

WELCOME TO OUR

MBUST Insights

Authors of this Newsletter Issue:

OA Team- Dr. Bhushan Shrestha, Dr. Anupama Shrestha, Dr. Sabin Basi, Dr. Sarbesh Das Dangol, Sabnam Subedi, Atmaz Kumar Shrestha, Suraj Chaudhary, Sushil Rai, Dhana Krishna Acharya

FBM Team- Dr. Sabina Shrestha, Dr. Saurabha Bhattarai, Dr. Sudip Pandey, Dr. Kishor Timsina, Mukesh Maharjan

AI/DS Team- Dr. Bhuwan Bhattarai

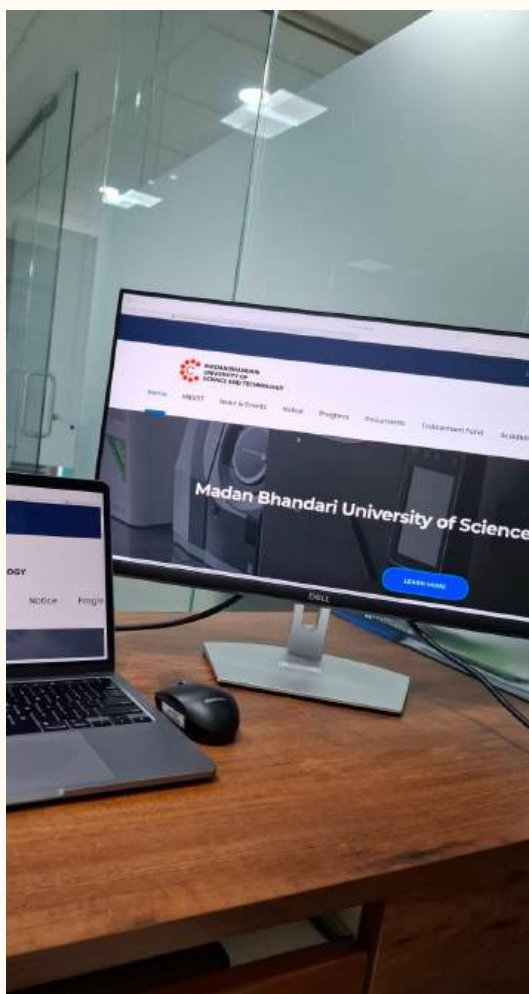
GRADUATE ADMISSION OPEN

Latest Update

It is an immense pleasure to announce that MBUST will be accepting graduate program applications from August 3, 2024 to August 27, 2024. This gives an exciting opportunity for those aspiring scholars to join the MBUST team and contribute to our innovative cutting-edge research.

Programs Offered:

- **Master's and PhD in Organic Agriculture:** We intend to give our students hands-on experience with the state-of-the-art advanced agriculture research and enable our students to take a lead in sustainable production of organic foods.
- **Master's and PhD in Forest Biomaterials:** Our program aims to train our aspiring students to gain expertise in forest biomaterials, its conservation and apply their knowledge in the industry.
- **Master's in Sustainable and Resilient Rural Infrastructure:** This exciting program enables combination of practical exposure with advancements in the innovative design of infrastructures for rural sustainability and its maintenance.



Meeting with Community Forestry Propounder

BY FBM TEAM



A productive discussion meeting took place in Lalitpur on July 8, 2024, with senior anthropologist Bihari Krishna Shrestha. He is renowned for his work in translating the public participatory approach into community forestry practices and Ama Samuha, a Nepali voluntary group focused on raising awareness about gender equality and social issues affecting women. The FBM team including Prof. Sanjay Nath Khanal, Dr. Sabina Shrestha, Dr. Sudip Pandey, Dr. Saurabha Bhattarai, and Dr. Kishor Timsina participated in discussion. The team expressed gratitude for Shrestha's visionary insights, which are expected to significantly influence the ongoing efforts of the Forest Biomaterials program.



Our Field Visit to Ghyangphedi

STUDENT AND FACULTY ENGAGEMENT

BY OA TEAM

Lately our team of faculty members and students visited the beautiful village of Ghyangphedi located in the Nuwakot district of Bagmati Pradesh. This was an opportunity for us to showcase our research and enable direct engagement with the local farmers and gain their insights in R&D. This enabled both our faculty members and students to closely work together, monitor the farms, enhance our commitment to community and learning through hands-on exposure and at the same time to foster academia-farmer collaborations to promote development of rural areas via sustainable organic agriculture.

Workshops

MUSHROOMS AND CORDYCEPS



BY OA TEAM

Just last month Dr. Bhushan Shrestha invited us to his enlightening session introducing some of the exciting wonders of mushrooms and cordyceps. In this workshop, he delved into the insights of mushroom cultivation techniques and their potential benefits.



Student and Faculty Engagement

EXPLORING AGRICULTURAL INNOVATIONS AT MADI ORGANIC FARM

BY OA TEAM

Dr. Bhaneshwar Pokharel recently invited our Organic Agriculture team to visit Madi Organic Farm, managed by Dr. Pokharel. Located in the serene landscape of Madi Municipality in Chitwan district of Bagmati Pradesh, Dr. Pokharel toured us around his farm and provided us profound knowledge of the contemporary sustainable agricultural farming which he integrated in his farm using cutting-edge technologies. Here are some of the highlights from his farm:

- Irrigation system using automatic sensors to optimize crop water use efficiency
- Integration of advanced technology in his greenhouse for year-round crop cultivation
- Synthetic pesticide/fertilizer-free organic farming practices
- Employment of Azolla farming and vermicomposting in livestock feed and improving soil fertility
- Management of livestock in ameliorating food security and biodiversity

All these features enable Madi Organic Farm to brag the blend of their sustainability practices, implementing innovation while fostering eco-friendly farming system.





Community Engagement

Meeting with Chandragiri Community Forest User Group for Collaborative Work

BY FBM TEAM

On June 17, 2024, a discussion meeting was held at MBUST with the Chandragiri Community Forest User Group from Chitlang, focusing on research related to the utilization of forest products. The meeting featured key representatives from the user group, including Mr. Dudh Raj Lama (President), Mr. Shyam Bahadur Chumi (Vice President), Ms. Ram Maya Jimba (Secretary), and Mr. Amit Balami (Member).

The MBUST team engaged in formulating a comprehensive research agenda that encompasses:

- i. Baseline Assessment
- ii. Fire Management and Mitigation
- iii. Sustainable Forest Utilization
- iv. Forest Management

This collaborative effort aims to enhance the sustainable management of forest resources and improve the livelihoods of the community. The MBUST team appreciates the valuable contributions from the user group and looks forward to the outcomes of this important research initiative.

Field Exploration

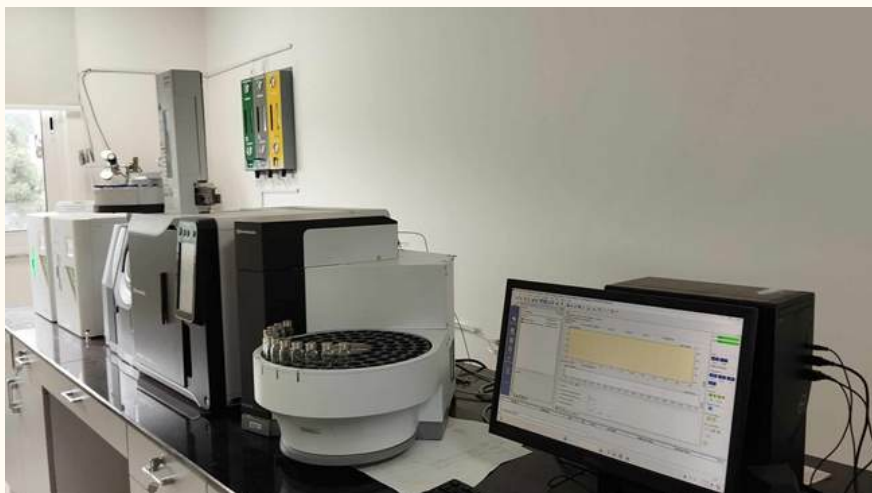
BY FBM TEAM

The Forest Biomaterials program at MBUST is currently engaged in collecting bark samples from various tree species and extracting tissue using an increment borer for further analysis. This research aims to gain a deeper understanding of the composition and properties of different tree species. The collected bark samples and tissue extracts will undergo thorough analysis using advanced techniques to determine their chemical composition, structural characteristics, and potential applications. This research hopes to develop eco-friendly alternatives, value addition, efficient utilization of forest resources for industries and livelihoods for communities dependent on forest resources.



GC-MS/MS ANALYSIS

Successful Implementation of Hydrogen as Carrier Gas



BY FBM TEAM

MBUST laboratory has successfully installed and is now operating a GC-MS/MS system utilizing hydrogen as a carrier gas. This innovative approach addresses the challenges of helium shortages, providing a more sustainable and cost-effective alternative. The transition to hydrogen is expected to enhance operational efficiency while reducing reliance on helium, which has become increasingly difficult to obtain. The laboratory aims to leverage this technology for improved analytical capabilities in various research applications.

EXPLORING OPPORTUNITIES

Collaborative Research



BY FBM TEAM

On June 2, 2024, Dr. Lok Ranjan Bhatta provided valuable insights regarding the research activities at the Biological Resources Lab of the Nepal Academy of Science and Technology (NAST) and discussed on potential collaborative research opportunities with MBUST.

Dr. Bhatta highlighted ongoing projects, including nutritional and phytochemical analyses of wild edible fruits and mushrooms, as well as studies on biological diversity and sustainable management of medicinal and aromatic plants. The discussion emphasized the importance of collaboration in advancing research and development initiatives that align with both institutions' goals for sustainable resource management and biodiversity conservation.

The MBUST team appreciates Dr. Bhatta's contributions and looks forward to fostering a productive partnership that enhances research capabilities.

ADVANCING TRADITIONAL MEDICINE RESEARCH

COLLABORATION WITH HUNAN UNIVERSITY OF CHINESE MEDICINE



BY FBM TEAM

On June 18, 2024 a productive discussion was held with a team led by Yi Gangqiang from Hunan University of Chinese Medicine to systematically study, research, promote, and disseminate traditional medicine. The meeting focused on exploring collaborative efforts to enhance the understanding and application of traditional medicinal practices.

Both teams emphasized the importance of integrating traditional medicine into modern healthcare systems, aiming to leverage their combined expertise for greater impact. This collaboration is expected to foster innovative research initiatives and promote the benefits of traditional medicine on a global scale.

WELCOME OF AI AND DS STUDENTS

BY AI/DS TEAM

On May 14, 2024 MBUST team welcomed and oriented Artificial Intelligence (AI) and Data Science students (DS). These two new programs classes started on May 16, 2024.



Editorial Team

Editor-in-chief: Prof. Dr. Rajendra Dhoj Joshi

Managing Editor: Associate Prof. Padma Sunder Joshi / Prof. Dr. Sanjay Nath Khanal

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Copy Editors: Dr. Sabina Shrestha, Dr. Bhushan Shrestha, Dr. Anupama Shrestha,
Dr. Sabin Basi, Dr. Sudip Pandey, Dr. Kishor Timsina, Dr. Saurabha Bhattarai,
Dr. Bhuwan Bhattarai

Contributing authors/photographers: Organic Agriculture (OA) team, Forest Biomaterials (FBM) team, Artificial Intelligence (AI) team, Data Science (DS) team

Any Questions?

info@mbust.edu.np

9840088016, 9849848053

Chitlang, Thaha Municipality-9,

Makawanpur,

Bagmati Pradesh, Nepal

www.mbust.edu.np