# How to control red mites using BioCare ?

Poultry Red mite creates serious threat to the egg production industry, posing serious animal health and welfare concerns and impacting public health. A spray of BIOCARE on the birds and its surroundings repels and protects poultry from Red Mites.

**General symptoms**
Feather-pecking; cannibalistic behaviour, increased feed and water intake, decrease general animal health, higher noise volumes and increased self-grooming, a characteristic symptom of anxiety.

**Preventive Spray**
If red mite appears during a certain season or if you hear of endemic breakdown in your region, we recommend going for prophylactic spray. Mix 50 ml in 1 litre of water (5%) and spray on birds and their environment such as the cage, ground, walls etc. Apply at least once in a week.

**Nebulisation** : You can also diffuse the product in the bird's cage using a nebulisator. The dosage is 20 ml in 80 ml of water.

**Major infection**
Mites started to heavily attack, create lesions and wounds on the skin.
Mix 50 ml (5%) for one litre water at room temperature. The volume of this preparation must match the size of the bird. For an adult bird, mix 500 ml of the product in 10 litres of water. Immerse the body of the bird in the solution (Warning : by holding the head outside) for approximately a minute and let the bird dry naturally in a warm surrounding. You can reuse this solution for another infested bird but not on a healthier bird.
Follow this treatment at least once in a week and then every 15 days.

Neem not only interferes in the lifecycle but also heals the bird's skin. It is neither poisonous to birds nor leaves pesticidal residue on the skin.

**Please note that neem does not kills directly, called as knock down effect. You may see still some mites still live after the application but don't panic.**

**Immediately after application, mites stop attacking the bird and becomes inactive and stop reproducing. Due to this indirect effect, mites are not able to create resistance to neem.**

Here with , some of the research articles that demonstrates the proven effect of Neem. BioCare is a similar oil formulation as RPO3, utilised in the first study. It is same formulation (neem extract) as explained in the second research article from Egypt**.**

**Citation- 1**

Med Vet Entomol . 2018 Sep;32(3):290-297. doi: 10.1111/mve.12296. Epub 2018 Feb 8.

# Efficacy of a novel neem oil formulation (RP03™) to control the poultry red mite Dermanyssus gallinae

A Camarda [1], N Pugliese [1], A Bevilacqua [2], E Circella [1], L Gradoni [3], D George [4], O Sparagano [5], A Giangaspero [2]
Affiliations PMID: **29417605** , DOI: 10.1111/mve.12296

## Abstract

Dermanyssus gallinae (Mesostigmata: Dermanyssidae) is the most harmful ectoparasite of laying hens, represents an occupational hazard for poultry workers, and a growing threat to medical science per se. There is increasing demand for alternative products, including plant-derived acaricides, with which to control the mite. The present study investigated the efficacy of neem oil against D. gallinae on a heavily infested commercial laying hen farm. A novel formulation of 20% neem oil, diluted from a 2400-p.p.m. azadirachtin-concentrated stock (RP03™), was administered by nebulization three times in 1 week. Using corrugated cardboard traps, mite density was monitored before, during and after treatment and results were statistically analysed. Mite populations in the treated block showed 94.65%, 99.64% and 99.80% reductions after the first, second and third product administrations, respectively. The rate of reduction of the mite population was significantly higher in the treated block ($P < 0.001$) compared with the control and buffer blocks. The results suggest the strong bioactivity of neem, and specifically of the patented neem-based formulation RP03™, against D. gallinae. The treatment was most effective in the 10 days following the first application and its effects persisted for over 2 months. Further studies will aim to overcome observed side effects of treatment represented by an oily layer on equipment and eggs.

**Keywords:** Azadirachta indica; Dermanyssus gallinae; acaricide; enriched colony system; laying hens; neem; zoonosis.

## Citation- 2

# Field study on the efficacy of an extract of neem seed (Mite -Stop) against the red mite Dermanyssus gallinae naturally infecting poultry in Egypt

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- PMID: **18481087**
- DOI: 10.1007/s00436-008-0965-9

## Abstract

Infestations with the poultry red mite Dermanyssus gallinae represent a major ectoparasite problem in poultry and affects egg and meat production worldwide. The effects of the neem seed product Mite-Stop against the red poultry mite were investigated. Five primitive poultry farms in two small villages in the Nile Delta and Giza district were selected for the study. The neem extract was diluted 1:40 and 1:50 with tap water just prior to use. Application of the two dilutions of the provided product was performed to soil, cracks and crevices of the examined area as well as to mite-infested birds on day 0 and day 7. Two hours after treatment soil dust was collected from sprayed regions of the stable and from unsprayed control regions of the same stable. The treated chickens were also checked for mites 2 h after each treatment. The examination of the chickens 2 h after spraying showed that they were free of mites. The examination of treated soil with the Tullgren funnel apparatus 2 h after the first spraying on day 0 already showed a considerable reduction of living mites compared to controls. Seven days after the first treatment of the soil the number of living mites was reduced for 80% in the treated soil and decreased even more after the second spraying, since those larvae that had hatched from eggs in the meantime were killed. The 1:40 dilution of the neem seed extract with tap water was superior to the 1:50 dilution. These results clearly show a very high killing rate of the extract, if the mites come in direct contact with the compound. However, in order to obtain extinction also of hidden and freshly hatched stages repeated spraying should be done three times within 8-10 days.

**Organic certification for product and process manufacturing by Ecocert**

| | NOP | EU |
|---|---|---|
| Inspected by Ecocert SA F-32600 as an organic agricultural input as per NOP, EU and JAP. | Input suitable for organic farming, Product Compliant Under NOP" | Inputs suitable for use in Organic Farming, according to (EC) n° 834/2007 & 889/2008 Regulations" |

**Stockage:**
Keep it in dry place. Avoid sunlight. At low temperature, the product may solidify. In this case, before application, keep the product in room temperature or in warm water for hours so that the product is fluid. Never heat the oil directly.

**Precautions:**
Contains 100% pure neem oil. Under recommended dosage, the product is nontoxic to mammals and birds. However, keep away from the reach of children. In case of contact with eyes, wash with abundant water and consult doctor. In case of ingestion, Azadirachtin, a component of neem oil, can be very irritating to the skin and stomach. Consult a doctor and show the label.


**Origin, fabrication and packing**
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