

# Inventory of Beekeeping in the Algerian north (Tizi-ouzou and Bejaia)

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## INTRODUCTION

According to the ancestral production systems, the Algerian beekeeping sector was not able to meet the growing demand for the products of the hive until 1990s. Even today, the beekeeping remains underexploited with many difficulties hindering its development despite the efforts of the State to modernize this sector.

The objective of this study is to make an inventory of the honey production in the counties of Bejaia and Tizi-Ouzou in northeastern Algeria. To achieve this, a survey was carried out on 31 beekeepers (14 in Bejaia and 17 in Tizi-Ouzou).

## MATERIALS AND METHODS

This study was investigated in Kabylie (Algeria). The study has been carried with 31 beekeepers (14 in Bejaia and 17 in Tizi-Ouzou) from the districts of Akfadou, Azzefoun, Bouzeguene, Chemini, Tigzirt et Souk-Oufella (Fig. 1). The interviews were semi-structured and covered household characteristics, beekeeping practices as well as breed description, management and perceived evolution.

## RESULTS

The survey shows a social, cultural and religious role for 61.29% of the beekeepers. The beekeeping is primarily held by men (93.55%). It is the basic source of income for 64.52% of the respondents. The main products of the hive are honey (100%), swarms (16.13%), royal jelly (9.68%) and propolis (9.68%). The phenotype of the bee reported by 74.19% of the surveys is of small size with a long body and dark pigmentation corresponding to the breed "*Apis mellifera intermissa*". Two apiculturists described another phenotype corresponding to the "*Apis mellifera major*". The factors behind the motivations for beekeeping are consumption of honey (100%), income generation (90.32%), hobby (58.06%) and conservation of biodiversity (22.58%).

The multiple constraints associated with several diseases, notably Varroase (mentioned by 80.65% of beekeepers), cause difficulties for the breeders. Thus they cannot profit maximum from beekeeping. Other constraints which were reported are; forest fires (35.48%), wasps (32.26%), absence of beekeeping professionals or technicians (29.03%), harsh and cold winters with snow (19.35%), high density of hives in the region (16.13%) and uncontrolled spreading of pesticides and crop protection products at farms (12.90%).

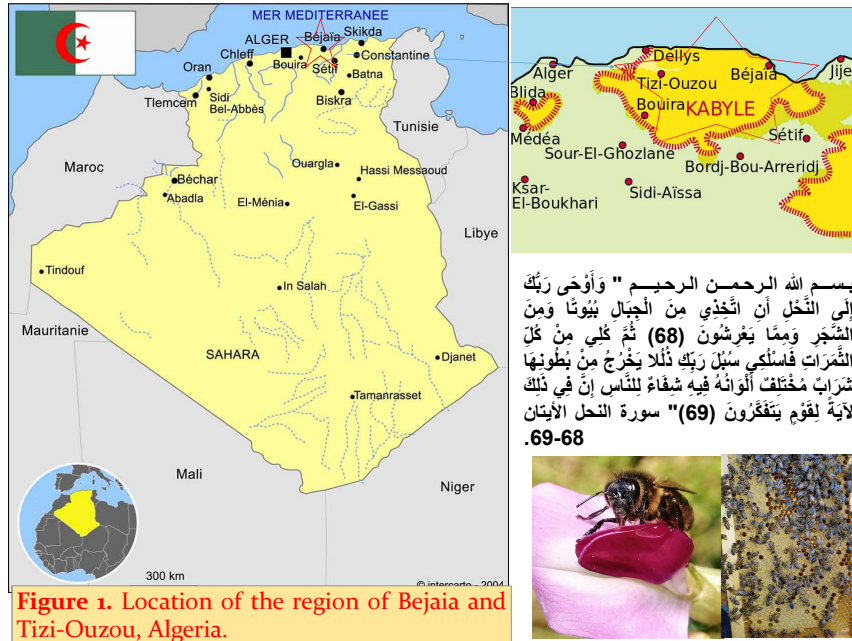


Figure 1. Location of the region of Bejaia and Tizi-Ouzou, Algeria.



Figure 2. The constraints of beekeeping in Bejaia and Tizi-Ouzou, Algeria.

Table 1. Socio-economic information on beekeeping in Bejaia and Tizi-Ouzou, Algeria

	Bejaia	Tizi-Ouzou	Total
Beekeepers Age (Years)	42.00±3.08	43.65±2.80	42.90±11.36
Breeding History (Years)	14.86±2.19	12.00±1.99	13.29±8.18
Hives Number	33.64±14.27	49.24±12.95	42.19±53.07
Honey Production (Kg/Hive)	9.57±1.10	6.70±1.01	7.99±4.33
Honey Price (Da/Kg)	4214.29±209.55	3823.53±190.16	4000.00±795.82
Annual Expenditure (DA/Hive)	2572.14±361.96	2830.47±328.47	2713.81±1337.97
Veterinary Costs /Total Expenditure (%)	19.64±2.00	23.35±1.81	21.68±7.59
Bee Swarm Price (Da)	5550.00±263.62	4200.00±372.62	5100.00±1038.54
Royal Jelly (DA/Kg)	170000±11801	112500±9700	144444±39087

P=0.01

P=0.01



Photos: Djoudad Nassim

## CONCLUSION

The economic situation of the Algerian beekeepers can be optimized by improving the production potential of the local bees. To this end, particular attention should be given to the training of the beekeepers, best management practices for beekeeping and access to veterinary care. The genetic improvement of local strains is also a feasible route as long as a balance between the bees and their breeding framework is respected.