



## Poultry Defender™

**Poultry Defender™** is a soil-dwelling predatory mite (*Stratiolaelaps spp.*) that feeds on fowl mites, small insects and nematodes in soils.

### The Pest – Fowl Mites

**Red fowl mites** and **Northern fowl mites** look roughly similar without inspection with a microscope. Adult mites have 8 legs and are approximately 1 mm long with a dark red to black appearance. Larvae have 6 legs and may be lighter in colour or pale as they do not contain the hosts blood.

Female adult mites lay eggs directly on their host. The eggs hatch in one to two days, depending on the temperature and humidity. The larvae do not feed on the bird; however, larvae rapidly develop to the nymph stage in about eight hours. The nymphs do feed on blood from the birds and become adults within four to seven days.

Adult female mites complete the egg-laying process within two days after taking a blood meal from their host. The number of eggs laid per female is relatively low, usually two to five. However, the short life cycle means that mite populations can increase rapidly, with newly infested birds capable of supporting a mite population in excess of 20,000 per bird in 9 to 10 weeks under favourable conditions.

Red fowl mites can survive for as long as 8 months without feeding, northern fowl mites can only survive a few days without a host to feed on.

Signs and symptoms of fowl mites include:

- Hens are agitated and stressed
- Chickens no longer want to roost on their perches
- Blood spots on the eggs
- Dark spots in the cage near the seams



## The Solution – Poultry Defender™

**Poultry Defender™** is a small pale brown, highly mobile mite with a lot of energy! Adult mites are 0.5-1.0 mm long and are commonly found in the top few centimetres of soil or compost.

Females lay their eggs near the soil surface, and these hatch into six-legged larvae. There are two further nymph stages and a life cycle can be completed in 10 days at 25 °C, but can vary from 7-30 days depending on temperature.

Below 12°C, **Poultry Defender™** becomes inactive, and development stops when temperatures fall below 8°C. The species does not hibernate (diapause) and is able to survive for 6-8 weeks without prey by feeding on decaying organic matter.

**Poultry Defender™** is also a predator of fungus gnats and shore flies larvae in the floor media.

**Poultry Defender™** is not considered harmful to humans or animals, and no environmental effects are expected.

## Environmental Conditions

**Poultry-Defender™** survives well in most poultry coop conditions and is not harmed by regular watering, although flooded or waterlogged areas are not tolerated. Optimum conditions for development are 20-30 °C, and soil temperatures above 30 °C are harmful.

## Packaging

**Poultry-Defender™** is supplied in a mixture of media and vermiculite with mould mites as a food source for the mites. There are 10,000 predatory mites per litre of mixture.



## Release and Storage Instructions

Release **Poultry Defender™** as soon as possible on arrival

- **Poultry Defender™** can be stored for a maximum of 2 days at 10-15 °C
- DO NOT REFRIGERATE
- Sprinkle the mixture on the coops around known infested areas

## Release rate

Preventative: Use 1 litre per 100-200 square metres

Curative: Use 1 litres per 20 to 50 square meters

Repeated applications may be needed for heavy pest infestations.

## Post release

**Poultry Defender™** may take 2-3 weeks to exert an effect on pest populations. **Poultry Defender™** can be hard to find in soil or growing media, therefore monitor pest numbers to determine the need for further releases.

Re-application of **Poultry Defender™** is recommended to 'hot spots' should some pests remain.

Before introducing **Poultry Defender™** into your coop please check residual chemical affects and ensure you know chemical compatibilities of products that may be applied.

A list of compatible pesticides and withholding periods can be found in the publication 'The Good Bug Book' Second Edition (2002), Editor Richard Llewellyn.