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POTATO DRY ROT DISEASE: SYMPTOMS AND ETIOLOGY, PATHOGEN DIVERSITY, ASSOCIATED MYCOTOXINS AND THEIR IMPACT ON HUMAN AND ANIMAL HEALTH

Suroj Ahammed* and Bejoysekhar Datta

Mycology and Plant Pathology Research Laboratory, Department of Botany, University of Kalyani, Kalyani, Nadia, West Bengal, India, 741235.
Email: surojahammed4376@gmail.com

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Abstract: The world's potato crop is seriously threatened by *Fusarium* species that cause potato dry rot (PDR) disease. The crop stand is impacted by this soil- and seed-borne diseases because the pathogens inhibit potato sprouts development and cause severe tuber rots. Dry rot is indicated by sunken, wrinkled brown to black tissue areas with concentric rings on tubers. The pathogens infect potato tubers through the wounds. Although soil contaminated with *Fusarium* spp. is also a source of inoculum, the seed tuber is thought to be the primary source of inoculum. The diversity of the globally recognised, PDR causing 18 *Fusarium* species varies depending on the climate and geographic location. The pathogens produce different mycotoxins and the mycotoxins associated with PDR possess a serious threat to human and animal health when entered body through consumption of toxin contaminated food. This review provides a comprehensive overview of potato dry rot disease, covering its symptoms and etiology, pathogen diversity, mycotoxins associated with the disease and the impact of mycotoxins on human and animal health. The information detailed herein aims to improve the understanding about the current status and the significance of potato dry rot disease.

Keywords: *Fusarium* diversity, Mycotoxin toxicity, Post harvest disease, Potato tuber rot

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PHYTOCHEMICAL STUDIES ON TRIBALLY USED AQUATIC MEDICINAL PLANTS OF LALBAGH BLOCK OF MURSHIDABAD DISTRICT, WEST BENGAL, INDIA

Souhardya Ray[1], Sutibra Narayan Mondal[1], Mithun Biswas[1] and Asim Mandal[2]*

[1]Department of Botany, Murshidabad University, West Bengal, India
[2]Department of Botany, Krishnath College, Murshidabad, West Bengal, India
Email: asimbotvu@yahoo.com

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Abstract: Since ancient times, plants have been utilized to treat a wide range of ailments. Conventional medical practices, such as Homeopathy, Ayurveda, and Unani, utilize the understanding of ethnomedicinal plants to address human health problems. Among tribal communities, these plants continue to be used for various traditional healthcare practices. Plants possess a multitude of bioactive chemicals that serve as the foundation for medical care; known as Secondary metabolites. The present study deals with the phytochemical screening and ethnomedicinal documentation of aquatic plants used by the tribal people of Lalbagh block of Murshidabad district. Fourteen aquatic and semi-aquatic plant species belonging to different families have been documented through field surveys and interviews, highlighting their medicinal importance. Each species then subjected to phytochemical screening using aqueous and organic solvent extracts to detect the different secondary metabolites. Results confirmed the presence of alkaloids, flavonoids, tannins, saponins, terpenoids, phenol etc. These secondary metabolites are associated with specific pharmacological activities that validate the indigenous therapeutic claims. This study aims towards detailed documentation of tribally used ethnomedicinally important aquatic plants with their potential reservoirs of bioactive compounds for future drug development and sustainable healthcare approaches.

Keywords: Phytochemical screening, Secondary metabolites, Tribal ethnomedicinal profiles, Murshidabad

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MEMECYLON MATHEWDANII (MELASTOMATACEAE), A NEW SPECIES FROM KERALA, INDIA

Santhosh Kumar E.S.*, Shareef S.M., Anusha P.P. and Rejitha Joseph

Jawaharlal Nehru Tropical Botanic Garden and Research Institute (JNTBGRI), Palode, Karimancode P.O., Thiruvananthapuram-695562, Kerala, INDIA
Email: santhoshkumares@gmail.com

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Abstract: A new species of the genus *Memecylon* from Kerala, SW India, *viz*. *Memecylon mathewdanii* E.S.S.Kumar, Shareef, Anusha & Rejitha is described and illustrated. A detailed taxonomic description, accompanied by photographs, notes on its ecology, and a comparative table distinguishing it from closely related species.

Keywords: *Memecylon*, Kerala, Southwest India, Endemic, Taxonomy

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SEASONAL OCCURRENCE OF MAJOR SUCKING INSECT-PESTS AND THEIR NATURAL ENEMIES ON OKRA (*ABELMOSCHUS ESCULENTUS* L. MOENCH) DURING SUMMER

Fanendra Kumar[1], G.P. Painkra[2]*, K.L. Painkra[3] and P.K. Bhagat[3]

[1]Department of Entomology, Indira Gandhi Krishi Vishwavidyalaya, Raipur,,Raj Mohini Devi College of Agriculture and Research Station, Ambikapur (C.G.) India
[2]Department of Entomology,Indira Gandhi Krishi Vishwavidyalaya, Raipur, College of Agriculture and Research Station, Shankargarh, Distt- Balrampur -Ramanujganj (C.G.) India
[3]Department of Entomology, Indira Gandhi Krishi Vishwavidyalaya, Raipur,Raj Mohini Devi College of Agriculture and Research Station, Ambikapur (C.G.) India
Email: fanendrasahu2000@gmail.com

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Abstract: The present study was investigated the seasonal occurrence of major sucking insect- pests of okra (*Abelmoschus esculentus* L. Moench) and their natural enemies during the summer. Field observations were recorded from seedling stage to crop maturity on leafhopper, whitefly, and aphid populations, along with associated natural enemies, and were correlated with weather parameters. Pest populations appeared soon after crop establishment and peaked during the mid-season, with leafhopper being the most predominant pest. Natural enemy activity closely followed pest population trends, while temperature and relative humidity significantly influenced population fluctuations. The findings highlight the importance of understanding seasonal pest dynamics for developing effective and eco-friendly Integrated Pest Management strategies.

Keywords: Aphid, Coccinellids, Leafhopper, Okra, Whitefly

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PROSPECTS OF *ACROCARPUS FRAXINIFOLIUS* AS AN ALTERNATIVE RAW MATERIAL FOR THE PULP AND PAPER INDUSTRY

Vennila S[1]*, S. Manivasakan[2] C. Cinthia Fernandaz[3] and S. Kala[4]

[1]Deptt. of Forestry, Agricultural College and Research Institute, TNAU, Tiruvanamalai - 606 753, Tamil Nadu
[2]Deptt. of Forestry, ICAR KVK, TNAU, Ooty - 643002, Tamil Nadu
[3]Deptt. of Agrl. Extension, Tamil Nadu Agricultural University, Coimbatore

[4]*ICAR-Indian Institute of Soil & water conservation Research Centre, Kota - 324 002, Rajasthan*
Email: vennila.s@tnau.ac.in

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Abstract: The growing demand for pulp and paper products has intensified the need to identify alternative and sustainable raw materials for the industry. *Acrocarpus fraxinifolius* Wight & Arn., a fast-growing multipurpose tree species native to tropical Asia, has gained attention for its potential as a pulpwood resource. The present study evaluates the prospects of *Acrocarpus fraxinifolius* as an alternative raw material for the pulp and paper industry by examining its physical and chemical characteristics. The results indicated that the species possesses moderate moisture content, satisfactory bulk and basic density, and a high proportion of acceptable chip fraction suitable for pulping operations. Chemical analysis revealed appreciable holocellulose content and comparatively lower lignin and extractives, which are favorable attributes for pulp production and paper quality. These characteristics are comparable with commonly used pulpwood species such as *Eucalyptus* and *Casuarina*. The findings suggest that *Acrocarpus fraxinifolius* can serve as a promising supplementary raw material for the pulp and paper industry. Its fast growth, adaptability to tropical conditions, and favorable wood properties further enhance its suitability for plantation-based pulpwood production. Adoption of this species could contribute to diversification of pulpwood resources and sustainable raw material supply for the paper industry.

Keywords: *Acrocarpus fraxinifolius*, Indigenous species, Pulp, Paper