

Some indigenous economic plants of the Sultanate of Oman

https://doi.org/10.1007/978-94-011-6830-4_19

Cited in:

In: Wickens G.E., Goodin J.R., Field D.V. (eds) *Plants for Arid Lands*. Springer, Dordrecht. Some indigenous economic plants of the Sultanate of Oman
Lawton R.M.
Formerly Land Resources Development Centre. Tolworth Tower. Surbiton. Surrey KT6 1OY.
UK now 46 High Park Avenue. East Horsley. Leatherhead. Surrey KT24 500. UK

Introduction

The Sultanate of Oman covers an area of approximately 300 000 km² of southeastern Arabia, between 16°40'–26°20'N and 51°50'–59°50'E. The arid climate of the Sultanate falls into two major zones.

Northern and eastern Oman, dominated by a range of limestone mountains reaching an altitude of nearly 3000 m, forms the first major climatic zone. Here the climate is of the Mediterranean type with an erratic and unreliable winter rainfall from December to March. In the mountains the annual rainfall varies from 300–500 mm, some of which may fall in July due to the influence of the southwestern monsoon, whereas on the coastal plain it is only c. 50–100 mm. During the winter months the day temperature on the mountains is c. 10–20°C and may fall to below 0°C at night; during summer the mountain day temperature will rise to between 25–30°C and fall to about 15°C at night. There is a variation in the range of temperatures along the coastal plain within the range of 20°–35°C for winter day temperatures, falling to below 10°–15°C at night (Whitcombe 1982). During summer the day temperatures on the coastal plain rise to almost 40°C and may exceed 45°C, at night they fall to 25–32°C. The relative humidity on the coastal plain during the day varies from 25–80 per cent; at night the relative humidity is higher and frequently in the region of c. 80 per cent.

The second major climatic zone is the southern region of Dhofar. A range of limestone mountains runs in an easterly direction from the South Yemeni border. To the south of this mountain range there is a narrow crescent-shaped coastal plain; to the north the desert stretches into Saudi Arabia. The mountains rise steeply from the plain to a height of c. 900 m, with a number of higher peaks and a 10–15 km wide, undulating, central plateau.

Dhofar has a monsoon climate with moisture-laden winds of the southwestern monsoon blowing in from the Arabian Sea and bringing heavy cloud cover and precipitation mainly in the form of drizzle, or mist, from late June to September. The drizzle is precipitated by broad-leaved woodlands that cover the south-facing escarpment and steep wadi (valley) sides of the mountains, and by the tall grasses *Plants for arid lands* © Royal Botanic Gardens, Kew, 1985

268 R.M. Lawton on the plateau. Cyclonic storms may occur at any time of the year. There are no adequate rainfall records for the mountains, but it is probably in the region of 500 mm per annum. On the coastal plain the rainfall is lower, varying from 100-500 mm per annum depending upon the frequency of cyclonic storms. Destructive flash floods occur about once every decade or so. The temperatures are much more equable in Dhofar; they range from c. 27°C to a maximum of 35°C during the day and fall to 16-28°C at night, throughout the year. Relative humidity is high, usually around 70 per cent and over 90 per cent during the monsoon.

The two major climatic zones are separated by the central Desert of Oman, where the wide range of day and night temperatures gives rise to radiation at night, and this results in heavy falls of dew for part of the year.

Keywords:

Coastal Plain Sand Dune Crude Protein Content Cyclonic Storm Browse Species

Reference

Gupta, M.C., B.M. Gandhi and B.N. Tandon 1974. An unconventional legume — *Prosopis cineraria*. *Am. J. Clinical Nutr.*: 1035–1036 (27 October 1974).