CONSERVE* 

A suspension concentrate containing 120 g/litre (11.6% w/w) spinosad.

A selective insecticide for use in
PROTECTED ORNAMENTAL PLANT PRODUCTION and
PROTECTED CROPS OF CUCUMBER, TOMATO, PEPPER AND
AUBERGINE for the control of
WESTERN FLOWER THRIP

Product Registration Number: MAPP 12058
PCS No 03728

The ideal partner for managing Western Flower Thrips in protected ornamental plant production, cucumbers, tomatoes, peppers and aubergines.

Compatible with Integrated Pest Management programmes.

CONSERVE has a unique mode of action.

---

Fargro Ltd
Toddington Lane
Littlehampton
West Sussex
BN17 7PP
Tel: 01903 721591
Fax: 01903 730737
www.fargro.co.uk

USE PLANT PROTECTION PRODUCTS SAFELY.
ALWAYS READ THE LABEL AND PRODUCT INFORMATION BEFORE USE
CONSERVE*

- Controls Western Flower Thrips (WFT), *Frankliniella occidentalis*, in protected ornamental plant production, cucumber, tomato, pepper and aubergine with a high level of activity against all stages, especially larvae and adults.
- Contains spinosad, an active ingredient for insect pest control, derived from the biological fermentation of naturally occurring soil bacteria, *Saccharopolyspora spinosa*.
- Can be used as part of an Integrated Pest Management programme.

The following text is taken from the approved product label:

**DIRECTIONS FOR USE**

**PROTECTED ORNAMENTAL PLANT PRODUCTION**

<table>
<thead>
<tr>
<th>Pest</th>
<th>Control of Western Flower Thrips.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>75 ml per 100 litres of water.</td>
</tr>
<tr>
<td>Water volume</td>
<td>500-1000 litres of water.</td>
</tr>
<tr>
<td>Maximum number of applications</td>
<td>6 per crop (2 consecutive).</td>
</tr>
<tr>
<td>Time of application</td>
<td>Apply when the nymphs or adults are first seen. Monitor carefully pest development to determine whether repeat applications are necessary. A two spray programme at 5 to 7 day intervals should be applied when conditions favour rapid pest development. Apply a maximum of 2 consecutive sprays followed by a minimum 10 week interval before any further applications of CONSERVE (a maximum of 3 blocks of 2 sprays). In protected situations the total number of applications of any spinosad containing product must not exceed 6 per glasshouse/protected structure in a 12 month period, regardless of the crop being treated (including ornamentals).</td>
</tr>
<tr>
<td>Latest time of application</td>
<td>No latest time of application.</td>
</tr>
<tr>
<td>Crop safety</td>
<td>CONSERVE has been tested on a wide range of ornamentals grown as pot plants and cut flowers. CONSERVE has good plant safety when applied at different growth stages. In view of the large number of species and cultivars grown it is recommended to test CONSERVE on a small number of plants to confirm plant safety before spraying the crop. Some spotting of <em>Saintpaulia</em> (African Violet) flowers may occur.</td>
</tr>
<tr>
<td>Notes</td>
<td>Some plants, eg Fuchsia flowers, can provide effective refuges from spray deposits of CONSERVE and control may be reduced.</td>
</tr>
</tbody>
</table>
**Pest Control of Western Flower Thrip.**

Rate 80 ml per 100 litres of water (maximum of 800 ml/ha).

Water volume 600-1000 litres of water.

Maximum number of applications 3 per crop (2 consecutive).

Time of application Apply when the nymphs or adults are first seen. Monitor carefully pest development to determine whether repeat applications are necessary. A 2 spray programme at 7 day intervals should be applied when conditions favour rapid pest development.

Apply a maximum of 2 consecutive sprays followed by a minimum 28 day interval before any further applications of CONSERVE.

In protected situations the total number of applications of any spinosad containing product must not exceed 6 per glasshouse/protected structure in a 12 month period, regardless of the crop being treated (including ornamentals). If the final insecticide chemical application to a crop was spinosad, choose a different insecticide active ingredient to begin spraying on the next crop. Do not apply later than 3 days before harvest.

Latest time of application 3 days before harvest.

Crop safety It is recommended to test CONSERVE on a small number of plants to confirm the crop safety before spraying a large area.

Notes Consult processors before use.

### RESISTANCE - GENERAL

To reduce the possibility of the development of resistance:

- Total reliance on one pesticide will hasten the development of resistance: Spinosad has a different mode of action from other insecticides and is most effective when applied in planned programmes with other insecticides with different modes of action.

- Avoid use of the same active ingredient or mode of action on consecutive generations of insects. However, multiple applications to reduce a single generation are acceptable. If uncertain of the generation cycle, no more than two consecutive applications should be used, or should there be continuous use for more than 30 days. Do not use CONSERVE on consecutive generations for insects which show a high risk of resistance such as Western Flower Thrip. Do not use reduced label rates when applied alone or in tank mixtures.

### PROTECTED CROPS

- Western Flower Thrip have shown resistance to certain chemical groups and resistance management steps should be taken as it is considered a high resistance risk pest in protected crops/plants.

- Before undertaking a spray programme with CONSERVE establish whether incoming plant material has previously been treated with CONSERVE or another spinosad containing product.

- Carry out careful monitoring and apply when the Western Flower Thrip is first seen making repeat applications at 5-7 day intervals for protected ornamentals with a maximum of 2 consecutive sprays, and 7 day intervals for protected cucumbers, tomato, pepper and
aubergine only if needed, with a maximum of 2 consecutive sprays.
- For protected ornamental plants apply a maximum of 2 consecutive sprays followed by a minimum 10 weeks interval before any further applications of CONSERVE (a maximum of 3 blocks of 2 sprays).
- For protected cucumber, tomato, pepper and aubergine, apply a maximum of 2 consecutive sprays followed by a minimum 28 day interval before any further applications of CONSERVE.
- In protected situations the total number of applications of any spinosad containing product must not exceed 6 per glasshouse/protected structure in a 12-month period regardless of the crop being treated.
- The maximum of 6 applications per structure in a 12 month period applies even if only part of the structure is treated at each application, such as with all year round (AYR) chrysanthemums.
- Apply in programmes with other insecticides with a different mode of action and use no further sprays of CONSERVE. (or any other spinosad containing products) once the maximum number of sprays have been applied.
- If the final insecticide application to a crop was spinosad, choose a different insecticide active ingredient to begin spraying on the next crop.
- Applications should be targeted against early insect developmental stages whenever possible.
- Do not use reduced label rates.
- Whenever possible use an Integrated Pest Management programme.
- Choose resistant cultivars.

INTEGRATED PEST MANAGEMENT
Whenever possible use an Integrated Pest Management programme.

BEES
Do not apply in the heat of the day when bees may be foraging as contact with direct spray may be harmful. Remove the hive during spraying as exposure to direct spray may be harmful to bees. Dow AgroSciences take the most restrictive approach and recommend that a period of 24 hours after application and all spray deposits are thoroughly dry before exposure of bees. Water pools with residues of spinosad will continue to pose a risk and should be avoided.

PROTECTED CROPS
As part of an Integrated Pest Management Programme.
- Inspect all incoming plant material for presence of Western Flower Thrip and treat if necessary.
- Monitor ornamental stock routinely to determine need for control measures.
- Use screens or barriers to prevent insects migrating.
- Use predators and parasites.
- Carefully choose any chemical products used in the pesticide programme and consider any side effects on bees and beneficial arthropods.

CONSERVE has been tested on a wide range of predators and parasites used to control pests in protected ornamentals. The active ingredient, spinosad has been shown to be of low impact to many insect and mite predators but harmful to adults of most parasitic wasps (Hymenoptera).

Exposure to direct spray is harmful to bumble bees, but dry spray deposits are harmless.

When applied to plants where insect and mite predators are present CONSERVE may cause a temporary reduction in abundance.

For susceptible predators (parasitic hymenoptera) re-introduction is possible after 7 days following application (with perhaps 14 days in winter months). For most other predators introduction is possible 24 hours after application. Re-introduction of
Toxicity Class rating:
1 = Harmless: less than 25 % reduction. 2 = Slightly harmful: 25-50 % reduction.
3 = Moderately harmful: 50-75 % reduction. 4 = Harmful: more than 75 % reduction.

**CONSERVE Recommendations for Integrated Use with Predators and Parasites**

<table>
<thead>
<tr>
<th>Beneficial Type</th>
<th>Species</th>
<th>*IOBC Toxicity Class Rating</th>
<th>Introduction Best Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predatory mites</td>
<td><em>Phytoseiulus persimilis</em></td>
<td>Harmless (1)</td>
<td>Data suggest predatory mites introduced when spray deposits are dry may be affected but will recover after 24 hours.</td>
</tr>
<tr>
<td></td>
<td><em>Amblyseius californicus</em></td>
<td>Harmless (1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Amblyseius cucumeris</em></td>
<td>Harmless (1)</td>
<td></td>
</tr>
<tr>
<td>Predatory insects</td>
<td><em>Chrysoperla carnea</em></td>
<td>Harmless (1)</td>
<td>Data suggest predatory insects introduced when spray deposits are dry may be affected but will recover after 24 hours. <em>Orius laevigatus</em> is best introduced after 7 days.</td>
</tr>
<tr>
<td></td>
<td><em>Orius laevigatus</em></td>
<td>Slightly harmful (2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Aphidoletes aphidimyza</em></td>
<td>Harmless (1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Macrolophus caliginosus</em></td>
<td>Harmless (1)</td>
<td><em>M. caliginosus</em> may be introduced on the day of application once spray deposits are dry. If CONSERVE is applied directly to plants containing <em>M. caliginosus</em> there may be a short-term reduction in numbers.</td>
</tr>
<tr>
<td>Parasitic wasps</td>
<td><em>Aphidius colemani</em></td>
<td>Harmful (4)</td>
<td>Direct applications of CONSERVE are harmful to parasitic wasps. Wait two weeks after an application of CONSERVE before introducing new parasites.</td>
</tr>
<tr>
<td></td>
<td><em>Encarsia formosa</em></td>
<td>Moderately Harmful (3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Trichogramma brassicae</em></td>
<td>Moderately Harmful (3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Diglyphus isaea</em></td>
<td>Harmful (4)</td>
<td></td>
</tr>
</tbody>
</table>

*Toxicity Class rating:
1 = Harmless: less than 25 % reduction. 2 = Slightly harmful: 25-50 % reduction.
3 = Moderately harmful: 50-75 % reduction. 4 = Harmful: more than 75 % reduction.

For further information and the latest advice on beneficial insects and mites and their integrated use with CONSERVE consult Fargro Limited.

**MIXING**

To ensure thorough mixing of the product invert the container several times before opening. Half fill the spray tank with water, begin agitation and add the required quantity of CONSERVE. Fill up the spray tank, agitating continuously to ensure thorough mixing, and maintain agitation until spraying is complete. Use only clean water for mixing.

For knapsack sprayers, half fill the spray tank with water and add the required quantity of CONSERVE. Fill up the spray tank agitating continuously to ensure thorough mixing. Use the spray solution immediately after preparation.

**SPRAY VOLUME**

Apply in a high volume spray to ensure thorough coverage of leaves, stems and buds to the point of run off.

Water volume should reflect the need for uniform cover and penetration of the leaf
The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work (UK only).

RISK AND SAFETY INFORMATION.

**VERY TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.**

Keep out of reach of children.
Keep away from food, drink and animal feeding stuffs.
If swallowed seek medical advice immediately and show this container or label.
This material and its container must be disposed of in a safe way.
Use appropriate containment to avoid environmental contamination.

To avoid risks to man and the environment, comply with the instructions for use.

NOTES

Wash spray tank and equipment (including knapsack sprayers) thoroughly with water and a liquid detergent immediately after use. Spray out. Fill with clean water and leave overnight. Spray out again before using another product.

**MODE OF ACTION**

**CONSERVE** insecticide enters the insect primarily through contact and ingestion. Contact occurs by direct application or by insect movement on a treated surface. Ingestion occurs from feeding on treated surfaces. Following entry, **CONSERVE** acts on the nicotinic and GABA receptor sites of the insect.

APPLICATION EQUIPMENT

Apply **CONSERVE** using either a hydraulic nozzle motorised sprayer or knapsack sprayer. Ensure the equipment is in good working order and has been calibrated according to the manufacturers’ recommendations.

canopy.

**Protected ornamental plant production**

Water volume: Minimum: 500 litres/ha
Maximum: 1000 litres/ha

Apply in a high volume spray to ensure thorough coverage of leaves, stems, buds and flowers to the point of run off.

**Protected cucumber, tomato, pepper, aubergine**

Water volume: Minimum: 600 litres/ha
Maximum: 1000 litres/ha

Apply in a high volume spray to ensure thorough coverage of leaves, stems, buds, flowers and fruits to the point of run off.

WATER VOLUME:

Minimum: 500 litres/ha
Maximum: 1000 litres/ha

Apply in a high volume spray to ensure thorough coverage of leaves, stems, buds and flowers to the point of run off.

APPLICATION EQUIPMENT

Apply **CONSERVE** using either a hydraulic nozzle motorised sprayer or knapsack sprayer. Ensure the equipment is in good working order and has been calibrated according to the manufacturers’ recommendations.

WATER VOLUME:

Minimum: 600 litres/ha
Maximum: 1000 litres/ha

Apply in a high volume spray to ensure thorough coverage of leaves, stems, buds, flowers and fruits to the point of run off.

APPLICATION EQUIPMENT

Apply **CONSERVE** using either a hydraulic nozzle motorised sprayer or knapsack sprayer. Ensure the equipment is in good working order and has been calibrated according to the manufacturers’ recommendations.
SAFETY PRECAUTIONS

Operator Protection:
WHEN USING DO NOT EAT, DRINK OR SMOKE.

Environmental Protection:
DO NOT CONTAMINATE WATER with product or its container.
Do not clean application equipment near surface water.
Avoid contamination via drains from farmyards and roads.

Storage and disposal:
WASH OUT CONTAINER THOROUGHLY, empty washings into the spray tank and dispose of safely.
DO NOT RE-USE CONTAINER for any purpose.

IMPORTANT INFORMATION
FOR USE ONLY AS A HORTICULTURAL INSECTICIDE

<table>
<thead>
<tr>
<th>Crop/situation:</th>
<th>Maximum Individual Dose</th>
<th>Maximum Number of Treatments</th>
<th>Latest Time of Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ornamental Plant Production (Protected)</td>
<td>75 ml/100 litres of water</td>
<td>6 per crop (See “Other specific restrictions”)</td>
<td>-</td>
</tr>
<tr>
<td>Cucumber (protected), tomato (protected), pepper (protected), aubergine (protected)</td>
<td>80 ml/100 litres of water</td>
<td>3 per crop (See “Other specific restrictions”)</td>
<td>3 days before harvest</td>
</tr>
</tbody>
</table>

Other specific restrictions:
For protected ornamental plants apply a maximum of 2 consecutive sprays followed by a minimum 10 week interval before any further applications of CONSERVE (a maximum of 3 blocks of 2 sprays).

For protected cucumber, tomato, pepper and aubergine, apply a maximum of 2 consecutive sprays followed by a minimum 28 day interval before any further applications of CONSERVE.

In protected situations the total number of applications of any spinosad containing product must not exceed 6 per glasshouse/protected structure in a 12 month period, regardless of the crop being treated (including ornamentals).

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTIONS PRODUCTS.
Dow AgroSciences Conditions of Supply:
All goods supplied by us are of high grade and we believe them to be suitable but, as we cannot exercise control over their storage, handling, mixing or use, or the weather conditions before, during and after application which may affect the performance of the goods, all conditions and warranties, statutory or otherwise, as to the quality or fitness for any purpose of our goods are excluded. No responsibility will be accepted by us or re-sellers for any failure in performance, damage or injury whatsoever arising from their storage, handling, application or use. These conditions cannot be varied by our staff or agents whether or not they supervise or assist in the use of such goods.

PROTECT FROM FROST
* CONSERVE is a trademark of Dow AgroSciences LLC

Approval Holder
Dow AgroSciences Ltd.,
Latchmore Court,
Brand Street,
Hitchin, Herts. SG5 1NH
Tel: 01462 457272

Pack Size: 1 litre
Outer Size: 10 x 1 litre

Safety data sheet available on request.

Marketed by Fargro Ltd.

24 hour emergency telephone number for CONSERVE: + 44 (0) 1553 761251

© 2012 Copyright of Fargro and its suppliers.