

Variation in gymnemic acid content and non-destructive harvesting of *Gymnema sylvestre* (Gudmar)

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ABSTRACT

Background Madhunashini (*Gymnema sylvestre* R. Br.) commonly known as 'Gudmar' in Hindi is an important medicinal climber and extensively used in almost all Indian System of Medicine as a remedy for diabetes, rheumatism, cough, ulcer, jaundice, dyspepsia, constipation, eyes pain and also in snakebite. In India, it is found growing in Andhra Pradesh, Bihar, Chhattisgarh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Tamil Nadu, Uttar Pradesh and West Bengal. The major phytoconstituents are gymnemic acids, gudmarin and saponins. Methods In the present study, *Gymnema* germplasm collected from various regions of Madhya Pradesh was evaluated on the basis of their morphological characteristics and gymnemic acid content. gymnemic acid content in the leaves was estimated by HPLC. We have also standardized the non-destructive harvesting practices of gudmar. Selective harvesting was done without harming the main plant. Only mature leaves (60%) were hand plucked in the month of October. Second harvest was done in the month of June. Results Data revealed that gymnemic acid content varied between 0.96% $\pm$ 0.03 (Seoni) to 1.58% $\pm$ 0.03 (Amarkantak). It was also observed that the leaves left at the time of 1st harvest during October matured in June at the time of 2nd harvest. Conclusion non destructive harvesting practice did not have any negative impact on overall development of the plant. It is evident that there is wide variation in the morphological characteristics and gymnemic acid content in *G. sylvestre* collected from various locations, which can be exploited for further crop improvement programmes.

KEYWORDS

cultivation . *Gymnema sylvestre* . gymnemic acid . non-destructive harvesting

REFERENCES