



Dr. Gohar Ayub

(HEC Approved Supervisor, ID: 6083)

Professor

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Working Experience

Professor (BPS-21) (04-03-2022 till now)

Job responsibilities

- Teaching (B.Sc-Hons, M.Sc-Hons and Ph.D classes)
- Research (M.Sc-Hons and Ph.D level)
- Extension activities (Field days, farmer's trainings, Workshops)
- Principal investigator (Certified fruit nursery)
- Focal person HEC/QEC
- Seminar/tour coordinator
- Department Presenter to various organizations
- Head of the vegetable group (Olericulture)

Associate Professor (BPS-20) (13-05-2014 to 03-03-2022)

Job responsibilities

- Teaching (B.Sc-Hons, M.Sc-Hons and Ph.D classes)
- Research (M.Sc-Hons and Ph.D level)
- Extension activities (Field days, farmer's trainings, Workshops)
- Principal investigator (Certified fruit nursery)
- Focal person HEC/QEC
- Seminar/tour coordinator
- Department Presenter to various organizations

Assistant Professor (BPS-19) (29-12-2009 to 12-05-2014).

Job responsibilities

- Teaching (B.Sc-Hons, M.Sc-Hons and Ph.D classes)
- Research (M.Sc-Hons and Ph.D level)
- Extension activities (Field days, farmer's trainings, Workshops)

Lecturer/Farm Manager (BPS-18) (13-01-2007 to 28-12-2009).

Lecturer/Farm Manager (BPS-17) (15-03-2002 to 12-01-2007).

Job responsibilities

- Teaching (B.Sc-Hons and M.Sc-Hons classes)
- Research (M.Sc-Hons)
- Extension activities (Field days, farmer's trainings)

-Farm Management (Daily, monthly, quarterly and yearly planning)

Horticulturist/Extension Officer in IUCN Project (Funded by European Union) at Dir-Kohistan, Khyber Pakhtoon Khwa (07-10-1998 to 14-03-2002).

Job responsibilities

- Supervise the activities of the field assistants
- Supervise the fruit nurseries and progeny garden
- Deliver technical advice to the farmers organized in VOs
- Trainings to Agriculture Extension Workers (AEW) in different villages
- Visit and supervise the project demonstration plots
- Keep record of all activities, inputs and germplasm
- Prepare monthly estimates and activities plan at the beginning of each month according to the approved annual work plan (AWP).
- Participate in staff meeting
- Report to the Project management unit (PMU) according to the format prepared by Monitoring and evaluation (M&E) officer.
- Establishment of new orchards and renovation of the existing orchards
- Promotion of off season vegetables in Dir Kohistan
- Marketing of off season vegetables
- Vegetable nursery raising and vegetable seed production
- Distribution of seed (high yielding varieties)
- Promotion of balanced fertilizer use
- Establishment of trial demonstration plots
- Promotion of kitchen gardening
- Bee keeping (Apiculture)

Member of international organization

- Australian society of plant scientists (ASPS)
- American soil society

Member/responsible person of committees within Agriculture University Peshawar

- Senior warden Unit B Hostels (Hostel 4, 5 and 8) (09 September, 2014 to 07 February 2022)
- Member of the Convocation media committee (2013)
- Tour in charge of the Horticulture department (June 2012- to date)
- Seminar Coordinator of the Horticulture department (September 2011- to 30-10-2019)
- Focal person for Alumni Association (June 2011- to date)
- Focal person for HEC in department (September 2011- to date)
- Focal person for quality enhancement cell (QEC) of the Horticulture department, AUP (May 2011- to date)
- Member of the campus beautification committee (2004-06)
- Member of the farm development committee (2002-06)
- Member of the farm purchase committee (2002-06)
- Member of the department purchase committee (2011- to date)
- Member of DTRC (Departmental tenure review committee) of Horticulture Department

- Member of AUTF (Agriculture University Teachers Foundation in cadre of Assistant Professors) (2014-2017)
- Member of Senate (Associate Professor for) for 03 years (2018-2021)
- Convener of the Registration Committee of the National Conference at UAP 15-16 November 2018.
- Member of the Food Committee of the National Conference at UAP 15-16 November 2018.
- Member of the organizing committee of the national conference “Beneficial microbes and sustainable crop production” at UAP 19-20 February 2020.
- Life time member of the Pakistan Society for Horticultural Sciences
- Focal Person for PhD & MSC students research
- Member of the departmental admission committee for BSc-III, MSc and PhD
- Member of board of studies for Horticulture, Agronomy and Soil Science
- Member of the academic council
- Member of the departmental time barred committee
- Member of board of Faculty of crop Production Sciences

Technical Expert to Assist NAB (National Accountability Bureau) team

- As investigation officer for inquiry against officers in Billion tree Tsunami Project
- As investigation officer for inquiry regarding cutting of fruit plants during road construction

Course taught at University

B.Sc (Hons) -I Year:	Introductory Horticulture
B.Sc (Hons) -II Year:	Principal Horticulture Practices
B.Sc (Hons) -III Year:	Farm Forestry, Post Harvest Horticulture Commercial fruits production Principles of vegetable production
B.Sc (Hons) -IV Year:	Temperate Fruits Production
M.Sc (Hons):	Mineral Nutrition for Horticultural Crops Advanced fruit Science Advanced vegetable Science
PhD:	Eco-Physiology Special and minor fruits Potato Physiology and Production Technology, Viticulture Solanecous Crops Physiology

PhD students produced**(04)**

1. **Muhammad Ilyas** (Management practices to enhance yield and quality of autumn potato crop).
2. **Samia Mukhtar** (Enhancing growth, flower production and quality of german Chamomile through Nitrogen, Phosphorous, Potassium (NPK) integration with Farm Yard Manure (FYM), Poultry Manure (PM) and Humic Acid (HA).
3. **Farzana Begum** (Producing quality okra seed through nutritional and crop management practices).
4. **Gulzar Ullah** (Dissecting the heat stress responses and effects on morphology of tomato varieties employing high temperature conditioning and nutrients management).

PhD students in progress**(05)**

1. **Muhammad Umar** (Enhancing growth and yield of Broccoli through Nutrients management, plants density and irrigation regimes). Thesis writes up stage
2. **Muhammad Pervaz** (Course work completed)
3. **Hafiz Naveed Hussain** (Course work completed)
4. **Ayesha Bi Bi** (Course work completed)
5. **Haider Ali** (Course work completed)
6. **Muhammad Zubair** (Course work completed)

M. Sc (Hons) students produced**(73)****Fruits: (4)**

1. Sajjad Ali Khan (Effect of different growing media and planting time on the cutting of cherry rootstock colt in Swat).
2. Muhammad Ali Shah (Effect of natural and synthetic growth regulators on in vitro propagation in cherry).
3. Murad Aftab (Growth response of pear varieties grafted on different pear rootstocks).
4. Abdul Haseeb (Influence of various plant extracts on the shelf life of persimmon).

Vegetables: (56)

1. Farzana Begum (Response of tomato cultivars to Potash levels).
2. Nasir Mehmood (Effect of nitrogen levels on tomato cultivars).
3. Aftab Ayyaz (Response of radish cultivars to nitrogen levels in Mansehra).

4. Ammara Saeed (Effect of potash levels on growth of chili cultivars).
5. Mushtaq Ali (Response of bringal cultivars to potash levels).
6. Zahid Hussain (Effect of organic and inorganic fertilizer on potato cultivars).
7. Muhammad Ilyas (Effect of stickling size and Phosphorous levels on carrot seed production).
8. Haider Ali (Response of Coriander growth and development to sowing dates and Nitrogen levels).
9. Abida Bibi (Effect of bed types on the growth of turnip cultivars).
10. Basirath Bibi (Response of cabbage to different NPK combinations).
11. Saleha Tawab (Effect of Zinc levels on bringal cultivars).
12. Rizwanullah (Influence of Zinc and Boron on the growth and yield of tomato).
13. Roshan Zeb (Response of raddish cultivars to Phosphorous levels).
14. Ehsan Ellahi (Effect of nitrogen levels on the growth of cauliflower cultivars)
15. Muhammad Rashid (Influence of Calcium and Magnesium on the growth and yield of tomato).
16. Samra Naeem Abbasi (Response of peas cultivars to sowing time sunder the agro-climatic condition of Azad Kashmir).
17. Muradullah (Sowing time effects growth in radish cultivars).
18. Mudassar Khan (Growth of tomato cultivars as influenced by sowing dates).
19. Hakim Khan (Foliar application of Calcium and Magnesium influenced Chilli growth and yield).
20. Zia-ur-Rehman (Effect of sulphur and magnesium on the growth and yield of tomato).
21. Amin Khan (Growth response of potato to nitrogen concentrations).
22. Qurat-ul-Ain (Growth response of Broccoli to zinc and boron concentrations).
23. Zeshan Nawaz (Response of cucumber to foliar application of Calcium and Magnesium)
24. Bi Bi Zanib (Response of bringal cultivars to nitrogen levels)
25. Muhammad Ashfaq (Effect of different nitrogen levels on the growth of onion cultivars)

26. Muhammad Nouman (Response of tomato cultivars to different mulching materials)
27. Maaz khan (Response of cucumber to different levels of poultry manure)
28. Farhat Ullah (Sterilization methods and bag placement influenced mushroom growth).
29. Saqib Khattak (Effect of supplemental Potassium application on growth, yield and tuber quality of potato cultivars).
30. Murad Ali (Growth and yield response of onion cultivars to organic manures).
31. Syed Muhammad Aslam (Evaluation of potato genotypes at Islamabad).
32. Saad Khan (Tomato growth as affected by staking and branches removal).
33. Azaz Ali (Peas growth responded to sowing time and mulching).
34. Faizan (Okra growth as affected by Zn and B concentrations).
35. Syed Azaz Ali Shah (Bitter melon growth as affected by time of application and concentration of GA₃).
36. Saeed (Response of tomato growth to Phosphorous levels with and without PSB).
37. Aliya Ayaz (Effect of dipping time and GA concentrations on the growth of Bitter melon).
38. Nisar Muhammad Roghani (Response of Bitter melon to foliar application of Zinc and Boron concentrations).
39. Faryal (Response of coriander growth and seed production to Phosphorous levels with and without phosphate solubilizing bacteria).
40. Hajra Shah (Effect of sowing dates and umbel pinching on seed production in carrot).
41. Hafiz Naveed Khan (Peas growth as affected by Zn and B concentrations).
42. Sumbal Gul (Effect of Boron and its time of application on the growth, yield and seed production in tomato).
43. Sidra Saleem (Response of Cucumber to sowing dates and ethereal concentrations).
44. Ayesha Zahid (Effect of Iron concentrations and sowing dates on the growth and yield in Bitter melon).
45. Syed Hasan (Growth response of Peas to sowing dates and Salicylic acid concentrations).

46. Abdullah Sayed. (Effect of Gibberellic acid levels on growth and yield of Bringal cultivars)
47. Asad ur Rehman (Effect of Gibberellic acid and Naphthaline acetic acid concentrations on growth and yield of Okra)
48. Muhammad Abbas Dad. Response of Mint to sowing dates and Nitrogen levels.
49. Malak Muhammad Saad. Effect of phosphorous levels and cutting regimes on seed production in fenugreek.
50. Shehzad Khan. Peas growth as affected by Phosphorous levels and Phosphorous solubilizing bacteria
51. Alvena Izhar. Effect of stacking size and phosphorous levels on seed production in Raddish.
52. Rabia Asghar. Response of turnip to sowing dates and phosphorous levels
53. Mahnoor Khattak. Response of Okra to Nitrogen levels and Bacteria species.
54. Saba Rukhsar. Effect of sowing dates on the growth and yield of Okra cultivars
55. Subreena Iqbal. Effect of sowing dates and cutting regimes on seed production in spinach.
56. Nuzhat Nabi. Effect of phosphorous levels and amino acid concentration on seed production in lettuce.

Ornamentals: (13)

1. Samia Mukhtyar (Response of Zinnia cultivars to phosphorous levels).
2. Fahimullah (Effect of planting dates and cutting types on the propagation of *Cerodendron splendens*).
3. Muhammad Shahab (Assessment of IBA (indole butyric acid) levels and planting time for rooting and growth of Alstonia cuttings).
4. Gulzarullah (Effect of various potash levels on growth and development of Gladiolus cultivars).
5. Imtiaz Ahmad (Evaluation of cormel sizes and nitrogen levels for enhancing growth of gladiolus).
6. Ali Rehman (Rooting and growth of chrysanthemum cultivars to calcium levels).
7. Fawad Ahmad (Response of African corn lily to various planting depths and distances).

8. Khaleeq ur Rehman (Influence of nitrogen and planting time on the growth of Aloe Vera).
9. Abbas Jamal (Effect of IBA (Indole butyric acid) levels on different cuttings of *Clerodrum splendens*).
10. Bakht Baidar (Interactive effect of Calcium and Magnesium on rooting and growth of *Schefflera arboricola* cuttings).
11. Zia U din (Growth response of Aloe vera to irrigation intervals and nitrogen levels).
12. Adnan Ali Shah (Effect of plant spacing and corm size on growth and yield of tuberose).
13. Naveed Malik (Growth response of chrysanthemum as influenced by nitrogen levels and cutting time).

Have been Co-supervisor of more than 190 students for PhD/MSc research work

Supervised more than 100 BSc internship students

Trainings Attended

- Fodder Production
- Integrated Pest management (IPM)
- Participatory Monitoring and evaluation
- Environment and pollution
- Environment and NRM (Natural Resources Management)
- Participatory approaches to development
- Natural Resources and its sustainable use
- Annual work plan preparation
- Planning for farmer oriented research
- Walnut borers and its control
- Off-season Vegetable production and their marketing
- Insect pest management of vegetables
- Climate change workshop (25-11-2014 at Agriculture University Peshawar)
- Self assessment training (07-04-2016)

Trainings given to Agriculture Extension officers/ Research officers/ Field Assistants/farmers

- Orchard + Nursery establishment and their Management

- (Dir Kohistan Project at Sheringal Dir Upper, 1999-2002)
- UN Project at Agriculture University Peshawar (Afghan farmers, 2004)
- Khwando kor Organization at Karak,, Kohat, Hangu (2005-06)
- Farm Forestry Project at Karak, Para Chinar (2005-06)
- AUP Project at Mingora Swat (May 2011)
- PATA Development Project (Farmers training on wheat sowing, Bada Ber and Mathni union councils, November, 2013)
- Off season vegetable production to AOs of southern Districts, FAO (02, 2014)
- Production technologies for potato growers of Wana Waziristan FATA (03, 2014)
- Vegetable and vegetable seed production for farmers of Wazeristan (August, 2017)
- Export potential of fruits and vegetables to AOs at PARD (October, 2018)
- Potential of export oriented Horticulture in Pakistan to AOs at PARD (February, 2019)
- Tomato tunnel farming, production technology and post harvest losses to Bajour/Momand agency farmers on 25-10-2021

Conferences/Presentations

International

- Poster presentation at University of York, UK (23 June 2007).
- Attended Conference “Plant respiration in changing environment” at University of York (16 September 2007).
- Attended conference “Plant energy and Water” at RSBS, Australian National University (ANU) (September 2008).
- Attended conference “Phenotypic Plasticity Symposium at ANU” (21 April 2009)
- Oral presentation “Soybean biomass at three growth CO₂ concentrations” in student Conference at ANU, **Australia** (08 October 2009).
- Oral presentation “Light respiration in Soybean and Eucalyptus and its relation with photorespiration” in COMBIO conference at Christchurch **New Zealand** (06-10 December 2009).
- Poster Presentation at Oxford University, **United Kingdom** (New phytologist 11-14 April 2010) (<http://www.newphytologist.org/respiration/default.htm>).
- Oral presentation “Photosynthesis of drought Eucalyptus plants at three CO₂ and two temperature regimes” at Macquarie University, Sydney **Australia** (14th December 2010).

Local

- Oral Presentation “Orchard and nursery management” to Agriculture Extension officers and Research officers at Mingora Swat dated 05-05-2011.
- Oral presentation “Drought effect on Eucalyptus carbon economy, grown at three CO₂ concentrations and two temperature regimes” in International Conference “climate change. A challenge for Agriculturist” dated 28-30 may 2012 at Agricultural University Peshawar.
- Poster presentation “Tomato cultivars responded differently to potash levels” in International Conference “climate change. A challenge for Agriculturist” dated 28-30 may 2012 at Agricultural University Peshawar.
- Poster presentation “Potash levels affected the growth and yield in chilli cultivars” in International Conference “climate change. A challenge for Agriculturist” dated 28-30 may 2012 at Agricultural University Peshawar.
- Paper presentation in “2nd International seminar on Agri-business and Khair Pur special economic zone” dated 6-7 Aril, 2017 at Institute of Business administration (IBA) Sukkar, Sind.
- Oral Presentation “Response of tomato growth to phosphorous levels with and without phosphate solublizing bacteria” in conference “climate Smart Agriculture and crop modeling” dated 18-19 April 2018 at University of Agriculture Peshawar.
- Oral Presentation “Response of coriander growth to phosphorous levels with and without phosphate solublizing bacteria” in conference “climate Smart Agriculture and crop modeling” dated 18-19 April 2018 at University of Agriculture Peshawar.
- Poster presentation on “Okra seed yield and quality as influenced by change in climate“ in National conference “Agriculture problems and food security in the changing climate” dated 14-17 November, 2018 at Agriculture University Peshawar
- Poster presentation on “Dissecting the heat stress responses and effects on morphology of tomato employing high temperature conditioning“ in National conference “Agriculture problems and food security in the changing climate” dated 15-16 November, 2018 at Agriculture University Peshawar
- Oral presentation “Response of Cucumber to sowing dates and ethereal concentrations” in National conference on Sustainable Farming through Intervention of Agricultural Mechanization and Renewable Energy Technologies on June 30, July 01, 2021

Organizer in the conferences

- 1- National conference on *Agricultural Problems & Food Security in changing climate*, 14-17 November, 2018 at Agriculture University Peshawar
- 2- National conference on *Beneficial Microbes and sustainable crop production*, 19-20 February 2020 at Agriculture University Peshawar.

- 3- National conference on *Sustainable Farming through Intervention of Agricultural Mechanization and Renewable Energy Technologies* on June 30, July 01, 2021 at Agriculture University Peshawar
- 4- As a Co chair of the session in Weed Science conference at Agriculture University Peshawar during July 2021
- 5- As a National/Local abstract reviewer and Chair of the Session in *International Horticulture Conference (IHC 2022)* at Gomal University DI Khan dated 17-19 May 2022
- 6- National conference/one day seminar on *Mechanical rice plantation* at Agriculture University Peshawar dated July 27, 2022

Publications (64)

International (24)

1. **Gohar Ayub**, Renee A. Smith, David T. Tissue and Owen K. Atkin. (2011). Impacts of drought on leaf respiration in darkness and in the light in *Eucalyptus saligna* exposed to industrial-age atmospheric CO₂ and growth temperature. *New Phytologist*, Vol.190, PP-1003-1018.
2. Mohammad Ilyas, **Gohar Ayub**, Nasim Ahmad, Osaid Ullah, Said Hassan and Rizwan Ullah. (2013). Effect of Different Steckling Size and Phosphorous Levels on Seed Production in Carrot (*Daucus carota*). *Middle-East Journal of Scientific Research* 17 (3): 280-286.
3. Muhammad Shahab, **Gohar Ayub**, Ali Rahman, Anwar Rashid, Abbas Jamal and Jawad Ali (2013). Assessment of IBA (Indole Butyric Acid) Levels And Planting Time For Rooting And Growth Of Alstonia Cuttings. *Journal of Natural Sciences Research* 14(3): 59-67
4. Nishat Lal Badshah and **Gohar Ayub**. 2013. Effect of different concentrations of Nitrogen and Zinc on the growth of Pecan Nuts seedlings. *ARPN Journal of Agricultural and Biological Sciences*. 8(4): 337-343
5. Muhammad Ilyas, **Gohar Ayub**, Zahid Hussain, Manzoor Ahmad, Baseerat Bi bi, Abida Rashid and Luqman. 2014. Response of tomato to different levels of calcium and magnesium concentrations. *World applied sciences journal*. 31(9): 1560-64
6. **Gohar Ayub**, Joana Zaragoza-Castells, Kevin L. Griffin and Owen K. Atkin (2014). Leaf respiration in darkness and in the light under pre-industrial, current and elevated atmospheric CO₂ concentrations. *Plant Science*. Vol.226. PP 120-130.
7. Paul P.G. Gauthier, Kristine Y. Crous, **Gohar Ayub**, Honglang Duan, D. S. Ellsworth, D. T. Tissue, Mark G. Tjoelker, John R. Evans, Owen K. Atkin. (2014). Drought increases heat tolerance of leaf respiration in *Eucalyptus globulus*

- saplings grown under both ambient and elevated atmospheric [CO₂] and warming. Journal of Experimental botany. 65 (22): 6471-85
8. Mohammad Asad Hussain, Noor Ul Amin, **Gohar Ayub**, Muhammad . Sajid (2014). Response of Tuberose (*Polianthes tuberosa*) to Potassium and Planting Depth. Biology Agriculture and health care. 4 (11): 106-110
 9. Bakht Baidar, **Gohar Ayub**, Javaid Rehman, Nadia Bostan, Faz al Rabi, Asif Ali, Imtiaz Ahmad (2014). Interactive Effect of Calcium and Magnesium on Rooting of Schefflera arbolicola Cuttings. Journal of Natural Sciences Research. 4 (16): 22-25
 10. Saleha Tawab , **Gohar Ayub** , Faiza Tawab , Owais Khan , Nadia Bostan , Ghazala Ruby , Shawana Ahmad and Ume-Kalsoom Afridi (2015). Response of Bringal (*Solanum melongena* L.) cultivars to Zinc levels. ARPN Journal of Agricultural and Biological Sciences. 10 (5): 172-178
 11. Rizwan Ullah, **Gohar Ayub**, Mohammad Ilyas, Manzoor Ahmad, Muhammad Umar, Samia Mukhtar , Saqib Farooq (2015). Growth and Yield of Tomato (*Lycopersicon esculentum* L.) As Influenced By Different Levels of Zinc and Boron as Foliar Application. American-Eurasian J. Agric. & Environ. Sci. 15 (12): 2495-2498
 12. Ali Rahman , **Gohar Ayub**, Muhammad Shahab, Abbas Jamal, Anwar Rashid, Zubair Aman, Jawad Ali, Khaleeq Ur Rahman (2016). Rooting and growth of chrysanthemum cultivars in response to different levels of calcium. International Journal of Biosciences. 8(2):124-129
 13. Samia Mukhtar, **Gohar Ayub**, Muhammad Ilyas, Manzoor Ahmad, Muhammad Umar, Azmat Ali Awan, Luqman, Gulzar Ullah (2016). Response of Zinnia (*Zinnia elegans*) cultivars to different levels of Phosphorous. International Journal of Biosciences. 8(3):75-83
 14. Gulzar Ullah, **Gohar Ayub**, Mohammad Ilyas, Imran Habib Khan, Mohammad Asad Hussain, Fawad Naeem, Luqman, Muhammad Imtiaz Khan (2016). Effect of various potassium levels on growth and development of different gladiolus cultivars. International Journal of Biosciences. 8(5):45-49
 15. Fawad Naeem, **Gohar Ayub**, Gulzar Ullah, Mohammad Ilyas, Asmat Karim, Mohammad Asad Hussain, Farzana Begum, Imran Habib Khan (2016). Response of African corn lily to various planting depth and distance. International Journal of Biosciences. 8(5):105-111.
 16. Farhatullah Khan, **Gohar Ayub**, Mohammad Ilyas, Ijaz Naeem, Jawad Ali, Anwar Rahid, Mushtaq Ahmad Khan (2016). Comparison of sterilization methods and bags placement positions on biological and nutritional performance of oyster mushroom. International Journal of Biosciences. 9(1):404-414
 17. Maaz ur Rahman, Imran Ahmad ,Noor ul Amin, Mehboob Alam, **Gohar Ayub**, Abdul Mateen Khattak, Muhammad Amjad Khan, Muhammad Ali Khan, Rahmatullah,

- Asadullah, Syed Mubarak Shah , Naveed Ahmad, Ibrar Hussain, Muhammad Naem ,Sohail Ahmad, Naveedullah, Syed Abdul Qadir Gilanil and Imran Habib khan (2016). Performance of different Marigold varieties under Agro climatic condition of Peshawar (*Tagetes erecta*). International Journal of Advanced Research and Review. 1(12):20-27.
18. Farzana Begum, Neelam Ara, **Gohar Ayub**, Mohammad Ilyas, Nagina Begum, Ammara Saeed and Azmat Ali Awan (2017). Effect of drought stress on tomato cv. Bambino. International Journal of Agricultural and Environmental Research. 3(3): 275-278
 19. Mohammad Ilyas and **Gohar Ayub**. (2017). Effect of various planting depth and mulching on yield of autumn potato crop sown at different sowing dates. International Journal of Biosciences. 11(6):166-177
 20. Nasreen Naz, Ikramullah khan, Bakhtiar Gul, **Gohar Ayub**, Farooq Jan, Nawaz Jang and Muhammad Shuiab (2018). Response of tomato growth to different phosphorous levels and sowing dates. Acta Ecologica Sinica. 39(1):30-35
 21. Muhammad Numan Khan, Azaz Ali Kha, **Gohar Ayub**, Abdul Haseeb, Fayaz Ali, Husain Ahmad and Zaho Ying (2018). The influence of plastic mulching materials and sowing dates on yield and yield components in Pea. Research in Agriculture.3(2): 50-61
 22. Muhammad Ilyas, **Gohar Ayub**, Imran, Azmat Ali Awan and Manzoor Ahmad (2020). Calcium and boron effect on production and quality of autumn potato crop under chilling temperature. Communications in soil science and plant analysis. 52 (4): 375-388
 23. Farzana Begum, **Gohar Ayub** (2020). Effect of harvesting stage on seed yield and quality of Okra sown at different dates. Journal of biodiversity and environmental Sciences. 17 (1):154-166
 24. Abdul Haseeb, **Gohar Ayub**, Tanveer Ali Sial, Sikandar Hayat, Husain Ahmad, Fayaz Ali, Zhilong Lan and Muhammad Numan Khan (2022). Enhancement of postharvest life of persimmon fruit through botanical extracts. Archives of crop science. 4 (1): 85-92

Local (40)

1. Gulzar Ullah and **Gohar Ayub** (2021). Dissecting the heat stress responses and effects on morphology of tomato varieties employing pre-transplant high temperature conditioning. Sarhad Journal of Agriculture, 37(4): 1384-1402.
2. Faryal Idress, **Gohar Ayub**, Sidra Saleem and Seema Zubair (2021). Effect of phosphorous levels and phosphate solubilizing bacteria on growth and seed production in Coriander. Pure Appl. Bio., 10(3): 617-627
3. Samia Mukhtar, **Gohar Ayub** (2021). Integrated management of soil applied organic and inorganic amendments to improve growth and flower quality of

chamomile. Soil and environment. 40(1):10-20

4. Saeed ul Haq, **Gohar Ayub**, Sidra Saleem, Abid Khan, Nadeem Khan and Seema Zubair (2020). Effect of Phosphorous with and without phosphate solubilizing bacteria on growth and yield of tomato. Pure Appl. Bio., 9(3): 2111-2121
5. Masood Ahmad, Sumbal Ayaz, Sultan Akbar Jadoon, Mehboob Alam, Abdur Rab, Iftikhar Hussain Khalil, **Gohar Ayub** and Hassan Ali (2019). Application of maleic hydrzide controlled plant height and ameliorate flower production in local dahlia. Bioscience Research. 16(2):1882-1890
6. Ikmat-Un-Nisa Marwat, Muhammad Shuaib, Ikramullah Khan, **Gohar Ayub**, Kashif Ali, Firasat Hussain, Muhammad Ilyas, Farooq Jan, Fida Hussain. 2019. The response of Capsicum annum L. growth to phosphorus levels and sowing dates. University of Chitral journal of Botany. 1(1): 169-183
7. Hajra Shah, Umaria Shahid, Kamran Shah, **Gohar Ayub**, Imran Ahmad, Gulshan Ara, Uzma Litaf and Bi Bi Zainab (2019). Consequences of sowing dates and umbel pinching on Daucus carrota seed production. Pure Appl. Bio., 8(2): 1771-1781.
8. Saqib Farooq, **Gohar Ayub**, Murad Ali, Ahmad Naeem, Rabia Riaz, Muhammad Wasiullah Khan, Muhammad Afzal, Rafiullah, Kamran Rauf, Syed Qaisar Ali Shah and Imtiaz Khan (2019). Effect of supplemental potassium application on growth and yield of potato cultivars. Pure Appl. Bio., 8(2): 1554-1563
9. Aliya Ayaz, **Gohar Ayub**, Maqsood Khan and Syed Aizaz Ali Shah (2019). Influence of Gibbererllic Acid concentrations and dipping durations on the growth and yield of bitter gourd. Sarhad J.Agric. 35(2):587-593
10. Murad Ali, **Gohar Ayub**, Nangial Khan, Mohammad Wasiullah Khan, Ahmad Khan, Kabir Khan, Shahid Rehman, Muhammad Afzal, Maazur Rehman and Rafiullah (2019). Response of organic manures to the growth of onion cultivars in Peshawar valley. Pure Appl. Bio., 8(2): 1374-1384
11. Mohammad Ilyas and **Gohar Ayub** (2017). Role of planting depth and mulching on growth and yield components of autumn potato crop sown at different dates. Pure Appl. Bio., 6(4): 1436-1449
12. Azmat Ali Awan, Mohammad Ilyas, Azaz Shakir, Muhammad Saleem Khan, Nasim Ahmad, Manzoor Ahmad, **Gohar Ayub**, Gulzar Ullah and Farzana Begum (2017). Effect of different media and timing factor on rooting of olive (*Olea europea*) through air layering Pure Appl. Bio., 6(4): 1126-1131
13. Sajid Siddique, **Gohar Ayub**, Zeeshan Nawaz, Shah Zeb, Faiza Shafique Khan, Naveed Ahmad, Amir Khan and Kamran Rauf. (2017). Enhancement of growth and productivity of cucumber (*Cucumis sativus*) through foliar application of Calcium and Magnesium. Pure Appl. Bio., 6(2): 402-411
14. Javed Rahman, Murad Aftab, Mohammad Abdul Rauf, Khalil Ur Rahman, Wasim Bilal, Farooq and **Gohar Ayub** (2017). Comparative study on

compatibility and growth response of pear varieties on different rootstocks at nursery. *Pure Appl. Bio.*, 6(1): 286-292

15. Muhammad Ishfaq khan, **Gohar Ayub**, Muhammad Ilyas and Manzoor Ahmad (2016). Growth and yield of onion as affected by nitrogen and phosphorous levels. *International Journal of Agricultural and Environmental Research*. 2(4): 346-354
16. Quratul Ain, **GoharAyub**, Mohammad Ilyas, Manzoor Ahmad, Farzana Begum, Luqman, Ammara Saeed, Mohammad Imtiaz Khan and Kamran Shah (2016). Response of broccoli to foliar application of zinc and boron concentrations. *Pure Appl. Bio.*, 5(4): 841-846
17. Muhammad Noman Khan, **Gohar Ayub**, Mohammad Ilyas, Maaz Khan, Faheem Ul Haq, Jawad Ali and Aftab Alam (2016). Effect of different mulching materials on weeds and yield of Chili cultivars. *Pure Appl. Bio.*, 5(4): 1160-1170
18. Abida, **Gohar Ayub**, Mohammad Ilyas, Baseerat, Luqman, Mohammad Imtiaz Khan , Saqib Farooq (2016). Effect of Sowing Techniques on Weeds Growth and Yield of Turnip Cultivars. *Pak. J. Weed Sci. Res.*, 22(3): 417-423
19. Baseerat Bibi, **Gohar Ayub**, Mohammad Ilyas, Abida Bibi, Samia Mukhtar, Qurat ul Ain (2016). Effect of NPK levels on yield and yield components of cabbage (*Brassicaoleracea L. Var. Capitata*). *Pure Appl. Bio.*, 5(2): 234-239
20. Roshan Zeb, **Gohar Ayub**, Mohammad Ilyas, Manzoor Ahmad, Luqman, Gulzar Ullah, Ammara Saeed and Qurat ul Ain. (2016). Growth and yield of radish cultivars influenced by Phosphorous levels. *Pure Appl. Bio.*, 5(2): 213-222
21. Bibi Zanib, **Gohar Ayub**, Sajid Siddique, Shah Zeb, Ehtesham Jamil (2016). Response of Bringal (*Solanum melongena L.*) Cultivars to Nitrogen levels. *Pure Appl. Bio.*, 5(1): 134-141
22. Abbas Jamal, **Gohar Ayub**, Ali Rahman, Anwar Rashid, Jawad Ali and Muhammad Shahab (2016). Effect of IBA (Indole Butyric Acid) levels on the growth and rooting of different cutting types of *Clerodendrum splendens*. *Pure Appl. Bio.*, 5(1): 64-71
23. Haidar Ali, **Gohar Ayub** , Ehsan Elahi, Muhammad Shahab , Saeed Ahmed , Nazeer Ahmed (2015). Response of coriander (*Coriandrum sativum L.*) to different Nitrogen levels and sowing dates. *Asian J Agri Biol*. 3(4): 140-144
24. Bakht Baidar, **Gohar Ayub**, Nadia Bostan, Fazal Rabi, Junaid Khan, Asif Ali, Imtiaz Ahmad (2015). Interactive Effect of Calcium and Magnesium on growth of *Schefflera arboricola* Cuttings. *Pure Appl. Bio.*, 4(4): 568-574
25. Ehsan Elahi , Asif Wali , Nasrullah , **Gohar Ayub** , Saeed Ahmed , Zelle Huma and Nazeer Ahmed (2015). Response of cauliflower (*Brassica oleracea L.*) cultivars to phosphorus levels. *Pure Appl. Bio.*, 4(2): 187-194

26. Muhammad Zubair, **Gohar Ayub**, Abdur Rab, Noor Ul Amin, Masood Ahmad and Neelam Ara. 2013. Preflowering growth of *Gladiolus* in response to Staggered planting. Pak.J.bot. 45 (4) : 1329-1338
27. Muhammad Zubair, **Gohar Ayub**, Noor Ul Amin, Abdur Rab, Masood Ahmad and Neelam Ara. 2013. Yield and quality of cut flowers and corm production of *gladiolus* Vary by Cultivar at three levels of nitrogen fertility. Pak.J.bot. 45(3): 967-976
28. Nasir Mehmood, **Gohar Ayub**, Ihteram Ullah, Naveed Ahmad, Muhammad Noor, Amir Muhammad Khan, Saeed Ahmad, Ammara Saeed and Farzana (2012).Response of tomato (*Lycopersicon esculentum* Mill.) cultivars to nitrogen levels.Pure Appl. Bio., 1(3): 63-67
29. Muhammad Arif, Fazal Munsif, Kawsar Ali, Inamaullah, Muhammad Saleem and **Gohar Ayub**. 2012.Effect of biochar, FYM and mineral nitrogen alone and in combination on yield components of maize. Sarhad J. Agri. 28(2): 191-195
30. Muhammad Zafarullah Khan, Khalid Nawab, Javidullah, Amir Khatam, Muhammad Qasim, **Gohar Ayub** and Naima Nawaz. 2012. Communication gap and training needs of Pakistan S agricultural extension agents in Horticulture. Sarhad J. Agric. 28(1):129-135
31. **Gohar Ayub**, Muhammad Sajid, M. Zubair and Noor ul Amin. 2007. Response of *Dahlia pinnata* to different levels of nitrogen alone and in combination with constant doses of phosphorous and potassium. Sarhad J. Agric. 23(3):571-576.
32. Alina Bushra Saleem, Muhammad Zubair, **Gohar Ayub** and Sohail Akhtar. 2007. The profile of nursery business in Hazara. Sarhad J.Agric. 23(1):55-63.
33. Muhammad Zubair, **Gohar Ayub**, Faridullah Khan Wazir, Munir Khan and Zafar Mehmood. 2006. Effect of Potassium on pre flowering growth of *Gladiolus* cultivars. J.of Agri and Bio Sci.1(3):36-46.
34. Muhammad Zubair, Faridullah Khan Wazir, Sohail Akhtar and **Gohar Ayub**. 2006. Planting dates affect floral characteristics of *Gladiolus* under the soil and climatic conditions of Peshawar. Pak. J. Biolog. Sc.9(9):1669-1676.
35. Muhammad Zubair, **Gohar Ayub** and Faridullah Khan Wazir. 2006. Effect of phosphorus levels on yield and quality of corms and cormels of *Gladiolus* cultivars. Sarhad J.Agric. 22(4):623-632.
36. Muhammad Zubair, Sohail Akhtar, Fardidullah Khan Wazir and **Gohar Ayub**. 2006. Vegetative growth of *Gladiolus* in response to phosphorous under the soil and climatic conditions of Peshawar. Sarhad J.Agric. 22(3):395-403.
37. Muhammad Zubair, Fardidullah Khan Wazir, **Gohar Ayub** and Sohail Akhtar. 2006. Planting dates effect production and quality of *Gladiolus Corms* and *Cormels*.Sarhad J.Agric. 22(2):249-258.
38. Muhammad Zubair, Fardidullah Khan Wazir and **Gohar Ayub**. 2005.Influence

of planting dates on the floral characteristics of *Gladiolus* under the climatic conditions of Peshawar. Sarhad J.Agric. 21(4):569-575.

39. Fauzia Mehboob, Noor Badshah, Nusrat Jabeen and **Gohar Ayub**. 2004. Effect of irradiation on the post-harvest life of potatoes. Sarhad J.Agric. 20(2):215-217.

40. Nusrat Jabeen, Noor Badshah, Fauzia Mehboob and **Gohar Ayub**. 2003. Effect of gamma radiation on post harvest storage life of onion bulb under ordinary room condition. Sarhad J.Agric. 19(4):507-51

Books: 1- Growth Response of Aloe Vera to Different Irrigation Intervals and Nitrogen Levels. Lap Lambert Academic Publishing GmbH KG, 68 pages Zia Uddin, **Gohar Ayub** (2013)

2-Effect of Environmental Pollution on Plant Growth

Amanullah, Shah Khalid, **Gohar Ayub** (online)

Academic record

S.No	Certificate/Degree	Session	Marks obtained/ Total Marks	Division	Board/University
1.	PhD Plant Sciences <i>Specialization:</i> Physiology (Horticulture. Crops)	2010			Australian National University, Canberra Australia
2.	M.Sc (Hons) Agriculture <i>Specialization:</i> Horticulture	1996-1998	Cumulative Grade Point Average (CGPA): 3.93/4.00 (83.70%)	1 st	The University of Agriculture Peshawar
3.	B.Sc (Hons) Agriculture <i>Specialization:</i> Horticulture	1992-1996	CGPA: 3.76/4.00 (81.74%)	1 st	The University of Agriculture Peshawar
4.	Higher Secondary School Certificate (HSSC) (Biology)	1992	757/1100 (68.82%)	1 st	Federal Board of Intermediate & Secondary Islamabad
5.	Secondary School Certificate (SSC) (Science group)	1989	654/850 (76.95%)	1 st	Board of Intermediate & Secondary Education, Peshawar

Awards/Scholarships/Grants/Prizes

- First class first position in School at Matric (SSC) level
- Got Presidential scholarship at SSC Examination (Top ten students of Distt Dir)
- Got Merit scholarship at HSSC
- Got third position in department at MSc (Hons)
- Got Merit scholarship throughout B.SC (Hons) and M.Sc (Hons)

- Got HEC (Higher Education Commission) *Open merit Overseas scholarship for perusing PhD* at Universities of York (UK) and the Australian National University (ANU), Canberra (Australia)
- Got grant from WUN (World Universities Network) for conduction of field experiment at University of Illioni (USA)
- Got grant from VC Australian National University for perusing field experiment at University of Western Sydney, Australia
- Got grants from Natural Environment Research Council (NERC) in UK and Australian Research Council (ARC) for facilitating lab and filed experiments during the study of PhD
- Got grant from ASPS (Australian Society of Plant Scientists) for attending COMBIO Conference at Christchurch, New Zealand (December, 2009)
- Got grant from New Phytologist for attending Plant respiration conference at Oxford, UK (April, 2010)
- Got Project from University Endowment fund (Rs.1.2 million) for production of certified fruit plants (October 2015-18)

Reviewers of the journals

- Sarhad Journal of Agriculture
- PJAR (Pakistan Journal of Agricultural Research)
- Natural Resources
- African Journal of Agricultural Research
- Scientia Horticulturae
- World Applied Science Journal
- Saudi Journal of Biological Sciences

Member of

- Subject expert for selection board in University of Sargodha
- Subject expert for selection board in Islamia University Bahawalpur
- Subject expert for selection board in University of Haripur
- Subject expert for selection board in Hazara University
- Subject expert for selection board in University of Swabi
- Subject expert for selection board in Abdul Wali Khan University Mardan
- Subject expert for selection board in Bacha Khan University Charsada

- Subject expert for selection board in Gomal University DI Khan
- Member of board of study in University of Swabi
- Member of board of study in University of Haripur
- Member of board of study in Abdul Wali Khan University Mardan
- Subject Expert/Examiner/Paper reviewer in Public Service Commission KP

Computer skills

Composing Programs:

M.S. Office 2000, MS –Word, Excel, Power point, Sigma plot, Coral draw, End note, Statistical Analysis Programs: M.Stat-C, SPSS

Languages

Urdu fluent (first language)

Pashto fluent (mother language)

Arabic (Writing & Reading)

English fluent (Reading, Speaking, Writing), **English remains as a medium of instruction for 22 years of education.**

References:

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