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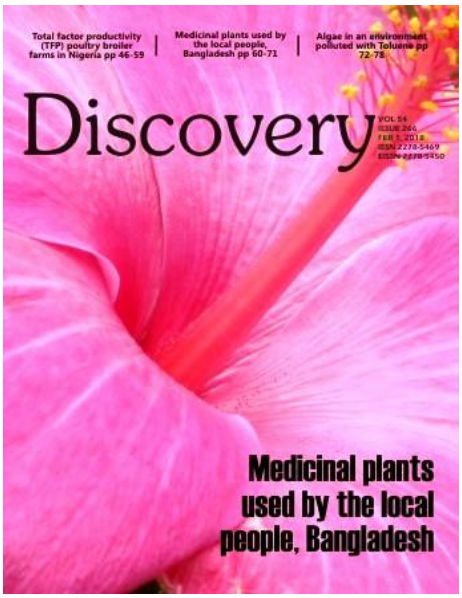
Discovery

About the Cover



ABOUT THE COVER

Medicinal plants used by the local people at the village Pania under Baghmara upazila of Rajshahi district, Bangladesh was carried out from December 2016 to November 2017. A total of 56 species belonging to 52 genera under 39 families were recorded. Magnoliopsida is represented by 33 family, 46 genera and 49 species and Liliopsida is represented by 6 family 6 genera and 7 species. For each species botanical name, local name, habit, parts used, ailments, treatment process and family were provided. It has been documented and this might be scientifically authorized for their therapeutic properties. Local people of the area depend on knowledge of "Kabiraj" (locally healer's common name) for simple ailments and also people depend on local primary healthcare centre for major health problems. Therefore, it would be important to document the traditional knowledge of medicinal plants for further healing purpose and the medicinal plants are used as traditional health care system need urgent conservation (Ref: Mst. Mafroja Khatun, Mahbubur Rahman AHM. Medicinal plants used by the local people at the village Pania under Baghmara Upazila of Rajshahi District, Bangladesh. *Discovery*, 2018, 54(266), 60-71).

AGRICULTURAL ECONOMICS

Total factor productivity (TFP) of productive resources used in homestead poultry broiler farms in Niger State of Nigeria

Sadiq MS, Singh IP, Lawal M, Ahmad MM, Muhammad H

The present research measured the total factor productivity (TFP) of productive resources used in homestead poultry broiler farms in Niger State of Nigeria, using structured questionnaire complemented with interview schedule to collect cross-sectional data from a drawn sample size of 97 active broiler producers *via* multi-stage sampling design. The data analyses were performed using descriptive and inferential statistics. Findings from the study showed evidence of productive labour force in the enterprise, literate farming population with sustainable household size typical of African agrarian setting. The enterprise was found to be profitable in the studied area. Furthermore, findings showed that marginally above the sampling population were productive in the utilization of their input resources which may be due to technical awareness of the modern poultry management techniques in the studied area. Thereafter, it was observed that gender status, experience, capital source and operational capital were the factors undermining farmers TFP. Therefore, study recommended gender sensitization and the need for public private partnership synergy to explore the untapped potentials in this sub-sector in the studied as almost half of the farmers were found not to be productive in the utilization of their resources.

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PLANT TAXONOMY

Medicinal plants used by the local people at the village Pania under Baghmara Upazila of Rajshahi District, Bangladesh

Mst. Mafroja Khatun, Mahbubur Rahman AHM

Medicinal plants used by the local people at the village Pania under Baghmara upazila of Rajshahi district, Bangladesh was carried out from December 2016 to November 2017. A total of 56 species belonging to 52 genera under 39 families were recorded. Magnoliopsida is represented by 33 family, 46 genera and 49 species and Liliopsida is represented by 6 family 6 genera and 7 species. For each species botanical name, local name, habit, parts used, ailments, treatment process and family were provided. It has been documented and this might be scientifically authorized for their therapeutic properties. Local people of the area depend on knowledge of "Kabiraj" (locally healer's common name) for simple ailments and also people depend on local primary healthcare centre for major health problems. Therefore, it would be important to document the traditional knowledge of medicinal plants for further healing purpose and the medicinal plants are used as traditional health care system need urgent conservation.

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ENVIRONMENTAL ECOLOGY

Preliminary investigation of algal forms and colonization pattern of algae in an environment polluted with Toluene

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Release of low molecular aromatic hydrocarbon into natural waters brings severe consequences to our environment. Unfortunately very limited information is available regarding the limnological status of water contamination with these pollutants. This work evaluated the effect of toluene on algal forms and their colonization pattern in culture. In the study, the colonization of algae in the culture (toluene Conc. = 20%) started on the 20^{th} day of the study. The algal divisions present in the culture in a 40 day investigation include the Cyanophyta, Euglenophyta, Chlorophyta and Desmids. Cyanophyta were represented by *Oscillatoria*, *Lyngbya* and *Chroococcus*, Euglenophyta was represented by *Phacus*, Chlorophyta were represented by *Chlorella*, *Closterium* and *Hydrodicton*, while Desmids was represented by *Desmidium aptogonium*. The Cyanobacteria and Euglenophytes were the most dominant algal species. In the order of colonization, the Cyanobacteria were the pioneer species followed by the Euglenophytes and the Chlorophytes. The Desmids were last to colonized the culture during the period under study. The species colonization reflects the bioremediation potential of hydrocarbon of the various algal forms. Microscopic quantification of algal density using haemocytometer reveals the algal species in the division Cyanophyta were the most do in ant species in the treatment culture (57.2%). While in the control experiment, the algal species of the division Euglenophyta and Chlorophyta were the most dominant species at the early age of the culture. These were represented by (54.5%) and (36.4%) respectively. However, at the mid and terminal age of the culture, the algal species of the divisions Cyanophyta and Euglenophyta were the most dominant, these were represented by (57.2%) and (21.4%) respectively. In the control experiment, the algal species in the division Euglenophyta maintained their dominant nature with a 54.5% population. Result of this study could be useful in understanding colonization pattern and as such could be a vital tool in management of toluene polluted environment and general clean up of the environment with respect to toluene and other related crude oil hydrocarbons in bioremediation protocol.

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