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CONTENT

- 17th Nematological Event: International Symposium cum Workshop Advances in Nematology and Emerging Threats
- Internship program
- Future events

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17th NEMATOLOGICAL EVENT
International Symposium cum Workshop

Advances in Nematology and Emerging Threats

9th-11th October, 2024

National Nematological Research Centre

University of Karachi

**17th Nematological Event: Symposium-cum-Workshop on
“Advances in Nematology and Emerging Threats”**

9-11 October, 2024

The National Nematological Research Centre (NNRC), University of Karachi hosts 17th Nematological Event: “Advances in Nematology and Emerging Threats”, to highlight the latest developments and challenges in the field of nematology. This Nematological Event has been jointly organized by Pakistan Society of Nematologists (PSN), National Nematological Research Centre (NNRC), University of Karachi (UoK) and Food and Agriculture Organization (FAO) and supported by Pakistan Science Foundation (PSF).

The three-day workshop was held during 9-11 October, 2024 at National Nematological Research Centre, University of Karachi. A total of 50 invited honourable guests, over 165 participants for symposium and 40 registered participants for workshop which included trainees from all over Pakistan viz., PMAS, Arid Agriculture University, Rawalpindi, University of Poonch, Rawalakot, Azad Jammu Kashmir, Khyber Pakhtunkhwa Agricultural University, Peshawar, UCS, Shankar Campus, Abdul Wali Khan University, Mardan, Islamia University, Bahawalpur, Bahauddin Zakariya University, Multan, Sindh Agriculture University, Tandojam, Plant Disease Research Institute, Tandojam, Sindh Agriculture University, Umerkot Campus, Utal University, Lasbella, Balochistan, Pakistan Agricultural Research Council (PARC), Karachi

University Campus, Karachi, VPCI, SARC, Pakistan Agricultural Research Council, Karachi University Campus, Karachi, Jinnah University for Women, Karachi, Department of Agriculture and Agribusiness Management, University of Karachi, Department of Biotechnology, University of Karachi, Department of Botany, University of Karachi, Department of Zoology, University of Karachi, Department of Genetics, University of Karachi attended the workshop.

Inaugural session

The inaugural session was held at the KU's International Centre for Chemical and Biological Sciences's Saleem-uz-Zamaan Siddiqui Auditorium on Wednesday. The three-day event is also celebrating the "**50th Anniversary of the NNRC**" which has been a cornerstone of nematological research in Pakistan.

The workshop was inaugurated at 10. 30 AM with the name of Allah Almighty followed by Naat-e-Rasool-Maqbool (SAW).

The KU Vice Chancellor Prof. Dr. Khalid Mahmood Iraqi inaugurated the event and shared his thoughts on the significance of nematology research for Pakistan's agricultural future. He encouraged the efforts of Pakistan Society of Nematologists to discursive the knowledge of Nematology and emphasized to accelerate such workshop programs. He also praised NNRC's contributions to sustainable agricultural practices through indigenous beneficial nematodes.

He said that over the past fifty years, the Centre has grown exponentially and provided quality and holistic education to students from diverse backgrounds. Its role in disseminating knowledge of nematological-related issues, significant community services, and crop safety is well known in this region.

Dr. Iraqi mentioned that during this long time, the NNRC has rendered an invaluable service to the nation and society. He added that how the NNRC has shaped the nematological research work and also contributed to its fantastic growth and development in a very strong and credible manner speaks volumes of the devotion and dedication with which the larger cause has been promoted in a manner which by itself is a role model in its own right.

Director of National Nematological Research Centre, University of Karachi Prof. Dr. Saboohi Raza welcomed the participants. In her welcome address she briefly highlighted the contributions of NNRC in the field of nematology over the past five decades and its vital role in tackling nematode-related challenges in a short documentary.

The Patron-in-Chief of Pakistan Society of Nematologists (PSN) Prof. Dr. Manzoor Hussain Soomro focused on the history and progress of nematological research in Pakistan and the region. He highlighted the need for continuous scientific efforts to address the growing challenges posed by nematodes.

The Head of the Food and Agriculture Organization (FAO) in Sindh, James Robert Okoth stressed the need for sustainable agricultural practices and the role of nematodes in improving soil health and integrated pest management.

Another speaker, Prof. Dr. Toshiyoshi Yoshiga from the Faculty of Agriculture, University of Saga, Japan, presented a Country Report on Japan's advancements in nematology, showcasing their research on nematode diversity and pest management. He mentioned that in light of growing global agricultural challenges, Pakistan and Japan are fostering stronger ties in the field of nematology, with a shared commitment to sustainable pest management and agricultural innovation.

The KU Dean of the Faculty of Science, Prof. Dr. Musarrat Jahan emphasized the importance of interdisciplinary collaboration and the need for innovation in nematology research to combat the threats posed by nematodes to food security.

Later on, shields and souvenirs were presented to the guests and foreign participants in the inaugural session. Shields were also presented to Vice Chancellor, University of Karachi Prof. Dr. Iraqi; to Dr. M.A. Maqbool (late), founder of National Nematological Research Centre, Pakistan Society of Nematologists (PSN) and a scientific journal “Pakistan Journal of Nematology”, acknowledging his lasting legacy in advancing this vital scientific field; to Prof. Dr. Shahina Fayyaz (late), who was instrumental in the success of NNRC, PSN and PJN. Shields were received by their family members. All staff members were also presented shields in recognition of their contributions in the subject. A commemorative shield of NNRC was presented to Dr. Saboohi Raza, Director, NNRC by Vice Chancellor, Prof. Dr. Iraqi. Later on, the Associate Editor of the Pakistan Journal of Nematology and PSN Newsletter Dr Firoza Kazi was awarded a gold medal for her outstanding contributions in research and teaching in nematology, she has played a key role in elevating the journal’s standard to meet HEC-recognized levels. Her exceptional work in scientific publishing and her contributions to the field have set a high bar for future generations of researchers. The inaugural session was ended with lunch.

Paper presentation Session

After lunch break paper presentation session was started. A total of fifteen oral presentations were delivered by the speakers. Prof. Dr. Tariq Mukhtar, President PSN Chair the session with Prof. Dr. Manzoor H. Soomro as a Co-Chair.

Training Session- Day two

Training session was started at 10:00 AM-1:30 PM on day two. The following activities were worked out in this training workshop: Series of lectures and lab demonstrations; sampling techniques and strategies; processing analysis of soil and root samples. The lab exercise was based on the identification of the important genera of plant parasitic nematodes, cutting and preparation of root-knot pattern and cyst cone for identification up to species level. After lunch break the session continued from 2:30-4:30 PM.

Concluding Session- Day three

On day three training session continued till 11:30 AM at NNRC. Afterwards concluding session was held at the premises of Office of Dean Sciences. Prof. Dr. Musarrat Jahan, Dean Sciences, University of Karachi distributed certificates to the participants in a simple ceremony followed by refreshment. In the closing remarks she thanks to all the participants and wish that this workshop may help you in the correct identification of nematodes. Afterwards lunch was served.

Publication of Training Manual

A training manual was published by NNRC for the workshop participants. Training manual, 2024, training workshop bags, folders and other materials were distribution to the trainers and participants.

The e manual covers the following topics necessary for nematode identification: survey and sampling of soil and plant material, isolation methods of nematodes, extraction of root-knot and cyst nematodes by examination of root and soil material, estimation of nematode population by temporary mounting of

nematodes, permanent mounting of nematodes on slides for microscopic observation, mounting perineal pattern of *Meloidogyne* species and mounting vulval cone of cyst (*Heterodera* spp.), different groups of nematodes in detail with illustrations. It includes identification of some important genera of plant parasitic nematodes viz., *Meloidogyne*, *Heterodera*, *Helicotylenchus*, *Hoplolaimus*, *Pratylenchus*, *Hemicricconemoides*, *Paratylenchus*, *Aphelenchus*, *Tylenchorhynchus* and *Xiphinema*. Important diseases caused by nematodes, virus vector nematodes and entomopathogenic nematodes were also included.

Publication of Souvenir: 50 Years of Excellence of NNRC

50th Anniversary Golden Jubilee Souvenir was also published at this occasion. National Nematological Research Centre, University of Karachi is celebrating Golden Jubilee Year of its foundation. The souvenir highlights the NNRC's great contribution to Plant nematology in the agricultural discipline regarding crop protection, environmental and human health spread over five decades. A dept of gratitude is owed to the leaders who left this world but their legacy lives on, namely Dr. Abdul Ghaffar, Dr. M.A. Maqbool and Dr. Shahina Fayyaz, who established and nurtured the institution where it stands today. It's a memorable occasion of NNRC on reaching this golden milestone through its academic excellence for human resource development and stimulating awareness through its diagnostic and advisory services-the growers.

For souvenir about 20 abstracts were received which were presented in oral presentation session by participants.

General Body Meeting of Pakistan Society of Nematologists (PSN)

General body meeting of Pakistan Society of Nematologists was held at NNRC on 10 October, 2024 before lunch. The meeting began with recitation from the Holy Quran. The meeting was attended by Office bearers of the Society, members and other participants of the workshop. The important issues related to the functioning of the Society were discussed.

Minutes of the Meeting of the Pakistan Society of Nematologists (PSN)

The meeting of the Pakistan Society of Nematologists (PSN) was held to discuss important organizational and journal-related matters. The following agenda items were deliberated and unanimously approved:

1. Election of Executive positions of PSN
It was resolved that the election of the Pakistan Society of Nematologists will be conducted in December 2024. All existing members, along with newly registered members up to the submission deadline of nominations, shall be eligible to cast their votes in the election.
2. Appointment of Managing Editor, PJN
The house approved the appointment of Dr. Erum Adeel as the Managing Editor of the Pakistan Journal of Nematology (PJN).
3. Remuneration of Managing Editor
It was decided that the remuneration of the Managing Editor will be 50% of the Article Processing Charges (APC) of the Pakistan Journal of Nematology.
4. Publication of Hard Copies of PJN
The meeting resolved that the hard copies of the journal will be limited

to subscribers only and for official record purposes, in order to reduce printing costs.

The meeting concluded with a vote of thanks to the Chair.

Internship program

National Nematological Research Centre, University of Karachi has been providing the facilities of internship program throughout the year for the biological students of University of Karachi and other Universities and research institutions of Pakistan. The program is initiated for the benefit of the students so that they get the knowledge about nematodes, their importance in agriculture, their disease symptoms and identification. Details are as follows:

- **Department of Microbiology, University of Karachi**

Mr. Muhammad Umer, Mr. M. Alishan and Ms. Roomana Khan from Department of Microbiology, University of Karachi completed their internship of four weeks in July, 2024 on the basic morphology and identification of plant parasitic nematodes from NNRC, University of Karachi.

- **Department of Agriculture and Agri Business Management, University of Karachi**

Four students of Department of Agriculture and Agri Business Management, University of Karachi viz., Ms. Aeman Nasir, Ms. Ayesha Khawer, Ms. Sakina and Hafiza Zohra completed their internship of four weeks in August, 2024 on the basic morphology and identification of plant parasitic nematodes from NNRC, University of Karachi.

- **Balochistan Agriculture College Quetta**

Five students of Balochistan Agriculture College Quetta viz., Mr. Eijaz Ahmed, Mr. Mir Aamir Ali, Mr. Saud, Mr. Muhammad Shoaib and Mr. Shah Zaib completed their internship of four weeks in November, 2024 on the basic morphology and identification of plant parasitic nematodes from NNRC, University of Karachi.

All these students were given certificates on successful completion of their internship.

Future events

- **13-14 March, 2025**

The 53rd meeting of the Working Group Nematology will take place on March 13-14, 2025 at INRES, Molecular Phytomedicine at the University of Bonn, Germany by German Phytomedicine Society

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- **17-18 March, 2025**

54th World Congress on Microbiology, March 17-18, 2025 at Berlin, Germany
Including Phycology, Nematology & Protozoology session

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- **13-17 July, 2025**

UC Davis Entomology: The 2025 conference will take place in July 13-17 at Victoria, British Columbia, Canada

Web site: <https://entomology.ucdavis.edu/>