SPARC
Scheme for Promotion of Academic and Research Collaboration

MASSEY UNIVERSITY
TE KUNENGA KI PŪREHUROA
UNIVERSITY OF NEW ZEALAND

International Workshop cum Training

on

"Unlocking the Potential of Moringa: Opportunities for Global Health and Climate Resilience"

under Scheme for Promotion of Academic and Research Collaboration (SPARC)

10-19 September 2024

Department of Biochemistry, COBS&H
CCS Haryana Agricultural University
Hisar-125004 (Haryana) India

www.hau.ac.in

Inspiring Agripreneurs

(Established by Parliament Act No. 16 of 1970)

About the University

Chaudhary Charan Singh Haryana Agricultural University, commonly known as HAU, is one of the largest agricultural universities in Asia, situated in Hisar, Haryana, India. Named after India's seventh Prime Minister, Chaudhary Charan Singh, HAU is a leading institution in agricultural research and played a crucial role in the Green Revolution and White Revolution of the 1960s and 70s. Originally part of Punjab Agricultural University, Ludhiana, HAU became an autonomous entity on February 2, 1970, following a Presidential Ordinance and the Haryana and Punjab Agricultural Universities Act of 1970, which was ratified by the Lok Sabha on March 29, 1970. The university spans 7,219 acres in Hisar and 1,426 acres at various outstations. Over the years, it has developed a state-of-the-art infrastructure and boasts one of India's best campuses, catering to both academic and extracurricular needs of its students.

About the City

Originally named Hisar-e-Firoza by its Turkic founder, Firuz Shah Tughlaq, in 1354 AD, the city was embellished with numerous historical structures, including forts, palaces, tombs, mosques, gates, and gardens. Many of these monuments remain well-preserved. The name 'Hisar' is derived from the Arabic word meaning 'Fort'. Located 180 kilometers west of Delhi, Hisar is a significant city in North India, situated at coordinates 29°09'N and 75°42'E in Haryana. The city hosts several prestigious educational institutions, including CCS Haryana Agricultural University, Guru Jambheshwar University, and Lala Lajpat Rai University of Veterinary & Animal Sciences. Government policies have played a crucial role in the city's economic growth, with favorable industrial policies attracting numerous entrepreneurs and spurring industrialization in and around Hisar.

Climate

Hisar's climate is influenced by its continental location on the fringes of the southwest monsoon region, giving it a tropical monsoonal and semi-arid climate. The city receives an average annual rainfall of about 480 mm. Summer temperatures can reach between 40°C and 49°C (some days), while winter temperatures vary from a high of 28°C to a low of around 1.5°C. Dewfall is most significant in December and January, and least in April and November. The weather during the workshop period is expected to be favorable as day temperature (maximum temperature) of 34°C, night temperature between 22-23°C, average rainfall 18 mm and relative humidity varies from 51 to 84 %.

About the Workshop

The workshop aims to advance understanding of the impact of environmental factors on Moringa (Moringa oleifera L.), a crop valued for its extensive medicinal properties and versatile applications. It focuses on optimizing Moringa cultivation practices to enhance its medicinal and nutritional benefits.

Objectives of the Workshop

Investigate Environmental Effects: To explore how abiotic stresses such as cold, salinity, and drought affect Moringa growth and development. Examine the biochemical and genetic mechanisms, including cold acclimatization strategies that enable Moringa to adapt to extreme conditions.

Analyze Antioxidant and Tannin Properties: To assess how seasonal changes, geographic variations, and growth stages influence the antioxidant and tannin properties of Moringa leaves. To discuss their implications for medicinal efficacy and agricultural utility.

Evaluate Seed Quality and Storability: To examine the effects of environmental factors like temperature, humidity, and photoperiod on the quality and storability of Moringa seeds. To investigate variations in seed characteristics across different regions and seasons.

Discuss Practical Applications: To explore the diverse uses of Moringa in natural medicine, culinary practices, and environmental sustainability. Assess how tannin properties impact its palatability and use in agricultural systems.

Foster Knowledge Exchange: To facilitate discussions among international researchers, practitioners, and stakeholders to share insights, promote collaboration, and develop strategies for optimizing Moringa cultivation and utilization globally.

Topics to be Covered in Workshop

- Introducing Moringa oleifera into New Zealand farming systems – Challenges and Opportunities
- Assessing new species for climate suitability and risk using Moringa oleifera in New Zealand as a case study
- Bioactive compoundin Moringa Oleifera: Health Benefits
- Advancements in Seed Science: Enhancing longevity, germination, and genebank management through modern technologies
- From Idea to Publication: A step-by-step approach to research papers
- Strategic approaches to seed sector development: Management, Quality assurance, and policy eupport for agricultural advancement
- Organic seed certification and seed traceability
- Enhancing nutrient boavailability: making the most out of moringa's nutrition
- How to bring back moringa in our plates? Ways and means of sustainable healthy life
- Protecting Innovations: A guide to Intellectual Property Right
- E-Resources in the digital age: Access, management, and use
- Ensuring food and nutritional security: The vital role of Moringa
- Understanding environment challenges and variation in antioxidant property of moringa based on season, location and maturity stage
- Varietal identification through molecular techniques
- Enhancing feed efficiency with moringa tannins: A sustainable approach
- Frost-resilient moringa: Analyzing cold acclimatization mechanisms
- The regional and seasonal dynamics of Moringa in sustainable agriculture
- Moringa oleifera- A versatile plant for sustainable health and environmental solution
- Moringa through the lens of bioinformatics
- Horticulture for nutritional security- National health perspectives
- Science communications prospective for researchers

Who can apply ?

Faculty, Ph. D. students/Research Associates from Agricultural universities having at least M.Sc. degree in any discipline of agriculture and Life Sciences .

How to apply ?

There is no registration fee to attend this workshop. Please complete your registration by scanning QR code or click here. For assistance contact: Dr. Axay Bhuker, +91-9812375695; sparcworkshopccshau@gmail.com.

For participants traveling from long distances, on-campus accommodation will be made available on request basis at University Faculty House.

Chief Patron

Prof. B. R. Kamboj
Vice–Chancellor, CCSHAU Hisar

Patron

Dr. Rajbir Garg
Director of Research

Patron

Dr. Rajesh Gera
Dean, COBS&H

Keynote Speakers

Dr. D. K. Yadava
ADG (Seeds), ICAR
New Delhi

Dr. Keshavulu Kunusoth
President
ISTA

Craig Robert McGill
Massey University
New Zealand

Dr. Fiona R. Hay
Aarhus University-Flakkebjerg
Denmark

Dr. Bhagirath Chauhan
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PI from India

Course Director
Craig McGill
PI from Massey University, New Zealand

Course Co-Director
Dr. Axay Bhuker
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Course Co-Director
Dr. Penny Back
Co-PI from Massey University, New Zealand

Organizing Commitee

Dr. Sushil Nagar, Assistant Scientist
Dr. Neeraj Kharor, Assistant Scientist
Dr. Babita Rani, Assistant Professor
Dr. Ajay Pal, Assistant Professor
Dr. Nisha Kumari, Assistant Scientist
Dr. Punesh Sangwan, Assistant Scientist

We look forward to welcoming you to this exciting workshop!