WinField® United

Citrus Crop Manual

villa

WinField® United

Citrus Crop Manual

Our comprehensive portfolio of Citrus products is provided in a quick reference guide. The aim is to communicate a summary positioning in crop phenological stage (timing of application), features of the product, do's and don'ts, and use rates in an easy one-page format.

Note that crop protection advisors and farmers must always comply with the recommendations on the official label according to the Act (Act 36 of 1947).

Integrated crop management is the most important and sustainable approach to designing and managing crop protection systems. It is a careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimise risks to human health and the environment.

Whilst designing a custom spray-guideline, always consider if the crop will be exported. Export destination requirements including residue management (Maximum Residue Levels or Import tolerances) may differ from what the South African residue limits is set at. Discuss with your advisor the implications and consult industry body (Citrus Growers Association) recommendations when deciding on product positioning.

villa

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Citrus Growth Stage Spray Programme

BBCH Growth stages		Post Harvest (pre-leaf drop)													
Description of stage			Beginning of bud swelling (00) Aug	First leaves separating: (10) Aug - Mid Aug	Beginning of shoot growth: axes of developing shoots visible (31) - End Aug	Flowers visible, still closed (green bud), (55) Sept	Most flowers with petals forming a hollow ball (59) - Sept	Beginning of flowering: about 10% of flowers open (61) - Sept - Oct	80 - 100% Petalfall	100% petalfall to mid Oct	Fruits about 40% of final size. Dark green fruit: end of physiological fruit drop (74)	Fruits about 90% of final size (79) - Nov	Beginning of fruit colouring (colour-break) (81) - Nov - Dec	Fruit ripe for picking; fruit has not yet developed variety-specific colour (Jan)	Fruit ripe for consumption beginning of senescence and fruit abscission (Feb)
CITRUS THRIPS	**Option 1 TIVOLI 240 SC**					Tartar Emetic + sugar			TIVOLI 240 SC 2 x applications						
	Option 2 BIOMECTIN					Tartar Emetic + sugar		BIOMECTIN 18 EC		BIOMECTIN 18 EC			BIOMECTIN 18 EC		
	Option 3 SAVAGE 360 SC					Tartar Emetic + sugar			SAVAGE 360 SC		SAVAGE 360 SC				
	Option 4 MAINTAIN 200 SP				MAINTAIN 200 SP										
	Option 5 ROSSI 200 SC									ROSSI 200 SC					
CITRUS RED SCALE	**Early preventative treatment - Option 1**					IMIDOR 350 SC			TIVOLI 240 SC						
	Early preventative treatment - Option 2					IMIDOR 350 SC			1st TIVOLI 240 SC application	2nd TIVOLI 240 SC application					
	Corrective treatment SCALEX 100 SC							SCALEX					SCALEX 100 SC		
MEALY- BUG								BUPROFEZIN 500 WDG		1st TIVOLI 240 SC application	2nd TIVOLI 240 SC application				
BUDMITE & OTHER MITES									CRYSTAL 550 SC		TIVOLI 240 SC			SPIROFEN 240 EC	LESSON 50 EC
FCM													WALKER 240 SC	WALKER 240 SC	
CITRUS BLACK SPOT Early wet season								VILLA UNIZEB 750 WDG		VILLA UNIZEB 750 WDG	FUNGAWAY 250 SC CERATO 250 EC + VILLA UNIZEB or KOCIDE 2000 +Mineral Oil				
ALTERNARIA				KOCIDE 2000				D-ZOLE 250 EC				KOCIDE 2000			
ROOTROT						PHOSPHITE 400 SL		PHOSPHITE 400 SL							
FRUITFLY															HARRIER 500 EC HYM-LURE
NEMATODES				NEMACUR 100 GR or MOCAP											
BOLLWORM								PROFENFOS/ METHOMYL 90 SP							
ANTS									ANTSET 200 SC						

** Please note that programme is adjusted according to season and IPM principles.*
** Spray guideline is based on phenological stages. Consult industry MRL list with regard to limitations for export destinations.*
** This programme does not necessarily represent all the products available and must be adjusted to season accordingly.*
** Always read the label before use.*

WINFIELD® UNITED

INSECTICIDE
HERBICIDE
FUNGICIDE
ADJUVANT
PLANT GROWTH REGULATOR
TANK CLEANER

INSECTICIDE

Trade name	Active ingredient	Target species
ANTSET 200 SC	fipronil and lambda-cyhalothrin	Ants
BIOMECTIN 18 EC	abamectin	Thrips
BUPROFEZIN 500 WDG	buprofezin (thiadiazin)	Mealy bug, red scale, woolly whitefly
CRYSTAL 550 SC	fenbutatin oxicide (organotin)	Mites
HARRIER 500 EC	mercaptothion (organophophate)	Fruit fly, mealy bug, mussel scale, soft brown scale, thrips
HYM-LURE RFU	protein hydrolysate	Fruit fly
IMIDOR 350 SC	imidacloprid (chloro-nicotinyl)	Red scale, aphids, psylla
KLAXON 240 EW	tau-fluvalinate (pyrethroid)	Thrips
LESSON 50 EC	fenpyroximate	Budmite, red mite, flat mite, silver mite, lowveld mite
MAINTAIN 200 SP	acetamiprid (acetamidine)	Thrips
METHOMYL 90 SP	methomyl (carbamate)	Bollworm, orangedog, mealybug, red scale, soft green scale, wax scale
MOCAP 150 GR	ethoprophos (organophophate)	Nematodes
NEMACUR 100 GR	fenamiphos (acetamidine)	Nematodes
PROFENFOS	profenofos (organophosphate)	Bollworm, thrips, red spider mite, psylla, mealybug, aphids
ROSSI 200 SC	fipronil (phenyl pyrazole)	Thrips
SAVAGE 360 SC	chlorfenapyr (pyrole)	Thrips
SCALEX 100 EC	pyriproxyfen (phenyl ether)	Red scale
SPIROFEN 240 SC	spirodiclofen (tetronic acid)	Mites
TARTAR EMETIC SP	tartar emetic	Thrips
TIVOLI 240 SC	spirotetramat (tetramic acid)	Citrus mealybug, long-tailed mealybug, oleander mealybug;, citrus red mite, citrus rust mite, Lowveld mite, red scale, citrus thrips, woolly whitefly
WALKER 240 SC	methoxyfenozide (diacylhdrazine)	False codling moth

ANTSET 200 SC

Active ingredient: Fipronil 182 g/ℓ, lambda-cyhalothrin 18 g/ℓ
(Reg No. L10378 Act 36 of 1947)

A suspension concentrate contact and stomach insecticide for the control of ants in orchards and vines.



Features

- IRAC group code 2B/3 insecticide.
- Insecticide combination consisting of 2 different insecticide modes of action.
- Quick knockout action.
- Long residual action.
- Repellent properties.
- 28 days withholding period.

Do's and don'ts

- Do not apply in orchards or vineyards during flowering.
- Do not apply if there are flowering plants near the orchard / vines where bees are active.
- Do not use any type of attractant.
- Do not mix ANSET 200 SC with other chemicals.
- Apply only one application per season.
- Treat other structures in the orchard like supporting poles etc.

INSECTICIDE

USE RATE†
- Apply 25mℓ / 10ℓ water or 250mℓ/100ℓ water.
- Apply to the point of run-off as a coarse spray.
- Treat the bottom 30cm-45cm of the trees stem.
- Use a ring-spray attachment fitted to the lance of a knapsack sprayer.

REGISTRATION DETAILS†
ANSET 200 SC,
Active ingredient: Fipronil 182g/ℓ and Lambda-cyhalothrin 18g/ℓ.
Reg. No. L10378, Act 36 of 1947.

Registration holder:
Universal Crop Protection (Pty) Ltd.
Reg. No. 1983/008184/07
PO Box 801, Kempton Park, 1620.
Tel. (011) 396-2233

PACKAGING
1 ℓ

ALWAYS READ THE LABEL

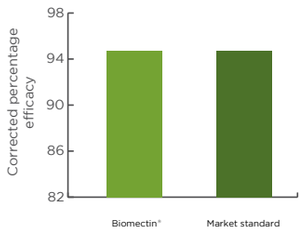
villa | www.villacrop.co.za

WINFIELD® UNITED

BIOMECTIN 18 EC

Active ingredient: Abamectin 18 g/ℓ
(Reg No. L7979 Act 36 of 1947)

An emulsifiable concentrate insecticide with translaminar activity for the control of citrus thrips.



Features

- IRAC group code 6 insecticide.
- Inhibits functioning of central nervous system.
- BIOMECTIN 18 EC exhibits translaminar movement.
- BIOMECTIN 18 EC is compatible with citrus blackspot fungicides.
- Relatively nontoxic to beneficial insects.
- Suitable for use in an IPM programme.
- Will suppress lowveld- and red spider mite.
- Short withholding period – 7 days.

Do's and don'ts

- Monitor thrips infestation regularly.
- Apply at low levels of thrips infestations.
- Do not allow population pressure to build up too high.
- Do not exceed 3 sprays per season and do not apply more than 2 sprays consecutively.
- Alternate with insecticides from other IRAC group codes.
- Do not apply sulphur sprays within two weeks of BIOMECTIN 18 EC applications to prevent fruit/leaf spotting.

INSECTICIDE

USE RATE†
- Apply BIOMECTIN 18 EC at first sign of thrips infestation.
- Apply 20 mℓ BIOMECTIN 18 EC plus 300 mℓ light or medium grade narrow distillation range mineral spray oil per 100 ℓ water.
- Apply as a light cover spray, avoiding run-off.

REGISTRATION DETAILS†
BIOMECTIN 18 EC
Active ingredient: Abamectin 18 g/ℓ,
Reg. No. L7979 (harmful), Act 36 of 1947

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
20 ℓ, 5 ℓ, 1 ℓ

ALWAYS READ THE LABEL

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WINFIELD® UNITED

BUPROFEZIN 500 WDG

INSECTICIDE

Active ingredient: Buprofezin (thiadiazin) 500g/kg
(Reg No. L8254, Act 36 of 1947)

A contact and stomach insecticide acting as an insect growth regulator, formulated as a water-dispersible granule for the control of mealybug at the nymphal stages on citrus.

Features

- IRAC group code 16 insecticide.
- Inhibits the synthesis of chitin by suppressing the hormone that regulates the process.
- Distinct from other IGRS's as it only controls *Homoptera,* with no effect against *Lepidoptera* (caterpillars and moths) and *Diptera* (flies).
- Treated adults lay sterile eggs.
- Contact and stomach action (when ingested).
- Very effective against juvenile stages (crawlers) of mealybug in citrus.
- Buprofezin MRL 0.01 mg/kg (the level of detection) for citrus.
- Compatible with various IPM programme.

Do's and don'ts

- Scouting is paramount.
- Ensure thorough spray coverage of the tree as biological effectivity depends on contact of the crawlers with the residue, wherever they may settle.
- Commence application early in the season on harvested trees, which are easier to penetrate with spray application.
- Do not apply later than mid-October for oranges and grapefruit and not later than 90% petal fall for lemons and soft citrus.
- Restrict application to healthy, well-irrigated orchards and do not spray when the temperature exceeds 30 °C.

USE RATE†
30 g Buprofezin + 250-500 mℓ light narrow range oil per 100 ℓ water.

Apply as a full cover spray, ensuring good contact where crawlers will move and settle.

REGISTRATION DETAILS†
BUPROFEZIN 500 WDG
Active ingredient: Buprofezin (thiadiazin) 500 g/kg
Reg. No. L 8254 Act 36 of 1947 (caution)

Registration holder:
Universal Crop Protection (Pty) Ltd.
Reg. No. 1983/008184/07
PO Box 801, Kempton Park, 1620.
Tel. (011) 396-2233

PACKAGING
300 g

ALWAYS READ THE LABEL

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WINFIELD® UNITED

CRYSTAL 550 SC

INSECTICIDE

Active ingredient: Fenbutatin oxide (organo tin) 550g/ℓ
(Reg No. L9095, Act 36 of 1947)

A suspension concentrate, contact and residual acaricide with anti-feeding properties for the control of various mite species on citrus.

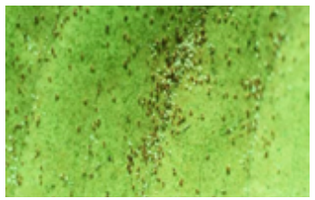

Figure 1. Red spider mite
Figure 2. Rust mite damage
Figure 3. Spider mites under leaf surface

Features

- CRYSTAL 550 SC is a group code 12B insecticide. (An organo tin compound).
- It is effective against mobile stages of mites.
- Strong residual action with anti-feeding properties.
- Effective against red mite, flat mite, lowveld mite and rust mite on citrus.
- Short pre-harvest interval of 7 days except EU (EU - not later than 90% petal-fall).
- Effective in combination with SPIROFEN 240 SC for control of both eggs and mobile stages.
- CRYSTAL 550 SC is a blue label product ie. Caution is required while handling.

Do's and don'ts

- Best results achieved when applied just after hatching of eggs – scouting is important.
- Apply as a good medium cover spray.
- Ensure good coverage of the fruit.

USE RATE†
Per 100 ℓ water:
55 mℓ : Red mite and Lowveld mite.
20 mℓ : Flat mite.
15 mℓ : Rust mite.

REGISTRATION DETAILS†
CRYSTAL 550 SC
Active ingredient: fenbutatin oxide (organo tin) 550 g/kg
Reg.No. L9095, Act 36 of 1947 (caution)

Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
1 ℓ

ALWAYS READ THE LABEL

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WINFIELD® UNITED

HARRIER 500 EC

INSECTICIDE

Active ingredient: Mercaptothion (organophosphate) 500 g/ℓ
(Reg No. L 10373, Act 36 of 1947)

An emulsifiable concentrate stomach and contact insecticide for the control of fruit fly in citrus, in combination with a protein hydrolysate liquid concentrate, HYM-LURE RFU.

Features

- For resistance management, HARRIER 500 EC is an IRAC Group 1B insecticide.
- HARRIER 500 EC is an organophosphate insecticide with stomach and contact action.
- HARRIER 500 EC is registered for the control of fruit fly, in combination with Hym-Lure RFU (Protein hydrolysate).
- HARRIER 500 EC has a short withholding period (PHI: EU: 7 days, Korea and Switzerland: 28 days).
- Confirm withholding periods with the relevant export organisation as the MRL's differs for different markets.

Do's and don'ts

- Apply only as a diluted application.
- Do not apply as a full cover application for control of fruit fly.
- Do not add any other product(s) to bait mixtures.
- Do not mix with hard water. pH must range between 4.5 and 5.5.
- Add an appropriate Villa approved buffer and surfactant when required.

USE RATE†

Fruit fly bait:

- 175 mℓ HARRIER 500 EC + 400 mℓ HYM-LURE RFU per 100 ℓ water.
- Apply bait once a week for 4-8 weeks prior to harvest and before color break.
- Apply as a bait application at 100-800 mℓ water per tree (depending on size) as scattered coarse droplets (1,000-3,000 micron).
- Use a thin solid stream application, using a "Teejet" D2 or D3 orifice plate without the whirl plate at 1.5 to 3 Bar pressures.
- Aim the application to the inside of tree canopies and underside of the leaves.

REGISTRATION DETAILS†

HARRIER 500 EC
Active ingredient: Mercaptothion (organophosphate) 500 g/ℓ
Reg. No. L 10373 Act 36 of 1947 (caution)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

HYM-LURE RFU
Active ingredient: Protein hydrolysate 425 g/ℓ
Reg. No. L 5354, Act 36 of 1947(caution)

Registration holder:
Pioneer Foods Groceries (Pty) Ltd
Reg. No. / Nr. 1993/000454/07
Glacier Place, 1 Sportica Crescent
Tygervalley, 7530 Tel: 021- 974 4000

PACKAGING
5 ℓ, 20 ℓ

ALWAYS READ THE LABEL

HYM-LURE (READY FOR USE)

Active ingredient: Protein hydrolysate 425 g/ℓ
(Reg No. L 5354, Act 36 of 1947)

A protein hydrolysate liquid concentrate used in the preparation of bait for the control of fruit flies in citrus, in combination with an insecticide registered in terms of Act No. 36 of 1947 for the control of fruit flies.



Figures 1-3. Various fruit flies

Features

- HYM-LURE RFU is an attractant for both sexes of fruit fly.
- HYM-LURE RFU must be mixed with a registered insecticide like HARRIER 500 EC.
- For control of *Ceratitis capitata*, -Mediterranean fruit fly (Medfly), and *Ceratitis rosa*, -Natal fruit fly.

Do's and don'ts

- Bait applications should be prioritised during two months before fruit ripening.
- Baits are more effective when applied during the morning in cool temperatures.
- Increasing the protein concentration can cause fruit burn.
- Apply bait to the inside of the tree with a solid stream nozzle.
- Maintenance bait sprays must be applied to every tree in every second row in a particular week and to the alternate rows in the following week.
- Do not add any other product(s) to bait mixtures.

ALWAYS READ THE LABEL

INSECTICIDE

USE RATE†

Citrus except Mandarins:

- 400 mℓ - 1000 mℓ per 100 ℓ water + HARRIER 500 EC
- Dosage should not exceed 400mℓ HYM-LURE RFU per 100 ℓ water on Mandarin type cultivars and Pomelo/Grapefruit.
- Apply as a bait application at 100-800 mℓ water per tree (depending on size) as scattered coarse droplets (1,000-3,000 micron)

Aerial Application:

- 750 mℓ HYM-LURE RFU + 250 mℓ HARRIER 500 EC per hectare.
- Apply using a 300 micron VMD range at a height of 10 m above the trees.

REGISTRATION DETAILS†

HYM-LURE RFU
Active ingredient: Protein hydrolysate 425 g/ℓ
Reg. No. L 5354, Act 36 of 1947. (caution)

Registration holder:
Pioneer Foods Groceries (Pty) Ltd
Reg. No. / Nr. 1993/000454/07
Glacier Place, 1 Sportica Crescent
Tygervalley, 7530
Tel: 021- 974 4000

HARRIER 500 EC
Active ingredient: Mercaptothion (organophophate) 500 g/ℓ
Reg. No. L 10373 Act 36 of 1947 (caution)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

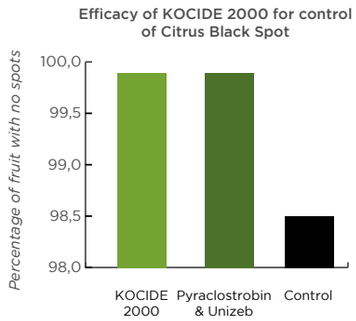
PACKAGING
25 ℓ

IMIDOR 350 SC

INSECTICIDE

Active ingredient: Imidacloprid (chloro-nicotinyl) 350 g/ℓ
(Reg No. L8019, Act 36 of 1947)

A systemic suspension concentrate insecticide for the control of red scale, aphids and psylla on citrus.



Features

- IRAC group code 4A insecticide.
- IMIDOR 350 SC is highly systemic with translaminar activity and with contact and stomach action.
- IMIDOR 350 SC is taken up through the roots and underground stem of the plant.
- IMIDOR 350 SC is transported to all actively growing parts of the plant.
- Controls red scale, aphids and psylla.
- Once taken up by the plant it provides prolonged protection.
- Soil drench application is not affected by adverse weather conditions.

Do's and don'ts

- Remove organic material around the trunk of the tree.
- Apply during August & September at green tip to white bud growth stage.
- Irrigate within 24 hours after application.

ALWAYS READ THE LABEL

USE RATE†

Soil drench application:

- Dilute the recommended dosage rate of IMIDOR 350 SC in 1 ℓ of water and apply around the trunk base with a jug.
- Apply 9 mℓ/ tree for the control of aphids, red scale and psylla.

REGISTRATION DETAILS†

IMIDOR 350 SC
Active ingredient: Imidacloprid 350 g/ℓ
Reg. No. L8019, Act 36 of 1947
(harmful)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
20ℓ, 5 ℓ, 1 ℓ

KLAXON 240 EW

Active ingredient: Tau-fluvalinate (pyrethroid) 240 g/ℓ
(Reg No. L10455, Act 36 of 1947)

A stomach and contact insecticide emulsion for the control of citrus thrips.

Features

- IRAC insecticide group code 3A insecticide.
- Acts on the nervous system of insects by disrupting the function of the sodium channel.
- Relatively non-toxic to honey-bees, at recommended doses.
- Low toxicity to many other beneficial insects whilst being very effective against target species.
- Toxic to spiders and mites, including predatory mites.
- Withholding period – 42 days.

Do's and don'ts

- Application timing should be managed to minimise disruption where integrated mite control is practiced.
- Confirm withholding periods with the relevant export organisation in case of crops intended for export.
- Monitor thrip infestation regularly.
- Do not apply KLAXON 240 EW when bees are active.
- Do not apply KLAXON 240 EW in areas where resistance of thrips against synthetic pyrethroid insecticides occurs.
- Do not use KLAXON 240 EW with any spray oil or highly alkaline materials.
- Alternate with insecticides from other IRAC insecticide group codes.

INSECTICIDE

USE RATE†
- Apply 30 mℓ /100 ℓ t as a light cover spray at 70 to 90 % petal drop.
- A second application may be applied four to five weeks later.

REGISTRATION DETAILS†
KLAXON 240 EW
Active ingredient:
Tau-fluvalinate (pyrethroid) 240 g/ℓ
Reg. No. L10455 Act 36 of 1947
(caution)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
1 ℓ

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WINFIELD® UNITED

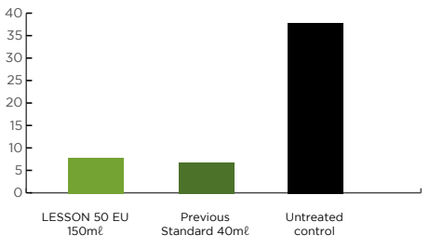
LESSON 50 EC

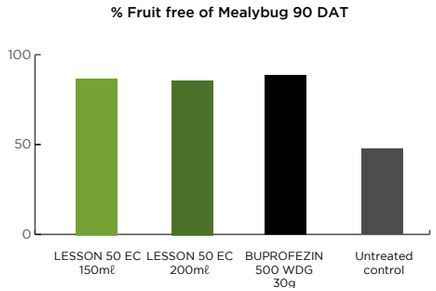
INSECTICIDE

Active ingredient: Fenpyroximate 50 g/ℓ
(Reg. No. L9256, Act 36 of 1947)

An emulsifiable concentrate residual contact acaricide/insecticide for the control of budmite and a wide spectrum of mites as well as mealybug in citrus.

Figure 1. Budmite infestation 31 weeks after application





Features

- IRAC group code 21 insecticide.
- LESSON 50 EC is a fast-acting contact insecticide.
- Rain and UV resistant.
- No cross resistance with other acaricides.
- Effective at both nymph and adult stages.
- Residual action of 21-28 days at recommended rate.
- Can be applied in ideal window between February to April.
- Effective against red mite, rust mite, lowveld citrus mite, flat mite, grey mite and silver mite if present during time of application.
- Also registered for control of mealybug.
- LESSON 50 EC MoA is mitochondrial electron transport inhibition, resulting in pests unable to feed and reproduce which leads to mortality and a decline in pest populations.
- Extremely safe for use on citrus.
- PHI: 28 days - Confirm withholding periods for export crops with the relevant export organisation.

ALWAYS READ THE LABEL

Do's and don'ts

- Apply during February to April during bud formation period.
- Do not exceed more than one LESSON 50 EC treatment (or other IRAC Group 21 products) per growing season for good resistance management.
- LESSON 50 EC is most effective against mobile stages of mites. Optimum control is obtained when applications coincide with periods of maximum egg hatch.
- Application for mealybug should be timed at crawler movement and should only be applied once per season.

USE RATE†

Mites: 150 mℓ/100 ℓ water
- Apply as a medium volume, full cover spray.
- Scout orchards frequently to determine mite infestation levels. Commence with application at first signs of infestation.
- Apply spray mixture at 5-7 ℓ per meter tree height above canopy skirt or tree diameter.

Mealybug: 200 mℓ/100 ℓ water
- Apply as a full cover spray at the onset of first mealybug crawler movement.
- Ensure good coverage and wetting on all parts of the tree, especially the undersides of the leaves.

REGISTRATION DETAILS†
LESSON 50 EC
Active ingredient: Fenpyroximate 50 g/ℓ
Reg. No. L9256, Act 36 of 1947
(caution)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

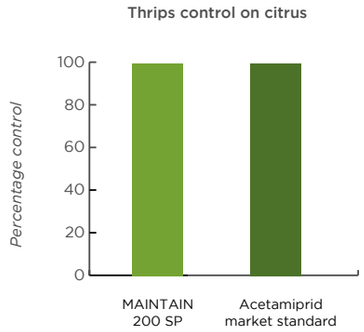
PACKAGING
5 ℓ

MAINTAIN 200 SP

INSECTICIDE

Active ingredient: Acetamiprid (acetamidine) 200 g/kg
(Reg No. L9225, Act 36 of 1947)

A water soluble powder, systemic, contact and stomach insecticide for the control of citrus thrips, mealybugs, citrus red scale and aphids.



Features

- IRAC group code 4A insecticide.
- Broad spectrum of activity.
- Short persistence on leaf surface.
- Contact, translaminar and systemic action.
- Triple action: ovicidal, adulticidal and larvicidal.
- Low acute toxicity to bees.
- Quick knockdown effect.
- Long residual effect against thrips.

Do's and don'ts

- Regular scouting is extremely important to determine the pest status.
- Use MAINTAIN 200 SP in a tank mix with VILLA 51 to improve wetting and contact with waxy leaf and fruit surfaces.

USE RATE†

Citrus thrips:
- Apply 40 g MAINTAIN 200 SP per 100 ℓ water
- Apply in the early season (at 100% petal-fall) as a light cover spray.
- Repeat when threshold is exceeded but not later than 6 weeks after 100% petal-fall or first application, as pest repercussions may occur.

Mealybugs:
- Apply 40 g/100 ℓ. Full cover spray when infestation is noticed.

Red scale:
- Apply 50 g/100 ℓ. Full cover spray when infestation is noticed.

REGISTRATION DETAILS†
MAINTAIN 200 SP
Active ingredient: Acetamiprid (acetamidine) 200 g/kg
Reg. No. L9225, Act 36 of 1947 (caution)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
500 g, 1 Kg

ALWAYS READ THE LABEL

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WINFIELD® UNITED

METHOMYL 90 SP

INSECTICIDE

Active ingredient: Methomyl (carbamate) 900 g/kg
(Reg No. L7189, Act 36 of 1947)

A water-soluble powder insecticide with contact and stomach action for the control of a wide spectrum of citrus pests including: aphids, mealy bug, African bollworm, red scale, soft green scale, waxy scale and orange dog caterpillar.

Figure 1. Mealybug on citrus
Figure 2. Africa bollworm larva
Figure 3. Orange dog caterpillar

Features

- A carbamate insecticide: IRAC Group code 1A.
- Cholinesterase inhibitor. Interferes with nervous system of insect.
- Systemic insecticide with contact and stomach action.
- Controls aphids, African bollworm, mealybugs, red scale, orange dog caterpillars, soft green scale and waxy scale.
- Effective as a corrective application for the control of red scale.
- Short withholding period. 2 days (20g rate), 28 days (dosage higher than 20g).
- Very toxic.

Do's and don'ts

- Application must be performed with high-pressure compressor type handguns for the control of red scale.
- Application must be performed when the presence of young nymphs of scale or mealybug are observed.
- Ensure thorough wetting of all parts of the plant.
- Regular monitoring of orchards is essential.

USE RATE†
- **African bollworm and aphids:** 20 g /100 ℓ - Apply as a light cover spray when aphids and/or larvae appear
- **Orange dog:** 25 g/100 ℓ - Apply as a light cover spray as soon as larvae are noticed.
- **Red scale**: 100 g plus 3 ℓ narrow range oil. Apply when 25 to 40 % of the fruit is infested with one or more live nymphs or adult scales.
- **Mealybug:** 20 g/100 ℓ - Apply as a full cover spray with a high-pressure sprayer as soon as young nymphs appear on the fruit.
- **Soft green scale:** 20 g/100 ℓ plus 500 mℓ narrow range oil - Apply as a full cover spray with a high-pressure sprayer.
- **Waxy scale:** 25 g/100 ℓ - Apply as a full cover spray with a high-pressure pump

REGISTRATION DETAILS†
METHOMYL 90 SP
Active ingredient: Methomyl (carbamate) 900 g/kg
Reg. No. L7189, Act 36 of 1947,
(very toxic)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
1 Kg

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WINFIELD® UNITED

MOCAP 150 GR

INSECTICIDE

Active ingredient: Ethoprophos (organophosphate) 150 g/kg
(Reg No. L 6985, Act No. 36 of 1947)

A granular contact nematicide for the control of nematodes in citrus.

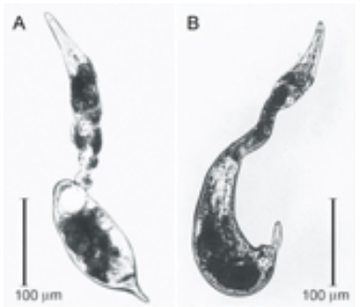

Figure 1. Swollen females of the citrus nematode
Figure 2. Citrus tree showing signs of decline caused by the citrus nematode Tylenchulus semipenetrans

Features

- IRAC group code 1B insecticide.
- MOCAP 150 GR is an organophosphate insecticide and nematicide with contact action.
- MOCAP 150 GR is registered for the control of the citrus nematode *(Tylenchulus semipenetrans).*
- MOCAP 150 GR has no withholding period on citrus.

Do's and don'ts

- Ensure an even distribution of the granules.
- MOCAP 150 GR should be applied midway through an irrigation cycle.
- Precede the MOCAP 150 GR application with an irrigation of 10mm water.
- Irrigate with 10mm irrigation immediately after application.
- Do not mix and apply simultaneously with fertilizer from a single granule applicator.
- Do not use MOCAP 150 GR on soils of pH 9 or above.
- Confirm withholding periods with the relevant export organisation as the MRL's differs for different markets.

USE RATE†
- Apply 10 g/m² of the drip area.
- Apply MOCAP 150 GR evenly in the drip area of the tree at the start of nematode activity during Spring.
- Repeat annually in Spring.

REGISTRATION DETAILS†
MOCAP 150 GR
Active ingredient: Ethoprophos (organophosphate) 150 g/kg
Reg. No. L 6985, Act 36 of 1947 (harmful)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
15 kg

ALWAYS READ THE LABEL

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WINFIELD® UNITED

NEMACUR 100 GR

INSECTICIDE

Active ingredient: Fenamiphos (organosphophate) 100 g/kg
(Reg No. L2056, Act 36 of 1947)

A granular systemic nematicide for the control of nematodes in citrus.

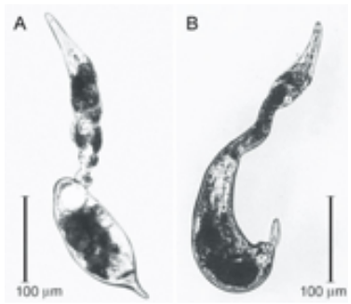

Figure 1. Swollen females of the citrus nematode
Figure 2. Citrus tree showing signs of decline caused by the citrus nematode Tylenchulus semipenetrans

Features

- IRAC Group 1B insecticide.
- NEMACUR 100 GR is an organophosphate insecticide and nematicide with systemic action.
- NEMACUR 100 GR is registered for the control of the citrus nematode *(Tylenchulus semipenetrans)*.
- Systemic in plants - acropetal and basipetal.
- NEMACUR 100 GR has a local withholding period of 150 days.
- Fenamiphos is stable to hydrolysis at between pH 4.0 to pH 9.0.

Do's and don'ts

- Do not exceed 120 kg per hectare or 400 g per tree.
- Irrigate immediately after application with at least 25 mm water.
- Ensure an even distribution of the granules.
- Do not mix and apply simultaneously with fertilizer from a single granule applicator.
- Alternate with products from different insecticide group codes to avoid AMD (accelerated microbial degradation).
- Confirm withholding periods with the relevant export organisation as the MRL's differs for different markets.

USE RATE†
- Apply the granules evenly to the soil surface in the tree basin area.
- Apply 18 to 40 g/m² depending on number of trees per hectare and size of basin area.
- Repeat annually in Spring.

REGISTRATION DETAILS†
NEMACUR 100 GR
Active ingredient: Fenamiphos (organosphophate) 100 g/kg
Reg. No. L2056 , Act 36 of 1947, (very toxic)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
25 Kg

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WINFIELD® UNITED

PROFENFOS

INSECTICIDE

Active ingredient: Profenofos (organophosphate) 500 g/ℓ
(Reg No. L7032, Act 36 of 1947)

An contact stomach insecticide and acaricide with translaminar action as an emulsifiable concentrate for control of thrips, African bollworm, psylla and mealybug on citrus.



USE RATE†
Rate Per 100 ℓ water:
African bollworm and aphids: 50 mℓ
Thrips and psylla: 75 mℓ
Mealybugs: 100 mℓ

REGISTRATION DETAILS†
PROFENFOS
Active ingredient: Profenofos 500 g/ℓ
Reg. No. L7032 , Act 36 of 1947,
(harmful)

Registration holder:
Universal Crop Protection (Pty) Ltd.
Reg. No. 1983/008184/07
PO Box 801, Kempton Park, 1620.
Tel. (011) 396-2233

PACKAGING
5 ℓ

Features

- IRAC Group code 1B insecticide.
- Cholinesterase inhibitor. Interferes with nervous system of insect.
- Non systemic insecticide with contact, stomach and translaminar action. Strong ovicidal properties.
- Controls aphids, thrips, African bollworm, psylla and mealybugs.
- Ideal for application in early spring complex.
- PROFENFOS also controls various mites.

Do's and don'ts

- Apply before 50% petal fall on export citrus.
- Acidify the spray mixture with a suitable buffer.
- Do not use PROFENFOS on grapefruit and soft citrus cultivars.
- Do not apply PROFENFOS after a winter oil application.
- Do not use PROFENFOS in tank mixtures with gibberellic acid.

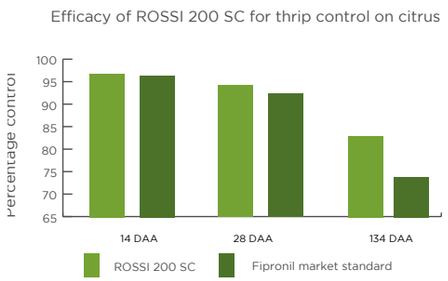
ALWAYS READ THE LABEL

ROSSI 200 SC

INSECTICIDE

Active ingredient: Fipronil (phenyl pyrazole) 200 g/ℓ
(Reg No. L8272, Act 36 of 1947)

A suspension concentrate, contact and stomach insecticide for the control of thrips on citrus.



Features

- IRAC group code 2B insecticide.
- Controls citrus thrips through contact and stomach action (ingestion).
- ROSSI 200 SC has a strong knockdown effect on citrus thrips.
- ROSSI 200 SC provides long residual control.
- Quick treatment made possible by applying light cover sprays.

Do's and don'ts

- Apply early as a single, light cover spray.
- Late applications may result in pest repercussions.
- Beehives must be removed from orchards before application.

USE RATE†
- Apply ROSSI 200 SC at 10 mℓ per 100 ℓ water.
- Apply from 90 % to 100 % petal drop until just before calyx closure.

REGISTRATION DETAILS†
ROSSI 200 SC
Active ingredient: Fipronil (phenyl pyrazole) 200 g/ℓ
Reg. No. L8272, Act 36 of 1947, (harmful)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
1 ℓ

ALWAYS READ THE LABEL

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WINFIELD® UNITED

SAVAGE 360 SC

Active ingredient: Chlorfenapyr (pyrole) 360g/ℓ
(Reg No. L8533, Act 36 of 1947)

A suspension concentrate contact and stomach insecticide and acaricide for the control of thrips on citrus.



Features

- SAVAGE 360 SC belongs to the pyrole group and is an IRAC group code 13 insecticide.
- SAVAGE 360 SC has good translaminar, but limited systemic activity.
- It acts through both contact and stomach action.
- SAVAGE 360 SC has a strong knockdown effect against citrus thrips.
- Versatile - can be applied as either a medium cover spray or a bait spray.
- Provides prolonged periods of control.
- The bait spray option fits well into a softer IPM spray programme.
- The shorter withholding period allows for later application.

Do's and don'ts

- Ensure that the medium cover application is performed before calyx closure.
- If the spray-water exceeds a pH of 7.0, the addition of an acidifying surfactant is recommended.
- Apply a maximum of 3 bait treatments per season before middle of December. Adhere to a 140 day withholding period.
- Do not apply SAVAGE 360 SC where there is bee activity in orchards to be sprayed.
- Use only in orchards where mealybug is under commercial control.

INSECTICIDE

USE RATE†
- Apply 30 mℓ SAVAGE 360 SC per 100 ℓ water:
- Apply as a medium cover spray at 90% to 100 % petal drop.

Bait spray
- Apply 30 mℓ SAVAGE 360 SC plus 200 g white sugar
- Apply as a coarse droplet bait spray. Apply 5 to 10 ℓ spray mixture per tree according to tree size.

REGISTRATION DETAILS†
SAVAGE 360 SC
Active ingredient: Chlorfenapyr (pyrole) 360 g/ℓ
Reg. No. L8533, Act 36 of 1947, (harmful)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
1 ℓ

ALWAYS READ THE LABEL

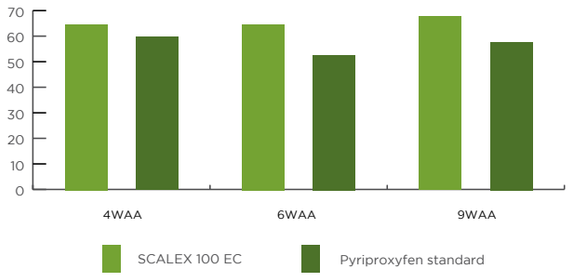
INSECTICIDE

SCALEX 100 EC

Active ingredient: Pyriproxyfen (phenyl ether) 100 g/ℓ
(Reg No. L7573, Act 36 of 1947)

An emulsifiable concentrate contact and stomach insecticide with insect growth regulant properties for the control of red scale on citrus.

Figure 1: Fruit infested with red scale



Features

- SCALEX 100 EC is an Insect Growth Regulator (IGR), IRAC Group code 7C insecticide.
- The active ingredient (pyriproxyfen) mimics a natural hormone in insects and disrupts their growth.
- SCALEX 100 EC is active only against juvenile/nymph stages of the target pests.
- Translaminar action.
- Very low impact on beneficial insects.
- Non-toxic to bees and predatory mites.
- Various programmes are recommended depending on the severity of red scale infestation.
- Compatible with citrus black spot fungicide sprays.
- Fits well into an IPM programme.

Do's and don'ts

- Best results are obtained when the spray is timed to coincide with first crawler movement.
- Ensure thorough penetration and wetting of the trees to ensure that crawlers have contact with SCALEX 100 EC. wherever they move or settle on the trees.
- Ant control is advised in conjunction with using SCALEX 100 EC.

USE RATE†

Red scale
Dosage Per 100 ℓ water:
- 30 mℓ SCALEX 100 EC plus 200 - 300 mℓ medium narrow range mineral oil.
- Apply as a full cover spray (normally at bud burst).
- Under heavy infestations a second spray may be required 5-8 weeks after the first.
- A third spray may be needed where red scale in not under commercial control.

REGISTRATION DETAILS†
SCALEX 100 EC
Active ingredient: Pyriproxyfen 100 g/ℓ
Reg. No. L7573, Act 36 of 1947,
(harmful)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
5 ℓ

ALWAYS READ THE LABEL

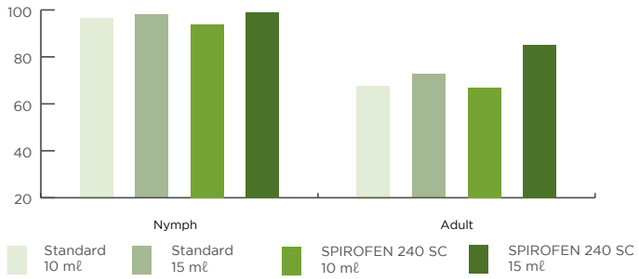
SPIROFEN 240 SC

INSECTICIDE

Active ingredient: Spirodiclofen (tetronic acid) 240g/ℓ
(Reg No. L9498, Act 36 of 1947)

A suspension concentrate, contact acaricide for the control of various mites on citrus.

Figure 1.
Citrus red mite



Features

- Belongs to the tetronic acid class of insecticides: IRAC group code 23.
- Active by contact on mite eggs, all nymphal stages and adult females.
- Acts by inhibiting lipid biosynthesis thereby interfering with the process of acdysis (moulting).

Do's and don'ts

- Apply as a medium cover spray to ensure thorough coverage of the leaf surfaces (upper and lower) and of fruit.
- Do not apply as a corrective treatment for high populations.
- Do not apply TRIFLOXYSTROBIN 500 WDG within 30 days before or after the application.
- If necessary, follow up with registered acaricides with other modes of action eg. CRYSTAL 550 SC.

USE RATE†

Red mite, lowveld mite, flat mite
10 to 15 mℓ/100 ℓ water

Rust mite
15-20 mℓ/100 ℓ water

- Apply when mite populations are building up,
- Apply only 1 treatment per season before middle of January.

REGISTRATION DETAILS†
SPIROFEN 240 SC
Active ingredient: Spirodiclofen (tetronic acid) 240 g/ℓ
Reg. No. L9498, Act 36 of 1947, (caution)

CRYSTAL 550 SC
Active ingredient: fenbutatin oxide (organotin) 550 g/kg
Reg.No. L9095, Act 36 of 1947, (caution)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
1 ℓ

ALWAYS READ THE LABEL

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WINFIELD® UNITED

TARTAR EMETIC SP

INSECTICIDE

Active ingredient: Tartar emetic 995 g/kg
(Reg No. L4479, Act 36 of 1947)

A water-soluble salt to be sprayed as a bait application for the control of citrus thrips.

Features

- TARTAR EMETIC SP is an IRAC group code 8E insecticide.
- TARTAR EMETIC SP controls thrips by ingestion, (stomach action).
- Relatively non-toxic to predatory mites and beneficial insects.
- Quick and easy bait type application.
- Can be applied by aerial application.
- Suitable to be used in an IPM programme with alternate products for effective thrip control.
- Short withholding period (30 days) makes late season applications possible.

Do's and don'ts

- Ensure coarse droplets with application.
- Apply when thrips pressure is still low.
- To prevent the development of resistance to the product do not apply repeatedly, but alternate with other registered products for control of thrips.
- Do not apply during nectar production of the flowers.
- Repeat application if rain occurs within 2 days of spraying.
- Consult your export agent for the latest withholding period relevant to your export market.

USE RATE†

Ground application

- Apply as a light bait spray aimed at the outer foliage of the tree.
- 400 g TARTAR EMETIC SP Plus 400 g Sugar per 100 ℓ
- Apply about 5 ℓ of the spray solution per full grown tree.

Aerial application

- 400 g TARTAR EMETIC SP Plus 400 g Sugar

REGISTRATION DETAILS†
TARTAR EMETIC SP
Active ingredient:
Tartar emetic 995 g/kg
Reg. No. L4479, Act 36 of 1947,
(harmful)

Registration holder:
Universal Crop Protection (Pty) Ltd.
Reg. No. 1983/008184/07
PO Box 801, Kempton Park, 1620.
Tel. (011) 396-2233

PACKAGING
25 Kg

ALWAYS READ THE LABEL

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WINFIELD® UNITED

TIVOLI 240 SC

INSECTICIDE

Active ingredient: Spirotetramat (tetramic acid) 240 g/ℓ
(Reg. No. L9385, Act 36 of 1947)

A suspension concentrate systemic insecticide for the control of scales, mites and the suppression of mealybugs. Spirotetramat is fully systemic, with a very strong translaminar effect. After foliar application, spirotetramat enters the plant cells and is mobile in the phloem in both directions. This two-way translocation is known as “ambimobile translocation” as it moves both upwards and downwards.




Features

- Spirotetramat is an IRAC Group Code 23 insecticide, making it an ideal partner to alternate with other chemistry.
- Spirotetramat inhibits acetyl CoA carboxylase and inhibits lipid biosynthesis.
- Registered for control of red scale, citrus red mite, citrus thrips and suppression of mealybug.
- Fully systemic, with very strong translaminar effect, it reaches protected pests and protects leaves that develop after foliar application.
- Spirotetramat has a significant effect on fecundity and fertility resulting in a reduction in the target population.
- Favourable environmental profile with minimal effect on beneficial insects, it is an excellent choice for IPM.

Do’s and don’ts

- Apply as a high volume, full cover spray.
- Spirotetramat is very effective at the juvenile stages or nymph stages of the target insects. Adult stages can therefore still be observed for a period after application.

USE RATE†

Red Scale: Early preventive treatment.
- Two treatments spray programme*: Apply 10 mℓ /100 ℓ when first crawler movement is observed (80 to 100 % petal fall). Repeat 4 weeks later.
- Single Treatment spray programme: Apply 20 mℓ/100 ℓ when first crawler movement is observed (80 to 100 % petal fall).
- Ensure thorough coverage of all parts of the trees.

Citrus mealybug: *(Planococcus citri)*
- Apply 30 – 40 mℓ/100 ℓ plus 300 mℓ light to medium narrow range mineral oil. Start with application at the onset of crawler movement. Repeat after 4 weeks. Apply as a full cover application.

Citrus thrips: *(Scirtothrips aurantii)*
- Apply 30 – 40 mℓ/100 ℓ after flowering. A second treatment can be applied two weeks later, before calyx closure. Use higher rate in case of high infestation pressure.

REGISTRATION DETAILS†
TIVOLI 240 SC
Active ingredient: Spirotetramat (tetramic acid) 240g/ℓ
Reg. No. L9385, Act 36 of 1947, (caution)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
5 ℓ

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WINFIELD® UNITED

WALKER 240 SC

INSECTICIDE

Active ingredient: Methoxyfenozide (diacylhydrazine) 240 g/ℓ
(Reg No. L10348, Act 36 of 1947)

A suspension concentrate molting acceleration product in insects for the control of false codling moth *(Thaumatotibia leucotreta)* in citrus.

Figure 1. False codling moth Thaumatotibia leucotreta
Figure 2. False codling moth larvae

Features

- IRAC group code 18 insecticide.
- WALKER 240 SC mimics the action of the molting hormone of lepidopterous larvae (L1 to L2 stages).
- Larvae cease feeding within 4-8 hours after ingestion and thereafter undergo an incomplete and developmentally lethal premature molt.
- Relatively harmless to beneficial insects as it is a selective insecticide (*Lepidoptera* order only). Good IPM insecticide.
- Relatively harmless to bees and young bees.
- PHI: 30 days - Confirm withholding periods with the relevant export organisation as the MRL's differs for different markets.

Do's and don'ts

- For good resistance management, do not exceed more than 2 WALKER 240 SC treatments per growing season.
- Alternate WALKER 240 SC in a programme with other registered insecticides with different modes of action.
- Tank mixtures of WALKER 240 SC with any other insecticides that reduces its selectivity to beneficial predatory insects, will adversely affect the full benefit of WALKER 240 SC in an IPM programme.
- Always apply as a high volume, full cover spray.

USE RATE†
- Dosage rate: 60 mℓ /100 ℓ water
- High volume full cover application 8 weeks and 4 weeks prior to harvest.
- Apply as a preventative treatment at the beginning of moth flight peak or before eggs hatch. This ensures that the majority of emerging larvae are exposed to the active ingredient before damage occurs.

REGISTRATION DETAILS†
WALKER 240 SC
Active ingredient: Methoxyfenozide (diacylhydrazine) 240 g/ℓ
Reg. No. L10348, Act 36 of 1947, (caution)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
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WINFIELD® UNITED

HERBICIDE

Trade name	Active ingredient	Target species
BOUND 200 SL	glufosinate-ammonium	Annual & perennial weeds
CHIKARA 250 WG	flazasulfuron	Sedges, broadleaves and grasses
ORION 240 EC	oxyfluorfen	Annual broad leaf weeds and grasses
SCAT 360 SL	glyphosate	Annual & perennial weeds
SERIES 240 EC	clethodim (cyclohexanedione)	Grass weeds
SLASH 710 SG	glyphosate (glycine)	Annual & perennial weeds

BOUND 200 SL

Active ingredient: Glufosinate-ammonium 200 g/ℓ
(Reg No. L 9280, Act 36 of 1947)

A non-selective soluble concentrate herbicide with contact action, for the post-emergence control of annual weeds.




Features

- HRAC group code H herbicide.
- BOUND 200 SL kills the weed by inhibiting an enzyme central to the plants metabolism.
- BOUND 200 SL is a contact herbicide with limited translocation in the plant.
- BOUND 200 SL is active on all the green parts of the treated weeds.
- Chlorosis and wilting occur within 3 – 5 days after application followed by death 1 to 2 weeks later.
- BOUND 200 SL can be very useful for controlling glyphosate resistant weeds such as *Lolium spp.* and *Conyza spp* in orchards and vineyards.
- BOUND 200 SL can also be used to control glyphosate tolerant volunteer maize.
- Control of hard to kill weeds such as:
  - *Malva parviflora*. Small mallow/kiesieblaar.
  - *Conyza bonariensis* flax-leaf fleabane/vaalskraalhans.
  - *Lolium spp.* rye grass /raaigras.
  - *Cynodon dactylon* common couch grass /kweekgras.

ALWAYS READ THE LABEL

Do's and don'ts

- Trim low hanging branches to prevent leaf and fruit contact.
- Where young trees with green stems are present, use shields to prevent damage.
- Ensure that direct spray or drift does not come into contact with green leaves, active buds and fruit.
- Ensure thorough coverage of the weed foliage.
- If re-growth is observed repeat application when adequate leaf surface area is available for uptake, especially in the case of perennial weeds. Eg. *Cynodon dactylon* and *Cyperus esculentus.*

HERBICIDE

USE RATE†
Annual grasses and broad leaf weeds
5.0 - 7.5 ℓ/ha
Perennial grasses and sedges
5.0 - 7.5 ℓ/ha
Apply when actively growing
Apply 300 ℓ/ha water volume

REGISTRATION DETAILS†
BOUND 200 SL
Active ingredient: glufosinate-ammonium 200 g/ℓ
Reg. No. L 9280 Act 36 of 1947
(harmful)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
5 ℓ

CHIKARA 250 WG

Active ingredient: Flazasulfuron (sulfonyl urea) 250 g/kg
(Reg No. L 5628, Act No. 36 of 1947)

A water dispersible granular post emergence herbicide for the control of sedges, broadleaves and grasses as listed in citrus.

Features

- Pre- and post-emergence action on wide range of sedges, grasses and broadleaf weeds.
- Root and foliar absorption.
- Control difficult and glyphosate resistant weeds.
- Excellent synergy with glyphosate.
- Japanese formulation – high quality and reliable.
- Weed control up to 80 -100 days.

Do's and don'ts

- CHIKARA 250 WG is a leaf and root absorbed herbicide and must be applied during active growth of the target weeds.
- CHIKARA 250 WG should not be used in newly planted citrus orchards (<1 year).
- CHIKARA 250 WG applied to soils with a pH exceeding 7.0 (water) and/or soils containing free lime may result in longer residual activity in respect of very sensitive follow-up crops. Under these circumstances consult your technical adviser for specific recommendations.
- CHIKARA 250 WG has a residual effect on germinating weeds, the control of which might be affected by factors such as weed species, soil pH, soil moisture and soil temperatures.
- Rainfall or irrigation within 2 hours may result in reduced efficacy on emerged weeds only. The efficacy of CHIKARA 250 WG will be adversely affected if cool, dry conditions prevail after spraying.
- Soils with exceptionally high clay content, high cation exchange capacity and exceptionally high organic matter may adversely affect the efficacy of CHIKARA 250 WG.
- Prepare only sufficient spray for immediate use and under no circumstances should unused spray mixture be held overnight.
- Use only water of which the quality is suitable for overhead irrigation. Avoid water with a conductivity exceeding 1,0 mS/cm, a resistance of less than 300 ohm and pH above 8.
- Withholding period: allow the minimum days indicated between last application and harvest citrus : 45 days.

ALWAYS READ THE LABEL

HERBICIDE

USE RATE†

- Established orchards (bearing trees only) 150 g/ha + 3 ℓ GLYPHOSATE 360 SC product + 200 - 400 ℓ water volume/ha.

- For control of Cyperus spp. (4 leaf - flowering) and effective residual control of a range of actively growing grasses and broadleaf weeds (4-8 leaf stage), CHIKARA 250WG must be mixed with glyphosate (360 g/ℓ formulation) at a rate of 3 ℓ / ha and applied in 200 – 400 ℓ /ha as a directed spray in a swath on either side of the trunk. A non-ionic surfactant should be included.

REGISTRATION DETAILS†
CHIKARA 250 WG
Active ingredient: Flazasulfuron (sulfonyl urea) 250 g/kg
Reg. No. L 5628, Act 36 of 1947
(caution)

Registration holder:
CHIKARA® is the registered trademark of ISHIHARA SANGYO KAISHA, Ltd., Japan
Represented by:
Disa BioTechnologies (1999/47619/23)
Postnet 327, Private Bag x 16,
Constantia, 7848
Tel: (021) 794 8566

PACKAGING
200 g

ORION 240 EC

HERBICIDE

Active ingredient: oxyfluorfen (diphenyl ether) 240 g/ℓ
(Reg No. L7432, Act No. 36 of 1947)

A selective contact and residual herbicide for use in citrus, for the control of annual broadleaved weeds and grasses as indicated on the label.



Features

- HRAC group code E herbicide.
- ORION 240 EC has both post-emergence and residual action on both broadleaf and grass weeds.
- ORION 240 EC rapidly binds to clay particles and organic material in the surface soil layer. This along with its low water solubility prevents it from leaching in the soil and being absorbed by crops roots.
- ORION 240 EC controls weeds through a contact action on shoots of germinating seedlings as they emerge through the activated layer.

Do's and don'ts

- ORION 240 EC should be applied on a clean soil surface, free of any plant residues that could intercept applied product and result in suboptimal weed control.
- Soil disturbance after application will affect weed control detrimentally.
- ORION 240 EC should be applied to moist soil and the soil must remain moist as long as possible, to enhance residual activity.
- ORION 240 EC should be applied as a directed spray, aimed at the soil surface to avoid contact with crop foilage, as it can lead to localized leaf damage.
- Under cold, wet and moist conditions ORION 240 EC vapours may cause scorching of the lower leaves (especially in young trees). This localized scorching will not influence further growth under normal conditions.
- Sensitive nearby growing crops may be damaged by the vapour action of ORION 240 EC.
- Application of ORION 240 EC on citrus bearing orchards should be done at least 3 weeks before blossoming or 3 weeks after fruit set.
- Avoid application during periods of vegetative growth.

ALWAYS READ THE LABEL

USE RATE†
- Dosage per hectare:
  3.0 to 4.0 ℓ / 500 ℓ water.

REGISTRATION DETAILS†
ORION 240 EC
Active ingredient: oxyfluorfen (diphenyl ether) 240 g
Reg. No. L 7432 , Act 36 of 1947

Registration holder:
Universal Crop Protection (Pty) Ltd. Co.
Reg. No. 1983/008184/07
PO Box 801, Kempton Park, 1620.
Tel. (011) 396-2233

PACKAGING
5 ℓ

SCAT 360 SL

Active ingredient: Glyphosate (glycine) 360 g ae/ℓ
(glyphosate isopropylamine salt) 480 g/ℓ
(Reg No. L 5716, Act No. 36 of 1947)

A soluble liquid, non-selective, systemic, post-emergence herbicide with slight or no soil activity for the control of perennial and annual weeds in citrus.

Features

- SCAT 360 SL is an HRAC Group Code G9 non-selective herbicide.
- Provides control of both annual and perennial grass and broadleaf weeds.
- Uptake (absorption) is fast and the active ingredient is translocated throughout the plant.
- On contact with the soil, glyphosate binds to the clay particles (adsorption) and is decomposed over time by soil microbes.
- Non-toxic when used according to label recommendations.
- The product has no soil residual effect, therefore has no root uptake and is safe to follow-up crops after application.
- Wilting of weeds will be visible within the first week after application on annual weeds and total death occurs 14-21 days after application.
- It is rain fast an hour after application on small actively growing annual weeds.

ALWAYS READ THE LABEL

Do's and don'ts

- Always use clean water, free of mud or organic material as a spray mixture.
- For optimum results, a minimum of 1.5 % SCAT 360 SL concentration in the total spray volume is recommended.
- For optimum results, always apply the product on actively growing, stress free weeds.
- Avoid applications during high temperatures and when the relative humidity is low.
- Do not spray weeds covered with dust.
- Protect young trees with green bark from direct spray.
- Apply SCAT 360 SL at volumes ranging from 12 to 600 ℓ spray mixture per hectare.
- The addition of ammonium sulphate (VELOCITY SUPER or VELOCITY DRYMAX) to the spray mixture is strongly recommended for effective weed control.
- For optimum and consistent results, it is recommended to add a non-ionic surfactant at 0.5% solution to the spray volume.
- Do not apply when heavy rain is imminent.

HERBICIDE

USE RATE†
- Annual broadleaf & grass weeds
- Dosage rates depend on weed size and weed species.

Broadleaf weeds
- 1.25 to 1.50 ℓ / ha 1 to 12-leaf
- 1.50 to 2.00 ℓ / ha 12-leaf to pre- flower
- 2.50 to 3.00 ℓ / ha Flower

Certain difficult to control broadleaf weeds require higher dosage rates. (Consult tables in label)

Grass weeds
- 1.25 to 1.50 ℓ / ha 1 to 12-leaf
- 1.50 to 2.00 ℓ / ha12-leaf to pre-flower
- 2.50 to 4.00 ℓ / ha flowering stage.

REGISTRATION DETAILS†
SCAT 360 SL
Active ingredient: Glyphosate (glycine) 360 g ae/ℓ (glyphosate isopropylamine salt) 480 g/ℓ
Reg. No. L 5716 , Act 36 of 1947
(caution)

Registration holder:
Universal Crop Protection (Pty) Ltd. Co.
Reg. No. 1983/008184/07
PO Box 801, Kempton Park, 1620.
Tel. (011) 396-2233

VELOCITY-DRYMAX
Active ingredient: Ammonium sulphate 1000 g/kg
Reg. No. L9454, Act 36 of 1947,
(caution)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
1 ℓ , 5 ℓ , 20 ℓ

SERIES 240 EC

Active ingredient: Clethodim (cyclohexanedione) 240 g/ℓ
(Reg No. L 8913, Act No. 36 of 1947)

A selective systemic herbicide for post emergence control of grass weeds in citrus.

Features

- SERIES 240 EC is a HRAC Group Code A herbicide.
- SERIES 240 EC is a post emergence, selective herbicide for the control of grass weeds in citrus.
- SERIES 240 EC is a systemic herbicide.
- SERIES 240 EC acts by inhibiting lipid synthesis causing mortality of the growth points in grass weeds.
- SERIES 240 EC has a withholding period of 28 days in citrus.
- Broad spectrum control of difficult to control grass species.
- Ideal on young trees and orchards with few broadleaved weed infestations.

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Do's and don'ts

- Allow a minimum of four days after a SERIES 240 EC application before applying any other agrochemical treatment.
- Do not apply on crops or weeds under stress conditions.
- Apply only during moist conditions with actively growing weeds.
- Do not irrigate on the treated area within one hour after the SERIES 240 EC application.
- SERIES 240 EC is sensitive to brackish water with high EC values (Ca. Mg, Na).
- Apply SERIES 240 EC with the recommended adjuvants for optimal control.

HERBICIDE

USE RATE†
- 0.5-1 ℓ/ha PLUS 0.1% DIRECT + 1% VELOCITY DRYMAX
  OR
- 0.5-1 ℓ/ha + 0.3% SUMMIT SUPER

REGISTRATION DETAILS†
SERIES 240 EC
Active ingredient: clethodim, 240g/ℓ
Reg. No. L 8913 , Act 36 of 1947
(caution)

Registration holder:
Universal Crop Protection (Pty) Ltd. Co.
Reg. No. 1983/008184/07
PO Box 801, Kempton Park, 1620.
Tel. (011) 396-2233

VELOCITY-DRYMAX
Active ingredient: Ammonium sulphate 1000 g/kg
Reg. No. L9454, Act 36 of 1947,
(caution)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
5 ℓ

ALWAYS READ THE LABEL

SLASH 710 SG

Active ingredient: Glyphosate (glycine) 710 g/kg
(Reg No. L8450, Act 36 of 1947)

A water-soluble granule, non-selective, systemic, post emergence herbicide with slight or no soil activity, for the control of annual and perennial weeds in citrus.

Figure 1. Tree row treated with SLASH 710 SG

Figure 2. Young citrus row treated with SLASH 710 SG

Figure 3. Conyza bonariensis - 7 days after application

Features

- HRAC group code G9 herbicide.
- Highly effective, systemic post emergent, non-selective herbicide.
- Little or no soil residual effect, therefore no root uptake.
- Non toxic when used according to label recommendations.
- Provides control of annual and perennial grass and broad leaf weeds.

Do's and don'ts

- For optimum results, a minimum of 1 % SLASH 710 SG concentration in the total spray volume is recommended.
- Apply SLASH 710 SG at a minimum volume rate of 200 ℓ spray mixture per hectare.
- Protect young trees with green bark from direct spray.
- Do not mix SLASH 710 SG with muddy or poor quality water for making a spray mixture.
- The addition of VELOCITY®-SUPER (2 %) or VELOCITY®-DRYMAX (1 %) to the spray mixture is strongly recommended.
- Do not spray weed plants covered with dust.
- Do not apply when heavy rain is imminent.
- Apply when weeds are young and actively growing.

ALWAYS READ THE LABEL

HERBICIDE

USE RATE†

Annual broadleaf & grass weeds
- Dosage rates depend on weed size and weed species.

Broadleaf weeds
- 0.5 to 0.8 kg/ha in the 1 – 12 leaf stage.
- 0.8 to 1.5 kg in the 12 leaf stage to pre-flower stage.
- 1.5 to 2.5 kg/ha in the flowering stage.
- Certain difficult to control broadleaf weeds require higher dosage rates. (Consult tables in label).

Grass weeds
- 0.7 to 1.0 kg/ha in the 1 – 12 leaf stage.
- 1.0 to 1.5 kg/ha in the 12 leaf to pre-flower stage.
- 1.5 to 2.0 kg/ha in the flowering stage.

REGISTRATION DETAILS†

SLASH 710 SG
Active ingredient: Glyphosate 710 g/kg
Reg. No.L8450, Act 36 of 1947
(caution)

Registration holder:
Universal Crop Protection (Pty) Ltd.
Reg. No. 1983/008184/07
PO Box 801, Kempton Park, 1620.
Tel. (011) 396-2233

VELOCITY-DRYMAX
Active ingredient: Ammonium sulphate 1000 g/kg
Reg. No. L9454, Act 36 of 1947,
(caution)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
10 Kg

FUNGICIDE

Trade name	Active ingredient	Target species
BENOMYL 500 WP	benomyl (benzimidazole)	Citrus black spot, post harvest diseases
CERATO 250 EC	pyraclostrobin (strobilurin)	Citrus black spot
D-ZOLE 250 EC	difenoconazole (triazole)	Navel end rot, brown spot
FUNGAWAY 250 SG	azoxystrobin (strobilurin)	Citrus black spot
KOCIDE 2000	copper hydroxide	Citrus black spot and alternaria spot
PHOSPHITE 400 SL	potassium phosphite/phoshorous acid equivalent	Phytophthora root and collar rot
SUPPORT 400 SC	pyrimethanil (aniline derivative)	Post harvest diseases: blue mould, green mould
TEBUZOLE 250 EW	tebuconazole (triazole)	Navel-end rot
THIAZOLE 500 SC	thiabendazole (benzimidazole)	Post harvest diseases: blue mould, green mould, stem-end rot
VILLA UNIZEB 750 WDG	mancozeb (dithiocarbamate)	Citrus black spot, melanose, citrus rust, citrus silver mite, brown rot, necrostoma.

FUNGICIDE

BENOMYL 500 WP

Active ingredient: Benomyl (benzimidazole) 500 g/kg
(Reg No. L 6909, Act 36 of 1947)

A wettable powder fungicide with systemic action, for the preventative and corrective control of citrus black spot on citrus.

Figure 1,2 and 3: Citrus black spot

Features

- FRAC Fungicide Group Code 1 (benzimidazole).
- BENOMYL 500 WP may be applied as a single full cover spray between 1 and 20 December.
- BENOMYL 500 WP provides up to 6 weeks protection against citrus black spot infection.
- BENOMYL 500 WP has a highly systemic mode of action with an eradicant action against citrus black spot (in areas where benzimidazole résistance does not occur).
- BENOMYL 500 WP at the higher dosages and applied as a thorough full cover spray may be applied up to 4 weeks after infection has occurred.

Do's and don'ts

- Do not use BENOMYL 500 WP if field resistance to benzimidazole has already occurred in the orchard.
- The addition of oil to the spray mixture is essential in order to improve the eradicant properties of BENOMYL 500 WP.
- If problems of coverage are experienced, two sprays may be applied: second half November and first week January.
- Use in mixture with chemically unrelated fungicides (strobilurins, copper, mancozeb).
- All BENOMYL 500 WP applications should be preceded by an application of VILLA UNIZEB 800 WP at 200 g/100 ℓ during the last week in October up to 10 November.

USE RATE†
Citrus Black Spot
- Apply a single full cover spray at 25 g to 50 g/100 ℓ between 1 and 20 December.
- Follow the application with a VILLA UNIZEB 750 WDG application during the first week of January.
- BENOMYL 500 WP dosage depends on tree age and cultivar.

REGISTRATION DETAILS†
BENOMYL 500 WP
Active ingredient: Benomyl (benzimidazole) 500 g/kg
Reg. No. 6909, Act 36 of 1947
(caution)

VILLA UNIZEB 800 WP
Active ingredient: Benomyl (benzimidazole) 500 g/kg
Reg. No. L 8056 Act 36 of 1947
(caution)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
10413, Aston Manor, 1630
Tel. (011) 396-2233

PACKAGING
25 kg

ALWAYS READ THE LABEL

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WINFIELD® UNITED

CERATO 250 EC

Active ingredient: Pyraclostrobin (strobilurin) 250 g/ℓ
(Reg No. L9336, Act 36 of 1947)

An emulsifiable concentrate fungicide, with contact and translaminar action for the preventative control of of black spot in citrus.

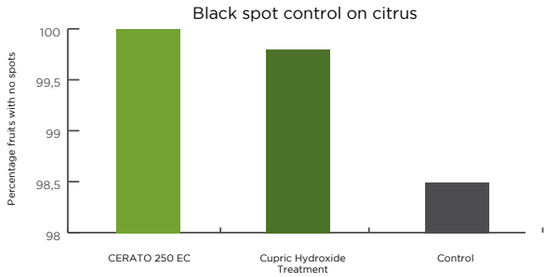


Figure 1.
Citrus black spot.

Figure 2. Percentage black spot control with CERATO 250 EC

Features

- IRAC group code 11 fungicide.
- Excellent inhibitor of spore germination.
- CERATO 250 EC has both a contact and translaminar action.
- Part of the QoI group of fungicides.
- Blocks the mitochondrial electron transport of fungi.
- Provides up to 6 weeks preventative control of citrus black spot infection.
- Has a relatively short withholding period (45 days) compared to other strobilurins.
- Ideal fit in a resistance management spray program containing fungicides from other chemical groups.

Do's and don'ts

- Apply within 25 days of the first contact fungicide application and ALWAYS in conjunction with mancozeb or copper.
- Apply a second CERATO 250 EC application 6 weeks later.
- Follow up with a contact fungicide 6 weeks later.
- Do not apply on old neglected citrus trees as they are prone to high levels of black spot infection.

FUNGICIDE

USE RATE†
Citrus Black Spot
Apply 10 mℓ /100 ℓ water
CERATO 250 EC + 300 mℓ light to medium narrow range mineral oil
+ 150 g VILLA UNIZEB 800 WP.

REGISTRATION DETAILS†
CERATO 250 EC
Active ingredient: Pyraclostrobin (strobilurin)
250 g/ℓ,
Reg. No. L9336, Act 36 of 1947
(harmful)

VILLA UNIZEB 800 WP
Active ingredient: Benomyl (benzimidazole) 500 g/kg
Reg. No. L 8056 Act 36 of 1947
(caution)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
5 ℓ

ALWAYS READ THE LABEL

villa | www.villacrop.co.za

WINFIELD® UNITED

D-ZOLE 250 EC

Active ingredient: Difenocanozole (triazole) 250g/ℓ
(Reg No. L7923, Act 36 of 1947)

An emulsifiable concentrate fungicide with systemic action for the control of navel-end-rot, black core rot (*Alternaria citri*) and brown spot.

Figure 1. Internal symptoms of brown rot
Figure 2. Symptoms of Alternaria citri

Features

- D-ZOLE 250 EC is a FRAC group code 3 fungicide.
- D-ZOLE 250 EC inhibits cell membrane ergosterol biosynthesis stopping development of the fungus.
- D-ZOLE 250 EC is a locally systemic fungicide with limited acropetal movement.
- D-ZOLE 250 EC shows both preventative and curative action.

Do's and don'ts

- Should be applied as a preventative treatment.
- Apply as a good medium cover spray.
- Do not apply after 100 % petal fall.
- Do not apply more than 3.0 ℓ per hectare D-ZOLE 250 EC per season.
- Use the higher rate on orchards with a history of *Alternaria* diseases.
- The two D-ZOLE 250 EC applications are part of a season-long control strategy for *Alternaria alternata* (brown spot) control.

FUNGICIDE

USE RATE†

Navels, Clementines and Mandarin:
- Navel-end-rot *(Alternaria citri)*
- Apply 40 to 60 mℓ / 100 ℓ water
- Apply 2 sprays: the first at 50% petal fall and the second at 100% petal fall.

Mandarins:
- Brown Spot *(A. alternata)*
- Apply 40 to 60 mℓ / 100 ℓ water + 200 g / 100 ℓ water COZEB 800 WP.

REGISTRATION DETAILS†
D-ZOLE 250 EC
Active ingredient: Difenocanozole (triazole) 250g/ℓ
Reg. No. L7923, Act 36 of 1947, (caution)

Registration holder:
Universal Crop Protection (Pty) Ltd.
Reg. No. 1983/008184/07
PO Box 801, Kempton Park, 1620.
Tel. (011) 396-2233

PACKAGING
1 ℓ

ALWAYS READ THE LABEL

villa | www.villacrop.co.za

WINFIELD® UNITED

FUNGAWAY 250 SC

Active ingredient: Azoxystrobin (strobilurin) 250 g/ℓ
(Reg No. L8590, Act 36 of 1947)

A suspension concentrate, systemic fungicide with contact and translaminar action for the preventative control of citrus black spot on citrus.

Figure 1,2 and 3:
Citrus black spot

Features

- FRAC group code 11 fungicide.
- Azoxystrobin has a unique mode of action and is part of the QoI group of fungicides.
- Highly effective fungicide for use in anti-resistance programmes.
- FUNGAWAY 250 SC is systemic with translaminar action.
- Provides 6 weeks protection against germinating citrus black spot spores.
- Safe to use by applicators if used according to label instructions.
- Fits well in an IPM friendly spray programme.

Do's and don'ts

- Apply only as a full cover application.
- ALWAYS apply in a tank mix with VILLA UNIZEB or copper oxychloride for resistance management.
- Apply twice per season (6 weeks apart) in a programme with VILLA UNIZEB or copper oxychloride.

USE RATE†

Citrus Black Spot
Application per 100 ℓ water
20 mℓ FUNGAWAY
Plus 150g Villa UNIZEB 800 WP OR 150 g
Copper oxychloride Plus 300 mℓ light
narrow range mineral oil

REGISTRATION DETAILS†
FUNGAWAY 250 SC
Active ingredient: Azoxystrobin
(strobilurin) 250 g/ℓ
Reg. No. L8590, Act 36 of 1947

VILLA UNIZEB 800 WP
Active ingredient: Benomyl
(benzimidazole) 500 g/kg
Reg. No. L 8056 Act 36 of 1947
(caution)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 11992/002474/07
10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
4 ℓ

ALWAYS READ THE LABEL

KOCIDE® 2000

Active ingredient: Copper hydroxide 538 g/kg (copper equivalent 350g/kg)
(Reg no. L7805, Act 36 of 1947)

A water dispersible granule contact fungicide and bactericide to control black spot and *alternaria* spot on citrus.

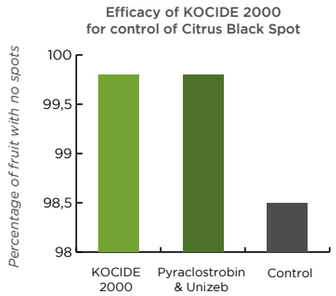


Figure. 1 Fruit infected with black spot

Features

- Fungicide group code M1.
- KOCIDE® 2000 is a preventative contact fungicide.
- Copper hydroxide is the most effective source of copper ions for disease control.
- KOCIDE® 2000 is tenacious and persists on the leaf surface for prolonged protection.
- High quality copper formulation.
- 50% reduction in metallic copper applied per hectare.
- Less likely to give rise to phytotoxicity.
- KOCIDE® 2000 mixes and handles easily and can be measured out by weight or volume.
- KOCIDE® 2000 is highly compatible with other chemicals.

Do's and don'ts

- Do not acidify a spray solution containing KOCIDE® 2000.
- Use KOCIDE® 2000 in a resistance management programme together with other contact and systemic fungicide groups.
- Always apply as a full cover spray.

USE RATE†

Black spot
Apply 150 g per 100 ℓ water to a maximum of 15 kg per hectare. Apply 4 applications at 30-35 day intervals, starting at 100% petal fall.

Alternaria spot
Apply 150 g of KOCIDE® 2000 per 100 ℓ water to a maximum of 15 kg per hectare OR 75 g of KOCIDE® 2000 and 100 g of MANCOZEB to a maximum of 8.0 kg per hectare.

REGISTRATION DETAILS†
KOCIDE® 2000
Active ingredient: Copper hydroxide 538 g/kg (copper equivalent 350g/kg)
Reg. No. L7805, Act 36 of 1947
(caution)

Registration holder:
Mitsui & Co, Europe Plc.
Johannesburg branch.
PO Box 652948, Benmore, 2010.

PACKAGING
10 kg

ALWAYS READ THE LABEL

PHOSPHITE 400 SL

Active ingredient: Potassium phosphite 560g/ℓ
(phosphorous acid equivalent) 400 g/ℓ
(Reg No. L7468, Act 36 of 1947)

A water-soluble systemic fungicide for the control of root and collar rot *(Phytophthora spp.)* on citrus.

Figure 1 and 2: The result of Phytophthora root rot in a citrus orchard in Hoedspruit

Features

- FRAC fungicide group code 33.
- PHOSPHITE 400 SL is a systemic fungicide absorbed by trunk and leaves and translocated to the roots.
- PHOSPHITE 400 SL can be applied as a trunk paint treatment or as a foliar spray.

Do's and don'ts

- Use PHOSPHITE 400 SL only on actively growing trees when sufficient sap flow is taking place.
- Do not apply to plants that are oxygen deprived within 6 days after heavy rains or when soil is waterlogged.
- Stop application about 1 hour before an air temperature of 30 °C is reached.
- Do not apply PHOSPHITE 400 SL within a week before, or after, a copper application.
- Use plastic or fiberglass containers when using the product as a trunk paint treatment.
- Do not treat easy peeler varieties which tend to set very heavy crops.
- Systemic translocation of PHOSPHITE 400 SL to the roots of citrus trees is enhanced when trees are not flushing. Do not apply the product when the trees are flushing.

ALWAYS READ THE LABEL

FUNGICIDE

USE RATE†
Commence treatment just after the rainy season has started and repeat at 6 to 8 week intervals during the rainy season.

Trunk paint treatment
Mix in a 50 : 50 ratio with water.
Paint the whole trunk from ground level upwards for 35 cm.

Foliar application
500 mℓ / 100 ℓ water. Apply as a light cover spray at 1800 to 2000 ℓ spray solution per hectare on medium to large trees.

REGISTRATION DETAILS†
PHOSPHITE 400 SL
Active ingredient: Potassium phosphite 560 g/ℓ (phosphorous acid equivalent) 400 g/ℓ
Reg. No. L7468, Act 36 of 1947 (caution)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
20 ℓ

SUPPORT 400 SC

Active ingredient: Pyrimethanil (aniline derivative) 400g/ℓ
(Reg No. L9282, Act 36 of 1947)

A suspension concentrate systemic fungicide for the control of post-harvest diseases in citrus.

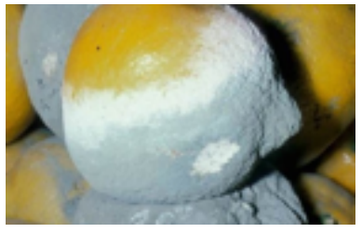


Figure 1. Blue mould (Penicillium italicum).
Figure 2. Green mould (Penicillium digitatum) on citrus.

Features

- FRAC group code 9 fungicide.
- Contact fungicide with translaminar activity.
- Inhibition of the enzymes necessary for infection.
- Provides both protective and curative efficacy.
- Effective for the control of post harvest diseases in citrus including blue mould and green mould.
- Effective for the control of Imazalil tolerant *Penicillium* populations.

Do's and don'ts

- Commence treatment as early as possible after harvest.
- Fruits must be thoroughly rinsed and disinfected with an approved chlorine disinfectant, as a standard practice, before treatment.
- Ensure contact time of the dip or drench treatment with the fruit for at least 2 minutes.
- Do not rinse the fruit after the treatment.
- Use only the ambient treatment on lemons as Maximum Residual Levels can be exceeded with hot water treatment.
- Maintain the concentration of the active ingredient in the tanks when topping up.

FUNGICIDE

USE RATE†
- 250 mℓ /100 ℓ water (1000 ppm Pyrimethanil)
- *Penicillium digitatum* (green mould), *Penicillium italicum* (blue mould) including the Imazalil resistant *Penicillium* populations.
- Apply SUPPORT 400 SC either as a dip or drench treatment (in ambient or hot water).

REGISTRATION DETAILS†
SUPPORT 400 SC
Active ingredient: Pyrimethanil 400 g/ℓ
Reg. No.L9282, Act 36 of 1947

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
5 ℓ

ALWAYS READ THE LABEL

villa | www.villacrop.co.za

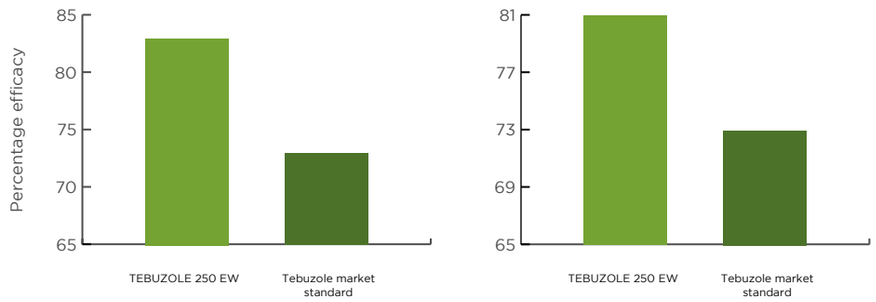
WINFIELD® UNITED

TEBUZOLE 250 EW

Active ingredient: Tebuconazole (triazole) 250 g/ℓ
(Reg No. L7551, Act 36 of 1947)

An emulsion in water fungicide with systemic action for the control of navel end rot in citrus.

Control of *Alternaria cilri* in Citrus



Features

- FRAC group code 3 fungicide.
- TEBUZOLE 250 EW is a systemic triazole fungicide.
- Rapidly absorbed into vegetative parts of the plant.
- New growth is also protected after application.
- The product has a good residual effect.
- Application significantly reduces early season fruit drop.
- TEBUZOLE 250 EW has curative properties.

Do's and don'ts

- Apply as a good medium cover spray.
- Especially effective when applied during a hot, dry flowering period when styles tend to crack.

ALWAYS READ THE LABEL

FUNGICIDE

USE RATE†
Navel end rot *(Alternaria citri)*
- Apply 80 mℓ per 100 ℓ water
- Apply 2 sprays: the first at 50% petal fall and the second at 100% petal fall.

REGISTRATION DETAILS†
TEBUZOLE 250 EW
Active ingredient: Tebuconazole (triazole) 250 g/ℓ
Reg. No. L7551, Act 36 of 1947
(caution)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
20 ℓ

THIAZOLE 500 SC

Active ingredient: Thiabendazole (benzimidazole) 500g/ℓ
(Reg No. L7832, Act 36 of 1947)

A suspension concentrate fungicide for the control of post-harvest rot in citrus.

FUNGICIDE



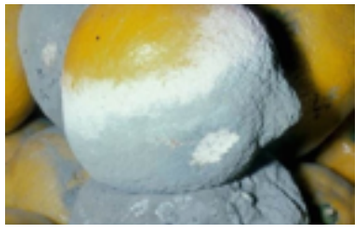


Figure 1. Grapefruit treated with THIAZOLE 500 SC in a water emulsion wax.
Figure 2. Green mould (Penicillium digitatum) on citrus.
Figure 3. Blue mould (Penicillium italicum).

Features

- FRAC group code 1 fungicide.
- Severely inhibits fungal growth and development by inhibiting cell mitosis.
- A systemic fungicide with protective and curative action.
- Forms a protective deposit on the treated surface of fruit.
- Effective for the control of a wide spectrum of post harvest diseases including blue mould, green mould and stem end rot.
- Also effective for disinfection of empty cold stores.

Do's and don'ts

- Commence treatment as early as possible after harvest.
- Maintain the concentration of the active ingredient in the tanks when topping up.
- Be aware of the high risk of benzimidazole résistance development.
- Avoid exclusive repeated use of fungicides from the same fungicide group code.
- Alternate the use of THIAZOLE 500 SC with products from different fungicide group codes.

USE RATE†
Blue mould, Green mould & Stem-end rot
- Treat the fruit after washing and cleaning. 400 mℓ/100 ℓ - Apply by means of spraying or brushing the suspension on to the fruit

OR
- 200 mℓ/25 ℓ wax - Apply in the water emulsion wax by means of a special wax applicator.

REGISTRATION DETAILS†
THIAZOLE 500 SC
Active ingredient: Thiabendazole 500 g/ℓ
Reg. No. L7832 , Act 36 of 1947
(caution)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
5 ℓ

ALWAYS READ THE LABEL

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WINFIELD® UNITED

VILLA UNIZEB 750 WDG

Active ingredient: Mancozeb (dithiocarbamate) 750 g/kg
(Reg No. L8812, Act 36 of 1947)

A wettable granule, contact fungicide for the preventative control of citrus black spot.

Figure 1,2 and 3: Citrus black spot

Features

- FRAC group code M3 fungicide.
- A multi-site protectant.
- Excellent wettable granule formulation:
  - no dust problem when measuring
  - disperses easily when mixed in water
  - Improved safety to operators.
- Excellent tank mix partner in black spot programme.
- Used in an integrated programme with the strobilurins for citrus black spot control.
- Will also control: rust mite, silver mite, brown rot and necrostoma.

Do's and don'ts

- Apply only as a full cover application.
- Do not use with alkaline products, e.g. lime sulphur and Bordeaux mixtures.
- Do not use VILLA UNIZEB 750 WDG together with calcium arsenate or urea on citrus.
- Before commencing with the spray programme, remove all out of season citrus fruit.

ALWAYS READ THE LABEL

FUNGICIDE

USE RATE†

Citrus Black Spot and Melanose

- 200 g/100 ℓ Villa Unizeb 750 WDG. 4 applications. First spray in third week of October. 3 follow-up sprays at 25 day intervals.

Villa Unizeb 750 WDG in a progamme application with strobilurines.

- Start with a single application of VILLA UNIZEB 750 WDG (at 200 g/100 ℓ) at 100 % fruit set.
- Follow up with the tank mix of VILLA UNIZEB 750 WDG plus CERATO 250 EC or FUNGAWAY 250 SC plus mineral oil, 21 to 24 days later.
- Repeat above tank mix 21-24 days later. Apply VILLA UNIZEB 750 WDG (at 200 g /100 ℓ)6 weeks later.

REGISTRATION DETAILS†

VILLA UNIZEB 750 WDG
Active ingredient: Mancozeb (dithiocarbamate) 750 g/kg
Reg. No. L8812, Act 36 of 1947
(caution)

CERATO 250 EC
Active ingredient: Pyraclostrobin (strobilurin) 250 g/ℓ,
Reg. No. L9336, Act 36 of 1947
(harmful)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
25 kg

ADJUVANT

Trade name	Active ingredient	Target species
CLASS ACT NG	ammonium sulphate and non-ionic surfactant	For use with water-sensitive herbicides like glyphosate and products that require the use of a surfactant and/or ammonium sulphate.
COMMODOBUFF	organic acid and alkali polyether-polymethylsiloxane-copolymer and	Buffering agent for correction of ph
INTERLOCK	vegetable oils, polyoxy ethylene fatty acid esters	Deposition-agent adjuvant that improves spray deposition and canopy penetration while reducing spray drift and evaporation of spray droplets
VELOCITY DRYMAX	ammonium sulphate	Use with glyphosate to complex antagonistic ions in spray water

CLASS ACT NG

Active ingredient: Ammonium sulphate and non-ionic surfactant 480 g/ℓ (Reg No. L10477, Act 36 of 1947)

Class Act NG is an adjuvant that contains ammonium sulphate, a non-ionic surfactant and has humectant properties for use with water-sensitive herbicides like glyphosate and products that require the use of a surfactant and/or ammonium sulphate.

Figure 1: Faster & more effective glyphosate control

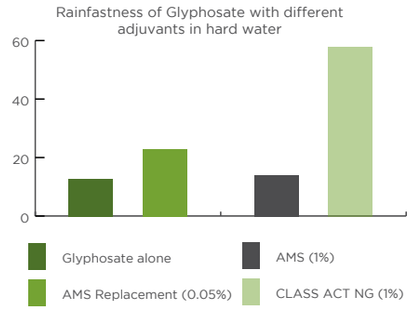

Figure 2: Rainfastness of glyphosate

Features

- Contains the patented CornSorb Technology.
- Highly extended droplet drying time.
- Moist droplet deposit increases absorption speed and amount.
- Contains a full rate of surfactant for droplet spreading and increased absorption.
- Faster control.
- More effective control on hardy weeds.
- Contains ammonium sulphate to negate salt antagonism.
- Registered with leading brand name glyphosate products.

Do's and don'ts

- Use with glyphosate and other salt-sensitive herbicides.
- Do not use as a standard practice with all herbicides.
- Add to the spray tank before the herbicide.

ADJUVANT

USE RATE†
- 1 – 2 % (1 – 2 ℓ/100 ℓ spray solution).
- For use with glyphosate and other herbicides that recommend the use of ammonium sulphate adjuvants.
- Use the higher rate in cases where additional coverage is required e.g. resilient weeds or weeds with hairy or waxy surfaces.
- Use the higher rate when spray water contains high levels of calcium, magnesium, sodium and potassium, therefore hard or brackish water.

REGISTRATION DETAILS†
CLASS ACT NG
Active ingredient: Ammonium sulphate 480g/ℓ
Reg. No. L10477, Act 36 of 1947, (caution)

Registration holder:
Winfield Solutions Registration Holdings (Pty) Ltd.
Reg. No. 2015/312008/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
10 ℓ

ALWAYS READ THE LABEL

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WINFIELD® UNITED

COMMODOBUFF

ADJUVANT

Active ingredient: Organic acid and alkali 660 g/ℓ
(Reg. No. L5390, Act 36 of 1947)

A buffering agent for the correction of the water pH in alkaline spray mixtures.

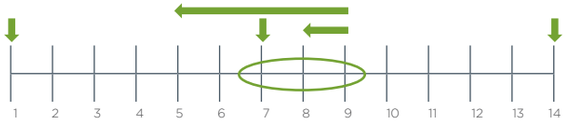

Figure 1: pH-Scale

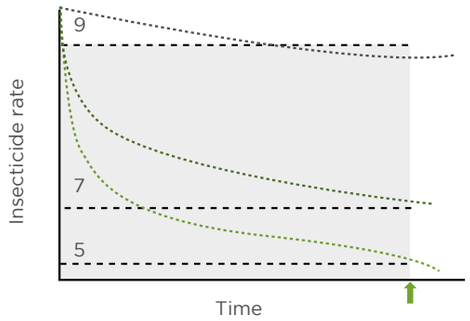

Figure 2: Alkaline hydrolysis

Features

- Used mainly to decrease alkaline hydrolysis (degradation of insecticides in high pH water).
- True buffer that reduces and stabilizes the spray solution pH to between 4 and 6 (typically pH 4.5 – 5.5), where most insecticides are most stable.
- Will not decrease the pH to extremely low levels, especially when using water with a low buffering capacity.
- Used mainly with insecticides that are prone to alkaline hydrolysis to extend the half-life in alkaline water.

Do's and don'ts

- Add to the spray tank before the alkaline hydrolysis-sensitive insecticide.
- Do not use as a standard practice, but only when labels specifically recommend acidification.

USE RATE†
- 0.05 – 0.1 % (50 – 100 mℓ /100 ℓ spray solution).
- Use the higher rate in water with a high alkalinity (buffering capacity)

REGISTRATION DETAILS†
COMMODOBUFF
Active ingredient: Organic acid and alkali 660g/ℓ
Reg. No. L5390, Act 36 of 1947, (caution)

Registration holder:
Villa Crop Protection (Pty) Ltd.
No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
5 ℓ, 10 ℓ

ALWAYS READ THE LABEL

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WINFIELD® UNITED

INTERLOCK

ADJUVANT

Active ingredient: Vegetable oils, polyoxy ethylene fatty acid esters 880 g/ℓ (Reg. No. L10254, Act 36 of 1947)

INTERLOCK is a deposition-agent adjuvant that improves spray deposition and canopy penetration while reducing spray drift and evaporation of spray droplets.

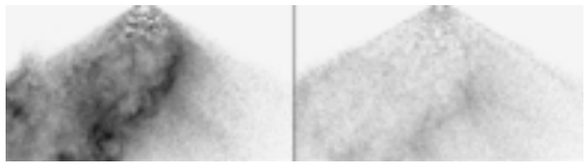

Figure 1: XR nozzle without and with INTERLOCK

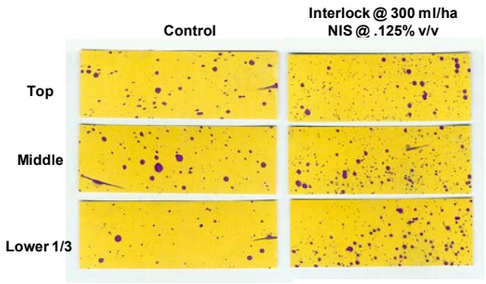

Figure 2: Depth of canopy penetration with Interlock applied to a canopied crop

Features

- Drastically reduces the ultra and very fine spray droplets.
- Increases mean droplet velocity at canopy height.
- Increases canopy penetration.
- Increases retention and coverage.
- Decreases drift and evaporation.
- Can be used with herbicides.
- Does not increase the spray solution viscosity.

Do's and don'ts

- Do not use with herbicides that restrict the use of an adjuvant.
- Does not replace other adjuvants because it should be used in conjunction with the recommended adjuvant.
- Only use for weed control. Not for application into trees.
- Do not mix in an induction system or container when the products are undiluted.

USE RATE†
- 0.2 – 0.3 ℓ/ha Ground and > 0.5% Aerial rates.
- Compatible with most commonly used herbicides. However, a jar test is recommended prior to large scale mixing.
- Add after herbicide products or other adjuvants but prior to complete filling of the spray tank.
- Can be used with most Villa herbicides.

REGISTRATION DETAILS†
INTERLOCK
Active ingredient: Vegetable oils, polyoxy ethylene fatty acid ester 880g/ℓ
Reg. No. L10254, Act 36 of 1947, (caution)

Registration holder:
Winfield Solutions Registration Holdings (Pty) Ltd.
Reg. No. 2015/312008/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
10 ℓ

ALWAYS READ THE LABEL

VELOCITY®-DRYMAX

Active ingredient: Ammonium sulphate 1000 g/kg
(Reg. No. L9454, Act 36 of 1947)

A granular formulation that will slightly reduce alkaline water pH, complex certain antagonistic ions in carrier water, overcome the antagonism of phenoxy herbicides against glyphosate and enhance the activity and compatibility of foliar applied herbicides such as glyphosate.

Figure 1: Glyphosate alone and with VELOCITY-DRYMAX

Figure 2: Untreated Control; glyphosate alone; glyphosate + VELOCITY-DRYMAX

Features

- Overcomes salt antagonism of glyphosate and other salt-sensitive herbicides.
- Overcomes phenoxy herbicide antagonism of glyphosate.
- 100 % concentration dry formulation – less transport cost, less storage space.
- Rate calculation according to water analysis or EC.
- Registered with leading glyphosate brand names.
- Also used with clethodim.

Do's and don'ts

- Add to the spray tank first, before glyphosate or any other sensitive herbicide.
- Pre-solubilize in a small amount of water before adding to the spray tank.
- It is not necessary to also add buffers to glyphosate spray solutions.
- There is no need to let the tank mixture stand for any period of time in order for the VELOCITY-DRYMAX to bind the antagonistic salts. The reaction occurs during droplet drying.

ADJUVANT

USE RATE†
- 0.25 - 1 % (0.25 – 1 kg/100 ℓ spray solution).
- If an EC measurement or water analysis is available, a calculated rate can be recommended.
- For use with glyphosate or any other herbicide, like clethodim, that is antagonized by salts in carrier water.

REGISTRATION DETAILS†
VELOCITY-DRYMAX
Active ingredient: Ammonium sulphate 1000 g/kg
Reg. No. L9454, Act 36 of 1947, (caution)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
10 kg

ALWAYS READ THE LABEL

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WINFIELD® UNITED

PLANT GROWTH REGULATOR

Trade name	Active ingredient	Target species
2,4-D FIX	2,4-d (phenoxy compound, sodium salt)	A PGR for prevention of abscission of the calyx on citrus fruit.
ETHEPHON 480 SL	ethephon	A soluble concentrate plant growth hormone for the early detection of latent citrus black spot
FALGRO 20 SP	gibberellic acid	A water-soluble powder plant growth hormone for the promotion of certain physiological and morphological effects
FALGRO TABLETS	gibberellic acid	A plant growth hormone in tablet form for the promotion of certain physiological and morphological effects
FALGRO 4 SL	gibberellic acid	A water soluble liquid plant growth hormone for the promotion of certain physiological and morphological effects.

2,4-D FIX

Active ingredient: 2,4-D (phenoxy compound, sodium salt) 25 g/ℓ
(Reg. No. L10769, Act 36 of 1947)

A plant growth regulator for prevention of abscission of the calyx on citrus fruit.



Features

- Prevention of stem-end rot by keeping the calyx of the fresh fruit alive whilst in storage.
- Retard calyx abscission that occurs during the degreening process.
- Maintain fruit quality during cold storage.
- 2,4-D alters the levels of endogenous hormones and delays fruit senescence.
- 2,4-D treatment may enhance fruit defense against various stresses.
- Post-harvest active to aid with the reduction of the navel ends and control of navel-end rot in combination with other fungicide actives.

Do's and don'ts

- Apply 2,4-D FIX within 12 hours after picking for best results.
- Pre-mix the required quantity of 2,4-D FIX with a small volume of clean water and add to drench or fungicide bath.
- Ensure agitation when adding 2,4-D FIX to wax.
- Do not exceed recommended dosages.

ALWAYS READ THE LABEL

PLANT GROWTH REGULATOR

USE RATE†
Drench and fungicide bath application
- 1-2 ℓ/ 100 ℓ water
Wax
- 2 ℓ/ 200 ℓ of wax (while agitating)

REGISTRATION DETAILS†
2,4-D FIX
Active ingredient: 2,4-D (phenoxy compound, sodium salt) 25 g/ℓ
Reg. No. L10769, Act 36 of 1947, (caution)

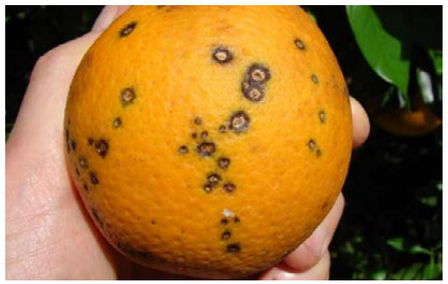
Registration holder:
Universal Crop Protection (Pty) Ltd.
Reg. No. 1983/008184/07
P.O. Box 801, Kempton Park, 1620.
Tel. (011) 396-2233

PACKAGING
20 ℓ

ETHEPHON 480 SL

Active ingredient: Ethephon 480 g/ℓ
(Reg. No. L4776, Act 36 of 1947)

A soluble concentrate plant growth hormone for the early detection of latent citrus black spot.



Features

- ETHEPHON 480 SL is a plant growth regulator.
- ETHEPHON 480 SL promotes the early detection of latent citrus black spot.
- Easy test to perform.
- Latent citrus black spot will appear as reddish lesions on the surface of the infected fruit.

Do's and don'ts

- Collect samples 8 weeks prior to harvest from sensitive indicator trees.
- Sample 100 fruit per orchard (up to 5 hectares), add 20 fruit per additional hectare.
- Dip fruit into suspension for five minutes and air-dry overnight.
- Store fruit at +- 25°C, under dry conditions for 14 days.
- Treated fruit must be disposed after inspection.

PLANT GROWTH REGULATOR

USE RATE†

- Apply 8 mℓ / 1 ℓ water ETHEPHON 480 SL.

REGISTRATION DETAILS†
ETHEPHON 480 SL
Active ingredient: Ethephon 480 g/ℓ
Reg. No. L4776, Act 36 of 1947
(caution)

Registration holder:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
1 ℓ

ALWAYS READ THE LABEL

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WINFIELD® UNITED

FALGRO® 20 SP

Active ingredient: Gibberellic acid 200 g/kg
(Reg. No. L6394, Act 36 of 1947)

A water-soluble powder plant growth hormone for the promotion of certain physiological and morphological effects as indicated on citrus.



Features

- Gibberellic acid is a plant growth regulator.
- FALGRO 20 SP increases fruit set.
- FALGRO 20 SP delays maturity and increases rind integrity.
- Realises better fruit set in poor setting cultivars.
- Prevents excessive flower abscission during hot flowering periods.
- Increases picking window by delaying maturity of selected orchards.
- Reduces creasing in navel cultivars.

Do's and don'ts

- Apply as a medium to full cover spray.
- If a summer oil has been sprayed on citrus, a minimum of 14 days must elapse before FALGRO 20 SP may be applied.
- An oil may be applied 5 to 10 days after a FALGRO 20 SP application.
- Adjust the pH of the spray mixture to between 5.5 and 6.5.
- Do not apply to orchards under stress.

PLANT GROWTH REGULATOR

USE RATE†

To reduce rind creasing
- Apply 2.5-10 g / 100 ℓ water depending on citrus type and cultivar.

To increase fruit set
- Apply 1.25-5 g / 100 ℓ water depending on citrus type and cultivar

REGISTRATION DETAILS†
FALGRO 20 SP
Active ingredient: Gibberellic acid 200 g/kg
Reg. No. L6394, Act 36 of 1947, (caution)

Registration holder:
Universal Crop Protection (Pty) Ltd.
Reg. No. 1983/008184/07
P.O. Box 801, Kempton Park, 1620.
Tel. (011) 396-2233

PACKAGING
12 x 12.5 g water-soluble sachets

ALWAYS READ THE LABEL

villa | www.villacrop.co.za

WINFIELD® UNITED

FALGRO® TABLETS

Active ingredient: Gibberellic acid 204 g/kg
(Reg No. L4503, Act 36 of 1947)

A plant growth hormone in tablet form for the promotion of certain physiological and morphological effects as indicated on citrus.



Features

- Gibberellic acid is a plant growth regulator.
- FALGRO TABLETS increases fruit set.
- FALGRO TABLETS delays maturity and increases rind integrity.
- Realises better fruit set in poor setting cultivars.
- Prevents excessive flower abscission during hot flowering periods.
- Increases picking window by delaying maturity of selected orchards.
- Reduces creasing in navel cultivars.

Do's and don'ts

- Apply as a medium to full cover spray.
- If a summer oil has been sprayed on citrus, a minimum of 14 days must elapse before FALGRO TABLETS may be applied.
- An oil may be applied 5 to 10 days after a FALGRO TABLETS application.
- Adjust the pH of the spray mixture to between 5.5 and 6.5.
- Do not apply to orchards under stress.

ALWAYS READ THE LABEL

PLANT GROWTH REGULATOR

USE RATE†

To reduce rind creasing
- Apply 16-64 mℓ / 100 ℓ water depending on citrus type and cultivar.

To increase fruit set
- Apply 8-32 mℓ / 100 ℓ water depending on citrus type and cultivar

REGISTRATION DETAILS†
FALGRO TABLETS
Active ingredient: Gibberellic acid 204 g/kg
Reg. No. L4503, Act 36 of 1947, (caution)

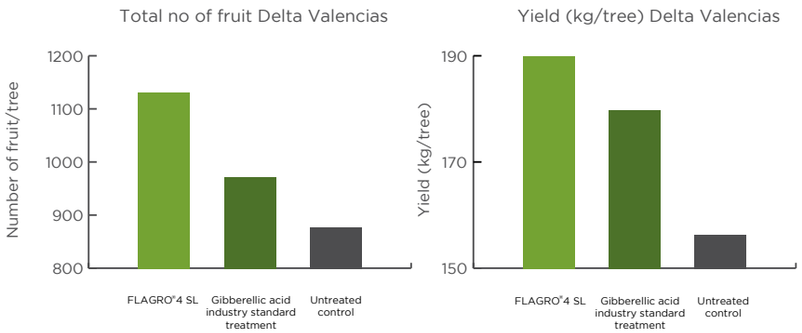
Registration holder:
Universal Crop Protection (Pty) Ltd.
Reg. No. 1983/008184/07
P.O. Box 801, Kempton Park, 1620.
Tel. (011) 396-2233

PACKAGING
4.9 g x 10 tablets

FALGRO® 4 SL

Active ingredient: Gibberellic acid 32 g/ℓ (Reg. No. L6393, Act 36 of 1947)

A water-soluble liquid plant growth hormone for the promotion of certain physiological and morphological effects as indicated on citrus.



Features

- Gibberellic acid is a plant growth regulator.
- FALGRO 4 SL increases fruit set.
- FALGRO 4 SL delays maturity and increases rind integrity.
- Realises better fruit set in poor setting cultivars.
- Prevents excessive flower abscission in hot flowering periods.
- Increases picking window by delaying maturity of selected orchards.
- Reduces creasing in navel cultivars.

Do's and don'ts

- Apply as a medium to full cover spray.
- If a summer oil has been sprayed on citrus, a minimum of 14 days must elapse before FALGRO 4 SL may be applied
- An oil may be applied 5 to 10 days after a FALGRO 4 SL application.
- Adjust the pH of the spray mixture to between 5.5 and 6.5.
- Do not apply to orchards under stress.
- Do not apply to orchards where black spot has not been controlled.
- Do not apply to trees suffering from root disease.
- Decide on the yield/fruit size balance before application.

ALWAYS READ THE LABEL

PLANT GROWTH REGULATOR

USE RATE†

To reduce rind creasing
- Apply 16-64 mℓ / 100 ℓ water FALGRO 4 SL depending on citrus type and cultivar.

To increase fruit set
- Apply 8-32 mℓ / 100 ℓ water depending on citrus type and cultivar

REGISTRATION DETAILS†
FALGRO 4 SL
Active ingredient: Gibberellic acid 32 g/ℓ
Reg. No. L6393, Act 36 of 1947
(caution)

Registration holder:
Universal Crop Protection (Pty) Ltd.
Reg. No. 1983/008184/07
PO Box 801, Kempton Park, 1620.
Tel. (011) 396-2233

PACKAGING
5 ℓ, 1 ℓ

TANK CLEANER

Trade name	Active ingredient	Target species
PROTANK LIQUID CLEANER	Proprietary blend of phosphate and carbonate salts, sequestering agents, surfactants and solvents.	Spray tank cleaner for commercial use on farm only

PROTANK® LIQUID CLEANER

Active ingredient: proprietary blend of phosphate and carbonate salts, sequestering agents, surfactants and solvents 100%

Spray tank cleaner for commercial or farm use only.




Features

- PROTANK LIQUID CLEANER decreases contamination when changing from one chemical to another.
- Assures accurate dosage by removing chemicals from the previous batch.
- Removes scale, dirt, etc.
- Protects pump and valves.
- Reduces strainer clogging.
- Minimizes nozzle wear.

Do's and don'ts

- Use a hand boom to wash down the tank interior and cover.
- Once the pump and interior has been cleaned, open boom valve and empty tank by spraying out through boom and nozzles.
- Take care to observe proper disposal of spray solution.
- Rinse tank by following the same procedure using water only.
- A three-minute rinse using cold water is necessary, however if you are changing over to a different chemical, a second rinse will lessen the chance of contamination.
- Use as directed but in addition allow the rinse solution to remain in the sprayer and its parts overnight.

USE RATE†

Large Tanks (380- 1100 ℓ)

- Close boom valve and add 190 ℓ water to tank, then turn on agitation and add 470 mℓ of PROTANK LUQUID CLEANER.

Smaller tanks

- Fill tank half full of water and use 25 mℓ or more for every 10 ℓ of tank volume.

DETAILS†

PROTANK LIQUID CLEANER
Active ingredient: Proprietary blend of phosphate and carbonate salts, sequestering agents, surfactants and solvents 100%.

Distributor:
Villa Crop Protection (Pty) Ltd.
Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630.
Tel. (011) 396-2233

PACKAGING
1 ℓ

ALWAYS READ THE LABEL

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WINFIELD® UNITED