

The Assessment of Honey Bee Losses in the Last Two Years and Applied Control Strategies in Turkey



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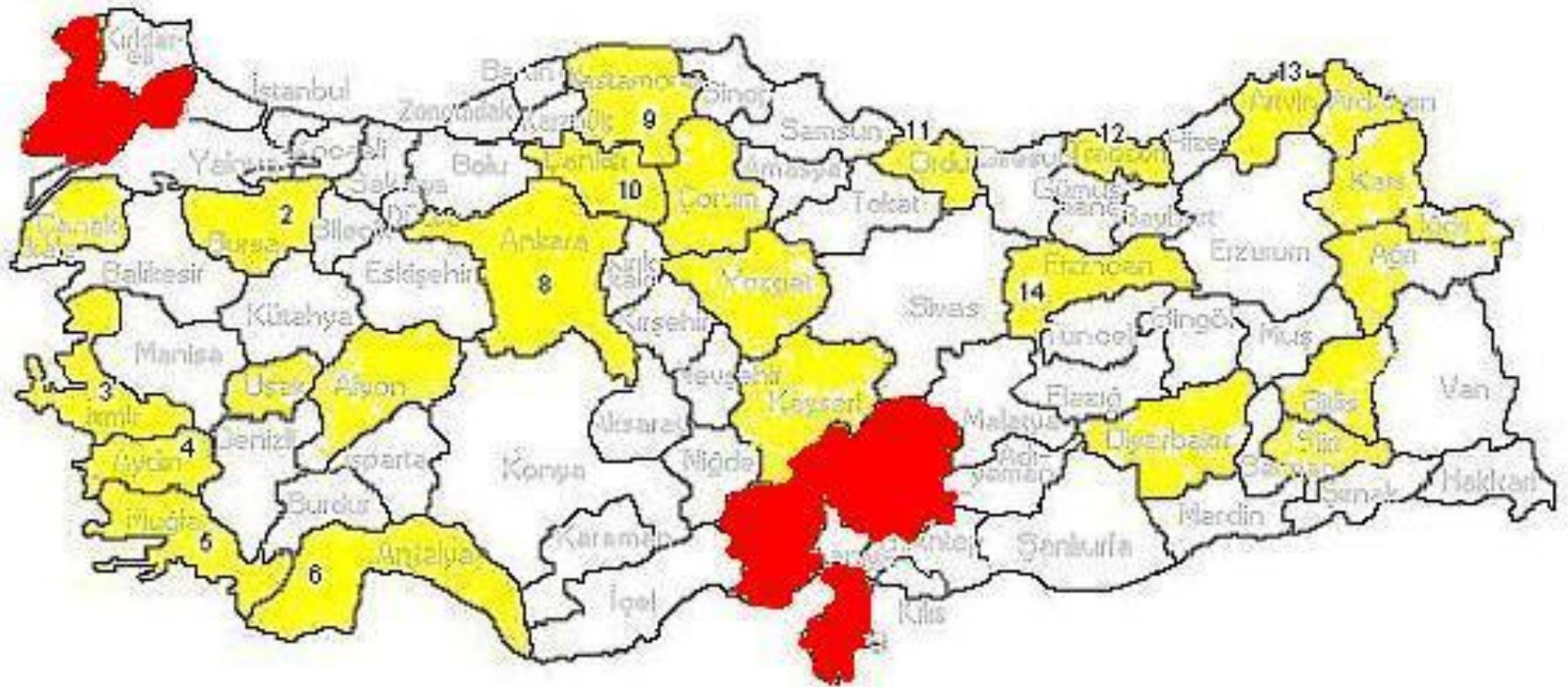


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2008*



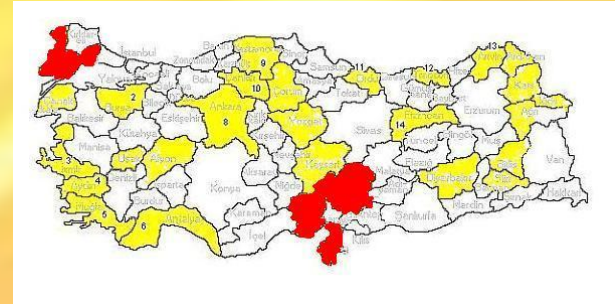
2006

In two months;



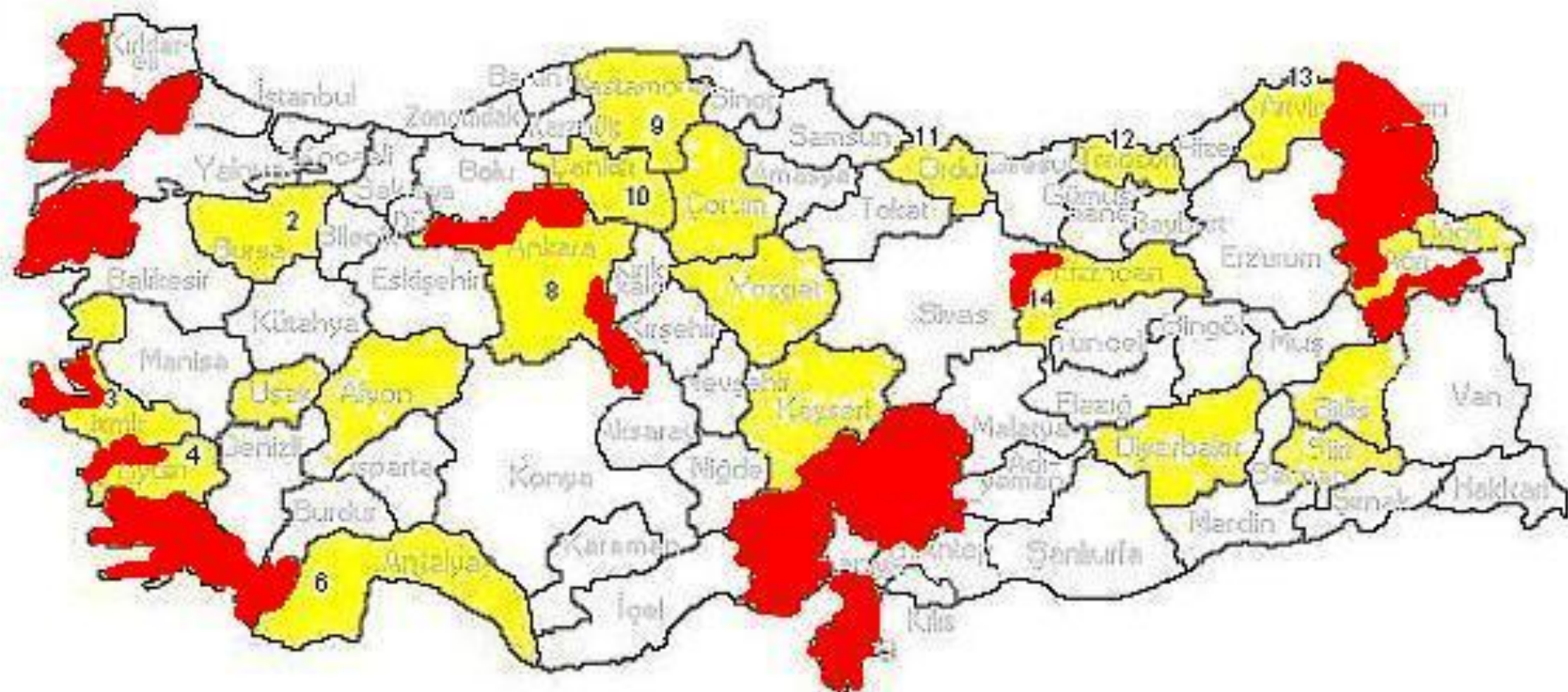
This area colder than the south of Turkey (Hatay, Kahramanmaraş and Adana), so climatic options are very different.

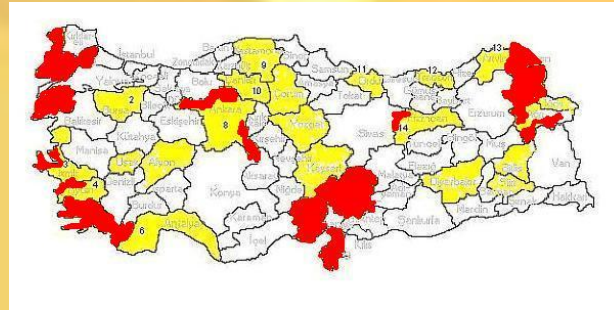
In addition, honey bee races are different from each other.



The background features a honeycomb pattern of hexagons in shades of yellow and orange. On the left side, there is a 3D cube rendered in a light brown color, appearing to be part of the honeycomb structure. On the right side, there is a larger, flat 2D hexagon in a light orange color. The year '2007' is centered in the middle of the image in a large, bold, black font.

2007





We organised a lot of field study and collected samples from approx. 1500 apiaries in different regions of Turkey



METHOD



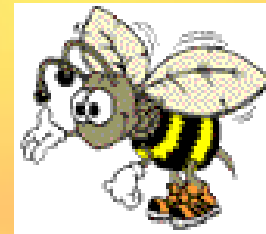
QUESTIONNAIRE

We applied question forms to 1200 beekeepers and they answered them. We asked the style of the colony losses and the other things...

LABORATORY DIAGNOSIS TECHNIQUES

After collected samples, we used laboratory diagnostic techniques for honey bee diseases. We determined AFB, EFB, Chalkbrood, Stonebrood, Nosemosis, Varroasis, Acarapiasis.

In respect of our laboratory diagnostic analyses and evaluation of questionnaires, the reasons of death or loss of honey bees can be categorized



Honeybee diseases (**Virus (new)**, Akar, Bakteri)

cell phones and
electromagnetic signals

Feeding problem
and starvation

Queen bee problem

Seasonal changing

Pesticides (imidaclopride)

GDO plants

CCD
(Colony Collapse Disorder)



RESULTS



QUESTIONNAIRE

honeybee loss rates

40% South
5% North
50% West
20% East
30% North-West
2% North-East
40% South West
18% South-East
of **TURKEY**

LABORATORY DIAGNOSTIC TECHNIQUES

honeybee loss rates

15% AFB+EFB, 5% nose mose	South
2% AFB+EFB, 10% nose mose, 4% chalkbrood	North
9.5% AFB+EFB, 7% nose mose	West
8% AFB+EFB, 7% nose mose	East
9.4% AFB+EFB, 13% nose mosis	North-West
1% nose mosis	North-East
5.1% AFB+EFB, 2% nose mosis	South West
1% AFB+EFB, 1% nose mosis	South-East

of **TURKEY**

And 92.8% of Turkey, infested by *V. destructor*

RESULTS



QUESTIONNAIRE

honeybee loss rates

TURKEY AVERAGE RATE

25.6%

LABORATORY DIAGNOSTIC
TECHNIQUES

honeybee loss rates

TURKEY AVERAGE RATE

12.2%

13.4%

Except the honey bee diseases;

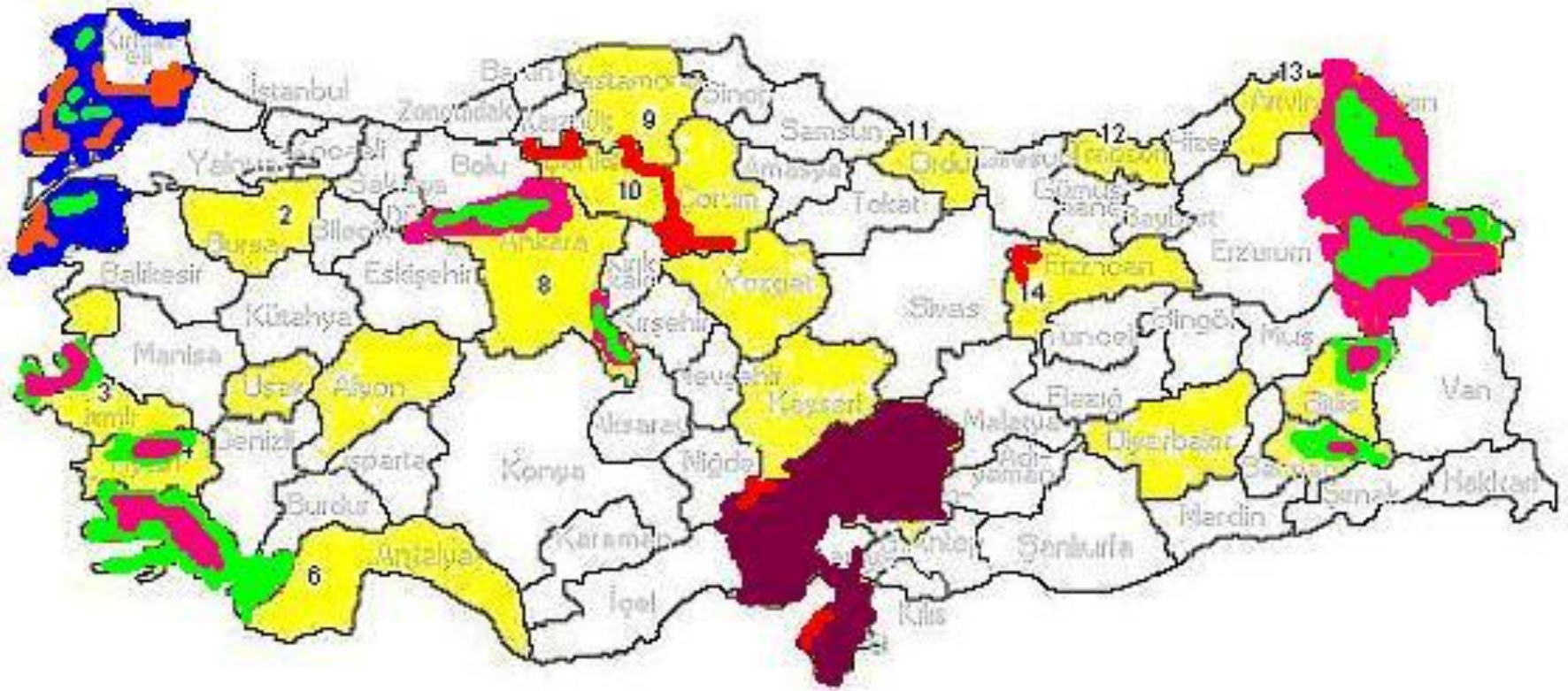
- *Incorrect answers to questionnaire (beekeepers can not diagnose by laboratory techniques, so only questionnaire is not enough)*
- *Pesticides (esp. Imidaclopride in Trakya region)*
- *Incorrect feeding*
- *Queen bee problem etc.(different races, different climatic options)*

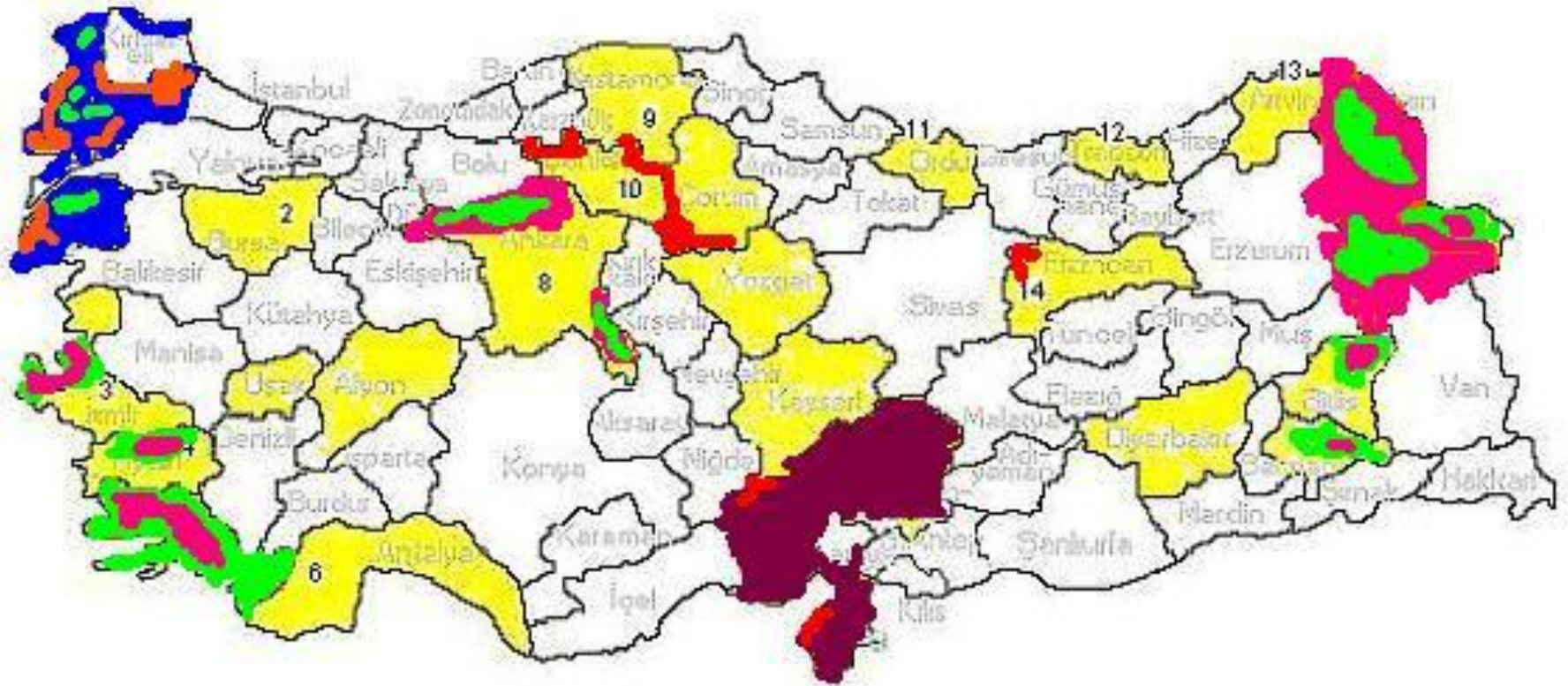
most of them depend on

SEASONAL CHANGING & V.destructor+ VIRUSES!!

Causeless loss rate:3-4%


So, new map is not only red after the investigation;





- Sampling area
- Beekeeper's incorrect techniques
- Huge level of seasonal change
- Pesticides
- Virus infection
- Causeless loss

Except honey bee diseases®



2008

- Season is very good (There are normal climatic values)
- Nectar feeding is very good
- Causeless losses or except honey bee diseases losses rates are decreasing 😊 this year
- Colony death rate is normal level, not a huge number!
- Honey production is well 😊



But we should think about 2009 or 2010,2011,... So,now we think that in 2006-2007 Seasonal changing affected honey bees' behaviours, nutrition, level of the nectar, life of the *Marchelina hellenica*, life of the plants with nectar, the distance of the hanoybee's flight to find the nectar in Turkey. In conclusion, we can say that when the climatic factors are normal, everything is to get better in beekeeping sector.

**THANK YOU
FOR YOUR ATTENTION...**

