

BOTANIGARD® 22WP



An American Vanguard Company

Mycoinsecticide

FOR USE ON FOOD CROPS AND ORNAMENTALS IN GREENHOUSES, SHADE HOUSES, NURSERIES, LANDSCAPES, INTERIORSCAPES, AND ON TURF

Product Information Bulletin

185

GENERAL INFORMATION

BOTANIGARD 22WP is a microbial insecticide (mycoinsecticide) that offers activity on a wide range of insects as a foliar spray, drench, or dip.

BOTANIGARD 22WP should be used as a preventative at the first sign of pest activity and may be used multiple times in a crop. **BOTANIGARD 22WP** contains the live spores of the entomopathogenic fungus, *Beauveria bassiana* strain GHA.

Common Name: *Beauveria bassiana* strain GHA.

Class: Biopesticide fungal agents

| GROUP | UNF | INSECTICIDE |
|-------|-----|-------------|
|-------|-----|-------------|

Packaging: 1 lbs., 12 lbs. to a case.

RESTRICTED ENTRY INTERVAL (REI) AND SIGNAL WORD

REI = **4 hours** Signal Word = **CAUTION**

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicator and other handlers must wear:

- Coveralls, waterproof gloves, shoes plus socks
- Mixers/loaders and applicators must wear a minimum of a NIOSH-approved particulate filtering facepiece respirator with any R or P filter; or a NIOSH-approved elastomeric particulate respirator with any R or P filter; or a NIOSH-approved powered air-purifying respirator with an HE filter. See label for complete PPE requirements.

ADVANTAGES OF BOTANIGARD

- Broad labeling including food crop uses
- Compatible with BCAs and IPM practices
- 0-day Pre-Harvest Interval (PHI)
- No resistance development
- No limit on number of applications



CAN BE USED IN ORGANIC PRODUCTION

MODE OF ACTION

BOTANIGARD 22WP acts by contact. Fungal spores attach to the pest, germinate, and penetrate through the cuticle. The fungus then grows within the pest, causing infection and mortality. It may take 7-10 days after treatment to control the target pest.

USE SITES

BOTANIGARD 22WP may be used on crops grown in greenhouses, indoor/outdoor nurseries, shade houses, mushroom houses, commercial landscapes, interiorscapes, and on turf.

INSECTS CONTROLLED

| | |
|--------------|--------------|
| Aphids | Loopers |
| Armyworms | Mealybugs |
| Caterpillars | Psyllids |
| Flea Beetles | Root Weevils |
| Lace Bugs | Stink Bugs |
| Leaf Beetles | Thrips |
| Leafminers | Whiteflies |
| Leafhoppers | |

(See label for complete list of insects controlled)

APPLICATION RATES

BOTANIGARD 22WP rates range from ½ to 2 lbs. per 100 gal. of water depending on target pest. Use higher rates when pest pressure is high. Refer to the label for specific rates.

TANK MIXING

BOTANIGARD 22WP is physically and biologically compatible with a wide range of insecticides, fungicides, and spray adjuvants although some fungicides and insecticides may kill spores. Follow the most restrictive label limitations with tank mix partners.

RESISTANCE MANAGEMENT

There has been no reported resistance to the active ingredient in **BOTANIGARD 22WP**. There is no limit on the number of applications or total amount of product that can be applied in one season.

COMPATIBLE BIOLOGICAL CONTROL AGENTS WITH BOTANIGARD 22WP

The introduction of Biological Control Agents (BCAs) is often a component of an Integrated Pest Management (IPM) program and an awareness of use with compatible products is essential to the success of the program.

BOTANIGARD 22WP, based on the fungus *Beauveria bassiana* strain GHA, is an effective

mycoinsecticide that is used to control many insects. The applied spores infect the soft body of an insect directly. Consequently, growers need to be able to assess how they can be used in their IPM program, for example, as a spot treatment or by broad application.

BIOLOGICAL CONTROL AGENTS AND THEIR USE WITH BOTANIGARD 22WP

| Genus | Species | OHP Recommendation |
|-------------------------------------|---------------|---|
| Aphidius | colemani | Ok on mummifield aphids. Wait until mummification before applying. Avoid use on banker plants. |
| Aphidius | ervi | Ok on mummifield aphids. Wait until mummification before applying. Avoid use on banker plants. |
| Aphidoletes | aphidimyza | Use only on established population. |
| Chrysoperla | carnea | Apply 5 days prior to release. |
| Cryptolaemus | montrouzieri | Ok to apply. |
| Diglyphus | isaea | Ok to Apply -- Use on established populations. Or wait 3-5 days before release. |
| Encarsia | formosa | Use only on established populations. Or wait 3-5 days before release. OK on parasitized whitefly pupae. |
| Eretmocerus | eremicus | Use only on established populations. Or wait 3-5 days before release. |
| Heterorhabditis | bacteriophora | Ok to apply |
| Hypoaspis (Stratiolaelaps scimitus) | miles | Ok to Apply |
| Neoseiulus (Amblyseius) | californicus | Ok to Apply |
| Neoseiulus (Amblyseius) | cucumeris | Ok to Apply |
| Neoseiulus (Amblyseius) | fallacis | Ok to Apply |
| Orius | insidiosus | Apply prior to introduction of Orius |
| Phytoseiulus | persimilis | Apply 5 days prior to release. |
| Steinernema | carpocapsae | Ok to Apply |
| Steinernema | feltiae | Ok to Apply |
| Trichogramma | spp. | Ok to Apply |

*Resources were reviewed for the compatibility of the BOTANIGARD active ingredient with BCAs and a summary of the findings is provided. Please refer to product label for proper application and your BCA supplier for further information.

Use of BOTANIGARD 22WP according to the labeling is subject to the use precautions and limitations imposed by the label affixed to the container of BOTANIGARD 22WP. It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Always read product label prior to product use.

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