

CAUTION
KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING

QUANTUM

Imidacloprid 200 SC

INSECTICIDE

ACTIVE CONSTITUENT: 200 g/L IMIDACLOPRID

GROUP **4A** INSECTICIDE

For the control of various insect pests of cotton, fruit, vegetables and ornamentals as specified in the Directions for Use table.

APVMA Approval No.: 90832/150572

SC Formulation Type
Suspension
Concentrate

**BE PROUDLY
AUSTRALIAN**

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DIRECTIONS FOR USE

FOLIAR SPRAY APPLICATIONS		
CROP	PEST	RATE
Cotton	Aphids	250 mL/ha + Penetra Penetrant at 0.2% v/v (2 mL/L water)
	Mirids, Brown flea beetle	
Stone Fruit	Green peach aphid, Black peach aphid	Dilute spraying: 25 mL/100 L Concentrate Spraying: Refer to Mixing/Application section
Cucurbits	Green peach aphid	25 mL/100 L or 300 mL/ha
Capsicum		
Eggplant		
Potato		
Tomato		
Brassicas	Grey cabbage aphid, Turnip aphid	
Sweet Potato	Silverleaf whitefly, including type B	25 mL/100 L or 250 mL/ha
Cucumber		
Eggplant	Melon Thrips	
Roses	Aphids	25 mL/100 L

WHP	CRITICAL COMMENTS
13 weeks	<p>The addition of Penetra Penetrant or equivalent is critical for the performance of Quantum Imidacloprid 200 SC Insecticide. Apply early in the establishment of an aphid infestation when numbers are low (i.e. no more than 1 or 2 leaves per plant with honeydew present). Applications made later than this may result in reduced control.</p> <p>Shorter residual control may be evident and a repeat application of a registered aphicide (follow the Cotton Insecticide Resistance Management Strategy for cotton aphid) may be required to achieve complete control:</p> <ul style="list-style-type: none"> • If application of Quantum Imidacloprid 200 SC Insecticide plus Penetra or equivalent are timed too late (see above); or • If existing high density aphid colonies (hotspots) are present; or • If aphids have established throughout the plant canopy (especially lower in the canopy); or • If there is high re-infestation; or • If there is rapid crop growth; or • If Quantum Imidacloprid 200 SC Insecticide plus Penetra or equivalent is used following a spray-failure (e.g. resistance to organophosphates or carbamate insecticides). <p>Note: Where resistance to carbamates or organophosphates is suspected, Quantum Imidacloprid 200 SC Insecticide plus Penetra or equivalent should be used first so as not to delay control of the aphids present.</p> <p>Aphids treated with Quantum Imidacloprid 200 SC Insecticide plus Penetra or equivalent may still be present on the plant but will not be feeding. Control of aphids should initially be assessed by a reduction in fresh honeydew and not on the presence of aphids on the plant. After ingesting Quantum Imidacloprid 200 SC Insecticide, aphids may take up to 5 days to die.</p> <p>Apply when pest numbers reach treatment threshold levels as determined by field checks.</p>
21 days	Apply at first sign of aphid infestation. Apply as a full cover spray, ensuring thorough coverage. Apply by dilute or concentrate spraying equipment. Apply the same total amount of product to the target crop whether applying this product by dilute or concentrate methods. DO NOT use in equipment that requires rates greater than 125 mL/100 L water (i.e. greater than 5 x concentrate).
1 day	Apply at first sign of aphid infestation.
7 days	
3 days	
7 days	Apply at first sign of aphid infestation. Add a wetting agent.
7 days	Apply at first sign of whitefly or melon thrips infestation. Apply dilute sprays (25 mL/100 L) to run off. Ensure thorough coverage of underside of leaves. Use of droppers will improve coverage of underside of leaves.
7 days	
	Apply as a thorough spray at first sign of infestation.

CROP	PEST	RATE
Ornamental plants	Aphids, Azalea Lace Bug, Bronze Orange Bug, Harlequin Bug, Citrus Mealy Bug, Greenhouse Thrips, Fullers Rose Weevil	25 mL/100 L
	Hibiscus Flower Beetle	50 mL/100 L
	Longtailed Mealybug	50 mL/100 L + surfactant
	Psyllids	25 mL/100 L
	Soft Scales	25 mL/100 L
Turf	First instar larvae of: African Black Beetle, Argentinian Scarab, Pruinose Scarab	2.5 L/ha or 25 mL/100L Spray with at least 400 L water per hectare to ensure even coverage. Preferably spray on to wet or dewy grass. Irrigate with 12 mm of water commencing within one hour of application.
	Larvae of Billbug	
Duboisia	Green peach aphid	25 mL/100 L
Pandanus Trees	Flatid (<i>Jamella australiae</i>)	Spot Spray: 875 mL/100 L of water Stem Injection: 1.75 L/1 L of water

SOIL DRENCHED APPLICATIONS

CROP	INSECTS	RATE
Apples	Woolly aphid	Chemical control: 12 mL/1 L of water/tree Beneficial insect plus chemical control (e.g. <i>Aphelinus mali</i> plus Quantum Imidacloprid 200 SC Insecticide): 3 mL/1 L of water/tree

WHP	CRITICAL COMMENTS
-	Apply as a thorough spray at first sign of infestation.
	Spray buds and flowers as needed.
	Apply 3 sprays 2 weeks apart. Use a non-ionic surfactant at label rate.
	Spray at first sign then a week later.
	Spray in late spring or when scales are first seen. Apply 3 sprays 2 weeks apart. Use a non-ionic surfactant at label rate.
-	Apply at peak egg hatch that is mid Spring to mid Summer depending on species.
	Monitor adult activity through late Spring and early Summer. Spray when numbers peak, or when small larvae (4 mm) are found in the thatch or surface soil. Early application is essential to minimize grass damage due to feeding.
	Apply when aphid numbers reach spray threshold levels as determined by regular monitoring. Ensure thorough coverage of all leaves.
	Spot Spray: Spray 100 mL of mixture directly into the leafy throat of each head. Stem Injection: Drill holes 0.5 to 1 cm in diameter and 10 cm deep at an angle of 30°, 1 to 1.5 m above ground level. Drill one hole per limb (or trunk in single trunked trees). Apply 5 mL of mixture in each hole and seal the hole. DO NOT re-apply in the same holes. Uptake of Quantum Imidacloprid 200 SC Insecticide, and therefore control of the pest in heavily infested heads already showing severe damage, will be slow and may be incomplete.

CRITICAL COMMENTS

For trees up to 7 years of age. During late summer or autumn, apple trees with woolly aphid colonies or damage should be identified and marked for treatment the following season. At green tip to petal fall, apply 1 litre of the prepared Quantum Imidacloprid 200 SC Insecticide mixture to moist soil immediately around the base of the tree trunk. Ensure the mixture infiltrates the soil around the trunk and does not run off the soil. Control weeds before application. DO NOT disturb or remove the soil around the trunk during the season. If aerial colonies are present at application, maximum effectiveness may not be achieved until the following season. DO NOT treat more than once in any 3 year period.

CROP	INSECTS	RATE
Elm	Elm leaf beetle	7 mL/25 mm of tree diameter at breast height
Seedling Eucalyptus (to 1 m high) in pots	Chrysalid beetle larvae, Psyllids	2.5 mL/plant
Azaleas in pots	Azalea lace bug	3.5 mL/250 mL water/pot
Ornamentals in pots	Scarab beetle larvae	3.5 mL/5 L water
Roses	Aphids	3.5 mL/2 L water/plant
For soil drench treatments, remove mulch and dead vegetation, and moisten the soil surface first. Apply Quantum Imidacloprid 200 SC Insecticide mixture, then water it in well immediately after application.		

NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION.

WITHHOLDING PERIODS:

Apples: NOT REQUIRED WHEN USED AS DIRECTED.

Cotton: DO NOT HARVEST FOR 13 WEEKS AFTER APPLICATION.

DO NOT GRAZE OR CUT FOR STOCK FOOD.

Cucurbits: DO NOT HARVEST FOR 1 DAY AFTER APPLICATION.

Tomatoes: DO NOT HARVEST FOR 3 DAYS AFTER APPLICATION.

Brassicas, Capsicum, Eggplant, Potatoes, Sweet Potatoes: DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION.

Stone Fruit: DO NOT HARVEST FOR 21 DAYS AFTER APPLICATION.

DO NOT GRAZE ANY TREATED AREA OR CUT FOR STOCK FOOD.

DO NOT FEED PRODUCE HARVESTED FROM TREATED AREA TO ANIMALS, INCLUDING POULTRY.

EXPORT OF TREATED PRODUCE

Growers should note that MRLs or import tolerances do not exist in all markets for edible produce treated with Quantum Imidacloprid 200 SC Insecticide. If you are growing produce for export, please check with Quantum Agrosiences Holdings Pty Ltd for the latest information on MRLs and import tolerances before using Quantum Imidacloprid 200 SC Insecticide.

CRITICAL COMMENTS
Mix the required dose in sufficient water to adequately treat each tree. Use at least 50 L of mix per tree up to a tree diameter of 400 - 500 mm and then add 100 L per tree for larger trees. Inject mix to a depth of 20 - 30 cm in a minimum of 4 injection sites per tree 0.75 to 1.5 m apart, arranged in an evenly spaced grid to just beyond the drip line.
Ensure root zone is adequately moist with active root growth. Keep treated area moist for 7 - 10 days after treatment. Treat at least 6 - 10 weeks prior to pest attack in the late winter or early spring when roots are active. DO NOT treat if soil is waterlogged.
Mix in water up to 0.5 L per 3 L pot and apply to soil. Use less water for smaller pots.
DO NOT dilute to the point where mix runs out the bottom of pots.
Use as a soil drench for pots up to 20 L capacity. Prior to application remove mulch and dead vegetation and moisten the soil surface. Apply the Quantum Imidacloprid 200 SC Insecticide mixture, and then water it in well immediately after application.
Use as a soil drench. 5 L of mixture will treat twenty 6 L pots. Prior to application remove mulch and dead vegetation and moisten the soil surface. Apply the Quantum Imidacloprid 200 SC Insecticide mixture, and then water it in well immediately after application.
Use as a soil drench by pouring mixture evenly around drip zone. Use this rate for plants up to 1 m high. For each additional metre of plant height, add 2 mL extra of Quantum Imidacloprid 200 SC Insecticide to the 2 L of water. Prior to application remove mulch and dead vegetation and moisten the soil surface. Apply the Quantum Imidacloprid 200 SC Insecticide mixture, and then water it in well immediately after application.

GENERAL INSTRUCTIONS

MIXING/APPLICATION

Prior to pouring, shake container vigorously, then add the required quantity of Quantum Imidacloprid 200 SC Insecticide to water in the spray vat while stirring or with agitators in motion.

Special Instructions for Stone Fruit

Dilute Spraying (Stone Fruit)

- Use a sprayer designed to apply high volumes of water up to the point of run-off and matched to the crop being sprayed.
- Set up and operate the sprayer to achieve even coverage throughout the crop canopy. Apply sufficient water to cover the crop to the point of run-off. Avoid excessive run-off.
- The required water volume may be determined by applying different test volumes, using different settings on the sprayer, from industry guidelines or expert advice.
- Add the amount of product specified in the Directions for Use table for each 100 L of water. Spray to the point of run-off.
- The required dilute spray volume will change, and the sprayer set up and operation may also need to be changed, as the crop grows.

Concentrate Spraying (Stone Fruit)

- Use a sprayer designed and set up for concentrate spraying (that is a sprayer which applies water volumes less than those required to reach the point of run-off) and matched to the crop being sprayed.
- Set up and operate the sprayer to achieve even coverage throughout the crop canopy using your chosen water volume.
- Determine the appropriate dilute spray volume (See Dilute Spraying above) for the crop canopy. This is needed to calculate the concentrate mixing rate.
- The mixing rate for concentrate spraying can then be calculated in the following way:

Example Only

1. Dilute spray volume as determined above: For example 1,500 L/ha.
2. Your chosen spray volume: For example 500 L/ha.
3. The concentrate factor in this example is: $3 \times$ (i.e. $1,500 \text{ L} \div 500 \text{ L} = 3$).
4. If the dilute label rate is 10 mL/100 L, then the concentrate rate becomes 3×10 , that is 30 mL/100 L of concentrate spraying.

The chosen spray volume, amount of product per 100 L of water, and the sprayer set up and operation may need to be changed as the crop grows. DO NOT use a concentrate rate higher than that specified in the Critical Comments.

For further information on concentrate spraying, users are advised to consult relevant industry guidelines, undertake appropriate competency training and follow industry Best Practices.

APPLICATION (Cotton)

Thorough coverage of cotton plants is essential to achieve maximum performance from Quantum Imidacloprid 200 SC Insecticide plus Gulf Ag Penetra Penetrant. Equipment should be calibrated to achieve a minimum of 60 droplets/cm² on the target foliage. A droplet Volume Median Diameter (VMD) for optimum performance from Quantum Imidacloprid 200 SC Insecticide plus Penetra is dependent on equipment and is defined below.

DO NOT apply when unfavorable environmental conditions may reduce the quality of spray coverage.

Ground Application (Cotton): Application using ground equipment should be made using hollow cone nozzles with a minimum spray volume of 100 L/ha. Hollow cone nozzles are recommended but if flat fan nozzles are used, higher water volumes will be required, and nozzles should be configured to ensure thorough coverage. A droplet VMD of 150 - 180 microns must be used. Where multiple nozzles per row are used, they should be of the same specification to ensure that each nozzle contributes an equal proportion of the required dose. Where multiple nozzles per row are used (particularly for banded application) ensure the correct

nozzle overlap pattern is achieved on the target foliage. Banded applications less than 100% are not recommended beyond the 15 node crop stage.

Aerial Application (Cotton): Apply in a minimum spray volume of 25 L/ha. A droplet VMD of 120 - 150 microns must be used. DO NOT exaggerate swath width or exceed a swath of 20 to 22 m. Do not apply Quantum Imidacloprid 200 SC Insecticide plus Penetra using Ultra Low Volume (ULV) methods. The use of large droplet placement equipment is not recommended.

NOTE ON ORNAMENTALS

Quantum Imidacloprid 200 SC Insecticide has been used on a wide range of ornamental plant species without damage. However, some species and varieties are particularly sensitive to chemical sprays and as this is often related to local conditions it is advisable to treat only a small number of plants first, in order to ascertain their reaction before treating the whole crop.

COMPATIBILITY

Quantum Imidacloprid 200 SC Insecticide is compatible with propineb, bitertanol or methamidophos. DO NOT mix concentrates together but add each to the spray tank separately, as formulations of other manufacturers' products are beyond the control of Quantum Agrosciences Holdings Pty Ltd, all mixtures should be tested prior to mixing commercial quantities. As changes in climatic conditions can alter the sensitivity of plants to mixtures of sprays, Quantum Agrosciences Holdings Pty Ltd cannot be responsible for the behaviour of such mixtures.

INSECTICIDE RESISTANCE WARNING

For insecticide resistance management, Quantum Imidacloprid 200 SC Insecticide is a Group 4A insecticide. Some naturally occurring insect biotypes resistant to Quantum Imidacloprid 200 SC Insecticide and other Group 4A insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if Quantum Imidacloprid 200 SC Insecticide or other Group 4A insecticides are used repeatedly. The effectiveness of Quantum Imidacloprid 200 SC Insecticide on resistant individuals could be significantly reduced. Since occurrence of resistant individuals is difficult to detect prior to use, Quantum Agrosciences Holdings Pty Ltd accepts no liability for any losses that may result from the failure of Quantum Imidacloprid 200 SC Insecticide to control resistant insects. Quantum Imidacloprid 200 SC Insecticide may be subject to specific resistance management strategies. For further information contact your local supplier, Quantum Agrosciences Holdings Pty Ltd representative or local agricultural department agronomist.

INSECT RESISTANCE MANAGEMENT STRATEGY

Cotton aphid in cotton

Observe the cotton industry Insecticide Resistance Management Strategy (IRMS).

Aphids, whitefly and melon thrips in various crops

DO NOT apply Quantum Imidacloprid 200 SC Insecticide (or other Group 4A insecticides) in consecutive sprays within and between seasons. Rotate with registered insecticides from other mode of action groups.

Confined Environments such as glasshouses

Annuals: DO NOT apply more than one spray of Quantum Imidacloprid 200 SC Insecticide (or other Group 4A insecticides) to any one crop.

Perennials: Rotate with registered insecticides from other groups. Use a maximum of three Quantum Imidacloprid 200 SC Insecticide (or other Group 4A insecticides) sprays in any 12-month period.

PROTECTION OF LIVESTOCK

Dangerous to bees. DO NOT spray any plants in flower while bees are foraging. DO NOT graze any treated area or cut for stock food. DO NOT feed produce harvested from treated area to poultry or livestock.

GROUP 4A INSECTICIDE

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

DO NOT contaminate streams, rivers or waterways and drains with the chemical or used containers. A spray-drift minimization strategy should be employed at all times when aerially applying sprays. The strategy envisaged is exemplified by the cotton industry's Best Management Practices Manual.

STORAGE AND DISPOSAL

Store in the closed, original container in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. Triple rinse containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. Do not burn empty containers or product.

SAFETY DIRECTIONS

Harmful if swallowed. May irritate the eyes and skin. Repeated exposure may cause allergic disorders. Avoid contact with eyes and skin. When preparing product for use, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and goggles. Wash hands after use. After each day's use, wash gloves, goggles and contaminated clothing.

FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 131126.

SAFETY DATA SHEET

Additional information is listed in the Safety Data Sheet (SDS) which is available from the supplier.

CONDITIONS OF SALE: Quantum Agrosiences Holdings Pty Ltd shall not be liable for any loss injury damage or death whether consequential or otherwise whatsoever or howsoever arising whether through negligence or otherwise in connection with the sale supply use or application of this product. The supply of this product is on the express condition that the purchaser does not rely on Quantum Agrosiences Holdings Pty Ltd's skill or judgement in purchasing or using the same and every person dealing with this product does so at his own risk absolutely. No representative of Quantum Agrosiences Holdings Pty Ltd has any authority to add to or alter these conditions.

Additional information required under the Globally Harmonised System (GHS) classification of the substance/mixture: **Causes skin irritation. Causes serious eye irritation. Toxic to aquatic life with long lasting effects.** Avoid release to the environment. Wear protective gloves, protective clothing, eye protection and face protection. Wash all exposed external body areas thoroughly after handling.



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