NoFly WP™

A highly effective biological insecticide

This product is based on a natural fungus which kills select pest insects while being safe to most beneficial insects. It is a concentration of the active ingredient *Isaria fumosoroseus* strain FE 9901, a naturally occurring insecticidal microorganism.

**Targets**
Attacks pests in all active life stages from larvae to adult, of common greenhouse pests like various species of whitefly, aphids, thrips, mealybugs, fungus gnats, weevils, Lygus, leafhopper, Engytatus, and others.

**When to use NoFly WP™?**
Apply at first symptoms of pest attack. Minimum 3 applications at 5-7 day intervals or shorter in severe infestations.

**Unit of packaging**
Active ingredients: *Isaria fumosoroseus* strain FE 9901 (entomopathogenic fungus) is available in 2 lb bag with 12 per case and 10 lb pail for hydroponic vegetable applications
Formulation: Wettable powder
Concentration: 18.0% *Isaria fumosoroseus* strain FE 9901. Contains a minimum of 2x10⁹ colony forming units per gram (dry weight basis)
Packaging: in a polythene bag or polypropylene pail

**How does NoFly WP™ work?**
When spores of NoFly WP™ come into contact with the insect pest they attach to the body and begin to grow almost immediately. Once the spore germ tube penetrates the host cuticle, fungal multiplication takes place through formation of hyphal bodies in the host body. The NoFly microbe mechanically disrupts the host's internal organs and initiates tissue necrosis. This leads to lack of feeding, inactivity and eventually death.

**Application and Useful Tips**
- NoFly WP™ can be used on vegetables, ornamentals, herbs and medicinal plants in the greenhouse or in other indoor growing facilities
- Apply at first symptoms of pest
- Can be applied through a Dramm® Cold Fogger
- Treatments should be directed to all areas of the plant where the insect feeds, hatches, and lives
- Apply 2 lbs per acre
- NoFLY WP™ can be applied anytime throughout crop cycle, even at harvest

**Important!**
- Not recommended to be applied through a pulse or heat-generating fogger
- In case of heavy infestations, combination with a standard insect growth regulator can produce a synergistic effect

**Best working conditions NoFly WP™**
Optimal humidity for growth of *I. fumosoroseus* FE 9901 is 50% or greater. If humidity is below 50%, schedule application immediately after general watering or irrigation. Nofly WP™ is unaffected by pH ranges from 4.0-9.0.

**Handling**
Koppert Biological Systems is not liable for any loss of quality if the product is stored for longer and/or under different conditions than recommended.
- Storage before application: 6 months at 75°F/24°C
- Storage in refrigerator: 18 months 46°F/8°C
- Protect from extreme heat and cold

**Mode of action**
Colonizes host insects and starves host of nutrients. Mortality occurs within 2-5 days.

**Dosage**
The information given below is merely indicative. Tailored advice can be provided if information is available on the local factors that need to be taken into account; such as the crop, the climate conditions and the level of infestation. For the correct approach, please consult a Koppert specialist or a distributor of Koppert products.

<table>
<thead>
<tr>
<th>NoFly WP™</th>
<th>preventive</th>
<th>light curative</th>
<th>heavy curative</th>
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<tbody>
<tr>
<td>rate</td>
<td>16 oz/100 gal</td>
<td>16 oz/100 gal</td>
<td>16 oz/100 gal</td>
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<tr>
<td>rate/acre</td>
<td>2 lbs</td>
<td>2 lbs</td>
<td>2 lbs</td>
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<td>interval (days)</td>
<td>7-14</td>
<td>5-7</td>
<td>3-5</td>
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<tr>
<td>frequency</td>
<td>As needed</td>
<td>3-4x or until control is achieved</td>
<td>3-4x or until control is achieved</td>
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<td>remarks</td>
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**Important!** Only use products that are permitted in your country/state and crop. Check local registration requirements and strictly follow label instructions. Koppert Biological Systems cannot be held liable for incorrect or unauthorized use.

**www.koppertus.com**
800.928.8827  orders@koppert.com
The Four Stages of Control with NoFly WP™

1. Attachment
The spores identify the insect's cuticle and attach to it through hydrophobic interaction between spore wall and lipid layer of epicuticle.

2. Germination
Spores germinate on the insect after application. The hyphae penetrate the wax, chitin and protein matrices of the cuticle without an obvious detrimental effect upon the insect other than local discoloration.

3. Growth
Once P. fumosoroseus penetrates host cuticle, fungal multiplication takes place through formation of hyphal bodies or “blastospores” in the host body within 48 hours.

4. Sporulation
The mycelium is present on the dorsum of the insect body within 48h and sporulation occurs within 72h. In high relative moisture conditions, the fungus can grow outside of the insect and produce new spores.

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