

توفير غبار الطلع لطوائف النحل الغربي في المنطقة الشرق الأوسط

Pollen availability to APis mellifera colonies in the Middle East region

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Abstract

Identifying the main sources of pollen collected by honey bees provides beekeepers with information essential to deciding where and when to place colonies and is an important tool in deciding whether to feed their colonies with protein- rich food .this study aimed to :a) identify the main sources of pollen grains collected by honeybees in Jordan and Israel

b) Determine pollen stress periods in these areas and c) assess the effect of pollen availability on honeybee population dynamics.

Pollen pellets collected by honeybees during a one-year period were sampled from twelve sites in the region using pollen traps. Pollen pellets were characterized and compared to pollen grain samples taken from blooming plants prevalent in the experimental sites. Other colonies from the same sites were assessed during this period for brood area and food-storage levels.

We found that pollen –stress periods differed among locations although pollen shortages at most Jordanian sites occurred from October to November and at most Israeli sites from November to January. Furthermore we found a positive correlation between

levels of stored pollen and levels of sealed brood area in all locations .in Jordan seven plants (*diplotaxis erucoides* *silybum marianum* *ceratonia siliqua* *convolvulus fatmensis* *ecballium elaterium* *rubus sanguineus* and *sinapsis alba*) provided over 50% of the pollen entering the hives from march to June . In northern Israel 38% of the pollen collected by the bees during April was from *calendula arvensis* during may and June over 80%of the pollen was collected from *carthamus tenuis* while43%of the pollen entering the hives during July was from *cephalaria joppensis*. Chemical analyses showed that for must pollen types the three major.