THE SAFE STRIP

*No residues in honey beyond the maximum limits when used according to label instructions.

SAFE

HIGHLY EFFECTIVE

NO RESIDUES*

APIVAR

vetopharma.com
> THE APIVAR STRIP IS A COMBINATION OF TWO COMPONENTS:

1. Amitraz is a sub-lethal miticide that paralyzes Varroa mites. Varroa cannot keep holding on to the bees and falls to the bottom of the hive, leading to their starvation.

2. Plastic polymer strip: specially designed to ensure a regular release of amitraz on the surface of the strip after its placement in the hive. The polymer strip was chosen for its rigidity and its ability to continuously release the active ingredient over a minimum six-week period.

> HOW IT WORKS IN THE COLONY

Apivar works by contact: the active ingredient is delivered continuously over time. As bees walk on the strip’s surface they pick up molecules of the active ingredient and then distribute them throughout the colony.

As Apivar works by contact only, it is very important to position the strips in an area of high bee activity, typically in the center of the brood area. This ensures that bees will come in frequent contact with the strips, thereby distributing amitraz throughout the hive. Some practices, such as bee feeding, can increase activity and further ensure full distribution of the active ingredient.

1. Bees walk on the strips, picking up molecules of amitraz.
2. The bees distribute amitraz through contact with each other.
3. Mites on the bees are exposed to the amitraz which leads to paralysis and starvation.
4. The mite population drops and subsequent mite generations are also killed.
Proven effective for more than 15 years

> NO EVIDENCE OF RESISTANCE

EFFECTIVENESS PROVEN BY VARIOUS STUDIES IN DIFFERENT COUNTRIES

1. MARYLAND - USA (2009)

Efficacy of Apivar® (amitraz) for Varroa mite control in Maryland

2. ALBERTA - CANADA (2011)

Efficacy of Apivar® on the Varroa mite, *Varroa destructor*, in Alberta Canada
Nasr et al, 2012, Canadian Pest Surveillance Branch, Research and Innovation Division, Agriculture and Rural Development.

<table>
<thead>
<tr>
<th>TREATMENT</th>
<th>AVERAGE EFFICACY %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(# MITES BY WASHING 300-400 BEES)</td>
</tr>
<tr>
<td>Bayvarol</td>
<td>-129.8% ± 182.5</td>
</tr>
<tr>
<td>Apistan</td>
<td>39.0% ± 40.7</td>
</tr>
<tr>
<td>Checkmite</td>
<td>88.8% ± 15.3</td>
</tr>
<tr>
<td>APIVAR</td>
<td>94.7% ± 5.5</td>
</tr>
</tbody>
</table>

3. FRANCE (FROM 2007 TO 2013)


Mean efficacy on more than 100 colonies per year in different apiaries located in different regions of France

4. TUCSON - USA (2014)

Controlling Varroa destructor with Apivar® (Véto-Pharma)
Frank A. Eischen, R. Henry Graham, Abbey Stilwell, Carl Hayden; Bee Research Center, USDA-ARS, Tucson, AZ.

Remaining Varroa populations after 6-week treatment

Safe for bees and for honey

> NO SIGNIFICANT RESIDUES IN HIVE PRODUCTS

Apivar is safe for bees and products hives thanks to the high quality of its components and its controlled-release technology. This recent study proves that none of the active ingredient, amitraz, was detected in honey, even in colonies treated with 10 times the recommended dosage.

Residue level in ppb (µg/L)

< Negative control
< Label Dose
< x2 Apivar®
< x10 Apivar®
< Positive control
Honey spicked with Amiatraz 200µg/kg

*MRL EMA: Maximum Limit of Residues tolerated by the European Medicine Agency for amitraz, its residues, and its metabolites in honey for human consumption.

> NO NEGATIVE EFFECT FOR BROOD OR QUEENS

TOTAL POPULATION BEFORE AND AFTER A SIX-WEEK TREATMENT WITH APIVAR

Efficacy of Apivar® (amitraz) for Varroa mite control in Maryland

To learn more about Apivar efficacy and safety, visit Apivar.net and download the technical publications.
## Simple, safe and effective control of Varroa mites

<table>
<thead>
<tr>
<th>Product</th>
<th>Active ingredient</th>
<th>Average efficacy &gt;90%?</th>
<th>Evidence of resistance?</th>
<th>Residues in honey or beeswax?</th>
<th>Negative effect for brood or queens?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apiguard</td>
<td>Thymol</td>
<td>NO</td>
<td>NO</td>
<td>YES¹</td>
<td>Can increase mortality rate of brood and bees at temperatures &gt;86°F²</td>
</tr>
<tr>
<td>Apistan</td>
<td>Fluvalinate</td>
<td>Inconsistent³</td>
<td>YES²</td>
<td>-</td>
<td>NO</td>
</tr>
<tr>
<td>Checkmite plus</td>
<td>Coumaphos</td>
<td>Inconsistent⁴</td>
<td>YES⁴</td>
<td>YES⁵</td>
<td>Damages brood and queen cells²</td>
</tr>
<tr>
<td>MAQS</td>
<td>Formic acid</td>
<td>Inconsistent⁶</td>
<td>NO</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>APIVAR</td>
<td>AMITRAZ</td>
<td>YES⁷</td>
<td>NO³</td>
<td>NO⁸</td>
<td>NO⁹</td>
</tr>
</tbody>
</table>

### REFERENCES

2. Product label
8. PETTIS J (2013). Amitraz residue transfer into honey from Apis mellifera hives treated with Apivar®, USDA-ARS, Beltsville, MD USA – 2013
**Apivar in practice**

> **APIVAR TREATMENT TIMING RECOMMENDATIONS**

Apivar can be used year-round when honey supers are not on the hives, but many beekeepers treat in the spring, before the nectar-collecting period.

The purpose of the spring treatment is to decrease mite populations (and reduce the risk of colony loss) during the nectar-collecting season, thereby maximizing honey yield. The spring treatment must be completed before honey supers are installed. Apivar can also be applied in the fall to reduce mite load in the colony before winter bees are produced. This will maximize the strength of the colony for wintering. Fall treatments should be initiated as soon as honey supers are removed.

The recommended dosage is two strips per deep brood box full of bees, or as shown in the table below. Apivar is most effective when applied at the specified dosage. Do not undertreat.

<table>
<thead>
<tr>
<th>Number of frames covered with bees</th>
<th>&lt;5</th>
<th>6-10</th>
<th>11-15</th>
<th>&gt;16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of strips</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

> **INSTALLING APIVAR STRIPS**

Installing Apivar in the hive is easy. Just tear open the foil pouch, remove the double rigid strips, and follow these steps:

1. Remove honey supers before applying Apivar.
2. Separate the double rigid strips.
3. Use the strips die-cut triangle as a hanging hook:

   - Hang each strip between 2 comb frames in the brood area or the bee cluster, with a minimum distance of 2 frames between strips.
   - Suspend Apivar strips in the brood chamber so bees can walk on both sides of the strips.

4. Leave strips in the hive for 42 days minimum and then remove. DO NOT re-use the strips.

   - **Number of frames covered with bees**
   - **Number of strips**

**Optimize the power of Apivar by scheduling hive treatments as shown above.**

**Reposition the strips for optimum results**

If the bee cluster moves away from the strips, reposition the strips into the bee cluster, and leave them in place for 14 more days before removal. Strips must be removed after a maximum of 56 days.
Apivar is a product of Véto-pharma, a French pharmaceutical company that develops and markets innovative products to help commercial and hobbyist beekeepers prevent and control hive diseases and infestations. All Véto-pharma products are developed and manufactured in compliance with applicable pharmaceutical standards.

Apivar was first formulated in 1995 and has been manufactured in a dedicated facility operated to the highest standards in pharmaceutical manufacturing. The facility’s processes are dedicated entirely to animal health product manufacturing in compliance with GMP standards. The facility is also regularly inspected by the French National Agency for Veterinary Medicinal Products.

Véto-pharma’s manufacturing process is designed to maintain strict control of raw materials, packaging materials, intermediates, and finished products. This control is supported by an exhaustive, on-going analysis and testing process, and provides full validation of processes and methods to guarantee batch consistency and reproducibility. As a result, beekeepers around the globe can be confident that each Apivar strip is consistent, safe for bees and humans, and meets or exceeds stringent pharmaceutical quality standards.

Véto-pharma is dedicated to developing products that benefit bees and beekeepers. Our passion for bees and the benefits they bring to our world is reflected in our good relationships with beekeepers and beekeepers’ organizations all around the globe. For more information about future Véto-pharma bee and beekeeping products, visit our website at: www.apivar.net

1 The facility operates in accordance with European Union (EU) Good Manufacturing Practice (GMP) guidelines for Veterinary Medicinal Products (Directive 91/412/EEC). GMP is a EU standard that is approximately equal to the pharmaceutical manufacturing standards required by the US Food and Drug Administration and the US Environmental Protection Agency.

> TESTIMONIALS

“I have used Apivar for more than four years and I am very happy with the results. In fact, I have never found another product that can match Apivar for effectiveness.”

Hossein Yeganehrad, Caspian Apiaries, BC, Canada

“We tested 10 hives in two apiaries. An alcohol wash of 300 bees showed an average of 25 to 30 mites before treatment. After a 42-day Apivar treatment, we did another wash that showed an average of only one or two mites. Needless to say, we were impressed with Apivar’s efficacy and ease of use.”

Ted Jones, Jones’ Apiaries, Farmington, CT
Apivar®

> THE SAFE STRIP

> WHERE TO FIND APIVAR?

BRUSHY MOUNTAIN BEE FARM
610 Bethany Church Road
Moravian Falls, NC 28654
1-800-233-7929
www.brushymountainbeefarm.com

DADANT & SONS, INC.
51 South 2nd Street
Hamilton, Illinois 62341
1-888-922-1293
www.dadant.com

MANN LAKE LTD.
501 S. 1st St.
Hackensack, Minnesota 56452
1-800-880-7694
www.mannlakeltd.com

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