ZooMite

A new method for the control of red mite

zoochimica
AnimalHealth
ZooMite is a feed supplement using in feed of laying hens for control of red mite.

ZooMite expresses the highest and most modern technology that we known for control of one of the biggest problems that affect the intensive farming of laying hens.

In Italy 83% of positive holdings of 40

ZooMite combines the effect of decrease the power of the mite with that of his killing through the use of different molecules and active ingredients suitable for the purpose. The Dermatophagoides G. is a mite now known but despite this the farmers have great difficulties to contain it and to fight it.

Estimated economic damage in Europe 130 million euro ... growing.

The strategies used so far passed all through the application of products directly in farms, the knowledge of the problem did not allow us to find alternatives, partly because the louse red is affected by many factors ranging from the type of farming, the size, climate, temperature, management, distribution systems of acaricides, etc.
**ZooMite** is a product easy to use (feeding) and cancels many of the problems that breeders have been encountered over time by adding a unique quality that is to treat the environments and the animals through the animals themselves by acting day after day without interval times which are physiologically necessary for the application of products of contact.

![Fig. 5 Withanolide A](image)

![Fig. 6 Ursolic Acid](image)

**ZooMite** is a new approach to tackle an ancient problem, supplementation with the product reduces the stress caused to animals by the mite, the medicinal plants contained in **ZooMite** (*Withania Sonnifera and Ocimum Sanctum* Fig. 5-7), are able to reduce the plasma concentration of **Cortisol**.

**Fig. 7 Effect of active fraction of Withania Somnifera on chronic stress induced plasma corticosterone**

<table>
<thead>
<tr>
<th>Treatment Groups</th>
<th>Plasma Corticosterone (µg/dl)</th>
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<tr>
<td>Control without stress</td>
<td>14.6 ± 1.9</td>
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<tr>
<td>Control + stress</td>
<td>21.6 ± 2.1^</td>
</tr>
<tr>
<td>Control + stress + Withania Somnifera</td>
<td>17.6 ± 1.4^b</td>
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Conclusion: Result indicated Withania Somnifera is capable to minimize the stress by regularising plasma corticosterone

Ref: S.K. Bhattacharya & A.V. Muruganandam, Pharmacology —’00 Biochemistry and Behavior, 75 (2003) 547-555
Recent studies have shown that high levels of cortisol promote the growth of Dermanyssus G. (Lucifer effect).

Others ingredients of the product (*Mangifera Indica, Mucuna Pruriens and Boerhavia*) widespread thanks to the presence of *Ursolic Acid* (fig.6) Flavonoids and L-dopa, are able to provide a rapid response antioxidant, anti-inflammatory and immunomodulatory.

The synergy of these effects enables the animal to address the fight against Dermanyssus Gallinae. The combination of these medicinal plants with the *Allium Sativum, rich in Allicin*, can get the definitive answer against red mite: this is because the presence of all the described alkaloids are found in the blood stream, which becomes the means for obtaining, from one side the reduction of stress in animal and on the other make blood unappetizing for the mite, which will be so discouraged to continue feeding. Furthermore, the continued presence of these essences plant strengthens the immunity of the animal, while the continuous introduction of *Allicin* environment, causes a masking olfactory, that camouflaging the smell of the bird, it prevents mite to locate and reach.

![Fig. 3 Kieselgur](image1.png)  
![Fig. 4 Kieselgur](image2.png)

Finally associate these plant essences with organic silica for animal feeding (*E551c-Kieselguhr*) fig. 3-4, suitably calcined, not absorbed in the intestine, it will lead to the elimination continues in the environment, through feces, silica that, with the drying, will constitute precisely that powder, which in absence protected the mite itself, but now going in contact with the exoskeleton of Dermanyssus Gallinae, given the high abrasiveness, it will cause the fracture to be followed by death. In this way we get a number of advantages: first of all no withdrawal period and, moreover, the mechanical action of the silica calcined does not create problems of resistance. Last, but not least, cost-effectiveness of the intervention, because the phytochemicals present and titrated in the product, allow to replace equal Methionine added to feed.
ZooMite
Complementary feed for poultry

ZooMite offers several advantages:

- easy of use
- silica does not create resistance
- reduction of variables (time, management, climate, etc.)
- continuous and progressive action
- muscle relaxant action
- decrease and control of hormone production (Cortisol)
- increase the immunity of animals

COMPOSITION:
Calcium carbonate from calcic rocks, Sodium bicarbonate, products obtained from the processing of herbs (Mucuna Pruriens, Boerhaavia Diffusa, Azadirachta Indica, Allium Sativum, Trigonella Foenumgraecum, Withania Somnifera radice, Ocimum sanctum, Emblica Officinalis frutti, Mangifera indica cortex), rice bran (EN-01037), soy flour.

ANALYTICAL COMPONENTS
Calcium 3.6 – Phosphorus 0.01% – 2.43% Sodium - Methionine 0.01% - 0.02% Lysine A Ash Insoluble in HCl 72%

ADDITIVES (per kg)
Binders, Anti-caking agents: E551c Kieselgur

INSTRUCTIONS FOR USE:
Mix thoroughly with other feed components in the ratio of 0.1% of food.

Packaging: Bag Kg.10

Packed by:
Unione Commerciale Lombarda s.p.a.
Via G. Di Vittorio, 36 25125 Brescia Italy

(With recognition in atT1004538S)
*ZooMite does not contain dangerous substances considered to humans, animals or the environment.
* ZooMite is thermostable.

* ZooMite is available in a version for the production Bio of organic foods.
* The above directions are not necessarily authorized in all countries.
* Please consult the local label for exact instructions.
* Bibliography is available upon request.