Sensory training for honey from hives feeded with supplementary feeding

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INTRODUCTION

Sensory analysis of bee honey is an important tool for determining its floral origin, for subsequent quality control practices and the consumer preferences towards this product. The aim of this research was training and monitoring of assessors to evaluate the sensory properties of honeys produced by honeybees feeded with different sugar pastes manufactured in Zukán S.L.U. (Murcia, Spain).

METHODOLOGY

LOCATION

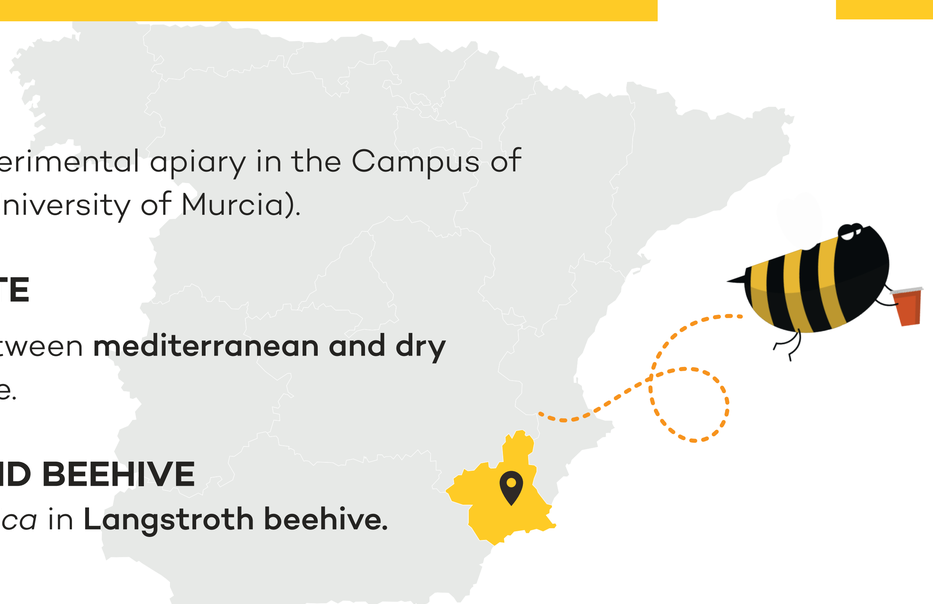
Murcia, Spain (experimental apiary in the Campus of Espinardo of the University of Murcia).

TYPE OF CLIMATE

Transition area between **mediterranean and dry subtropical** climate.

TYPE OF BEE AND BEEHIVE

Apis mellifera iberica in **Langstroth beehive.**



GROUPS OF HONEY SAMPLES

C GROUP 1

Control group, no supplementary feed

Ap GROUP 2

Fed with **Apipasta®** (sugar paste)

Av GROUP 3

Fed with **Apipasta® Vitamins** (sugar paste with vitamins and free aminoacids)

Ap+ GROUP 4

Fed with **Apipasta® Plus** (sugar paste with vitamins and 3% of crude protein)

SENSORY ANALYSIS OF HONEY

- Panel composed with **8 assessors**.
- Descriptors evaluated: **sweet, acidity, bitterness, salty, and 7 families of flavor and appearance descriptors**.
- The training was conducted in **18 successive sessions** in which assessors become familiar with the honey and its various attributes.
- Some plants extracts and species are blended with **invert sugar syrup** like references to train the flavor and descriptors.
- The **panel was monitored** to evaluate the efficiency of the training.
- **Descriptive quantitative analysis of honey was conducted**.

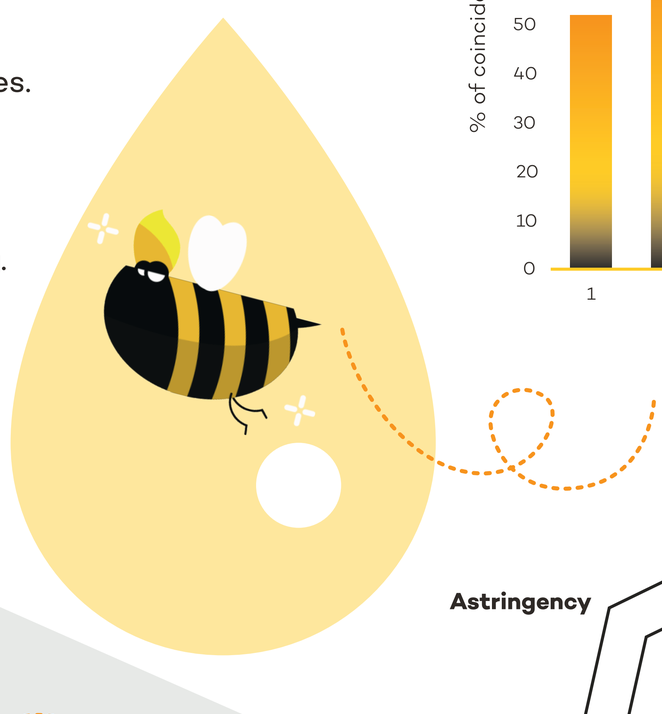
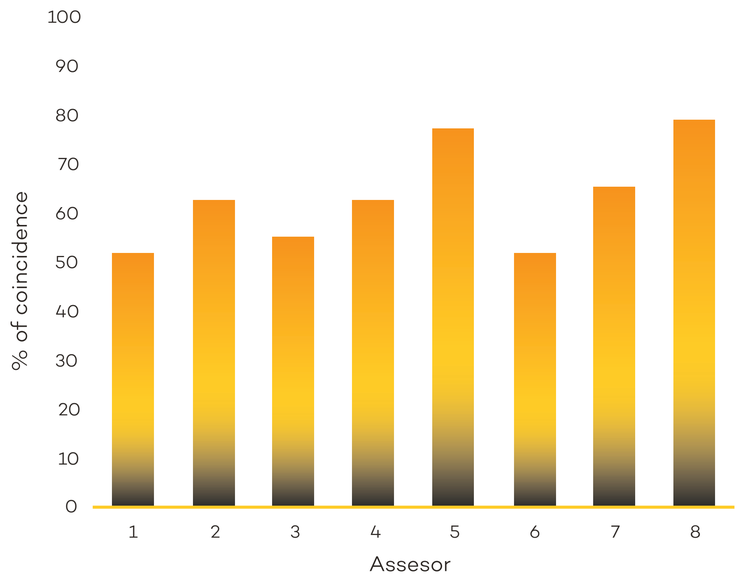
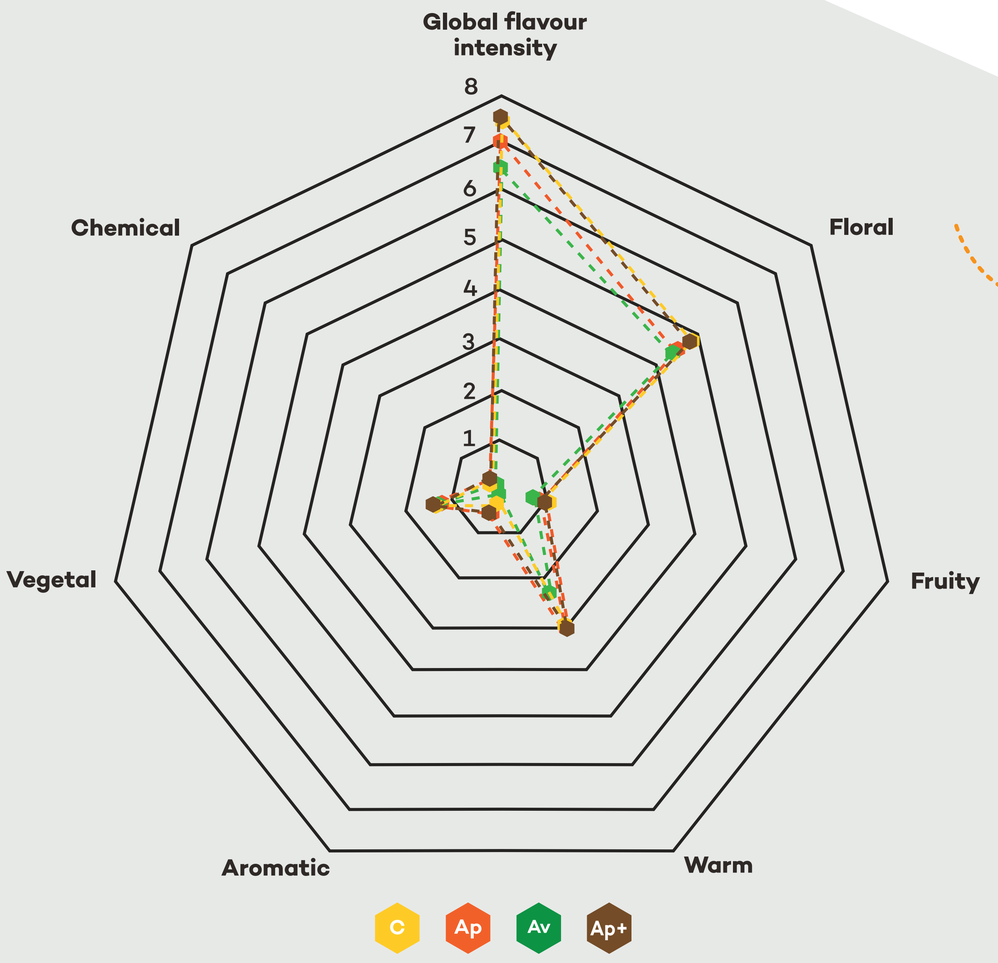


FIGURE 1. Percentage of coincidence test.





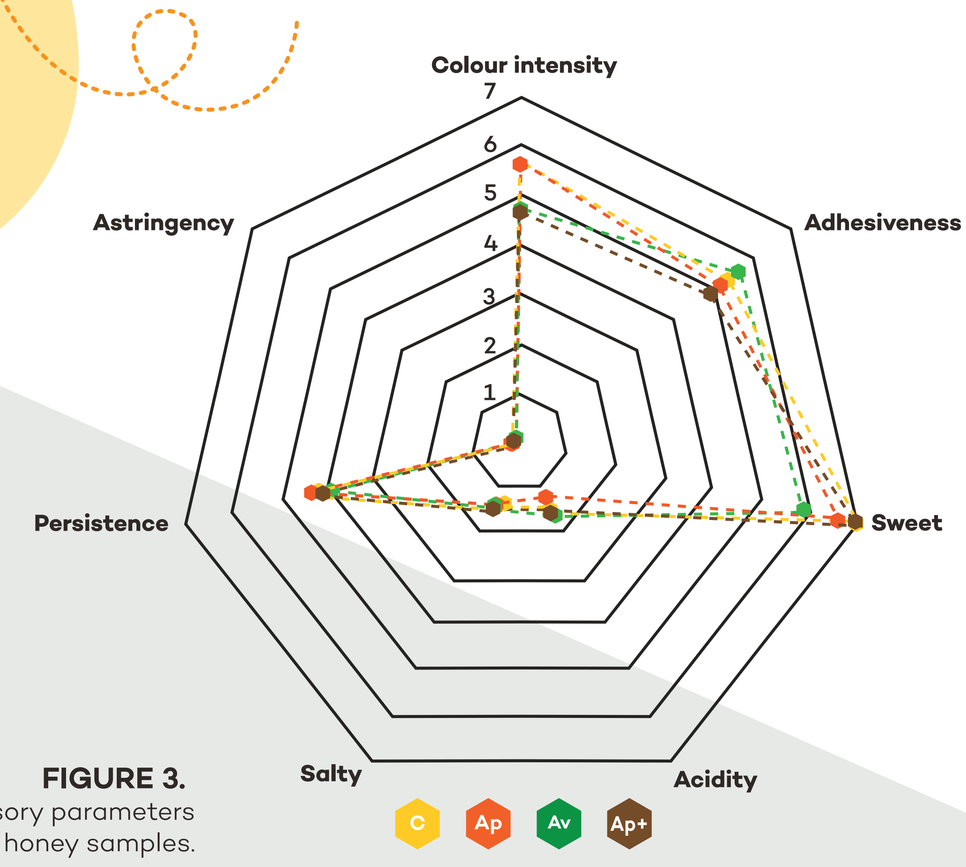


FIGURE 3. The sensory parameters analyzed in the honey samples.

FIGURE 2. The sensory parameters found in the honey samples.

RESULTS AND DISCUSSION

The percentages obtained in **Figure 1**, indicated the training protocol was effective and the panel was efficiently trained to evaluate the honey samples.

No significant statistical differences in odour, flavour and basic taste were found in all analyzed honeys (P>0.05) independently of the type of feeding (**Figure 2 and 3**). For the visual attributes, only differences were found for the color. Control honey and honey from hives feeded with **Apipasta®** had a relatively higher value than honeys from feeding bees with **Apipasta® Vitamins** and **Apipasta® Plus** although it was not relevant in quality of honey.

CONCLUSIONS

Supplementary feeding (**Apipasta®, Apipasta® Vitamins, Apipasta® Plus**) range consumption do not affect the sensory characteristics of honey.

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