

AFTER COLONY LOSSES IN HATAY AND ADANA REGION OF TURKEY THE INVESTIGATION OF HONEY BEE DISEASES

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Introduction

Hatay and Adana provinces have very important situation in Turkish beekeeping industry. %20 of Turkish honey have been produced in this region. Also major portion of citrus and cotton honey have been produced in Hatay and Adana. In the year of 2007 sudden colony losses occurred in Turkey, mostly in Hatay and Adana region.



Material-Method

In this research, 97 honey bee brood combs collected from Adana and 88 honey bee brood combs collected from Hatay during the spring and autumn field works. The total investigated adult honey bee numbers were 3880 from Adana and 3520 from Hatay. All debris and adult honey bee samples investigated under dissection microscope for diagnosis of Varroasis. Spore counting method by hemocytometer was used for Nosemosis. Guanine visualization and dissection methods used for diagnosis of Acarapiasis. Larval samples were inoculated to selective media and MYPGP, Brain Heart Infusion and Blood agar were used for determination of American and European Foulbrood. For bacterial identification biochemical tests like Catalase, Indole, Methyl Red, Voges Proskauer, Hydrolysis of starch used and Gram- stained slides investigated under light microscope.



Results and Discussion

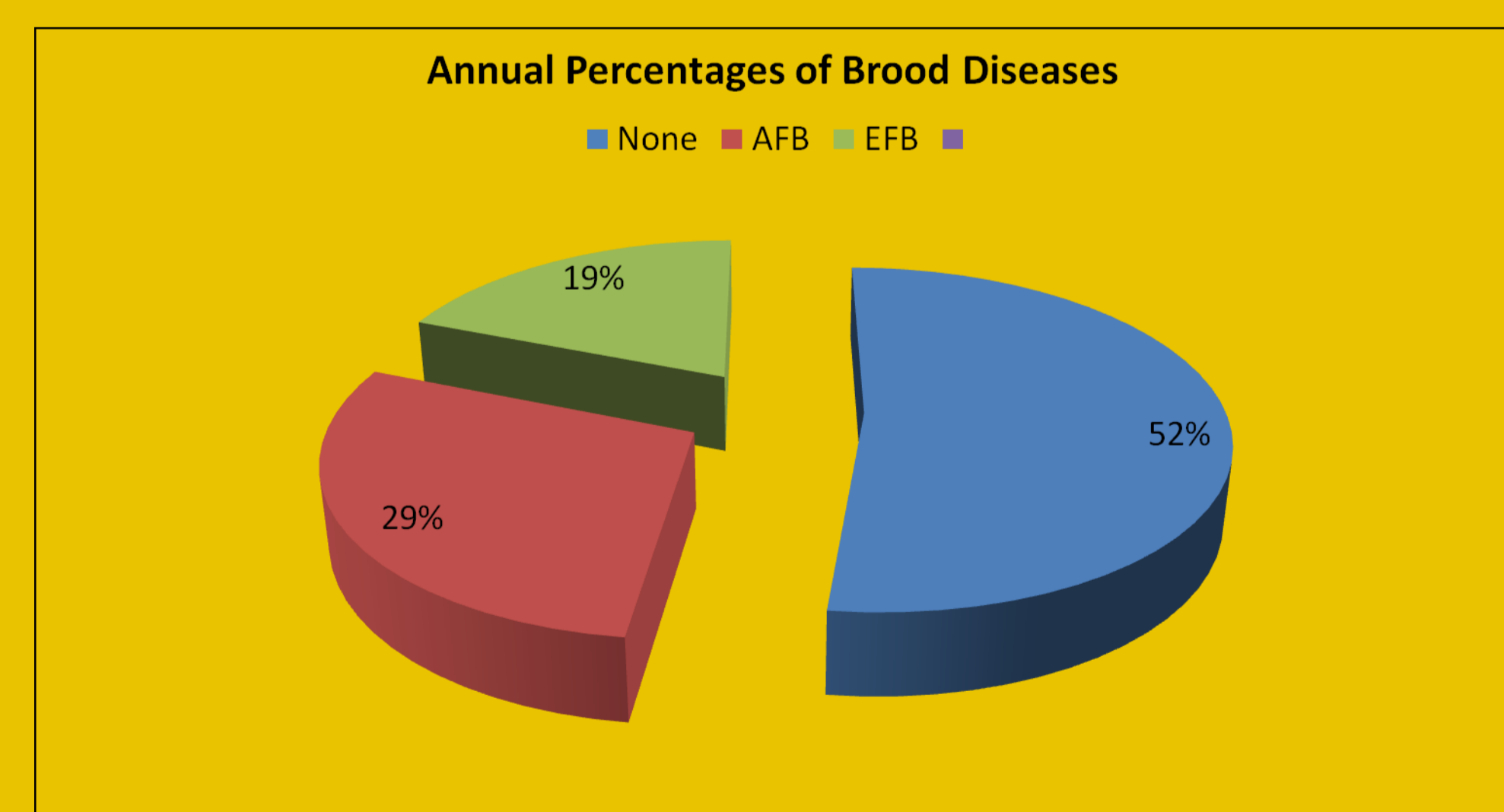
As a result of laboratory analyses Varroasis was determined in the ratio of %98 and Nosemosis was determined in the ratio of %12.97. On the other hand, Acarapiasis was not found in any samples. As results of diagnostic tests that applied to all honey bee samples, 29% American Foulbrood and 19% European Foulbrood were detected. The ratio of the healthy bees was 52%. Consequently, we saw that parasitic and microbial diseases were exist and prevalent in this region but levels of diseases were not at the rate of leading to death. For this reason we have focused on viral diseases could be the cause of the suspicious colony losses in Hatay and Adana region.

Table 1. *Nosema apis* spore density in Adana Region

Season	Number of Hives	Average Spore Numbers	Standart Deviation	t	Degree of Freedom	P
Spring	54	408518,52	263219,60	3,356	95	0,001
Autumn	43	617209,30	349157,66			

Table 2. *Nosema apis* spore density in Hatay Region

Season	Number of Hives	Average Spore Numbers	Standart Deviation	t	Degree of Freedom	P
Spring	48	568541,67	257243,90	2,246	59,365	0,028
Autumn	40	749250,00	451319,36			



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