

# Batavia

# **1L e**

GROUP 23 INSECTICIDE

A 2-way systemic ketoenol insecticide for the control of sucking insect pests in apple, pear, cherry, plum, currants and strawberries.

A suspension concentrate formulation containing 100 g/L spirotetramat.

For professional use only.

#### **Authorisation Holder**

Bayer CropScience Limited 230 Cambridge Science Park Milton Road, Cambridge CB4 QW2 Telephone: 01223 226500

#### Marketing Company:

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## Safety Information

#### **BATAVIA**

UFI: 5RM0-K0HC-200U-YE37

Contains 100 g/L Spirotetramat. Also contains 1.2-benzisothiazolin-3-one, reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one (3:1). May produce an allergic reaction.







#### Warning

May cause an allergic skin reaction. Suspected of da naging fertility. Suspected of damaging the unborn child. Toxic to aguatic life with long lasting effects.

Avoid broat ring dust/fume/gas/mist/vapours/spray. Wear protective gloves/protective clothing/eye protection ace protection.

Obtain special instructions before use. IF ON SKIN: Gently wash with plenty of soap and

IF exposed or concerned: Call a POISON CENTER or doctor/physician.

Collect spillage.

Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean/triple rinsed containers which can be disposed of as non-hazardous waste.

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

PCS Number: 05905

#### SAFETY PRECAUTIONS

#### Operator Protection

Operators must wear suitable protective clothing (coveralls), suitable protective gloves and face protection (faceshield) when handling the concentrate.

When using do not eat, drink or smoke.

Wash hands and exposed skin before eating and drinking and after work.

If you feel unwell, seek medical advice (show label where possible).

#### **Environmental Protection**

Do not contaminate water with product or its container. Do not clean application equipment near surface water. Avoid contamination via drains from farmvards or roads.

Application by orchard/blast sprayer: To protect aquatic organisms respect an unsprayed buffer zone of 10 m to surface water bodies.

Dangerous to bees. Do not use where bees are actively foraging.

Direct spray away from water.

#### Storage and Disposal

Keep away from food, drink and animal feedingstuffs.

Keep in original container, tightly closed, in a safe place.

Rinse container thoroughly by using an integrated pressure rising device or manually rinsing three times. Add washings to sprayer at time of filling and dispose of safely. Do not re-use container for any purpose.



To access the Safety Data Sheet for this product scan the code or use the link below:

www.bavercropscience.ie/sds/batavia.pdf or alternatively contact your supplier IE86280922d rA1d

PROTECT FROM FROST

Bayer

# **DIRECTIONS FOR USE**

IMPORTANT: This leaflet is approved as part of the label. All instructions on this leaflet and on the label should be read carefully in order to obtain successful results from the use of this product.

## RESTRICTIONS

Shake well before use.

The products must not be applied to plants in flower or plants that are being actively visited by honeybees or bumblebees.

Under certain circumstances fruit trees may exhibit symptoms of leaf scorch following applications of Batavia. When applying Batavia to fruit trees, ensure that the trees are not under stress, for example nutrient or water deficiency.

Tank mixtures are not recommended for use in fruit trees in order to ensure an optimum uptake and level of control and to avoid potential crop damage. Batavia should be applied before plant growth regulators are used, an interval of at least 3 days should be observed between the application of Batavia and plant growth regulators.

#### RATES OF USE

Crop	Maximum individual dose L product/ha	Maximum Number of Treatments per Year	PHI
Outdoor apple and outdoor pear	2.25	2	21
Outdoor cherry and outdoor plum	1.5	2	21
Outdoor blackcurrant, white currant and redcurrant	0.75	2	Post inances ap, lication
Outdoor and protected strawberry	1.0	2	Pre-flowering and post-harvest application

#### PESTS CONTROLLED

Batavia is a 2-way systemic insecticide based on spirotetramat which belongs to the ketoenol group of chemistry and within this the class of tetramic acids. It is transported within the plant by both the xylem and phloem and can therefore protect new growth that has not been sprayed directly. It works by inhibition of lipid biosynthesis to control the sucking pests listed below:

iipid biosyritricsis to coritror tri	le suching pests listed below.	
Outdoor Apples and Pears	Woolly aphid, <i>Eriosoma Lanigerum</i> . Rosy apple aphid, <i>Dysaphis plantaginea</i> . Green apple aphid, <i>Aphis pomi</i> . Pear bedstraw aphid, <i>Dysaphis pyri</i> . Pear sucker, <i>Cacopsylla pyri &amp; Cacopsylla pyricola</i> . Mussel scale, <i>Lepidosaphes ulmi</i> . Leaf curling midges, <i>Dasineura mali</i> , <i>Dasineura pyri</i> .	
Outdoor cherry	Black cherry aphid, Myzus cerasi.	
Outdoor plum	Leaf curling plum aphid, <i>Brachycaudus helichrysi.</i> Mealy plum aphid, <i>Hyalopterus pruni.</i>	
Outdoor Strawperries	Tarsonemid mite, <i>Tarsonemus pallidus</i> . Potato aphid, <i>Macrosiphum euphorbiae</i> . Rose aphid, <i>Macrosiphum rosae</i> . Peach potato aphid, <i>Myzus persicae</i> .	
Protected Strawberries	Tarsonemid mite, <i>Tarsonemus pallidus</i> . Potato aphid, <i>Macrosiphum euphorbiae</i> . Rose aphid, <i>Macrosiphum rosae</i> . Peach potato aphid, <i>Myzus persicae</i> . Strawberry root aphid, <i>Aphis forbesi</i> . Melon cotton aphid, <i>Aphis gossypii</i> . Strawberry aphid, <i>Chaetosiphon fragaefolii</i> . Yellow rose aphid, <i>Rhodobium porosum</i> .	
Outdoor blackcurrant, whitecurrant and redcurrant.	Gall mite, Cecidophyopis ribis (reduction only). Currant-lettuce aphid, Hyperomyzus lactucae. Blackcurrant leaf midge, Dasinerua tetenisi.	

Due to the mode of action, rapid knockdown of any pests should NOT be expected. Obvious control usually occurs after 3-7 days and is dependent upon pest stage, with youngest larvae being most susceptible and adults least susceptible. For optimum control, application should be made as soon as pests appear in the crop, so that population build up is prevented through targeting the very young larval stages as they are produced.

#### **CROP SPECIFIC INFORMATION**

Through its two-way systemicity, the active ingredient spirotetramat is translocated to growing points and is able to reach hidden <u>sucking</u> pests in folded leaves and crevices on the tree. However, it is <u>important</u> to note that a substantial expansion of the leaf canopy/crop growth is required (i.e postflowering) for good efficacy as the active ingredient is taken up through foliage and then transported to other plant parts. There is also negligible movement from new leaves to older leaves, so good spray cover on older leaves will be particularly important if the pest is located there.

## Pest specific information - application rate and timing

As a general principle for optimal results, applications of Batavia should target the very youngest larval stages of the pest(s) as these are most susceptible.

Where more than one application of Batavia is used in a crop, growers should refer to the resistance management strategy section of this label.

#### Dose adjustment for applications to Apple, Pear, Cherry and Plum.

\*Where tree height and/or canopy density is reduced, the dose (and water volume) should be adjusted in accordance with an appropriate dose adjustment scheme, for example PACE. Consult your specialist advisor for further information. Further information on the PACE scheme is available from an AHDB Apple Best Practice Guide, or PACE website.

Definition of tree canopy: tree canopy height is the average of the tree height in the orchard (soil to top of the crown) minus the average fund height in the orchard (soil to first main branch).

# **Outdoor Apple and Pear**

Apply Batavia at a maximum rate of 1.5 or 2.25 L/ha depending up in arget pest for tree canopy of 3 m or above (see below for individual procepecific information). Applications can be made at pest infestation from BBCH 69 (end of flowering) to BBCH 81 (maturity onset), respecting the Philo. 21 days before harvest. To ensure good crop coverage a water volume of 500 to 1500 L/ha should be used.

# Woolly aphid, Eriosoma lanigerum.

Apply up to two applications of Batavia post-flowering at 2.25 L/ha for trees with a canopy height of 3 m or higher (adjust the application rate according to tree height and canopy density\*). The first application should be made at the earliest

signs of pest migration from old wood to new wood. If a second application is required, it should be made at a minimum interval of 21 days after the first application.

# Pear sucker, Cacopsylla pyri & Cacopsylla pyricola.

Apply Batavia post-flowering at 2.25 L/ha for trees with a canopy height of 3 m or higher (adjust the application rate according to tree height and canopy density\*), just after blossom at first hatching of the second generation. Application timing should target the pest early in its development cycle between egg hatch and the first larval instar. A second application can be made at a minimum interval of 21 days after the first application.

# Leaf curling midges, Das neur, mali and Dasineura pyri.

Apply Batavia post fiewe ing at 2.25 L/ha for trees with a canopy height of 3 m or higher (adjust the) application rate according to tree height and canopy density\*) against leaf curling midges, especially targeting the first generation of midge to suppress its second and third generations. The use of pheromone waps to identify, when adult midges are flying is an appropriate technique to ensure the optimal but relatively narrow spray window of between mating flight and irst egg hatch is accurately targeted. A second application can be made as appropriate to pest pressure following the initial treatment, respecting a mir mum interval of 21 days between applications.

# Rosy apple aphid, Dysaphis plantaginea, Green apple aphid, Aphis pomi, Pear bedstraw aphid, Dysaphis pyri.

Apply Batavia post-flowering at 1.5 L/ha for trees with a canopy height of 3 m or higher (adjust the application rate according to tree height and canopy density\*). Where two applications of Batavia are used a minimum interval of 14 days between applications is applicable.

# Mussel scale, Lepidosaphes ulmi.

Apply Batavia post-flowering at 1.5 L/ha for trees with a canopy height of 3 m or higher (adjust the application rate according to tree height and canopy density\*) timed preferably at the beginning of crawler migration or certainly within the migration period, which lasts around 4-6 weeks. Where two applications of Batavia are used a minimum interval of 14 days between applications is applicable.

## **Outdoor Cherry**

Black cherry aphid, Myzus cerasi.

Apply Batavia post-flowering at 1.5 L/ha for trees with a canopy height of 3 m or higher (adjust the application rate according to tree height and canopy density\*). Applications can be made at pest infestation from BBCH 69 (end of flowering) to BBCH 81 (maturity onset), respecting the PHI of 21 days before harvest. To ensure good crop coverage a water volume of 500 to 1500 L/ha should be used. Where two applications of Batavia are used a minimum interval of 14 days between applications is applicable.

#### **Outdoor Plum**

Leaf curling plum aphid, *Brachycaudus helichrysi* and Mealy plum aphid, *Hyalopterus pruni*.

Apply Batavia at 1.5 L/ha for trees with a canopy height of 3 m or higher (adjust the application rate according to tree height and canopy density\*). Applications can be made at pest infestation from BBCH 69 (end of flowering) to BBCH 81 (maturity onset), respecting the PHI of 21 days before harvest. To ensure good crop coverage a water volume of 500 to 1500 L/ha should be used. Where two applications of Batavia are used a minimum interval of 14 days between applications is applicable.

# **Outdoor Strawberry**

Tarsonemid mite, Tarsonemus pallidus, Potato aphid, Macrosiphum euphorpica. Rose aphid, Macrosiphum rosae and Peach potato aphid, Myzus persicae.

Apply Batavia at a rate of 1.0 L/ha. To ensure good crop coverage a water volume of 1000 to 2500 L/ha should be used. Where two applications of Batavia are used a minimum interval of 14 days between applications is applicable. A maximum of two applications are allowed per year, regardless of the timing.

# Pre-flowering applications:

Applications can be made at pest infestation from BBCH 49 ("several daughter plants with root (ready for planting)") to BBCH 56 ("inflorescence elongating"). No applications should be made after 14 days before flowering or during the period of flowering until after harvest.

#### Post-harvest applications:

Applications can be made at pest infestation from BBCH 93 ("old leaves dying, young leaves curling; old leaves of cultivar specific colour") to BBCH 97 ("old leaves dead").

# **Protected Strawberry**

Tarsonemid mite, *Tarsonemus pallidus*, Potato aphid, *Macrosiphum euphorbiae*, Rose aphid, *Macrosiphum rosae*, Peach potato aphid, *Myzus persicae*, Strawberry root aphid, *Aphis forbesi*, Melon cotton aphid, *Aphis gossypii*, Strawberry aphid, *Chaetos phon fragaefolii* and Yellow rose aphid, *Rhodobium porosum*.

Apply Batavia at a rate of 1.0 L/ha, to ensure good crop coverage a water volume of 1000 to 2500 L/ha should be used. Where two applications of Batavia are used a minimum minierval of 14 days between applications is applicable. A maximum of two applications are allowed per year, regardless of the timing.

# Pre-flowering applications:

Applications can be made at pest infestation from BBCH 49 ("several daughter plant" with root (ready for planting)") to BBCH 56 ("inflorescence elongating"). In applications should be made after 14 days before flowering or during the period of flowering until after harvest.

# Post-harvest applications:

Applications can be made at pest infestation from BBCH 93 ("old leaves dying, young leaves curling; old leaves of cultivar specific colour") to BBCH 97 ("old leaves dead").

# Outdoor Blackcurrant, redcurrant and whitecurrant

<u>Gall mite, Cecidophyopis ribis, Currant-lettuce aphid, Hyperomyzus lactucae and Blackcurrant leaf midge, Dasinerua tetenisi (reduction only).</u>

Post harvest application only. Apply Batavia at a rate of 0.75 L/ha post harvest. To ensure good crop coverage a water volume of 500 to 1000 L/ha should be used. Where two applications of Batavia are used a minimum interval of 14 days between applications is applicable. A maximum of two applications are allowed per year.

#### PESTICIDE RESISTANCE MANAGEMENT STRATEGY

Spirotetramat is a tetramic acid derivative with a similar mode of action to spirodiclofen, therefore is a member of IRAC Group 23 within the IRAC Mode of Action Classification scheme (www.irac-online.org).

Total reliance on one pesticide will hasten the development of resistance; pesticides of different chemical types or alternative control measures should be included in a planned programme.

In a spray programme Batavia should be used with other insecticides of a different mode of action, either in alternation or as a 2-spray block within the programme.

Batavia should always be applied at the full recommended rate of use for the crop canopy size and target pest and in sufficient water volume to achieve the required spray penetration into the crop and uniform coverage necessary for optimal pest control.

#### MIXING AND SPRAYING

Shake well before use. Add the required quantity of Batavia to the half-filler' spray tank with the agitation system in operation, and fill to the required 'two Continue agitation at all times during spraying and stoppages until the tank is completely empty. Spray immediately after mixing. Wash equipment the roughly, immediately after use, by using an integrated pressure rising device or manually rinsing three times. Add washings to sprayer at time of filling and discusse of safely.

For use in tractor mounted/trailed sprayer, orchard blact strayer and knit psack handheld sprayer.

# **Processing Information:**

If the crop is intended for processing consult the processor before the use of Batavia.

Tests on apple for juicing, cider or compote (puree) and on strawberry and blackcurrant for juicing and jam have shown no taint from the use of Batavia.

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