

Anti-varroa Drugs (without market authorization) found on the black market in the Near East

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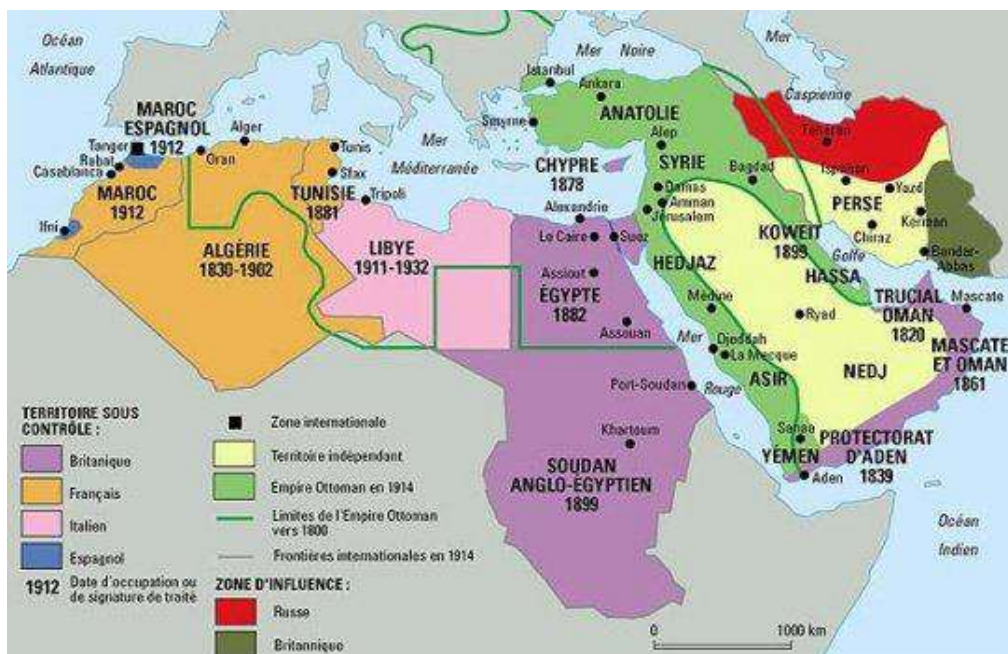
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The Near East is a region of Asia and Africa which includes the countries to the south east of the Levantine basin (Mediterranean Sea). It is often considered part of the Middle East or the Levant (where the sun rises) as it was known in earlier times.

Considered as one of the cradles of civilization, the Middle East was the source of many inventions and discoveries such as writing, the wheel or certain irrigation techniques. Although there is no universally accepted definition, we can consider that the Middle East includes the states of Iran to the east, Turkey, Palestine and Egypt in the west. Mesopotamia is the oldest of the civilizations to have left us with substantial traces; Babylon was one of the first great cities of the region.



By Philippe Rekacewicz, 1 August 1992

Beekeeping in the Near East

Beekeeping was known in the Near East centuries before the advent of Islam. Several books about bees had already been written in Roman times. Five thousand years before Christ, the people of the East (Iran and Iraq) understood the need for pollination of date palms by men.

For around five decades, the use of the frame hive has grown and the majority of beekeepers are able today to manage modern frame hives. However, harvesting honey from wild colonies has not completely disappeared. Everywhere bees are still nesting in old trees, or in holes dug in the rock or in caves.



Apiary in traditional basketry



collection traditional hives in Iran

Traditional hives are made of clay pottery, wood (tree trunks) or wicker (willow branches).

* Clay hives: there are two models. The former have the shape of a cylinder with a length of about one meter which is used lying length-wise. The latter have the form of haystack. These two models are baked to make them solid.

* Tree trunk hives: the trunk is hollow and closed at its ends by a wooden plank. Then entrances are made on the sides.* Basket hives: are usually made of willow branches covered with cow dung to seal the walls. The majority of frame hives are Langstroth and Dadant

In the Near East there are several countries with modern apiaries and beekeeping methods. Three countries among them have over a million hives. They are: Iran - 5,011,767 hives,

Turkey - 4.300.000, Yemen 1,001,022 hives (according to the Web site: www.beekeeping.com).

Varroa destructor in the Near East

The *Varroa destructor* mite, a parasite well known to beekeepers, is currently the leading cause of death for *Apis mellifera* worldwide. In the Near East, it appeared in the 70s. We have now been facing this problem for over forty years. Since the advent of *Varroa*, research has evolved significantly regarding the control methods used. This has resulted in the development of several products that have received a market authorization (AMM) in the majority of countries in the Near East.

The recent problem of parasite resistance to pyrethroids, which has manifested itself both in the Near East and other regions, has resulted in significant colonies losses throughout the world.

The Ministries of agriculture of all the countries in the Near East have undertaken substantial expenditure in the battle against *Varroa destructor*. They have purchased many anti-varroa products from various companies (Ciba Geigy, Sandoz, Bayerhealthcare AG, Farma kachim, Alvetra, Vita Europe, Elanco, Veto-Pharma, Chemicals Laif S, r, i. etc).

This has allowed them to test the effectiveness of different treatments and their mode of action on parasites: inhalation (fumigation), absorption (systemic), or contact and evaporation. Since 2008, products from China have been sold on the black market without veterinary authorization in the Near Eastern countries and also without permission from Bayer Healthcare AG. These products are pictured in the following photos: Wang's Flumethrin strips and Wang's Fluvalinate strips.



[Wang's Flumethrin Strip](#)



[Wang's Fluvalinate Strip](#)



Bayvarol (active molecule: Flumethrin 3.6 mg) from Bayer AG



Apistan (active molecule: Fluvalinate 800 mg) from Vita Europe

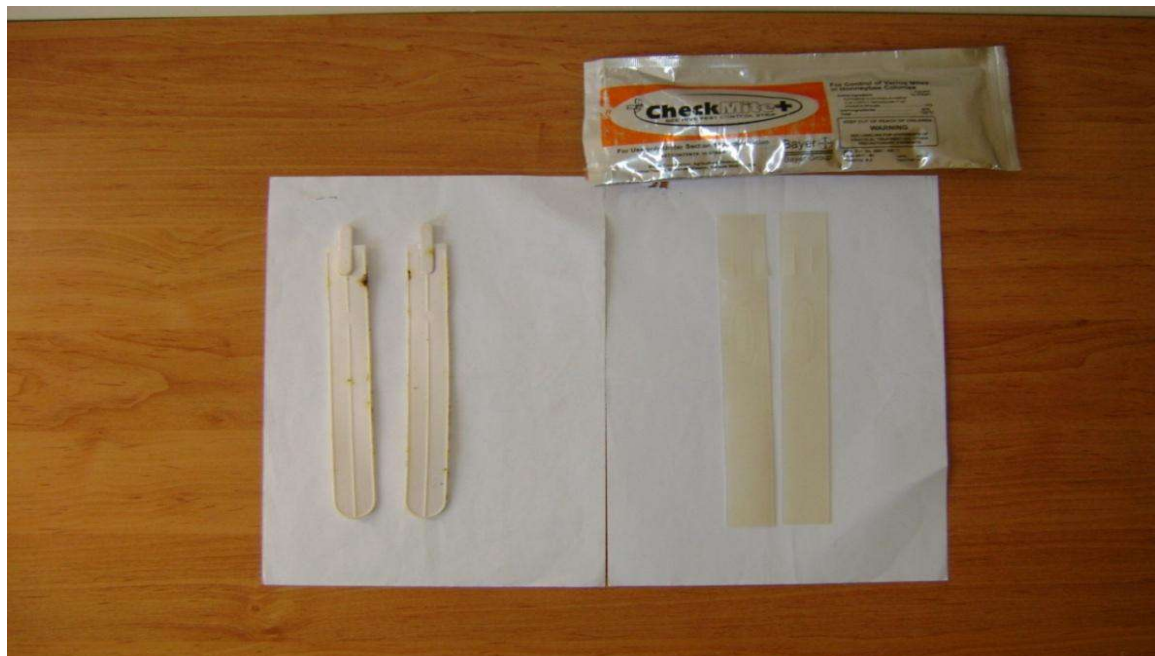
Furthermore a product from an unknown country under the name of CheckMite+ is sold on the black markets of the majority of Near East and Middle Eastern countries. The active molecule is para-dichlorobenzene plus another unknown molecule. The fake CheckMite+ can contaminate hive products and is dangerous to beekeepers. These strips are light yellow and thin. See photos below.



Box of fake CheckMite + manufactured by a Middle Eastern country



Box of genuine CheckMite + produced by Bayer AG



CheckMite + Strips from Bayer AG + the strips are white and thick

Fake CheckMite + from the Middle East these strips are light yellow and thin

Conclusion

After over three decades of experience in the Near East in the use of different types of treatment against *Varroa*: by inhalation (fumigation), absorption (systemic action), contact (slow release) and evaporation, I feel that efficacy depends on the local conditions and that care is needed when using these products. In the Near East and Middle East, the optimal conditions are a high and stable external temperature and the absence of worker brood. The main precautions consist of preventing re-infestation and robbing by treating outside periods of nectar flow or queen rearing and by checking the efficacy of the treatment. Therefore the alternative to chemical control requires more than the simple use of a vegetable or animal extract in place of a synthetic acaricide. It requires an additional effort from the beekeeper to manage the bee colonies, and this is more time consuming. *Varroa destructor* is a serious disease. It is necessary to learn how to live with it.

This can be done:

- By preserving only strong colonies in the apiaries.
- By systematically changing the queens every two years.
- Apiaries should be treated twice a year with natural products in spring and autumn with the chemical drugs authorized by each country's veterinary organization within the Near East. The beekeeper must respect the law regarding authorized anti-varroa drugs for treatments.
- The drugs available on the black market should not be used or the honey and wax and other bee products will become contaminated in the future.

Although we are in the 21st Century, *Varroa destructor* will undoubtedly remain one of the principal agents responsible for the weakening of apiarian livestock in the coming years.

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