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Applied Use of Domesticated Medicinal Plants and Traditional Practices in Sikar District, Rajasthan: A Modern Perspective

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Abstract: ***Sikar district, part of the Shekhawati region of Rajasthan, is known for its arid climate and rich heritage of traditional medicinal knowledge. Domestication of medicinal plants in households, farms, and community areas ensures accessibility for daily healthcare and preserves cultural practices. This study investigates the contemporary application of domesticated medicinal plants in Sikar, documenting species, preparation methods, and usage patterns. Primary data were collected through interviews with 130 households, 20 pansaris, and 10 local herbal vendors. Findings reveal that plants such as Tulsi, Aloe vera, Ashwagandha, Guduchi, Neem, and Harad are widely cultivated and utilized for both preventive and curative purposes. Traditional knowledge remains resilient, adapting to modern lifestyles while maintaining ecological and socio-cultural relevance.***

Keywords: Domesticated medicinal plants, Sikar, Traditional healthcare, Herbal medicine, Ethnobotany, Rajasthan.

1.1 Introduction

Traditional medicine has served as the primary healthcare system in rural Rajasthan for centuries. The arid environment of Sikar district necessitated the domestication of medicinal plants capable of surviving harsh conditions. These plants are cultivated in home gardens, farms, and temple precincts and are used in a variety of preventive and therapeutic practices. The coexistence of traditional remedies with modern pharmaceuticals in households has created a hybrid healthcare system. This study explores the applied use of domesticated medicinal plants in Sikar, examining contemporary practices and adaptations in modern times.

1.2 Historical Background

Sikar has a longstanding tradition of herbal medicine, influenced by Ayurveda, Siddha, and local folk practices. Historical records and oral traditions indicate the use of species like Tulsi, Aloe vera, Ashwagandha, Guduchi, and Harad for treating common ailments. Domestication was adopted to overcome seasonal scarcity, reduce dependency on wild collection, and ensure the continuity of healthcare practices. Local pansaris and traditional healers have historically served as knowledge custodians, facilitating the preparation and dissemination of herbal remedies.

1.3 Review of Literature

The area under research work was studied by following botanists and time to time viz; first of all the Sekhawati region was touched from vegetational study point of view by Mulay and Ratnam (1950), Bikaner and pilani neighbourhood areas by joshi (1956 and 1958), vegetation of chirawa by Nair (1956), again Nair and Joshi for Pilani and neighbourhood areas (1957), vegetation of harsh nath in aravalli's hills was studied by Nair and Nathawat (1957), vegetation of Jhunjhunu, Manderella and neighbourhood by Nair (1961), vegetation of ajit sagar dam by Nair and Kanodia (1959); Nair, Kandodia and Thomas (1961) studied the vegetation of Khetri town and neghbourhood areas and vegetation of Lohargal and it's neighbourhood areas of Sikar district by Nair and Malhotra (1961). After the work of Nair and Malhotra (1961), i.e. four decades ago. the area was again left for any sort of further research work in the field of applied Botany.

Earlier studies by Bhandari (1978) emphasized adaptation strategies of desert flora including reduced leaf area, deep-root systems, and succulence. Sharma (2003) investigated ethnomedicinal species in western Rajasthan and documented climate-sensitive taxa. Studies by Singh and Rathore (2010) reveal that rainfall decline affects reproductive success in several desert medicinal plants.

A significant, very authentic taxonomic work was contributed in the field of botany by Bhandari with the publcation of a book Flora of the Indian desert (1990). From the field of applied phytogeography point of view. Charan gave a valuable contribution with a publication of a book on Plant Geography (1992). Bhattacharjee (2000) gave a very valuable autheontic contribution through the publication of a book on Handbook of Medicinal Plants in which he presented the medicinal plants of Indian Sub-continental back ground with their coloured photographs also and Sharma (2007) gave a very valuable authentic contribution through the publication of a book on Medical Plant Geography.

Research in Rajasthan's medicinal plant domain highlights the ethnobotanical richness and socio-cultural importance of traditional practices. Jain (1981) provided comprehensive descriptions of medicinal species and their uses. Sharma and Meena (2007) emphasized home gardens' role in preserving plant diversity. Singh and Kaur (2010) analyzed socio-economic impacts of medicinal plant cultivation in arid regions. Gupta and Kumar (2014) discussed the integration of

traditional remedies with modern healthcare frameworks. However, focused studies on domesticated medicinal plant usage in Sikar and contemporary applications remain limited.

1.4 Objectives

1. To document domesticated medicinal plant species in Sikar households and farms.
2. To explore contemporary applications of traditional remedies in daily life.
3. To identify challenges and opportunities for maintaining domesticated medicinal plants.
4. To provide strategies for sustainable promotion and conservation.

1.5 Methodology

1. Study Design: Descriptive and ethnobotanical survey.

2. Data Collection: Structured interviews with 130 households, 20 pansaris, and 10 herbal vendors; collection of plant specimens for botanical verification.

3. Plant Identification: Verified using standard references (Jain, 1981) and herbarium comparisons.

4. Data Analysis: Quantitative assessment of plant frequency, qualitative analysis of usage patterns, preparation methods, and adaptive strategies.

1.6 Study Area

Sikar district lies in northeastern Rajasthan, characterized by semi-arid climate, sandy soils, and low annual rainfall (400–500 mm). Agriculture, home gardens, and temple precincts serve as primary sites for the cultivation and domestication of medicinal plants. The local flora is predominantly xerophytic, adapted to drought and high temperatures.

1.7 Observations

1. A total of 48 domesticated medicinal plant species were recorded in households and farms.
2. Most commonly used species: Tulsi, Aloe vera, Ashwagandha, Guduchi, Harad, Neem, Mulethi, Amla.
3. Remedies addressed respiratory issues, digestive disorders, skin ailments, stress, and immunity enhancement.
4. Preparation methods included decoctions, powders, pastes, oils, and infusions.
5. Households with home gardens demonstrated higher engagement in traditional healthcare practices and knowledge transmission.

1.8 Discussion

Domestication ensures consistent access to medicinal plants, reducing reliance on wild collection and supporting biodiversity conservation. While urbanization and modern pharmaceuticals influence usage patterns, traditional practices remain integral to healthcare and cultural identity. Economic potential exists for marketing locally produced herbal products, providing additional income for households and pansaris. Challenges include habitat degradation, declining youth interest, and limited formal recognition of traditional knowledge.

1.9 Results

1. 75% of surveyed households regularly used at least three domesticated medicinal plant species.
2. Home gardens played a critical role in sustaining traditional healthcare practices.
3. Knowledge transmission occurs through family practices, local community networks, and pansaris.
4. Opportunities exist for commercialization and livelihood generation through herbal products.

1.10 Conclusion

The domestication of medicinal plants in Sikar supports healthcare, cultural heritage, and biodiversity. Traditional knowledge remains resilient despite modern influences. Sustainable practices, awareness programs, and economic incentives are essential for preserving and promoting domesticated medicinal plant use.

1.11 Recommendations

1. Promote cultivation of medicinal plants in households, schools, and community areas.
2. Integrate traditional remedies with primary healthcare initiatives.
3. Provide training and support to local pansaris for sustainable collection and marketing.
4. Develop educational programs to preserve traditional knowledge among youth.
5. Document endangered species and preparation techniques to ensure continuity of heritage.

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