

CAUTION

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

Cheminova

Couraze[®] 200 SC

Insecticide

ACTIVE CONSTITUENT: 200 g/L IMIDACLOPRID

GROUP	4A	INSECTICIDE
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For the control of aphids, mirids and brown flea beetle on cotton; green peach aphid, woolly aphid, grey cabbage aphid and turnip aphid on crops specified in the Directions for Use Table and for the control of some insect pests of ornamentals and turf.

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CONTENTS: 1-1000 L

DIRECTIONS FOR USE

Foliar Spray Applications

CROP	PEST	RATE	WHP	CRITICAL COMMENTS
Cotton	Aphids	250 mL/ha + organosilicone surfactant at 0.2% v/v (2 mL/L water) or equivalent organosilicone surfactant	13 weeks	<p>The addition of organosilicone surfactant is critical for the performance of Couraze 200 SC Insecticide. Apply early in the establishment of an aphid infestation when numbers are low (ie 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 applications of Couraze 200 SC Insecticide plus organosilicone surfactant 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 reinfestation pressure; or • If there is rapid crop growth; or • If Couraze 200 SC Insecticide plus organosilicone surfactant is used following a spray failure (eg resistance to organophosphate or carbamate insecticides). <p>Note: Where resistance to carbamates or organophosphates is suspected Couraze 200 SC Insecticide plus organosilicone surfactant should be used first so as not to delay control of the aphids present.</p> <p>Aphids treated with Couraze 200 SC Insecticide plus organosilicone surfactant 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 Couraze 200 SC Insecticide, aphids may take up to 5 days to die.</p>
	Mirids, Brown Flea Beetle			Apply when pest numbers reach treatment threshold levels as determined by field checks.

FRUIT				
CROP	PEST	RATE	WHP	CRITICAL COMMENTS
Stone fruit	Green Peach Aphid, Black Peach aphid	Dilute spraying 25 mL/100 L Concentrate spraying Refer to the Mixing/Application section	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 spraying methods. DO NOT use in equipment that requires rates greater than 125 mL/100 L of water.
VEGETABLES				
Brassicas	Grey Cabbage Aphid, Turnip Aphid	25 mL/100 L or 300 mL/ha	7 days	Apply at first sign of aphid infestation. Add a wetting agent.
Capsicum, Egg plant, Potato	Green Peach Aphid			Apply at first sign of aphid infestation.
Cucurbits			1 day	
Tomato			3 days	
Cucumber	Silverleaf	25 mL/100 L or 250 mL/ha	1 day	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.
Sweet potato	Whitefly, including type B		7 days	
Egg plant	Melon Thrips			

TURF AND ORNAMENTALS			
CROP	PEST	RATE	CRITICAL COMMENTS
Turf	First instar larvae of: African Black Beetle, Argentinian Scarab Pruinose Scarab	2.5 L/ha or 25 mL/100 m ² Spray with at least 400 L water per	Apply at peak egg hatch, which is mid spring to mid summer depending on species.
	Larvae of Billbug	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.	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 minimise grass damage due to feeding.
Ornamental plants including roses	Aphids, Azalea Lace Bug, Bronze Orange Bug, Harlequin Bug, Citrus Mealybug, Greenhouse Thrips, Fullers Rose Weevil	25 mL/100 L	Apply as a thorough cover spray at first sign of insect infestation.
	Hibiscus Flower Beetle	50 mL/100 L	Spray buds and flowers as needed.
	Longtailed Mealybug	50 mL/100 L + surfactant	Apply 3 sprays 2 weeks apart. Use a non-ionic surfactant at label rate.
	Psyllids	25 mL/100 L	Spray at first sign and then a week later.
	Soft Scales	25 mL/100 L	Spray in late spring or when small scales are first seen. Apply 3 sprays 2 weeks apart. Add a wetting agent.
Duboisia	Green Peach Aphid	25 mL/100 L	Apply when aphid numbers reach spray threshold levels as determined by regular monitoring. Ensure thorough coverage of all leaves.
Pandanus trees	Flatid (<i>Jamella australiae</i>)	Spot spray 875 mL/100 L of water Stem injection 1.75 L/1 L of water	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 reapply in the same holes. Uptake of Couraze 200 SC Insecticide, and therefore control of the pest in heavily infested heads already showing severe damage, will be slow and may be incomplete.

Soil Drench Applications

CROP	PEST	RATE	CRITICAL COMMENTS
Apples	Woolly Aphid	Chemical control 12 mL/1 L of water/tree	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 Couraze 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.
		Beneficial insect plus chemical control (eg <i>Aphelinus mali</i> plus Couraze 200 SC Insecticide) 3 mL/1 L of water/tree	
Azaleas in pots	Azalea Lace Bug	3.5 mL/250 mL water/pot	Use as a soil drench for pots up to 20 L capacity.

CROP	PEST	RATE	CRITICAL COMMENTS
Elm	Elm Leaf Beetle	7 mL/25 mm of tree diameter at breast height	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 to 500 mm and then 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 to 10 days after treatment. Treat at least 6 to 10 weeks prior to pest attack in late winter or early spring when roots are active. DO NOT treat if soil is waterlogged.
Ornamentals in pots	Scarab Beetle larvae	3.5 mL/5 L water	Use as a soil drench. 5 L of mixture will treat twenty 6 L pots.
Roses	Aphids	3.5 mL/2 L water/plant	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 Couraze 200 SC Insecticide to the 2 L of water.
Seedling eucalypts (to 1 m high) in pots	Chrysomelid Beetle larvae, Psyllids	2.5 mL/plant	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.
For soil drench treatments, remove mulch and dead vegetation, and moisten the soil surface first. Apply the Couraze 200 SC Insecticide mixture, and 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.

COTTON: 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, EGG PLANT, 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.

GENERAL INSTRUCTIONS

INSECTICIDE RESISTANCE WARNING

GROUP	4A	INSECTICIDE
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For insecticide resistance management, Cheminova Couraze 200 SC Insecticide is a Group 4A insecticide. Some naturally occurring insect biotypes resistant to Couraze 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 Couraze 200 SC Insecticide and other Group 4A insecticides are used repeatedly. The effectiveness of Couraze 200 SC Insecticide on resistant individuals could be significantly reduced. Since occurrence of resistant individuals is difficult to detect prior to use, Cheminova Australia Pty Ltd accepts no liability for any losses that may result from the failure of Couraze 200 SC Insecticide to control resistant insects. Couraze 200 SC Insecticide may be subject to specific resistance management strategies. For further information contact your local supplier, Cheminova representative or local agricultural department agronomist.

Insecticide Resistance Management Strategy for cotton aphid in cotton: Contact your local supplier, Cheminova representative or local agricultural department agronomist.

Insecticide Resistance Management Strategy for aphids, whitefly and melon thrips: DO NOT apply Couraze 200 SC Insecticide (or other group 4A insecticides) in consecutive sprays within and between seasons. Rotate with registered insecticides from other groups.

Confined environments such as glasshouses

Annuals: DO NOT apply more than one spray of Couraze 200 SC Insecticide to any one crop.

Perennials: Rotate with registered insecticides from other groups. Use a maximum of three sprays in any 12 month period.

MIXING/APPLICATION

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

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 an 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 1500 L/ha
2. Your chosen concentrate spray volume: For example 500 L/ha
3. The concentration factor in this example is: 3 X (ie $1500 \text{ L} \div 500 \text{ L} = 3$)
4. As the dilute label rate is 25 mL/100 L for stone fruit, then the concentrate rate becomes 3 x 25, which is 75 mL/100 L of concentrate spray.

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 Couraze 200 SC Insecticide plus organosilicone surfactant. 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 Couraze 200 SC Insecticide plus organosilicone surfactant is dependent on equipment and is defined below.

DO NOT apply when unfavourable 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 applications) 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 width of 20 to 22 m. DO NOT apply Couraze 200 SC Insecticide plus organosilicone surfactant using Ultra Low Volume (ULV) methods. The use of large droplet placement equipment is not recommended.

EXPORT OF TREATED PRODUCE

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

Note on Ornamentals

Couraze 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

Couraze 200 SC Insecticide is compatible with propineb, and bittertanol. DO NOT mix concentrates together but add each to the spray tank separately. As formulations of other manufacturers' products are beyond the control of Cheminova, 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, Cheminova cannot be responsible for the behaviour of such mixtures.

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 animals, including poultry.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

DO NOT contaminate streams, rivers or waterways with the chemical or used containers. A spray drift minimisation 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.

Leaflet

The method of disposal of the container depends on the container type. Read the 'Storage and Disposal' instructions on the label that is attached to the container.

Non-returnable containers only

Triple or preferably pressure rinse containers before disposal. Add rinsings to the 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 for appropriate disposal 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.

100, 110L

Do not remove or tamper with the dry valves or security seal. Do not contaminate the drum with water or any other foreign matter. After each use of the product ensure that the dry valve coupler, delivery system and hoses are disconnected, triple rinsed with clean water and drained accordingly. When the drum is empty remove the dry valve coupler and return to the point of purchase.

1000L

Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage

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 available from www.cheminova.com.au

WARNING

This product must be used, handled and stored strictly as directed in accordance with this label, packaging and other reference material ("Directions"). To the extent permitted by law Cheminova Australia Pty Ltd and its related companies will have no liability for any injury, loss or damage arising from a failure to follow the Directions.

APVMA Approval No: 61462/61802

Batch No:

Date of Manufacture:

131128-T

Drummuster logo (relevant pack sizes)

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<p>FOR 24 HOUR SPECIALIST ADVICE IN EMERGENCY ONLY PHONE 1800 033 111</p>
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