

Management of *Apis mellifera* in Semi-arid Subtropical Climates of India

Part 4

Innovations in Apiary Management

of beekeeping in a region depends upon many factors: ambient climatic conditions; bee forage; and, incidence of diseases, predators and enemies (Eckert and Shaw, Sukowitch and Masad, 1980; Lensky and 1966). Semi-arid tropics present a different environmental conditions and resources create climates (Purgala, 1973), and require entirely different management (Sihag, 1990a, 1990b, 1992; Smith, 1953). This paper presents the life-cycle pattern, diseases, pests, predators and enemies of *A. mellifera* under prevailing climatic and floral resources of subtropical India.

1.1. Climate Conditions

from place to place. Bee forage availability starts with flowering of pigeon pea in September-October. Major honey plants are rape, mustard, sunflower, eucalyptus, pigeon pea and litchi (in restricted areas). Other plants support beekeeping during different months.

General Ecobiology of *Apis mellifera*

Apis mellifera in subtropical northern India starts build-up activity with the commencement of flowering on baobab (*Adansonia digitata* var. *Digitata*) in October. Weak colonies show build-up and spring colonies start honey. Drones are produced from December to March depending on earlier build-up. Artisanry queen bees are reared. This coincides with winter in the region. Therefore,