



Curriculum Vitae

A. PERSONAL INFORMATION

Name: DR. ABDUL AZIZ KHAKWANI

Father's Name: Abdul Latif Khan

Date Of Birth: April 10, 1965

N.I.C. No: 12101-0926782-3

Religion: Islam

Nationality: Pakistani

Domicile: Dera Ismail Khan

Languages Spoken: English/Urdu

Marital Status: Married

Postal/Permanent Address: House No. MC-952, Mohallah Khakwani,
Dera Ismail Khan 29050, NWFP, Pakistan.

Phone & Mobile No: 0966-715809 & 03005791218

Fax No: 0966-750087

Email: azizkhakwani2002pk@yahoo.com
azizkhakwani@gu.edu.pk

B. EDUCATIONAL RECORD

Level of Education / Examination Passed	Institution / Board / University	Date of obtaining Certificate / Degree	Marks Obtain/ Total	Division/ Grade/ Distinction	Specialized Field
Post Doctorate	The University of Reading, UK.	2008-09	N/A	N/A	Physiology (Agriculture)
Ph.D.	Gomal University, Dera Ismail Khan.	2003	N/A	N/A	Agronomy (Agriculture)
M.Sc. (Hons)	Gomal University, Dera Ismail Khan.	1990 (A)	832/1000	Ist	Agronomy (Agriculture)
B.Sc. (Hons)	Gomal University, Dera Ismail Khan.	1988 (A)	738/900	Ist	Agronomy (Agriculture)
F.Sc.	BISE, Peshawar.	1983 (A)	626/1000	Ist	Pre-Medical
S.S.C.	BISE, Peshawar.	1980 (A)	633/850	Ist	Science

Topic of M.Phil/ M.Sc(Hons):

Topic of Ph.D:

C. JOB DETAILS -TEACHING AND RESEARCH EXPERIENCE

S.NO	Job Title, Period of Service and Address of Employer	Job Duties/ Responsibilities
1	Worked as Agriculture Officer at the office of Deputy Director of Agriculture Extension, Department of Agriculture (Extension Wing), Dera Ismail Khan, NWFP. (05/12/1989 to 31/12/1990). Govt. of NWFP.	To promote Modern Agriculture Production Technology in farming communities. To arrange seminar/trainings for farmers regarding innovative technologies transformation. To develop linkages between Research Scientists and farming communities to solve their technical problems. Introduction of new crops through demonstration plots on farmers field.
2	Worked as Research Officer at Agricultural Research Institute, Dera Ismail Khan, NWFP,	To solve the farmers problems by conducting research on various aspects of crop production. To develop different crop varieties of wheat and

	Agriculture Research System. (01/01/1991 to 31/05/2006)	rice etc. To disseminate newly developed technologies/varieties of different field crops among farming communities.
3	Worked as Station Director/ Gram Botanist at Agriculture Research Station, Ahmad Wala, Karak. (01/06/2006 to 30/03/2007)	To develop gram varieties suitable for area, resistant to diseases, biotic and abiotic stresses for Pakistan as well. To develop new technologies for increasing gram production in Pakistan. To introduce newly developed gram varieties among farming communities of NWFP. To increase seed production of gram crop.
4	Worked as Wheat Botanist at Agricultural Research Institute, Dera Ismail Khan, NWFP, Agriculture Research System.. (01/04/2007 to 31/12/2008)	To solve the farmers problems by conducting research on various aspects of crop production. To develop different crop varieties of wheat and rice etc. To disseminate newly developed technologies/varieties of different field crops among farming communities.
5	Worked as Station Director/ Gram Botanist at Agriculture Research Station, Ahmad Wala, Karak. (01/01/2009 to 15/12/2009)	To develop gram varieties suitable for area, resistant to diseases, biotic and abiotic stresses for Pakistan as well. To develop new technologies for increasing gram production in Pakistan. To introduce newly developed gram varieties among farming communities of NWFP. To increase seed production of gram crop.
6	Worked as Wheat Botanist at Agricultural Research Institute, Dera Ismail Khan, KPK, Agriculture Research System. (16-12-2009 to 16-02-2011)	To solve the farmers problems by conducting research on various aspects of crop production. To develop different crop varieties of wheat and rice etc. To disseminate newly developed technologies/varieties of different field crops among farming communities.
7	Teaching as Assistant Professor in Agronomy Department, Faculty of Agriculture, Gomal University Dera Ismail Khan KPK. Pakistan. (17/02/2011 to date (28/11/2018).	To teach undergraduate and post graduate courses of Agriculture curriculum approved by HEC. To supervise research projects of graduate and post graduate scholars for the award of M.Sc (Hons) and Ph.D. degrees. To organize seminars/workshops for Universities. To publish research papers/articles in national and international journals.

D. ADMINISTRATIVE EXPERIENCE

S.No	Administrative Experience	Period served From-To
1	Station Director/ Gram Botanist at Agriculture Research Station, Ahmad Wala, Karak.	01/06/2006 to 30/03/2007
2	Worked as Wheat Botanist at Agricultural Research Institute, Dera Ismail Khan, KPK, Agriculture Research System.	16-12-2009 to 16-02-2011

E. POST PH.D RESEARCH EXPERIENCE : Seventeen years (17 years)

F. PROJECTS EXECUTED/ COMPLETED

1. TESTING OF NEW CEREAL CROPS IN THE BARANI AREAS TO IMPROVE FOOD SECURITY. (Govt. of KPK, Directorate General of Agriculture Research. ADP#575-80656. Rs: 20 millions).
2. ADAPTIVE RESEARCH OF NEW VARIETIES OF WHEAT AND HYBRID OF MAIZE IN KPK. (ADP#574-80655. RS: 44.026 millions).
3. TRANSFORMATION OF WHEAT PRODUCTION TECHNOLOGY AND INTRODUCTION OF NEW HIGH YIELDING WHEAT VARIETIES IN ROD KOHI AREAS OF D.I.KHAN. (Livelihood Project sponsored by Swiss Development Cooperation, Islamabad. 2002-04)

G. INTERNATIONAL CONFERENCE/ FESTIVAL/ SYMPOSIUM

H. & I. WORKSHOP/ SEMINAR/ CONFERENCE/BUSINESS FORUM/JOB FAIR

Name & Place	Presented/ Attended/ Participated	Duration From-To
<ul style="list-style-type: none">• Attended one day workshop as speaker on “Sugarcane Production Technology under Agroclimatic Conditions of Dera Ismail Khan” on 17 November, 2015 organized by Department of Agronomy, Gomal University, D.I.Khan.	Attended	17 November, 2015
<ul style="list-style-type: none">• Attended one day workshop on “SPSS” on 7 November, 2015 organized by Council of	Attended	7 November, 2015

Allied Health Sciences Pakistan at Lahore.		
Attended training on “HOW TO WRITE A WORTH PUBLISHING RESEARCH PAPER/THESIS” ON 3-4 April, 2014 at University of Agriculture Peshawar organized by AUTA.	Attended	3-4 April, 2014
Presented paper on “Residual Effect of Commercial Organic and Inorganic Fertilizers on Growth and Yield of Coarse Rice and Soil Properties: in 1st National Conference on “Prospects and Opportunities for Agricultural Development in Pakistan. Held on 25-27, 2013 at Khanispur Ayubia. Organized by Department of Agriculture, University of Haripur, Khyber Pakhtunkhwa.	Presented	25-27, 2013
International Conference on “Sustainable Productivity: Threats and Options” April 11-12, 2013 at Ayub Agricultural Research Institute Faisalabad-Pakistan.	Attended	April 11-12, 2013
TWO-DAY NATIONAL SEMINAR on “Language of Literature for Peace and Tolerance” on 7 th and 8 th February 2013 organized by Department of English Language and Literature, Gomal University DIKhan. KPK.	Attended	7 th and 8 th February 2013
36 th All Pakistan Science Conference on “NATIONAL PROSPERITY THROUGH LIVESTOCK & POLTRY DEVELOPMENT” on 12-13 Nov. 2012 at Gomal University, Dera Ismail Khan.	Attended	12-13 Nov. 2012
Training workshop on “Field Layout and Statistical Data Analysis Techniques” at NIFA, Peshawar from September 25-27, 2012.	Attended	September 25-27, 2012.
Workshop on “Use of GIS for Natural Resources Conservation, Environmental Protection and Disaster Management” at Gomal University. DIK. KPK on 4th September, 2012.	Attended	4th September, 2012
Post-Doctorate Training Course on “Application of physiological indices as a screening technique for drought tolerance in wheat varieties” from SCHOOL OF BIOLOGICAL SCIENCES, UNIVERSITY OF READING, UNITED KINGDOM during 2008-09.	Participated	
April 29-30, 2005 at NWFP, Agricultural	Attended	April 29-30, 2005

University, Peshawar.		
Training Course on “Breeding Methodology for the Development of New Cultivars and their Release”. Held on April 29-30, 2005 at NWFP, Agricultural University, Peshawar.	Attended	April 29-30, 2005
Group Training Course on ‘Rice Research Techniques’ at Tsukuba International Center, Japan International Cooperation Agency (JICA) from 5 February, 2002 to 27 November, 2002.	Participated	5 February, 2002 to 27 November, 2002.
Training course in “Nuclear and Other Advanced Techniques in Food and Agricultural Research” at Nuclear Institute for Food & Agriculture, Tarnab-Peshawar, Pakistan from September 17-28, 2001.	Participated	September 17-28, 2001
Training workshop on “Seed Production Technology”, October 14-16, 1996. Sponsored by Continuing Education, NWFP Agricultural University, Peshawar at Agricultural Research Institute, Dera Ismail Khan, Pakistan.	Attended	October 14-16, 1996
Workshop on “Computer Application (MSTATC and WordPerfect)” January 1-7, 1994. Sponsored by Continuing Education, NWFP Agricultural University, Peshawar at Agricultural Research Institute, Dera Ismail Khan, Pakistan.	Attended	January 1-7, 1994
Workshop on “Computer Application in Agriculture”, January 4-9, 1992. Sponsored by USIAD/TIPAN project and NWFP Agricultural University, Peshawar at Agricultural Research Institute, Dera Ismail Khan. Pakistan.	Attended	January 4-9, 1992
Ten weeks (225 hours) “Intensive Course in English for Academic Purposes” from March 25 to June 06, 1991 at CIELS, Islamabad, Pakistan.	Participated	March 25 to June 06, 1991

J. DISTINCTIONS/ AWARDS/ ACHIEVEMENTS

Title of Award/ Certificate	Year	Awarded / Nominated/ Presented by
RESEARCH PRODUCTIVITY	2010-	Pakistan Council for Science and

AWARD	11	Technology (PCST)
--------------	-----------	--------------------------

K. MEMBERSHIP OF ORGANIZATIONS

- a. Appointed as member in “Technical Working Group” for the year 2017-18 of Arid Research Center Dera Ismail Khan. KPK, vide letter No. 736 /PSDP Project AZRI, D.I.Khan dated 08/08/2107.
- b. Nominated as associate Editor of PSA journal “Crop & Environment” for three years vide notification No. 153/PSA/ Journal Dated Faisalabad, the: July 10.2013.
- c. Member of National Curriculum Revision Committee (NCRC), Higher Education Commission (HEC), Pakistan (2011) and 2017.
- d. Life time member of Pakistan Society of Agronomy.

L. INTERNATIONAL PUBLICATION OF BOOKS NA

M. NATIONAL PUBLICATION OF BOOKS/ANNUAL REPORT/NEWSLETTERS

N. ACADEMIC AND RESEARCH ACHIEVEMENTS

Co-breeder involved in evaluating 7 wheat varieties (Dera-98, Daman-98, Nasir-2000, Raj, Zam-04, Hashim-8 and Gomal-8) approved by Provincial Seed Council, Govt. of NWFP, Pakistan.

Student supervised

No	Name	M. Phil/Ph.D.	Supervisor	Co-supervisor	Status
1	Mr. Malik Ikramullah	M. Phil	Supervisor		Completed 2013

2	Miz. Mahjabin Aman	M. Phil		Co-supervisor	Completed 2013
3	Miss Rabia Atta Hashmi	M. Phil		Co-supervisor	Completed 2013
4	Qaiser Abbass	M. Phil		Co-supervisor	Completed 2014
5	Syed Wasim Zaki	M. Phil	Supervisor		Under process
6	Ghulam Shabir	M. Phil	Supervisor		Under process
7	Arif Hussain	Ph.D.	Supervisor		Under process
8	Najeebullah	M. Phil	Supervisor		Completed 2015
9	Fazal Subhan	M. Phil	Supervisor		Completed 2015
10	Faisal Ali	M. Phil	Supervisor		Completed 2017
11	Jawad Hussain	M.Sc. (Hons.)		Co-supervisor	Completed 2018
12	Najeebullah	Ph.D.	Supervisor		
13	Qadir Ullh	M. Phil	Supervisor		Completed 2019
14	M. Sohail Akbar	M. Phil	Supervisor		Completed 2018
15	M. Amir Sohail	M. Phil	Supervisor		Completed 2019
16	Jazeb Nawaz	M. Phil	Supervisor		Completed 2019
17	Gulbadin Hikmatyar	M. Phil	Supervisor		Completed 2019
18	Mosaib Khan	M. Phil	Supervisor		Under process 2018
19	Ghulam Abbas	M. Phil	Supervisor		Under process 2018
20	Ejaz Khan	M. Phil	Supervisor		Under process 2019
21	M. Wasim Iqbal	M. Phil	Supervisor		Under process 2019
22	Zakirullah	M. Phil	Supervisor		Under process 2019

O. SCHOLARLY, HONOURARY AND UNIVERSITY EXTENSION LECTURES

P. EDITORIAL AND VETTING OF INTERNATIONAL/ HEC RECOGNIZED JOURNALS

Q. LIST OF RESEARCH PUBLICATIONS (IMPACT FACTOR/ HEC RECOGNIZED)

PUBLICATIONS: (Seventy nine)

1. Hussain, I., E. A. Khan and A.A.Khakwani. 2019. Effect of Different Nitrogen Levels on Productivity of Different Sorghum Genotypes under Climatic Conditions of D.I.Khan. Pakistan Journal of Environmental & Life Sciences, .
2. Hussain, A., Khakwani, A.A. Tanveer, A., Khan, E.A. and Baloch, S. 2019. Optimizing efficacy of acetachlore + atrazine and dicamba at various doses to manage Conyza stricta. Planta Daninha Journal, 36 (): (Impact factors = 0.45)
3. K. Farkhanda, N. U. Khan, I. Ullah, S. Ullah, A. A. Khakwani, T. A. Jilani. 2019. Impact of NPS fertilizer on the yield and yield components of Common Bean varieties in rainfed conditions of Pakistan. Int. J. of Agri. and Biol. Scis., (Mar & Apr), 17-26.
4. Najeeb Ullah, N. U. Khan, A.A. Khakwani, M. S. Baloch, E. A. Khan, F. Khan and Z. Ullah. 2019. Impact of sowing time on yield and fibre of Bt. cotton varieties in arid environment of Dera Ismail Khan. Sarhad Journal of Agriculture, 35(1):264-273.
5. Hussain, I., A.A.Khakwani and A.A.Khan. 2018. The evaluation of different regimes wheat of wheat cultivar under agro-climatic conditions of D.I.Khan.Gomal University Journal of Research, 34(1):32-37.
6. Bari, A., M. S. Baloch, **A. A. Khakwani**, I. Hussain, J. Iqbal and A. N. Shah. 2018. Application of Various Herbicides on Controlling Large and Narrow Leaf Weeds and Their Effects on Physiological and Agronomic Traits of Wheat. Planta Daninha Journal, 36 (): (Impact factors = 0.45)
7. Khan, N.U., **A. A. Khakwani**, F. Khan, S. Ullah and F. Khan. 2018. Conservation tillage plus wheat straw management and N effects on cotton grown under rainfed conditions of Pakistan. American Journal of Plant Sciences (AJPS). (Accepted):
8. Hussain, I., M. S. Baloch, **A. A. Khakwani** and A. A. Shah. 2018. Allelopathic influence of popular (*Populus alba* L.) aqueous extract on cereal crops. 2nd INTERNATIONAL CONFERENCE ON PLANT SCIENCES 5th-7th December, Deptt. Of Botany, GC University Lahore.

9. Khan, N.U., **A. A. Khakwani**, F. Khan, S. Ullah and F. Khan. 2018. Response of cotton to tillage plus wheat straw management and N application in wheat-cotton system. *Agricultural Sciences*. (Accepted):
10. Hussain, I., E. A. Khan, M. S. Baloch, **A. A. Khakwani** and Sheheryar. 2018. Allelopathic effect of Daraikh (*Melia azedarach*) on wheat crop. National Conference on Agricultural Problems and Food Security in the Changing Climate (Nov. 14-17, 2018) UoA Peshawar. (Presented orally)
11. Khan, N. U., **A. A. Khakwani**, S. Ullah, F. Yazdan, F. Khan. 2018. Response of cotton to tillage plus wheat residue and potassium management in wheat-cotton system. *International Journal of Agriculture and Biological Sciences*, Sep & Oct, 43-50.
12. Najeeb Ullah, **A.A. Khakwani**, N. U. Khan, M. S. Baloch and E. A. Khan. 2018. Effect of irrigation intervals on the yield and fibre characteristics of different cotton genotypes. *Sarhad Journal of Agriculture*, 34(2): 342-348.
13. Khan, N.U., **A. A. Khakwani**, F. Khan, S. Ullah and A. Rashid. 2018. Conservation Tillage Plus Wheat Straw Management And Nitrogen Effects On Cotton Grown Under Rainfed Conditions Of Pakistan. *African Journal of Agricultural Research* (Accepted):
14. GHAZANFAR ULLAH, G., E. A. KHAN and **A. A. Khakwani**. 2018. Physiological response of spring wheat to seeding and potassium application rates. *Pak. J. Bot.*, 50(3): 937-947.
15. Khan, S.U., T. H. Flower, Q. U. Khan, **A. A. Khakwani**, O. U. Sayal and I. Bakhsh. 2018. Comparison of suitable extractants used in soil phosphorus testing on different soils. *The JAPS*, 28(1): 113-118.
16. Khan, N. U., **A. A. Khakwani**, S. Ullah, N. Ullah, A. Rauf and I. Ullah. 2018. Response of Upland Cotton (*Gossypium hirsutum* L.) to Tillage and Nitrogen in Wheat Based Cropping System. *Sarhad Journal of Agriculture*. Vol., 34(1): 70-78.
17. Subhan, F., **A. A. Khakwani**, A. A. Khan, Ghazanfarullah, A. A. Khan and U. K. Saddozai. 2017. Forage and grain production dynamics of triticale sown on different dates under irrigated conditions. *International Journal "AGRICULTURE AND FORESTRY"* Vol., 63(4): 107-112.
18. Waqas, M., Ghazanfar Ullah, **A. A. Khakwani**, E. A. Khan, K. Waseem and T. A. Khan. 2017. EFFECTS OF FERTILIZERS (N P K) ON GROWTH INDICES, YIELD AND QUALITY OF HYBRID SUNFLOWER
a. *INT. J. BIOL. BIOTECH.*, 14 (1): 101-107.

19. Mohibullah, M., M. A. Rabbani, A. Amin, H. Rehman, Zakiullah, Irfanullah, Muzammil, T. Islam, Ihteramullah, **A. A. Khakwani**, S. Ghulam, S. Shaheen, Qudratullah, K. Batool. 2017. Allelic Variation and Correlation Analysis in Bread Wheat (*Triticum Aestivum* L.) Accessions Based on Various Polygenic Traits. *Int. J. of Hort.*, 7(3): 20-25.
20. Farooq, U., E. A. Khan, **A. A. Khakwani**, S. Ahmed, N. Ahmed and G. Zaman. 2016. Impact of sowing time and seeding density on grain yield of wheat variety Gomal-08. *Asian J Agri Biol.*, 4(2): 38-44.
21. **Khakwani, A. A.**, U. K. Saddozain, I. U. Awan, M. S. Baloch, Q. Khan, M. Munir, G. Saddozai and I. Bakhsh. 2016. Effect of organic and inorganic inputs on soil parameters and productivity of coarse rice. *J. Agri. Res.*, 54(2): 195-206.
22. Zeeshan M., S. Khan, **A. A. Khakwani**, M. Nisar, A. Jamil, 2016. Comparative performance of different cultivars of garlic (*Allium sativum* l.) Under the agroclimatic condition of DERA ISMAIL KHAN, K.P.K. PAK. *Int. J. of Modern Agri.*, 5(1): 1-4.
23. Nadim M. A., M. S. Baloch, E. A. Khan, **A. A. Khakwani** and K. Waseem. 2016. Integration of organic, synthetic fertilizers and micronutrients for higher growth and yield of wheat. *SJA.*, 32(1): 9-16.
24. Munir, M., S. Iqbal, J.U.D. Baloch and **A.A. Khakwani**. 2015. In vitro explant sterilization and bud initiation studies of four strawberry cultivars. *J. of Applied Hort.*, 17(3): 192-198.
25. Baloch, M.S., I. Hussain, **A.A. Khakwani**, K. Naveed, M. Amjad, M. Hashim & N. Hussain. 2015. Growth and Yield of Wheat Varieties under the Agro-Ecology of Dera Ismail Khan. *GUJR* 31(2): 18-28.
26. Mohibullah M, M. A. Rabbani, M. Munir, S. K. Marwat, S. Gangohi, M. Iqbal, A. Amin, A. A. Khakwani, M. Rashid and I.Ullah. 2015. Estimation of Genetic Divergence Based on Different Quantitative Traits and Allelic Variation in Bread Wheat (*Triticum aestivum* L.) Germplasm through SDS-PAGE Techniques. *American-Eurasian J. Agric. & Environ. Sci.*, 15 (10): 1940-1946.
27. Munir, M., M. R. Alhajhoj, A. A. Khakwani and J. D. Baloch. 2015. Flowering time response of Nasturtium (*Tropaeolum majus* L.) cultivar 'Empress of India' to photoperiod, light integral and temperature using photo-thermal model. *Songklanakar J. Sci. Technol.* 37 (3): 247-254.
28. Ejaz, A. K., A.A. Khakwani, M. Munir and Ghazanfarullah. 2015. Effects of Allelopathic Chemicals Extracted From Various Plant Leaves on Weed Control and Wheat Crop Productivity. *Pak. J. Bot.*, 47(2): 735-740. (Impact factors = 0.872)

29. Ikram Ullah, M., **A.A. Khakwani**, M. Sadiq, I. U. Awan, M. Munir and Ghazanfarullah. 2015. Effects of Nitrogen Fertilization Rates on Growth, Quality and Economic Return of Fodder Maize (*Zea mays* L.) SJA 31(1): 45-52.
30. Marwat, S.K., F. Rehman, E. A. Khan, **A. A. Khakwani**, I. Ullah, K. U. Khan and I.U. Khan. (2014). Useful ethnophytomedicinal recipes of angiosperms used against diabetes in South East Asian Countries (India, Pakistan & Sri Lanka). Pak. J. Pharm. Sci., 27(5): 1333-1358. (Impact factors = 1.014)
31. **Khakwani, Abdul Aziz**, Noor, S., M. Sadiq, , I.U. Awan, M. Munir, G. Ullah and I. Bakhsh. (2014). Impact of plant densities and NPK fertilization on growth and optimum economic return of sunflower. SJA, 30(2): 157-164.
32. Jatoi, W.A., M. J. Baloch, N. U. Khan, M. Munir, **A. A. Khakwani**, N. F. Vessar, S. A. Panhwar and S. Gul. (2014). HETEROSIS FOR YIELD AND PHYSIOLOGICAL TRAITS IN WHEAT UNDER WATER STRESS CONDITIONS. The JAPS, 24(1): 252-261. (Impact factors = 0.638)
33. Gul, S., N. U. Khan, S. Batool, M. J. Baloch, M. Munir, M. Sajid, **A. A. Khakwani**, S. H. Ghaloo, Z. A. Soomro and S. F. Kazmi. (2014). GENOTYPE BY ENVIRONMENT INTERACTION AND ASSOCIATION OF MORPHO-YIELD VARIABLES IN UPL AND COTTON. The JAPS, 24(1): 262-271. (Impact factors = 0.638)
34. Khan, S., I.U.Awan, M.S.Baloch, E.J.Khan, **A.A.Khakwani** and Nazir Hussain. 2013. Performance of maize varieties under irrigated conditions of Dera Ismail Khan. Gomal Uni. J. Res., 29(2): 26-29.
35. Sadozai, G. U., M. Farhad, M. A. Khan, E. A. Khan, M. Niamatullah, M. S. Baloch, **A. A. Khakwani**, and K. Wasim. 2013. Effect of Different Phosphorous Levels on Growth, Yield and Quality of Spring Planted Sunflower. Pak. J. Nutri. 12 (12): 1070-1074.
36. Khan, Q. U., R. Ahmad, M. Jamil, O. Sayal, A. Latif, **A. A. Khakwani**, G. Khan, M. M. Hashim, M. M. Rashid and M. Parvez. 2013. Assessment of Various Growth, Yield and Nutritional Parameters of Tomatoes as Affected by Farmyard Manure Fortified with Potassium Fertilizer. Pak. J. Nutri. 12 (12): 1066-1069.
37. **Khakwani, A. A.**, M.D. Dennett, N. U. Khan, M. Munir, M.J. Baloch, A. Latif and S. Gul. 2013. Stomatal and chlorophyll limitations of wheat cultivars subjected to water stress at booting and anthesis stages. Pak. J. Bot., 45(6): 1925-1932. (Impact factors = 0.872)
38. G. Ullah, E. A. Khan, I. U. Awan , M. A. Khan, **A. A. Khakwani**, M. S. Baloch, Q. U. Khan, M. S. Jilani, K. Wasim, G. Jilani and M. M. Ullah. 2013. Wheat Response

to Fertilizer Application Techniques and Nitrogen Levels: II. Crop Growth and Yield Attributes. *Pak. J. of Nutri.* 12 (7): 636-641.

39. Baloch, M.J., J. Dunwell, N. U. Khan, W. A. Jatoi, **A. A. Khakhwani**, N. F. Vessar and S. Gul. 2013. Morpho-physiological characterization of spring wheat genotypes under drought stress. *Int. J. Agric. Biol.*, 15(5): 945-950. (Impact factors = 0.808)
40. Zakariyya M.I., I.U. Awan, M. S. Baloch, **A.A. Khakhwani** and M. Sadiq. 2013. Integrated weed management strategies in wheat. *Pak. J. Weed Sci. Res.*, 19(2): 217-230.
41. Farhat Naz, F., J. Baloch, M. Munir and **A.A. Khakhwani**. 2013. Growth and development response of Antirrhinum to plant growing media. *JAH. J. of Applied Hort.*, 15(1): 32-36.
42. Ghazanfar Ullah, E. A. Khan, I. U. Awan, M. A. Khan, **A. A. Khakhwani**, M. S. Baloch, Q. U. Khan, M. S. Jilani, K. Wasim, S. Javeria and G. Jilani. 2013. Wheat Response to Application Methods and Levels of Nitrogen Fertilizer: Phenology, Growth Indices and Protein Content. *Pak. J. Nutri.*, 12(4): 365-370.
43. **Khakhwani, A.A.**, M. D. Dennett, M. Munir and M. S. Baloch. 2012. WHEAT YIELD RESPONSE TO PHYSIOLOGICAL LIMITATIONS UNDER WATER STRESS CONDITION. *The Journal of Animal & Plant Sciences*, 22(3): 773-780. (Impact factors = 0.638)
44. BALOCH, M. J., J. DUNWELL, **A. A. KHAKWANI**, M. DENNET, W. A. JATOI and S. A. CHANNA. 2012. Assesment of wheat cultivars for drought tolerance via osmotic stress imposed at early seedling growth stages. *JAR.* 50(3): 299-310.
45. AWAN, I. U., S. Ali, E. A Khan, M. S. BALOCH, I. Bakhsh, **A. A. Khakhwani** and M. Sadiq. 2012. Evaluation of wheat warieties under water stressed condition. *Crop and Environment*. 3(1-2): 9-12.
46. BAKHSH, I., I. U. AWAN, M. S. BALOCH, E. A. KHAN AND **A. A. KHAKWANI**. 2012. Effect of plant growth regulator (NAA) and irrigation regimes on yield of transplanted coarse rice. *Sarhad J. Agric.* 28 (4): 239-244.
47. AWAN, H., I. U. AWAN, M. MANSOOR, **A. A. KHAKWANI**, M. A. KHAN, GHAZANFARULLAH and B. KHATTAK. 2012. Effect of defoliant application at different stages of boll maturity and doses of sulfur on yield and quality of upland cotton. *Sarhad J. Agric.* 28 (2): 245-247.
48. Javid, T., I. U. Awan, M. S. Baloch, I. H. Shah, M. A. Nadim, E. A. Khan, **A. A. Khakhwani**, and M. R. Abuzar. 2012. Effect of planting methods on the growth and yield of coarse rice. *The Journal of Animal & Plant Sciences*, 22(2): 358-362. (Impact factors = 0.638)

49. **Khakwani, A.A.**, M.D. Dennett, M. Munir and M. Abid. 2012. Growth and yield response of wheat varieties to water stress at booting and anthesis stages of development.
a. Pak. J. Bot., 44(3): 879-886. (Impact factors = 0.872)
50. BALOCH, M. J., J. DUNWELL, N. U. KHAN, **A. A. KHAKWANI**, M. DENNET AND W. A. JATOI. 2012. Profiling dehydrin gene sequence and physiological parameters in drought tolerant and susceptible spring wheat cultivars. Pak. J. Bot., 44(2): 801-806. (Impact factors = 0.872)
51. Khan, A. A., I. U. Awan, M. Mansoor, E. Ahmad, **A. A. Khakwani**, and M. S. Baloch and Najibullah Khan. 2012. Use of concentrated aqueous plant exudates as weed control measures in wheat crop. Pak. J. of Weed Sci., 18(1): 99-105.
52. Khan, M. H., N. Din, **A. A. Khakwani**, M.S. Baloch, M. Zubair and A.W. Khan. 2012. GOMAL-8, a high yielding, disease tolerant wheat variety for irrigated area. The Journal of Animal & Plant Sciences, 22(2): 403-407. (Impact factors = 0.638)
53. Hussain, N., M. S. Baloch, M. Yousaf, M. Naeem. **A. A. Khakwani** and I. Begum. 2011. Performance of sorghum varieties in Potohar region. Gomal University Journal of Research, 27(2):26-30.
54. BIBI, M., N. Khan, F. Mohammad, R. Gul, **A. A. Khakwani** and O. U. Sayal. 2011. Genetic divergence and association among polygenic characters in gossypium hirsutum l. Pak. J. Bot., 43(6): 2751-2758. (Impact factors = 0.872)
55. KHAN, M.I, G. Hassan, I. Khan, M. Saeed, **A.A. Khakwani**, M. Idrees and K. Nawab. 2011. Factors influencing seed germination of wild onion and chickpea cultivars. Pak. J. Bot., 43(6): 2787-2792. (Impact factors = 0.872)
56. Wazir, I., M. Sadiq, M. S. Baloch, I. U. Awan, E. J. Khan, I. H. Shah, M. A. Nadeem, **A.A. Khakwani** and Imam Bakhsh. 2011. Application of bio-herbicide alternatives for chemical weed control in rice. Pak. J. Weed Sci. Res., 17(3): 245-252.
57. BIBI, M., N. KHAN, F. MOHAMMAD, R. GUL, **A. A. KHAKWANI**, O. SAYAL, M. IDREES AND I. A. KHAN. 2011. Genetic disparity and relationship among quantitatively inherited yield related traits in diallel crosses of upland cotton. Pak. J. Bot., 43(5): 2543-2550. (Impact factors = 0.872)
58. BALOCH, M. J., N. KHAN, W. A. JATOI, G. HASSAN, **A. A. KHAKHWANI**, N. F. VEESAR AND Z. A. SOOMRO. 2011. Drought tolerance studies through wssi and stomata in upland cotton. Pak. J. Bot., 43(5): 2479-2484. (Impact factors = 0.872)
59. Khan, M. H., N.U.DIN, **A. A. KHAKWANI**, M. S. BALOCH, M. ZUBAIR1, S. KHAN AND A.W.KHAN. 2011. Hashim-8: a Short Duration, High Yielding and

Disease Resistant Wheat Variety for Rain-fed Areas of Pakistan. *Int. J. Agric. Biol.*, 13: 956–960. (Impact factors = 0.808)

60. Khan, A. A., I. U. Awan, M. Mansoor, E. A. Khan, **A. A. Khakwani**, and M. S. Baloch. 2011. Efficacy and economic analysis of plant aqueous exudates on physiological parameters of wheat. *Pak. J. of Weed Sci.*, 17(4): 417-424.
61. Marwat, S. K., F. Rehman, K. Usman, **A. A. Khakwani**, S. Ghulam, N. Anwar, M. Sadiq and S.J. Khan. (2011). Medico-ethobotanical studies of edible wild fruit plants species from the flora of north westren Pakistan (D. I. Khan district). *J. Med. Plants Res.*, 5(16): 3679-3686.
62. **KHAKWANI, A. A.**, M. D. DENNETT AND M. MUNIR. (2011). Drought tolerance screening of wheat varieties by iducing water stress conditions. *SONGKLANAKARIN J. SCIENCE AND TECHNOLOGY*, 33(2): 135-142.
63. **KHAKWANI, A. A.**, M. D. DENNETT AND M. MUNIR. (2011). Early growth response of six wheat varieties under artificial osmotic stress condition. *PAK. J. AGRI. SCI.*, 48(2): 118-123.
64. Baloch, M. S, I. H. Shah, M. A. Nadim, M. I. Khan and **A. A. Khakwani**. (2010). Effect of seeding density and planting time on growth and yield attributes of wheat. *The Journal of Animal & Plant Sciences*, 20(4): 239-240. (Impact factors = 0.638)
65. Khan, A. W, M. Amjad Nadim, **A. A. Khakwani** and Tehseen Ullah. (2010). Nitrogen-Fertilization: Its impact on Growth & Yield of Wheat. *Life Sci. Int. J.*, Vol: 4 (1): 1386-1390.
66. **Khakwani, A. A.**, Baloch, M. S, Nadim, M. J, Zubair, M and I. H. Shah. (2010). LODGING: a determining factor in reducing yield and yield structure of wheat. *Sarhad Journal of Agriculture*. Vol: 26(2): 235-239.
67. Baloch, M. S., I. U. Awan, G. Hassan and **A. A. Khakwani**. (2006). Effect of Establishment Methods and Weed Management Practices on Some Growth Attributes of Rice. *Rice Science* 13(2): 131-140.
68. Shah, W.A., J. Bakht, T. Ullah, A. W. Khan, M. Zubair and **A. A. Khakwani**. (2006). Effect of Sowing Dates on the Yield and Yield Components of Different Wheat Varieties. *Journal of Agronomy* 5(1): 106-110.
69. **Khakwani, A. A.**, M. Zubair, M. Mansoor, K. Naveed, I. U. Shah, A. Wahab, M. Ilyas and I. Ahmad. 2006. Agronomic and Morphological Parameters of Rice Crop as Affected by Date of Transplanting. *Journal of Agronomy* 5(2): 248-250.

70. **Khakwani, A.A.**, M. Shiraishi, M. Zubair, M. S. Baloch, K. Naveed, and I. U. Awan. (2005). Effect of seedling age and Water depths on Morphological and Physiological Aspects of Transplanted Rice under High Temperature. Journal of Zhejiang University SCIENCE (JZUS), 2005, 6B (5): 389-395. (Impact factors = 1.108)
71. Uddin. N, M. H. Khan, M. Zubair, **A. A. Khakwani**, M. S. Baloch, S. Khan and A. W. Khan. (2005). Rainfed area improvement in perspective: Development of ZAM-04, improved wheat variety for rainfed areas of NWFP. Indus Journal of Plant Sciences, 4(1): 119-123, Supplimentary Issue February 2005.
72. **Khakwani, A. A.**, K. Naveed, I. U. Awan, M. S. Baloch, A. Naeem and M. I. Khan. 2004. Evaluation of coarse rice genotypes under high temperature of Dera Ismail Khan. Indus Journal of Plant Sciences, October. 3(4): 381-385.
73. Khan, N. U., G. Hassan, S. U. Khan, **A. A. Khakwani** and Q. Nawaz. (2002). Weed management through plant population densities in transplanted rice. Pak. Weed Sci. Res. 18(1-2):71-75, 2002.
74. **Khakwani, A. A.**, H. K. Ahmad, G. Hassan and F. U. Khan. 2001. Studies on sugarcane-sunflower intercropping system at different geometrical patterns and NPK levels during autumn planting. Pak. J. Biol. Sci. 4(10): 1209-1211.
75. **Khakwani, A. A.**, H. K. Ahmad, G. Hassan, M. A. Khan and F. U. Khan. 2001. Evaluating economics of intercropping sunflower in spring planted sugarcane at different geometrical patterns and NPK levels. Pak. J. Biol. Sci., Vol. 4 (Supplementary Issue No.3): 205-208.
76. Khan, N. U., S. U. Khan, G. Hassan, **A. A. Khakwani** and Q. Nawaz. 2001. Studies on chemical weed control measures in wheat (*Triticum aestivum* L.). On-line J. Biol. Sci. 1(17): 584-586.
77. Uddin, N., **A. A. Khakwani**, S. Khan and A. Wahab. 2000. Dera-98: An outstanding heat tolerant wheat cultivar for warmer areas of NWFP. Pak. J. of Bio. Sci. 3 (11):1817-1819.
78. **Khakwani, A. A.**, H. K. Ahmad, Nasiruddin Khan and M. H. Khan. 1993. Agro-economic study of intercropping mung and guara in sorghum. Gomal Univ. J. Res. 13(2): 121-126.
79. **Khakwani, A. A.**, H. K. Ahmad, Nasiruddin Khan, H. U. Khan and S. U. Khan. 1993. Effect of intercropping and planting geometry on the yield and yield related traits of sorghum. Gomal Univ. J. Res. 13(2): 133-140.

R. REFERENCES

- **Dr. Atiq Ahmad Alizai, Assistant Professor, Department of Horticulture, Gomal University. D.I.Khan. Mobile: +92+03219602478.
Email: atiqahmadalizai@yahoo.com**
- **Dr. Khalid Abdullah. Cotton Commissioner. Pakistan. Mobile: +92+3335369162.
Email: khalidabdullah99@yahoo.com**