

POISON

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

Sorcerer® 36

Insecticide

ACTIVE CONSTITUENT: **36 g/L ABAMECTIN**

GROUP

6

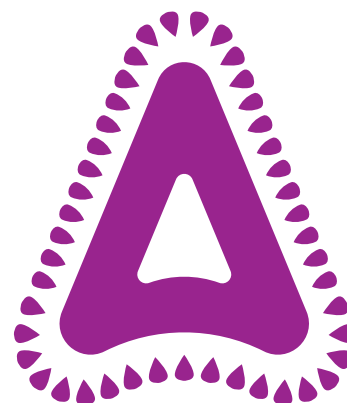
INSECTICIDE

Crops: Adzuki bean, Mung bean and Navy bean, Almond, Apple, Avocado, Blackcurrant, Blackberry, Blueberry, Citrus, Cotton, Custard apple, Cut flowers, Duboisia, Fruiting vegetables, Hops, Lettuce, Lychee, Mushroom, Nursery stock, Oil tea tree, Ornamentals, Papaya, Passion fruit, Pear, Raspberry, Rhubarb, Spring onion and shallot, Snow pea and Sugar Snap pea, Soybean, Sweet corn, Strawberry and vegetables

Controls: A range of mite and insect pests as specified in the Directions for Use table.

Formulation type
Emulsifiable
Concentrate

EC



ADAMA

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CONTENTS: 500 mL to 1000 L

RESTRAINTS

DO NOT use if rainfall is expected before spray has dried as reduced efficacy may result.
DO NOT overhead irrigate within 24 hours of application.
DO NOT make more than two applications to cotton per season, regardless of pest being controlled.
DO NOT apply to cotton under visible stress.

DIRECTIONS FOR USE

SITUATION	PEST	RATE	CRITICAL COMMENTS
Adzuki beans, mung beans and navy beans	Two spotted mite (<i>Tetranychus urticae</i>), Bean or onion thrips (<i>Thrips tabaci</i>)	150 mL/ha	Monitor crops regularly and apply as soon as threshold mite or thrips numbers have been reached. Best results will be achieved when spray is applied to low mite or thrips populations. Application to high populations may not give satisfactory control. Thorough coverage of foliage is essential. For aerial spraying, apply in a minimum water volume of 20 L/ha. Preferably use aircraft fitted with Micronair equipment using settings to produce a median droplet size. For ground application, apply using a boom spray with inter-row droppers in a minimum water volume of 100 L/ha. Apply a maximum two (2) foliar applications per crop, with a minimum re-treatment interval of 7 – 10 days between applications.
Almond	Two spotted mite (<i>Tetranychus urticae</i>), Brown almond mite (<i>Bryobia rubrioculus</i>)	375 mL/ha Plus 5 L/ha summer oil	Apply spray treatment if monitoring shows high numbers of pest mites and if pest pressure exceeds local thresholds. Apply via orchard airblast/mister sprayer applying sufficient water to obtain thorough and uniform coverage of foliage and branches. May be applied in dilute or concentrate sprays but in not less than 1000 L/ha. Make no more than 1 spray application per season. SORCERER® 36 should not be applied in 2 consecutive seasons without a chemical from a different Mode of Action Group being used in between. Use in accordance with existing insecticide resistance management strategies and in accordance with best practice.

ADAMA

SITUATION	PEST	RATE	CRITICAL COMMENTS
Apples, Pears	Two Spotted Mite (<i>Tetranychus urticae</i>), European Red Mite (<i>Panonychus ulmi</i>)	375 mL/ha plus 5 L/ha summer oil (See General Instructions for mixing rates)	For best results, apply the product using dilute applications (spraying to point of run-off). If applying with concentrate applications, efficacy may be compromised. DO NOT apply at more than two times concentrate (i.e. half the dilute water volume). Apply the same total amount of SORCERER® 36 to the target crop whether applying SORCERER® 36 by dilute or concentrate spraying methods. Use a high-quality summer spraying oil only and follow label instructions. In apples, apply SORCERER® 36 from 2 to 6 weeks after petal fall if monitoring shows high numbers of over-wintering European red mite eggs are present, or if mites are a problem early in the season. In pears, application should be made soon after mite numbers have reached the threshold for your area. Generally, SORCERER® 36 takes about 7 days to reach maximum mite control. SORCERER® 36 may control moderate to high mite populations, but in the absence of predatory mites (see <i>Integrated Pest Control</i> below), retreatment with another miticide may be necessary. If retreatment is required, use an approved miticide from a different chemical group. DO NOT make more than one application of SORCERER® 36 per season. Refer to notes on Resistance and Crop Safety under the <i>General Instructions</i> section of this label. Integrated Pest Control: The effects of SORCERER® 36 on parasitic wasps and other beneficial insects in Australian orchards are not fully known. Studies have shown that after application of SORCERER® 36, predatory mite populations may not increase for a number of weeks, due to a lack of suitable pest mite prey. Predatory mite numbers will increase with any increase in pest mite numbers allowing the continuation of biological mite control. DO NOT use in IPM programmes unless the pest mite threshold has been reached and predators are unlikely to achieve effective control.
Avocados	Tea Red Spider Mite (<i>Oligonychus coffeae</i>), Six spotted mite (<i>Eotetranychus sexmaculatus</i>)	18.75 mL/ 100 L water with 500 mL Summer Oil per 100 L water	Apply at the first signs of infection and before severe infestation. For good control apply in early spring. Apply by foliar application with ground equipment only (air-blast or equivalent). Spray in sufficient volume to ensure thorough coverage. Apply in the range of 1000 –1500 L/ha. Do not apply more than 2 applications per crop. Applications should be applied 14 - 28 days apart. Apply in accordance with the Resistance Management Strategy. To avoid resistance build up, the product should be rotated with other approved miticides and insecticides from different chemical groups.
Blackcurrants	Two Spotted Mite (<i>Tetranychus urticae</i>)	150 or 225 mL/ha or 30 to 45 mL/ 100 L	Apply using spray volume of 1000 L/ha. Spray to point of runoff. DO NOT exceed 1200 L/ha. When applying 30-45 mL/100 L application, DO NOT exceed 500 L/ha spray volume. DO NOT apply more than one application of SORCERER® 36 per season. Apply when mites appear but before numbers exceed 3 mites per leaf. Apply as a high-volume ground spray application using an airblast sprayer. DO NOT use in an IPM program unless the pest mite threshold has been reached and predatory mites are unlikely to provide effective control.
Blackberries and Raspberries	Two Spotted Mite (<i>Tetranychus urticae</i>)	150 or 225 mL/ha or 30 to 45 mL/ 100 L	Apply using ground application equipment (boom spray/knapsack) to the point of runoff. Ensure thorough coverage by increasing water volume in accordance with crop growth. Thorough coverage and penetration into bushes is essential. When applying 30-45 mL/100 L application, DO NOT exceed 500 L/ha spray volume. DO NOT use more than 2 applications per crop, with a minimum retreatment interval of 28 days between consecutive applications. Apply in accordance with the Two-Spotted Mite Resistance Management Strategy.
Blackberries, Raspberries and Blueberries	Queensland fruit fly (QFF) (<i>Bactrocera tryoni</i>)	To prepare diluent, add 12.5 mL product / 100 L, plus yeast autolysate. <u>Spot Treatment:</u> To be applied at 125 spots / ha, with 20 mL diluent applied per spot. <u>Strip Spray Treatment:</u> To be applied at 15 L diluent / ha.	Apply with ground equipment (spray gun, knapsack sprayer, or equivalent) only. Direct spray towards the base of bushes where fruit bearing is sparse. Apply on a weekly basis starting from a month prior to harvest (i.e. green berry stage) through to the end of the berry harvest. Add yeast autolysate as an attractant at the recommended label rate. Allow approximately 7 days between consecutive spray applications. DO NOT make more than 12 applications to any fruit crop in any one season. DO NOT apply when conditions are unsuitable for water-based sprays (i.e. high temperatures, strong winds, inversion conditions, imminent rain). Apply no more than four (4) sequential spray applications of SORCERER® 36 before switching to another registered fruit fly insecticide from another chemical group for at least two (2) applications. SORCERER® 36 only has contact residual activity against QFF (i.e. has no systemic action).
Citrus	Brown Citrus Rust Mite (<i>Tegolophus australis</i>), Citrus Rust Mite (<i>Phyllocoptera oleivora</i>), Broad Mite (<i>Polyphagotarsonemus latus</i>)	Dilute Spraying: 8-13 mL /100 L plus 250 mL/100 L summer oil. Concentrate Spraying: Refer to Application Instructions.	Apply by dilute spraying equipment in 3000 L to 6000 L water/ha. Apply the same total amount of product to the target crop whether applying this product by dilute or concentrate spraying methods. Use the higher rate under conditions of high pest pressure. Make no more than one application per season.
	Queensland fruit fly (QFF)	12.5 mL /100 L	Apply in a spray volume of 15 – 20 L/ha in combination with suitable protein-based lure product. Apply treatment when fruit fly activity is initially observed, as determined by regular monitoring and fruit fly trapping. Apply as a coarse spray in a 1 m wide band spray to tree skirt using a spray gun, knapsack sprayer or equivalent. Apply to one side of every row or every second row of trees. Apply a maximum of 6 applications in a season with a minimum retreatment interval of 7 days. SORCERER® 36 should be used in conjunction with other registered QFF control methods.
Citrus (bare rooted and potted nursery stock only)	Citrus red mite	12.5 mL /100 L Plus either: 30 mL Apollo®/ 100 L Or 5 mL amitraz (200 g/L) product / 100 L	Apply as a two minute dip for budwood and thoroughly treat with a drenching spray or dip to all the above ground parts of bare-rooted or potted plants.
Cucumber	Western Flower Thrips (<i>Franklinella occidentalis</i>)	45 mL/100 L (high volume) OR 225 mL/ha (low volume)	Spray to wet foliage to near the point of runoff. Thorough coverage and penetration into the crop canopy is essential. DO NOT use more than two sprays of SORCERER® 36 per crop. Refer to notes on resistance under the <i>General Instructions</i> section of this label.
Cucumber, Zucchini and Squash	Two Spotted Mite (<i>Tetranychus urticae</i>)	150 or 225 mL/ha	Apply by boom spray, hand-held boom or similar in sufficient water volumes to obtain thorough coverage and penetration into the crop canopy. Apply the higher rate for high pest pressure. Preferably apply before the build-up of mite numbers. Re-apply as mite numbers indicate. Include cultural control methods as part of an integrated pest management strategy in addition to chemical control. Alternate with other chemical groups. Allow at least 28 days between applications and do not make more than two applications per crop. Refer to notes on resistance under the <i>General Instructions</i> section of this label.
Custard apple	Two spotted mite (<i>Tetranychus urticae</i>), Banana spotted mite (<i>Tetranychus lambi</i>)	30 to 45 mL/ 100L or 150 – 225 mL/ha	Apply when mites first appear during spring/summer. Best results are obtained when applied to low pest populations. Apply by air blast sprayer or equivalent using a sufficient water volume to obtain thorough coverage. Thorough coverage is essential to achieve effective control. Do not apply more than one application per season.

SITUATION	PEST	RATE	CRITICAL COMMENTS
Duboisia	Red spider mite (<i>Tetranychus urticae</i>)	375 mL/ ha plus 5 L/ha of summer oil	Apply to point of run off. Thorough coverage is essential. Monitor crops regularly and apply as soon as the threshold mite number for your area has been reached. Best results will be obtained when applied to low mite populations. Application under high populations may not give satisfactory control, in this case a second application 7-10 days later may be needed.
Fruiting vegetables other than cucurbits. Including tomatoes, peppers (sweet and chilli), and eggplant	Two spotted mite (<i>Tetranychus urticae</i>), Tomato Red Spider Mite (<i>Tetranychus evansi</i>)	150 to 225 mL /ha (high volume spraying 30 mL /100 L or 45 mL/100 L)	Thorough coverage and penetration into the plant canopy is essential. Preferably apply before the build-up of mite numbers. Use higher rate in situations of greater pest pressure (in tomatoes this is when mite numbers exceed 5-6 mites per compound leaf). Re-apply when pest numbers indicate. For staked/trellised tomatoes use high volume spraying. For non-trellised/ staked tomatoes use droppers to direct the spray onto plants and away from the inter-row. Alternate with other chemical groups. Allow at least 28 days between applications. Do not use more than 2 applications per crop. Do not apply more than 2 consecutive sprays before changing to an approved insecticide from a different chemical group. Refer to notes on resistance under <i>General Instructions</i> section of this label.
	Tomato Russet Mite (<i>Aculops lycopersici</i>)		Apply as for Two Spotted Mite. The lower rate will control Tomato Russet Mite not apparent at spraying. Use the higher rate when Tomato Russet Mite is present at spraying or is the main pest.
	Tomato Potato Psyllid (<i>Bactericera cockerelli</i>)	225 mL/ha or 45 mL/ 100 L plus 500 mL summer spray oil	Thorough coverage and penetration into the plant canopy is essential. Preferably apply before the build-up of pest numbers. Re-apply when pest numbers indicate. Alternate with other chemical groups. Allow at least 28 days between applications. Do not use more than 2 applications per crop. Refer to notes on resistance under <i>General Instructions</i> section of label.
	Tobacco Leafminer (Potato Moth) (<i>Phthorimaea operculella</i>)	300 mL/ ha (for high volume spraying use 60 mL/ 100 L)	Apply in sufficient volume to obtain even coverage and penetration of plants. Apply on the first sign of pests. Re-apply as pest numbers indication, or every 7 – 10 days with a maximum of 5 applications to the crop. If mites are also a project, do not use more than 2 SORCERER® 36 sprays per crop. For staked/trellised tomatoes use high volume spraying. For non-trellised/ staked tomatoes use droppers to direct the spray onto plants and away from the inter-row. Refer to notes on resistance under <i>General Instructions</i> section of label.
Tomato and Eggplant only	Western Flower Thrips (<i>Franklinella occidentalis</i>)	45 mL/100 L (high volume) OR 225 mL/ha (low volume)	Spray to wet foliage to near the point of runoff. Thorough coverage and penetration into bushes is essential. DO NOT use more than two sprays of SORCERER® 36 per crop. Refer to notes on resistance under the <i>General Instructions</i> section of this label.
Hops	Two Spotted Mite (<i>Tetranychus urticae</i>)	500 mL/ha	Apply as pest pressure indicates as a dilute spray in 1000 to 2000 L water/ha depending on crop size. Make no more than one application of SORCERER® 36 per season.
Leafy vegetables including Beetroot leaves, Brassica leafy vegetables, Chicory, Endive, Lettuce (field grown), Sliver Beet, Spinach	Western Flower Thrips (<i>Franklinella occidentalis</i>)	150 or 225 mL/ha	Apply before pest populations reach economically damaging levels. Apply in sufficient volume to penetrate the plant canopy and evenly cover the plant surfaces. Apply the higher rate for high pest pressure. Re-apply as pest numbers indicate. Alternate with other chemical groups. Allow at least 28 days between applications and do not make more than two applications per crop.
Lettuce	Two Spotted Mite (<i>Tetranychus urticae</i>)	150 to 225 mL/ha or 30 to 45 mL /100 L water	Apply sufficient volume for even coverage and adequate spray penetration of plants using a knapsack or boom spray. Use the higher rate for high pest pressure. DO NOT apply more than one (1) application per crop to avoid potential development of resistance. Where more frequent control of two spotted mite is required other approved chemicals with a different MoA Group should be rotated to avoid resistance development.
Lychees	Two Spotted Mite (<i>Tetranychus urticae</i>), Litchi erineose mite (<i>Aceria litchii</i>)	25 to 50 mL/ 100 L water	Apply foliar spray when mites first appear during spring/summer. Use calibrated air-blast sprayer or similar equipment. Apply in spray volume of 1,000-1,500 L/ha water. Thorough coverage of foliage is essential to achieve effective control. Apply a maximum of two (2) foliar applications per season, with a minimum re-treatment interval of 28 days. Add wetter: 0.2% horticultural spray oil (i.e. 200 mL product /100 L). Use in accordance with existing insecticide resistance management strategies.
Mushrooms	Red pepper mites (<i>Siteroptes mesembrinae</i>), Mushroom pygmy mites (<i>Microdispus lambi</i>) Soil borne nematodes of the family Rhabditidae	3 mL / 50 L of casing material 1.5 mL in 1.5 L of water/m ² of growing medium	Apply when pests first appear using a water cart or knapsack spray. Repeat depending upon infestation. Apply as a casing drench or if in crop over beds. DO NOT apply more than 2 applications per crop with a minimum retreatment interval of 14 days. Application of SORCERER® 36 should be made at casing material preparation stage or 2 applications watered onto casing layer as split applications. Include cultural control methods as part of an integrated pest management strategy in addition to chemical control.
Papaya/ Pawpaw	Two Spotted Mite (<i>Tetranychus urticae</i>)	150 or 225 mL/ha or 30 to 45 mL /100 L water	Apply when pest first appears. Ensure adequate spray penetration to obtain effective control of pest. Do not make more than one application per season. To avoid resistance, sprays should be rotated with products from different chemical classes.
Passion fruit	Passionvine Mite (<i>Brevipalpus phoenicis</i> Geijskes), Two spotted mite (<i>Tetranychus urticae</i>)	25 mL / 100 L water	Apply with a properly calibrated boom sprayer or similar equipment in sufficient volume to penetrate the plant canopy and evenly cover the plant surfaces. Apply in the range of 1200 -1500L/ ha. Apply before pest populations reach economic damaging levels. If conditions continue to favour mite development, a second application may be required 14-20 days later. Do not apply more than two sprays per season. To avoid resistance build up, the product should be rotated with other approved miticides and insecticides from different chemical groups.
Rhubarb	Broad mite (<i>Polyphagotarsonemus latus</i>)	150 to 225 mL/ha or 30 to 45mL/ 100 L	Apply using an airblast sprayer or boom sprayer. The water rate may need to increase as the crop size increases. Mature crops may require 500 L/ ha and the rate per 100 L should be used. Do not make more than two applications per season with a minimum retreatment interval of 14 days. SORCERER® 36 (Group 6A) should not be applied in 2 consecutive crops without alternating with miticides from different chemical groups.
Spring onions and shallots (field only)	Two Spotted Mite (<i>Tetranychus urticae</i>)	150 to 225 mL/ha	Apply with a properly calibrated boom sprayer (or equivalent) in sufficient volume to penetrate the plant canopy and evenly cover the plant surfaces.
Snow peas and sugar snap peas	Two spotted mite (<i>Tetranychus urticae</i>), Tomato Red Spider Mite (<i>Tetranychus evansi</i>)		Apply before pest populations reach economic damaging levels. Re-apply if monitoring shows moderate numbers of pest mites re-infest plants. Allow at least 28 days between applications. Do not apply more than 2 applications per crop. SORCERER® 36 should not be applied in two consecutive seasons without a chemical from a different MOA group being used in between.
Sweet corn (field only)			

SITUATION	PEST	RATE	CRITICAL COMMENTS
Strawberries	Two Spotted Mite (<i>Tetranychus urticae</i>)	50 mL/100 L If spray volume is less than 600 L/ha, use a minimum of 300 mL/ha SORCERER® 36. DO NOT exceed 600 mL/ha SORCERER® 36 per application	Spray to wet foliage to near the point of run-off. Thorough coverage and penetration into plants is essential. Preferably apply on first appearance of mites. When applied early, one application may be sufficient to give effective control however, if mite numbers exceed 3-5 mites per leaflet, apply two applications spaced 7-10 days apart. Re-apply as pest numbers indicate to a maximum of 2 sprays of SORCERER® 36 per season. If retreatment is required after 2 consecutive sprays with SORCERER® 36, use an approved miticide from a different chemical group. Integrated Pest Control: see comments in the apple and pear section. Refer to notes on Resistance under the <i>General Instruction</i> section of this label.
	Western Flower Thrips (<i>Franklinella occidentalis</i>)		
Nursery stock (non-food)	Tomato Potato Psyllid (<i>Bactericera cockerelli</i>)	225 mL/ha plus 500 mL summer spray oil Or 45 mL/100 L	Thorough coverage and penetration into the plant canopy is essential. Apply before pest populations reach economic damaging levels. Re-apply if monitoring shows moderate numbers of pests re-infest plants. Do not apply more than 2 applications per crop. Allow at least 7 days between applications. Do not apply more than 2 consecutive sprays before changing to an approved insecticide from a different chemical group.
Ornamental Plants including Roses, Chrysanthemums, Carnations and Indoor Foliage Plants	Two Spotted Mite (<i>Tetranychus urticae</i>), Western Flower Thrips (<i>Franklinella occidentalis</i>)	25 mL/100 L to a maximum of 750 mL/ha SORCERER® 36 per application	Spray to wet foliage to near the point of run-off using at least 2,000 L/ha (100 litres per 500 square metres). Thorough coverage and penetration into plants is essential. Preferably apply on first appearance of mites. If applied when pest numbers are low to moderate, one application will be sufficient to give effective control, however if mites are numerous, apply a second application 7-10 days later. DO NOT use overhead irrigation within 24 hours after application. DO NOT use on Ferns and Shasta. For ornamentals not listed on the label, small test applications to assess for unexpected phytotoxicity should be made before spraying the whole crop. DO NOT use more than 2 times per season. Refer to notes on Resistance under the <i>General Instructions</i> section of this label.
Ornamental Plants (Only for purposes of interstate quarantine requirements)	Melon Thrips (<i>Thrips palmi</i>)	25 mL/100 L of water	Do not use more than two times per season per crop. Refer to notes on Resistance under the <i>General Instructions</i> section of this label.
Cotton	Two Spotted Mite (<i>Tetranychus urticae</i>), Carmine Mite (<i>Tetranychus cinnabarinus</i>)	150 mL/ha	Apply to actively growing crops. Thorough coverage is essential. Monitor crops regularly and apply as the threshold mite number for your area has been reached. Best results will be obtained when applied to low mite populations. Application to high populations may not give satisfactory control. Under these conditions a second miticide application 7-10 days later may be needed.
Cotton (NSW and Qld only)	Native Budworm (<i>Helicoverpa punctigera</i>), Bollworm (<i>Helicoverpa armigera</i>)	150 or 300 mL/ha	Apply to actively growing crops. Thorough coverage is essential. Use the low rate only when the population comprises less than 10% <i>Helicoverpa armigera</i> . Use the higher rate alone or the lower rate with a suitable mixing partner. Larvae feeding within bolls may not be controlled. Applications should target brown eggs and newly emerged larvae (neonates). DO NOT apply more than twice in one season for <i>Helicoverpa</i> control.
Cut flowers	Tomato Potato Psyllid (<i>Bactericera cockerelli</i>)	45 mL/100 L water or 225 mL/ha	Use as a pre-harvest spray or post-harvest dip. Ensure adequate penetration and coverage when applying pre-harvest. For dipping, flowers must be totally immersed in the diluted solution for not less than one minute and left to air dry naturally for two hours.
Soybeans	Two Spotted Mite (<i>Tetranychus urticae</i>)	150 mL/ha	Apply to actively growing crops. Thorough coverage is essential. Monitor crops regularly and apply as soon as there are 10 mites per leaf. Best results will be obtained when applied to low mite populations. Application to high populations may not give satisfactory control. Under these conditions a second application 7-10 days later may be needed. DO NOT apply more than 2 sprays per season.
Oil tea tree	Pyrgo Beetle	150 mL/ha	Apply to coppice regrowth. Apply as a foliar spray by ground or aerial application. Use a spray volume of 30 to 100 L/ha. Do not apply more than 2 applications per crop. For resistance management alternate with products from different mode of action groups.

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

WITHHOLDING PERIODS:

Harvest

Adzuki beans, mung beans and navy beans, Almonds, Hops, Soybeans:

DO NOT HARVEST FOR 28 DAYS AFTER APPLICATION.

Apples and Pears, Avocados, Custard apple:

DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION.

Blackcurrants, Sweet corn:

DO NOT HARVEST FOR 21 DAYS AFTER APPLICATION.

Blackberries and Blueberries, Citrus, Lychees, Papaya, Raspberries, Rhubarb:

DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION.

Cotton:

DO NOT HARVEST FOR 20 DAYS AFTER APPLICATION

Cucumber, Leafy Vegetables, Lettuce, Mushrooms, Shallots, Spring onion, Squash, Strawberries, Zucchini, Fruiting vegetables other than cucurbits:

DO NOT HARVEST FOR 3 DAYS AFTER APPLICATION.

Nursery stock, Ornamentals: **NOT REQUIRED WHEN USED AS DIRECTED.**

Passion fruit, Snow peas and Sugar snap peas:

DO NOT HARVEST FOR 1 DAY AFTER APPLICATION.

Grazing

Adzuki beans, mung beans and navy beans, Hops, Soybeans:

DO NOT GRAZE OR CUT FOR STOCKFOOD FOR 28 DAYS AFTER APPLICATION.

Apples and Pears:

DO NOT FEED TREATED PRODUCE TO LIVESTOCK FOR 14 DAYS AFTER APPLICATION.

Avocados, Custard apple, Duboisia, Ornamentals, Papaya, Rhubarb:

DO NOT GRAZE OR CUT TREATED AREA FOR STOCK FOOD.

Cotton:

DO NOT GRAZE OR CUT FOR STOCKFOOD FOR 20 DAYS AFTER APPLICATION.

Cucumber, Squash, Strawberries, Zucchini, Leafy Vegetables, Fruiting vegetables other than cucurbits:

DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 3 DAYS AFTER APPLICATION.

Nursery stock, Passion fruit: **NOT REQUIRED WHEN USED AS DIRECTED.**

Snow peas and sugar snap peas:

DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 2 DAY AFTER APPLICATION.

Oil Tea tree, Sweet corn:

DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 21 DAYS AFTER APPLICATION.

OBSERVE RESTRAINTS AND RESTRICTIONS FOR TANK MIX PRODUCTS.

TRADE ADVICE:

Export of treated produce: Growers should note that maximum residue limits (MRLs) or import tolerances may not exist in all markets for all edible produce treated with SORCERER® 36. If you are growing edible produce for export, please check with Adama representative for the latest information on MRLs and import tolerances before using SORCERER® 36 prior to application.

GENERAL INSTRUCTIONS

SORCERER® 36 is an insecticide and acaricide with contact and stomach action. SORCERER® 36 has limited plant systemic activity but exhibits translaminar movement. Good spray coverage is essential. SORCERER® 36 is translocated into leaves and remains for several weeks offering limited residual control of sucking mites and other target pests. Abamectin that is not absorbed into plants is quickly degraded.

Mixing

Measure the required amount of SORCERER® 36, add to the partly filled spray tank and then add the remainder of the water. Wetting agent is not required.

Applications Instructions for Apples and Pears: SORCERER® 36 is not systemic making good coverage essential. To achieve 375 mL SORCERER® 36 + 5 L summer oil/ha apply spray at the following mixing rates:

Spray Volume	SORCERER® 36	Summer Oil
	(Rate/100 L required)	
1000 L/ha (minimum)	38 mL	500 mL
1500 L/ha	25 mL	335 mL
2000 L/ha	19 mL	250 mL
2500 L/ha	15 mL	200 mL

Crop Safety: Abamectin formulations plus summer oil has very occasionally caused slight fruit russetting on some pear varieties, particularly ANJOU and other sensitive varieties, when used alone or when other products are applied sequentially. A very small amount of temporary apple fruit blemishing has been associated with low water volume applications. The Directions for Use and Precautions on summer oil labels should be followed carefully. Certain conditions may play a part in the occurrence of this damage. DO NOT make applications (1) when unusually hot conditions are present or expected within 24 hours after application, (2) under poor or slow drying conditions or (3) with equipment that may leave large droplets on fruit after application. SORCERER® 36 plus summer oil may increase the severity of fruit russetting on sensitive apple varieties. DO NOT apply SORCERER® 36 to apples or pears before or after applications of Delan® or Captan.

Cut flowers: This product 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 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 larger quantities.

Application Instructions for Citrus: To be effective SORCERER® 36 requires thorough spray coverage. Ensure that equipment is properly calibrated to give an even distribution at the correct volume. The same quantity of SORCERER® 36 per hectare should be used when spraying either the dilute or concentrate method.

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 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 SORCERER® 36 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

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 concentrate factor in this example is 3 X (i.e. $1500 \text{ L} \div 500 \text{ L} = 3$)
4. If the dilute label rate is 125 mL/100 L, then the concentrate rate becomes 3 x 125; that is 375 mL/100 L of concentrate spray.

The chosen spray volume, amount of product per 100 L of water, and the sprayer set and operation may need to be changed as the crop grows. For further information of concentrate spraying, users are advised to consult relevant industry guidelines, undertake appropriate competency training and follow industry Best Practices.

Application Instructions for Cotton and Soybeans: Apply by ground spraying equipment in a minimum spray volume of 100 L/ha or by fixed wing aircraft in a minimum volume of 20 L/ha. Good coverage is essential.

Air: Apply by air spray when there is a reliable cross wind to assist with good penetration into the crop canopy. Application should be carried out in the cooler parts of the day or night. Preferably use aircraft fitted with micronair atomisers.

Ground: Use inter-row droppers fitted with nozzles spraying towards the crop rows. Inter-row nozzles should be level with or just below the canopy and spraying at right angles to the ground.

COMPATIBILITY

SORCERER® 36 is compatible with Caltex Summer Spray Oil, BP Summer Spray Oil, Codacide and with most commonly used insecticides and fungicides.

Cotton and Soybeans applications: SORCERER® 36 is compatible with Ballistic® EC, Alpha-Scud® EC, Showdown® 375, Amitraz® EC, Ulvapron, and EC formulations of methomyl. DO NOT apply with ULV formulations. Mixtures with more than one of the above are not recommended.

As formulations of other manufacturer's products are beyond the control of Adama, all mixtures should be tested prior to mixing commercial quantities.

INSECTICIDE RESISTANCE WARNING

For insecticide resistance management SORCERER® 36 is a Group 6 insecticide. Some naturally occurring insect biotypes resistant to SORCERER® 36 and other Group 6 insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if SORCERER® 36 or other Group 6 insecticides are used repeatedly. The effectiveness of SORCERER® 36 on resistant individuals could be significantly reduced. Since the occurrence of resistant insects is difficult to detect prior to use, Adama Australia accepts no liability for any losses that may result from the failure of SORCERER® 36 to control resistant insects.

SORCERER® 36 may be subject to specific resistance management strategies. For further information contact your local supplier, Adama representative or local agricultural department agronomist.

WFT Resistance Management Strategy:

Chemicals alone will not control western flower thrips (WFT). Effective control can only be achieved with an integrated approach using additional cultural control methods. The most important cultural control method is the removal of all flowering weeds (especially white clover) from within and around the crop. Uncontrolled flowering weeds harbour abundant thrips that re-infest the crop and overwhelm any chemical control. Crop debris may harbour western flower thrips and so should be ploughed in or burned. If the crop is at all sensitive to viruses, such as Tomato Spotted Wilt Virus (TSWV), it is essential to remove any virus infected plants (burn or bury). The effective chemical management of WFT is made difficult by resistance to a wide range of insecticides and limited accessibility to life stages during spraying. Only the larval and adult stages of WFT are contacted by insecticidal sprays; eggs are protected in plants tissue, while pupal stages shelter in soil and debris. In order to effectively manage WFT in crops, chemicals should be sprayed at intervals. The intervals are governed by the length of the life-cycle, which is controlled by the temperature.

Monitoring allows insecticides to be used only when necessary and so vigilant crop monitoring will reduce insecticide costs, reduce insecticide impact on beneficial insects and lessen the likelihood of the development of resistance. Sticky traps should be set to monitor thrips numbers at a minimum density of 3-10 traps per ha. A new series of sprays should not be commenced without appropriate monitoring.

Chemical applications should be made in a series of sprays until population levels have fallen to acceptable levels. To keep resistance levels down, change chemical groups between series of sprays. A series of chemical sprays will be three applications of the one chemical, 3-5 days apart. Apply three consecutive sprays of the same chemical and alternate to chemical in a different group for the following series of sprays (NOTE THAT THE MAXIMUM NUMBER OF ABAMECTIN APPLICATIONS IS TWO PER SEASON). There must be at least a 3 week break (<20°C) or two week break (>20°C) before another series of sprays is applied. If monitoring indicates the need to spray earlier, then insecticide resistance, inappropriate spray application or inadequate cultural control should be suspected and expert advice sought. The use of SORCERER® 36 for the control of WFT is subject to a Croplife IRM strategy. Consult the current guidelines before applying SORCERER® 36 for WFT control.

GROUP	6	INSECTICIDE
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CROP SPECIFIC RESISTANCE STRATEGY

Experience has shown that repeated use of one particular miticide or miticides from the same chemical group can lead to the early development of mite resistance to that miticide or chemical group. Therefore, SORCERER® 36 should not be applied more than the following number of times per season/crop: Apples/Pears, Citrus, Hops: One spray per season; Tomatoes: One spray per crop if two-spotted mites are present, two sprays per crop for russet mites or WFT alone; Cotton: One spray per crop if two-spotted mites are present, two sprays per crop for *Helicoverpa* alone; Capsicums, Strawberries, Eggplant, Blackcurrants, Cucumber, Squash, Zucchini, Leafy Vegetables: Two sprays per season. In addition, SORCERER® 36 should not be applied in two consecutive seasons without an unrelated chemical being used in between. Alternate SORCERER® 36 with approved miticides from other chemical groups. Consult your chemical supplier or technical consultant for advice on chemical groups.

In cotton: The use of SORCERER® 36 should be in accordance with anti-resistance guidelines developed by CottonInfo.

CROP MONITORING

Effective control depends on regular monitoring of crops. Check crops regularly (every 3-5 days) during the season.

PRECAUTION

Re-Entry Period

DO NOT allow entry into treated areas until the spray has dried, unless wearing cotton overalls buttoned to the neck and wrist (or equivalent clothing) and chemical resistant gloves. Clothing must be laundered after each day use. Do not allow re-entry into treated areas in glasshouses for 24 hours after treatment.

General Safety Precautions

Do not use human flaggers/markers unless they are protected by engineering controls such as enclosed cabs.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Do not apply under weather conditions or from spraying equipment that may cause spray to drift from the target area. Dangerous to fish and other water-borne organisms. Do not contaminate streams, rivers or waterways with the chemical or used containers. Dangerous to bees. Do not spray any plants in flower while bees are foraging. Studies indicate that when abamectin comes into contact with soil it readily and tightly binds to the soil and becomes inactive over time.

Cotton only: A strategy to minimize spray drift should be employed at all times when applying sprays as outlined in the cotton industries Best Management Practices.

STORAGE AND DISPOSAL

Store in the closed, original container in a dry, cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. DO NOT use this container for any other purpose.

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.

1000 L: Empty contents fully into application equipment. Close all valves and return to point of supply or other designated collection point for refill or storage. This container remains the property of Adama Australia.

Disposal of waste dipping solution: Dispose of spent treatment solutions in a waste pit at least 50 metres away from streams, drains, ponds, channels, wells, boreholes or watercourses. Ensure it is disposed of at least two metres above any groundwater, in a location that is not affected by erosion or flooding. For light soil areas it is recommended to add compost, sawdust or peat to the disposed liquid.

SAFETY DIRECTIONS

Harmful if swallowed. Will irritate the eyes and skin. Avoid contact with eyes and skin. If product on skin, immediately wash area with soap and water. If product in eyes, wash it out immediately with water. When opening the container and preparing the product for use and using the product, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and elbow length chemical resistant gloves, goggles and half-facepiece respirator. If applying the product by spraying equipment carried on the back of the user wear cotton overalls over normal clothing buttoned to the neck and wrist and a washable hat and elbow length chemical resistant gloves and a half facepiece respirator. When using as a dip, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), a washable hat, elbow-length chemical resistant gloves, impervious footwear, goggles and half-facepiece respirator.

Wash hands after each day's use. Wash gloves, respirator (if rubber wash with detergent and warm water), face shield or goggles and contaminated clothing.

FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 131126. If swallowed, do NOT induce vomiting. If in eyes, wash out immediately with water.

SAFETY DATA SHEET

Additional information is listed in the Safety Data Sheet (SDS). A safety data sheet for SORCERER® 36 is available at adama.com. Call Customer Service on 1800 423 262.

CONDITIONS OF SALE: The use of SORCERER® 36 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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UN No. 2902

PESTICIDES, LIQUID, TOXIC, N.O.S.

PACKING GROUP: III

HAZCHEM CODE: 2X

03/2021 22567