

Ikramullah Khan

Curriculum vitae

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Qualifications

2011 **DOCTORATE IN ECOLOGY**
The University of Queensland, Australia

• **Thesis: “ASPECTS OF WEED SEED SPREAD AND PREVENTION”**

- Research compared the seed spread of different weed species through different biotic and abiotic factors. Biotic factors include the role of animals and human being in the spread of seeds. These seeds were coming from different plant species and some of them were noxious weed seeds. Seeds of those noxious weeds adversely affect the natural and endemic biodiversity of the locality. Noxious weed seeds cause enormous health, environmental and economic losses of the locality.
- Role of human being in spreading weed seeds was researched and especially the roles of small vehicles in spreading weed seeds and their affect on the environment were studied in detail.
- Innovative prevention methods of noxious weed seed spread through small vehicles were discovered. Some of the existing preventative methods such as efficacy of wash down facility were improved through the discovery of innovative and improved methods.
- Spread of noxious weed seeds through animals were identified and quantified in Australia. Similarly, noxious weed seed spread through fodder and seed lots were researched and it was discovered that these vectors spread noxious weed seeds such as Parthenium weed (*Parthenium hysterophorus* L.), which cause huge health, environmental and economic losses. Based on these discoveries some recommendations were specified for the Australian government to help in legislation to prevent noxious weed spread.
- Based on the analogy of “Prevention is better than cure” environment friendly methods of noxious weed control were discovered to help in protecting the local biodiversity. For example, weed seeds could be killed through physical methods such as heat at high temperature generated in the ambient conditions of solar radiations, moisture and plastic mulch.
- Plant identification skills have been developed. Flora of Queensland on cars has been identified by studying its vegetative and reproductive characteristics.
- Having good command of the data analysis included the general linear model, regression modelling, multiple linear regressions and Pearson's correlation, and the factorial experimental design included analysis of variance and least significant difference values, utilising Minitab, GenStat, Sigma Plot and Excel.
- The doctoral research is expected to generate five research papers in high impact factor journals.
- Awarded four years University of Queensland International Research Award (Tuition fee waiver), University of Queensland Living Allowance Scholarship and University of Queensland Research Travel grant.

2006 **MASTER OF PHILOSOPHY IN INAVSIVE WEEDS**
University of Peshawar, Peshawar, Pakistan

- **Thesis: “Alien invasive plant species in the North-West Frontier Province - Pakistan”**
 - Research tracked with surveying invasive alien plant species in the North-West Frontier Province and their negative effect on local biodiversity. New invasive plant species were

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identified and documented in the North-West Frontier Province, which are deleterious to human health because these species produce pollens which are allergenic to human skin. These alien invasive species also pose a big threat to the local biodiversity and environment. Local and alien invasive weeds also compete with crop for soil, water light and nutrients and reduce the yield of crops up to 40 percent.

- The factorial experimental design included analysis of variance and least significant difference values, and utilised Minitab, Sigma Plot and Excel
- Awarded a two-year Higher Education Commission Talent Scholarship.

1999 **MASTER OF SCIENCE IN BOTANY WITH SPECIALIZATION IN WEED SCIENCE**
University of Peshawar, Peshawar, Pakistan

- **Thesis:** Research project investigated the effect of different herbicides in controlling broadleaf and grassy weeds in wheat crop.
- Awarded a Two-year Higher Education Commission Merit Scholarship

1997 **BACHELOR OF SCIENCE IN BIOLOGY WITH FIRST CLASS HONOUR**
Gomal University, Dera Ismail Khan, Pakistan

- Completed a two-year general science degree in Botany, Zoology and Chemistry
- Awarded a Two-year District Merit Scholarship

Relevant teaching and research experience (10 + years)

- Ph D Research student in the School, of Land, Crop and Food Sciences, The University of Queensland, St Lucia campus, Brisbane, Australia.
(24th March 2008 to 30th September 2011).
- Research Associate in the Queensland University of Technology (QUT) under the supervision of Dr. Vincent. Project: Using the ORYSA2000 model to estimate the potential yield of rice in Asia pacific region.
- Teaching at Aboriginal & Torres Strait Islander Studies Unit, Indigenous Tutorial Assistance Scheme (ITAS), The University of Queensland, St Lucia campus, Brisbane, Australia (24th August 2009 to date).
- Assistant Professor (BS-19), Department of Weed Science, NWFP Agricultural University Peshawar, Pakistan (July 08, 2010 to date).
- Lecturer (BS 18), Department of Weed Science, NWFP Agricultural University Peshawar, Pakistan (January 01, 2007 to July 08, 2010).
- Lecturer (BS 17), Department of Weed Science, NWFP Agricultural University Peshawar, Pakistan (February 17, 2003 to January 01, 2007).
- Lecturer (BS 17), Department of Weed Science, NWFP Agricultural University Peshawar, Pakistan, On Contract Basis (February 18, 2001 to February 17, 2003).

Distinctions and awards

- ❖ First Class Academic Career
- ❖ Got Young Scientist Award/ Best presenter award in the 22nd Asian Pacific Weed Science Society Conference, Lahore, Pakistan, 2010.
- ❖ Graduate School Research Travel Grant (GSRTG), The University of Queensland, Australia, 2009.

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- ❖ Our Common Future Fellowship – Climate change (VolkswagenStiftung sponsored) Germany, 2009.
- ❖ Membership Global Young Faculty – Climate change (VolkswagenStiftung sponsored) Germany, 2009.
- ❖ Travel Award by Kirkhouse Trust (UK) for Australia, March 2008.
- ❖ University of Queensland International Research Award (UQIRA), Australia, 2008.
- ❖ University of Queensland Research Scholarship (UQRS), Australia, 2008.
- ❖ Travel Grant by Higher Education Commission of Pakistan (HEC) to attend the 21st Asian Pacific Weed Science Conference in Colombo (Sri Lanka), October, 2007.
- ❖ Travel Award by Higher Education Commission of Pakistan (HEC) to attend and present paper in the International Symposium on Dry land and Human Security (ISDHS) in Dubai (UAE), December, 2006.
- ❖ Sponsored membership of the Society for Conservation Biology (SCB), USA.

Training and short courses

- ❖ Staff Development Course conducted by National Academy of Higher Education and Higher Education Commission of Pakistan at NWFP Agricultural University Peshawar-Pakistan, February 26 to March 22, 2007.
- ❖ Training of the Presiding officers in Peshawar conducted by UNDP in collaboration with the Govt. of Pakistan, December 8, 2007.
- ❖ Workshop on “Current Trends in Plants Systematic”, Department of Botany, University of Karachi, Pakistan. August 29-September 1, 2005.
- ❖ One Month Preliminary Training in “Basic Molecular Techniques in Biology” at National Institute of Biotechnology and Genetic Engineering (NIBGE) Faisalabad, March 12 to April 11, 2005.
- ❖ Conducted “Workshop for In-service Teachers of Botany” Sponsored by Higher Education Commission of Pakistan in collaboration with Department of Weed Science, NWFP Agricultural University Peshawar- Pakistan, August 9-14, 2005.
- ❖ National Workshop for Life Scientist held in Kohat University of Science and Technology, Kohat-Pakistan, August 15-23, 2005.
- ❖ National training course in “Weed Science” at Department of Weed Science, NWFP Agricultural University Peshawar, October 1-6, 2001.
- ❖ National training course in “Latest Development in Molecular Biology and Biotechnology” at Centre of Excellence in Molecular Biology (CEMB), Lahore, October 8-13, 2001.
- ❖ Organized “Science Fair” in the University of Peshawar-Pakistan, October 27-29, 1999.

Conferences and seminars attended

1. Attended “Our Common Future” congress held on 2-6 November, 2010 in Hannover and Essen, Germany.
2. Presented research article in the 22nd Asian Pacific Weed Science Society Conference March 08-12, 2010, Govt. College University Lahore, Pakistan.
3. Presented research paper on “Reducing viable weed seed spread” in a one day seminar on “Weed Biology” The University of Queensland, Brisbane, Australia (August 27, 2010).
4. Attended Conference of the Australian Branch of the International Association of Plant Biotechnology “Culturing a sustainable future” 24th – 26th November 2009. The Terrace Room, Sir Lew Edwards Building The University of Queensland, Brisbane, Australia.

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5. Presented Research paper in 21st Asian Pacific Weed Science Society (APWSS) Conference, held at the Galle Face Hotel, Colombo, Sri Lanka from 2-6 October 2007.
6. Presented Paper on Invasive weeds in the International Symposium on Dry lands Ecology and Human Security (ISDEHS, 2006) in Dubai-UAE.
7. Presented Paper on “Invasive Weeds Threat to the Biodiversity” In the First International Conference, held in October 23-26, 2003” at NWFP Agricultural University Peshawar, Pakistan.
8. Presented Research article in the 6th National weed science conference, held in March 28-30, 2005, Department of Weed Science, NWFP Agricultural University Peshawar, Pakistan.
9. Presented Paper in the Second International weed Science Conference, University of Arid Agriculture, Rawalpindi, Pakistan. March 20-22, 2006
10. Attended 6th Plant Science Conference held in Botany Department 1999, University of Peshawar, Pakistan
11. Attended 8th Plant Science Conference held in Botany Department 2003, University of Karachi, Pakistan
12. Attended Seminar of Biodiversity Conservation held in October 2003, in Weed Science Department, NWFP Agricultural University, Peshawar.

Professional Societies

- ✓ Member “Society for Conservation Biology (SCB) USA.
- ✓ Member “Asian Pacific weed Science Society (APWSS).
- ✓ Member “International Association for Plant Tissue Culture and Biotechnology (IAPTC&B) Australian Branch” Brisbane, Australia.
- ✓ Member, Weeds Society of Queensland (WSQ), Australia.
- ✓ “Our Common Future” Fellow (Germany)
- ✓ Member “Global Young Faculty” (Germany)
- ✓ Member “Weed Science Society of Pakistan (WSSP)”, Weed Science Department, Agricultural University Peshawar, Pakistan.
- ✓ Chief Organizer of the Student Wing in the Weed Science Society of Pakistan (WSSP).
- ✓ Member “Pakistan Botanical Society (PBS)” University of Karachi, Pakistan.
- ✓ Member “Pakistan Ethno botanical Association (PEA)” Weed Science Department, NWFP Agricultural University Peshawar, Pakistan.
- ✓ Member, United Nation Student Association (UNSA), the University of Queensland, Australia.
- ✓ Member, National Academy of Young Scientists (NAYC) – Pakistan.
- ✓ Member, Occupational Health and Safety (OH&S) Committee, School of Agriculture and Food Science, Faculty of Science, the University of Queensland, Australia.

Field of specialization

- Weed Ecology
- Integrated crop management
- Plant anatomy
- Plant taxonomy

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- Environmental Science
- Natural Resource Management
- Weed management

Field of Interest

- ❖ Weed Ecology
- ❖ Invasive Weeds and Climate Change
- ❖ Biodiversity Conservation
- ❖ Weed Physiology
- ❖ Natural Resource Management
- ❖ Environmental Science
- ❖ Integrated Weed Management and Studies on Physiological Aspects of Crop Plants. Crop Protection from Weeds Losses.

Taught courses at graduate and postgraduate level

- General Weed Science
- Plant Ecology/Environmental Science
- Plant Taxonomy
- Weed Identification
- Plant Anatomy
- Ethnobotany
- Invasive Weeds
- Biodiversity Conservation
- Problems solving in agricultural system at UQ

Research projects completed

1. "Weed seed spread by animals in Khyber Pakhtunkhwa, Peshawar – Pakistan". 2010. Sponsored by the University of Queensland Graduate School, Brisbane, Australia, worth AUS \$ 5,000 = Rs. 450,000.
2. "Medicinal and aromatic plants of Northwest Pakistan", 2005. Sponsored by Alif Laila Foundation, Lahore, Pakistan, worth Rs. 20,000

Students supervised at graduate and post graduate level

- Shakirullah Khan (AUP)
- Muhammad Khalid Khan (AUP)
- Bushra Faiz (AUP)

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- Farooq Khalil (AUP)
- Sadiq Ali (AUP)
- Masooma Tariq (AUP)
- Nehemiah Mahase (Mater Student at the University of Queensland, Australia)

Referee for journals

1. Pakistan Journal of Weed Science Research
KPK Agricultural University Peshawar- Pakistan
2. Sarhad Journal of Agriculture
KPK Agricultural University Peshawar- Pakistan
3. Asian Journal of Plant Sciences, Faisalabad – Pakistan
4. American- Eurasian Journal of Agriculture & Environmental Sciences,
Lahore, Pakistan.
5. Pakistan Journal of Plant Sciences
University of Peshawar- Pakistan

Computer Knowledge

Can successfully operate most of the computer software's and can work online used in applied research and office automation i.e. statistical packages, word processors, spreadsheets and graphic packages etc. Full command on MS Office (MS Word, Excel and Power point) and internet and Endnote.

Publications and presentations

1. **Ikramullah Khan**, Z. Muhammad, G. Hassan and K. B. Marwat. 2001. Efficacy of different herbicides for controlling weeds in wheat crop -1. *Scientific Khyber*. 14(1): 51-57.
2. **Ikramullah Khan**, G. Hassan and K. B. Marwat. 2002. Efficacy of different herbicides for controlling weeds in wheat crop- II. *Weed Dynamics and herbicides*. *Pak. J. Weed Sci. Res.* 8(1-2): 41-47.
3. Khan, N., K. Naveed and **Ikramullah Khan**. 2003. Efficacy of different herbicides measures on weed control and on yield and yield components of wheat crop. *Asian. J. Plant Sci. Res.*2(14): 1024-1026.
4. Khan, N., G. Hassan, M. A. Khan and **Ikramullah Khan**. 2003. Efficacy of different herbicides for controlling weeds in wheat crop at different times of application- 1. *Asian. J. Plant Sci. Res.* 2(3): 305-309.
5. Khan, M. A., N. Khan and **Ikramullah Khan**. 2004. *Phragmites australis* (Cav): A new invasive weed in Pakistan. *Scientific Khyber*. 17(2): 169-173.
6. Khan, N., **Ikramullah Khan** and M. A. Khan. 2004. Major Rabi and Kharif Weeds of agronomic crops of district Bannu. *Pak. J. Weed Sci. Res.* 10(1-2): 79-86.
7. Hanif, Z., S. A. Khan, K. B. Marwat, I. A. Khan and **Ikramullah Khan**. 2004. Important Weeds of wheat Crop in Malakandher Farm, N.W.F.P. Agricultural University Peshawar. *Pak. J. Weed Sci. Res.* 10(3-4): 109-112.
8. M. D. Khan, I.H. Khalil, M.A. Khan and **Ikramullah Khan**. 2004. Genetic divergence and association for yield and related traits in mash bean. *Sarhad Journal of Agriculture*, 2004 (Vol. 20) (No. 4) 555-561.
9. Islam, M., H. Ahmad A. Razaq, N. Akhtar, A. Rashid and **Ikramullah Khan**. 2006. Weeds and medicinal plants of Shawar Valley, District Swat. *Pak. J. Weed Sci. Res.* 12(1-2): 82-86.
10. **Ikramullah Khan**, Razzaq and M. Islam. 2007. Ethnobotanical studies of some medicinal and aromatic plants at higher altitudes of Pakistan. *American- Eurasian J. Agric. & Environ. Sci.*, 2(5): 470-473.
11. Khan, N. U., G. Hassan, M. B. Kumbhar, S. Kang, **Ikramullah Khan**, A. Parveen and U. Aiman. 2007. Heterosis and Inbreeding Depression and Mean Performance in Segregation Generations in Upland Cotton. *European Journal of Scientific Research* ISSN 1450-216X Vol.17 No.4 pp.531-546.
12. **Ikramullah Khan**, K.B. Marwat. Z. Hussain, 2007. Chemical weed management in wheat at higher altitudes. *Commun. Agric. Appl. Biol. Sci.* 2007; 72 (2):259-64.
13. Khan, N. U., G. Hassan, , K.B. Marwat, M.B. Kumbhar, **Ikramullah Khan**, Z.A. Soomro, M.J. Baloch and M.Z. Khan. 2009. Legacy study of cotton seed traits in upland cotton using Griffing's combining ability model. *Pak. J. Bot.*, 41(1): 131-142.
14. **Ikramullah Khan**, K. B. Marwat and I. Khan, 2007. Post emergent herbicidal control of *Asphodelus tenuifolius* in *Cicer arietinum* L. at Lakki Marwat. 21st Asian Pacific Weed Science Society (APWSS) Conference, held at the Galle Face Hotel, Colombo, Sri Lanka from 2-6 October 2007.
15. Dawar, K, **Ikramullah Khan**, S. Khan and M.I. Khan. 2011. Effect of urea with or without urease inhibitor (NBPT) and herbicide on maize yield. *Pak. J. Weed Sci. Res.* 17(2):207-213.

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16. **Ikramullah Khan**, K. B. Marwat, I. A. Khan, H. Ali, K. Dawar, H. Khan. 2011. Invasive weeds of southern districts of Khyber Pakhtunkhwa, Pakistan. Pak. J. Weed Sci. Res. 17(2):161-174.
17. Dawar, K., **Ikramullah Khan**, S. Khan, M.I. Khan. 2011. The impact of urease inhibitor (NBPT) and herbicide on the yield and quality of wheat. Pak. J. Weed Sci. Res. 17(2): 187-194.
18. **Ikramullah Khan**, K. B. Marwat, I. A. Khan, H. Ali, H. Khan, K. Dawar. 2011. Ethnobotanical studies of invasive weeds of southern districts of Khyber Pakhtunkhwa, Pakistan. Pak. J. Weed Sci. Res. 17(3):00-00 (in Press).
19. Khan, A. I., S. Ali, **Ikramullah Khan**. 2011. Efficacy of The Eco-Friendly methods of Weed Management In the yield of Okra. Pak. J. Weed Sci. Res. 17(3):00-00 (in Press).
20. Haidar Ali, Habib Ahmad, M. Yousaf, Khan Bahadar Marwat and **Ikramullah Khan**. 2011. Trade of medicinal plants in Mingora City. Pak. J. Weed Science Res. 17(3):00-00 (in Press).
21. Potential and trends in marketable fruit production of Shawar valley Swat. 2011. Razzaq, A., M. Islam, Haidar Ali, Habib Ahmad, **Ikramullah Khan** and A. Rashid. Pak. J. Weed Science Res. 17(3):00-00 (in Press).
22. Hussain, Z., K.B. Marwat, J. Cardina and **Ikramullah Khan**. 2011. Impact of Common Cocklebur Densities on yield and yield components of maize. Weed Research (submitted).
23. **Ikramullah Khan**, C.O'Donnell, S. Navie, D. George and S. Adkins. 2011. Weed seed spread by vehicles: A case study from southeast Queensland. Accepted for oral Presentation in the 23rd Asian Pacific Weed Science Conference (APWSS) in Cairns, Australia. September 25-30, 2011.

CONFERENCE ABSTRACTS

24. **Ikramullah Khan**, K. B. Marwat and Z. Hussain. 2005. Efficacy of different herbicides for weed management in wheat crop at higher altitudes. Ist Kashmir International Science Conference, University of A J & K, September, 220-21, 2005. Page. 17.
25. Hassan, G., M. Tariq, I.A. Khan, I. Khan and **Ikramullah Khan**. 2006. Interference of wild oats with wheat. Second International Conference, University of Arid Agriculture, Rawalpindi. March 20-22, 2006. Page:22.
26. Khan, I. A., G. Hassan, S. Ahsan, S. Bibi and **Ikramullah Khan**. 2006. Comparison of different wild oats Biotypes. Second International Conference, University of Arid Agriculture, Rawalpindi. March 20-22, 2006. Page: 55.
27. **Ikramullah Khan** and K. B. Marwat. 2006. Invasive weeds threat to the biodiversity, A Case Study District Lakki Marwat. International Symposium on Dry lands Ecology and Human Security (ISDEHS 2006) Dubai (UAE) Abstract No. 94/2006 Page. 53.
28. Saeed, M. K. B. Marwat and **Ikramullah Khan**. 2006. Weed Management in Dry lands of Pakistan. International Symposium on Drylands Ecology and Human Security (ISDEHS 2006) Dubai (UAE) Abstract No.228/2006 Page.81.
29. Zahid Hussain, Khan Bahadar Marwat, **Ikramullah Khan**, Muhammad Saeed and Bakhtiar Gul. 2006. Evaluation of Chemical Weed Control in Wheat at Different Densities and Sowing Methods under Rainfed Conditions. International Symposium on Dry lands Ecology and Human Security (ISDEHS 2006) Dubai (UAE). http://isdehs.com/html/2006___247.html
30. **Ikramullah Khan** and K. B. Marwat. 2008. Biodiversity at risk from extinction due to invasive weeds. Annual meeting of the Society for conservation biology SCB, The

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University of Tennessee at Chattanooga's Department of Biological and Environmental Sciences, Chattanooga, Tennessee, USA. 13-18 July 2008.

31. Adkins, S.W., C. O'Donnell, N. Khan, T. Nguyen, **Ikramullah Khan**, A. Shabbir, K. Dhileepan, D. George and S. Navie. 2010. Parthenium weed (*Parthenium hysterophorus* L.) research in Australia: New management possibilities. Australasian Weeds Conference to be held in New Zealand, Christchurch, 26-30 September 2010.
32. **Ikramullah Khan**, C.O'Donnell, S. Navie, D. George and S. Adkins. 2010. Weed seed spread by vehicles: A preliminary study from southeast Queensland, Australia. Oral Presentation in the 22nd Asian Pacific Weed Science Conference (APWSS) in Lahore, Pakistan. March 08-12, 2010.

Personal background

Full name: Ikramullah Khan. Born on 18 April 1978, married, good health and professionally sound. Interests include cricket, badminton, internet and gardening.
Language: English, Urdu and Pashto.