

DIVERSITY IN CHARACTERS OF *PHOENIX* *DACTYLIFERA* L (Date-palm).

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ABSTRACT

Morphological and anatomical characteristics of *Phoenix dactylifera* L were studied with a view to find out the mystery of its distribution in various ecological zones. It was found that in shoot it has xerophytic modifications whereas in the root it has anatomical characteristics which can sustain it in hydrophytic conditions. The studies revealed that it has compound pinnate and very rough leaves with sunken stomata and adequate vascular supply. The stem is unbranched with rough bases of leaves just like cork causing reduction in transpiration. The root-anatomy resembles that of a common hydrophyte. Its root cortex possesses numerous lacunae, the air passages. These characteristics enable it to adapt to various environments.

INTRODUCTION

The world wide distribution of *Phoenix dactylifera* L grown in different environments is of curious nature. Parker (1915) considered it to be an indigenous plant of the Oasis of Sahara desert and Arabia, which according to him was introduced to the Indo-Pak-sub continent during the first muslim invasion of India.

The date-palm grows in severe dry hot areas with excessive sub soil water. It is of great economic importance and provides energy rich sweet delicious fruit. Its exact ecological relationship with different environments is not known and therefore, little progress can be made both in its development and its growth potential in new areas. Morphological and anatomical characteristics of a plant are indicative of its ecological adaptation tendency.

This in view, a detailed morphological and anatomical study of date palm was carried out in the present investigation and the findings thereof are reported. The findings will not only be of interest to ecologists but equally important to horticulturists and other farm growers to grow it successfully.

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