information Literacy
- Interpersonal Communication
- Project and Time Management
- Scientific Writing
- Interdisciplinary Research
- Imaging Science

Projects

1. Improving the robustness, sustainability, productivity and eco-efficiencies of rice systems throughout Asia funded by Asia-Pacific Network for Global Change Research (APN); Project Reference ARCP-2012-09-NMY-Meinke; Role: Member
2. Eco-efficient nitrogen management for emerging aerobic rice systems funded by Higher Education Commission of Pakistan (HEC); Role: Principal Investigator
3. Assessment and evaluation of forage and seed production of the maize (*Zea mays* L.) fodder crop in the mixed farming systems of central Punjab, Pakistan funded by Higher Education Commission of Pakistan (HEC); Role: Co-Principal Investigator
4. Creating value from waste: Vermicompost enrichment with rock phosphate for sustainable intensification of cropping systems funded by MaxGrow Agrochemicals; Role: Principal Investigator (In-Progress)
5. Forecasting national agronomic demand of nitrogen fertilizers in Pakistan funded by Engro Fertilizer worth PKR 3 Million; Role: Consultant Team Member (Consultancy Project In Progress)
6. National Greenhouse Gas Inventory for Major Crops (wheat, maize, cotton, sugarcane, rice, and potato) funded by Asia Development Bank (ADB); Role: Co-PI (maize-potato systems worth PKR 11.9 Million)

Key Publications

1. Aamer, M., Zhang, J., Awan, M.I., Wei, H., Nabi, F., Huang, W., Liu, Z., Su, X., Liu, S., Elnour, R.O. and Hashem, M. 2026. Biochar and γ -Aminobutyric acid partnership improves rice productivity and mitigates Sb + Pb toxicity in co-contaminated soil. *BMC Plant Biol* 26, 94 (2026). <https://doi.org/10.1186/s12870-025-07658-5>
2. Brownlie, W.J., Aziz, T., Sutton, M.A., Shenk, A., Winkler, M.K.H., Robinson, G., Adhya, T.K., Amon, B., Awan, M.I., Bittman, S., Bleeker, A., Borghardt, G., Butterbach-bahl, K., Brandani, S., Constantinescu, M., Dahl, K.R., Dalgaard, T., Delon, C., Döhler, H., ... van Grinsven, H.J.M. (2024). Nitrogen Mitigation: INMS Guidance Document on Measures for Sustainable Nitrogen Management. <https://doi.org/10.5281/zenodo.13831113>.
3. Wan, Z., Wang, L., Huang, G., Rasul, F., Awan, M. I., Cui, H., Liu, K., Yu, X., Tang, H., Wang, S., Xu, H. 2023. nirS and nosZII bacterial denitrifiers as well as fungal denitrifiers are coupled with N₂O emissions in long-term fertilized soils. *Science of The Total Environment*:165426. <https://doi.org/10.1016/j.scitotenv.2023.165426>
4. Mukhtar, A., Awan, M.I., Sadaf, S., Mahmood, A., Javed, T., Shah, A.N., Shabbir, R., Alotaibi, S., Shah, A.A., Adamski, R., Siuta, D., 2022. Sulfur enhancement for the improvement of castor bean growth and yield, and sustainable biodiesel production. *Front. Plant Sci.* 13 DOI: <https://doi.org/10.3389/fpls.2022.905738>
5. Awan, M.I., van Oort, P.A.J., Ahmad, R., Bastiaans, L., Meinke, H., 2015. Farmers' views on the future prospects of aerobic rice culture in Pakistan. *Land Use Policy* 42: 517-526.
6. Awan, M.I., van Oort, P.A.J., Bastiaans, L., van der Putten, P.E.L., Yin, X., Meinke, H., 2014. A two-step approach to quantify photothermal effects on pre-flowering rice phenology. *Field Crops Research* 155: 14-22.
7. Awan, M.I., Bastiaans, L., van Oort, P.A.J., Ahmad, R., Ashraf, M.Y., Meinke, H., 2014. Nitrogen use and crop performance of rice (*Oryza sativa* L.) under aerobic conditions in a semi-arid subtropical environment. *Agronomy Journal* 106: 199-211.

Administrative Responsibilities

Deputy Hall Warden

Associate Tutor

Associate DSA

Incharge Student Record Branch

Incharge Farms