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**BİLDİRİ ÖZETLERİ
ABSTRACTS**



PP16**MORPHOMETRIC STRUCTURE OF ALMOND POLLENS (*PRUNUS AMYGDALUS* L.) WITH THEIR PROTEIN AND MINERAL CONTENTS**

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Aim

To determine the protein and mineral matter contexts with morphometric features (length, pellet weight, shape, and surface structure) of almond pollen

Material-Methods

The study has been conducted in a garden that is located on 6x6 m and totally 62 da. area in Bozcayazı village, Kilis by using various almond types. Pollen traps have been mounted on the flight board of colonies in the blooming of almond trees. Pollen pellets from the hives and pollens from flower samples such as ferragnes and ferradual types have been mixed with shaker in the 0,7 % salty water by 50 ml falcon tubes. Centrifugal samples have been examined morphologically (length, shape, surface structure) with light microscope in 40x/0.65 objective after closing with lamella by dropping on lame. The weight of the pollen pellets has been determined with 0,0001 assay balance. Mineral matter context of the pollens has been determined by Atomic Absorption Spectrophotometer by adapting 920.181 method of A.O.A.C.; and the protein context has been determined by DUMAS (Jean-Baptiste DUMAS 1826) method.

Result

Worker bees that carry the pollen connect the pollens that are on the flowers with nectar or honey in their foregut and they create pollen pellets in pollen baskets that are on their back legs. Honey bees (*Apis mellifera* L.) meet the needs of protein, vitamin, fat and mineral matter with the pollens. Colonies need more pollen in the period of reproduction and breeding. There is a positive relationship between honey bees and almond trees that bloom in spring. Even if almond pollens that are rich in protein and mineral matters have a positive effect on brood rearing of the colonies, honey bees can provide adequate pollination for producing fruit of almond trees. Pollen is an important nutrient for people. Many studies Show that pollen has positive effects on immunity, digestion reproduction systems. This study that aims to determine the protein and some mineral matter context of the almond pollens has created awareness for bee farmers and almond producers.

Keywords

Almond (*Prunus amygdalus* L.), Pollen pellet, Protein, Mineral matter

	Horizontal axis length (µm)	Vertical axis length (µm)	Pellet weight(mg)	Shape	Surface structure
Ferragnes	47,55±0,12	48,78±0,10	7,05±0,14	Triangle	Straight
Ferradual	54,30±0,15	62,45±0,11		Oval	Straight

Table 1. Morphometric features of almond (*Prunus amygdalus* L.) pollens

Protein, %	25,78±0,26
Potassium, ppm	281,80±0,15
Magnesium, ppm	66,40±0,13
Calcium, ppm	80,11±0,12
Sodium, ppm	19,40±0,18
Copper, ppm	2,80±0,21
Iron, ppm	20,81±0,16

Table 2. Protein and mineral matter context of almond (*Prunus amygdalus* L.) pollens