

# POISON

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

# Kohinor® 350

## Insecticide

ACTIVE CONSTITUENT: **350 g/L IMIDACLOPRID**

GROUP **4A** INSECTICIDE

For the control of various insect pests of cotton, fruit, vegetables, ornamentals and turf as a foliar spray and as a soil-applied treatment for the control of various canegrubs in sugarcane, certain pests in apples and citrus, and silverleaf whitefly in various vegetable crops and an injection treatment for control of certain pests in bananas as specified in the Directions for Use table

Formulation type

Suspension  
Concentrate

SC



# ADAMA

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CONTENTS: 1 L, 5 L, 10 L, 20 L, 110 L, 200 L, 1000 L

### DIRECTIONS FOR USE

#### RESTRAINTS

DO NOT use on crops produced hydroponically or in glasshouses and other covered situations.

DO NOT apply KOHINOR® 350 or any other Group 4A Insecticide as a foliar application after soil application or injection of KOHINOR® 350 in that crop.

DO NOT apply more than one soil application of KOHINOR® 350 or any other soil-applied Group 4A insecticide per crop for vegetables or sugarcane, per season for citrus or per two years for apples.

DO NOT apply more than one injection of KOHINOR® 350 or any other Group 4A insecticide per crop for bananas.

#### SOIL APPLICATIONS

CROP	PEST	RATE	WHP	CRITICAL COMMENTS
Apples	Woolly Aphid ( <i>Eriosoma lanigerum</i> )	<b>Chemical control:</b> 3.5 mL / 1 L water / tree <b>Beneficial insect plus chemical control:</b> e.g. <i>Aphelinus mali</i> plus KOHINOR® 350 1.75 mL / 1 L 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 KOHINOR® 350 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 2 year period.
Azaleas in pots	Azalea Lace Bug	2 mL / 250 mL water/pot		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 KOHINOR® 350 mixture and then water it in well immediately after application.

SOIL APPLICATIONS - continued

CROP	PEST	RATE	WHP	CRITICAL COMMENTS
Bananas – Cavendish (Nth Qld, NT, Nth WA only)	Banana Rust Thrips ( <i>Chaetanaphothrips signipennis</i> )	2.5 or 3.5 mL / stool Inject undiluted or diluted 50:50 with water	-	<p>The higher rate may give improved control in some situations.</p> <p><b>Application timing</b> DO NOT inject bunched plants. Select the best follower and inject into the base. DO NOT inject any follower more than once. Injection can occur at any time within 3 months after harvest of the mother plant or nurse-suckering. To limit the risk of plant damage from injection, inject only those followers that are at least 1.5 m tall to the throat of the plant. Plants smaller than 1.5 m tall to the throat can be treated but there is significant risk of plant injury from injection. For application in plant bananas, the same minimum height requirement applies as above, plus the plant should be at a stage at least 3 months prior to bell emergence.</p> <p><b>Application method</b> Injection should occur 15 cm from the base of the plant at an off-centre, downward angle to a depth of 5 to 10 cm. DO NOT inject into the centre of the plant as this may result in plant death. Injection should be conducted in a manner which ensures applied chemical is retained within the pseudostem. Irrigation or moderate to heavy or prolonged periods of rainfall may saturate the internal structure of the pseudostem, leading to “run-out” from injection holes. Allow sufficient time following irrigation and rainfall events, before application, to minimize such “run out”. KOHINOR® 350 should be used as part of an integrated pest management approach which should include the use of other measures for control of banana rust thrips, such as bell injection and bunch applications. <b>NOTE:</b> Application during conditions conducive to banana spider mite may enhance population development. Under these conditions, continue to monitor mite populations following KOHINOR® 350 application, taking appropriate action where thresholds are exceeded.</p>
	Banana Weevil Borer ( <i>Cosmopolites sordidus</i> )	2.5 mL/stool Inject undiluted or diluted 50:50 with water		
Capsicum Cucurbits Eggplant Sweet Potato Tomatoes	Silverleaf Whitefly, including type B	14 mL / 100 metres of row		
Capsicum Eggplant Tomatoes		14 mL / 100 metres of row (mix with sufficient water using at least 2 L of spray mixture per 100 m row)	<p><b>Furrow spray pre-plant</b> Apply to open furrow not earlier than 5 days prior to planting as a narrow band of spray centred under the plant row. DO NOT leave KOHINOR® 350 exposed to sunlight. Sprayed soil should be covered immediately. After final shaping of the planting bed, the treated layer of soil should be approximately 100 mm below the soil surface. At planting steps should be taken to ensure workers do not contact treated soil.</p>	
		14 mL / 100 metres of row (mix with sufficient water to allow a constant volume of at least 50 mL of drench mixture per plant)	<p><b>Plant hole drench</b> DO NOT apply KOHINOR® 350 by this method where plant spacing along the row exceeds 60 cm. Apply the selected volume of drench mixture in the planting hole at planting or within 2 days after planting. Steps should be taken to ensure workers do not contact treated soil or drench mixture.</p>	

SOIL APPLICATIONS - continued

CROP	PEST	RATE	WHP	CRITICAL COMMENTS
Citrus	Black Citrus Aphid, Citrus Leaf Miner, Pink Wax Scale, Red Scale	9 mL / tree Apply as a soil drench* OR via micro-sprinkler* or drip irrigation*	20 weeks (H)	<p>*Refer to Application directions under GENERAL INSTRUCTIONS for detailed information on application methods. Application via micro-sprinkler and drip application methods will give best results when used in conjunction with other control methods such as the release of beneficial species (e.g. parasitic wasps). Treatment is only recommended for trees of up to 4 m in height.</p> <p><b>Citrus leafminer, black citrus aphid:</b> Apply KOHINOR® 350 in late spring after main flowering has finished (October to December) prior to the summer or autumn flush. Apply prior to pest establishment or at the first signs of pest infestation.</p> <p><b>Red scale, Pink wax scale:</b> Monitor crop throughout late spring to early summer (October to December). If scale is observed, apply KOHINOR® 350 after main flowering and prior to or at the onset of crawler emergence.</p> <p><b>Multiple flowering and/or overlapping cropping:</b> Where extended flowering and/or multiple flowering periods occur, e.g. lemons and limes, or if the previous season's crop is still hanging on the tree during or at the end of a new season's flowering (overlapping cropping) e.g. Valencia oranges. KOHINOR® 350 should only be applied:</p> <ul style="list-style-type: none"> <li>-when there is a minimum of 20 weeks to the next harvest and</li> <li>-according to the timing for specific pests described above and</li> <li>-after the previous crop has been harvested or stripped out and</li> <li>-when the main flowering period has finished.</li> </ul> <p>DO NOT apply more than once per season.</p>
Elm	Elm Leaf Beetle	4 mL / 25 mm tree diameter at breast height	-	<p>Mix the required dose in sufficient water to adequately treat each tree. Use at least 50 L of mix per tree up to a diameter of 400 - 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 - 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 late winter or early spring when roots are active. DO NOT treat if soil is waterlogged.</p>
Ornamentals in pots	Scarab Beetle Larvae	2 mL / 5 L water		<p>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 KOHINOR® 350 mixture and then water it in well immediately after application.</p>
Roses	Aphids	2 mL / 2 L water / plant		<p>Use as a soil drench by pouring the mixture evenly around drip zone. Use this rate for plants up to 1 m high. For each additional meter of plant height, add 1.2 mL extra of KOHINOR® 350 to the 2 L of water. Prior to application remove mulch and dead vegetation and moisten the soil surface. Apply the KOHINOR® 350 mixture and then water it in well immediately after application.</p>
Seedling Eucalypts (to 1 m high) in pots	Chrysomelid Beetle Larvae, Psyllids	1.5 mL / plant		<p>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.</p>

SOIL APPLICATIONS - *continued*

CROP	PEST	RATE	WHP	CRITICAL COMMENTS
Sugarcane (Plant cane)	Greyback Canegrub	16 - 22 mL per 100 metres of cane row (equivalent to 1.05 - 1.44 L/ha for single row cane with 1.52 m spacing between rows)	21 weeks (G or H)	<p><b>Moderate - high pest pressure</b> (2 or more grubs/stool expected) <b>August – November applications from planting to hilling-up.</b> Apply at planting, or at first working, or at half-open drill stage, or at fill-in or final hilling. Apply at final hilling only if sufficient soil cover can be applied. Use the high rate where heavy canegrub infestation is expected. Apply in a narrow spray band in the planted row. Treated soil must be covered immediately. Refer to Application directions under GENERAL INSTRUCTIONS.</p>
		11 mL per 100 metres of cane row (equivalent to 0.72 L/ha for single row cane with 1.52 m spacing between rows)		<p><b>Low pest pressure</b> (less than 2 grubs/stool expected) <b>September – November applications at fill-in and hilling-up only.</b> Apply at fill-in or final hilling only. Apply at final hilling only if sufficient soil cover can be applied. Apply in a narrow spray band in the planted row. Treated soil must be covered immediately. Refer to Application directions under GENERAL INSTRUCTIONS</p>
Sugarcane (Ratoon Cane) All sugarcane areas		16 - 22 mL per 100 metres of cane row (equivalent to 1.05 - 1.44 L/ha for single row cane with 1.52 m spacing between rows)		<p>Apply from September to November to fields which are at high risk of greyback grub damage. In areas where early flights of beetles occur, application should be early within this period. Late applications where large 3rd instar larvae dominate the grub population will not be as effective. Application should be made while stools are small enough to avoid excessive damage. Use the high rate when high grub populations are expected, e.g. an average greater than 4 grubs per stool. Apply only as a subsurface soil application behind coulters (refer to Application directions under GENERAL INSTRUCTIONS). Soil should have moisture at coulters depth at the time of application or should receive at least 15 mm of rainfall or irrigation within one week. DO NOT leave KOHINOR® 350 exposed to sunlight. After application ensure the KOHINOR® 350 treated band is covered by at least 100 mm of soil and that coulters slits are filled in completely. DO NOT apply more than once per season.</p>
	French's Canegrub	16 - 22 mL per 100 metres of cane row (equivalent to 1.05 - 1.44 L/ha for single row cane with 1.52 m spacing between rows)		<p>Begin monitoring for the presence of grubs in September, and continue to monitor at regular intervals. Apply KOHINOR® 350 immediately if grub numbers have reached an economic threshold (about 3 grubs per stool). Early applications are more effective than later ones. DO NOT apply any later than November. Use the high rate when grub populations are high, e.g. an average greater than 5 grubs per stool, or if application is late (damage already visible). Apply only as a subsurface soil application behind coulters (refer to Application directions under GENERAL INSTRUCTIONS).</p>
	Negatoria Canegrub	11 - 16 mL per 100 metres of cane row (equivalent to 0.72 - 1.05 L/ha for single row cane with 1.52 m spacing between rows)		
Sugarcane (Ratoon Cane) Southern Qld (Bundaberg and south) and NSW only	Childers Canegrub, Plectris Canegrub, Rhopaea Canegrub, Southern One-Year Canegrub	11 -16 mL per 100 metres of cane row (equivalent to 0.72 - 1.05 L/ha for single row cane with 1.52 m spacing between rows)		<p>Begin monitoring for the presence of grubs in September (December for southern one-year canegrub) and continue to monitor at regular intervals. Apply KOHINOR® 350 immediately if grub numbers reach an economic threshold (e.g. 3 - 4 grubs per stool). Early applications are more effective than later ones. Use the high rate when grub populations are high, e.g., an average greater than 5 grubs per stool or if application is late (damage already visible). Apply only as a subsurface soil application behind coulters (refer to Application directions under GENERAL INSTRUCTIONS).</p>

**FOLIAR APPLICATIONS**

CROP	PEST	RATE	WHP	CRITICAL COMMENTS
Brassicas	Grey Cabbage Aphid, Turnip Aphid	15 mL / 100 L or 170 mL / ha	7 days	Apply at first sign of aphid infestation. Add a wetting agent.
Capsicum	Green Peach Aphid			Apply at first sign of aphid infestation.
Cotton	Aphids	145 mL / ha + organosilicone adjuvant at recommended rate	13 weeks	The addition of an organosilicone adjuvant is critical for the performance of KOHINOR® 350. 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. 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. -If applications of KOHINOR® 350 plus organosilicone adjuvant 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 KOHINOR® 350 plus organosilicone adjuvant is used following a spray failure (e.g. resistance to organophosphate or carbamate insecticides). Note: where resistance to carbamates or organophosphates is suspected, KOHINOR® 350 plus organosilicone adjuvant should be used first so as not to delay control of the aphids present. Aphids treated with KOHINOR® 350 plus organosilicone adjuvant 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 KOHINOR® 350, aphids may take up to five days to die.
	Mirids, Brown Flea Beetle			Apply when pest numbers reach treatment threshold levels as determined by field checks.
Cucumber	Silverleaf Whitefly including type B	15 mL / 100 L or 145 mL / ha	1 day	Apply at first sign of whitefly infestation. Apply dilute sprays (15 mL/100 L) to run off. Ensure thorough coverage of underside of leaves. Use of droppers will improve coverage of underside of leaves.
Cucurbits	Green Peach Aphid	15 mL / 100 L or 170 mL / ha		Apply at first sign of aphid infestation.
Duboisia			-	Apply when aphid numbers reach spray threshold levels as determined by regular monitoring. Ensure thorough coverage of all leaves.
Eggplant		15 mL / 100 L or 170 mL / ha	7 days	Apply at first sign of aphid infestation.
	Melon Thrips	15 mL / 100 L or 145 mL / ha		Apply at first sign of melon thrips infestation. Apply dilute sprays (15 mL/100 L) to run off. Ensure thorough coverage of underside of leaves. Use of droppers will improve coverage of underside of leaves.
Ornamental Plants	Aphids, Azalea Lace Bug, Bronze Orange Bug, Harlequin Bug, Citrus Mealy Bug, Greenhouse Thrips, Fullers Rose Weevil	15 mL / 100 L	-	Apply as a thorough cover spray at first sign of insect infestation.
	Hibiscus Flower Beetle	30 mL / 100 L		Spray buds and flowers as needed.
	Longtailed Mealybug	30 mL / 100 L + surfactant		Apply three sprays 2 weeks apart. Use a non-ionic surfactant at label rate.
	Psyllids	15 mL / 100 L		Spray at first sign and then a week later.
	Soft Scales			Spray in late spring or when small scales are first seen. Apply three sprays 2 weeks apart. Add a wetting agent.

**FOLIAR APPLICATIONS - continued**

CROP	PEST	RATE	WHP	CRITICAL COMMENTS
Pandanus Trees	Flatid ( <i>Jamella australiae</i> )	<b>Spot spray:</b> 500 mL / 100 L water <b>Stem injection:</b> 1 L / 1 L water	-	<b>Spot spray:</b> Spray 100 mL of mixture directly into the leafy throat of each head. <b>Stem injection:</b> Drill holes 0.5 - 1 cm in diameter and 10 cm deep at an angle of 30° and 1 - 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 KOHINOR® 350 and therefore control of the pest in heavily infested heads already showing severe damage will be slow and may be incomplete.
Potato	Green Peach Aphid	15 mL / 100 L or 170 mL/ha	7 days	Apply at first sign of aphid infestation.
Roses	Aphids	15 mL / 100 L	-	Apply as a thorough cover spray at first sign of aphid infestation.
Stone Fruit	Green Peach Aphid, Black Peach Aphid	<b>Dilute spraying:</b> 15 mL / 100 L <b>Concentrate spraying:</b> Refer to 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 75 mL / 100 L water (i.e. greater than 5 X concentrate).
Sweet Potato	Silverleaf Whitefly including type B	15 mL / 100 L or 145 mL / ha	7 days	Apply at first sign of whitefly infestation. Apply dilute sprays (15 mL/100 L) to run off. Ensure thorough coverage of underside of leaves. Use of droppers will improve coverage of underside of leaves.
Tomato	Green Peach Aphid	15 mL / 100 L or 170 mL / ha	3 days	Apply at first sign of aphid infestation.
Turf	First instar larvae of African Black Beetle, Argentinian Scarab, Pruinose Scarab	1.5 L/ha or 15 mL / 100m <sup>2</sup>	-	Spray with at least 400 L water per ha to ensure even coverage. Preferably spray onto wet or dewy grass. Irrigate with 12 mm water commencing within one hour of application. Apply at peak egg hatch, i.e. mid spring to mid summer depending on species.
	Larvae of Billbug			Spray with at least 400 L water per ha to ensure even coverage. Preferably spray onto wet or dewy grass. Irrigate with 12 mm 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 minimize grass damage due to feeding.

**NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION**
**WITHHOLDING PERIODS (WHP)**
**Harvest (H):**
**BRASSICAS, CAPSICUM, EGGPLANT, POTATOES, SWEET POTATOES (FOLIAR):**
**DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION.**
**CITRUS:**
**DO NOT HARVEST FOR 20 WEEKS AFTER APPLICATION.**
**COTTON:**
**DO NOT HARVEST FOR 13 WEEKS AFTER APPLICATION**
**CUCURBITS (FOLIAR):**
**DO NOT HARVEST FOR 1 DAY AFTER APPLICATION**
**STONE FRUIT: (FOLIAR):**
**DO NOT HARVEST FOR 21 DAYS AFTER APPLICATION.**
**SUGARCANE:**
**DO NOT HARVEST FOR 21 WEEKS AFTER APPLICATION.**
**TOMATOES (FOLIAR):**
**DO NOT HARVEST FOR 3 DAYS AFTER APPLICATION.**
**ALL OTHER CROPS:**
**NOT REQUIRED WHEN USED AS DIRECTED**
**Grazing (G):**
**SUGARCANE:**
**DO NOT GRAZE OR CUT FOR STOCKFEED FOR 21 WEEKS AFTER APPLICATION.**
**EXCEPT FOR SUGARCANE, DO NOT GRAZE ANY TREATED AREA, OR CUT FOR STOCK FOOD OR 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 KOHINOR® 350.

If you are growing edible produce for export, please check with Adama Australia for the latest information on MRLs and import tolerances before using KOHINOR® 350.

## GENERAL INSTRUCTIONS

### NOTE FOR VEGETABLE CROPS

#### POTENTIAL MIGRATION OF SILVERLEAF WHITEFLY FROM

NEIGHBOURING CROPS: Adult silverleaf whitefly (SLWF) populations are controlled when they ingest a lethal dose of active ingredient by feeding on a KOHINOR® 350-treated crop. In some very susceptible crops and varieties however, the migration of large populations of adults from adjacent fields may result in significant feeding damage to the crop, although further reproduction and development of the pest will be prevented. To help prevent such damage it is important to minimise the migration of adult SLWF into a treated crop, e.g. by applying a "clean-up" fast-acting insecticide to recently harvested crops. Consideration of factors such as planting sequences and timing, wind direction, variety selection and general crop hygiene should also be integral to SLWF management. Crops should also be monitored for SLWF adult numbers after application of KOHINOR® 350 and appropriate fast-acting insecticides for control of adults should be applied if economic thresholds are reached or excessive adult feeding damage is observed.

### NOTE ON ORNAMENTALS

KOHINOR® 350 has been used on a wide range of ornamental plant species without damage. Some species and varieties however are particularly sensitive to chemical sprays and as this sensitivity 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.

### MIXING

Prior to pouring, shake container vigorously, then add the required quantity of KOHINOR® 350 to water in the spray tank while stirring or with agitators in motion. KOHINOR® 350 requires constant agitation in the tank.

### APPLICATION (Stone Fruit)

**Dilute spraying:** 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 excess 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 runoff.

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:** 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 information is needed to calculate the concentrate mixing rate.

The mixing rate for concentrate spraying may 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: 3X (i.e.  $1500 \text{ L} \div 500 \text{ L} = 3$ )
4. As the dilute label rate is 15 mL/100 L for stone fruit, then the concentrate rate becomes  $3 \times 15$ , i.e. 45 mL/100 L 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 (Citrus)

Ensure treatment area below canopy is weed free prior to application and remains weed free throughout season, otherwise reduced control will occur.

**Soil Drench:** Apply KOHINOR® 350 in a water mix using 1 L water per tree. Apply evenly to moist soil immediately around the base of the tree trunk to a maximum trunk height of 20 cm. Ensure the mixture infiltrates the soil around the trunk and does not run off the soil. DO NOT disturb or remove the treated soil around the trunk during the season. Irrigation for up to one hour (depending on soil type). Immediately after a soil drench application is preferred but not essential. DO NOT leave KOHINOR® 350 mixture exposed to sunlight.

**Drip or micro-sprinklers (below canopy):** For treatment under non-bearing trees, application via micro-sprinklers is not recommended and the Critical Comments in the Directions for Use table should be consulted for further guidance on application via drip/trickle. Drip emitters placed under the tree canopy or near the trunk provide better results than those spaced irregularly or further from the tree.

Micro-sprinklers should only be used when the wetting zone can be contained beneath the tree canopy, especially in young orchards where there is minimal canopy and root development. Begin injection only after soil below the trees furthest from the injection point is partially wetted up and irrigation system has reached operating pressure. After KOHINOR® 350 is completed, and lines have been flushed continue irrigation for no longer than one hour. On sandy soils, this irrigation period after lines have been flushed should not be more than 10 minutes. Allow 48 hours before subsequent irrigations. This application technique is best suited to an IPM system where beneficial species (e.g. parasitic wasps) are released. DO NOT disturb or remove the treated soil during the season. DO NOT leave KOHINOR® 350 mixture exposed to sunlight.

### APPLICATION (Cotton)

Thorough coverage of cotton plants is essential to achieve maximum performance from KOHINOR® 350 plus organosilicone adjuvant. Equipment should be calibrated to achieve a minimum of 60 droplets/cm<sup>2</sup> on the target foliage. A droplet Volume Median Diameter (VMD) for optimum performance from KOHINOR® 350 plus organosilicone adjuvant is dependent on equipment and is defined below. DO NOT apply when unfavourable environmental conditions may reduce the quality of spray coverage.

**Ground Application:** Application using ground equipment should be made using hollow cone nozzles with 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:** 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 KOHINOR® 350 plus organosilicone adjuvant using Ultra Low Volume (ULV) methods. The use of large droplet placement equipment is not recommended.

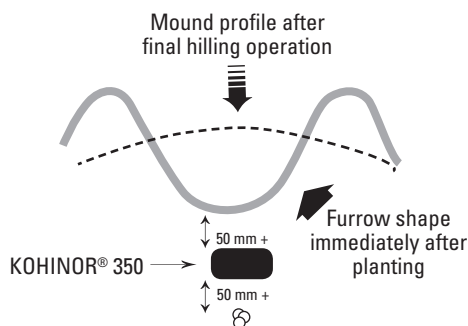
### APPLICATION (Sugarcane)

**Plant cane:** Application can occur at various stages from planting until hilling up as described below. KOHINOR® 350 should be applied into the plant drill in a narrow band centred on the cane row. Mix KOHINOR® 350 with water and spray the mixture into the cane drill as a narrow 50-100 mm wide band in the middle of the drill. Apply in no less than 1.5 litres of water per 100 metres of cane row (equivalent to no less than 100 L/ha of water for single row cane with 1.52 m spacing between rows).

Adjust the application equipment so that the treated band of soil is at least 50 mm above the level of the setts in the soil, and is immediately covered by at least 50 mm more soil on top of that layer. There should be at least 100 mm of soil cover over the treated layer after the final cultivation or hilling-up operation. This placement of the spray band can be achieved in several ways. Not all application methods are suited to every circumstance. Application at planting is not recommended for control of greyback canegrubs in situations where very deep planting is practised.

#### At planting

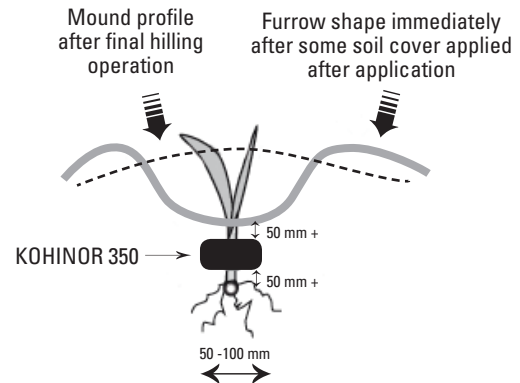
Fix a spray nozzle or nozzles on the planter so that the KOHINOR® 350 spray band is directed at soil just after it covers the setts to a depth of at least 50 mm. The boards on the planter need to be adjusted so that at least another 50 mm of soil comes over the top of the treated band of soil. Subsequent cutaway cultivations must not disturb soil to the depth of the treated band.



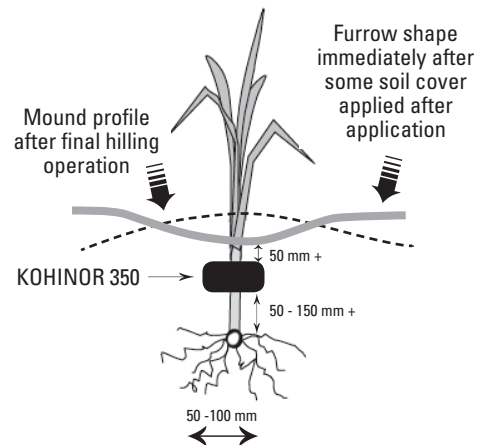
#### At first working, or at half-open drill, or at fill-in

Apply KOHINOR® 350 as a spray band 50-100 mm wide directed at the base of the young cane shoots so that the middle of the drill is treated, not the sides. A single nozzle per row or a directed nozzle each side of each row may achieve this. The treated band must be covered with at least 50 mm of soil immediately. Subsequent cultivations must not disturb soil to the depth of the treated band. There should be at least 100 mm of soil cover over the treated layer after the final cultivation or hilling-up operation.

#### First working

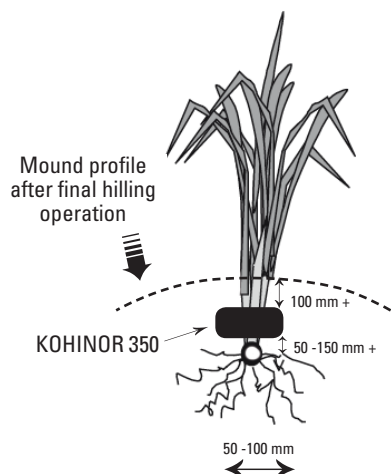


#### Fill-in



#### At hilling-up

Apply KOHINOR® 350 as twin narrow spray bands 50 mm wide on each side of the cane rows directed at the base of the young cane shoots. Directed nozzles each side of each row may achieve this. Direct the spray nozzles to ensure that the spray is not blocked by cane shoots or leaves. The treated bands must be covered with at least 100 mm of soil immediately as the final step in the shaping of the row profile.





### **Ratoon Cane**

Apply only as a subsurface soil application. Apply in no less than 1.5 litres of water per 100 m of cane row (equivalent to no less than 100 L/ha of water for single row cane with 1.52 m spacing between rows). Soil should have moisture at coulter depth at the time of application or should receive at least 15 mm of rainfall or irrigation within 1 week.

DO NOT leave KOHINOR® 350 exposed to sunlight. After application ensure the KOHINOR® 350 treated band is covered by at least 100 mm of soil and that coulter slits are filled in completely.

**Twin coulter method:** Apply subsurface behind twin coulters to a depth of 100 - 125 mm. Coulters should be spaced 220 - 500 mm apart, with one coulter on either side of the centre of the stool. Coulter slits should be in the sides or top of the stool mound rather than at the base. Narrow spacings may not be possible with advanced ratoon growth. DO NOT apply using narrow spacings if ratoon growth is advanced such that excessive crop damage from equipment may result.

**Single coulter method ("stool split"):** Apply subsurface behind a single coulter in the centre of the stool. DO NOT apply using this method if ratoon growth is advanced such that excessive crop damage from equipment may result. This method is not suitable for all areas. Before using this method, consult your Adama Representative.

### **INSECTICIDE RESISTANCE WARNING**

For insecticide resistance management, KOHINOR® 350 is a 

GROUP	<b>4A</b>	INSECTICIDE
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 insecticide. Some naturally occurring insect biotypes resistant to KOHINOR® 350 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 KOHINOR® 350 and other Group 4A insecticides are used repeatedly. The effectiveness of KOHINOR® 350 on resistant individuals could be significantly reduced. Since the occurrence of resistant individuals is difficult to detect prior to use, Adama Australia accepts no liability for any losses that may result from the failure of KOHINOR® 350 to control resistant insects. KOHINOR® 350 may be subject to specific resistance management strategies. For further information contact your local supplier, Adama Australia representative or local agricultural departmental agronomist.

### **RESISTANCE MANAGEMENT STRATEGY**

**Vegetables:** DO NOT apply more than one soil application of KOHINOR® 350 to each crop. DO NOT use KOHINOR® 350 or any other Group 4A insecticide as a foliar spray after soil application of KOHINOR® 350 in that crop. Refer to district advice for local silverleaf whitefly resistance management strategies.

**Cotton Aphid in Cotton:** Observe the cotton industry Insecticide Resistance Management Strategy (IRMS).

**Aphids, whitefly and melon thrips in various crops:** DO NOT apply KOHINOR® 350 (or other Group 4A insecticides) in consecutive sprays within and between seasons. Rotate with registered insecticides from other mode of action groups. DO NOT apply more than one soil application of KOHINOR® 350 to each crop.

### **Confined environments such as glasshouses:**

**Annuals:** DO NOT apply more than one spray of KOHINOR® 350 (or other Group 4A insecticides) to any one crop.

**Perennials:** Rotate with registered insecticides from other groups. Use a maximum of three KOHINOR® 350 (or other Group 4A insecticides) sprays in any 12 month period.

### **PRECAUTION**

**Application in bananas:** Ensure application equipment does not leak. To reduce the risk of exposure from accidental leakage wear gloves during application.

### **Apples, bananas, turf and vegetables**

Refer to instructions in Critical Comments for each application method.

### **COMPATIBILITY**

As formulations of other manufacturers' products are beyond the control of Adama Australia, all mixtures should be tested prior to mixing commercial quantities. As changes in climatic conditions may alter the sensitivity of plants to mixtures of sprays, Adama Australia 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.

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

Imidacloprid is toxic to certain aquatic species.

Application should be planned to avoid run off within 48 hours of application. DO NOT apply to wet/waterlogged soils. DO NOT apply if heavy rains are expected to occur within 48 hours. Irrigation run-off from treated areas should be prevented from entering drains and waterways. DO NOT over irrigate or cause run-off. Irrigation should only occur when soil moisture measurements indicate the need for addition of water.

**Citrus:** For the first 48 hours after application irrigation should be restricted to only that which is recommended immediately after application (refer to Application section).

**Sugarcane:** Irrigation should not occur within 48 hours of application.

### **Vegetables (furrow spray pre-plant and plant hole drench applications)**

Irrigation within 48 hours of application should be minimal and sufficient to reduce seedling stress only.

**Run-off Management:** DO NOT apply within 3 metres of aquatic areas. The growth of a vegetative filter strip between the application site and any water body would also assist.

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**

#### **1 L, 5 L, 10 L, 20 L, 200 L**

Store in the closed, original container in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. Triple or preferably pressure 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.

**For refillable containers:** empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

#### **Envirodrum Micro Matic Valve (110 L)**

Store in the original sealed Envirodrum in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. DO NOT tamper with the Micro Matic valve or the security seal. DO NOT contaminate the Envirodrum with water or any foreign matter. After each use of the product, please ensure that the Micro Matic coupler delivery system and hoses are disconnected, triple-rinsed with clean water and drained accordingly. When the contents of the Envirodrum have been used, please return the Envirodrum to the point of purchase. The Envirodrum remains the property of Adama Australia.

#### **1000 L**

Store in the closed, original container in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. Storage must be secure so that the contents cannot be tampered with. All locks and seals must be in order. If locks and seals are broken prior to initial use then the integrity of this product cannot be assured. If this occurs Adama Australia should be advised immediately. This minibulk container is reusable and remains the property of Adama Australia. DO NOT rinse empty container. Empty contents fully into application equipment. Close all valves and return to the point of supply for refill or storage. No other liquid, solid or pesticide product should be put into it. When empty, return to Adama Australia for cleaning, relabelling and refilling.

**SAFETY DIRECTIONS**

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

**FIRST AID**

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26.

**SDS**

Additional information is listed in the safety data sheet (SDS). A safety data sheet for KOHINOR® 350 is available from adama.com or call Customer Service on 1800 423 262.

**CONDITIONS OF SALE:** The use of KOHINOR® 350 Insecticide being beyond the control of the manufacturer, no warranty expressed or implied is given by Adama Australia regarding its suitability, fitness or efficiency for any purpose for which it is used by the buyer, whether in accordance with the directions or not and Adama Australia accepts no responsibility for any consequence whatsoever resulting from the use of this product.

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**NOT A DANGEROUS GOOD ACCORDING TO THE AUSTRALIAN DANGEROUS GOODS (ADG) CODE.**

07/2017 9175