

# What Portuguese Beekeepers Do To Cope With Varroa

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## Introduction

Despite the fact that *Varroa* (*Varroa destructor*) was first positively identified in Portugal in 1986, this was the first study carried out nationwide to broadly describe Portuguese beekeepers and beekeeping operations, particularly regarding aspects expected to impose selection pressure on *Varroa* populations.

## Materials and methods

Approximately 1200 enquiries (carried out during 2004-2006) were answered by beekeepers evenly distributed across the continental part of the country.

Data from those enquires was validated and analysed within the domain of descriptive statistics.



Fig 1. Mountain apiary in centre of Portugal

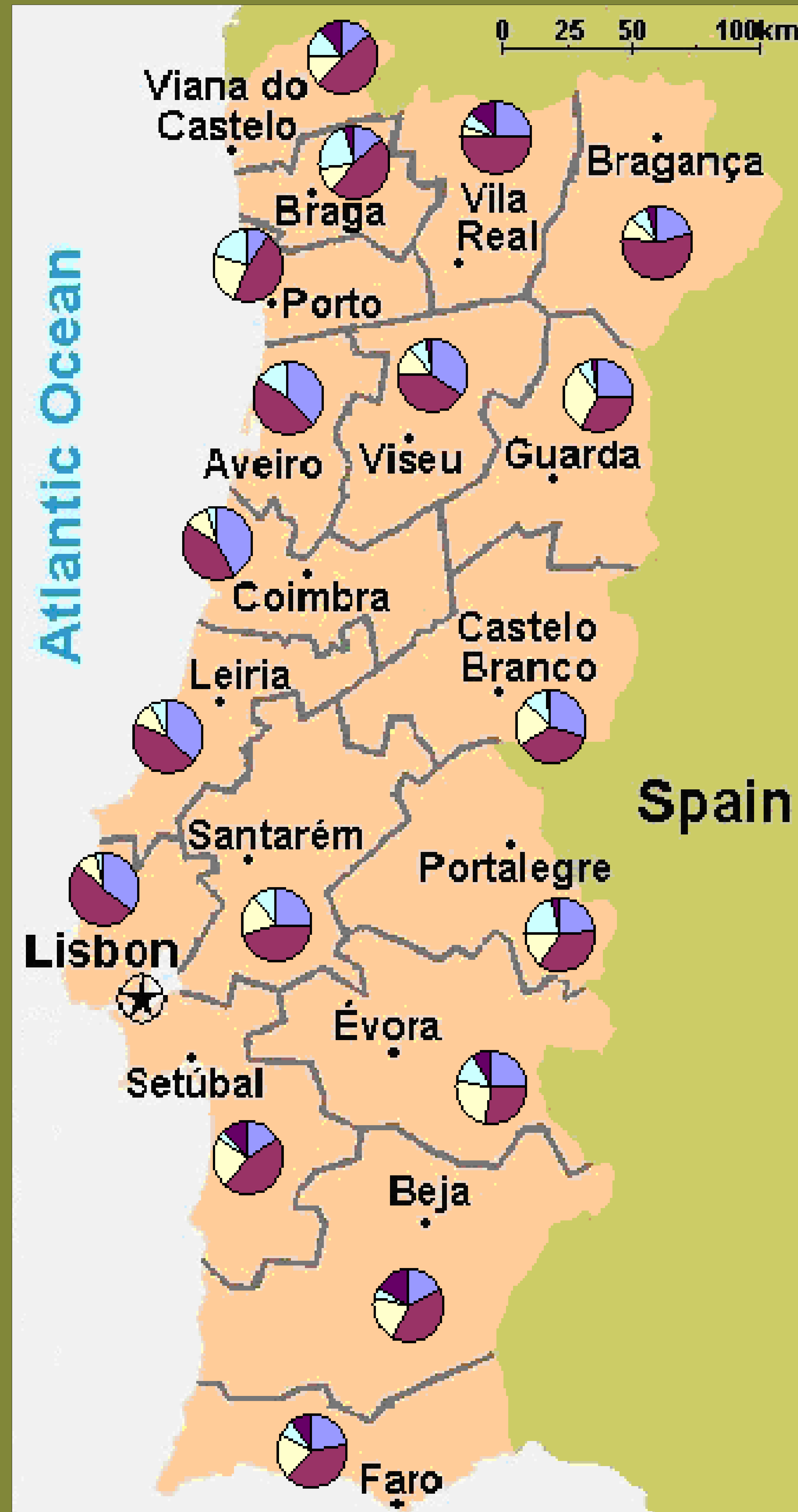
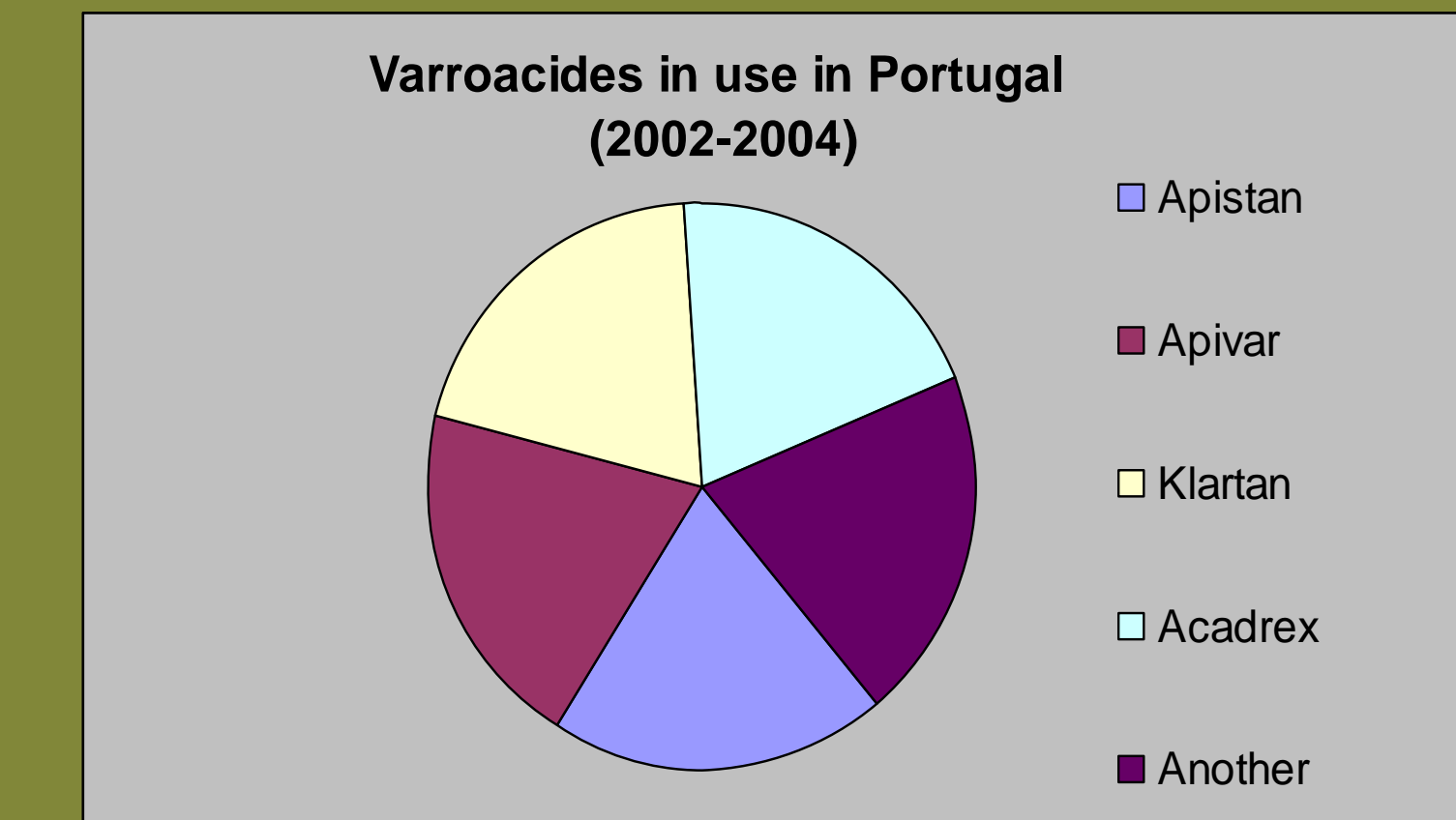


Fig 2. Use of varroacides (district frequencies, 2002-2004)



## Results

- . The average Portuguese beekeeper is a 56 years old male.
- . On average, each beekeeper maintains 2 apiaries, where he/she keeps a total mean number of 48 colonies.
- . The most used hive models are the country-specific “Lusitana” (38%, mostly used in northern Portugal) and “Reversivel” (38%, particularly more used in southern Portugal).
- . Regarding homologated treatments available during 2002 to 2004, Apivar® was globally preferred to Apistan.
- . Surprisingly, 55% of our beekeepers repeatedly adopted a single active substance throughout all that period (either amitraz or fluvalinate).
- . 77 % of our beekeepers reported two annual treatments against *Varroa*. These are predominantly applied for 4 to 6 weeks, mainly between January/March (78 % of enquired beekeepers) and, later on, in July/September (70%, after honey harvest).

## Conclusions

In Portugal, treatments against *Varroa* have been based on Apivar (43%), Apistan (26%), Klartan (17%) and the Acadrex (10%).

Other substances have also been used, such as Supona (chlorfenvinphos), Mitac 20 or Thymol.