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AGRO-PATHOLOGY BULLETIN

A Biannual Newsletter of the Department of Plant Pathology, University of the Punjab

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Message from the office of Vice Chancellor University of the Punjab



It is with great pleasure that I address you today when University of the Punjab has once again achieved notable recognition in global QS rankings by winning the "Most Improved Asia Region" award. I strongly believe that each department's contribution is essential in collectively shaping the university's impact.

With a vast expanse of fertile land and diverse climatic conditions, Pakistan has the potential to be a major agricultural powerhouse. However, the sector faces numerous challenges, including pests, diseases, and environmental stresses. This is where our plant pathologists play a crucial role. In Pakistan, where agriculture sustains millions of livelihoods, the importance of plant pathology cannot be overstated.

In this edition of the newsletter, I am certain that we will find a plethora of insightful articles, research updates, and success stories that showcase the exceptional caliber of work being carried out within the department of Plant Pathology.

Linking academia with industry is a pivotal step towards impactful innovation and progress. I appreciate the Department of Plant Pathology for forging this essential connection through the establishment of a research advisory board inclusive of the agri industry. By bridging the gap between theory and practical application, such initiatives pave the way for groundbreaking advancements in agricultural practices, ultimately contributing to global food security and sustainable development.

As we reflect on our past accomplishments and look towards the future, I urge each of you to continue pushing the boundaries of knowledge, fostering interdisciplinary collaborations, and nurturing the next generation of plant pathologists. Let us remain steadfast in our pursuit of excellence and in our mission to make meaningful contributions to society. I am deeply grateful for your contributions, and I am excited about the journey ahead as we continue to work together towards our shared vision of excellence.

Warm regards,

Prof. Dr. Khalid Mahmood

Department of Plant Pathology

132nd CONVOCATION 2024

University of the Punjab



Chairperson DPP participated in a panel discussion arranged on World Education Day by PHEC



On January 24, 2024, a significant ceremony commemorating World Education Day took place at the Punjab Higher Education Commission office in Arfa Karim Tower, Lahore. The event, presided over by the Chairperson Punjab HEC Prof. Dr. Shahid Muneer, aimed to showcase the academic advancements and progress of PHEC in alignment with global education goals. Chairperson Department of Plant Pathology, Prof. Dr. Tehmina Anjum was invited.



Prof. Dr. Rukhsana Kausar, Prof. Dr. Shazia Qureshi, Prof. Dr. Ali Sajid, Dr. Tanveer Qasim, Mr. Salman Abid, Ms. Farzana Shahid, Dr. Amina Moazzam, Ms. Shaughta Rathore, and Dr. Bushra Inayat Raja were also present. Panel experts actively contributed to discussions on education quality, enhancements in the teaching and learning system, teacher development, and addressing concerns about out-of-school children. Prof. Dr. Tehmina Anjum, highlighted the importance of innovation culture in this age of technology. She said that school education is our foundation and there is a dire need to stop rote learning if we want to create entrepreneurs and move up in the global innovation index. Dr. Anjum also emphasized on a fair assessment system, industry-academia linkage, increasing the education budget to 4% of the country's GDP and incentivizing the teaching community at every level.



The participants unanimously emphasized the integration of technology, the introduction of skills-based education, fostering international collaborations, and revising the curriculum. A consensus emerged to implement a teaching certification system for educators, underscoring the collective commitment to enhancing and maintaining educational standards. The achievements of universities in academic and research realms were highlighted, accompanied by discussions on contemporary challenges and suggestions for overcoming them.

Ms. Tayyaba Khan and Mr. Muhammad Atif successfully defended their PhD theses

Ms. Tayyabah Khan and Mr. Muhammad Atif successfully defended their PhD theses on 15th and 19th January 2024. Ms. Tayyabah completed her thesis under the supervision of Dean Faculty of Agricultural Sciences; Prof. Dr. M. Saleem Haider. The title of her thesis is “Fungal diversity and resistance to grain protectants associated with rice weevil, *Sitophilus oryzae*”. Dr. Farman Chaudhary, Visiting professor, Minhaj University Lahore and Dr. Farah Khan, Ex-chairperson, Department of Botany, Lahore College for Women University Lahore were the external examiners for the candidate. Ms. Tayyaba is working as a research officer in the Department of Plant Pathology, Faculty of Agricultural Sciences, University of the Punjab.

Mr. Atif compiled his thesis on “Effect of antifungal compounds from selected indigenous plants on structural and metabolic gene(s) of *Fusarium oxysporum* f. sp. *Lycopersici*”, while working under the supervision of Prof. Dr. Tehmina Anjum, Chairperson Department of Plant Pathology and Prof. Dr. Ahmad Ali Shahid, Ex-Chairman CEMB, University of the Punjab. Whereas external examiners were Dr. Muhammad Tahir, Professor, Department of Plant Biotechnology, National University of Sciences and Technology Islamabad and Dr. Safdar Ali Mirza, Professor, Department of Botany, GC University Lahore. Mr. Atif is working as a secondary school educator for biology at Government Boys Comprehensive Higher Secondary School, Lahore.

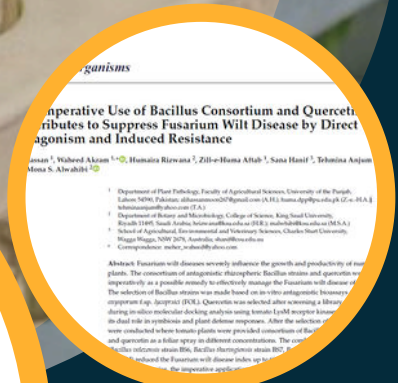
Both students successfully defended their thesis and answered questions from the audience. Department of Plant Pathology congratulates them on achieving this milestone.



Department of Plant Pathology

PUBLICATIONS

2023



In 2023, Department of Plant Pathology generated a total of 173 impact factor through publishing 85 research manuscripts

In 2023, the faculty of the Department of Plant Pathology at the University of the Punjab published 85 research manuscripts in both national and international renowned journals. This resulted in a total impact factor of 173. Out of 85 published articles, 48 are published in impact factor journals. Comparing this to the previous year, 2022, although the number of publications decreased, the total impact factor increased from 144 to 175. This shows an improvement in the quality of research across various aspects of plant pathology by the faculty. Detail list of publications can be checked from faculty profiles given on departmental web page.

Dr. Tariq Manzoor, Assistant Professor DPP at Faculty Development Program of PHEC



Punjab Higher Education Commission conducted a Three-day Faculty Development Program (FDP) for Batch-18 on “Advancing Teaching Excellence: Strategies for Effective Higher Education Instruction and Professional Development” for the faculty members serving at universities in Punjab on January 16-18, 2024 at Veterinary Academy, University of Veterinary & Animal Sciences Lahore. While highlighting the importance of such training programs, Chairman PHEC, Prof. Dr. Shahid Munir said that faculty development programs support more than just the individual, and so these are important for professional development.

Dr. Tariq Manzoor, Assistant Professor DPP participated in the workshop. The training program aims to equip faculty members with a comprehensive set of skills and knowledge to enhance their teaching effectiveness and professional growth in higher education. This was to empower participants to become well-rounded educators capable of fostering positive learning environments, promoting student engagement, and effectively managing professional responsibilities while maintaining work-life balance. Chairman PHEC, Prof. Dr. Shahid Munir distributed certificates among the participants.



Awareness seminar on innovations for higher productivity and quality in collaboration with NPO



On 30th January 2024, Department of Plant Pathology, PU conducted an awareness seminar on “Innovations for higher productivity and quality”. Mr. Azhar Khan, Deputy Manager, National Productivity Organization (NPO) was the resource person. Mr. Azhar introduced National Productivity Organization as the sole government body undertaking productivity with quality initiatives in Pakistan. He shared various programs and services NPO is providing. Mr. Azhar said that NPO recognizes the importance of socioeconomic development in Pakistan through enhancing productivity and implementation of productivity concepts in the industrial setup.

NPO Pakistan presently operates under the umbrella of the Ministry of Industries & Production, Government of Pakistan and has established research and resource institution working with the support of Asian Productivity Organization (APO) Tokyo-Japan. NPO is also working as a Liaison Office of Asian Productivity Organization (APO) which represents 21 Asian Countries with the mandate to promote productivity and quality consciousness among the public and private sector organization.

Mr. Azhar said that NPO Pakistan promotes the enhancement of productivity culture in Public and Private sector Organization by providing training, seminars, workshops, consultancy, release of index surveys, qualification certification, promotion of a comprehensive understanding of energy and the environment, and research on productivity. He further added that the NPO has been revitalized with the sagacious productivity specialists and professional team to create productivity consciousness and to address the issues of manufacturing and service sector of Pakistan.

NPO Pakistan has also acquired membership of World Confederation of Productivity Science and World Network of Productivity Organization to expand its linkages in 52 member countries of WCPS that are committed to productivity improvement.





Congratulations

YOU DID IT



Mr. Fahim Rafiq, graduate of the Department of Plant Pathology, PU (Session 2018 - 2020), appointed as Scientific Officer in Pakistan Agricultural Research Council.



Mr. Muhammad Iqbal, who completed his MS Hons from DPP in 2023, appointed as (IPM) Pest Control Specialist in C-SHINE Sustainable Solutions (Rentokil Initial Company).



Mr. Naseem Hassan, alumnus of the Department of Plant Pathology, PU (Batch 2013 - 2019) joined Punjab Police as Sub Inspector. He got posting in district Okara.



Mr. Maroof Siddique, PhD Scholar of DPP joined Biodyne World as Agriculturist. He will be involved in research and development, crop management, technology adoption and data analysis.

Congratulations Prof. Dr. Amna Shoaib, on winning ASA - PU elections 2024 as Member Executive



Prof. Dr. Amna Shoaib, Department of Plant Pathology, secured her seat as a member executive in Academic staff Association elections 2024. She got 395 votes from the platform of Academic Front.

Dr. Amjad Abbas Magsi, the candidate from the Council of Professionals (COPS), emerged victorious as the President, securing a significant mandate with 448 votes. For the Secretary position, Dr. Muhammad Islam claimed success with 412 votes. Within the CoPs, Dr. Ghalib Atta clinched the Vice President Arts position with 440 votes, while Dr. Farah Shakuri secured the Vice President Science slot with 423 votes. Dr. Amir Masood Chishti captured the Treasurer seat with 443 votes. Ahmad Bilal from Academic Front won the seat of Joint Secretary.

On Executive Member New Campus six seats Abrar Zafar 525 votes, Abdul Rehman Khan Niazi 442, Abdul Muqieet Hai 436, Mudassar Azam 435, Aashi Zeeshan 410, Amina Shoaib won 395 votes. In Old Campus, Abrar Ahmed won with 470 votes and Siddiqa Riaz with 397 votes. The Department of Plant Pathology extends congratulations to all newly elected members and hopes for collaborative efforts toward the advancement of the University.

Prof. Dr. Arshad Javaid participated in 5th Conference of Asian Allelopathy Society

Prof. Dr. Arshad Javaid presented his research work entitled “Exploiting allelopathic potential of *Chenopodium album* for management of parthenium weed” as a keynote speaker in the 5th Asian Allelopathy Society Conference held on January 16-17, 2024 at Bahauddin Zakariya University, Multan. He also chaired Technical Session-VI of the Conference. Dr. Arshad Javaid is the life member of this Society and he also participated in its 1st International Conference held at South China Agriculture University, Guangzhou, China during December 2009.

Allelopathy is a biological phenomenon where one plant releases chemicals collectively called allelochemicals into the environment that affect the growth, germination, or survival of other nearby plants both negatively and positively. Dr. Arshad is exploiting potential of these chemicals, known as allelochemicals, for management of pests, diseases and weeds in crop fields.



Department of Plant Pathology, University of the Punjab jumped from X2 to X1 in the accreditation category of NAEAC



HIGHLIGHT

Department of Plant Pathology improved its accreditation category from X2 to X1 awarded by National Agriculture Education Accreditation Council (NAEAC). Department of Plant Pathology is the leading department of the Faculty of Agricultural Sciences, University of the Punjab in accreditation rating with highest score of 77% among 7 running departments of this faculty. The team visited the Department of Plant Pathology on 17th March, 2023.

CERTIFICATE DISTRIBUTION CEREMONY

The certificate was presented to the Chairperson, Department of Plant Pathology by the Chairperson NAEAC, Prof. Dr. Fayyaz ul Hassan and the Vice Chancellor University of the Punjab, Prof. Dr. Khalid Mehmood in a small ceremony held on 13th February 2024. While acting Dean of Agricultural Sciences, Prof. Dr. Sajid Rashid and Secretary NAEAC, Dr. Abdul Ghaffar were also present.

Faculty of the Department of Plant Pathology participated in the 6th region-wise one-day training workshop for program evaluators of NAEAC

National Agriculture Education Accreditation Council (NAEAC) conducted a one-day training workshop for new program evaluators in the Faculty of Agricultural Sciences, University of the Punjab on 14th February, 2024. Faculty members of the Department of Plant Pathology including Chairperson DPP, Prof. Dr. Tehmina Anjum, Prof. Dr. Arshad Javaid, Dr. Uzma Bashir, Dr. Nasir Subhani, Dr. Zill-e-Huma Aftab, Dr. Waheed Anwar, Dr. Waheed Akram and Dr. Adnan Akhtar participated and received certificates for completing this training. Chairperson NAEAC, Prof. Dr. Fayyaz ul Hassan introduced the process of accreditation. Secretary NAEAC, Dr. Abdul Ghaffar described in detail regarding responsibilities of an evaluator, format of AIC report and SWOT analysis. Faculty members from other departments of Punjab University and University of Veterinary Sciences were also present.



DPP hosted an awareness seminar on “mitigating the emerging issue of pesticide residues in vegetables and rice” in collaboration with PW&QCP



Department of Plant Pathology, Punjab University in collaboration with Pest Warning and Quality Control of Pesticides (PW&QCP), Government of the Punjab organized a seminar on 16th February 2024, to create awareness on arising issue of pesticide residues especially in rice and vegetables. Director General PW&QCP, Dr. Ghulam Abbas said that the EU had already issued an alert for Pakistan while 161 consignments of rice had been rejected by the European bloc and the US due to a high ratio of residue in the produce. He added that the developed world had set strict standards for food safety, citing that in 2017 Indian rice exports were banned due to non-compliance with the standards and the benefit shifted to Pakistan.

Deputy Director of Agriculture Gujranwala PW&QCP, Mr. Talfoor-ul-Hassan said that rice is an important cash crop and Basmati rice is our pride. He highlighted major diseases of rice and pesticides being used on it. He said that farmers should be encouraged to use pesticides with low PHI that is the preharvest interval and can be defined as the minimum amount of time between the last application of a pesticide and when the crop can be harvested.

Assistant Director Plant Protection PW&QCP Lahore, Mr. Habib Anwar, shared data on pesticides application on vegetables. He said that after cotton, vegetables receive the highest amount of pesticides. He also highlighted the importance of integrated pest management. Mr. Haroon Ghani, Assistant Director Plant Protection, Lahore and Ms. Sabin Fatima, Project Coordinator and Assistant Director Plant Protection HQ Lahore were also present on the occasion.

HIGHLIGHT

Farmers should be encouraged to use pesticides with low PHI (Preharvest Interval) which defines the wait time between a pesticide application and when a crop can be harvested (PW&QCP).



The team of PW&QCP also visited the First Fungal Culture Bank of Pakistan which is running under the Department of Plant Pathology, University of the Punjab. They were briefed about the functioning of the culture bank. Director General PW&QCP took special interest in the collection of beneficial microbes and entomopathogenic fungi. The department also presented shields as a token of remembrance to the guests.



SPORT UPDATES

HOT NEWS



Competitive sports show case by DPP team in sports week at FAS, PU

Faculty of Agricultural Sciences celebrated Sports Week from 19 to 23 February 2023. All eight departments of FAS including the Department of Plant Pathology participated in various events during this time. Dean Faculty of GeoSciences PU, Prof. Dr. Sajid Rashid Ahmad inaugurated the event in a colorful ceremony. While addressing the students he expressed his gratitude towards the organizing committee for arranging such lively sports activities. He further said that sports make us learn to accept one's defeat in a graceful way along with struggling for a common goal with a team. In closing ceremony, the Dean Faculty of Agricultural Sciences, PU, Prof. Dr. M. Saleem Haider distributed trophies to the winners.

**DPP GIRLS CRICKET TEAM -
CHAMPIONS**

**MAROOF SIDDIQUE - RUNNER UP
BOYS CHESS**

**AYESHA ISHTIAQ - GIRLS
BADMINTON SINGLE CHAMPION**

**UMARA MUSHTAQ - GIRLS LUDO
CHAMPION**





Participation of DPP in 2nd International Conference on Recent Innovations in Plant Sciences and Natural Products at University of Okara



2nd International Conference on Recent Innovations in Plant Sciences and Natural Products was organized by Department of Botany, University of Okara between 15 – 16th February 2024. Chairperson DPP, Prof. Dr. Tehmina Anjum and Prof. Dr. Arshad Javaid were invited as keynote speaker. Chairperson DPP talked on “Green chemistry – A frame work for a sustainable future of crop protection”, whereas Dr. Javaid presented his research findings on “Potential of metabolites of *Dreshlera* spp. For the management of *Rumex dentatus* and *Phalaris minor* in wheat”.

Dr. Waheed Akram, Assistant Professor at DPP also presented his work on “The combined use of biocontrol agents and quercetin contributes to suppress *Fusarium* wilt disease by direct antagonism and induced resistance”. Department of Plant Pathology, PU congratulates Dr. Fahim Arshad Chairman, Department of Botany, University of Okara and his energetic team on organizing a successful conference.



Dr. Hina Ashraf after earning her PhD degree from DPP joined Connecticut Agricultural Experiment Station (CAES), New Haven, USA



Dr. Hina Ashraf has been awarded Postdoctoral Fellowship by The NSF Center for Sustainable Nanotechnology in collaboration with Connecticut Agricultural Experiment Station (CAES) New Haven, CT to help expand understanding of chemical interactions at plant bio-interfaces to enable development of next generation agrochemicals. The aim of CSN is to support fundamental research that forwards efforts to achieve global food security and to build a climate resilient agricultural system.

During her doctoral studies, Dr. Hina focused on developing environment friendly nanopesticides for sustainable pest control in agricultural fields. She demonstrated her expertise by publishing high-quality research papers with a total of 30 impact factor.

The Connecticut Agricultural Experiment Station (CAES) is the Connecticut state government's agricultural experiment station, a state government component that engages in scientific research and public outreach in agriculture and related fields. It is the oldest state experiment station in the United States. During her tenure at CAES, Dr. Hina will be engaged in a collaborative research project with Johns Hopkins University in the USA. We extend our best wishes to her for continued success in her future endeavors.

Dr. Nasir Subhani represented DPP in 2nd International Conference on Plant Protection in Qatar

The Second International Conference on Plant Protection (2nd ICPP 2024) took place at Abu Dhabi University's Dubai Campus from January 15th to 17th, 2024. Dr. Nasir Subhani, an Associate Professor in the Department of Plant Pathology at the University of the Punjab, presented his research on the application of ferrous oxide nanoparticles to combat wilt disease in chili plants caused by *Fusarium oxysporum*. The University of the Punjab generously provided travel grant for Dr. Subhani to attend this conference.



FIRST MEETING OF THE

Research Advisory Board

DEPARTMENT OF PLANT PATHOLOGY
UNIVERSITY OF THE PUNJAB



The principal highlights

The inaugural meeting of the Research Advisory Board for the Department of Plant Pathology at the University of the Punjab took place on February 20th, 2024. Chaired by Prof. Dr. Tehmina Anjum, Chairperson of the Department of Plant Pathology, the gathering aimed to foster collaboration between academia, industry, and the government sector. Dignitaries from the agricultural industry and government sector were present. Prof. Dr. Khalid Mehmood, the Vice Chancellor of the University of the Punjab, also graced the forum with his presence. He commended the Department of Plant Pathology PU for facilitating a platform where industry, academia, and government sectors could unite to discuss agricultural issues of the country and plan research projects accordingly. Prof. Dr. Khalid Mehmood emphasized the importance of collaboration between Punjab University and industry, highlighting the crucial role of such partnerships in enhancing applied agricultural research. All participants contributed valuable suggestions, underscoring the necessity of commercializing research conducted in universities.

MEETING MINUTES

The meeting commenced with the recitation of the Holy Quran. Subsequently, Professor Dr. Tehmina Anjum, Chairperson of the Department of Plant Pathology, extended a warm welcome to all the board members and expressed gratitude for their dedication and commitment to enhancing research standards in universities. Dr. Tehmina provided a brief introduction to the department and outlined the ongoing research activities across various laboratories within the department.

The distinguished guests expressed their admiration for the ongoing research in the Department of Plant Pathology at the University of the Punjab, Lahore. They emphasized that being a new department, its achievements are not widely known, thus there is an urgent need to promote its activities for the purpose of fostering more collaborations. Chairperson DPP, mentioned that the department has already begun efforts in this direction. Initiatives such as forming an advisory board and convening its inaugural meeting with all stakeholders represent significant initial steps toward achieving our objectives.

All participants stressed the importance of translating university research into tangible products through collaboration with the industry and government sectors. Representatives from both sectors assured their support for future projects undertaken by the Department of Plant Pathology, University of the Punjab. Experts from both sectors emphasized the necessity for research collaboration in the development of more effective fungicides and fertilizers, as well as standardized application methods. They highlighted pressing issues such as parasitic nematodes, bacterial leaf blight in rice, aflatoxins in maize and chili, the prevalence of fall armyworm, and the presence of pesticide residues in crops, particularly rice.

Numerous representatives from the Research and Development (R&D) departments of various agroindustries expressed keen interest in biopesticides. They urged the government sector to expedite the approval of biopesticide registration guidance. This move aims to encourage the adoption of safer and environmentally friendly biopesticides in combating crop pests and diseases, which pose significant threats to livelihoods and food security.

Dr. Ghulam Abbas
DG (Plant Protection) PWQCP Punjab

Mr. Rashid Ahmad
Executive Director CropLife Pakistan

Dr. Ahmad Saleem Akhtar
GM Research & Development, Tara Group

Dr. Khalid Hameed
CEO Tara Group

Dr. Khalid Aziz
Sr. Manager Agri. Business
Rafhan Maize Products Co. Ltd

Mr. Muhammad Rizwan Younis
GM Agri Division Guard Rice

Ms. Ayesha Gulzar
COO Agribusiness Support Fund USAID.
Country Director JE Austin Associates

Dr. Sabin Fatima
Deputy Director (PP) HQ PWQCP

Mr. Zeeshan Zulfiqar
Director NF Biotech

Mr. Tahir Saleemi
Managing Director, HajiSons

Mr. Faraz Ali Butt
Technology Development Manager –
Agri, Lucky Core Industries

Ch. Najaf Rasool
CEO Animal Care Sciences

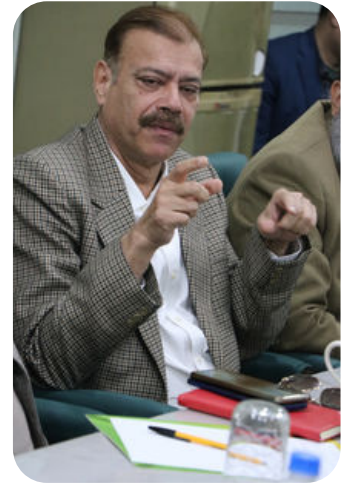
Mr. Sajid Sandhu
CEO Green Circle

Mr. Shahid Saleem
GM Technical VGreen

Mr. Imran Sheikh
Managing Director, Galaxy Rice Pakistan

Mr. Moeed Akhtar
Operation Manager Microbial
Biotechnologies (Pvt) Ltd

Mr. Touqeer Ahmad
Manager Regulatory Affairs Agri Division
Lucky Core Industries Limited





Few board members expressed the opinion that there should be stringent quality criteria for research in degree programs. They suggested that students, especially those in PhD programs, should be compelled to develop at least one agricultural product or provide a solution to a major agricultural problem faced by the farmers. However, this idea faced criticism from other members who argued that bringing a product to market typically takes a long time, ranging from ten to twelve years, with toxicological studies alone requiring up to eight years. They cautioned that imposing such restrictions would impose additional burden on students. Instead, they proposed that it should be the responsibility of supervisors to enhance the

standard and innovation level of PhD research projects, thereby ensuring that students learn and produce high-quality theses. It was further emphasized that the evaluation of supervisors for their promotions should be based on more practical criteria rather than solely considering the number of publications.

It was highlighted that the agricultural extension and advisory services are essential in providing farmers and other stakeholders in rural areas with the necessary information and services required to improve their livelihoods and promote sustainable agriculture. These services provide farmers with access to knowledge, better technology, and practices. Additionally, extension services benefit farmers' knowledge, adoption, productivity, and financial returns. members said that strengthening the collaboration between universities and government extension services can greatly benefit farmers. Universities possess valuable resources such as students, researchers, and qualified teachers who can contribute significantly to agricultural education and research. By involving universities in extension services, farmers can access the latest scientific knowledge, technologies, and practices to enhance productivity, sustainability, and resilience in agriculture. Moreover, universities can serve as hubs for innovation, where cutting-edge research can be translated into practical solutions for farmers. This collaboration can foster a dynamic exchange of ideas, expertise, and resources between academia and the agricultural community, ultimately leading to improved outcomes for farmers and the agricultural sector as a whole.





Additionally, there was discussion about the importance of providing students with practical field knowledge, particularly through internships. It was proposed to extend the duration of internships from one semester to one year in BS program.



It was emphasized that by investing in the capacity building of universities and promoting their active involvement in extension services, policymakers can leverage the full potential of these institutions to address the evolving challenges facing agriculture and rural communities. This approach can contribute to the development of a knowledge-driven agricultural sector that is responsive to the needs of farmers and adaptable to changing environmental, social, and economic conditions. Embracing a tripartite collaboration, involving industry, academia and government sectors can empower all stakeholders to leverage their strengths, fostering a dynamic ecosystem conducive to sustainable development and prosperity. This will ultimately bring benefit to our agriculture system and Pakistan.

The worthy Vice Chancellor of the University of the Punjab, Prof. Dr. Khalid Mehmood joined the meeting during lunch and engaged with the board members. He commended the Department of Plant Pathology for its efforts in strengthening academia-industry linkages. He expressed that the University of the Punjab welcomes collaborations with various industries and government sectors. Furthermore, he emphasized the encouragement given to the departments to establish such connections, formalizing them through Memorandums of Understanding facilitated by the Department of External Linkages Punjab University. Vice Chancellor said that the linkage between academia and industry plays a pivotal role in driving innovation, fostering economic growth, and addressing real-world challenges. By collaborating closely, academia and industry can leverage their respective strengths to achieve mutually beneficial outcomes.

The Vice Chancellor said that Pakistan is blessed with abundant resources, particularly in the agriculture sector, and it is our responsibility to fully harness their potential. He highlighted the importance of all sectors of society working together to achieve this common objective.

HIGHLIGHT

Punjab University welcomes and encourages all forms of collaboration between academia and industry - Vice Chancellor, University of the Punjab



The meeting concluded with a vote of thanks extended to all participants, along with a commitment to materialize the suggestions put forth by the board and to collaborate for the improvement of agriculture education and research in universities and ultimately Pakistan's agriculture sector.



The DPP team convened at the Institute of Microbiology, GCU Faisalabad, to participate in an international symposium focused on nanotechnology



The Department of Plant Pathology actively participated in the International Symposium on Nanobiology: Integrating Nanotechnology and Microbiology for a Sustainable Future, held at the Institute of Microbiology, Government College University Faisalabad, Pakistan from February 28 to 29, 2024. Prof. Dr. Tehmina Anjum, Chairperson of DPP, delivered a keynote speech on the potential of green-synthesized nanoparticles in reducing the usage of chemical pesticides. Dr. Waheed Akram presented his research findings on "Biological evaluation and molecular docking insight of green-synthesized graphene oxide nanoparticles mediated growth promotion in mung bean".

Dr. Zill-e-Huma Aftab shared her discoveries on the "Effect of apple peel-mediated iron oxide nanoparticles for the management of early blight of potato." We extend our congratulations to Prof. Dr. Farhat Jabeen, Dean Faculty of Life Sciences, GCUF; Prof. Dr. M. Hidayat Rasool, Director IOM, GCUF; and Dr. Saima Muzammil, Principal Organizer, along with her team, for orchestrating a highly successful event.



This year, DPP extended paid internship opportunities to 80% of it's students

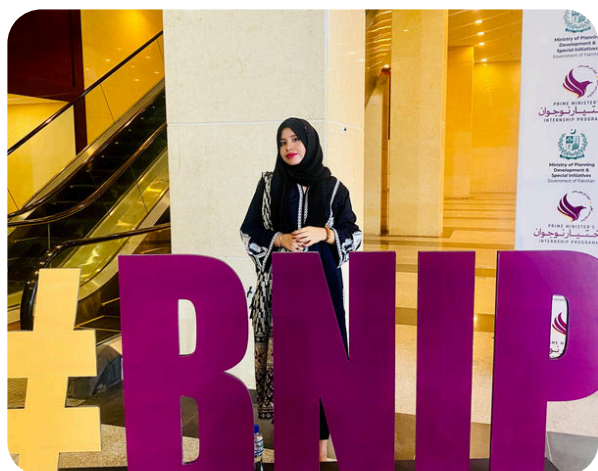
A STRIDE TOWARDS AN ENHANCED EXPERIENCE

During the eighth semester of their BS Hons. program, students from the Department of Plant Pathology are assigned to various organizations for a one-semester internship. The introduction of paid internships by the department began in 2023. Faculty members have been actively seeking additional paid placements, and in 2024, their efforts led to 80% of students being offered paid internships.



The Department of Plant Pathology expresses gratitude to VGreen, an agricultural services company, as well as Animal Care Sciences, Guard Rice, Syngenta, Lucky Core Industries, and the Punjab Agriculture Department for offering paid internship to our students.

Ms. Saman Shabbir, joined as a Development Fellow in Pakistan Oilseed Department, Ministry of National Food Security and Research



Ms. Saman Shabbir joined as a Development Fellow in a project of Pakistan Oilseed Department, Ministry of National Food Security and Research. Ms. Saman has joined through the Prime Minister 1 year Paid Ba-ikhtiyar internship program (BNIP) on a project entitled “Promotion of Olive Cultivation on a Commercial Scale in Pakistan”. During this period she will work in Olive Value Addition Lab and will be involved in olive soap manufacturing, olives curing, and tea processing, olive oil extraction and analysis and data compilation and report writing. She will also attend related workshops and training sessions.

Department of Botany, Lahore College for Women University Lahore, invited Prof. Dr. Arshad Javaid as a key note speaker on an international seminar on BLB

Prof. Dr. Arshad Javaid talked as an invited speaker about “Natural antifungal compounds of *Sonchus oleraceus* for the control of charcoal rot of mash bean” in International Seminar on Management of Bacterial Leaf Blight (BLB) of Rice by Biological Agents, held on March 5, 2024 at Department of Botany, Lahore College for Women University Lahore.

This seminar was organized under a joint project of Botany Department of LCWU and China (PSF/NSFC Project 2022). Chinese PI, Professor Yanjun Kou; CoPI, Dr. Nan Jiang, Pakistani PI, Dr. Khajista Jabeen; and CoPI, Dr. Zubaida Yousaf, Chairperson Department of Botany LCWU Lahore were present along with the faculty, PhD and MS students.





9th Invention to Innovation Summit - 2024

University of the Punjab
27 & 28 February

Enthusiastic participation of the faculty and students of the Department of Plant Pathology, University of the Punjab in the 9th Invention to Innovation Summit 2024. Showcase of research from our young researchers in poster competition, where, faculty members remained actively involved in the organizing committee, contributing to the success of the summit.



The 9th Innovation to Invention Summit, organized by the Punjab University Office of Research Innovation and Commercialization (ORIC) in partnership with the ORIC office at the University of Management and Technology (UMT), took place over two days on February 27th and 28th, 2024.



This event served as an important platform for showcasing and promoting research and innovation endeavors, facilitating the exchange of innovative ideas, knowledge, experiences, and achievements among participants. This initiative aligns with the vision of the Vice Chancellor (VC) to guide the university in embracing local ideas to tackle the country's financial and technical challenges through advanced knowledge. The summit featured 56 selected ideas for stalls, with 40% sourced from industry, alongside 40 oral presentations, 79 poster presentations, and four interactive sessions.

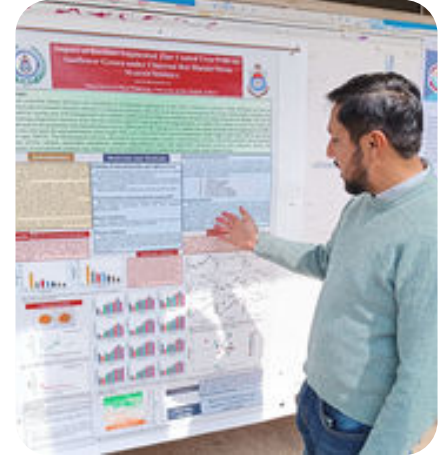
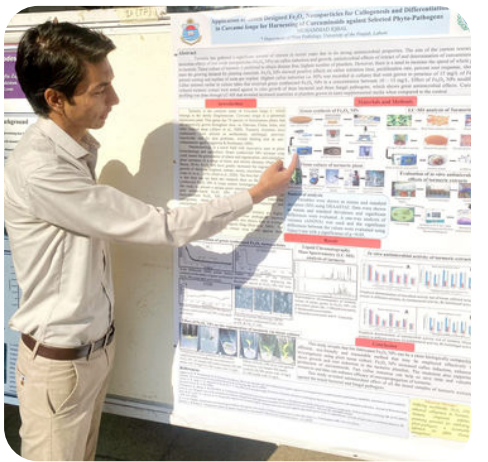
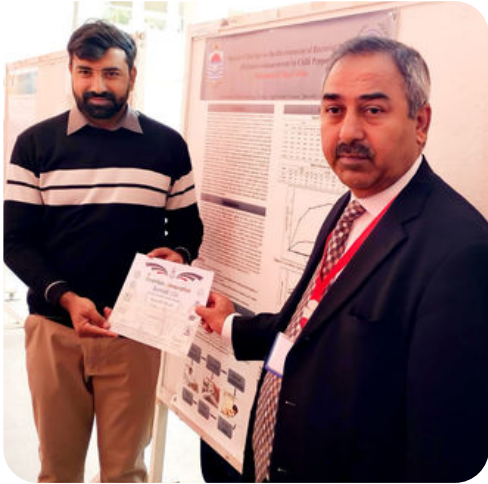
The inaugural ceremony of the summit was held at Al-Razi Hall, University of the Punjab on 27th February 2024. Mr. Abid H. K. Sherwani, Chief advisor, University of Management and Technology; Prof. Dr. Muhammad Akram Sheikh, Chairman Pakistan Science Foundation; Prof. Dr. Khalid Mahmood, Vice Chancellor University of the Punjab and Prof. Dr. Shahid Munir, Chairperson Punjab Higher Education Commission graced the occasion. Chairperson, Department of Plant Pathology, Prof. Dr. Tehmina Anjum hosted the ceremony.

Vice Chancellor, University of the Punjab, Prof. Dr Khalid Mahmood, in his address, emphasized the paramount importance of initiatives like the Summit within the university domain, underlining their potential to benefit students, researchers, and industrialists alike. Chief guest of the event, Prof. Dr. Shahid Munir compared the innovation culture in Pakistan with that of other countries during his address. He highlighted disparities in resources, infrastructure, and policies that impact the innovation ecosystem.

Prof. Dr. Amna Shoaib was honored with the Best Presenter Award for her captivating presentation entitled "Guardians of Growth: Zinc vs. Fungal Menace in Safeguarding Global Food Security." Students from the Department of Plant Pathology (DPP) enthusiastically took part in the poster competition. Mr. Muhammad Iqbal, an MS student from the Department of Plant Pathology (batch 2021-23), clinched the 1st prize in the poster competition for his presentation on enhanced curcumin production through the application of nanotechnology in tissue culture. Dr. Hina Ashraf secured the 2nd prize for her poster showcasing her PhD research on the green synthesis of nanopesticides. Additionally, Mr. Maroof Siddique PhD student at DPP received an appreciation certificate for his work on bio-augmented zinc-coated urea.



Department of Plant Pathology, congratulates its young researchers on their outstanding performance. As the summit drew to a close, there was a resounding commitment to continue and expand this significant event in the coming years.



Field visits of the research students of Environmental Plant Pathology for diseased plant sampling



The research students of the Environmental Plant Pathology Laboratory under the supervision of Prof. Dr. Amna Shoaib, visited fields in the outskirts of Lahore on 5th March 2024 and fields in the vicinity of University of the Punjab on 7th March 2024 for diseased plant sampling. First visit was done in collaboration with the Punjab Agriculture Department, Pest Warning & Quality Control of Pesticides Wing. The field visit highlighted challenges like late blight and early blight in potatoes, emphasizing the importance of hybrid varieties like NARC-G1 garlic for higher yields. Our sincere gratitude is to Dr. Sabin Fatima and Mr. Habib for their dedicated coordination in advancing agricultural research. Second field visit was carried out under the guidance of Mr. Irfan, Country Head of R&D in Arista, Mr. Sohail who is a Fungicide Technical Lead at Capricorn and Dr. Tariq Manzoor, Assistant Professor at the Department of Plant Pathology. During the visit, Mr. Irfan covered wheat cultivation challenges, focusing on the importance of the flag leaf and addressing diseases like Kernel Bunt and Rust.



Department of Botany, Minhaj University invited Prof. Dr. Amna Shoaib as a keynote speaker on International Women's Day

Prof. Dr. Amna Shoaib, has been accorded the distinguished privilege of assuming the role of keynote speaker at the esteemed Seminar on "Keys to Clarity: A Seminar on Elevating Scientific Communication". This enlightening event was scheduled for the 8th of March 2024 at the Department of Botany, Minhaj University, Lahore. Dr. Shoaib's participation added a layer of excellence to this forum, offering an unparalleled opportunity to explore the nuances of elevating scientific communication under the guidance of a luminary in the field.

Prof. Dr. Sajid Mehmood Shahzad, the Vice-Chancellor, honored Prof. Dr. Amina Shoaib with a shield, recognizing her valuable insights. The seminar attracted a substantial audience comprising Botany faculty and students.



Evoyl group conducted a recruitment drive in the Department of Plant Pathology on March 5th, 2024



On March 5th, 2024, the Evoyl Group organized a recruitment drive at the Department of Plant Pathology, University of the Punjab. Graduate and postgraduate students from various agricultural majors from different Universities participated in a written test. Evoyl is a rapidly expanding group of companies specializing in sales, services, and distribution of high-quality pesticides, seeds, high efficacy irrigation systems, and urban pest solutions. The Department of Plant Pathology extends best wishes to all participants who took part in the test.

Addition of Ms. Mamoona Asif and Ms. Taiba M. Ahmad in the list of those successfully defended their PhD theses in Plant Pathology

On February 23rd, 2024, Ms. Mamoona Asif and Ms. Taiba Muhammad Ahmad successfully defended their PhD theses. Both completed their research under the supervision of Prof. Dr. M. Saleem Haider, the Dean of the Faculty of Agricultural Sciences. Ms. Mamoona worked on "Linking biochar and soil microbial community dynamics with the development of cotton wilt." Dr. Adnan Akhter served as her second supervisor, providing expertise in biochar formulations and analysis. Meanwhile, Ms. Taiba worked on "Assessment of bacterial leaf blight of rice and predicting yield losses through spatial modeling in Pakistan." Prof. Dr. Sajid Rashid acted as the second supervisor, offering expertise in spatial modeling.

Dr. Farman Chaudhary, Visiting professor, Minhaj University Lahore; Prof. Dr. Naveed Aslam Malghani, Chairman Department of Plant Pathology, Islamia University Bahawalpur and Dr. Farah Khan, Ex-Chairperson, Department of Botany, Lahore College for Women University Lahore were the external examiners for the candidate. Congratulations to Ms. Mamoona and Ms. Taiba for their successful defense of their PhD theses!



Prof. Dr. Amna Shoaib delivered a keynote address at University of Engineering & Technology, showcasing her expertise and contributions in her field



Prof. Dr. Amna Shoaib, has been bestowed the honor of serving as the keynote speaker at the prestigious seminar on "Decoding the Riddles of High-Impact Scientific Writing." This enlightening event is scheduled to take place on the 21st February, 2024, at the Department of Chemistry, University of Engineering and Technology in Lahore, Pakistan. Dr. Amna's presence is a testament to her exemplary expertise, making this seminar a remarkable opportunity to delve into the intricacies of high-impact scientific writing under the guidance of a visionary in the field.

PhD students of the Department of Plant Pathology participated in Workshop on RNA-Seq Data Analysis at School of Biochemistry & Biotechnology PU

The School of Biochemistry and Biotechnology at the University of the Punjab organized a three-day workshop on RNA-Seq Data Analysis from March 6th to 8th, 2024. Participants included Mr. M. Taqqi Abbas, Ms. Hiba Arshad, and Ms. Tuba Ashraf from the Department of Plant Pathology.

The workshop curriculum included various topics. On the first day, participants gained understanding of the Linux environment and FASTQ file. The second day focused on R-Studio, DEGs analysis, and statistical fundamentals. On the third day, participants learned to build MA plots of DEGs, Volcano plots, Heat Maps, and conducted KEGG Pathway Analysis.

Dr. Naeem M. Ashraf, Assistant Professor at School of Biochemistry and Biotechnology, served as the resource person for the workshop. Dr. Ashraf has expertise in bioinformatics and structural biology.

Congratulations to Dr. Muhammad Khurshid, Director School of Biochemistry and Biotechnology and Patron of the Workshop and all the organizers for successfully arranging this workshop on recent genomic technologies.



FROM MOLECULES TO MOLECULAR DOCKING

An insight for Beginners

**Two Day
Workshop
23 - 24 April 2024**

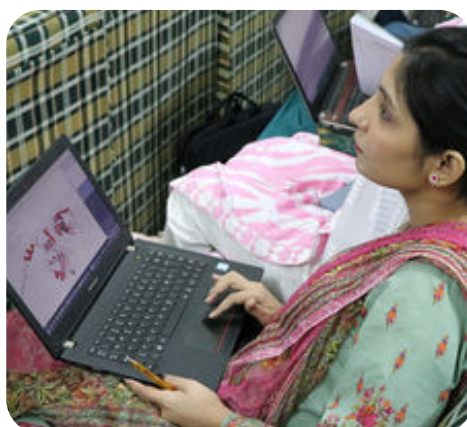
Departments / Universities Participated

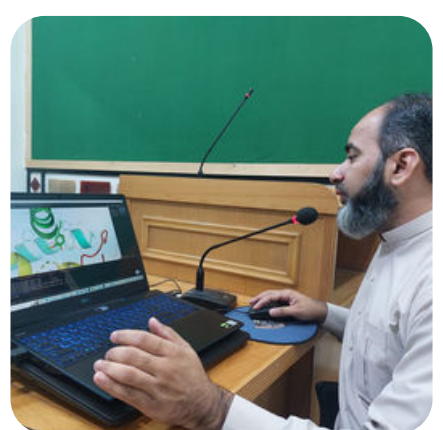
1. Dept. of Biochemistry & Biotechnology; University of Agriculture, D.I. Khan
2. Dept. of Botany; University of Education LHR
3. Dept. of Botany; University of Sargodha
4. Dept. of Biological Sciences; Forman Christian College LHR
5. Dept. of Botany; Women University Multan
6. Dept. of Botany; University of Okara
7. CAMB, University of the Punjab LHR
8. Dept. of Botany; Minhaj University LHR
9. Dept. of Biology; Lahore Garrison University LHR
10. Food Biotechnology Research Centre, PCSIR, LHR
11. Dept. of Botany; LCWU LHR
12. Institute of Botany; BZU, Multan
13. Institute of Botany; University of the Punjab
14. Dept. of Biochemistry & Biotechnology; Women University Multan
15. Centre of Earth and Environmental Sciences, PU
16. Govt. College University LHR
17. Dept. of Plant Pathology; PU LHR





The University of the Punjab's Department of Plant Pathology held a two-day workshop on Molecular Docking from April 23rd to April 24th, 2024. This interactive workshop catered specifically to beginners in the field of molecular biology. A total of seventy participants from 17 different departments across various universities registered for the event. Dr. Waheed Akram, Assistant Professor in the Department of Plant Pathology, served as the resource person. Throughout the workshop, attendees were introduced to molecular docking software such as PyMol, PyRx, AMDock, and Chimera, as well as online tools like SwissDock and GRAMM. Additionally, topics covered included homology modeling, model validation and evaluation, downloading proteins and ligands, preparing molecules for docking, and visualizing docking interactions between proteins and ligands using Discovery Studio, LigPlot, and Plip. Dean faculty of Agricultural Sciences; Prof. Dr. M. Saleem Haider and eminent agriculturist Prof. Dr. Ashraf Randhawa also graced the event.





Triumphant Tales

Students' Success Stories Inspire All

Hassan Ali - a graduate of DPP, elatedly marks his admission to pursue a PhD at Anhui Agricultural University in China with a full scholarship



Ali Hassan, a student of MS Hons Plant Pathology (batch 2021-23), has been admitted to the doctoral program in plant pathology at Anhui Agricultural University, China, for the period 2024-27. He has secured a full scholarship for his studies.

Anhui Agricultural University (AAU), located in Hefei, the capital of Anhui Province, is an institution with a long history and enjoys high prestige in agriculture, forestry and biotics studies, which have now been developed into its featured disciplines.

During his MS Hons, Ali focused on researching plant growth-promoting bacteria, leading to the publication of three manuscripts in internationally renowned journals with a total impact factor of 13. The Department of Plant Pathology provided him with comprehensive guidance throughout the admission and scholarship application process.

PhD student of DPP - Almas Qamar won third prize in an interdepartmental essay writing competition



In May 2024, the Center for South Asia & International Studies, the Consulate General of the People's Republic of China, and the School of Communication Studies at Punjab University jointly organized an interdepartmental essay writing competition. The theme of the competition was "73rd Pak-China bilateral diplomatic relations." Among the participants was Miss Almas Qamar, a PhD student from the Department of Plant Pathology, who achieved third place in the competition. As recognition for her accomplishment, she was awarded a certificate of achievement and a cash prize of 15,000 Rs.

A group of students, accompanied by their teachers from DPP, made a visit to the Expo Centre Lahore for Agri Connections 2024



Between April 24th and 25th, Expo Centre Lahore hosted Agri-Connections 2024, an exhibition and conference dedicated to advancing and sustaining the agricultural sector. On the event's second day, a delegation from the Department of Plant Pathology at the University of the Punjab, comprising postgraduate students, their Chairperson Prof. Dr. Tehmina Anjum, and two Assistant Professors, Dr. Zill-e-Huma Aftab and Dr. Waheed Akram, attended. Engaging with local and international experts, as well as various businesses within the agricultural industry, the team aimed to learn, collaborate, and forge connections. During discussions, the Chairperson explored opportunities for agricultural students, including potential paid internships and scholarships offered by agricultural companies.



The students visited various stalls, actively engaging with exhibitors and posing inquiries about their products and services. They diligently explored job prospects and potential research avenues with the representatives of different companies. The agricultural exhibition featured a range of modern technologies, machinery, equipment, and methodologies, capturing the keen interest of students. This exposure ignited their curiosity and stimulated their thinking, motivating them to consider integrating new technologies into their research projects.

New Addition to FCBP Inventory: *Alternaria porri*, Causal Agent of Purple Blotch of Onion

Continuing its operations under the Department of Plant Pathology (DPP), the FCBP (Fungal Culture Bank of Pakistan) remained steadfast in its support to farmers and researchers. In 2023, the FCBP fulfilled 78 culture requests, supplying a total of 180 fungal and bacterial cultures to researchers from various universities and research institutes. Additionally, five students successfully completed internships and research projects focusing on the identification of microbial flora.

While actively engaged in refreshing the existing inventory, the staff of FCBP dedicated efforts to identifying new cultures for inclusion in the FCBP inventory. Among these efforts, seven new fungal cultures were identified. Notably, one culture was isolated from an infected sample of onion crop received from the agriculture department, subsequently identified as *Alternaria porri*.



**In 2023, FCBP provided
180 fungal cultures to
researchers, entertaining
78 requests.**

Alternaria porri is a known causal agent of purple blotch of onion. It first manifests as small, water-soaked lesions that rapidly develop white centers. As the lesions progress, they turn from brown to purple with a halo of yellow. The culture is available for research.

Students of the Department of Plant Pathology, PMAS Arid Agriculture University Rawalpindi visited DPP



On the 15th of May 2024, under the guidance of Prof. Dr. Inam-ul-Haq, students from the 6th semester of the Department of Plant Pathology at PMAS Arid Agriculture University Rawalpindi, paid a visit to the Department of Plant Pathology at the University of the Punjab. During the visit, students had the opportunity to explore various research laboratories, including the First Fungal Culture Bank of Pakistan.

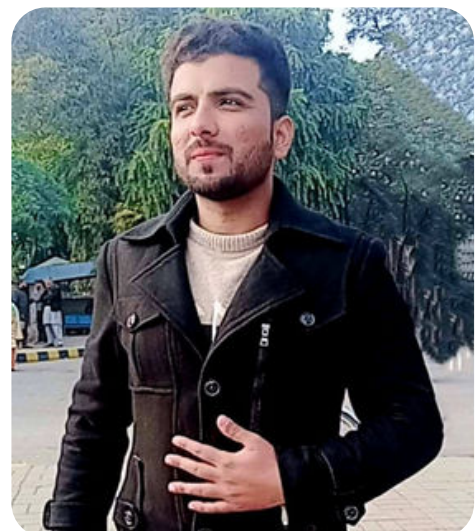
TTS Faculty of the Department of Plant Pathology Recognized with Performance-Based Increment and Honorarium for 2023

The syndicate in its meeting held on 30.04.2024 approved the recommendations of the TTS Standing Committee regarding grant of Performance Based Increment/Honorarium for the year 2023. A total of 111 faculty members of University of the Punjab received this award. From the Department of Plant Pathology, Prof. Dr. Arshad Javaid, Prof. Dr. Amna Shoaib, Dr. Waheed Anwar, Dr. Adnan Akhtar and Dr. Waheed Akram earned both PBI and Honorarium based on their performance. All TTS faculty of the Department of Plant Pathology, also received annual increment for the year 2023.



Doctoral Candidate of the Department of Plant Pathology, Mr. Asad Ali Embarks on Collaborative Endeavors with CMEC

Muhammad Asad Ali, a PhD Scholar in the Department of Plant Pathology at the University of the Punjab, has taken up a role as an Assistant Manager at the Chinese Agriculture Company (CMEC). He will be involved in their chili and sesame project, which operates within the framework of the Pakistan-China Agriculture Cooperation Exchange Centre. The project aims to facilitate the export of these agricultural commodities from Pakistan to China, following procurement from local farmers. Hope this will be a great learning experience for our young scholar.



The Department of Plant Pathology hosted a one-day seminar focused on the intersection of "Environment Sustainability and Agriculture."



On 27th May 2024, Department of Plant Pathology, University of the Punjab organized a seminar on Environment Sustainability and Agriculture. The objective was to create awareness among students and researchers regarding climate crises and pollution challenges in agriculture. Prof. Dr. Faiza Sharif, Director, Sustainable Development Study Centre, Government College University Lahore and Prof. Dr. Aisha Saleem Khan, Formans Christian College University Lahore was invited as guest speakers. Dr. Faiza addressed the emerging issues within Pakistan's agricultural system due to climate change and global warming, offering potential solutions and encouraging students to delve into these areas. Dr. Aisha shared her research findings from WWF-funded projects on phytoremediation, captivating the audience with intriguing data and plant illustrations. Guest of honor of the event, Prof. Dr. Shakeel Ahmad, Director of ORIC at Punjab University, commended the work of both scientists and stressed the importance of involving agricultural students in relevant research. Prof. Dr. Saleem Haider, Dean Faculty of Agricultural Sciences, Punjab University applauded the Department of Plant Pathology for organizing a seminar on such a crucial topic, highlighting how such platforms open up new research avenues for young minds.



The department expressed its appreciation by presenting shields as token of gratitude to both guest speakers. Prof. Dr. Tehmina Anjum, Chairperson of the Department of Plant Pathology, extended her thanks to all participants, speakers and organizers for their contribution to the engaging seminar.



Dr. Saleem Haider's Reappointment as Dean Signals Stability and Vision for Agricultural Sciences in PU

Agro-Pathology Bulletin

Vol 03; Issue 01 [January - June, 2024]

Prof. Dr. M. Saleem Haider reappointed as Dean Faculty of Agricultural Sciences in University of the Punjab

No.SO(Univ.)1-7/2021/ The Governor / Chancellor, in exercise of powers conferred upon him under para 2(2) of the First Statutes, appended as Schedule to the University of the Punjab Act, 1973, read with Section 11(8) of the Act *ibid*, appointed Prof. Dr. Muhammad Saleem Haider, Department of Plant Pathology as Dean Faculty of Agricultural Sciences, University of the Punjab for a period of three years .



Prof. Dr. Saleem Haider has the honor of being the first Dean of the Faculty of Agricultural Sciences at the University of the Punjab. This will be his second term serving as Dean of the Agricultural Faculty. Prior to this, Dr. Haider has served as the Director of the Institute of Agricultural Sciences for over a decade.

The Department of Plant Pathology extends congratulations to Dr. Saleem Haider on his reappointment as Dean of the Faculty of Agricultural Sciences. We anticipate progress and advancement within the faculty under his tenure.

Department of Plant Pathology

133rd CONVOCATION 2024

University of the Punjab

