



## Agricultural Engineer

# Ain Ul Abad Syed

### Professional summary

To acquire a challenging position as an agricultural engineer where my extensive experience in soilless cultivation and rapid propagation, particularly in hydroponics and aeroponics systems, and my academic background in farm structures can be used to contribute to the organization's growth and success. Beside that I have a good experience of research writing and editing.

### Experience

#### Research Assistant

July 2017 - June 2018

Latif Experimental Farm / Sindh Agriculture University Tandojam

Selected for a one-year internship under the National Internship Program and assigned to Latif Experimental Farm, where I served as a Research Assistant. Responsibilities included assisting in data collection, and field research activities.

#### Master Research Experience

February 2019 - January 2020

Conducted research on spinach production using a Deep Water Culture (DWC) hydroponic system, comparing growth performance, yield, and quality parameters with traditionally grown spinach. Contributed to data analysis, system maintenance, and experiment documentation. This work culminated in the publication of a peer-reviewed research article in 2021.

#### Studentship

November 2021- May 2022

Department of Farm Structures / Sindh Agriculture University, Tando Jam

Awarded a studentship under the SRGP Project No. 54 at the Department of Farm Structures, Sindh Agriculture University, Tandojam. Participated in experimental work involving the evaluation of physical and nutritional characteristics of fruits subjected to various drying methods. Responsibilities included sample preparation, data collection, analysis, and assisting in report compilation.

#### Visiting Faculty

January 2025- Till date

Department of Farm Structures & Postharvest Engineering

Appointed as Visiting Faculty in January 2025, with teaching responsibilities across two undergraduate programs. Delivered the course Hydroponics and Soilless Culture for the B.S. Agro-Industrial Engineering and Technology program and the course Heat Transfer and Refrigeration for the B.S. Dairy Technology program. Responsibilities included course planning, lecture delivery, assessment preparation, and guiding students in practical and applied aspects of the subject matter.

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### Links



### Education

#### Doctor of Philosophy (PhD)

2020 - Now

Department of Farm Structures & Postharvest Engineering, Faculty of Agricultural Engineering, Sindh Agricultural University

Pakistan, Tando Jam

#### Master of Engineering (ME)

2018 - 2020

Department of Farm Structures, Faculty of Agricultural Engineering, Sindh Agricultural University

Pakistan, Tando Jam

I graduated in July 2020, achieving the 3rd position among all faculty members and securing 1st place in the department of farm structures. During my studies, I conducted research focused on the design and fabrication of a hydroponic model for spinach cultivation, achieving marks of 81.50% and a CGPA of 3.92

#### Bachelor of Engineering (BE)

2013 - 2017

Faculty of Agricultural Engineering, Sindh Agricultural University

Pakistan, Tandojam

I graduated in July 2017 with an achievement of 70.31% marks, securing a 1st division.

#### Intermediate, Pre-Engineering

2010 - 2012

Board of Intermediate and Secondary Hyderabad

Pakistan, Hyderabad

I graduated in May 2012 with an overall mark of 82%, earning a Grade of A1.

## Research Publications

### Intelligent Rapid Asexual Propagation Technology-A Novel Aeroponics Propagation Approach

- October 2024

Tang, L., Syed, A.-A., Otho, A. R., Junejo, A. R., Tunio, M. H., Hao, L., Asghar Ali, M. N. H., Brohi, S. A., Otho, S. A., & Channa, J. A. (2024). Intelligent Rapid Asexual Propagation Technology—A Novel Aeroponics Propagation Approach. *Agronomy*, 14(10), 2289. <https://doi.org/10.3390/agronomy14102289>

### Predicting Stripe Rust Severity in Wheat Using Meteorological Data with Environmental Response Modeling

- February 2023

Ali, Y., Iqbal, S., Aatif, H. M., Naveed, K., Khan, A. A., Ijaz, M., Magsi, M. M., Ahmad, S., Syed, A. A., Magsi, M. A., Iqbal, R. K., Bukhari, N. A., Hatamleh, A. A., & Raza, A. (2023). Predicting Stripe Rust Severity in Wheat Using Meteorological Data with Environmental Response Modeling. *Journal of King Saud University - Science*, 35(4), 102591. <https://doi.org/10.1016/j.jksus.2023.102591>

### Addition of walnut shells biochar to alkaline arable soil caused contradictory effects on CO<sub>2</sub> and N<sub>2</sub>O emissions, nutrients availability, and enzymes activity

- April 2022

Sial, T. A., Shaheen, S. M., Lan, Z., Korai, P. K., Ghani, M. I., Khan, M. N., Syed, A.A., Hussain Asghar Ali, M. N., Rajpar, I., Memon, M., Bhatti, S. M., Abdelrahman, H., Ali, E. F., Rinklebe, J., & Zhang, J. (2022). Addition of walnut shells biochar to alkaline arable soil caused contradictory effects on CO<sub>2</sub> and N<sub>2</sub>O emissions, nutrients availability, and enzymes activity. *Chemosphere*, 293.

### Actual and predicted evapotranspiration along with groundwater contribution for wheat (*Triticum aestivum*) crop

- June 2021

Dahri, S.H, M .A. Mangrio, I.A. Shaikh, Z.H. Dahri, A.A. Syed, J.H. Jakhrani, and T.A. Syed. 2021. Actual and predicted evapotranspiration along with groundwater contribution for wheat (*Triticum aestivum*) crop. *Agricultural Engineering International: CIGR Journal*, 23(2):65-75.

### Comparative assessment of hydroponic and geponic cultivation systems for sustainable Spinach cultivation

- January 2021

Syed, A.A., Z.A. Khan, S.H. Chattha, I.A. Shaikh, M.N.H.A. Ali, Z.R. Bughio, S.H. Dahri and G.B. Buriro. 2021. Comparative assessment of hydroponic and geponic cultivation systems for sustainable Spinach cultivation. *Pakistan Journal of Agricultural Research*, 34(4): 678-688.

## Matriculation, Science

2008 - 2010

Board of Intermediate and Secondary Hyderabad

Pakistan, Hyderabad

I successfully completed my matriculation in April 2010 with an impressive 82% overall marks, securing a Grade of A1.

## Skills

Food Production Technology



Mechanization and Automation



Crop Management



Soilless Cultivation and Propagation



## Hobbies

◆ Cooking

◆ Reading

◆ Traveling

## Awards



3rd Position in Master of Engineering (ME)

## Languages

◆ English

◆ Sindhi

◆ Urdu

◆ Siraeki

## International Trainings

### Soil and Water Conservation and Dry Farming in Developing Countries

2022

Sponsored by the Ministry of Commerce and organized by International Exchange Center of Yangling Agricultural High-tech Demonstration Zone

### "Cultural History of Agricultural Machinery in China

2022

Co-organized by Jiangsu University and Bridge Chinese

## Affiliations

### American Academy of Environmental Engineers and Scientists

June 2022 - Now

United States

I have been affiliated with the American Academy of Environmental Engineers and Scientists (AAEES) as a registered student member since June 17, 2022

### The Society for Engineering in Agriculture Australia

June 2022 - Now

Australia

I have been associated with The Society for Engineering in Agriculture Australia (SEAg) as a registered student member since June 17, 2022, holding Registration ID No. 8960372.

### Pakistan Engineering Council

2017 - Now

Pakistan

I am affiliated with the Pakistan Engineering Council as a registered engineer in the discipline of "Agriculture" since 2017, holding a lifetime membership. My registration number is Agri/04908

## Conferences

### 1st International Conference on Recent Approaches in Plant Sciences (RAPS-2022)

Pakistan, Lahore

Attended the "1st International Conference on Recent Approaches in Plant Sciences (RAPS-2022)" organized by the Department of Botany, University of Education, Lahore, Pakistan, spanning across two days

### 18th International Congress of Soil Science

Pakistan, Tando Jam

Delivered a research abstract presentation titled "Efficiency and Performance of Hydroponic Unit for Spinach (*Spinacia oleracea* L.) Cultivation" at the 18th International Congress of Soil Science, organized by the Soil Science Society of Pakistan

### 1st International Conference of Agricultural Engineering & Technologies

Pakistan, Tando Jam

Took part in the "1st International Conference of Agricultural Engineering & Technologies" as a representative of the department of Farm Structures and conducted presentations to the guests on Hydroponic model Section over a span of 2 days.

### "Water Saving Agriculture for Pakistan

2021

Sponsored by the Ministry of Commerce and organized by International Exchange Center of Yangling Agricultural High-tech Demonstration Zone

### "Operation & Maintenance of Agricultural Machinery for Pakistan

2021

Sponsored by the Ministry of Commerce and organized by Chinese Academy of Agricultural Mechanization Sciences

### "Farm Products Circulation Technology for BRI Countries

2021

Sponsored by the Ministry of Commerce and organized by Hunan Agricultural Group Co.,Ltd.

### Cultivation of Oil Crops for Pakistan (Rapeseed, Peanut, etc.)

2021

Other

Sponsored by the Ministry of Commerce and organized by Hunan Agricultural Group Co.,Ltd.

Computer proficiency

Operating Systems

- Microsoft Windows
- Android
- iOS

Software

- Microsoft Word



- Mendeley



- SPSS



- Microsoft OneNote



- Adobe Acrobat Pro



- Microsoft Powerpoint



- Zotero



- Microsoft Excel



- Statistical Analysis

- Internet

- Document Imaging

- Presentations

- Documentation

- Engineering Research

- Designing

- Email

Personal Information

**Father:** Mr. Syed Jawad Hussain

**Marital Status:** Married

**Religion:** Islam

**Birthday:** December 28, 1994

**Nationality:** Pakistani

**NIC No:** 41701-0603894-7

**Surname:** Syed

**Gender:** Male

**Domicile:** Tando Allahyar (Rural)

References

References are available upon request