

CAUTION

KEEP OUT OF REACH OF CHILDREN

ACTIVE CONSTITUENT:
815 G/L PARAFFINIC OIL (AS 1888 - 1976),
UNSULPHONATED RESIDUE NO LESS THAN 98.0%

SACOA

BIOPEST[®]

Paraffinic Oil

A narrow range emulsifiable paraffinic oil for the management of
pests as per directions for use



DOM/BATCH NUMBER:

APVMA APPROVAL NUMBER:

54179/45163

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DIRECTIONS FOR USE

RESTRAINTS

DO NOT spray when temperatures are expected to exceed 32°C, or when soil is dry and trees are suffering from moisture stress.

CROP	PEST	STATE	APPLICATION RATE	CRITICAL COMMENTS
LITRES OF OIL IN DILUTE SPRAY PER 100 LITRES OF WATER				
Bananas	Cercospora Leaf Spot	NSW, ACT	4L	Apply in combination with mancozeb at 2.2-4.5 kg/ha in 200 to 500L of water via appropriate ground rig or 30 Litres via aerial application. Apply at 3-4 week intervals, from December until late April.
		Qld	3.5L	In North Queensland the interval may be reduced to 10-14 days in the wet season.
	Cercospora Leaf Spot, Leaf Speckle	NSW, ACT, Sth Qld, WA	5L	Apply in combination with Tilt 250 EC. Commence spraying in December and apply 4 to 5 times at 21 day intervals. Later use alternative fungicides if needed. Spray both sides of leaves.
	Cercospora Leaf Spot, Cordana leaf Spot	Nth Qld	5L	Apply in combination with Tilt 250 EC. Spray every two weeks from the start of the wet season in December and make a maximum of 6 applications. Later use alternative fungicides if needed. Spray both sides of leaves.
Cotton	Cotton Aphids	NSW, Qld, WA, NT only	2L to 5L	Apply by ground rig using minimum of 80L/ha of water. Use alone to control early to mid-season populations of less than 20 aphids per terminal. Do not rely on SACOA BIOPEST® Paraffinic Oil alone to control more than 20 aphids per terminal shoot. If populations of aphids exceed 20 per terminal, use SACOA BIOPEST® Paraffinic Oil in a mixture with a registered aphicide.
	Defoliation Aid	NSW, ACT, Qld, WA	2L	Apply in combination with thidiazuron (e.g. DROPP) defoliant
	Carrier for certain ULV insecticides	NSW, Qld, only	3L to 5 L	Apply in combination with ULV insecticide as specified on the insecticide label to ensure insecticide reaches its target.
Apples	Mites (Eggs), including European Red Mite, Scales (Hard & Soft)	NSW, ACT, Vic, SA, WA, Tas only	2L	Dormant or delayed dormant to half green tip
		Qld	3L	
	Mites	NSW, ACT, VIC, SA, WA, Tas only	1L	Summer (Foliar or Cover) or Post Harvest
Wetting agent/ adjuvant/carrier as recommended on fungicide and insecticide labels	Refer to particular pesticide label	All	500mL to 5L	SACOA BIOPEST® Paraffinic Oil acts as a carrier/adjuvant/wetting agent which may improve the performance of certain pesticides. Always check pesticide label for correct rates.

CROP	PEST	STATE	APPLICATION RATE	CRITICAL COMMENTS
LITRES OF OIL IN DILUTE SPRAY PER 100 LITRES OF WATER				
Pears	European Red Mite, Eggs, Scales	NSW, ACT, Vic, SA, WA,	1L to 2L	Dormant or delayed dormant (up to and including petal fall)
		Tas only	2L	
		Qld	3L	
	Two Spotted Spider Mite	NSW, ACT, Vic, SA, WA, Tas only	1L	Summer (Foliar or Cover) or Post Harvest
	Brown Mite, Pear Rust Mite	NSW, ACT, Vic, SA, WA, Tas only	1L to 2L	
	Pear Leaf Blister Mite	NSW, ACT, Vic, SA, Tas, WA only	1.5L to 2L	
Apricots Cherries	San Jose Scale	NSW, ACT, Vic, SA, WA only	2L	Dormant
		Qld	3L	
	Mites and Scales	NSW, ACT, VIC, SA, WA, Tas only	1L to 1.5L	Summer (Foliar or Cover) or Post Harvest. Applications should not be made over oil sensitive varieties. Do not apply to trees lacking adequate moisture
Almonds Peaches Nectarines	Aphids (Eggs), Mites (Eggs),	NSW, ACT, Vic, SA, WA, Tas only	3L	Dormant or delayed dormant
	San Jose Scales	NSW, ACT, Vic, SA, WA only	2L	Dormant
	Mites and Scales	NSW, ACT, Vic, SA, WA only	1L to 2L	Summer (Foliar or Cover) or Post Harvest
Plums , Prunes	Aphids (Eggs), Scales, Mites (Eggs)	NSW, ACT, SA, WA, Tas only	1.5L to 2L	Dormant or delayed dormant. To half green tip.
	Mites, Scales	NSW, ACT, VIC, SA, WA, Tas only	1L to 1.5L	Summer (Foliar or Cover) or Post Harvest Do not apply over fresh market fruits after bloom starts to form, as the oil will remove the bloom. Application should not be made over sensitive varieties.
Pecans	Aphids (Eggs), Scales, Mites (Eggs)	NSW, ACT, Qld, SA, WA, Tas only	3L	Dormant
	Aphids, Mites	NSW, ACT, QLD, SA, WA, Tas only	1L to 1.5L	Summer (Foliar or Cover) or Post Harvest

CROP	PEST	STATE	APPLICATION RATE	CRITICAL COMMENTS
LITRES OF OIL IN DILUTE SPRAY PER 100 LITRES OF WATER				
Avocado	Scale Insects	Qld	1,2L to 1,6L	Apply when heavy scale populations occur on stem, foliage or fruit. Do not apply if trees need watering. Application is most effective against young crawler stages.
		NSW, ACT, WA	2L	
Kiwi Fruit	Scale Insects	Qld	1L to 1,6L	
		NSW, ACT, WA	2L	
Custard Apple	Scale Insects	Qld	1L to 1,7L	
		NSW, ACT, WA	2L	
Mango	Scale Insects	QLD, NSW, WA, NT only	1L to 2L	Apply after fruit picking when heavy scale populations occur on stem and foliage.
	Wax Scale			
	Mango Plant Hopper			
Shade Trees* and Shrubs including Conifers, Deciduous Broadleaf Evergreens and Woody Ornamentals, Ornamental Trees* Shrubs along city streets, other rights of way including Deciduous and Broadleaf Evergreens.	Aphids, Scales (Immature), Spider Mites, Whitefly (immature)	NSW, ACT, VIC, SA, WA, Tas only	2L to 4L OR 1L to 3L	Winter Dormant period as needed for plants that become dormant in Winter.
				Summer (Foliar or Cover) as needed.
Flowers and Foliage Plant including Roses and other Flowering Shrubs, Foliage Ornamentals and Bedding Plants	Aphids, Scales (Immature), Spider Mites, Whitefly (immature)	NSW, ACT, VIC, SA, WA, Tas only	2L to 3L	Winter Dormant period as needed for plants that become dormant in Winter.
			1L to 2L	Summer (Foliar or Cover) as needed. Do not spray when buds are fully opened and/or shoot elongation is occurring. Do not apply to glasshouse roses.
Christmas Trees	Aphids Scales (Soft & Hard) (Immature), Spider Mites		2L to 4L	Winter as needed.
			1L to 3L	Summer as needed.

CAUTION: Spray no more than 4 times during growing season with two weeks minimum application interval. Do not spray when there is no obvious moisture in the leave or the plant is under stress. Avoid spraying open blooms. Bleaching and spotting has been observed with open blooms of certain plants.

Oil removes the glaucous (blue) bloom from some evergreens. Always use lower dosage or test spray oil sensitive plants first – do not spray walnut foliage.

CROP	PEST	STATE	APPLICATION RATE	CRITICAL COMMENTS
LITRES OF OIL IN DILUTE SPRAY PER 100 LITRES OF WATER				
Blueberries	Mites, Scales	All States	2L	Foliage.
			3L	Dormant.
Strawberries	Aphids, Mites	NSW, ACT, SA, WA, Tas only	1L	Dormant and Foliage.
Olives	Scales (Black Scale, Soft Brown, etc)	All States	1L	Best results are achieved when applied to crawlers in spring. Minimum of 1000L water per Ha
Grapes	Mealybugs	NSW, ACT, Qld, SA, WA, Tas only	4L to 6 L with 300L to 500L Water per Hectare	Dormant – A tank mix using insecticides improves control.
				Air carrier or Air blast type sprayers strongly recommended to avoid plant injury and reduce effect on bloom of table grapes.
	Grapevine Scale	NSW, Vic, SA, WA, Qld Only	3L	Apply as a post pruning spray in mid-winter when vines are fully dormant
		Tas only	2L	
	Powdery Mildew	All States	1L	Commence spraying just after woolly bud stage. Follow-up sprays should be applied every 14-21 days till bunch closure.
Asparagus, Beans, Beet, Corn, Cucurbits, Peppers / Capsicums, Radish, Squash, Tomatoes	Aphids, Mites, Thrips, Leafhopper	All States (Except Qld for beans, tomato, corn, and peppers/ capsicums)	1L to 2L	As needed
Corn (Sweet and Field), Sugar Beet	Aphids, Mites, Whitefly, Bugs (Immature)	NSW, ACT, SA, Tas, WA only	2L	As needed
Chrysanthemum, Dieffenbachia, Dracaena, Ferns, Gardenias, Jade Plant, Palms, Philodendron	Aphids, Scales, Whitefly	All States	1L to 2L	Do not apply to plants in direct sunlight behind glass. Do not use on Coconut Palms and Maidenhair Ferns. Chrysanthemum blooms have shown phytotoxic symptoms at the higher rate. Applicator should conduct a test for phytotoxicity by treating a few specimens before making a large-scale application. Protect floor, floor coverings and furnishings from overspray.
			2.5mL to 5.0mL/L	

CROP	PEST	STATE	APPLICATION RATE	CRITICAL COMMENTS
LITRES OF OIL IN DILUTE SPRAY PER 100 LITRES OF WATER				
Azalea, Begonia, Camellia, Chrysanthemum, Crown of Thorns	Aphids, Mealybugs, Scale, (Soft and Hard), Thrips, Whitefly (Immature) Reduces number of Spider mites	All States	10mL to 20mL/L OR 1L to 2L	Do not apply to plants in direct sunlight behind glass. Do not use on Coconut Palms and Maidenhair Ferns. Chrysanthemum blooms have shown phytotoxicity symptoms at the higher rate. Applicator should conduct a test for phytotoxicity by treating a few specimens before making a large-scale application. For greenhouse pests listed use once a week initially then as the pest is controlled decrease the frequency to every 2 – 3 weeks as needed.
Dieffenbachia*			10mL/L OR 1L	
Easter Lilly, Fern Gardenia, Hibiscus Foliage, Jade Plant Palm, Philodendron			10mL to 20mL/L OR 1L to 2L	
Poinsettia			10mL/L OR 1L	
Reiger Begonia Zinnias			10mL to 20mL/L OR 1L to 2L	
Hardy Plants	Leaf Polish	All States	10mL/L OR 1L	
*Oil removes the glaucous (blue) bloom from some evergreens. Always use lower dosage or test spray oil sensitive plants first – do not spray walnut foliage.				

CROP	PEST	STATE	APPLICATION RATE	CRITICAL COMMENTS
LITRES OF OIL IN DILUTE SPRAY PER 100 LITRES OF WATER				
Citrus	Redscale	Vic, SA, WA	0.6L to 1L	Apply in December and / or February – March.
		NSW, ACT		
		Qld		Apply late November/early December and late January/early February if required – apply in combination with Methidathion 50mL/100L.
	White Wax Scale, Pink Wax Scale	Vic, WA	0.5L to 1L	Apply in December / early January Period.
		NSW, ACT		
		Qld		Apply late November/early December and late January/early February if required. Apply in combination with Methidathion 50mL/100L, carbaryl 70g/100L, promecarb 50g/100L, soda ash 500-750g/100L or washing soda 500-750g/100L. Apply mid December / early January. Repeat in February.
	White Wax Scale, Pink Wax Scale, Black Scale	Tas, WA	0.5L to 1L	Apply December / early January. Repeat in February
	Soft Brown Scale	Tas, WA	0.5L to 1L	Apply in January / April.
	Circular Black Scale	QLD	0.5L to 1L	Apply between August – December. A second application may be necessary for heavy infestations..
		WA		Apply in December/ early January. A second application may be necessary for heavy infestations.
	Citrus Leaf-miner	All States	250mL to 1L (for Citrus Leaf-miner Control only) 500mL to 1L (when combining with Scale & Black Spot Control)	Apply thoroughly and evenly to flush growth, wetting both sides of all immature leaves to point of run-off. Spray every 5 to 14 days during flush periods, commencing as soon as pest's silvery mites are observed on young leaves. The interval will be shorter during summer and early autumn. Cease spraying when leaves become mature. Four sprays in one year should be sufficient to achieve control and no more than 8 sprays should be applied.

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

WITHHOLDING PERIOD

DO NOT HARVEST FOR 1 DAY AFTER APPLICATION

GENERAL INSTRUCTIONS

This product controls Aphids, Lace Bugs, Leaf Hoppers, Mealybugs, Mites, Plant Bugs, Scale, Whitefly, and eggs of Aphids, Mites on Vegetables, Fruit Trees, Nuts Trees, certain field crops, Shrubs, Plantation Trees, Greenhouse Plants, Ornamental Foliage Plants and Flowers.

SACOA BIOPEST® Paraffinic Oil can be used in combination with certain fungicides, herbicides and insecticides as a wetting agent/adjuvant/carrier as specified on the products label.

PRECAUTIONS

GENERAL

Different plant stresses can have a cumulative effect. In general, follow good farming practice to minimise all other sources of plant stress. Avoid applying SACOA BIOPEST® Paraffinic Oil when environmental conditions elevate plant stress. **AVOID** spraying complex tank mixtures. **In particular DO NOT spray:**

- » When the soil is dry
- » If trees are suffering from moisture stress
- » If hot weather (> 35°C) is imminent or has occurred in the previous 4 days
- » If the shade temperature is expected to exceed 32°C
- » In slow drying conditions

SACOA BIOPEST® Paraffinic Oil sprays greater than 250mL/100L water should not be applied for at least one month after spraying with sulphur or lime sulphur, as severe injury may occur, especially if the oil is applied in hot weather.

DO NOT apply SACOA BIOPEST® Paraffinic Oil in combination with Propargite or within four weeks of a Propargite application.

DO NOT apply Torque with SACOA BIOPEST® Paraffinic Oil where rapid speed of action is required.

DO NOT apply SACOA BIOPEST® Paraffinic Oil in combination with, or following a chlorothalonil application.

DO NOT use in combination with Supracide 400 Emulsifiable Concentrate Insecticide on mangoes after fruit set and while fruit is on the tree.

DO NOT use SACOA BIOPEST® Paraffinic Oil on mangoes during flowering or while fruit is on the tree.

CITRUS

APPLICATION

SACOA BIOPEST® Paraffinic Oil is an effective insecticide when used alone to control light-moderate infestations of pests as indicated in the directions for use table. When a range of SACOA BIOPEST® Paraffinic Oil rates is indicated, use the lower rate for light pest infestations and the high rate for moderate to heavy infestations, but only if weather and tree conditions are favourable (see general instructions – precautions). Alternatively for heavy pressures, apply low rate 2-3 times at an interval of about a fortnight. **DO NOT** exceed maximum recommended annual dosage (see Precautions - Citrus section). Time applications to target crawler stages of pests. Apply when trees are in good condition 7-10 days after rain or irrigation. Apply sprays thoroughly to ensure complete coverage is achieved on both sides of susceptible leaves throughout whole canopy. The preferred type of sprayer for large trees is the oscillating boom with outrigger. As a general guide, 4m high trees with heavy infestations of armoured scale could require spray volumes from 10,000L to 14,000 L/ha, soft scales 8,000 to 10,000 L/ha, and mites 5,000 to 8,000 L/ha. Adjust volume proportionally for tree size, planting density, target foliage (e.g. flush growth or whole canopy), canopy density and degree of infestation.

When pest pressure is moderate to heavy, and/or your spray equipment cannot achieve coverage comparable to an oscillating boom with outrigger, consider using SACOA BIOPEST® Paraffinic Oil in one of the mixtures indicated in the directions for use table. However, achieving thorough coverage should always be the aim no matter what mixture is used.

PRECAUTIONS – CITRUS

Refer to Precautions – General section above.

If petroleum spray oil is applied more than once from spring to autumn, either alone or in combination with other materials, the total maximum dosage of oil used in commercial orchards should not exceed 3L of oil in Queensland, and 2L of oil in southern Australia.

DO NOT use rates higher than 0.6% in Queensland. Use high rate (1%) in southern Australia ONLY when all general spraying precautions are met (see PRECAUTIONS – General) and when pest pressure warrants. Always consider the low rate as the first spray option.

DO NOT apply when high rate of natural fruit drop is expected.

DO NOT apply within 4 weeks of harvest.

DO NOT apply Lorsban 500EC Insecticide¹ in IPM programs. In SA, do not spray SACOA BIOPEST® Paraffinic Oil with Lorsban 500EC Insecticide if spraying in November/ December.

DO NOT apply to Glen Retreat variety of mandarins.

DO NOT apply SACOA BIOPEST® Paraffinic Oil with Supracide 400 Emulsifiable Concentrate Insecticide² to any citrus.

DO NOT apply SACOA BIOPEST® Paraffinic Oil in combination with Torque³ to Torque susceptible varieties of citrus such as tangerines, tangelos and some varieties of grapefruit.

DO NOT apply copper fungicides when slow drying conditions prevail or if it's likely to rain before spray is dry.

DO NOT use on copper shy varieties.

BANANAS

APPLICATION

High volume applications can be made from either a ground rig in a convenient volume of water e.g. 200 to 500 L/ha, or from the air in at least 30 L/ha water. Low volume aerial application does not require any further dilution of the mixture indicated.

SACOA BIOPEST® Paraffinic Oil can be applied alone, with DMI fungicides or dithiocarbamate fungicides. When a range of oil rates is indicated, use the higher rate when weather conditions particularly favour disease development. Maintain good defolating practices to reduce disease inoculum. Very old leaves, and leaves with advanced lesions should be removed, or infected parts of the leaf removed, prior to the application of DMI fungicides.

Sth QLD and NSW: Commence a protectant regime of fungicide sprays at the start of summer and continue until May. Alternate sprays according to an appropriate fungicide anti-resistance strategy using the following guidelines:

Apply DMIs at least twice consecutively and to a maximum of 5 per season at 21 to 28 day intervals.

Apply Dithane Rainshield Fungicide⁴ or Penncozeb 750DF Fungicide⁴ sprays at 3 to 4 week intervals from the ground and at 7 – 10 day intervals from the air.

Nth QLD, WA and NT: Alternate fungicides according to an appropriate fungicide anti – resistance strategy. Use dithiocarbamates as major component of strategy. Apply sprays at 10 – 14 day intervals during all periods favouring disease development. Extend this to 21 – 28 days during drier, cooler periods. Apply oil with all fungicides. Apply DMIs a maximum of 6 times per year and no more than twice consecutively. Do not apply DMIs from July – November. In Nth QLD only, apply Dithane Rainshield Fungicide or Penncozeb 750DF Fungicide sprays at 2-week intervals during the wet season, 3 weeks after this, and 4 or 5 weeks during the dry season. Prior to the next wet season return to 3-week intervals. Folicur 430SC Fungicide⁵ is approved for use in banana plantations interplanted with avocados.

1. Registered Trademark of Dow AgroSciences Australia Limited

2. Registered Trademark of Syngenta Australia Limited

3. Registered Trademark of Crop Care Australasia Pty Ltd

4. Registered Trademark of Cerexagri SA

5. Registered Trademark of Bayer CropScience Pty Ltd

TANK MIXTURES

This product may be mixed with other pesticides to improve the level of kill or enhance coverage. User should read and follow all instructions on the label of the proposed tank mixed product.

MIXING INSTRUCTIONS

1. Add water to the mixing tank to allow proper agitation by pump or paddles.
2. Add other desired pesticides.
3. If wettable powder formulation – mix water and powder thoroughly so that powder is totally suspended in the water before the oil is added.
4. If other pesticide to be added is an emulsifiable formulation, do so after the oil and water has been thoroughly mixed.
5. Add oil under agitation when tank is $\frac{3}{4}$ full. Top off with water to form a milky solution.
6. Maintain agitation until solution is completely used.
7. In a small equipment lacking agitators, stir or shake diluted spray frequently during applications.
8. It is important for users to read and follow all instructions on the labels of the proposed tank mixed products.
9. Flush fluid in sprayer hose lines back into tank reservoir if fluid is allowed to stand for more than 20 minutes.

APPLICATION INSTRUCTIONS

- » The target must be completely covered in spray.
- » Oil residue on the plants surface often acts as a feeding and oviposition deterrent. However, the primary target is the pest itself as SACOA BIOPEST® Paraffinic Oil is a contact pesticide.
- » Dilute applications. (Greater than 1400L spray per hectare in horticultural crops) in most cases ensure best coverage.
- » Speed of travel is extremely important; tractor speed from 1.6kph to 5.4 kph is recommended, depending on crop size and target pest.

Do not spray when shade temperatures are or exceed 32°C.

COMPATIBILITY

- » SACOA BIOPEST® Paraffinic Oil can be used with such pesticides as NPV's, Bt's, Pyrethroids, Abamectin, Tracer II®, Mancozeb and Folicur® as stated on their respective directions for use labels.
- » Do not use spray oil with Dimethoate, or any other product containing sulphur.
- » If possible, either keep the spray equipment used for these compounds separate from the equipment used for SACOA BIOPEST® Paraffinic Oil, or make sure that the sprayer is thoroughly cleaned, so that no residue from these compounds remain.
- » Do not use with Carbaryl on deciduous fruit trees.

TIMING THE TREATMENT

- » Applicator must determine the precise timing to fit local growth and climate conditions. Do not exceed maximum rates or apply more often than recommended.
- » May be used up to one day before harvest.

PROTECTION OF LIVESTOCK, WILDLIFE, FISH, CRUSTACEAN AND THE ENVIRONMENT

Dangerous to fish. Do not contaminate streams, rivers, waterways with chemicals or used containers.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

Do not apply pesticides or other chemicals incompatible with oil, within 4 weeks before or after application of any other spray oils, as crop damage may occur.

STORAGE AND DISPOSAL

Store in the closed, original container in a cool, well ventilated area. Do not store for prolonged periods in direct sunlight.

Triple or preferably pressure rinse containers before disposal. Add rinsate 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 bury the empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

Refillable Containers: Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage. All 110 litre and 1000 litre containers remain the property of SACOA Pty Ltd.

FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre. **(Phone 13 11 26)**. If swallowed do not induce vomiting. Give a glass of water.

MATERIAL SAFETY DATA SHEET

Additional information is listed in the Material Safety Data Sheet (MSDS) which can be obtained from the supplier.

NOTICE TO BUYER

SACOA Pty Ltd accepts no responsibility for any consequence whatsoever arising from the use of the product other than that used in accordance with this label.

