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Domesticated Medicinal Plants and Their Traditional Applications in Jhunjhunu, Rajasthan: Integration in Modern Practices

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Abstract: ***Jhunjhunu, a historic place in the Shekhawati region of Rajasthan, demonstrates a vibrant tradition of medicinal plant use, with numerous species domesticated in household gardens, farms, and community spaces. This research explores the applied use of domesticated medicinal plants in contemporary times, examining the integration of traditional remedies into modern healthcare practices. Data were collected through structured interviews with 110 households, 18 local pansaris, and 12 herbal vendors. Key domesticated species documented included Tulsi, Aloe vera, Ashwagandha, Guduchi, Neem, Harad, Amla, and Mulethi. The findings indicate that traditional knowledge continues to be relevant, adapting to modern lifestyles while preserving cultural identity and promoting biodiversity conservation.***

Keywords: Domesticated medicinal plants, Jhunjhunu, Traditional healthcare, Herbal medicine, Rajasthan, Ethnobotany, Home gardens.

1.1 Introduction

Traditional medicine has been the backbone of healthcare in rural Rajasthan for centuries. Jhunjhunu, with its arid climate and historical heritage, relies heavily on domesticated medicinal plants cultivated in households, farms, and temple gardens. These plants serve preventive, curative, and wellness purposes, forming a complementary system alongside modern pharmaceuticals. This study aims to document the applied use of domesticated medicinal plants in Jhunjhunu, highlighting contemporary adaptations and the relevance of traditional practices in modern life.

1.2 Historical Background

Jhunjhunu's medicinal plant heritage is rooted in Ayurveda, folk medicine, and local ethnobotanical knowledge. Historical records and oral traditions report the use of species such as Tulsi, Aloe vera, Ashwagandha, Guduchi, Harad, and Neem for treating a variety of ailments. Domestication practices were developed to ensure year-round availability and reduce reliance on wild populations. Local pansaris have historically served as custodians of medicinal knowledge, preparing remedies and advising households on therapeutic applications.

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.

Rajasthan's medicinal plant use has been widely studied. Jain (1981) provides comprehensive documentation of medicinal

species and their applications. Sharma and Meena (2007) emphasize home gardens as crucial sites for conserving plant diversity. Singh and Kaur (2010) explore socio-economic impacts of medicinal plant cultivation. Gupta and Kumar (2014) discuss the integration of traditional remedies with modern healthcare frameworks. However, there is limited research focusing specifically on domesticated plant applications in Jhunjhunu, necessitating this study.

1.4 Objectives

1. Document domesticated medicinal plant species in Jhunjhunu households and farms.
2. Examine contemporary applications of traditional remedies.
3. Identify challenges in maintaining domesticated medicinal plants.
4. Recommend strategies for sustainable conservation and promotion.

1.5 Methodology

1. Study Design: Descriptive and ethnobotanical research.

2. Data Collection: Structured interviews with 110 households, 18 pansaris, and 12 herbal vendors; collection of plant specimens for botanical verification.

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

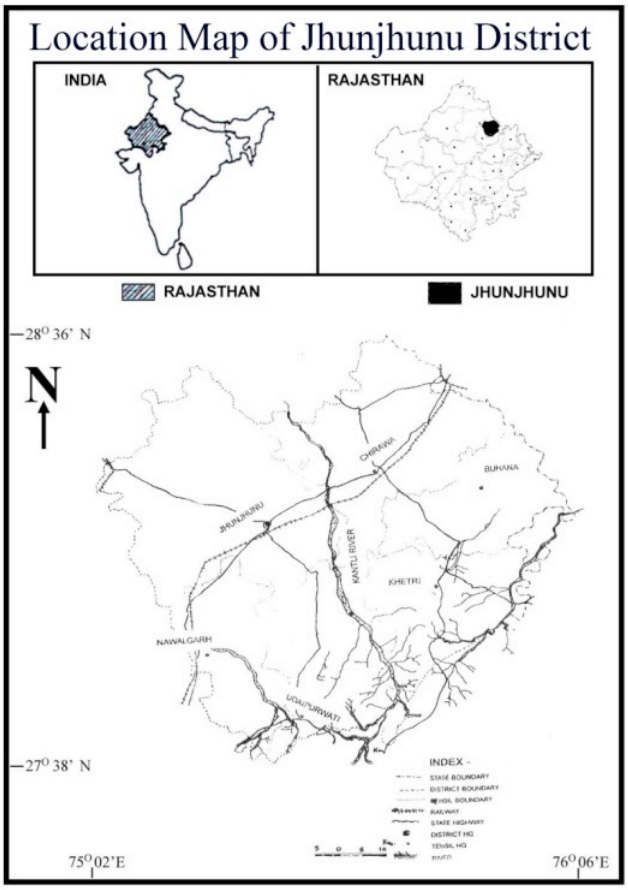
4. Data Analysis: Quantitative analysis of plant usage frequency and qualitative documentation of preparation methods, remedies, and modern adaptations.

1.6 Study Area

Jhunjhunu district, located in northeastern Rajasthan, has a semi-arid climate with low rainfall (400–550 mm annually) and sandy loam soils. Agriculture, home gardens, and temple premises are primary sites for domestication of medicinal plants. The region is characterized by xerophytic flora adapted to arid conditions.

The district is irregular hexagon in shape in the northeastern part of the State lies between 2702" east longitudes. It is surrounded by Churu district on the northwestern side Hissar and Mahendragarh district of Haryana State in the northeastern part and by Sikar district in the west, south and south eastern part-2. For the propose of administration the district is divided into five administrative subdivision viz, Chirawa, Udaipurwati, Jhunjhunu, Khetri and Nawalgarh Six Tehsil viz Jhunjhunu, Chirawa, Khetri, Nawalgarh, Buhana, Udaipurwati and eight Panchyat Samities viz Jhunjhunu, Chirawa, Khetri, Nawalgarh, Buhana, Udaipurwati, Alsisar and Surajgarh.

The total geographical area of the district is 2928 square Kms. This stands at 1.73 percent of the total area of the state from the points of area, Jhunjhunu district stand at 22nd place among the existing 33 districts of the state most of the part of the district is coerce by blow sand and dunes which for part of the great that desert sand shifting and active dunes are main hazards to cultivation. Soil erosion is the Result of constant deforestation and mining activity which have resulted in baring the slopes.



The district encompasses of three distinct geomorphic units.

1. The hilly area in south eastern part of district is characterized by hills of Aravalli range, running in north easterly direction. The highest peak, 1051 m high is in the south of Lohagar village bordering Sikar district. Hills are almost barren of vegetation except a few bushes of acacia and cactus.
2. The undulating area with small isolated hills having steep slope lies in the south western part of district. The major portion of hills is found in Khetri and Udaipurwati tehsils. The general elevation above mean sea level rests between 300 and 450m Quaternary level forms are represented by sand and colluvial deposits of talus and scree at piedment slopes.
3. The desertic plain generally lying at an altitude of about 300m amsl occupies the northern part of the district and is covered with sand dunes. The general slope of the area is from south to north. Sand dunes are drifting in nature.

District Jhunjhunu is situated in Arid Rajasthan plain known as Rajasthan. It comprises of Rolling hills, some of the arrival ranges in the southeastern side running in the south eastern Direction and range of the Aravali Hills in extreme southeastern of Udaipurwati existing towards Singhana and Khetri in the east, viz Nawalgarh-Khetri upland its general elevation above means sea level is between 300 to 450 meters. The highest peek is in the south of Lohagarh village and its height is 1051 meters, this is no perennial river in the district katti and Dohan are only seasonal rivers. River katti originated from Khadela hill sides of Shrimadhopur Tehsil. Sikar and enters near south west of Udaipurwati tehsil running towards north –west direction and ultimately disappears in the sandy

tracks of the Churu District. This river, however, divides the district almost into two parts. Similarly Dohan River also originates from Shrimadhopur hills and flows to north –eastern direction passing through some eastern part and ultimately disappears in sandy tracks of Mahendragarh district of Haryana Besides, there. Major streams of Udaipur Lohagarh ki nadi chandrawati and sukh nadi. There is no lake in the district however small tanks are in existence in some areas. There are only four tanks used for irrigation purposes. There is also a bound of "Ajit Sagar" about 11Km. from Khetri on Nizampur road.

1.7 Observations

1. 48 domesticated medicinal plant species were recorded across households and community gardens.

2. Frequently used species: Tulsi, Aloe vera, Ashwagandha, Guduchi, Neem, Harad, Mulethi, Amla, Babul.

3. Remedies addressed respiratory problems, digestive disorders, skin infections, stress, and immunity enhancement.

4. Preparation methods included decoctions, powders, pastes, oils, and herbal teas.

5. Households with home gardens showed higher engagement with traditional remedies and better knowledge transfer to younger generations.

1.8 Discussion

Domestication ensures continuous availability of medicinal plants, reducing pressure on wild populations and promoting biodiversity. Despite urbanization and the availability of pharmaceuticals, traditional practices remain relevant and culturally significant. Pansaris continue to play a central role in guidance, preparation, and distribution of remedies. Opportunities exist for economic empowerment through marketing of herbal products. Challenges include declining youth interest, environmental degradation, and limited formal recognition of traditional knowledge.

1.9 Results

74% of households regularly used at least three domesticated medicinal plant species.

Home gardens were vital for maintaining traditional healthcare practices.

Knowledge transmission occurred through family traditions, community interactions, and guidance from pansaris.

Commercial opportunities exist through sustainable herbal product development, supporting livelihoods.

1.10 Conclusion

Domestication of medicinal plants in Jhunjhunu supports healthcare, cultural identity, and biodiversity conservation. Traditional knowledge remains relevant despite modern influences, adapting to contemporary lifestyles. Sustainable strategies, awareness programs, and economic incentives are essential for preserving these practices and promoting domesticated medicinal plant use.

1.11 Recommendations

1. Encourage cultivation of medicinal plants in homes, schools, and community gardens.

2. Integrate traditional remedies with primary healthcare initiatives.

3. Provide training and support to pansaris for sustainable collection, processing, and marketing.

4. Educate youth to preserve traditional medicinal knowledge.

5. Document endangered species and traditional preparation methods for long-term conservation.

References

[1.]Charan, A.K. (1992). Plant Geography, Rawat Publication, Jaipur

[2.]Jain, S.K. (1981). A Manual of Ethnobotany. Jodhpur: Scientific Publishers.

[3.]Sharma, R., Meena, P., and Singh, V. (2007). Medicinal plant diversity in home gardens of Rajasthan. Indian Journal of Traditional Knowledge, 6(4), 603–609.

[4.]Singh, R., and Kaur, H. (2010). Socio-economic importance of medicinal plants in arid Rajasthan. Journal of Arid Environments, 74(9), 1105–1112.

[5.]Gupta, S., and Kumar, A. (2014). Traditional medicinal plants and modern applications in Rajasthan. Indian Journal of Applied Research, 4(5), 21–27.

[6.] Sharma, M.K. (2007). Medical Plant Geography, Rachna Publication, Jaipur.

[7.]Sharma M.K. et.al. (2014). Medicinal Phytogeography. M. D. Publication, Jaipur

[8.]Sharma M.K.(2014) Phytogeographical Distribution of Azadirachata indica in Churu District, Rajasthan, Journal - IJGAES, Vol.-(2), 2 (March-April2014) , 2348-0254,35-37.

[9.]Sharma M.K.(2015) Conservation Status and Threats to Medicinal Plant Diversity in Semi-Arid Rajasthan: A Case Study of Shekhawati, Journal -IJGAES(3), Issue-3(May- Jun. 2015) , 2348-0254, p.25-27.

[10.]Sharma M.K.(2015) Ayurveda and Geography: A Study of Regional Healing Traditions in Shekhawati Region, Rajasthan, Journal -IJGAES, Volume-(3), Issue- 6 (Nov.- Dec. 2015) , 2348-0254, p.45-47.