PATENT CO.®

RIDofMITE®

NATURAL POULTRY
RED MITE REPELLENT

natural poultry red mite repellent

RIDofMITE is a unique blend
of natural organic essential oils and vitamins

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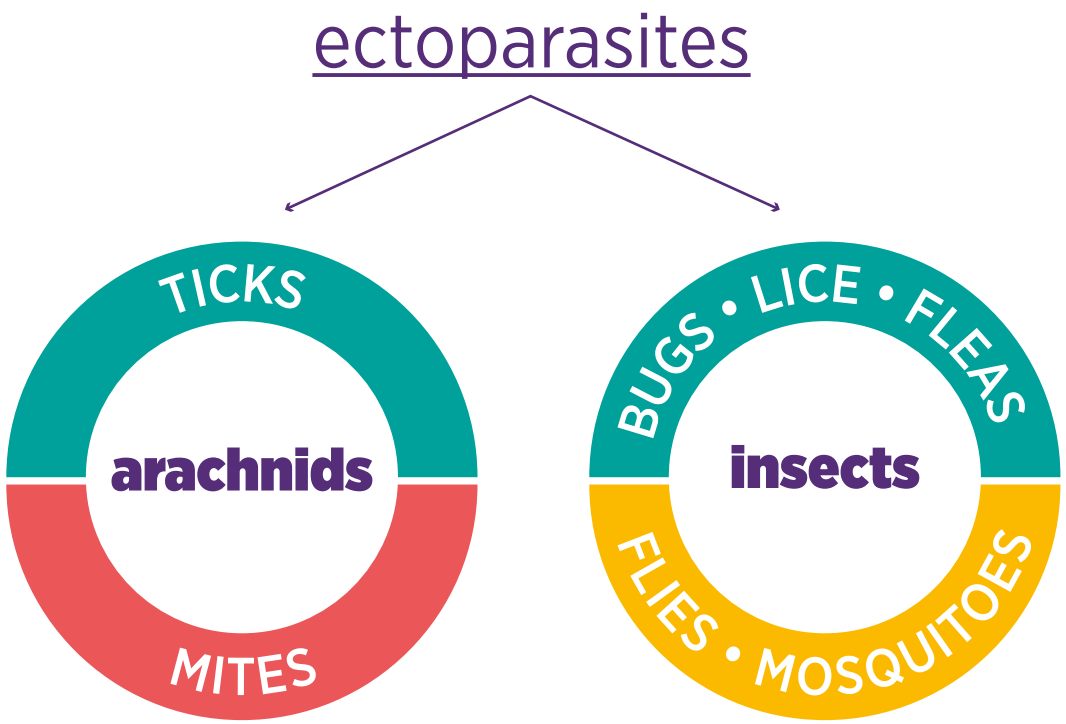
—ectoparasites

Ectoparasites and vector-borne diseases pose a constant threat and challenge to livestock and human health worldwide. Increased activities toward the intensification of agricultural practices and livestock production, coupled with rural and peri-rural landscape modifications and poor ecosystem protection, create host populations conducive to the evolution and persistence of parasites and vectors.

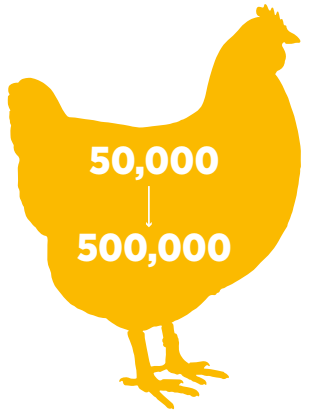


—presence

appearance → **in-house birds**
especially in hot weather conditions

life cycle → **on the host and in the barn**

survival without host → **up to a year**



Infestation levels are estimated to range from a “normal” 50,000 mites per bird to over 500,000 mites per bird in severe infestations.

The mite is active at night because it uses the darkness to attach to the animal and suck blood, but during the day it hides in different places in the farm such as holes, cracks and gaps in the buildings, in cages, and in equipment.

—most significant mites

- Northern Fowl Mite (*Ornithonyssus sylviarum*, G. Canestrini & Fanzago, 1877)
- **Red Fowl Mite (*Dermanyssus Galinae*, De Geer 1778)**

Poultry red mite (Dermanyssus gallinae) is the most economically important parasite affecting commercial egg production facilities worldwide.

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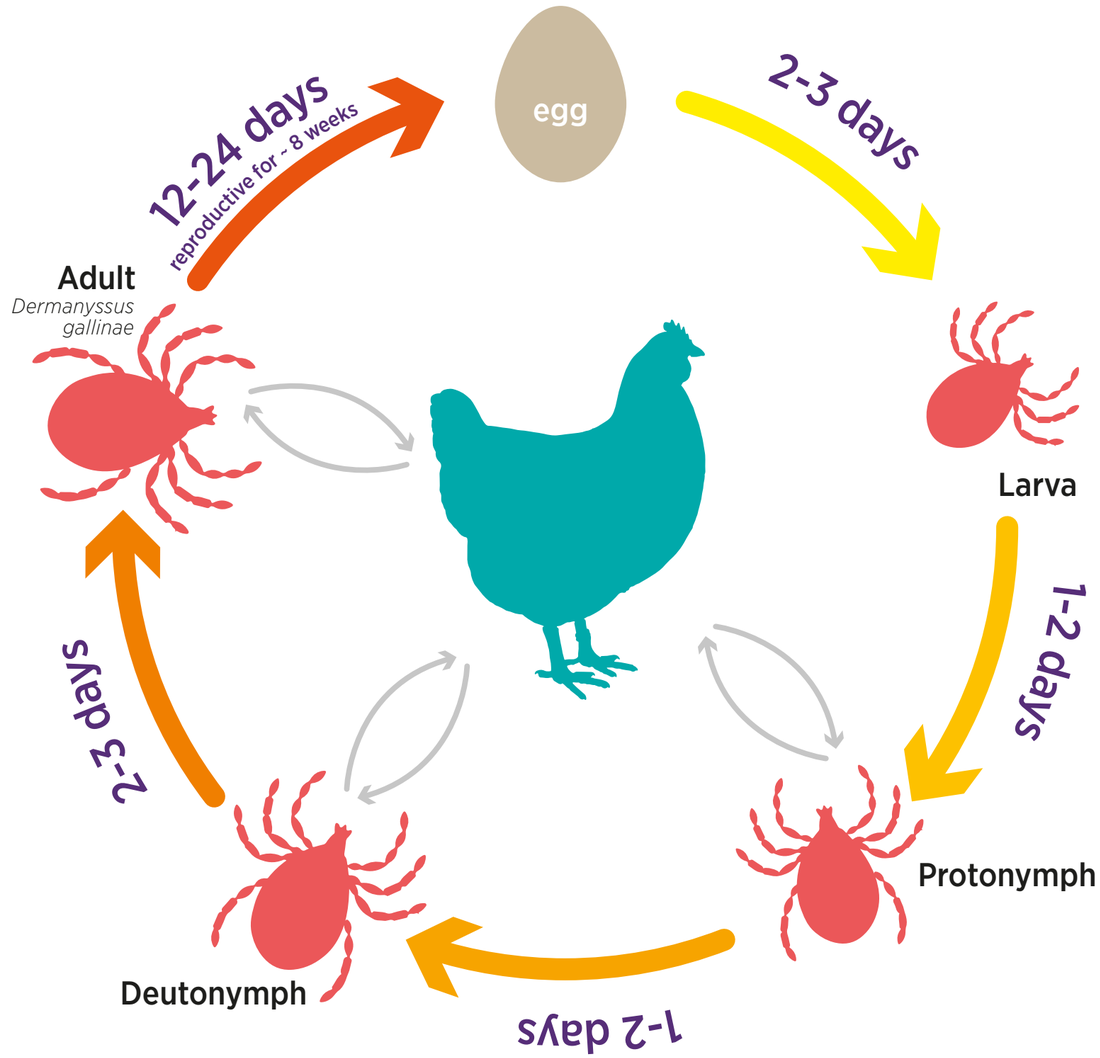
—RED MITE negative impacts

1. **agitation and stress in the flock**
2. **reduced feather quality**
3. **skin irritation**
4. **feather pecking**
5. **weight loss**
6. **anemia**
7. **drop in egg production of up to 20%**
8. **in male birds, reduction of seminal fluid volume**
9. **decrease in egg quality**
10. **production losses attributed to increase in bird mortality**
11. **output and mite control costs**
12. **vector of pathogenic organisms (*)**

(*) In addition, poultry red mites can also carry viruses and bacteria that cause illness in hens (e.g. Salmonella, Pasteurella, and Leucosis, among others).

—RED MITE life cycle



20-35°C/68-95°F and 70-80% relative humidity
Life cycle can be completed within 5-14 days (egg to adult)

Resistance to mite control carried out by spraying commercial premises with pesticides has been identified in red mite populations, highlighting the need for alternative solutions for controlling this debilitating parasite.

Red mites can survive for up to 1 year without a single meal of blood!

PATENT CO. Natural solution

Reaching all the mites during treatment is only possible by means of a natural solution. That is the reason why PATENT CO. developed a new approach to solving this problem – PHYTOGENICS.
Phytogenics, from the aspect of poultry red mites, are a group of natural chemical alternatives or non-acaricide products used as feed additives; derived from herbs, spices or other non-woody flowering plants known to have medicinal properties.

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—RIDofMITE® product performance

PHYTOBIOTIC

is completely natural, produced using nature-identical substances from purely plant-derived materials and does not contain any chemicals.

MODE OF ACTION

Monoterpenes, such as a-pinene, cineole, eugenol, limonene, terpinolene, citronellol, citronellal, camphor, and thymol, are complex compounds characterised by a strong odour that masks hens' scent and acts like a natural poultry red mite repellent.

RIDofMITE®

NATURAL POULTRY RED MITE REPELLENT

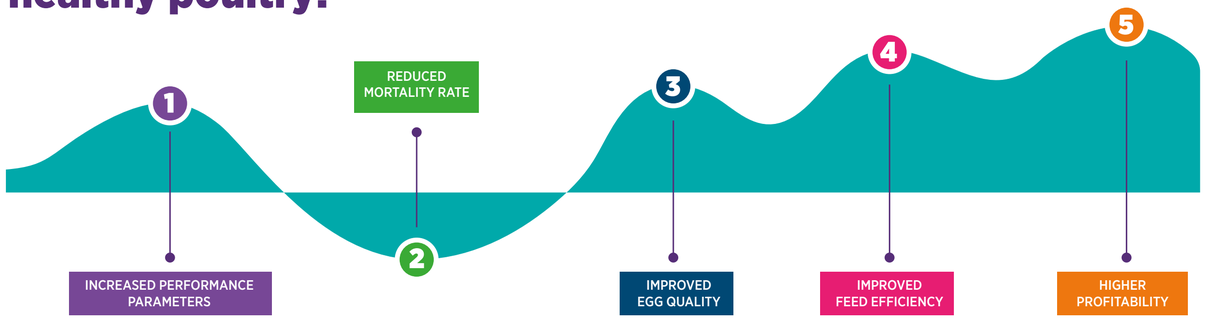
HEALTHIER

- A comprehensive collection of international studies proves that RIDofMITE® is completely
  * non-toxic for humans and animals
- A completely natural, non-toxic alternative to chemical insect repellents such as N,N-diethyl -3-methylbenzamide.

LONG-TERM SOLUTION

Feed palatability and quality, growth promotion, gut function and nutrient digestibility, gut microflora, fewer diseases of the gastrointestinal tract, improved health and immune function, carcass meat safety and quality, increased productive results and reduced mortality

—healthy poultry!

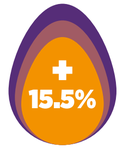


—dosage

500g/MT
Booster dosage

250g/MT
Constant control

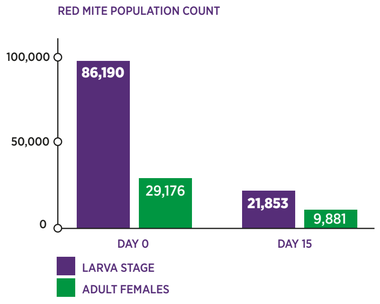
—egg mass increase

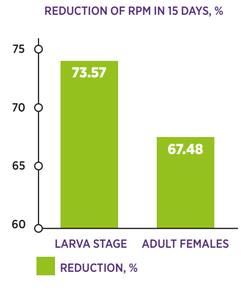


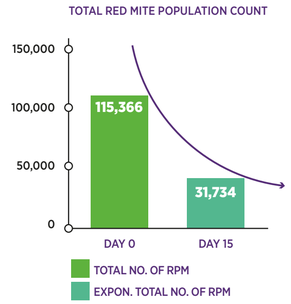
the trials

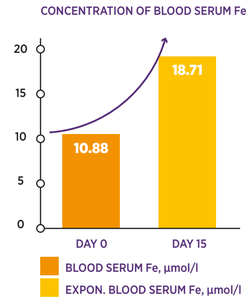
CONTROL OF POULTRY RED MITE (*Dermanyssus gallinae,* De Geer, 1778) IN LAYING HENS FACILITIES BY DIETARY ADDITION OF RIDofMITE®

15-DAY TRIALS









Hens were given feed to which RIDofMITE® was added in the amount of 500 g per ton.

Productive results of hens fed with dietary addition of RIDofMITE®

	Feed intake (g/hen/day)	Feed conv. ratio (g egg / g feed)	Egg production (%)	Egg mass (g/hen/day)	Egg weight (g)
DAY 0	117.50[a] ± 2.85	2.86[a] ± 0.47	68.92[b] ± 10.84	43.20[a] ± 6.70	62.50[a] ± 1.47
DAY 15	117.93[a] ± 3.41	2.60[a] ± 0.33	77.06[a] ± 6.09	48.7[a] ± 5.29	62.89[a] ± 2.81

Sensory quality of hard boiled eggs of hens fed with dietary addition of RIDofMITE®

Grade system (1-7)	Smell	Texture	Taste	Impression
DAY 0	5.89[b] ± 0.36	5.95[b] ± 0.42	6.05[b] ± 0.33	5.91[b] ± 0.39
DAY 15	6.30[a] ± 0.42	6.37[a] ± 0.31	6.44[a] ± 0.36	6.26[a] ± 0.32

Hens were given feed to which RIDofMITE® was added in the amount of 500 g per ton.

Use of RIDofMITE® in just 15 days leads to:

Red Mite reduction

Decreased hen mortality

Increased egg production

Increased concentration of blood serum Fe

Investigation of the effects of natural dietary red mite repellent RIDofMITE®

TRIAL LASTED 6 WEEKS WITH 24,850 LAYING HY-LINE BROWN HENS INFESTED WITH RED MITES

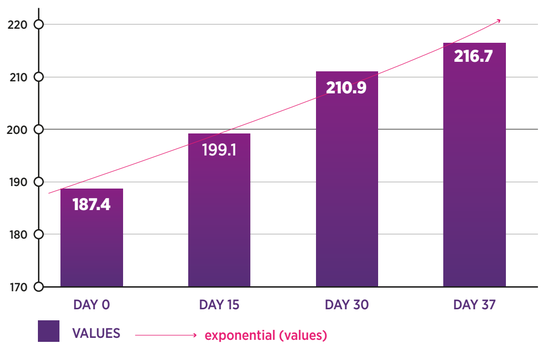
Ratio of 500 g/t in first 15 days

Decreased ratio of 250 g/t until the end of experiment

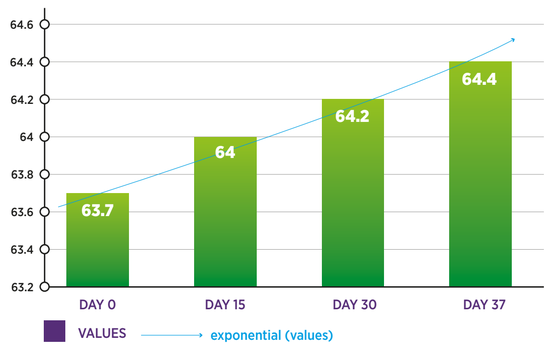
Eggs productivity

Red mite reduction

Average number of eggs laid per hen



Egg weight result



PATENT CO.

ABOUT US

PATENT CO. is a multinational company established in 1990 in the heart of Europe in Serbia. Today, we operate in more than 20 countries on 4 continents (Europe, America, Asia, and Africa).

PATENT CO. strives to be an innovative and internationally-oriented company that is always one step ahead in introducing new technologies in animal nutrition.

RESEARCH AND DEVELOPMENT

Every year, **PATENT CO.** invests significant resources in research and development programmes in laboratories, research centers, and farms. This program facilitates the development of new products, with a view to finding optimal animal feed production solutions.

QUALITY AND SAFETY

PATENT CO. invests in top-of-the-line equipment for the production of animal feed additives and premixtures, allowing us to achieve final products of consistently high quality. This process ensures full traceability, from the reception of raw materials to delivery of the product to the customer.

PATENT CO.®

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