

Development of cereal bars with beehive products

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Beekeeping contributes directly to the production of **sustainable food** by promoting the pollination of crops [1].



Beekeeping products such as honey, pollen and propolis have biological and therapeutic properties that promote health and well-being [2]. The production of cereal bars with bee products promotes sustainable agricultural practices and the responsible use of natural resources.



Objectives: The aim of this study was to develop different formulations of cereal bars with honey, pollen, and propolis (**Montesinho Natural Park** bee products).

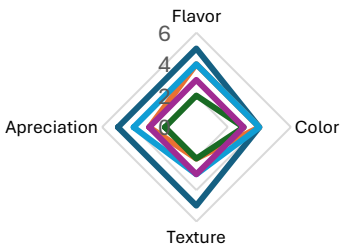
Methods

Bars with different compositions, varying the percentages of honey, pollen and propolis, were developed and tested by different consumers. The most well-accepted bar, HONEYCHEST, which contains 10% honey in its formulation, was evaluated for nutritional analysis, and compared with other commercial bars containing honey.

Results

Sensorial analysis

H1 H2 H3
H4 H5

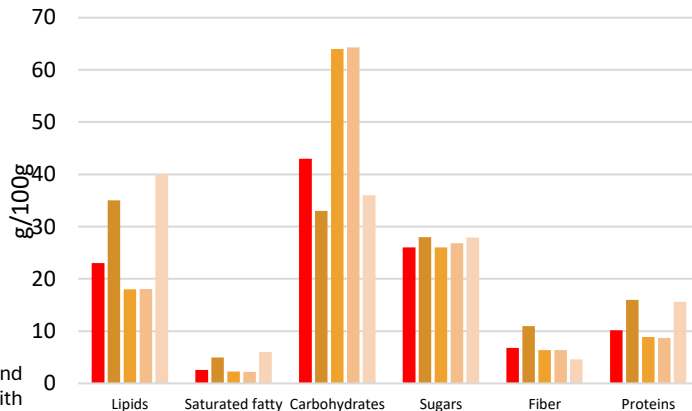


H1 (Honeychest bar), H2, H3, H4 and H5 are cereal bars formulated with different proportions of honey, pollen and propolis.



Fig.: Honeychest bar (H1).

Nutritional Analysis



Main nutrients (g)

■ Honeychest (10% honey) ■ Bar 1 (20% honey) ■ Bar 2 (4% honey)
■ Bar 3 (3% honey) ■ Bar 4 (1.6% honey)

Conclusions

Compared to other commercial cereal bars, Honeychest has a low lipid content, surpassed only by samples 2 and 3. In a global analysis we can say that the bar developed is an excellent option for incorporating products from Montesinho region, as they are combined with the products from the hive and the chestnut paste, which gives them a unique consistency and taste and very interesting nutritional characteristics.

References

[1] Apimondia, report: Beekeeping contributes to achieve the Sustainable Development Goals (2021), ISBN 978-88-7643-100-5; [2] Nizioł-Lukaszewska Z, Zawiałak G. Contribution of propolis in alternative medicine. Współczesna Onkol. 2017;21(4):293-296.

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