



PHYTOCHEMICAL POTENTIAL OF FLOWERS COLLECTED FROM CANDIDATE PLUS TREES OF *MADHUCA LONGIFOLIA* IN POPULATIONS OF MADHYA PRADESH

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ABSTRACT: *Madhuca longifolia* commonly known as Mahua, belongs to the family Sapotaceae. It is an economically important NTFP species of dry tropical and sub-tropical regions of India. In addition to providing food, fodder, fuel and other necessities, it is a significant source of seasonal income linked to tribal livelihood systems. Some major uses of Mahua are production of country liquor, biofuels, traditional medicines, edible oil, soaps etc. Mahua flowers are widely used in the manufacturing of alcohol as well as different types of food products due to presence of high amount of sugar and other useful phytochemicals viz., carbohydrate, protein and phenol. The present study mainly focuses on elucidating the variation found in the phytochemical constituents in mahua flowers of selected Candidate Plus Trees (CPTs) in different seven populations of Madhya Pradesh. Significant variation was noted for phytochemicals among CPTs of different populations. Total soluble sugar ranged from 10.94 % to 64.53 %, total carbohydrate from 5.10 % to 24.59 %, protein content from 4.53 % to 10.34 % and phenol content ranged from 2.71 % to 7.54 %. Therefore findings of study recommend the use of flowers from higher phytochemical containing CPTs and populations for value addition and commercial use, and for further tree improvement strategy.

Keywords: Genotype, *Madhuca longifolia*, phytochemicals, protein, total carbohydrate, total soluble sugar

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INTRODUCTION

India is recognized as a repository of diverse plant species that have been utilized for their medicinal and aromatic properties since ancient times.

Traditional medicine is extensively employed in various countries for the treatment of a wide range of diseases due to its safety, cost-effectiveness, and efficacy (WHO, 2014; Boyce, 2009). Among