INSECT CONTROL IN POULTRY HOUSES

Sumithion® 1000EC insecticide provides effective control of the adult lesser mealworm (*Alphitobius diaperinus*) beetle also known as litter beetle or darkling beetle (black beetle).

**Description**

The adult lesser mealworm is roughly 6 mm long and widely oval in shape. It is shiny black or brown with reddish brown elytra, the colour variable among individuals and changing with age. Much of the body surface is dotted with puncture-like impressions. The antennae are paler at the tips and are covered in tiny, yellowish hairs. The elytra have shallow longitudinal grooves.

**Impact**

**Facility Damage**

Lesser mealworm can cause damage to almost every part of a poultry facility. They can burrow into wood structures and tunnel through insulation. They can cause damage to sill sealers and vapor barriers. They can even create spaces between walls, concrete, and flooring.

**Disease Vectors**

Lesser mealworm can carry diseases such as *E. coli*, turkey coronavirus, *Salmonella*, Marek’s disease virus, Newcastle disease virus, poultry tapeworms, infectious bursal disease virus (IBDV), astrovirus, RSS orthoreovirus, and coccidiosis protozoa.

**Direct Damage to Poultry**

Poultry can be directly, negatively affected by Lesser mealworm in the facility. Aside from carrying diseases, lesser mealworm may also pester the birds, causing excess movement and reducing feed efficiency. Poultry that feed on the pests instead of provided feed can suffer effects of lower nutrition. Beetles are filling, but not as nutritious as the feed provided. They are also known to crawl on the birds when deprived of moisture and chew at the base of the feathers. The skin bites can be mistaken for skin leukosis at the processing plants. The bites also predispose the birds to certain diseases. In cases of heavy infestation, the beetles are known to kill weakened chicks in their pursuit of food and moisture.

**Feed Loss**

These beetles can consume a significant amount of poultry feed. They can be found in stored grains and seeds such as wheat, rice, soybeans, and barley. Spilled feed can attract a lesser mealworm infestation.
Features

<table>
<thead>
<tr>
<th>Active ingredient Fenitrothion</th>
<th>Industry standard, provides effective and residual control of lesser mealworm</th>
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</thead>
<tbody>
<tr>
<td>Robust label claims</td>
<td>Can be used in poultry litter as well as shed walls and roof</td>
</tr>
<tr>
<td>The only Group 1B insecticide registered for use in poultry</td>
<td>Ideal rotation option to prolong the effective life of existing control options</td>
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<tr>
<td>Established product</td>
<td>Sumithion 1000EC insecticide has been sold in Australia for many years for control of a range of beetles, grasshopper and pests in pasture, grain protection and poultry markets</td>
</tr>
</tbody>
</table>

Directions for use

<table>
<thead>
<tr>
<th>Situation/ Crop</th>
<th>Pest</th>
<th>State</th>
<th>Rate</th>
<th>WHP</th>
<th>Critical Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broiler poultry house litter, walls, roof and feed sheds</td>
<td>Lesser mealworm (litter beetle), darkling beetle (black beetle)</td>
<td>All states</td>
<td>1.0 L/100 L water (10 L diluted spray treats 70 m²)</td>
<td>Nil</td>
<td>Apply diluted spray to broiler poultry shed litter, walls, and roof. Spray feed shed and other places where beetles may hide. Spray old litter before spreading new litter. Improved results may be obtained where spray is incorporated into the litter. DO NOT house layer birds in recently treated sheds. Avoid contamination of chicken feed and do not allow spray to reach birds in neighbouring shed. Spray sheds after each batch of broilers is taken out shortly before re-stocking.</td>
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