SUNSHINE AGRICULTURE
e-Newsletter

ISSN (E): 2583 – 0821

Sun. Agri.:e- Newsletter, (2025) *5*(12), 101-103

Article ID: 504

Royal Tree to Regional Threat: The Policy Shift Toward Total Elimination of *Prosopis juliflora* in South-Eastern Rajasthan

Aditya Kumar Jayant[1*], Ramniwas Vaishnav[2], Sanjay Saini[3]

[1]Department of Silviculture and Agroforestry, College of Horticulture and Forestry, Agriculture University, Kota
[2]Department of Silviculture and Agroforestry, College of Horticulture and Forestry, Agriculture University, Kota
[3]Research Scholar College of Forestry, Odisha University of Agriculture & Technology

Open Access

*Corresponding Author
Aditya Kumar Jayant*

Available online at
www.sunshineagriculture.vitalbiotech.org

Article History
Received: 16. 12.2025
Revised: 21. 12.2025
Accepted: 26. 12.2025

INTRODUCTION

The introduction of *Prosopis juliflora* in India dates back to the early twentieth century, when it was promoted as a multipurpose tree capable of surviving harsh climatic conditions. In Rajasthan, including the comparatively wetter but ecologically sensitive South-Eastern region, the species was planted extensively to address fuelwood scarcity, rehabilitate degraded lands, and stabilize soils. Due to its rapid growth and resilience, *P. juliflora* gained the reputation of a "royal tree" in afforestation programs.

However, ecological realities over the decades have exposed the unintended consequences of introducing a non-native invasive species. In South-Eastern Rajasthan, where agriculture, livestock rearing, and forest-based livelihoods coexist, *P. juliflora* has increasingly emerged as a regional threat rather than an asset.

2. Spread and Establishment in South-Eastern Rajasthan

Unlike the Thar Desert, South-Eastern Rajasthan receives relatively higher rainfall and supports mixed cropping systems, pasturelands, and forest patches. These conditions have inadvertently favored the rapid spread of *P. juliflora*. Its deep taproot system, prolific seed production, and ability to regenerate from cut stumps have enabled it to colonize:

- ✓ Agricultural field boundaries
- ✓ Grazing commons and pasturelands
- ✓ Forest fringes and degraded forest areas
- ✓ Roadside and canal embankments

The absence of natural predators and limited early regulation further accelerated its dominance across the landscape.

3. Ecological Impacts

The ecological consequences of *P. juliflora* invasion in South-Eastern Rajasthan are increasingly evident:

- ✓ **Loss of native biodiversity:** Dense thickets suppress indigenous grasses, shrubs, and tree species essential for local fauna.
- ✓ **Degradation of grazing lands:** Encroachment into pasturelands reduces fodder availability, directly affecting livestock-dependent communities.
- ✓ **Alteration of soil properties:** Accumulation of leaf litter and allelopathic effects hinder the regeneration of native plants.
- ✓ **Hydrological stress:** Deep roots extract groundwater, potentially aggravating water scarcity in agricultural zones.

These impacts threaten the ecological balance of a region that supports both rainfed and irrigated farming systems.

4. Socio-Economic Consequences

While *P. juliflora* provides fuelwood and charcoal, its long-term socio-economic costs outweigh short-term benefits:

- ✓ Reduced agricultural productivity due to land encroachment
- ✓ Increased labor and cost for land clearing
- ✓ Declining availability of open grazing areas
- ✓ Physical hazards to humans and livestock due to thorns

Small and marginal farmers, pastoralists, and forest-dependent communities are among the most affected groups.

5. Policy Shift: From Utilization to Total Elimination

In response to mounting ecological and livelihood concerns, the Rajasthan government has adopted a policy of total elimination of *Prosopis juliflora*, including in South-Eastern districts. Key features of this policy shift include:

- ✓ Complete uprooting rather than surface cutting to prevent regrowth
- ✓ Convergence of departments such as Forest, Panchayati Raj, Agriculture, and Rural Development
- ✓ Use of employment-based schemes for removal activities
- ✓ Simplified procedures for cutting, transport, and disposal

The policy reflects a paradigm shift from viewing *P. juliflora* as a resource to recognizing it as an invasive threat requiring decisive action.

6. Restoration and Sustainable Alternatives

Elimination alone is insufficient without ecological restoration. Current strategies emphasize:

- ✓ Replantation with native tree and grass species suitable for South-Eastern Rajasthan
- ✓ Restoration of grazing commons and agroforestry systems
- ✓ Productive utilization of removed biomass where feasible
- ✓ Active involvement of local communities in monitoring and maintenance

Such integrated approaches are essential to prevent reinvasion and ensure long-term sustainability.

7. Challenges and Way Forward

Major challenges include high labor requirements, financial constraints, and the risk of reinfestation. Long-term success depends on sustained political commitment, community participation, scientific monitoring, and landscape-level planning.

CONCLUSION

The transformation of *Prosopis juliflora* from a "royal tree" to a regional ecological threat in South-Eastern Rajasthan highlights the unintended consequences of poorly regulated species introductions. The recent policy shift toward total elimination marks a significant step

toward restoring ecological balance and protecting rural livelihoods. However, success will ultimately depend on coupling eradication with systematic restoration and inclusive governance to ensure resilient and productive landscapes for the future.

REFERENCES

JAGGI, D., VARUN, M., PAGARE, S., TRIPATHI, N., RATHORE, M., SINGH, R., & KUMAR, B. Invasive Alien Weed Species: A Threat to Plant Biodiversity.

Joshi, E. B., Soni, H. B., & Joshi, P. N. *Floristic Study of Arid Ecosystem: Ecology and Phytosociology*. Google Book Publishers.

Sharma, B. K., Kulshreshtha, S., & Sharma, S. (2013). Historical, sociocultural, and mythological aspects of faunal conservation in Rajasthan. In *Faunal heritage of Rajasthan, India: general background and ecology of vertebrates* (pp. 167-212). New York, NY: Springer New York.

Sharma, B. K., Kulshreshtha, S., Sharma, S. K., Lodha, R. M., Singh, S., Singh, M., & Sharma, N. (2013). Physiography and biological diversity of Rajasthan. In *Faunal Heritage of Rajasthan, India: General Background and Ecology of Vertebrates* (pp. 39-166). New York, NY: Springer New York.