

# Office of The Conservator of Forest (Silviculture)

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## Vegetation of Rajasthan

Rajasthan is the largest state of India. The Aravali ranges divide it unequally in two parts extending from Sirohi district of Rajasthan up to Delhi. The state can be divided into four distinct regions:

- 1) The Western desert,
- 2) The Aravalli hills,
- 3) Eastern plains and
- 4) Southeastern plateau.

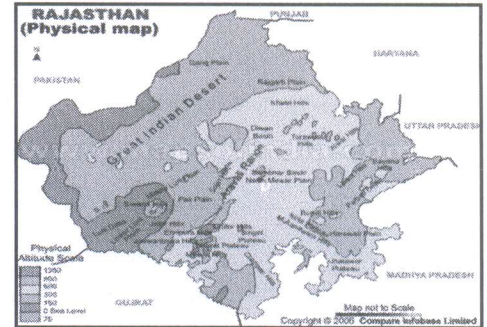
The climate of Rajasthan varies from arid to sub-humid. The state is largely an arid state and the climate is characterized by

- Low rainfall with limited rainy days and erratic distribution,
- Extremes of diurnal and annual temperature,
- High wind velocity leading to rapid loss of soil moisture.

Plants that can overcome transpiration losses by means of small/less foliage, thorns and spines can only survive in such climatic conditions (Adaptation). Hence the vegetation of Rajasthan is predominantly thorny in nature and with small leaves.

### Vegetation:

The vegetation of Rajasthan is diverse as it varies with the decreasing order of aridity and number of rainy days from western Rajasthan to less arid eastern planes to slightly sub-humid conditions at Mt Abu towards south eastern plateau. About 1900 species of flowering plants are found in Rajasthan. Dr C.M. Mathur (first State Silviculturist of Rajasthan: 17-8-1955 to 4-8-1964) has dealt the vegetation of Rajasthan in detail. (Refer: **Mathur, C. M. (1960): Forest types of Rajasthan. Indian Forester 86(12): 734-739** )



Based on decreasing order of aridity the vegetation of Rajasthan can be classified broadly as below: -

### 1. *Calligonum polygonoidis* (phog) - *Leptadenia pyrotechnica* (khip) type:

Extreme arid conditions. Rainfall below 150 mm only and length of dry season exceeds 11 months. Only shrubs and under shrubs and no trees. Areas include Barmer, Jaisalmer and Bikaner

### 2. *Prosopis cineraria* (khejri) - *Capparis decidua* (ker) - *Zizyphus* (ber) - *Salvadora* (jal/Pilu) type:

This association also represents arid conditions. Rainfall is 150-400 mm with 9-11 months dry. The human interference has almost destroyed it and is now confined to sacred places like orans (common village grazing land). *P.cineraria* is a light demander species and grow well in sandy soil. *Capparis decidua* is generally absent from sand dunes but found in areas, which have a kankar pan underneath. *Salvadora oleoides* (& *S.persica*) occurs in heavier and somewhat saline soils. **The climatic climax of the Indian Thar desert is represented by *Prosopis cineraria* and *Salvadora oleoides* community.**

**3. *Acacia-Capparis* type:**

Range of rainfall is 400-700mm with 8-9 months dry season. Hence the area is semi - arid in nature.

**4. *Acacia senegal-Anogeissus pendula* type:**

Rainfall 400-700 mm and dry season of 8.5-10 months. *A pendula* is the most remarkable species of the Aravallis.

**5. *Acacia catechu-Anogeissus pendula* type:**

Rainfall 550-900 mm and dry season of 8-9 months.

**6. *Anogeissus pendula-Boswellia serrata* type:**

It is found in Aravalli ranges.

**7. *Butea monosperma-Madhuca indica-Zizyphus* type:**

It is found in Banswara, Dungarpur, Chittorgarh and Udaipur district.

**8. *Tectona grandis* type:**

Udaipur, Chittorgarh, Pratapgarh and Banswara district of Rajasthan .The associate species are *Boswellia serrata*, *Dalbergia latifolia* and *Dendrocalamus strictus*.

**9. *Mangifera indica-Syzigium cumini*:**

It is found in Mt Abu. Bamboo is the associate species.

**Factor affecting vegetation**

The special feature that is affecting vegetation of Rajasthan in western zone is the Rajasthan Canal. Crop pattern has changed all along it in the command area. Cattle pressure is more in the state as cattle to human ratio is almost 1. Pasturelands are heavily encroached leaving no grazing field for cattle. Migratory cattle (sheep & goat) damage the forests of Eastern Rajasthan heavily every year.

**State tree**

***Prosopis cineraria* (Khejri), family: Mimosaceae.**

**State flower**

***Tecomella undulata* (Rohida), family: Bignoniaceae.**

**Forest Types:**

Champion & Seth has classified forests of Rajasthan in three sub groups:

**Tropical Dry Deciduous Forest (5B) and**

**Tropical Thorn Forest (6B)**

**Sub Tropical Broad Leved Hill Forest (8B) Mt. Abu**

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**Other recent publications of the office:**

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| 1. Grow Bamboos (Year 2004)-Hindi.                            | 2. Nature Trail (Year 2006 & 2007)-Hindi |
| 3. Termite control (Year 2006)-Hindi                          | 4. Tendu (Year 2008)-Hindi               |
| 5. General information relating to planting (Year 2008)-Hindi | 6. Raising Guggal (Year 2008)-Hindi      |