

FOR CONTROL OF MITES AND WHITEFLIES ON ORNAMENTAL PLANTS IN
COMMERCIAL GREENHOUSES AND NURSERIES



JUDO™ (spiromesifen) Miticide/Insecticide is an excellent and innovative compound for controlling mites and whiteflies on nursery and greenhouse ornamentals. Efficacy and plant safety have been evaluated on a great number of ornamental crops. When used according to the label recommendations JUDO provides outstanding control of whiteflies and mites resistant to other families of insecticides and miticides.

JUDO has the following features and advantages:

- New chemical class (Tetrionic acids) with a novel mode of action (lipid biosynthesis inhibitor). It is the only member of this class on the market.
- No cross-resistance to other registered insecticides or miticides.
- Controls all stages of mites and whiteflies (including eggs).
- Adult females exposed to JUDO produce fewer eggs and the eggs produced have a low percentage that hatch.
- Translaminar activity, providing 21 to 30+ days control.
- Soft on many beneficials, particularly parasitic wasps and predatory bugs. Predatory mite numbers are reduced, but populations recover, and mites can be reintroduced after about 7 days.
- Rain-fast formulation.

JUDO™ Mode Of Action (MOA)

JUDO is a lipid biosynthesis inhibitor, and works by preventing the treated mite or whitefly from maintaining proper water balance. This results in desiccation, i.e. the treated mite or whitefly dries up and dies. Depending on temperatures, this occurs within 3 to 10 days after treatment. Speed of activity typically is faster on outdoor crops than greenhouse crops. All developmental stages of mites and whitefly are affected. As with many products, the activity against whitefly immatures is more rapid than against adults. A second application may be necessary to control whitefly if the initial infestation is heavy.



Bemisia tabaci whitefly adults

Because JUDO has a brand-new mode of action, it controls insects and mites resistant to other products. However, product rotation is a sound part of any pest management strategy. Therefore, rotating Judo with other products is strongly recommended.

Activity: Target Mite and Insect Pests

JUDO provides excellent control of a wide range of mite species.

Mites controlled: all spider mites, rust mites, broad, flat and cyclamen mites, plus others.

JUDO provides outstanding control of whiteflies. It is one of the few products that will provide dependable control of all known Q biotype whiteflies. The Q biotype is tolerant to or resistant to numerous insecticides and insect growth regulators.

In addition, the unique mode of action makes JUDO an ideal product to use in a whitefly management program on crops such as poinsettias.

Whiteflies controlled: Greenhouse Whitefly, Sweetpotato Whitefly (including all known Q biotype whitefly strains worldwide), Silverleaf Whitefly and Giant Whitefly.

As with any crop protection product, good coverage of plant surfaces is necessary for optimum control, and applications should be made to developing populations, before damaging numbers are present.

Summary of Plant Safety to Ornamentals

JUDO™, when applied properly, may be used on most ornamentals. JUDO has been tested on over 400 varieties of greenhouse and nursery ornamentals including the most popular varieties of rose and poinsettias. The vast majority of plants have not shown any adverse effects. However, under specific conditions crop safety may be an issue on a few plant species or cultivars. Due to the large number of ornamental plant species and cultivars and different climatic conditions and cultural practices, it is impossible to set an all-inclusive recommendation regarding plant safety. However, the following is a summary:

JUDO is NOT recommended for use on the following ornamentals:

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| Agyranthemum (= <i>Chrysanthemum</i>) <i>frutescens</i> (Jamaica primrose, Agyranthemum daisy) |
| Alstroemeria (Lily of the Incas) |
| Bacopa |
| Cyclamen |
| Fern |
| Fuchsia |
| Geranium - <i>Pelargonium</i> spp. (including ivy, zonal and seed geraniums) |
| <i>Hedera</i> spp. |
| Hydrangea |
| Lobelia |
| Matthiola (Stock) |
| Mexican Heather |
| New Guinea Impatiens |
| Peperomia |
| Phlox |
| Primula |
| Tropical Foliage Plants (including but not limited to <i>Dracaena</i> , Croton (<i>Codiaeum</i> spp.), Neanthebella Palm, <i>Schefflera</i>) |

Use of more than 2 fluid ounces per 100 gallons per application, or 4 fl. oz. per season, is not recommended for the following ornamentals:

| | | |
|---------------|--------------|------------|
| Chrysanthemum | Lantana | Snapdragon |
| Gerbera daisy | Marigolds | Verbena |
| Impatiens | Shasta daisy | |

*JUDO™ may be used on most greenhouse cut rose cultivars. However, because of the large number of rose cultivars, we strongly recommend that a small trial be done before an application is made to an entire planting. Application of more than 4 fl. oz. of JUDO per year to greenhouse-grown roses is not recommended. Application to ‘Attache’, ‘Vogue’, or ‘Classy’ varieties is not recommended.

Adhering to the following recommendations will minimize the chance of plant injury:

- Spray liquid should dry slowly.
- Best to apply in the evening or early morning.
- Best to apply when the relative humidity is greater than 70%.
- Avoid applying in direct sunlight and during the warmest part of the day.
- The pH of the spray tank water should be between 5.5 and 8.
- Avoid tank mixes with emulsifiable concentrate (EC) formulations.
- Avoid surfactants unless experience has shown this combination is safe to use on the target crops.
- Avoid applying to plants that are under stress.
- Use 1-2 fluid ounces/100 gallons on greenhouse crops (except for whitefly control on poinsettia, where the 4 fluid ounces can be used); use 1-4 fluid ounces per 100 gallons on outdoor nursery crops.
- Apply a maximum of three times per crop cycle. On greenhouse crops, wait 30 days before making a second application.

When evaluating JUDO (alone or in a tank mix combination) on a crop or cultivar for the first time it is important to apply only to a few plants and observe for any phytotoxicity. Injury can develop slowly (14 to 28 days). Testing should be made at the 4 fl. oz. rate.

Product Compatibility

JUDO Miticide/Insecticide is effective when used alone at recommended rates. Nevertheless the use of tank mixes is a common practice in many cropping systems. JUDO is compatible with many other pesticides, plant growth regulators and micronutrients. When considering mixing JUDO with other pesticides or additives, first contact your OHP, Inc. representative for advice.

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