

**READ SAFETY DIRECTIONS BEFORE OPENING OR USING**


**LIQUICOP<sup>®</sup>**  
**COPPER FUNGICIDE**

**ACTIVE CONSTITUENT:****93g/L COPPER (Cu) present as Copper Ammonium Complex**


**GROUP M1 FUNGICIDE**

A copper solution for the control of a wide range of fungicide and bactericide diseases on horticultural & viticultural crops.

**Nufarm**

Grow a better tomorrow.

Nufarm Australia Limited  
ACN 004 377 780  
103-105 Pipe Road  
Laverton North Victoria 3026  
Tel: (03) 9282 1000  
nufarm.com.au

Contents: 1 Litre  
Contents: 5 Litres  
Contents: 20 Litres  
Contents: 25 Litres  
Contents: 200 Litres  
Contents: 250 Litres  
Contents: 500 Litres  
Contents: 800 Litres  
Contents: 1000 Litres

APVMA Approval No.: 50722/0707

**STORAGE AND DISPOSAL**

KEEP OUT OF REACH OF CHILDREN. Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. All containers containing the concentrated product must be sealed properly once opened to prevent loss of ammonia and possible formation of crystals. Triple or (preferably) pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on-site. If recycling 1, 5, 20, 25 & 200 L containers, replace cap and return clean containers to recycler or designated collection point. If recycling 250, 500, 800 & 1,000 L containers, empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage. If not recycling, break, crush or puncture and bury 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.

**SAFETY DIRECTIONS**

May irritate the eyes and skin. Avoid contact with eyes and skin. Wash hands after use.

**FIRST AID**

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

**ADDITIONAL STATEMENTS (WHS REGULATIONS 2011)**

Not required - product not classified as hazardous under GHS criteria.

**SAFETY DATA SHEET**

For further information refer to the Safety Data Sheet (SDS), which can be obtained from your supplier or from the Nufarm website – nufarm.com.au

In case of emergency: Phone 1800 033 498 Ask for shift supervisor. Toll free 24 hours.

**CONDITIONS OF SALE**

"Any provisions or rights under the Competition and Consumer Act 2010 or relevant state legislation which cannot be excluded by those statutes or by law are not intended to be excluded by these conditions of sale. Subject to the foregoing, all warranties, conditions, rights and remedies,

expressed or implied under common law, statute or otherwise, in relation to the sale, supply, use or application of this product, are excluded. Nufarm Australia Limited and/or its affiliates ("Nufarm") shall not accept any liability whatsoever (including consequential loss), or howsoever arising (including negligence) for any damage, injury or death connected with the sale, supply, use or application of this product except for liability which cannot be excluded by statute."

BN / DOM / Barcode / /

Liquicop® trade mark owned or used under license by Nufarm Australia Ltd.

\* Other trade marks

**READ SAFETY DIRECTIONS BEFORE OPENING OR USING**

# LIQUICOP®

## COPPER FUNGICIDE

**ACTIVE CONSTITUENT:**

**93g/L COPPER (Cu) present as Copper Ammonium Complex**

**GROUP M1 FUNGICIDE**

A copper solution for the control of a wide range of fungicide and bactericide diseases on horticultural & viticultural crops.



**Nufarm** Grow a better tomorrow.

APVMA Approval No.: 50722/0707

**DIRECTIONS FOR USE**

**RESTRAINTS**

DO NOT apply when either hot (above 35°C) or frost prone conditions prevail.

DO NOT apply when poor drying conditions exist or if it is likely to rain before the spray is dry.

DO NOT apply to wet crops.

DO NOT apply to copper-shy crops or cultivars.

DO NOT mix with acidifying/buffering agents unless they are required to maintain the pH between 6&7.

The stability and efficacy of Liquicop is pH dependent (refer Mixing Instructions). DO NOT mix with phosphate-based acidifiers or buffers.

CROP	DISEASE	RATE (by high volume sprayer, >500L/ha)	RATE (by air or ultra low volume sprayer <500L/ha)	CRITICAL COMMENTS
<b>VEGETABLES</b>				
BEANS	Common blight ( <i>Xanthomonas campestris</i> pv. <i>phaseoli</i> )	500mL/100L water	2.5L/ha*	Apply at the first sign of infection or as a preventative spray. Repeat every 7 - 14 days depending on the disease pressure. Spray immediately after heavy rains, hail or dust storms.
	Bacterial brown spot ( <i>Pseudomonas syringae</i> pv. <i>syringae</i> )			Apply within 21 days of emergence and repeat every 10 - 14 days depending on the disease pressure.
	Chocolate spot ( <i>Botrytis</i> spp.) Rust ( <i>Uromyces</i> spp.)			Spray at first sign of infection. Repeat every 10 - 14 days while conditions allow infection.
	Halo blight ( <i>Pseudomonas syringae</i> pv. <i>phaseolicola</i> )	500-750mL/100L water	2.5-2.9L/ha*	Apply every 10 -14 days from the time the crop is 15 - 30 cm high, while conditions allow infection. Use the higher rate when conditions are highly favourable for infection

CROP	DISEASE	RATE (by high volume sprayer, >500L/ha)	RATE (by air or ultra low volume sprayer <500L/ha)	CRITICAL COMMENTS
<b>VEGETABLES</b>				
* AERIAL APPLICATION: Apply in 40L water in a preventative program as for ground applications.				
<b>BRASSICAS</b> (including broccoli, brussels sprouts, cabbage, cauliflower, chinese cabbage, collards, kale, kohlrabi, mustard, rape, turnip)	<b>Downy mildew</b> ( <i>Peronospora parasitica</i> ) <b>Black rot</b> ( <i>Xanthomonas campestris pv. campestris</i> ) <b>Peppery leaf spot</b> ( <i>Pseudomonas syringae pv. maculicola</i> ) <b>Ring spot</b> ( <i>Mycosphaerella brassicicola</i> )	500mL/100L water	2.5L/ha	Begin spraying from the seedling stage until maturity. Spray every 10 - 14 days depending on weather conditions and disease pressure. Do not use on copper sensitive varieties.
BROCCOLI	See BRASSICAS			
BRUSSELS SPROUTS	See BRASSICAS			
BUTTERNUT	See CUCURBITS			
CABBAGE	See BRASSICAS			
CAPSICUMS	Bacterial spot ( <i>Xanthomonas campestris pv. vesicatoria</i> ) Bacterial canker ( <i>Corynebacterium michiganense pv. michiganense</i> )	500mL/100L water	2.5L/ha	SEED BEDS: Apply every 7 days during wet weather FIELD CROPS: Begin spraying at first sign of disease and repeat every 7 - 14 days depending on weather conditions and disease pressure. Use the shortest interval when conditions are highly favourable for infection. These applications will reduce the spread of bacterial canker but they will not control seed or soil-borne infection.
CARROTS	Leaf spot ( <i>Alternaria, Cercospora, Septoria</i> )			Begin spraying at first sign of disease and repeat every 10 - 14 days depending on weather conditions and disease pressure.
CAULIFLOWER	See BRASSICAS			
CELERY	Leaf spot ( <i>Septoria apiicola</i> ) Bacterial soft rot ( <i>Erwinia carotovora pv. carotovora</i> )	500mL/100L water	2.5L/ha	Spray every 7 - 14 days. Use the shortest interval when weather conditions favour disease (i.e. cool and wet weather).
CHINESE CABBAGE	See BRASSICAS			
CUCUMBERS	See CUCURBITS			
CUCURBITS (including cucumbers, melons, pumpkin, squash, watermelon, zucchini, etc)	Downy mildew ( <i>Pseudoperonospora Cubensis</i> )	400mL/100L water	2.5 L/ha	Spray at early vineing stage or when infestation is expected. Only use as a preventative spray. After the disease has established itself, a systemic fungicide must be used. Do not spray when plants are under stress, i.e. hot, dry conditions.
	Angular leaf spot ( <i>Pseudomonas syringae pv. lachrymans</i> ) Bacterial leaf spot ( <i>Xanthomonas campestris pv. cucurbitae</i> )	500mL/100L water		Spray at first sign of disease and repeat every 7 - 10 days.
LETTUCE	Downy mildew ( <i>Bremia lactucae</i> ) Bacterial leaf spot ( <i>Xanthomonas campestris pv. vitians</i> ) Anthracnose ( <i>Microdochium panattonianum</i> )	300mL/100L water	1L/ha maximum	Begin spraying at first sign of disease and repeat every 7 - 10 days depending on weather conditions and disease pressure. This product predisposes lettuce to frost damage. Lettuce should not be treated with this product if frosts are likely since crop damage may occur. Do not use on copper sensitive varieties.
MELONS	See CUCURBITS			

CROP	DISEASE	RATE (by high volume sprayer, >500L/ha)	RATE (by air or ultra low volume sprayer <500L/ha)	CRITICAL COMMENTS
ONIONS	Downy mildew ( <i>Peronospora destructor</i> )	500mL/100L water	2.5L/ha	Begin spraying at first sign of disease and repeat every 10 days depending on weather conditions and disease pressure.
PARSNIPS	Leaf spot ( <i>Septoria</i> spp.)	500mL/100L water	2.5L/ha	Begin spraying at first sign of disease and repeat every 10 - 14 days depending on weather conditions and disease pressure.
PEAS	Ascochyta blight ( <i>Ascochyta</i> spp.) Bacterial blight ( <i>Pseudomonas syringae</i> pv. <i>psisi</i> )	500mL/100L water	2.5L/ha*	Begin spraying at first sign of disease and repeat every 10 - 14 days depending on weather conditions and disease pressure. * AERIAL APPLICATION: Apply in 40L water in a preventative program as for ground applications.
POTATOES	Early blight / Target spot ( <i>Alternaria solani</i> )	500mL/100L water	2.5L/ha	Apply from crop emergence to maturity at 7 - 10 days intervals while conditions favour development of this disease.
	Late blight / Irish blight ( <i>Phytophthora infestans</i> )	500mL plus 200g mancozeb/100L water	2.5L/ha plus 1kg/ha mancozeb	Depending on plant size, apply in high enough water volume to ensure good coverage. Ensure that both upper and lower surfaces are treated.
	Early & Late blight	-	2.5L/ha	AERIAL APPLICATION: Apply in 40L of water in a preventative program. Commence application at the 5 leaf stage and repeat at 7-10 day intervals.
PUMPKIN	See CUCURBITS			
RED BEET	Downy mildew ( <i>Peronospora farinosa</i> ) Rust ( <i>Uromyces betae</i> )	500mL/100L water	2.5 L/ha	Apply every 10 - 14 days, from the seedling stage until maturity, while conditions allow infection.
RHUBARB	Crown rot ( <i>Phytophthora</i> spp.)	500 mL/100L water	-	Dip rhubarb crowns before planting.
	Downy mildew ( <i>Peronospora jaapiana</i> )	500mL/100L	2.5 L/ha	Spray at 14 day intervals, from the seedling stage until maturity, while conditions allow infection.
SILVER BEET	Downy mildew ( <i>Peronospora farinosa</i> )	500mL/100L water	2.5L/ha	Begin spraying from the seedling stage until maturity and repeat every 10 – 14 days depending on weather conditions and disease pressure. Do not use on copper sensitive varieties.
SQUASH	See CUCURBITS			
SPINACH Downy mildew	Downy mildew ( <i>Peronospora farinosa</i> )	500mL/100L water	2.5L/ha	Begin spraying at first sign of disease and repeat every 10 - 14 days depending on weather conditions and disease pressure.
TOMATOES	Bacterial spot ( <i>Xanthomonas campestris</i> pv. <i>vesicatoria</i> ) Bacterial speck ( <i>Pseudomonas syringae</i> pv. <i>tomato</i> ) Bacterial canker ( <i>Clavibacter michiganensis</i> pv. <i>michiganensis</i> )	500mL/100L water	2.5L/ha	Apply as a preventative spray at 7 – 10 day intervals. Depending on plant size, apply spray at a high enough volume to ensure good coverage. Ensure that both the upper and lower surfaces are treated. The shortest interval should be used when conditions are very favourable for infection, ie, during wet weather and when inoculum levels are high. These applications will reduce the spread of bacterial canker but they will not control seed or soil borne infection.

CROP	DISEASE	RATE (by high volume sprayer, >500L/ha)	RATE (by air or ultra low volume sprayer <500L/ha)	CRITICAL COMMENTS
TOMATOES	Early blight / Target spot ( <i>Alternaria solani</i> ) Septoria leaf spot ( <i>Septoria</i> spp.)	500mL/100L water	2.5L/ha	Start application shortly after transplant when plants are 15 cm high and before symptoms appear. Apply every 7 – 10 days depending on weather conditions favourable for development of the disease. Depending on plant size, apply spray at a high enough volume to ensure good coverage. Ensure that both the upper and lower surfaces are treated. The shortest interval should be used when conditions are highly favourable for infection, ie, during wet weather and when inoculums levels are high.
	Late blight / Irish blight ( <i>Phytophthora infestans</i> )			Begin spraying at first sign of disease and repeat every 10 - 14 days.
Tomato seedlings	Bacterial speck ( <i>Pseudomonas syringae</i> pv. <i>tomato</i> )	500mL/100L water (5mL/L water)	-	Spray seedlings at weekly intervals with a hollow cone spray. Ensure that both the upper and lower surfaces are treated.
WATERMELON	See CUCURBITS			
ZUCCHINI	See CUCURBITS			
BANANAS	Yellow sigatoka ( <i>Mycosphaerella musicola</i> ) (QLD, NSW, WA, NT only)	500mL/100L water plus 300-600mL/ha Flexlend	2.5L/ha	Spray monthly from December to May when weather conditions favour disease. Ensure good coverage
	Phytophthora stem canker (NSW, WA only)	Stem Application: 250mL/L water or 250mL/L water based paint	-	Mix to a smooth consistency. Apply only to pseudostems wherever cankers appear, after removing dead tissue. Repeat applications up to a maximum of 5 per season until natural healing has commenced. Application with paint carrier may only require 1 or 2 treatments in a season.
STRAWBERRIES	Leaf spot ( <i>Mycosphaerella fragariae</i> ) Grey mould ( <i>Botrytis cinerea</i> ) (VIC, SA, TAS, WA only)	500mL/100L water	2.5L/ha	Spray when plants are established and repeat every 7 - 10 days throughout the season. Discontinue application if signs of phytotoxicity appear (reddening of leaf veins or new growth inhibition). Early in the season, alternating with Bavistin FL or Spin Flo will assist in reducing the development of grey mould.
<b>OTHER CROPS</b>				
ORNAMENTALS	Bacterial leaf spot	500mL/100L water	-	Begin spraying at first sign of disease and repeat every 10- 14 days depending on weather conditions and disease pressure. Do not use on copper sensitive varieties. Small scale evaluations consisting of 2 sprays at a 14 day interval should be applied first to test for phytotoxicity.
	Downy mildew	750mL/100L water		
TOBACCO SEED BEDS	Wildfire Angular leaf spot ( <i>Pseudomonas syringae</i> pv. <i>tabaci</i> ) (QLD, NSW & VIC only)	1L/100L water	-	Apply every 7 days.
	Algae (QLD, WA only)			Apply when algae first appears.

## TREE AND VINE CROPS

RATE CRITICAL COMMENTS			CRITICAL COMMENTS
In the following table, all rates are given for dilute spraying. For concentrate spraying, refer to the Application section.			For all uses in this table: 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.
CROP	DISEASES	RATE	
<b>FRUIT</b>			
APPLES Black spot (scab)	Black spot (scab) ( <i>Venturia inaequalis</i> )	500mL/100L water	Apply at green tip. Apply as a dilute or concentrate spray. Do not use a concentration factor greater than 2. NOTE: Crop injury (russetting) may occur from late application. Discontinue use when green tip on the earliest developing buds reaches 1 cm. Before applying to recently introduced varieties, ascertain their tolerance of copper sprays from relevant authorities.
APRICOTS	Shothole ( <i>Wilsonomyces carpophilus</i> ) Freckle ( <i>Venturia carpophila</i> )	500mL/100L water	Spray at bud swell prior to earliest signs of leaf/bud movement. Spray at least one post harvest application. Apply as a dilute or concentrate spray. Do not use a concentration factor greater than 2.
	Bacterial gummosis ( <i>Pseudomonas syringae</i> )	625mL/100L water	Autumn: Apply at 25 - 50% leaf fall. Apply again at 90 - 100% leaf fall. Winter: Apply in mid-winter. Spring: Apply at first sign of bud movement. Repeat application 7 - 10 days later. Apply as a dilute or concentrate spray. Do not use a concentration factor greater than 2.
		500mL/100L water (NSW only)	
		325mL/100L water (NSW, VIC, SA, WA only)	Apply 1 week after petal fall. Repeat application 7 - 10 days later. These sprays control the high leaf population of the bacteria in mid to late spring. Apply as a dilute or concentrate spray. Do not use a concentration factor greater than 2.
AVOCADOES	Anthracnose ( <i>Colletotrichum gloeosporioides</i> )	500mL/100L water	Spray every 4 weeks from the end of flowering to harvest. During extended wet weather, spray every 14 days. Start using Liquicop preferably during low infestation and preferably as a last spray in a spray program. Apply as a dilute or concentrate spray. Do not use a concentration factor greater than 3.
	Cercospora spot ( <i>Pseudocercospora purpurea</i> ) Sooty blotch ( <i>Akaropeltopsis</i> sp.) (QLD, NSW, VIC, SA, WA only)		
	<i>Phytophthora</i> stem canker	Stem Application: 250mL/L water or 250mL/L water based paint	Mix to a smooth consistency. Apply only to stems of trees wherever cankers appear, after removing dead tissue. Repeat applications up to a maximum of 5 per season until natural healing has commenced. Application with paint carrier may only require 1 or 2 treatments in a season.
CHERRIES	Shothole ( <i>Wilsonomyces carpophilus</i> )	500mL/100L water	Spray when buds are swelling but BEFORE AND WITHIN ONE WEEK OF BUD OPENING. Apply as a dilute or concentrate spray. Do not use a concentration factor greater than 2.
	Bacterial gummosis / canker ( <i>Pseudomonas syringae</i> )	625mL/100L water (VIC, TAS, SA, WA only)	Autumn: Apply at 25-50% leaf fall. Apply again at 90-100% leaf fall. Winter: Apply in mid-winter. Spring: Apply at first sign of bud movement. Apply as a dilute or concentrate spray. Do not use a concentration factor greater than 2.
		500mL/100L water (NSW only)	
		325mL/100L water (NSW, VIC, SA, WA only)	Apply 1 week after petal fall. Repeat application 7 - 10 days later. These sprays control the high leaf population of the bacteria in mid to late spring. Apply as a dilute or concentrate spray. Do not use a concentration factor greater than 2.

CROP	DISEASES	RATE	CRITICAL COMMENTS
CITRUS	Black spot ( <i>Guignardia citricarpa</i> ) Melanose ( <i>Diaporthe citri</i> ) Smoky blotch ( <i>Gloeodes pomigena</i> ) Scab ( <i>Elsinoe fawcettii</i> )	500-750mL/100L water plus 300-600mL/ha Flexend	Apply at petal fall. Apply the higher rate in coastal districts. Apply as a dilute spray only.
	<i>Phytophthora</i> stem canker	Stem Application: 250mL/L water or 250mL/L water based paint	Mix to a smooth consistency. Apply only to stems of trees wherever cankers appear, after removing dead tissue. Repeat applications up to a maximum of 5 per season until natural healing has commenced. Application with paint carrier may only require 1 or 2 treatments in a season.
KIWIFRUIT	<i>Phytophthora</i> stem canker	Stem Application: 250mL/L water or 250mL/L water based paint	Spray only to stems of vines wherever cankers appear, after removing dead tissue. Repeat applications up to a maximum of 5 sprays per season until natural healing is commenced. Application with paint carrier may only require 1 or 2 sprays in a season.
LYCHEES (LITCHIS)	Parasitic algae ( <i>Cephaleuros virescens</i> ) (QLD, NSW, only)	1L/100L water plus 300-600mL/ha Flexend	Spray affected trunk and limbs until runoff occurs. Apply monthly during the wet season. Apply as a dilute spray only.
	Lychee pepper spot ( <i>Colletotrichum gloeosporioides</i> )	500mL/100L water	Spray every 4 weeks from the end of flowering to harvest. During extended wet weather, spray every 14 days. Apply as a dilute spray only.
	<i>Phytophthora</i> stem canker	Stem Application: 250mL/L water or 250mL/L water based paint	Spray only to stems of trees wherever cankers appear, after removing dead tissue. Repeat applications up to a maximum of 5 sprays per season until natural healing is commenced. Application with paint carrier may only require 1 or 2 sprays in a season.
MANGOES	Anthracnose ( <i>Colletotrichum gloeosporioides</i> , <i>C. acutatum</i> ) (NSW, QLD, SA, WA, NT ONLY)	750mL/100L water	Spray every 4 weeks from end of flowering to harvest. During extended wet weather, spray every 14 days. Use in rotation with alternate chemistry. Apply as a dilute or concentrate spray. Do not use a concentration factor greater than 3.
	Bacterial black spot ( <i>Xanthomonas campestris</i> pv. <i>mangiferaeindicae</i> )	500mL/100L water	Apply at 2 - 4 week intervals from just after fruit set until harvest. The product is especially suited for application as the last two sprays at the end of a spray program to minimise visible residues. Apply as a dilute or concentrate spray. Do not use a concentration factor greater than 3.
NECTARINES	Shothole ( <i>Wilsonomyces carpophilus</i> )	500mL/100L water	Spray when buds are swelling but BEFORE AND WITHIN ONE WEEK OF BUD OPENING. Apply as a dilute or concentrate spray. Do not use a concentration factor greater than 2.
	Leaf curl ( <i>Taphrina deformans</i> )		CORRECT TIMING IS CRITICAL FOR EFFECTIVE CONTROL. Spray when buds are swelling but BEFORE AND WITHIN ONE WEEK OF BUD OPENING. For a given variety, the time of bud opening will vary from year to year, depending on the weather, and in any year, it will vary between varieties. Thus, the bud development of each variety in the orchard should be monitored each year to determine the correct time of application. Blocks containing more than one variety may need to be treated more than once, to treat each variety at the correct time. Where leaf curl is or is likely to be a severe problem based on previous experience, the following program should be followed: 1. AUTUMN - apply at leaf fall. 2. Apply at the FIRST SIGN of BUD SWELL and REPEAT ONE WEEK LATER. Apply as a dilute or concentrate spray. Do not use a concentration factor greater than 2.
	<i>Phytophthora</i> stem canker	Stem Application: 250mL/L water or 250mL/L water based paint	Spray only to stems of trees wherever cankers appear, after removing dead tissue. Repeat applications up to a maximum of 5 sprays per season until natural healing is commenced. Application with paint carrier may only require 1 or 2 sprays in a season.



CROP	DISEASES	RATE	CRITICAL COMMENTS
PASSIONFRUIT	<i>Phytophthora</i> stem canker	Stem Application: 250mL/L water or 250mL/L water based paint	Spray only to stems of vines wherever cankers appear, after removing dead tissue. Repeat applications up to a maximum of 5 sprays per season until natural healing is commenced. Application with paint carrier may only require 1 or 2 sprays in a season.
PEACHES	Shothole ( <i>Wilsonomyces carpophilus</i> )	500mL/100L water	Spray when buds are swelling but BEFORE AND WITHIN ONE WEEK OF BUD OPENING. Apply as a dilute or concentrate spray. Do not use a concentration factor greater than 2.
	Leaf curl ( <i>Taphrina deformans</i> )		CORRECT TIMING IS CRITICAL FOR EFFECTIVE CONTROL. Spray when buds are swelling but BEFORE AND WITHIN ONE WEEK OF BUD OPENING. For a given variety, the time of bud opening will vary from year to year, depending on the weather, and in any year, it will vary between varieties. Thus, the bud development of each variety in the orchard should be monitored each year to determine the correct time of application. Blocks containing more than one variety may need to be treated more than once, to treat each variety at the correct time. Where leaf curl is or is likely to be a severe problem based on previous experience, the following program should be followed: 1. AUTUMN - apply at leaf fall. 2. Apply at the FIRST SIGN of BUD SWELL and REPEAT ONE WEEK LATER. Apply as a dilute or concentrate spray. Do not use a concentration factor greater than 2.
	<i>Phytophthora</i> stem canker	Stem Application: 250mL/L water or 250mL/L water based paint	Spray only to stems of trees wherever cankers appear, after removing dead tissue. Repeat applications up to a maximum of 5 sprays per season until natural healing is commenced. Application with paint carrier may only require 1 or 2 sprays in a season.
PEARS	Black spot (scab) ( <i>Venturia pirina</i> )	500mL/100L water	Apply at green tip. Apply as a dilute or concentrate spray. Do not use a concentration factor greater than 2. NOTE: Crop injury (russetting) may occur from late application. Discontinue use when green tip on the earliest developing buds reaches 1cm. Before applying to recently introduced varieties, ascertain their tolerance of copper sprays from relevant authorities.
PLUMS	Shothole ( <i>Wilsonomyces carpophilus</i> )	500mL/100L water	Spray when buds are swelling but BEFORE AND WITHIN ONE WEEK OF BUD OPENING. Apply as a dilute or concentrate spray. Do not use a concentration factor greater than 2.
	<i>Phytophthora</i> stem canker	Stem Application: 250mL/L water or 250mL/L water based paint	Spray only to stems of trees wherever cankers appear, after removing dead tissue. Repeat applications up to a maximum of 5 sprays per season until natural healing is commenced. Application with paint carrier may only require 1 or 2 sprays in a season.
TROPICAL FRUIT	<i>Phytophthora</i> stem canker	Stem Application: 250mL/L water or 250mL/L water based paint	Apply only to stems of trees wherever cankers appear, after removing dead tissue. Repeat applications up to a maximum of 5 per season until natural healing has commenced. Application with paint carrier may only require 1 or 2 treatments in a season.
VINES Wine grapes & table grapes	Downy mildew ( <i>Plasmopara viticola</i> ) Powdery mildew ( <i>Uncinula necator</i> )	500mL/100L water	Apply when shoots are 10 cm long and repeat at 10 to 14 day intervals or as necessary while weather conditions favour infection. Leaf damage may occur on copper sensitive varieties. Apply as a dilute or concentrate spray. Do not use a concentration factor greater than 3. Withholding Period: DO NOT harvest for 4 weeks after application for wine grapes. Withholding Period: DO NOT harvest for 1 day after application for table grapes.

CROP	DISEASES	RATE	CRITICAL COMMENTS
<b>NUTS</b>			
ALMONDS	Shothole ( <i>Wilsonomyces carpophilus</i> )	500mL/100L water	Spray when buds are swelling but BEFORE AND WITHIN ONE WEEK OF BUD OPENING. Apply as a dilute or concentrate spray. Do not use a concentration factor greater than 2.
	Leaf curl ( <i>Taphrina deformans</i> )		CORRECT TIMING IS CRITICAL FOR EFFECTIVE CONTROL. Spray when buds are swelling but BEFORE AND WITHIN ONE WEEK OF BUD OPENING. For a given variety, the time of bud opening will vary from year to year, depending on the weather, and in any year, it will vary between varieties. Thus, the bud development of each variety in the orchard should be monitored each year to determine the correct time of application. Blocks containing more than one variety may need to be treated more than once, to treat each variety at the correct time. Where leaf curl is or is likely to be a severe problem based on previous experience, the following program should be followed: 1. AUTUMN - apply at leaf fall. 2. Apply at the FIRST SIGN of BUD SWELL and REPEAT ONE WEEK LATER. Apply as a dilute or concentrate spray. Do not use a concentration factor greater than 2.
MACADAMIAS	<i>Phytophthora</i> stem canker (QLD, WA only)	Stem Application: 250mL/L water or 250mL/L water based paint	Mix to a smooth consistency. Apply only to stems of trees wherever cankers appear, after removing dead tissue. Repeat applications up to a maximum of 5 per season until natural healing has commenced. Application with paint carrier may only require 1 or 2 treatments in a season.
	Husk spot ( <i>Pseudocercospora</i> sp.) (QLD, NSW, WA, NT only)	500mL/100L water	Good spray penetration of foliage is essential. Apply from nut set (late September) to December. Apply at least 3 sprays at 3 - 4 week intervals. Apply as a dilute or concentrate spray. Do not use a concentration factor greater than 2.
	Anthracnose ( <i>Colletotrichum</i> sp.) (QLD, NT, NSW only)	500mL/100L water	Good coverage inside the tree is essential. Spray from early summer (December) to May at monthly intervals.
	Pink Limb Blight ( <i>Corticium salmonicolor</i> )		Good coverage of infected limbs from early summer (December) to May at monthly intervals.
PECANS	<i>Phytophthora</i> stem canker	Stem Application: 250mL/L water or 250mL/L water based paint	Apply only to stems of trees wherever cankers appear, after removing dead tissue. Repeat applications up to a maximum of 5 per season until natural healing has commenced. Application with paint carrier may only require 1 or 2 treatments in a season.
WALNUTS	Walnut blight ( <i>Xanthomonas campestris</i> pv. <i>juglandis</i> )	750mL/100L water plus 300mL/ha Flexlend	Spray a minimum of three sprays at 7 - 10 day intervals, commencing when the catkins are partially opened. Further sprays may be necessary if conditions allow infection. Apply as a dilute spray only.

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

#### WITHHOLDING PERIODS:

Wine Grapes:

**DO NOT HARVEST FOR 4 WEEKS AFTER APPLICATION.**

Almonds, Apples, Apricots, Avocados, Bananas, Beans, Brassicas, Capsicums, Carrots, Celery, Cherries, Citrus, Cucurbits, Kiwifruit, Lettuce, Lychees (Litchis), Macadamias, Mangoes, Nectarines, Onions, Parsnips, Passionfruit, Peaches, Pears, Peas, Pecans, Plums, Potatoes, Red Beet, Rhubarb, Silver Beet, Spinach, Strawberries, Table Grapes, Tobacco, Tomatoes, Walnuts.

**DO NOT HARVEST FOR 1 DAY AFTER APPLICATION.**

#### GENERAL INSTRUCTIONS

#### FUNGICIDE RESISTANCE WARNING

GROUP	<b>M1</b>	FUNGICIDE
-------	-----------	-----------

Liquicop is a member of the multi-site activity group of fungicides. For fungicide resistance management Liquicop is a Group M1 fungicide. Some naturally occurring individual fungi resistant to Liquicop and other Group M1 fungicides may exist through normal genetic variability in any fungal population. The resistant individuals can eventually dominate the fungi population if these fungicides are used repeatedly. These resistant fungi will not be controlled by Liquicop and other Group M1 fungicides, thus resulting in a reduction in efficacy and possible yield loss. Since the occurrence of resistant fungi is difficult to detect prior to use, Nufarm Australia Ltd accepts no liability for any losses that may result from the failure of Liquicop to control resistant fungi. Liquicop is to be used as a preventative spray, generally applied before or at the first sign of disease. Many diseases infect plants – 2 weeks before symptoms appear, so applications should preferably start before symptoms appear.

**MIXING**

Fill the spray tank to three quarters of the required volume of water. Add any tank-mix products to the spray tank first and check pH. The stability and efficacy of Liquicop is pH dependent. DO NOT apply in a spray solution having a pH of < 6.0 as phytotoxicity may occur. If pH > 7.0, adjust to pH 6 - 7 with Hygrobuff or suitable buffer/acidifier. DO NOT use with phosphate buffer/acidifier. Then, slowly pour Liquicop into the spray tank, with the agitation system actively running. Thoroughly mix and top-up to the required volume with water. Formation of an aquagel is normal, but will not clog nozzles.

**IMPORTANT**

It is essential that Liquicop be kept agitated throughout the entire mixing and spraying operation. Liquicop must be applied within one hour of the product being diluted with water, therefore mix only the amount that can be used.

All containers containing the concentrated product must be sealed properly once opened to prevent the loss of ammonia and the possible formation of crystals.

**ADJUVANTS**

The addition of a sticker-spreader such as Flexlend is recommended, especially when applying Liquicop to Brassicas, faba beans, peas and onions, irrespective of the method of application. Use of oils and wetting agents is not recommended as these may enhance uptake of copper and increase phytotoxicity.

**APPLICATION**

In common with other non-systemic/preventative fungicides, application of Liquicop should aim to thoroughly cover all plant surfaces. DO NOT apply in water volumes resulting in application rates of less than 2.5 L Liquicop/ha unless otherwise specified. Continuous agitation of the spray solution is necessary or setting of the aquagel may occur. Good by-pass agitation is adequate.

**COMPATIBILITY**

The stability and efficacy of Liquicop is pH dependant and should not be mixed with acidifying agents unless required to decrease the pH when it is higher than 7 (see Mixing section). Liquicop is compatible with a wide range of wettable powder, water dispersible granule, suspension concentrate and emulsifiable concentrate formulations of commonly used fungicides, insecticides and miticides. Mixtures with more than one of the above products are not recommended. Such mixtures may be ineffective or may cause serious damage. Liquicop may NOT be compatible with some foliar fertilizers (primarily because of pH) and a test should be conducted before use. Liquicop should not be mixed with Ca-EDTA, Bavistin\* or Thiovit\* Jet (at higher rates only). Contact Nufarm Australia Ltd for latest compatibility information.

**SPECIAL INSTRUCTIONS FOR TREE AND VINE CROPS****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 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 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: e.g. 1500L/ha
2. Your chosen concentrate spray volume: e.g. 500L/ha
3. The concentration factor in this example is 3 X (i.e. 1500L 500L = 3)
4. If the dilute label rate is 500mL/100L, then the concentrate rate becomes 3x500, i.e. 1500mL/100L of concentrate spray.

- The chosen spray volume, amount of product per 100L of water and the sprayer set up and operation may need to be changed as the crop grows.
- Do not use a concentration factor higher than that specified in the Critical Comments and the following table.

CROP	MAXIMUM CONCENTRATION FACTOR
Almonds & Macadamias	2 times
Deciduous Fruit	2 times
Avocados & Mangoes	3 times
Vines	3 times
Citrus, Lychees & Walnuts	Dilute application only

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

**PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT:**

DO NOT contaminate streams, river or waterways with the chemical or used containers.



spraywisedecisions.com.au is an online weather forecasting program and is recommended for use when planning your pesticide application.

#### **STORAGE AND DISPOSAL**

**KEEP OUT OF REACH OF CHILDREN.** Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. All containers containing the concentrated product must be sealed properly once opened to prevent loss of ammonia and possible formation of crystals. Triple or (preferably) pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on-site. If recycling 1, 5, 20, 25 & 200 L containers, replace cap and return clean containers to recycler or designated collection point. If recycling 250, 500, 800 & 1,000 L containers, empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage. If not recycling, break, crush or puncture and bury 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.

#### **SAFETY DIRECTIONS**

May irritate the eyes and skin. Avoid contact with eyes and skin. Wash hands after use.

#### **FIRST AID**

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

#### **ADDITIONAL STATEMENTS (WHS REGULATIONS 2011)**

Not required - product not classified as hazardous under GHS criteria.

#### **SAFETY DATA SHEET**

For further information refer to the Safety Data Sheet (SDS), which can be obtained from your supplier or from the Nufarm website – [nufarm.com.au](http://nufarm.com.au)

**In case of emergency: Phone 1800 033 498** Ask for shift supervisor. Toll free 24 hours.

#### **CONDITIONS OF SALE**

"Any provisions or rights under the Competition and Consumer Act 2010 or relevant state legislation which cannot be excluded by those statutes or by law are not intended to be excluded by these conditions of sale. Subject to the foregoing, all warranties, conditions, rights and remedies, expressed or implied under common law, statute or otherwise, in relation to the sale, supply, use or application of this product, are excluded. Nufarm Australia Limited and/or its affiliates ("Nufarm") shall not accept any liability whatsoever (including consequential loss), or howsoever arising (including negligence) for any damage, injury or death connected with the sale, supply, use or application of this product except for liability which cannot be excluded by statute."

Nufarm Australia Limited  
ACN 004 377 780  
103-105 Pipe Road  
Laverton North Victoria 3026  
Tel: (03) 9282 1000  
Fax: (03) 9282 1001

Liquicop® trade mark owned or used under license by Nufarm Australia Limited.

\* Other trade marks