

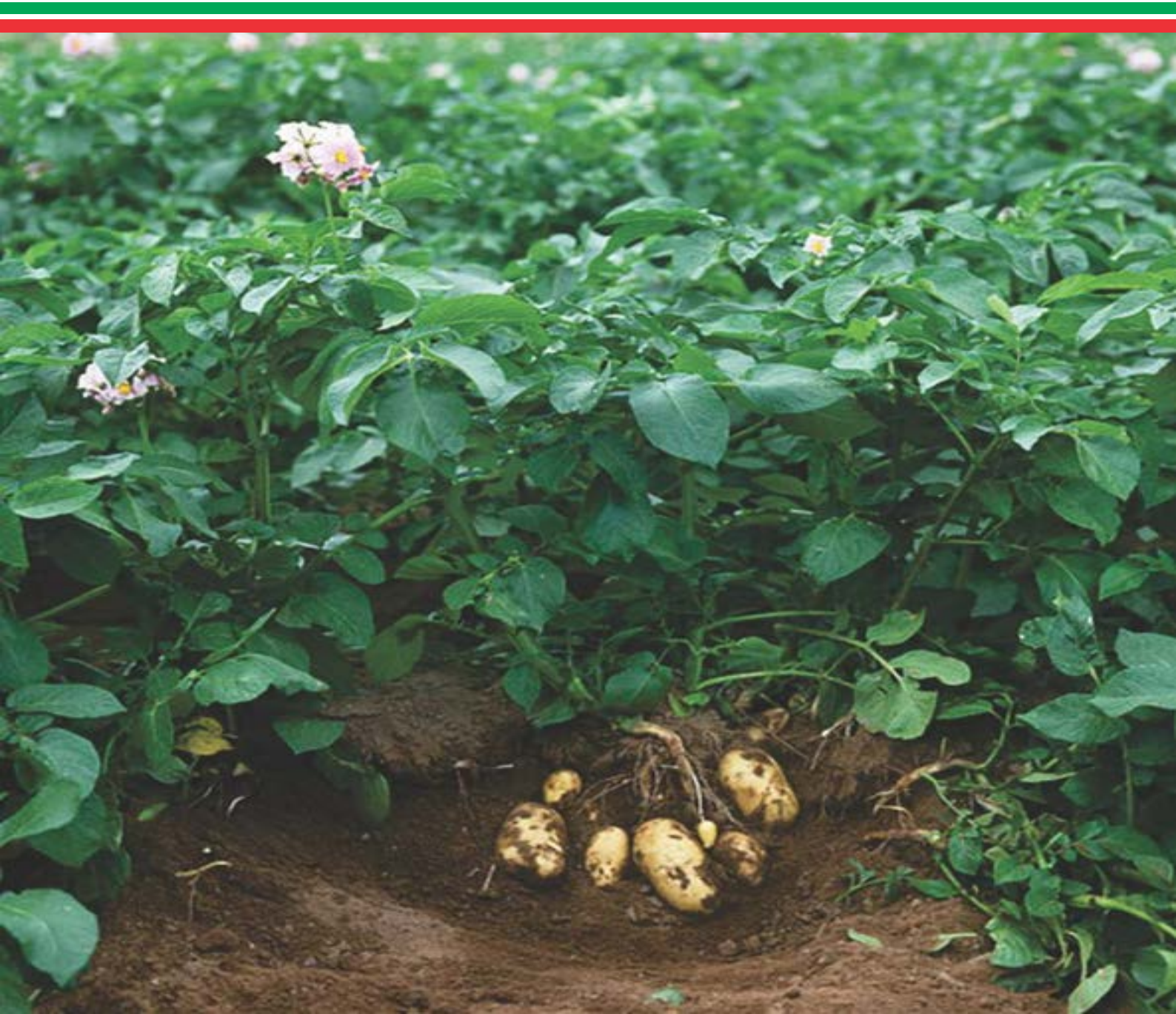


EXPERT CHOICE • AGROCHEMICALS



Expert Choice Catalogue

Your Farming Partner





WHO ARE WE?

Expert Choice is a wholly owned Zimbabwean Agrochemicals company that was established in 2017 offering agrochemicals across Zimbabwe

Zimbabwe having being primarily an agrarian based economy has struggled to maintain the status quo over the past decades. Government alongside with other key strategic alliances and organisations have introduced several agricultural initiatives and schemes to boost the agricultural sector. These initiatives and schemes have led to a commendable growth and rejuvenation of the agricultural sector in Zimbabwe. Extensive market research was carried out resulting in identifying a gap the scarcity of agrochemicals readily available in Zimbabwe.

It was and is still against this background that saw birth of Expert Choice. Expert Choice endeavours to provide agrochemicals and vet medicines in Zimbabwe. With the strategic intent to provide such services beyond the borders of Zimbabwe.





EXPERT CHOICE • AGROCHEMICALS



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EXPERT CHOICE • AGROCHEMICALS



Your Farming Partner

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EXPERT CHOICE AGROCHEMICALS



Geared towards making farming a profitable and enjoyable experience, **EXPERT CHOICE AGROCHEMICALS** is providing its farmers with field proven top quality agricultural inputs: Herbicides, Insecticides, Fungicides and Nematicides.

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.

Your **Farming** Partner

NOXIOUS WEEDS THROUGHOUT ZIMBABWE

Avena fatua L
Azolla filiculoides Lam
Cuscuta spp

Wild oat
Azolla
Dodder

Eichornia crassipes Solms
Harrisia martini (Labouret) Britton
Lantana camara L
Opuntia aurantiaca Lindl
Pistia stratiotes L

Water-hyacinth
Moonflower cactus
Cherry pie
Jointed cactus / jointed prickly pear
Water lettuce



PRODUCT	SEASON	CHEMICAL NAME
Insecticides		
Acetamiprid	all year	Acetamiprid 20sp
Assassin	all year	Acetamiprid 5% + Emamectin 2%
Amitraz	all year	Amitraz 200EC
Aluminium phosphide tablets	all year	Aluminium phosphide 56%
Belt expert	June - November	Flubendiamide + Thiacloprid
Cartap	all year	Cartap 50SP
Chlorpyrifos 48ec	all year	Chlorpyrifos
Cypermethrin	all year	Cypermethrin 10EC
Deltamethrin	all year	Deltamethrin 50 EC
Diazinon	all year	Diazinon 30ec
Dimethoate	all year	Dimethoate 40ec
Dynamec	all year	Abamectin
Dichlorvos	all year	Dichlorvos
Emamectin Benzoate	all year	Emamectin Benzoate 5WDG
Expert Activate	all year	Lambda 30g/L + Acetamiprid 150g/L
Expert Lightening 145 OD	all year	Imidacloprid + Beta-cyfluthrin
Expert Power 500WDG	all year	Emamectin Benzoate 100g/kg + Lufenuron 400g/kg
Expert 260 OD	Nov-Mar	Mesotrione+ Nicosulfuron+ Terbutylazine
Fenveralate 20EC	all year except in cotton	Fenveralate 20EC
Imidachloprid 200SL	all year	Imidachloprid 200SL
Imidachloprid 70WP	all year	Imidachloprid 70WP
Indoxacarb	all year	Indoxacarb 15SC
Lambda	all year	Lambda-cyhalothrin 5ec
Malathion 25 wp	all year	Malathion
Thunder	June - November	Imidacloprid + Beta-cyfluthrin
Thiamethoxam	all year	Thiamethoxam 25WG
Herbicides		
Agil	all year	Propaquizafop
Ametryn	all year	Ametryn 500SC
Atrazine	November - March	Atrazine 500FW
Bentan	all year	Bentazon 480SL
Bromoxynil	all year	Bromoxynil 225EC
Chlorimuron-ethy	November - March	Chlorimuron-ethyl 250g/l
Clomazone	November - March	Clomazone 480EC
Diquat	all year	Dibromide 40%
Fusilade	all year	Fluazifop-p-butyl
Glyphosate	all year	Glyphosate 41SL
Halosulfuron	November - March	Halosulfuron 750WG
Imazapyr	all year	Imazapyr 250SL
Jake 20DF	all year	Metsulfuron-methyl
Metribuzin	November - March	Metribuzin 480SC
Metolachlor	November - March	Metolachlor 960EC
MCPA 40SL	all year	MCPA 40SL
Mesotrione	all year	Mesotrione 480EC
Nicosulfuron	November - March	Nicosulfuron 750WDG
Pendimethalin	all year	Pendimethalin 500CS
Stellar star	November - March	Stellar star
Sulfan 480SC	all year	Sulfentrazone 480SC
Triadimenol 25EC	November - March	Triadimenol 250EC
Fungicides		
Chlorothalonil 720SC	all year	Chlorothalonil
Copper oxychloride 85wp	all year	Copper oxychloride
Dithane m 45	all year	Mancozeb 80WP
Expert Cloud 325SC	all year	Azoxystrobin + Difenconazole
Metalaxyl + mancozeb	all year	Metalaxy-m 72wp
Tebuconazole	all year	Tebuconazole 250EC
Wetttable Sulphur	all year	Sulphur 80WP
Nematicides		
Oxamyl	August - December	Oxamyl 310 SL

OTHER SERVICES OFFERINGS

- Expert agronomist advice
- Protective clothing
- Fertilizer
- Packaging materials
- Hygiene and sanitation



OTHER NAME	USAGE	PROBLEM
Acetamark	Leaf vegetables, fruit trees, ornamentals, cotton	Aphids, whiteflies, thrips
Nemesis	Pepper, cabbage, cucumber, maize, tomatoes	Lepidoptera pests, thrips, redspider mites, aphids, white flies
Red spider kill	Citrus, ornamentals, tomato	Citrus redspider mites, red spider mites
Phostoxin	Rodent control, grain protectant, Bean, leaf vegetables, fruit vegetables, domestic use	Mice, moles rats, grain weevils , Aphids, beanstem maggots, redspiders, scales, roaches fleas
	Tobacco, tomato, potato, cabbage	Redspider, leaf miner (tuta absoluta) DBM
	Beans and peas, onion, tomato, potato, maize	Potato leaf miner, diamond back moth larva, potato tubermoth, fall army worm, african army worm
Dursban	Tobacco, maize, citrus, horticulture	Termites. white grubs, wire worms
	Soybeans, Cotton	Jassids, aphids, bollworm, semi-loopers
	Tobacco, beans, groundnuts, peas, cotton, maize, sweet, potatoes, tomatoes, onions	American bollworm, stainers, Red bollworm, spiny bollworm, stainers maize stalk borer, weevil, hawk moth (larvae), leafminers
	Bean,leaf,vegetables,fruit vegetables,domestic use	Aphids, beanstem maggots,redspider, scales, roaches, fleas
Rogor	Potato, cauliflower, onion, cabbage	Aphids, redspiders
Dynamec	Tomato, cabbage, fruit trees, pepper, cotton, Tobacco, tomato, potato, cabbage	Redspider, leaf miner, Redspider, leaf miner (tuta absoluta) DBM
	Leaf & fruit vegetables,domestic use (insects)	Aphids,bagrada bug, semiloopers, fleas, cockroaches
Mac ten	Apples, pears, table and wine grapes, citrus, maize, tomato	Codling moth, false codling moth, african bollworm, fall armyworm, boll worms
Blast Super	Roses, carnations, tomatoes, cucumbers, legumes, cereals	Aphids, thrips, bollworms, whiteflies, leaf beetles, pod borers
Thunder	Tomato, beans, barley, wheat, ornamentals	Thrips, aphids, Russian & other wheat aphids, ballworms, white flies, leaf miners, caterpillars
	Cabbage, rice, cotton, maize, citrus,tomato	Diamondback moth larvae, cotton bollworms, American leaf miner, chilo worms
	Maize	Pre and early post emergent broad leaf and grass weeds
	Cotton, maize, potatoes	Jassids, helionthis bollworm, potato tuber moth, stalkborer
	Tobacco, flowers, citrus, tomato, maize	Termites, whiteflies, thrips, aphids
	Leafy vegetables, cotton, potato, tobacco, tomato	Termites, whiteflies, thrips, aphids
	Potatoes, brassicas, peas, tomatoes	Potato tuber moth, American bollworm, diamond back moth larvae
Karate	Cotton, Vegetables, Vegetables, cucurbits, fruit trees	Cutworms, stalkborers, boilworms, jassids, Thrips, aphids, mealy bugs, pumpkin fly
	Vegetables, cucurbits, fruit trees	Thrips, aphids, mealy bugs, pumpkin fly
Thrin	Tobacco, tomato, potato, cabbage, cotton, Leaf & fruit vegetables, domestic use (insects)	Aphids, white flies, thrips, caterpillars, Aphids, bagrada bug, semiloopers, fleas, cockroaches
	Brassicas, tomato, rice	Aphids, whiteflies, thrips
	Sugarcane, soybean, sunflower, potato	Selective post emergence herbicide for grass weeds in broad leaf crops
	Sugarcane, bananas, pineapples	Pre and post emergence annual broadleaved weeds and grasses
	Maize, sugarcane	Pre-emergence and post emergence broad leaf herbicide
Bentazon	Soyabeans, groundnuts, maize, peas, wheat	Post emergence broadleaf weeds, suppression of yellow nutsedge
	Maize, wheat, barley	Post emergent broad leaf weeds
Classic	Soyabeans	Post-emergent broad leaf weeds
Kalif	Soybean, tobacco, cotton, pumpkin, sweet potato	Pre-emergence annual grasses and broad leaf weeds
Paraquat	Seed crops, potato, industrial	Non selective and contact post emergence broad leaf and grass weeds
Fussion Super	Sugarcane, soybean, sunflower, potato,	Selective post emergence herbicide for grass weeds in broad leaf crops
Roundup	Industrial, seed crops	Non selective and systemic post-emergence broad leaf and grass herbicide
Servian	Maize, sugarcane, rice	Selective post emergence control of purple and yellow nutsedge
	Non-crop and industrial areas	Non selective herbicide for perennial and annual weeds
	Soyabeans, wheat, barley	Selective post emergence broad leaf herbicide
Sencor	Alfa alfa, soybean, potato, carrots, corn	Most (pre-emergence) broad leaf weeds and some grasses
Dual Magnum	Cotton, soybean, sorghum, peanuts, corn	Pre-emergence annual grasses and broad leaf
	Wheat, barley, grass pastures	Post-emergent control of annual broadleaf weeds
	Maize, sugarcane	Systemic pre- and early post emergence herbicide for annual broadleaf weeds, some grasses
Accent	Maize	Selective post emergence grass and broad leaf herbicide
	Maize, potatoes, groundnuts, sugarcane, cotton	Selective pre-emergent of certain annual grasses and broadleaf weeds
	Maize	Selective early post emergent grasses and broad leaf herbicide
	Sugarcane, soyabeans	Pre - and early post emergence control of sedges, broadleaf weeds and annual grasses
Shavit	Soybean, cereal, beet, brassicas	Leaf rust, powdery mildew, smuts
Bravo	Tomato, peanuts, potato, fruit trees	Early blight, late blight
	Tomato, cabbage, fruit trees	Early blight, late blight, leaf spot
Mancozeb	Tobacco, flowers, fruit trees, banana, tea, coconut	Anthrachnose, downey mildew, rust, blights
	Carrots, brassicas, tomato, potato	Powdery mildew, leaf rust, ring spot, leaf blotch, leaf blight, black spot
Ridomil	Field crops, nuts, ornamentals	Damping off, late blight, downey, mildew
Folicure	Tobacco, groundnuts, beans, potatoes, tomatoes, soyabeans, coffee	Leaf spot, grey mold, rust, early blight
	Beans, brassicas, grape vines,flowers, peaches	Powdery mildew, russet mite, thrips
Vycate	Field crops, ornamentals, fruits, vegetables	Nematodes



Email: info@ecagrochemicals.com
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GREY LEAF SPOT, NORTHERN LEAF
BLIGHT AND LEAF RUST

		CLOUD 325 SC					
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CARBARYL 85WP, CHLOPYRYFOS 480 EC, CYPERMETHRIN 10 EC, LAMBDA 50 EC, INDOXACARB 15 SC

ASSASSIN, CARTAP, EMAMECTIN BENZOATE, INDOXACARB 15 SC, CARBARYL85 WP

ASSASSIN, CARTAP, EMAMECTIN BENZOATE, INDOXACARB 15 SC, CARBARYL 85 WP, LAMBDA 5 EC

ATRAZINE 50 SC, METOLACHLOR 960 EC, S-METOLACHLOR 960,
EXPERT 260 OD, MESOTRIONE, MCPA, PENDIMETHALIN 500 CS.

ATRAZINE 50 SC, EXPERT 260 OD, MESOTRIONE, BROMOXNIL,
NICO SULFURON.

HALOSULFURON,

ATRAZINE 50 SC, EXPERT 260 OD, MESOTRIONE, MCPA, BENTAN

NICOSULFURON 750 WDG

[illegible]

Citrus Growth Stage Spray Programme

Growth stages														
Description of stage	Post Harvest (pre-leaf drop)	Beginning of bud swelling (00) - Aug	First leaves separating (10) - Aug - Mid Aug	Beginning of shoot development or developing shoots visible (21) - 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% Petal fall	100% petal fall to mid Oct	Fruit about 40% of final size. End of physiological fruit drop (74)	Fruit about 90% of final size (79) - Nov	Beginning of fruit colouring (colour-break) (81) - Nov - Dec	Fruit size for picking, fruit has now all developed variety-specific colour (Jan)	Fruit ripe for consumption beginning of senescence and fruit abscission (Feb)
CITRUS THRIPS	Option 1 PILARKING				TARTAR EMETIC + SUGAR			2 X APPLICATIONS						
	Option 2 ABAMECTIN 18EC				TARTAR EMETIC + SUGAR		ABAMECTIN 18EC		ABAMECTIN 18EC			ABAMECTIN 18EC		
	Option 3 DELEGATE				TARTAR EMETIC + SUGAR			DELEGATE		DELEGATE				
	Option 4 DICARZOL							DICARZOL						
	Option 5 ACETAMIPRID 200SL								ACETAMIPRID 200SL					
	Early preventative treatment -					IMDACHLOPRID 200SL		ACETAMIPRID 200SL	ACETAMIPRID 200SL					
EARLY PREVENTATIVE TREATMENT -														
CITRUS RED SCALE	Corrective treatment													
	METHOMYL						METHOMYL					METHOMYL		
MEALY-BUG								MALATHION 50EC	ACETAMIPRID 200SL	ACETAMIPRID 200SL				
BUDMITE & OTHER MITES								FENBUTATION -OXIDE		BROMOPROPYLATE 50EC			SPIROTETRAMAT	ABAMECTIN 18EC
FALSE CODLING MOTH												CRYPTOGRAN	DELEGATE 250WG	
CITRUS BLACK SPOT Early wet season								COPPER OXYCHLORIDE 85WP		COPPER OXYCHLORIDE 85WP	MANCOZEB 800WP			
ALTERNARIA								COPPER OXYCHLORIDE 85WP						COPPER OXYCHLORIDE 85WP
ROOTROT								EXPERT CLOUD						
FRUITFLY								POTASSIUM PHOSPHITE						
NEMATODES														SPINOSAD
BOLLWORM								OXAMYL						
ANTS								DIPEL						
								ALPHA-CYPERMETHRIN						

Soyabeans Growth Stage Spray Programme

DESCRIPTION OF STAGES		Pre plant "Burn down"	Planting	Germination and Emergence: VE	Vegetative Growth: V2-V3	Vegetative Growth: V3-V8	Flowering: R1-R3	Pod and Seed Development	Ripening/ Harvesting
HERBICIDES									
PRE-EMERGENCE BROAD- LEAF AND GRASSES	OPTION 1	GLYPHOSATE 41SL							
	OPTION 2		CLOMAZONE 480 EC						
	OPTION 3		METRIBUZIN						
POST EMERGENCE BROADLEAF WEEDS AND YELLOW NUTSEDGE	OPTION 1		S-METOLACHLOR 960EC						
	OPTION 2					CHLORIMURON-ETHYL			
POST EMERGENCE GRASSES	OPTION 1					BENTAN 480 SL			
	OPTION 2					FLUAZIFOP-P-BUTYL 12.5EC			
FUNGICIDES									
SOYABEAN RUST	OPTION 1						TEBUCONAZOLE 250EC		
	OPTION 2						TRIADIMENOL 25EC		
	OPTION 3						MANCOZEB		
FROG LEAF SPOT							EXPERT CLOUD		
INSECTICIDES									
CUTWORM	OPTION 1		LAMBDA- CYHALOTHRIN 5EC						
	OPTION 2		FENVALERATE 20 EC						
	OPTION 3								
AFRICAN BOLLWORM	OPTION 1				INDOXACARB 15EC	INDOXACARB 15EC	INDOXACARB 15EC	INDOXACARB 15EC	
	OPTION 2				LAMBDA- CYHALOTHRIN 5EC	LAMBDA- CYHALOTHRIN 5EC	LAMBDA- CYHALOTHRIN 5EC	LAMBDA- CYHALOTHRIN 5EC	
	OPTION 3				CYPERMETHRIN 10 EC	CYPERMETHRIN 10 EC	CYPERMETHRIN 10 EC	CYPERMETHRIN 10 EC	
	OPTION 1				ASSASSIN	ASSASSIN	ASSASSIN	ASSASSIN	
	OPTION 2								
	OPTION 3								

Wheat Growth Stage Spray Programme

[illegible]

Wheat Growth Stage Spray Programme

Description of stages		Seed Treatment	Plant	Plant	Germinate	Second leaf GS12	Tillering GS23-26	Joining GS30-32	Flagleaf GS39	Boot GS45-50	Heading GS53-59	Flowering GS61-87	Grainfill and Harvest
FUNGICIDES		Plant	Plant	Vegetative Stage				Reproductive Stage					GS93
BROWN RUST / STEM RUST <i>(Puccinia triticina) (Puccinia graminis)</i>	OPTION 1							EXPERT CLOUD 325	EXPERT CLOUD 325				
	OPTION 2							TRIADIMENOL 25EC	TRIADIMENOL 25EC				
	OPTION 3							TEBUCONAZOLE	TEBUCONAZOLE				
LOOSE SMUT AND SMUT	OPTION 1	EXPERT ROUGE 400FS											
	OPTION 2	TEBUCONAZOLE											
	OPTION 3	TRIADIMENOL 25EC											
SPECKLED LEAF BLOTCH <i>(Septoria spp.)</i>	OPTION 1							EXPERT CLOUD 325	EXPERT CLOUD 325				
	OPTION 2							TEBUCONAZOLE	TEBUCONAZOLE				
EYESPOT <i>(Pseudocercospora helminthoides)</i>	OPTION 1							EXPERT CLOUD 325	TEBUCONAZOLE				
	OPTION 2							TEBUCONAZOLE	TEBUCONAZOLE				
POWDERY MILDEW <i>(Blumeria graminis)</i>	OPTION 1							EXPERT CLOUD 325	EXPERT CLOUD 325				
	OPTION 2							TRIADIMENOL 25EC	TRIADIMENOL 25EC		TEBUCONAZOLE		
	OPTION 3							TEBUCONAZOLE	TEBUCONAZOLE				
YELLOW RUST / STRIPE RUST <i>(Puccinia striiformis)</i>	OPTION 1							TRIADIMENOL 25EC	TRIADIMENOL 25EC				
	OPTION 2							TEBUCONAZOLE	TEBUCONAZOLE				

INSECTICIDE

With a wide array of field proven products from world renowned leaders,
Expert Choice Agrochemicals is providing farmers with cost effective solutions to all insect problems for a better crop yield.

Insecticides are agents of chemical or biological origin used to control insects by; killing them or deterring them from feeding or preventing undesirable or destructive insect behaviour. Insecticides are classified according to the method of application and by the way they enter the insect's body. Many insecticides take effect in more than one way and target more than one insect.

STOMACH INSECTICIDES

Are applied on the surface of plants or are added to the bait. The insecticide is eaten along with the food material by insects that chew such as caterpillars.

CONTACT INSECTICIDES

Are sprayed or dusted on the insect's body. The poison is absorbed through the body wall. Most soft-bodied insects are vulnerable to contact insecticides.

FUMIGANTS

Are insecticidal gases. Insects that lurk out of reach of sprays are killed when they breathe the gas. In addition, the soil may be fumigated to destroy grubs or wire worms that attack roots.

RESIDUAL INSECTICIDES

Are applied to foliage and they have a long lasting effect as they remain on the surface for a longer time. Insects absorb deadly doses by contact with the poisoned surface.

SYSTEMIC INSECTICIDES

Are absorbed by plant tissues, so that when insects feed on the sap they are controlled.

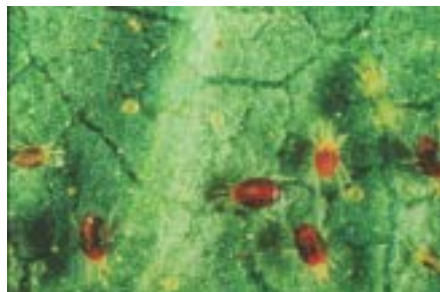


Your Farming Partner

Abamectin 18EC

Active Ingredient: Abamectin 1.8%

A translaminar GABA inhibitor acaricide and insecticide for control of Red Spider Mite on cotton, roses and tomatoes and American Leafminer (*Liriomyza* sp) on tomatoes.



Red Spider mite on Cotton



Leaf miner on tomato



Leaf miner on Roses

There are all sorts of pests out there that you may deal with on a property, so it helps that when using an insecticide to have one that is not only effective but can successfully address a wide range of insects. One such product that can do that is Abamectin 18 EC. Abamectin 18 EC is used by the agricultural community to control insects and mites on a large range of crops such as: citrus, pears, alfalfa, nut trees, cotton, vegetables, and ornamental. When Abamectin 18 EC is applied to crops and orchards, it is absorbed by the foliage and affects the insect when it eats the leaves.

CROP	PEST	AMOUNT OF ABAMECTIN /HA OR AS STATED	APPLICATION DIRECTIONS				
Tomatoes	Red spider mite, American leafminer	560ml/ha or 60ml/100L water	Apply a full cover spray at first sign of infestation and repeat at 7 days intervals if necessary. Harvest interval - 3 days.				
Roses	Red spider mite	560ml	Apply a full cover spray at first sign of infestation using at least 500 litres water/ha. A repeat application may be necessary where there is a heavy established infestation.				
Cotton	Red spider mite	MISTBLOWER, KNAPSACK TAILBOOM, KNAPSACK LANCE AND AERIAL APPLICATION:-					
		Plant Height	Amount ABAMECTIN per ha	Litres spray mix per ha.			
				Mistblower	Knapsack Tailboom	Knapsack Lance	Aerial
		Up to 0,4m	135ml	35	50	100	5
		0,4 - 0,9m	270ml	65	100	100	10
		Over 0,9m	400ml	100	150	100	15
		To improve spray penetration into the crop and reduce evaporation molasses must be added to the spray mixture at 25% by volume for aerial spraying GROUND U.L.V. APPLICATION: Mix 80ml ABAMECTIN with 350ml molasses and make up to 1 litre with clean water. Apply the mixture as follows:-					
		Plant Height	Swath on 1m wide rows	Walking speed metres/min	Height of sprayer above crop	Litres spray mix per ha	
		Up to 0,4m 0,4 - 0,9m Over 0,9m	4 rows 3 rows 2 rows	90 60 60	0,75 - 0,5m 0,5 - 0,25m Top of crop	1,7 3,3 5,0	
Do not feed treated cotton plants to livestock within 21 days of last application							

ALWAYS READ THE LABEL

Your Farming Partner

Acetamiprimid 20 SL

Active Ingredient: Acetamiprid 20%

A water soluble powder, systemic insecticide with contact and stomach action for the control of Aphids and suppression of thrips. Also for the control of pests as indicated on apples, pears, citrus, cotton, wheat, barley, oats and tree nuts.



Citrus Thrips



Wheat Aphids



Cotton leaf hoppers

Acetamiprid is generally used to protect plants against sucking insects such as aphids. It is a broad-spectrum pesticide that can be used on plants ranging from leafy vegetables and fruit trees to ornamental plants.

CROP/ PEST	DOSAGE/ 100L WATER OR AS INDICATED	REMARKS
Citrus: a. Citrus thrips and Mealybug (All species) 1. Nurseries and non-bearing transplanted trees 2. Bearing trees (excluding lemons)	40g	Apply as an outside cover spray. Repeat application when infestation increases again. Apply preventatively as an outside cover spray at or shortly after 100% petal fall when 2% of the fruit are infected. Repeat application when threshold is exceeded again, not later than 6 weeks after first application. Increase rate to 50g for Mealybug control.
b. Red Scale: (<i>Aonidiella aurantii</i>) 1. Nurseries and non-bearing transplants 2. Bearing trees	40g 50g 50g	Apply as a full cover spray to branch framework and foliage when the pest is noticed at 100% petal fall. Repeat application within 6 weeks (or use other registered product) when necessary as established by regular scouting.
c. Aphids (<i>Aphis gossypii</i>) d. Citrus leafminer (<i>Phyllocnistis citrella</i>) e. Pyslla (<i>Trioza eryteaea</i>)	40g 40g 40g	i. Nursery and non-bearing. Apply as an outside cover spray and repeat when threshold is exceeded again. ii. Bearing trees (excluding lemons). Apply as an outside cover spray when control is needed during first 6 weeks of petal fall. Withholding period in citrus 150 days.
Cotton <i>Aphis gossypii</i> , Leaf hoppers and Jassids (<i>Jacobiella fascialis</i>)	50-75g /ha (depending on insect pressure) +100ml per 100L spray Agriwett mixture when needed.	Apply 2 sprays at approximately 7 days apart in 200L water when economically threshold levels are exceeded. Plants must be actively growing and not be subjected to any type of stress. Systemic activity of the product is also impaired by plants that are waterlogged. Withholding period in cotton: 21 days
Tomatoes <i>Whitefly- (Bemisia tabaci)</i> and American leafminer <i>(Liriomyza trifolii)</i>	50g/ha +100ml Agriwett /100L spray mixture when needed	Apply sufficient spray to secure good coverage at first appearance of pest. Repeat at weekly intervals as long as necessary observing the safety period of 3 days.
Wheat, Barley and Oats Oat aphid (<i>Rhopalosiphum padi</i>) Brown ear aphid (<i>Sitobion avenae</i>) Common wheat aphid <i>(Schizaphis graminum)</i>	50g/ha +100ml Agriwett /100L spray mixture when needed	Apply when pest is noticed and repeat when necessary. Do not apply later than ear emergence stage of wheat, barley and oats and the start of the flowering stage of canola. Ground application: Apply in not less than 75L water/ha. Ensure good coverage of all plant parts. Withholding periods 56, 60 and 70 days in wheat, barley and oats respectively.

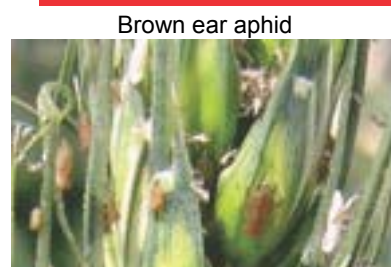
ALWAYS READ THE LABEL



White flies



Red scales on Citrus



Brown ear aphid

Your Farming Partner

Amitraz 200 EC

Active Ingredient: Amitraz 200g/L

An emulsifiable concentrate contact and residual acaricide for the control of eggs, larvae and adults of mites on the crops as indicated



Citrus red mite



Ornamental Red spider mite



American bollworm

CROP	PEST	DOSAGE	REMARKS
Citrus	Citrus red mite (<i>Panonychus citri</i>)	200ml/100 litres of water	Apply as a light to medium cover application when 2–4 mites per leaf are noted and before serious damage to foliage occurs. Inspect orchard regularly and repeat application if necessary. Do not apply later than 100 % petal fall. Will also control citrus bud mite (<i>Aceria sheldoni</i>) and citrus flat mite (<i>Brevipalpus</i> spp.) if present at time of application for citrus red mite. Pre-harvest interval (PHI): 28 days
Ornamentals	Red spider mite (<i>Tetranychus</i> spp.)	30ml/10 litres of water	Commence application as soon as mites are seen, as a full cover application. Ensure a thorough wetting of both the upper and lower surfaces of the leaves. Pre-harvest interval (PHI): 28 days
Tomato	Red spider mite (<i>Tetranychus urticae</i>) American bollworm (<i>Helicoverpa armigera</i>) Plusia looper (<i>Chrysodeixis acuta</i>) Tuber moth (<i>Phthorimaea operculella</i>) American leafminer (<i>Liriomyza trifolii</i>)	300ml/100 litres of water	Apply only in transplanted tomatoes. Commence application as soon as the first sign of pests is noticed. Depending on plant size apply at 500–2000L spray mixture/ha. Ensure thorough wetting of the upper and lower leaf surfaces. This application can be made only once per growing season. Pre-harvest interval (PHI): 5 days

ALWAYS READ THE LABEL

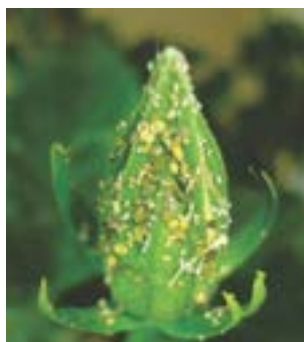


Your Farming Partner

Assassin

Active Ingredients: Acetamiprid 5% + Eamectin 2%

A broad spectrum acaricide and insecticide for the control of redspider mites, lepidoptera pests, thrips and leafminer in ornamentals, tomatoes and broadleaf crops.



Cotton Aphid



Silverleaf Whitefly



Onion miner, onion thrips.

CROP	PEST	APPLICATION DIRECTIONS
Pepper	budworm, cotton aphids, green peach aphids, redspider, leafminer.	400ml/ha. Application method: Foliar spray with 10 day interval from early occurrence
Cabbage	DBM, turnip aphids.	0.3-0.5 litres/ha Application method: Foliar spray with 10 day interval from early occurrence
Green Onion (Shallot)	Onion miner, onion thrips.	0.3-0.5 litres/ha Application method: Foliar spray with 10 day interval from early occurrence.
Cucumber	American serpentine leafminer, melon thrips.	400ml/ha. Application method: Foliar spray with 7 day interval from early occurrence
Maize	Fall armyworm, African armyworm.	300ml/ha. Application method: Foliar spray with 7 day interval from early occurrence
Cotton	Cotton Aphid (<i>Aphis gossypii</i>)	A 50-100ml/h Use the high rate under sustained heavy aphid pressure. DO NOT apply more than 2 sprays per season for cotton aphid control.
	Silverleaf Whitefly (<i>Bemisia tabaci</i> Biotype B)	175 or 350ml/ha Use higher rate when conditions favour a rapid increase in the whitefly population
	Cotton Bollworm (<i>Helicoverpa armigera</i>) Native Budworm (<i>Helicoverpa punctigera</i>)	300-350ml/ha. Apply at or just prior to the anticipated time of hatching of <i>Helicoverpa</i> eggs as indicated by egg levels or scouting. Where egg pressure is high, the addition of an ovicide is recommended. Use the lower rate on light infestations

ALWAYS READ THE LABEL

Fall armyworm



American serpentine leafminer,



Aphids



Your Farming Partner

Cartap 50 SP

Active Ingredient: Cartap hydrochloride 50%



Potato Leafminer



African Armyworm



Diamondback moth larva

A contact and systemic action insecticide for the control of boll worms, African armyworm, fall armyworm, diamondback moth larvae, leaf miners and other insect pests in cotton, maize, cabbage and other listed crops.

Mode of action:

Systemic insecticide with stomach and contact action.
Insects discontinue feeding and die of starvation.

CROP	PEST	RECOMMENDED DOSAGE	PRE-HARVEST INTERVALS (PHI)
Beans and Peas	Potato Leafminer (<i>Liriomyza huidobrensis</i>)	400g/100L water to a maximum of 2kg/ha	4 days-beans 3 days- peas
Cabbage	Diamondback moth larva (<i>Plutella xylostella</i>)	400g/100L water to a maximum of 2kg/ha	7 days
Onion	Thrips (<i>Thrips tabaci</i>)	400g/100L water to a maximum of 2kg/ha	14 days
Tomato	American Leafminer (<i>Liriomyza trifolii</i>)	400g/100L water to a maximum of 2kg/ha	7 days
Potato	Potato Leafminer (<i>Liriomyza huidobrensis</i>)	400g/100L water to a maximum of 2kg/ha	3 days
	Potato Tuber moth (<i>Phthorimaea operculella</i>)		
Maize	Fall Armyworm (<i>Spodoptera Frujiperda</i>)	500g/100L of water	7 days
	African Armyworm (<i>Spodoptera exempta</i>)	500g/100L of water	7 days

ALWAYS READ THE LABEL

Potato Tuber moth larva



Diamondback moth larva



Fall Armyworm



Your Farming Partner

Chlorpyrifos 48 EC

Active ingredient: Chlorpyrifos 480g/L



perni-cious scale on Apple



perni-cious scale on Peaches



Orange dog

A broad spectrum contact insecticide for control of cutworm, false wireworm and white grub in Tobacco lands. Apples, Pears, Peaches, Plums, Apricots, Citrus Oranges and maize black beetle and stalk borer.

CROP	PEST	DOSAGE RATE	APPLICATION DIRECTIONS																		
TOBACCO LANDS ONLY. Based on 15 000 plants/ha. DO NOT USE ON SEED BEDS. Refer to TRB handbook for detailed information.	AT PLANTING: False wireworm and Whitegrubs.	IRRIGATED TOBACCO 110ml per 100 litres water. DRY-LAND TOBACCO ml per 1000 litres water. 53 33 26 21 18 16 15 13	Apply 30ml mix per planting hole immediately before filling it with a minimum of 500 ml water for planting. <table><tr><td>planting water, litres per plant:</td><td>ml CHLORPYRIFOS 48 EC applied per ha:</td></tr><tr><td>0,5</td><td>397</td></tr><tr><td>1,0</td><td>495</td></tr><tr><td>1,5</td><td>585</td></tr><tr><td>2,0</td><td>630</td></tr><tr><td>2,5</td><td>675</td></tr><tr><td>3,0</td><td>720</td></tr><tr><td>3,5</td><td>787</td></tr><tr><td>4,0</td><td>780</td></tr></table>	planting water, litres per plant:	ml CHLORPYRIFOS 48 EC applied per ha:	0,5	397	1,0	495	1,5	585	2,0	630	2,5	675	3,0	720	3,5	787	4,0	780
	planting water, litres per plant:	ml CHLORPYRIFOS 48 EC applied per ha:																			
0,5	397																				
1,0	495																				
1,5	585																				
2,0	630																				
2,5	675																				
3,0	720																				
3,5	787																				
4,0	780																				
	IMMEDIATELY AFTER PLANTING: Cutworms. LATE INFESTATIONS: Cutworms, Dusty surface beetle, Termites.	 200ml/100 litres water. 200ml/100 litres water.	NB: CHLORPYRIFOS 48 EC is potentially phytotoxic and should be applied to the base of plants and never be poured over the hearts.CUP DRENCH: Apply 30ml mix to base of each seedling immediately after planting so as to wet the stem and surrounding soil. (450 litres mix/ha) CUP DRENCH: Apply 60ml mix to base of each plant so as to wet the soil surrounding the stem (900 litres mix/ha).																		
Apples, Pears, Peaches, Plums, Apricots.	perni-cious scale, red scale.	75ml/100 litres water.	Apply only when trees are dormant. At least 2 high volume sprays must be applied with 4 week intervals, one before and one after pruning.																		
Citrus Oranges	Orange dog	40ml/100 litres of water	Apply as a light cover spray. Repeat if necessary.																		
Maize	Black maize beetle	1L/ha in 200L water	Apply as an overall spray prior to planting and mixing the soil to a depth of 10cm by using a suitable implement																		
	Stalkborer	3,5ml /100ml row length in 3L water	Apply when 5% of the plants are infested with eggs or when 10% plants show "shot hole" damage.																		
Carrots, Potatoes	Cutworms	1L/500L of water / ha.	Apply as an overall application when plants emerge. Repeat application at intervals of 2-3 weeks.																		
Wheat	Russian wheat aphid, Green & brown aphids	750ml /200-300L of water/ha	Apply as an overall spray. Start spraying when the first signs of infestation are observed. Repeat spray 8 - 10 days later if necessary.																		
Cruciferae	Aphids, Caterpillars, Diamond back moth, Greater cabbage moth	50ml/500 litres of water/ha	Apply when pest is first noticed. Dot not apply less than 500 litres of water / ha.																		
Public Health	Cockroaches, Mosquitos, Ants, Termites		Spray pest habitats. For termite control in buildings drench inner and outer farrows along walls repeatedly.																		

ALWAYS READ THE

ALWAYS READ THE LABEL

Stalkborer



Corn leaf aphids,



Stalkborer



Your Farming Partner

Cypermethrin 10 EC

Active ingredient: Cypermethrin 10%

A synthetic pyrethroid for the control of semi-loopers in soyabeans, jassids, bollworms, aphids in cotton.

CROP/PEST	DOSAGE	APPLICATION DIRECTIONS
Soyabeans: Semi-Loopers	50ml/ha	Apply as soon as the pest is seen in the crop after flowering. The amount of water used will be dependant on the application method, but should be at least 200L. Harvest interval -14days
Cotton: Jassids Bollworms Aphids	100ml/Ha	Spray in at least 250 l of water/ha depending on plant height.

ALWAYS READ THE LABEL

Semi-Loopers



Jassids



Bollworms



Deltamethrin 25 EC

Active ingredient: Deltamethrin 25%

An emulsifiable concentrate: Stomach and contact insecticide for the control of American, Red and Spiny bollworm as well as Stainers in Cotton, Cutworms in ALL crops, Diamond-back moth in Crucifers and American bollworm in Grain Sorghum, Groundnuts, Beans, Peas, Maize, Tomatoes, Wheat and Tobacco as well as other uses as listed.

CROP	PESTS	DOSAGE	REMARKS
Beans, Groundnuts Peas	Aphids, Bud worms, Leaf miner Bollworms	250ml/ha	Apply in 200 to 500 litres water. Ensure good coverage..
COTTON	Bollworms & Stainers	2,5ml/ 100m row	Cotton should be treated with sufficient spray mixture for good coverage e.g. 200 litre per hectare for boom sprayers on full grown plants. Spray sufficient spray mixture for good coverage e.g. 2 litre per 100 metre row. Arrange at least 5 hollow cone spray nozzles over "tramlines", such that one nozzle sprays directly over the top of each row, one sprays in between the two rows, and another sprays on the outside of each of the two rows. For optimum coverage the two outside nozzles should be mounted on droparms and should point upwards at an angle of 45° . Dosage rates are all based on plants taller than 0,6 meter.
	American bollworm		
	Red bollworm		
	Spiny bollworm		
	Stainers		
MAIZE	Maize stalk borer American bollworm	2ml / 100m row	Apply in not less than 3 litre water per 100 metre row. Repeat sprays 12 to 14 days later could be necessary. Lands must be observed for reinfestation. To ensure good coverage inside the funnel as well as on the sides of the plant,
SWEET POTATOES	Weevil, Hawk moth (larvae) Leafminers	50ml/100 of water	Commence spraying at first signs of leaf damage. Ensure thorough wetting. Use up to 500 litre spray mixture per hectare.
TOMATOES	American bollworm	12,5ml/ 100 litres of water	Apply as a full cover spray. Repeat as a regular spray programme at 7 to 10 day intervals. Use 500 to 1000 litre spray mixture per hectare, high volume dependant on plant size for tomatoes up to 1 metre high.
ONIONS	Thrips	40ml/100 litre of water	Commence treatment at first signs of infestation and repeat at 10 - 14 day intervals if necessary. Use 250 - 500l spray mixture/ha depending on plant size.
MAIZE, SORGHUM, WHEAT	Army worm, Cutworm, Grain weevils	2.5ml /100 metre row	Apply in 3 liter water in a 50 cm wide band over the row. Will control all larval stages.
TOBACCO TRB CERT: 21-22-D-118	Aphids, caterpillars, budworms, leafminers	250ml/ha	Apply as a full cover spray. Commence spraying at first signs of leaf damage

Thrip



Cotton Stainer



Cotton Stainer



Cotton Stainer



Your Farming Partner

Diazinon 30

Active Ingredient: Diazinon 32.2%

A contact insecticide/acaricide for the control of many insect pests in various crops as listed



Coffee mealy bugs



Peas Aphids



Stem Maggot



Carrot Aphids

CROP	PEST	DOSAGE RATE per 10 litres water	APPLICATION DIRECTIONS
Apples, pears, plums, Not green and yellow apples	Aphids	12 ml	Full cover spray, Repeat as necessary.
	Bryobia mite, Red Spider mite	19 ml	Apply two sprays at 10 day intervals when pest is seen.
	Wooly aphid	8 ml	Apply when pest is seen and repeat as necessary.
Aloes	Aloe mite, Scale and Mirids	20 ml	Apply when pest is seen and repeat 2 weeks later if necessary.
Beans	Aphids	12 ml	Apply when pest is seen and repeat as necessary.
	Stem maggot	9 ml	Apply at 3, 5, 13 and 20 days after germination.
Crucifers, cucumbers, and tomatoes	Aphids	12 ml	Apply when pest is seen and repeat as necessary.
	Red spider mite	19 ml	Apply when seen and repeat 10 days later.
Carrots and Peas	Aphids Red spider mite	12 ml	Apply when pest is seen and repeat as necessary.
Citrus	Aphids	12 ml	Apply when pest is seen and repeat as necessary.
Coffee	Mealy bug	15 ml	Apply as a spot spray when pest is first seen. Repeat as necessary.
Lawns	Grass mealy bug, Hand grass scale, Red and White mite	4 ml	Apply to 20m ² at lawn.
	Lawn caterpillar	20 ml	Spot spray patches when caterpillar is seen.
Ornamentals (Not Stephanotis or African Violets)	Aphids	12 ml	Apply when pest is seen.
	Red spider mite	19 ml	Apply when seen and repeat 10 days later.
Public health household use	Cockroaches	150 ml	Apply as a coarse spray or brush surface frequently by pests.

ALWAYS READ THE LABEL

Citrus Aphids



hand grass scale



Aloe mite



Ornamental Aphids



Your Farming Partner

Dimethoate 40 EC

Active Ingredient: Dimethoate 40%



Aphids



Aphids



Aphids

A systemic and contact organophosphate insecticide for the control of sucking pests in Vegetables, Ornamentals and Deciduous fruit.

CROP	PEST	DOSAGE per 10 litres	APPLICATION
CABBAGE, RAPE CUCURBITS, BEANS	aphids red spider mite	7,5 ml	Full cover spray. Repeat 7-10 days later. Harvest interval -14 days
FLOWERS and ORNAMENTALS	aphids red spider mite mealy bug	7,5 ml	Full cover spray. Repeat 7-10 days later. Not for Chrysanthemum, Zinnia, Begonia, Ficus, Jacobina, Pride of India or Coleus.
LAWNS	red and white mite, mealy bug hard grass scale	7,0 ml	Apply to 50 m ² . Water in well Repeat treatment after 10 days
(Not Apricots)	and red spider mite, woolly aphid		necessary. Harvest interval: Apples/pears.....14 days Peaches/plums.....28 days
TOBACCO TRB CERTIFICATE: 21-23-D-124	aphids, grasshoppers leafminers	190ml/100L water	Full cover spray. Repeat as necessary

ALWAYS READ THE LABEL

Mealybug



Mealybug



Mealybug



Your Farming Partner

Emamectin Benzoate

Active Ingredient: Emamectin benzoate 19.5g/L



False codling moth



Pinworm



Codling moth

An emulsifiable concentrate insecticide with stomach action for the control of the pests as listed on apples and pears, barley, canola, citrus maize and sweetcorn, pomegranates, stone fruit, tomatoes, table and wine grapes, wheat and tobacco.

CROP	PEST	DOSAGE	USAGE REMARKS
Apples, Pears	Codling moth	60ml -100/ 100 litres of water	Apply as a full cover spray at 10-14 day intervals
Table and wine grapes	False codling moth	80–100ml/ 100 litres of water	Apply as a full cover spray. Repeat at 7 day intervals
Citrus	False codling moth African bollworm	80–100ml/ 100 litres of water	Apply as a full cover spray, ensuring thorough coverage.
Maize	Fall Armyworm, African armyworm, chilo worm, boll worms	625 ml/ha	Apply as full cover spray before larvae migrate into the maize ears.
Citrus	False codling moth, boll worms	80–100ml/ 100 litres water	Apply as a full cover spray applying at intervals of 7 to 10 days.
Tomatoes	African bollworm leaf miner/Pinworm Boll worms	625–750 ml/ha	Apply as full cover spray in 300 to 1000 L of water per hectare, depending on plant height.
Tobacco TRB Certificate 21-23-D-119	Cutworm, budworm, leaf eaters	400ml/100L of water	Apply as a full cover spray.

African bollworm



Fall Armyworm



ALWAYS READ THE LABEL

Your Farming Partner

Expert Lightning 145 OD

Active Ingredients: Imidacloprid 100g/L + Beta-cyfluthrin 45g/L



Russian wheat Aphids,



White flies



Caterpillar



Thrips

A foliar applied insecticide for use in ornamentals, vegetables, wheat and barley against various sucking and chewing insect pests.

CROP	INSECT	DOSAGE RATE	REMARKS
Tomato	Thrips, Aphids	300ml/ha in 600 litres of water or 8ml/16 litre Knapsack.	Apply at first signs of infestation as a full cover spray and repeat at 7-14 days interval if necessary. Pre-harvest interval 7 days.
Beans	White flies, Leaf miners, Caterpillars		
Barley Wheat	Russian & other wheat Aphids, Ballworms	300ml/ha in 250-300litres of water or 19ml/16 litre Knapsack.	Apply as soon as early infestation are noted during the mid tiller and booting stage.
Ornamentals	Aphids, White flies (<i>Bemisia</i> spp)	300ml/ha in 1000 litres of water. 5ml/16 litre Knapsack	Apply at first signs of infestation as a full cover spray and repeat at 7-14 days interval if necessary. Pre-harvest interval 7 days.
Tobacco TRB Certificate: 21-22-D-124	Cutworm and ants Leaf miners and Leaf eaters (includes grasshoppers, laceworm, lesser armyworm and semi-loopers), Aphids	60ml/100L litres of water.	Apply at first signs of infestation as a full cover spray and repeat at 7-14 days interval if necessary. Pre-harvest interval 7 days.

ALWAYS READ THE LABEL

Aphids



Leaf miners



Caterpillars



Your Farming Partner

Expert Power 500 WDG

Active Ingredients: Emamectin benzoate 100g/kg + Lufenuron 400g/kg



Cabbage webworms



Diamondback moth larvae



Cotton boll worms

An insect growth regulator and non systemic insecticide for the suppression and control of pin worm, diamondback moth larvae, African armyworm, fall armyworm, chilo worm, rice stemborers and boll worms in cabbage, maize, tomatoes, cotton and other listed crops.

Crop (or range)	Controll Pests	Dosage	Usage Remarks
Cabbage	Diamondback moth larvae, Cabbage webworms	130-150g/200 litres of water/ha. 10g/16L of water	Apply as a full cover spray at 10-14 day intervals
Rice	Striped rice stemborers,	130-150g/200 litres of water/ha. 10g/16L of water	Apply as a full cover spray. Repeat at 7 day intervals
Cotton	Cotton boll worms	130-150g/200 litres of water/ha. 10g/16L of water	Apply as a full cover spray. Repeat at 10-14 day intervals
Maize	Fall Armyworm, African armyworm, chilo worm, boll worms	130-150g/200 litres of water/ha. 10g/16L of water	Spray directly into funnels
Citrus	Fruit worms, boll worms	130-150g/200 litres of water/ha. 10g/16L of water	Apply as a full cover spray
Tomatoes	American leaf miner/ Pinworm Boll worms	130-150g/200 litres of water/ha. 10g/16L of water	Apply as a full cover spray. Repeat at weekly intervals

ALWAYS READ THE LABEL

Boll worms



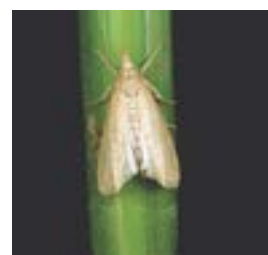
African armyworm



Cotton boll worm



Striped rice stemborers,



Your Farming Partner

Fenvalerate 20 EC

Active Ingredient: Fenvalerate 20%



Stalk borer.



Spiny bollworm



Jassids

A pyrethroid insecticide for the control of listed pests on Cotton and cutworm on Potato and Maize.

CROP/PEST	APPLICATION DIRECTIONS					
COTTON: Heliothis bollworm Red bollworm Spiny bollworm Jassids Leafeaters, Stainers	MISTBLOWER, TAILBOOM, KNAPSACK LANCE AND AERIAL APPLICATION:					
	Plant height	Amount FENVALERATE 20E.C per ha	Litres spray mix per ha			
			Mistblower	Tailboom	Knapsack Lance	Aerial
	0,4-0,9m	135ml	65	100	100	10
	Over 0,9m	200ml	100	150	100	15
	To improve spray penetration into the crop and reduce evaporation molasses must be added to the spray mixture at 25% by volume for aerial spraying. GROUND U.L.V. APPLICATION: Mix 40ml FENVALERATE 20E.C with 350ml molasses and make up to 1 litre with clean water. Apply the mixture as follows:					
	Plant height	Swath on 1m wide rows	Walking speed metres/min	Height of sprayer above crop	Litres spray mix per ha	
	0,4-0,9m	3 rows	60	0,5 - 0,25m	3,3	
Over 0,9m	2 rows	60	Top of crop	5,0		
SPECIAL NOTE: DIRECTIONS FOR USE OF FENVALERATE 20E.C ON COTTON: (i) FENVALERATE 20EC . may only be applied as follows: (a) between 25th December and 1st March in S.E Lowveld. (b) from 1st February to the end of the season in other areas. (iii) APPLICATION TIMING: Apply in conjunction with scouting results.						
POTATOES Potato tuber moth.	100ml/100 litres of water. (Apply 250-400 liters of spray mixture per hectare). Commence spraying as soon as plants are one month old or sooner in case of infestation. This rate can also control African bollworm.					
MAIZE Stalk borer.	Ground application 4ml/100m row. Apply in sufficient water i.e.3ltr of water per 100m row. Apply 7-10 days after 2.5% or more plants are infested with eggs. Do weekly scouting from 2-7 weeks after crop emergence by inspecting at least 100 plants at random per field. Second spray 10-14 days after first spray may be necessary.					

ALWAYS READ THE LABEL

Potato tuber moth



Potato tuber moth



Red bollworm



Heliothis bollworm



Your Farming Partner

Imidacloprid 70 WP

Active Ingredient: Imidacloprid 700g/kg



Aphids



White flies



Flea beetle

A systemic water dispersible insecticide that acts as an insect neurotoxin for control of various insects infesting various crops as listed.

Crop/Pest	Dosage Rate	Remarks
COTTON: Cotton aphid Cotton fleahopper Bandedwinged whitefly Plant bugs (excludes <i>Lygus hesperus</i>) Green stink bug Southern green stink bug Bollworm/Budworm (<i>ovicidal effect</i>)	30 g/100 litres of water.	Apply when aphids appear and repeat application 7-10 days later. Further application at 7-10 day interval may be necessary. Pre-harvest interval is 14 days.
POTATO: Aphids, Colorado potato beetle, Flea beetles, Leafhoppers, Psyllids.	2,25 g/100 m row length	Spray the Imidacloprid 70 WP mixture in the planting furrow from ridge-tip to ridge-tip before planting of the tubers.
TOBACCO: Aphids, Flea beetles Japanese beetle	36g/100ltrs of water	Apply 30ml of the mixture/plant in the transplanting water or apply 30ml of the mixture as a drench to the base of the plant at transplanting. Pre-harvest interval is 14 days
TOMATO: Aphids	0.025g/plant.	Apply as a soil drench 1 day after transplanting. Mix 5g of Imidacloprid 70WP with 20 ltrs of water and apply 100ml of this mixture to the base around the stem of each plant. Irrigate within 24hrs after application. Repeat application 28 days later. Do not harvest for 5 days
LEAFY VEGETABLES Including: Broccoli, Cabbage, Cauliflower, Kale, Mustard greens, Mustard spinach, Rape greens: Aphids, Flea beetles, Leafhoppers, Whiteflies.	190g/100 ltrs of waters	Apply 600ml of the Imidacloprid 70WP suspension per polystyrene seedling tray as a drench over the plants not more than 24 hrs prior to transplanting. Pre-harvest interval is 7 days.

ALWAYS READ THE LABEL

Japanese beetle

Colorado potato beetle

Leafhoppers

Flea beetle



Your Farming Partner

Imidacloprid 200 SL

Active Ingredient: Imidacloprid 200g



Thrips



Aphids



Thrips

A systemic insecticide for the control of Aphids and Termites on Tobacco, Thrips on flowers, Whitefly on Tomatoes, Termites on maize and Cotton, and sucking pests on Citrus.

CROP	PEST	DOSAGE RATE/100L	REMARKS
Cotton	Termites	1,0L/ha	Furrow treatment: Apply over seed in the furrow before covering with soil. Use a knapsack applying at least 100L spray mixture/ha.
Tomatoes	Whitefly (<i>Trialeurodes vaporarum</i>)	50ml	Apply in 300 to 500L water/ha. Repeat application after 7- 10 days.
Maize	Termites	200ml (0,5L /ha)	Apply 8-10 weeks after planting (prior to termite attack). Apply, using a knapsack, as a 30cm band in the maize row with at least 250L water/ha.
Flowers	Thrips	50ml + 200g sugar	Apply at first signs of infestation in 500 to 2000L water/ha. Repeat application after 7-10 days.
Citrus 2 yr old 6 yr old 10 yr old		Stem paint (undiluted)	Apply in August/ September before spring flush. Apply, using a paintbrush or suitable applicator, to the stem directly below first framework branch. Trees should not be stressed and 72 hours is required for absorption. Maximum application is 20ml/tree/ season
Tobacco	Aphids Termites	1L/Ha 6.5ml/100L 220ml/100L	At planting: Apply at an overall rate of 1L/Ha using one of the following. Mix directly in bulk planting water supply. Pour 1L of mix per planting hole. Mix separately from planting water. Apply one 30ml cup of mix in each planting hole prior to planting.

ALWAYS READ THE LABEL

Termites



Aphids



White flies



Your Farming Partner

Indoxacarb 15 SC

Active Ingredient: Indoxacarb 15%



Potato Tuber moth



Diamond Back Moth larvae



American bollworm

An emulsifiable concentrate stomach and contact insecticide for the control of Red, Spiny and American Bollworms on Cotton, Potato Tuber Moth on Potatoes, American Bollworms on peas and Diamond Back Moth larvae in Brassicas.

CROP/PEST	DOSAGE RATE	RECOMMENDATIONS/REMARKS
POTATOES: Potato Tuber moth	250ml/ha	Apply in 500L of water as a full cover spray at the onset of infestation. Repeat as necessary at 7-10 day intervals. Alternate with different mode of action products. Can be harvested at any time after application.
BRASSICAS: Diamond Back Moth larvae	250ml/ha	Apply in 250L of water as a full cover spray at the onset of infestation. Repeat as necessary at 7-10 day intervals. Alternate with different mode of action products. Can be harvested 3 days after application.
PEAS: American bollworm	250ml/ha	Apply in 250L of water as a full cover spray at the onset of infestation. Repeat as necessary at 7-10 day intervals. Alternate with different mode of action products. Can be harvested 7 days after application.
TOMATOES: American bollworm (larvae)	GROUND APPLICATION: 300 ml/ha >1000L/ha use 30ml/100L of water	Corrective Foliar Application: Apply in 500-1500L water per hectare. Good coverage of all foliage is essential. Tomatoes can be harvested 1day after application.

ALWAYS READ THE LABEL

African bollworm



Stalk borer



American bollworm



Your Farming Partner

Lambda-Cyhalothrin 5EC

Active Ingredient: Lambda-cyhalothrin 50g/L



Black cutworm larva



Caterpillars



Cutworms

A synthetic pyrethroid insecticide for the control of various pests in various crops as listed

CROP	PEST	RATE			APPLICATION
Cotton	Red spiny and Heliothis bollworm, leaf eating caterpillars and jassids	Plant Height	600-900mm	Over 900mm	Add the CYHALOTHRIN to a small quantity of water and stir well, then add the mixture to the prescribed quantity of water for use and stir well again. Keep the prepared spray well agitated during application. Do not mix with highly alkaline materials, e.g hydrated lime and lime sulphur.
		Cyhalothrin/ha	150ml/ha	200ml/ha	
		*Aerial spray volume	10-20L/ha	15-20L/ha	
		Tractor mounted mistblower spray volume	75L/ha	100L/ha	
		Tailboom spray volume	150L/ha	200L/ha	
		GROUND ULV			
		Plant Height 600-900mm Over 900mm			To make 1 litre spray mix: Add 40ml CYHALOTHRIN 5EC to 350ml molasses and make up to 1 litre with clean water (i.e 610ml): stir well, keep agitated and use immediately.
		Ground ULV application spray volume	3.3L/ha	5.0L/ha	
		Swath width	3 rows	2 rows	
		Walking speed in paces/minute	75	75	
Coffee	Cutworms	100ml/ha			Soil Drench
Peas	Cutworms	200ml/ha			Drench soon after planting
Curcu bits	Cutworms	150ml/ha			Drench after planting
ALWAYS READ THE LABEL					

ALWAYS READ THE LABEL

Cutworm



Heliothis bollworm



Cutworm



Your Farming Partner

Expert Activate

Active Ingredients: Lambda-cyhalothrin 30g/L + Acetamiprid 150g/L



Leaf miner



Leaf beetles



Pod borer

A highly systemic and contact insecticide for foliar and stem application and is active particularly against sucking insects and chewing insects with broad spectrum long residual activity widely used in agriculture for controlling insect pests including aphids, thrips, whiteflies, diamond back moth, leaf miner, African bollworm, pod borer, stem borers and leaf beetle in a broad range of edible and ornamental crops..

CROP	PEST	RATE	REMARKS
Roses, Carnations	Aphids, Thrips, Bollworm	Foliar spray: 500ml/ha in 1000L of water	Apply as first signs of infestation or insect egg hatch peak period as a full cover spray. Maximum 2 applications in at least a 7-day interval per season. PHI: 7days for edible crops.
Tomatoes, Cucumber, Capsicum.	Aphids, Thrips, Whiteflies, Bollworm.		
Brassicas; Kales Cabbage Broccoli Cauliflower	Aphids, Thrips, DBM, Whiteflies, Bollworm, Leaf miner, Leaf beetle		
Legumes; French beans, Runner beans, Common beans	Aphids, Thrips, Whiteflies, Pod borer		
Cereals; Wheat, Barley, Rice, Maize	Aphids, Caterpillars, Stem borers, Leaf beetles, Leafhoppers	10ml/20L of water	
Fruits; Melon, Orange, Mango	Thrips, Leafminers, Whiteflies, Leaf beetles		

ALWAYS R

ALWAYS READ THE LABEL

Mango leaf beetles



Striped beetle



Striped beetle



Your Farming Partner

Malathion 50EC

Active Ingredient: Malathion 50%

A contact/stomach insecticide and acaricide for the control of a range of pests on deciduous fruit, vegetables, ornamentals, lawns, maize, pastures, mushrooms and stored grain.



Woolly aphid



Red spider mite



Fruit fly

CROP	PEST	DOSAGE RATE PER 10 LITRES WATER OR AS STATED	APPLICATION DIRECTIONS
Apples, pears	Woolly aphid	12ml	Apply as a full cover spray. Repeat as necessary.
Apples, pears, Apricots, Nectarines, Peaches, Plums	Aphids, Bryobia mite, Mealybug, Red spider mite	12ml	Apply as a full cover spray at 10 day intervals as necessary.
	Fruit fly	18-20ml	Mix with 750g sugar. Apply 250-1000ml per tree as a coarse spray. Repeat weekly and after rain.
Beans, Beetroot, Brassicas, Carrots, Cucurbits, Peas, Peppers, Potatoes, Tomatoes, Turnips	Aphids	12ml	Apply as full cover sprays and repeat as necessary.
Beans, Brassicas, Cucurbits, Peas, Tomatoes	Red spider mite	12ml	
Cucurbits, Tomatoes, Turnips, Onions	Thrips	25ml	
Beans	CMR Beetles	25ml	
Beans, Peas	Lesser armyworm	60 - 125ml	
Brassicas	Diamond back moth Greater cabbage moth	25ml	Apply as full cover sprays and repeat as necessary.
Ornamentals except Roses	Aphids, Red spider	12ml	
	CMR Beetles, Thrips	25ml	
	Lesser armyworm	60 - 125ml	
Lawns	Lawn caterpillar	25ml	Apply as full cover spray. Water in well.
Maize, Pastures	Armyworm	660 - 1250ml per ha	Apply as full cover spray.
Mushrooms	Mushroom fly	15ml	Apply as a drench twice weekly. May be used after picking.
Stored grain	Flour and grain beetles	520ml	Apply 5 litres spray mix per 100m ² of bag surface when grain is loaded for storage.

ALWAYS READ THE LABEL



Mealybug



Mushroom fly



Grain beetles

Your Farming Partner

Oxamyl 310 SL

Active Ingredient: Oxamyl 310g/l



Root knot nematodes



Peanut pod speckling



Root knot nematodes

A water-soluble liquid systemic nematicide / insecticide for protection against nematode potatoes and insect pests on crops as listed.

CROP	PEST	DOSAGE	REMARKS
Maize	Nematodes	40ml / 100m row	Apply OXAMYL 310 SL as a foliar application six (6) weeks after full emergence of the crop.
Groundnuts	Peanut pod nematode (<i>Ditylenchus atricanus</i>)	1.2L per 100 litres of water	Apply as a foliar treatment at commencement of peg formation (with Sellie approximately 60 days after planting), in at least 250 litres of spray mixture per hectare. Ensure thorough wetting of the foliage.
Tomatoes	Root knot nematodes	SEEDBED: 40ml per 10 litres of water	Drench seedbeds with 2 litres of the spray mixture per m ² of the seedbed surface for 48 to 24 hours, prior to transplanting.
		SEED TRAYS: 40 ml per 10 litres of water	Spray seedling trays with 0.5 litres of the spray mixture per m ² of the total seed tray surface, 48 to 24 hours prior to transplanting.
		Foliar application: After transplanting: 800ml per 100 litres of water	Apply 250 litres of spray mixture per hectare as a foliar treatment, 2 weeks after transplanting. Repeat after 3 weeks with 500 litres spray mixture per hectare.
Potatoes	Root knot nematodes (<i>Meloidogyne</i> spp.) & suppression of Aphids	GROUND APPLICATION: 800ml per 100 litres of water	Apply 250 litres of spray mixture per hectare, 7 days after emergence. Repeat after 4 weeks at a rate of 600 litres of spray mixture, per hectare.
	Potato leafminer (<i>Liriomyza huidobrensis</i>)	FOLIAR APPLICATION: 3 litres per ha	Ensure thorough coverage of all foliage by applying in 400 to 600 litres water per hectare. Commence application at the first sign of leaf infestation and repeat at intervals of 7 to 14 days.



ALWAYS READ THE LABEL

Your Farming Partner

Thiamethoxam 25WG

Active Ingredient: Thiamethoxam 25%



Aphids

Gall midge

A granular broad spectrum insecticide which has quick stomach & contact activity. For control of Stem borer, gall midge, leaf folder, brown plant hopper, White Backed Plant hopper (WBPH), Green Leaf hopper (GLH), Thrips, etc. in rice, Aphids, Jassids, Thrips & White Flies in cotton.

Crop/Pest	Dosage Rate (dilution rate)	Spray Interval (days)	APPLICATION TIMING
Brassicas (cabbages, cauliflower, broccoli): Aphids	a. Foliar 200g/ha in 300-500 litres water. b. Soil application: 2g per 100 linear metres c. Post transplanting drench: 600g/ha or 0.02g/plant	14-21 days	First spray at first sign of infestation. Apply a max of 3-4 consecutive sprays. Soil surface spray at low water volume (200-300 litres/ha) incorporated at or before transplanting. Band apply to the plant furrow with a herbicide nozzle. Soil surface spray after transplanting is also possible.
Tomatoes: Aphids and white flies (Bemisia spp and Trialeoides vaporariorum)	a. Foliar: Aphids: 200g/ha (20g/100 litres of water) Whiteflies: (40g/100litres of water) b. Soil application: Aphids: 4g/100 linear metres (400g/ha) Whiteflies: 8g/100 linear metres (800g/ha) or 0.02g/plant c. Post transplanting Same as for soil application.	14-21 days	First spray at first sign of infestation. Apply a max of 3-4 consecutive sprays. In furrow application at transplanting: soil surface spray at low water volume (200-300litres/ha) incorporated at sowing time or before transplanting. Band apply to the plant furrow with a herbicide nozzle. Soil surface spray after transplanting is also possible. Apply 20-50ml of mixture per plant at the base of the young transplants.

ALWAYS READ THE LABEL

Aphids



White Backed Plant hopper



Leaf folder



Your Farming Partner

FUNGICIDE



CONTACT FUNGICIDES

Are not taken up into the plant tissue, they protect only the plant where the spray is deposited.

TRANSLAMINAR FUNGICIDES

Redistribute the fungicide from the upper sprayed leaf surface to the lower unsprayed surface.

SYSTEMIC FUNGICIDES

Are taken up and redistributed through the xylem vessels. Some are locally systemic and some move upwardly.

A fungicide is a specific type of pesticide (chemical or biological in origin) that controls fungal disease by inhibiting the growth of fungal spores or killing the fungus causing the disease. Different crops are affected by different fungi.

One fungal disease can affect more than one crop, similarly, a crop can be affected by more than one fungal disease.

Fungicides can be Preventive (used before the disease sets in) or Curative (used after the disease sets in) or both Preventive and Curative.

Fungicides are further categorized into Contact, Translaminar or Systemic.

With a wide array of field proven products from world renowned leaders, **Expert Choice Agrochemicals** is providing farmers with cost effective solutions to all fungal problems for a better crop yield.



Your Farming Partner

Chlorothalonil 720 SC

Active Ingredient: Chlorothalonil 720g/l



Early Blight



Late Blight



Early Blight

Chlorothalonil 720 SC is a broad spectrum contact fungicide for the preventative control of leaf spot diseases and web blotch in groundnuts, early and late blight in potatoes and tomatoes, downy mildew and anthracnose in cucurbits, fungal diseases in lawns and turf. Alternaria in apples and tobacco seedbeds and Anthracnose in pyrethrum. Apply as a full cover preventative spray.

CROP	DISEASE	RATE	APPLICATION DIRECTIONS
Apples	Alternaria	200ml/100L water	Apply 5-6 sprays at 14 day intervals from about 2 weeks after 100% petal fall.
Coffee	Coffee Berry Disease	3,2L/ha + 5,0kg/ha Copper Oxchloride 85WP or 5,0L/ha Copper Oxchloride 60 FW	Apply as a tank-mix in 1000L water/ha ensuring good coverage of the berries. First spray should be applied 4 weeks after main flowering and repeat after every 100mm of rainfall or 2-3 weeks whichever comes first (6 - 8 sprays). DO NOT APPLY BRAVO ON ITS OWN FOR CBD CONTROL.
Cucurbits	Downy mildew Anthracnose	2L/ha	Apply in a sufficient volume of water to ensure thorough wetting of the upper and lower leaf surfaces. Commence spraying at first signs of disease and repeat at 7 - 10 day intervals depending on the weather.
Groundnuts	Leaf spot disease (Cercospora sp) Web Blotch (Phoma sp)	2-2,5L/ha 2-2,5 L/ha	Ground Application Apply a minimum of 300L spray mixture/ha. Start spraying when first disease symptoms are seen (\pm 6 - 10 weeks after planting) and apply 6 - 8 sprays at 7 - 14 day intervals. Use the shorter interval under wet, humid conditions. Spinning Disc ULV Apply 5 litre mixture (2 parts Bravo 500 : 3 parts water) per ha. Application timing as above.
Lawns and Turf	Brown Patch	85ml/100m ² 155ml/100m ²	Preventative Treatment Apply in 20 - 60L water/100m ² . Corrective Treatment Apply in 20 - 60 L water/100m ² . The first spray should be followed up 3 weeks later and thereafter at 14 - 21 day intervals if necessary with the lower rate (i.e 85ml/100 m ²).
Potatoes	Early Blight (Alternaria sp) Late Blight (Phytophthora sp)	2 L/ha	Commence spraying preventatively when plants come into flower or when blight threatens and repeat at 7 - 10 day intervals depending on weather and after rain. Continue applications until tubers are ready for lifting. DO NOT apply less than 2 L BRAVO 500/ha on mature plants - apply proportionately less on smaller plants.
Pyrethrum	Anthracnose	200ml/100 L water	Apply as a full cover spray at 10 day intervals as soon as the disease can readily be found in the crop.
Tobacco Seedbeds ONLY TRB Cert. No. 550	Alternaria	HIGH VOLUME: 200ml/10L (TEN) water U.L.V.: Sprays 1 and 2: 100ml/1 (one) litre water Sprays 3 to 6: 200ml/1 (one) litre water	Spray at weekly intervals starting 4 weeks after emergence. HIGH VOLUME: Apply sprays 1 and 2 at 20ml/m ² , sprays 3 and 4 at 40 ml/m ² and sprays 5 and 5 at 60 ml/m ² U.L.V.: Apply sprays 1 and 2 at 4 ml/m ² Apply sprays 3 and 4 at 4 ml/m ² and sprays 5 and 6 at 6ml/m ² NB: Always consult TRB handbook for detailed recommendations.
Tomatoes	Early Blight (Alternaria sp) Late Blight (Phytophthora sp)	2 L/ha or 200ml/100 L water 400ml/100 L water	High Volume Application Approximately 1000 L/ha spray mixture on mature plants. Do not apply less than 2 L Bravo 500/ha on mature plants - apply proportionately less on smaller plants. Commence spraying when plants are 100 mm high or when blight threatens and repeat at 7 - 10 day intervals depending on weather and after rain. Low Volume Application Approximately 500 L spray mixture/ha on mature plants. Do not apply less than 2 L Bravo 500/ha on mature plants - apply proportionately less on smaller plants.

ALWAYS READ THE LABEL

Late Blight



Early Blight



Early Blight



Early Blight



Your Farming Partner

Copper Oxychloride 85% WP

Active Ingredient: Copper Oxychloride 85%



Leaf Spot Sigatoka



Scab



Anthracnose

A contact fungicide for the control of a wide range of diseases on many crops, fruits and ornamentals as listed.

CROP	DISEASE	RATE/ 100litre Water	DIRECTIONS FOR APPLICATION
Apples	Scab	250g	Apply in early greentip stage.
Bananas	Leaf Spot Sigatoka	400g	Apply as a full cover spray.
Beans	Bacterial Blight	400g	Spray at first sign of disease and repeat every 10-14 days.
Citrus	Black Spot	200g	Apply as full cover spray at 75% petal drop. Repeat 2-3 times at 4-5 week intervals.
Coffee	Berry Blotch, Leaf spot and Rust	400g	Spray every 14 days if disease is serious, otherwise every 21-30 days.
Cucurbits & Crucifers	Downy Mildew	300g	Spray at first sign of disease and repeat every 10 - 14 days.
Granadilla	Leaf and Fruit Spot	300g	Apply at first sign of disease and repeat 14 days later.
Grapes	Anthracnose & Downy Mildew	500g	Commence spraying at first sign of disease or from Jan onwards at 7 - 14 day intervals.
Mango	Bacterial spot	300g	Apply 3 weeks after blossom and again when fruit is fully developed.
Pears	Scab	250g	Apply only from early to advanced greentip.
Potatoes	Late blight, Early blight	500g	Commence spraying when plants are 150mm high and repeat at 7-14 day intervals and after rains, as long as conditions favour the disease.
Tea	Red Rust	500g	Apply 2000 L/10 kg/ha on a monthly basis. Also proportionately less on smaller plants.
Tomatoes	Late blight, Early blight Leaf spot	500g	Spray seedlings regularly every 7 days. In the field spray at first signs of disease and thereafter every 7-10 days or after rains as long as conditions favour disease.
Peas	Scab	300g per 100 litres of water	Apply as a F.C.S when leaves are half grown. Second spray when tips of nuts go brown. Third spray- 21 days later. Fourth spray- 21 days later

ALWAYS READ THE LABEL

Bacterial spot



Red Rust



Berry Blotch



Fruit Spot



Your Farming Partner

Expert Cloud 325 SC

Active Ingredients: Azoxystrobin 200g/l + Difenconazole 125g/l



Powdery mildew



Purple blotch



Alternaria leaf blight

A broad-spectrum fungicide for use in outdoor crops of carrots, leeks, Brussels sprouts, cabbage, cauliflower, broccoli/calabrese, kale (winter greens), collards (spring greens), rocket (outdoor) and strawberry (outdoor and protected).

CROP/ PEST	DISEASES CONTROLLED	REMARKS
Carrots	Alternaria leaf blight (<i>Alternaria dauci</i>) Powdery mildew (<i>Erysiphe polygoni</i>)	1.0 litre per hectare Apply in a recommended 200-600 litres of water per hectare. 14 days Pre-harvest interval
Leeks Nectarine, Peach, Plum	Leaf rust (<i>Puccinia porri</i>) Purple blotch (<i>Alternaria porri</i>) White tip (<i>Phytophthora porri</i>)	1.0 litre per hectare Apply in a recommended 300-1000 litres of water per hectare. 21 days Pre-harvest interval
Brassicas and Rocket (outdoor)	White blister (<i>Albugo candida</i>) Powdery mildew (<i>Erysiphe cruciferarum</i>) Alternaria (<i>Alternaria brassicae</i> and <i>Alternaria brassicicola</i>) Ring spot (<i>Mycosphaerella brassicicola</i>)	1.0 litre per hectare Apply in a recommended 200-600 litres of water per hectare. 21 days Pre-harvest interval
Strawberry	Powdery mildew (<i>Podosphaera aphanis</i>) Black spot (<i>Colletotrichum acutatum</i>) Leaf blotch (<i>Gnomonia comari</i>)	1.0 litre per hectare Apply as a protectant spray at the beginning of flowering. 3 days Pre-harvest interval
Potato Tomato	Early Blight, Late Blight Alternaria (<i>Alternaria</i>)	200-400ml/ha 14 days Pre-harvest interval
Wheat	Powdery mildew, Black spot, Rust	500ml/ha 21 days Pre-harvest interval
Peas	Powdery mildew,	150-300ml/ha 21 days Pre-harvest interval
Onion, Garlic	Powdery mildew, Rust <i>Stemphylium vasicarum</i>	

ALWAYS READ THE LABEL

White rust



Powdery mildew



Rust



Alternaria



Your Farming Partner

Mancozeb

Active Ingredient: Mancozeb 80%

A preventative fungicide for the control of early and late blight on Potato and Tomato and other diseases in fruit, vegetables and ornamentals as listed.



Downy mildew



Rust



Leaf Spot

Crop	Disease	Dosage rates per 100 Litres water or as indicated	Application Directions
Apples Pears	Scab	150-200g	Apply full cover spray at 75% petal fall. Repeat at 7 - 10 day intervals. Do not apply within 14 days of harvesting.
Apricots Peaches	Rust	200g	Apply full cover spray at 3-4 week intervals from mid -November. Do not apply within 14 days of harvesting.
Groundnuts	Leaf Spot	200g	Apply up to 2000 L/ha fortnightly at first sign of disease. Low Volume/Aerial: Apply at 2,75 kg/ha. Do not apply within 21 days of administration as fodder to animals.
Potato	Early blight Late blight	200g	Apply 500-1500 L/ha at or before first sign of disease, every 7-10 days and after rain or irrigation. Ensure good leaf coverage. Low Volume/Aerial: Apply at 1,7-2,8 kg/ha depending on plant size. Do not apply within 3 days of harvesting.
Tomatoes	Early blight Late blight Septoria leaf spot	200g	Apply at 500 - 2000 L/ha every 7-10 days from when plants are 150 mm high and after rain or irrigation. Low volume Aerial: Apply at 1,7 - 3 kg/ha depending on plant size. Ensure coverage on both leaf surfaces. Do not apply within 3 days of picking.
Ornamentals Roses	Anthrachnose Downy mildew Rust Black spot	200g	Apply as full cover spray every 7-14 days or after rain, at first sign of disease. Ensure covering on both leaf surfaces.
Vegetables Beans Brassicas Carrots Cucurbits Leeks Onions Peas	Anthrachnose Rust Scab Downy mildew Leaf blight Anthrachnose Downy mildew Alternaria Alternaria Downy mildew Downy mildew	300g 200g	Apply as a full cover spray every 7 - 14 days or after rain, at first sign of disease. Ensure coverage on both leaf surfaces. Do not apply within 3 days of harvesting.
Vines	Downy mildew	200g	Apply as a full cover spray from mid-January or at first sign of disease. Repeat weekly as long as favourable disease conditions exist. Do not apply within: 14 days of harvesting wine grapes 28 days of harvesting table grapes.

ALWAYS READ THE LABEL

Scab

Downy mildew

Rust



Your Farming Partner

Sulphur 80WP

Active Ingredient: Sulphur 78% + Deflocculant 2%



Powdery mildew



Russet mite



Powdery mildew

For the control of red spider mite and thrips on listed vegetables, russet mites on tomatoes and powdery mildew on grapes, ornamentals and peaches.

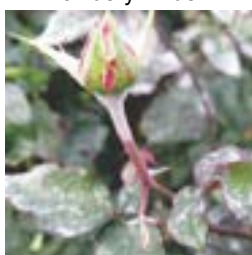
CROP	PESTICIDE/ DISEASE	APPLICATION DIRECTIONS
Onions, Cucurbits, Lettuce, Celery, Turnips	Thrip	Dust freely. Repeat as necessary
Beans, Brassicas, Cucurbits, Carrots, Peas, Tomatoes	Red Spider mite	Dust freely. Repeat as necessary
Tomatoes	Russet mite	Dust freely. Repeat as necessary
Grape vines	Powdery mildew	Dust at 10-30 kg/ha commencing when shoots are 150mm long and repeat at 21 day intervals for as long as disease persists.
Flowers and Ornamentals including Roses	Powdery mildew	Dust freely when disease first appears. Repeat at 7-14 day intervals
Peaches	Powdery mildew	Dust freely. Repeat at 10-14 day intervals

ALWAYS READ THE LABEL

Powdery mildew



Powdery mildew



Powdery mildew



Your Farming Partner

Tebuconazole 250EC

Active Ingredient: Tebuconazole 250g



Leaf Spot



Early Blight



Rust

A systemic fungicide with curative properties for the control of *Alternaria* on tobacco, *Cercospora* Leaf Spot, Grey Mould on groundnuts, Rust on beans, coffee and soyabeans and Early Blight on potatoes and tomatoes.

CROP	DISEASE	DOSAGE RATE	REMARKS
Tobacco Lands	<i>Alternaria</i> (<i>Alternaria alternata</i>)	500m/ha plus 500g/ha Dyrene 75 WP (tank mix)	Add the required amount of Tebuconazole 250EC to water in a partly filled spray tank and mix thoroughly. Mix the required quantity of Dyrene 75WP with a little water to form a cream, add to the spray tank, stir well and fill tank with water. Apply in minimum 500 litres water/ha. Start spraying at 6 weeks after planting and repeat at 21 days intervals to final harvest.
Groundnuts	Leaf Spot (<i>Cercospora arachidicola</i>) Grey Mould (<i>Botrytis cinerea</i>)	500m/ha	Apply as a preventative treatment or when first signs of the infection are noticed. Apply as a full cover spray in 300-500 litres water/ha. In the case of dryland application direct the spray onto rows. Repeat application every 10-14 days. Apply 4-5 sprays per season. A suitable wetter must be added to the spray mixture to ensure thorough wetting of foliage.
Beans	Rust (<i>Uromyces appendiculatus</i>)	500m/ha	Apply as a preventative treatment as soon as the first symptoms of infection are noticed. Repeat every 10-12 days if necessary. Apply as a full cover spray in minimum 500/water per ha
Potatoes	Early Blight (<i>Alternaria solani</i>)	75ml/100/ or at least 375 ml/ha	Apply as a preventative programme at 7-10 day intervals or commence spraying at first signs of infection. Apply as a full cover spray in minimum 500L water per ha.
Tomatoes	Early Blight (<i>Alternaria solani</i>)	75ml/100/ or at least 375 ml/ha	Apply at the first signs of infection and repeat every 7-10 days. Apply as a full cover spray in minimum 500/water per ha and relatively more on larger plants.
Coffee	Rust (<i>Hemileia vastatrix</i>)	1.0L /ha for trees 2-3m in height. Use lower rates for smaller trees	Curative and preventive spray. Apply as a full cover spray at the first signs of infection and repeat, if necessary after 3-4 weeks as soon as any redevelopments of rust is seen. It is important to start spraying early. Apply in a high volume of water (1000 - 2000/ha) to ensure good plant coverage and penetration.
Soyabeans	Rust	1.0L/ha	Curative spray. Apply at first signs of infection in a volume of 300-500 litres of water per ha to ensure good plant coverage and penetration. Repeat the application if necessary after 10-14 days as soon as any redevelopment of rust is seen.

ALWAYS READ THE LABEL



Your Farming Partner

Triadimenol 25EC

Active Ingredient: Triadimenol 250g



Leaf Rust



Soyabean rust



Leaf Rust

A broad spectrum systemic triazole fungicide for the control of Coffee leaf rust, Soyabean rust and Tobacco soreshin

CROP	PEST	DOSAGE	REMARKS
Coffee	Leaf Rust (<i>Hemileia vastatrix</i>)	Curative and preventative spray: 1 litre/ha for full-size trees of 2-3m height. Use proportionately higher or lower rates for taller or smaller trees.	Apply as a full cover spray at the first sign of infection and repeat after 3-4 weeks. It is important to start spraying early. The follow-up application should be applied as soon as any redevelopment of the rust is noted. A maximum of 2 sprays per season only are allowed in order to avoid development of fungicide resistance. Apply in any convenient volume of water from 60 to 2000 litres/ha. Harvest interval: 14 days.
Soyabean	Soyabean rust (<i>Phakospora pachyrhizi</i>)	500ml/ha	Apply as a full cover spray approximately 4 weeks after emergence. A follow-up application should be applied at first sign of infection on the bottom canopy (leaves). A maximum of 2 sprays per season only are allowed in order to avoid development of fungicide resistance. Apply in any convenient volume of water from 60 to 250 litres/ha. Harvest interval: 21 days
Tobacco Flue cured and Burley TRB Certificate 21-23-B-122 For further information consult TRB handbook.	Soreshiin (<i>Rhizoctonia solani</i> <i>Fusarium solani</i>)	Seedbeds not previously treated with triadimenol 200ml/100L water.	Drench seedbeds with this solution at the rate of 2L/m ² two days before pulling. Treated beds needed for a second or subsequent pulling within 2 weeks need not be treated a second time.
		Seedbeds treated previous season with full rate triadimenol 100ml/100L water. Retreatment of seedbeds sites more than 2 weeks after the first pulling - 100ml/100L water.	

ALWAYS READ THE LABEL

Your Farming Partner

Metalaxyl + Mancozeb

Active Ingredients: Metalaxyl 8% + Mancozeb 64%



Gummy stem blight



Septoria Spot



Gummy Stem Blight

A contact, systemic, preventive and curative fungicide for the control of Downy Mildew, Early Blight, Late Blight and Leaf Spots in potatoes, lettuce, tomatoes, cucurbits and other crops as listed

CROP	DISEASE	RATE	WHP	CRITICAL COMMENTS
Vine crops Grapevines	Downy Mildew <i>Plasmopara viticola</i>	Dilute spraying 250g per 100L of water	14 Days	Apply a maximum of 4 Metalaxyl + Mancozeb sprays per season. Minor phytotoxic reactions on some varieties of grapes may occur under certain conditions. Dilute spraying: Applying to the point of runoff. Use a minimum of 500L mixture/ha before flowering, increasing volume to a minimum of 1 000L/ha when vines are in full foliage.

		Boom Spraying/ Low volume application	Aircraft spraying	High Volume spraying		
Cucurbits	Downy Mildew Anthracnose, Gummy Stem Blight, Alternaria, Leaf Spot also Septoria Spot (pumpkins)	2.5kg in 200 to 500L of water/ha	2.5kg in 20-40L of water/ ha	250g per 100L of water/ha	7 days	This use is subject to a phenylamide anti-resistance strategy. Maintain a regular spray program. Commence spraying early (i.e before main disease infection period) with a registered fungicide from a different activity group, eg. mancozeb. When conditions favour disease development, apply 2 consecutive sprays of Metalaxyl + Mancozeb at 7 to 10 day intervals and then resume the program of protectant or non- Group D fungicides. DO NOT wait for disease to appear. Use the shorter interval when infection pressure is severe. Ensure thorough coverage of plants. Note: Add a non-ionic surfactant to the spray mix.
Lettuce	Downy Mildew Septoria Leaf Spot, Anthracnose	2.5kg in 200 to 500L of water/ha	2.5kg in 20-40L of water/ ha	250g per 100L of water; 35g per 15L of water	14 days	
Onions	Downy Mildew Purple Blotch	2.5kg in 200 to 500L of water/ha	2.5kg in 20 to 40L of water/ ha	250g per 100L of water	7 days	
Potatoes + Tomatoes	Late Blight, Early Blight Pink Rot	2.5kg in 200 to 500L of water/ha	2.5kg in 30 to 50L of water/ ha	250g per 100L of water	7 days	Make the first application 4 to 6 weeks after planting to crops previously treated at planting with Metalaxyl + Mancozeb. Repeat application 14 days later and then apply a program of protectant or non-Group D fungicides.
Strawberries	Eye Spot (<i>Mycosphaerella fragariae</i>), Leaf Blight (<i>Dendroploma obscurans</i>), Root Rot (<i>Phytophthora nicotianae</i> var. <i>parasitica</i>), Scorch (<i>Diplocarpon earlianus</i>)			Agricura special fungicide in 100L of water	7 days	Apply as a combined dip for runners after digging. For control of diseases only in Strawberry Runner Approval Schemes.
Tobacco	Aphids Termites	1L/Ha 6.5ml/100L 220ml/100L				At planting: Apply at an overall rate of 1L/Ha using one of the following. Mix directly in bulk planting water supply. Pour 1L of mix per planting hole. Mix separately from planting water. Apply one 30ml cup of mix in each planting hole prior to planting.

ALWAYS READ THE LABEL



Your Farming Partner

HERBICIDE



SELECTIVE HERBICIDES

Kill specific weed targets, while leaving the desired crop relatively unharmed

NON-SELECTIVE

Kill all plant material which they come into contact with.

Herbicides are pesticides used to kill or inhibit the growth of unwanted plants (weeds).

Commonly known as weed-killers, herbicides are categorized into selective and non-selective.

Some of these herbicides act by interfering with the growth of the weed and are often synthetic mimics of natural plant hormones.

They can be foliage-applied or soil-applied herbicides, pre-emergent or post-emergent.

Contact herbicides kill only the plant organs with which they are in contact.

Translocated/systemic herbicides are effective against roots or other organs, to which they are transported from above ground treated surfaces (soil).

Expert Choice Agrochemicals is providing farmers with cost effective solutions through outstanding products to help in all weed problems for improved crop yields.



Your Farming Partner

Atrazine 50 SC

Active Ingredients: Atrazine 47% and other active triazines 3%

A persistent and selective herbicide for the control of various broad leaved weeds as listed, in maize, sorghum and sugar cane

MAIZE:

ATRAZINE 50 S.C. L/ha.				APPLICATION
Soil	Clay %	Alone*	Tank Mix ** see below	Aerial: 25 litres water/ha Ground: 250 - 300 litres water/ha
Light	< 30	3,5	2,0	* Spray after sowing onto moist soil before and just after weed emergence ** Spray after sowing onto moist weed free soil before weed germination, See below - 'Tank Mixes'
Medium	30 - 40	4,5	2,5	
Heavy	> 40	5,5	3,0	

MAIZE TANK MIX:

When using ATRAZINE 50 S.C as a tank mix on maize, the following herbicides can be used at the following rates to reduce ATRAZINE 50 S.C. carry-over to susceptible crops in the rotation.

HERBICIDES RATES (LITRES/HA)

Soil	Clay %	Dual® MAGNUM 960 EC	Lasso® / Alachlor®
Light	< 20	0,65 - 0,75 *	2,8 (3,5)*
Light	20 - 30	0,75 - 0,9*	2,8 (3,5)*
Medium	30 - 40	0,9 - 1,0*	3,5 (4,0)*
Heavy	40 - 50	0,9 - 1,0*	3,5 (4,0)*
V. Heavy	> 50	0,9 - 10*	3,5 (4,0)*

* Where yellow nutsedge (*Cyperus esculentus*) control is required

SUGARCANE:

Where ATRAZINE 50 S.C is to be used as a weed killer in Sugar Cane, it should be mixed with AMETRYN 80 WP at the following rates:

APPLICATION	ATRAZINE 500 FW LITRES/ha	RATES/ha	AMETRYN 80 WP kg/ha
Pre-emergence	3,0		1,0
Post-emergence	1,6		2,0

SORGHUM:

ATRAZINE 50 S.C. LITRES/HA ALONE		Application	RATES/HA FOR TANK MIX*		
Soil Clay %	Rates/ha		Soil Clay %	ATRAZINE 50 S.C. + TERBUTRYN 50 SC	
< 25	-	Not recommended	< 20	N/R	N/R
25 - 35	3,5	Post - Emergent when crop is at 5 leaf stage	20 - 30	1,6	2,0
> 35	4,5	Pre - or post - emergent to crop	30 - 40	2,0	2,5
			> 40	2,5	3,0

* This tank mix is STRICTLY PRE-EMERGENT to the crop. Sow seed 30 - 40 mm deep.



ALWAYS READ THE LABEL

Your Farming Partner

Bentan 480 SL

Active Ingredient: Bentazone 480g/L

A water soluble selective contact herbicide for post-emergence control of broad-leaf weeds and suppression of yellow nutsedge in lawns, Soyabeans, Groundnuts, Maize, Sorghum, Wheat and other crops.

CROP	APPLICATION RATE	REMARKS
Soyabeans	Broad-leaf weeds 3.0L/ha	Apply BENTAN 480 SL from the second trifoliate leaf stage onwards. A second application may be made if there are problems with late-germinating broadleaf weeds. Bentazone may cause transient scorch on soyabeans but this will have no effect on yield. The rate of 3.0L/ha must not be exceeded as higher rates can cause plant damage.
	Yellow nutsedge 3.0L/ha	Refer to notes on yellow nutsedge. The rate of 3.0L/ha must not be exceeded as higher rates can cause plant damage
Groundnuts	Broad-leaf weeds 3.0L/ha	Apply BENTAN 480 SL from the trifoliate leaf stage onwards. A second application may be made if there are problems with later germinating weeds.
	Yellow nutsedge 3.0 - 5.0L/ha	Refer to notes on yellow nutsedge.
Maize, Sorghum, Oats, Wheat, Barley, Rice, Sugar cane, and other grass crops.	Broad-leaf weeds 3.0L/ha	BENTAN 480 SL may be applied at any stage of crop growth provided weeds are still in the susceptible growth stage.
	Yellow nutsedge 3.0 - 5.0L/ha	Refer to notes on yellow nutsedge.
Peas	Broad-leaf weeds 3.0L/ha	BENTAN 480 SL may be applied to peas when they are 50-150mm high provided weeds are in the susceptible stage. However, do not use BENTAN 480 SL on frost-damaged peas and/or if the crop is under stress (cold/ drought) or if night frost is expected.
	Yellow nutsedge 3.0L/ha	Refer to notes on yellow nutsedge. The rate of 3.0L/ha must not be exceeded as higher rates can cause plant damage.
Lawns	80ml/100m ²	For control of yellow nutsedge. Apply 80ml in a convenient volume of water to 100m ² . Do not mow for at least three days before treatment or at least four days after treatment. The lawn should have been well watered and fertilized in advance so that the weeds are growing actively.

Yellow nutsedge



Your Farming Partner

Bromoxynil 225 EC

Active Ingredient: Bromoxynil 225g/L

A selective emulsifiable concentrate herbicide for the post-emergent control of certain broadleaf weeds in the crops as indicated

CROP	DOSAGE/HA	REMARKS
Maize	1.5–2.0L	Apply as ground or aerial spray when the weeds are fully emerged, but not older than the 6-leaf stage. DO NOT apply to maize younger than the 4-leaf stage.
Wheat, barley and oats	1.5–2.0L	The cereal seedlings should be between the 3-leaf and the end of the stooling stage. DO NOT spray before the 3-leaf stage and from the beginning of the tillering stage onwards. The younger the weeds are and the more actively they are growing, the lower the dosage. When the weeds are reaching the 6-leaf stage and when growth is slowed down by drought, the higher rate should be used.

Some of broadleaf weeds controlled

<i>Acanthospermum hispidum</i>	Upright starbur	<i>Chenopodium murale</i>	Nettleleaf
<i>Amaranthus deflexus*</i>	Perennial pigweed	<i>Chenopodium schraderianum</i>	Schrader's spinach
<i>Amaranthus hybridus</i>	Cape pigweed	<i>Citrullus lanatus</i>	White watermelon
<i>Amaranthus spinosus</i>	Thorny pigweed	<i>Cleome gynandra</i>	Spider wisp
<i>Amaranthus thunbergii</i>	Red pigweed	<i>Cleome monophylla*</i>	Spindlepod
<i>Amsinckia menziesii</i>	Cape fiddleneck	<i>Cucumis myriocarpus</i>	Striped wild cucumber
<i>Anthemis cotula</i>	Dog fennel	<i>Datura ferox</i>	Large thorn apple
<i>Arctotheca calendula</i>	Cape marigold	<i>Datura stramonium</i>	Common thornapple
<i>Argemone subfusiformis</i>	White flowered Mexican poppy	<i>Emex australis*</i>	Spiny emex
<i>Cosmos bipinnatus</i>	Cosmos	<i>Flaveria bidentis</i>	Smelter's bush
<i>Bidens pilosa</i>	Blackjack	<i>Galinsoga parviflora</i>	Gallant soldier
<i>Bilderdykia convolvulus</i>	Climbing knotweed	<i>Gisekia pharnaceoides</i>	Gesekia
<i>Capsella bursa-pastoris</i>	Shepherd's purse	<i>Helianthus annuus</i>	Sunflower
<i>Chenopodium album</i>	White goosefoot	<i>Hibiscus trionum</i>	Bladderweed
<i>Chenopodium ambrosioides</i>	Wormseed goosefoot	<i>Ipomoea coscinosperma</i>	Pink morning glory
<i>Chenopodium carinatum</i>	Creeping goosefoot	<i>Ipomoea purpurea</i>	Common morning glory
<i>Chenopodium multifidum</i>	Stinking goosefoot	<i>Lepidium bonariense</i>	Pepper weed
<i>Ricinus communis</i>	Castor Oil	<i>Melilotus indica</i>	Yellow sweet clover
<i>Schkuhria pinnata</i>	Dwarf marigold	<i>Nicandra physaloides</i>	Apple of Peru
<i>Senecio burchellii</i>	Moltene disease plant	<i>Pentzia grandiflora</i>	Stinkweed
<i>Sesamum triphyllum</i>	Wild sesame	<i>Physalis angulata</i>	Wild gooseberry
<i>Sida cordifolia</i>	Heartleaf Sida	<i>Polygonum aviculare*</i>	Prostrate knotweed
<i>Sisymbrium thellungii*</i>	Common wild mustard	<i>Polygonum convolvulus</i>	Wild buckweed
<i>Solanum nigrum</i>	Black nighshade	<i>Raphanus raphanistrum*</i>	Wild radish
<i>Sonchus oleraceus</i>	Sow thistle	<i>Richardia brasiliensis</i>	Tropical richardia
<i>Tagetes minuta</i>	Khakiweed	<i>Xanthium spinosum</i>	Spiny cocklebur
<i>Tribulus terrestris*</i>	Common dubbeltjie	<i>Xanthium strumarium</i>	Cockle bur
<i>Vicia hirsute</i>	Tiny purple vetch	<i>Vicia sativa</i>	Broad-leaf purple vetch

*Apply from cotyledon to 3-leaf stage only. Ensure that plants are growing actively and are not subjected to any stress condition at application.

ALWAYS READ THE LABEL

Upright starbur



Red pigweed



Blackjack



Your Farming Partner

Chlorimuron-ethyl

Active Ingredients: Chlorimuron-ethyl 250g/L

A selective post emergent herbicide for use in soyabeans.



Biological Activity

Chlorimuron-Ethyl rapidly inhibits the growth of weeds which are susceptible. Leaves of susceptible plants appear yellow in 3-5 days followed by the death of growing points.

Susceptible plants are controlled in 7-21 days. Death of leaf tissue and growing point will follow in some species while others will remain green but stunted and non-competitive.

Crop	Weeds Controlled	Stage of application	Rate per Hectare
Soyabeans	Mostly broad leaf weeds	Seeding weeds	35g/ha

Pigweed	(<i>Amaranthus noitaha</i>)	Mexican marigold	<i>Targetes minuta</i>
Upright Starbur	(<i>Acanthospemum hispidum</i>)	Stockrose	<i>Hibscaus noitaha</i>
Thorn Apple	(<i>Datura stramonium</i>)	Black Jack	<i>Bidens pilosa</i>
Apple of Peru	(<i>Nicandra physaloides</i>)		

ALWAYS READ THE LABEL

Thorn Apple



Apple of Peru



Mexican marigold



Your Farming Partner

Clomazone 480 EC

Active Ingredient: Clomazone 480g/L

A selective residual pre-emergence, emulsifiable concentrate herbicide for the control of annual grasses and some broadleaf weeds in tobacco grown in the summer rainfall region.

APPLICATION:

CLOMAZONE 480 EC can be applied by means of any suitable medium to high volume applicator, provided that it is fitted with an efficient agitation system, it is able to apply the spray mixture evenly over the target area and it is calibrated correctly. Ensure thorough coverage of the target area by using not less than 200 litres spray mixture per ha.

CROP	Dosage rate per hectare	REMARKS
TOBACCO	1.0 – 2.5 L	Apply product within 14 days after transplant, before plants are growing actively.
SOYABEANS	1.0 - 1.5L	Apply at planting or within 3 days of planting onto a well prepared seedbed that is fine, even and firm and without excessive plant residues

WEEDS: The following weeds are normally controlled by **CLOMAZONE 480 EC**

CLOMAZONE 480 EC:

1.0L/ha *Digitaria sanguinalis* Crab finger grass
Eleusine indica Goose grass

CLOMAZONE 480 EC:

1.0L/ha to 2.5L/ha *Digitaria sanguinalis* Crab finger grass
Eleusine indica Goose grass
Commenlina benghalensis Wandering Jew
Portulaca oleracea Common purslane

ALWAYS READ THE LABEL

Crab finger grass



Wandering Jew



Goose grass



Common purslane



Your Farming Partner

Diquat 20 SL

Active Ingredient: Diquat (dichloride salt) 20%

A non-selective, contact post-emergence herbicide containing Diquat in the form of a solution for the control of annual grasses and broadleaf weeds.

CROP	DOSAGE RATE (LITRES/HA)	REMARKS
Crops and vegetables grown in a row.	1,0 - 2,0	a) Apply as a directed spray using a suitable shield to protect all parts of the crop from spray drift. b) Floodjet nozzles giving a large droplet distribution may be used in windless conditions and where the crop's bark is mature. c) Suitable registered pre-emergent herbicide may be tank-mixed with Paraquat 20 SL for a residual effect. d) Weeds covered in dust or wilting from water will not be adequately controlled.
Plantation crops eg. forestry, deciduous fruit, bananas, tea, coffee etc.	1,0 - 3,0	
All crops (Seedbeds)	1,0 - 2,0	Apply Diquat 20 SL to prepared seedbeds where weeds have already germinated before or immediately after sowing. Registered pre-emergent herbicides may be tank-mixed for a residual effect.
Conservation tillage	1,0 - 3,0	Apply before or just after planting annual crops. May be mixed with registered pre-emergent herbicide for residual effects. Heavy weed pressure may require further applications.
Industrial areas (non selective weed control).	1,0 - 3,0	Improved weed control may be achieved by tank mixing with a registered pre-emergent herbicide for residual effect.

Diquat 20 SL is a non-selective, contact post-emergence herbicide.

ALWAYS READ THE LABEL



Your Farming Partner

Expert 260 OD

Active Ingredients: Nicosulfuron 20g/Litre + Mesotrione 40g/Litre + Terbutylazine 200g/Litre

A selective systemic pre-emergent and early post-emergent herbicide for the control of grasses including Shamva grass and some broad leaved weeds in maize.



CROP AND TARGET	SOIL TYPE	DOSAGE	REMARKS
Maize Shamva grass <i>(Rottboellia cochinensis)</i> Wild oat <i>(Avena fatua)</i> Goosegrass <i>(Eleusine indica)</i> Jimson weed <i>(Datura stramonium)</i> Morning glory <i>(Ipomoea spp)</i> Pig weed <i>(Amaranthus spp)</i> Purslane <i>(Portulaca oleracea)</i>	<div>Clay %</div> <div> Light < 30 Medium 30 - 40 Heavy > 40 </div>	<div> Early post-emergent; 2-3 Litres/ha </div> <div> Pre-emergent; 1.8-2Lt/ha 2.0-2.5Lt/ha 3Lt/ha </div>	<div> Aerial: 25 litres of water/ha Ground: 250 - 300 litres of water/ha Spray after sowing onto moist soil before or just after weed emergence preferably at 3-5 leaf stage. </div> <div> Aerial: 25 litres of water/ha Ground: 250 - 300 litres of water/ha Spray after sowing onto moist weed free soil before weed germination. </div>

ALWAYS READ THE LABEL

Shamva Grass



Shamva Grass



Morning glory



Your Farming Partner

Expert Acetoklo 900 EC

Active Ingredients: Acetochlor 900g/L

An emulsifiable concentrate herbicide for the pre-emergence control of grasses and certain broadleaf weeds in groundnuts, maize and sugarcane and early post emergence weed control in plant and ratoon sugarcane.

1) MAIZE

% CLAY	DOSAGE L/ha
	ACETOCHLOR 900 EC
0 - 10	0,5
11 – 20	0,75 - 1,0
21 – 30	1,0
> 30	Not recommended

2) EUCALYPTUS PLANTATIONS:

% CLAY	DOSAGE L/ha	REMARKS
0-10	0,75 - 1,5	Apply as a band application 7-10 days before planting. Do not apply over the top of the trees. Use the higher dosage rate if extended control of grasses and/or variable yellow nutsedge control is required.
11-30	1,0 – 3,0	

3) GROUNDNUTS: Pre-emergence

% CLAY	ACETOCHLOR 900 EC L/ha	REMARKS
0 – 10	0.75 – 1,5	Use the higher rates if longer and better control of broadleaves and yellow nut-sedge is required.
11 – 30	1,0 – 3,0	

4) SUGARCANE: Pre-emergence in plant and ratoon sugarcane.

% CLAY	ACETOCHLOR 900 EC L/ha	REMARKS
0 – 35	1,75 – 2,5	Use the higher rates and/or in a tankmix with either DIURON or ATRAZINE if longer and better control of broadleaves and yellow nut-sedge is required.
> 35	2,25 – 3,0	

ALWAYS READ THE LABEL

SOME ANNUAL GRASSES CONTROLLED:

Chloris virgata Feathertop chloris
Digitaria sanguinalis Crab finger-grass
Eleusine indica Goose grass
Panicum schinzii Sweet buffalo grass
Setaria verticillata Sticky bristle grass
Urochloa panicoides Herringbone grass

SOME ANNUAL BROADLEAF WEEDS CONTROLLED:

Amaranthus hybridus Common pigweed
Amaranthus spinosus Thorny pigweed
Chenopodium album White goosefoot
Commelina benghalensis Benghal wandering jew
Galinsoga parviflora Gallant soldier
Portulaca oleracea Purslane
Tagetes minuta Khaki weed



Your Farming Partner

Expert Amica 700 WDG

Active Ingredients: Amicarbazone 700g/kg

A water-dispersible granule pre- and post-emergence herbicide for the control of certain broadleaf and grass weeds as listed, as well as the suppression of yellow nutsedge (*Cyperus esculentus*) in sugarcane.

Pre-emerge EXPERT AMICA 700 WDG treatments - SUGARCANE:		
SOIL CLAY %	RATE/HA	REMARKS
Ratoons only > 10%	2kg EXPERT AMICA 700 WDG plus 3L Acetochlor 900 EC	Make a uniform application to a moist soil surface after harvesting and before the weeds have germinated when the first cane leaves are not more than 10cm high.
Ratoons only 10 – 15%	1,5kg EXPERT AMICA 700 WDG plus 0,5kg Hexazinone 750 DF	Apply uniformly to a dry or moist soil surface as soon as possible after harvesting and before the weeds have germinated when the first cane leaves are not more than 10cm high.
16 – 35%	1,5kg EXPERT AMICA 700 WDG plus 0,8kg Hexazinone 750 DF	
> 35%	1,5kg EXPERT AMICA 700 WDG plus 1kg Hexazinone 750 DF	

Post-emerge EXPERT AMICA 700 WDG treatments - SUGARCANE:

SOIL CLAY %	RATE/HA	REMARKS
Ratoons only > 10%	1,5kg EXPERT AMICA 700 WDG + 2,0 kg MCPA plus 0.2 % Surfactant	Use this treatment where <i>Cyperus esculentus</i> and broadleaf weed species are predominant. Avoid unnecessary crop leaf contact.
Ratoons only > 10%	1,5kg EXPERT AMICA 700 WDG + 2,67kg Ametryn 750 WDG + 0.2 % Surfactant	Use this treatment where grass seedlings need to be controlled. Grasses should not have tillered before application. Avoid unnecessary crop leaf contact.
Ratoons only > 10%	1,5kg EXPERT AMICA 700 WDG + 1,14kg MCPA 700 WSG + 1,33kg Ametryn 750 WDG + 0.2% Surfactant	Use this treatment where there is a mixture of sedges, broadleaf weeds and grasses. Avoid leaf contact on the crop.

ALWAYS READ THE LABEL



Your Farming Partner

ExpertCane 750WDG

Active Ingredients: Metribuzin 643g/kg + Chlorimuron-ethyl 107g/kg

A pre-emergence and early post-emergence herbicide with long residual control of annual and perennial broadleaf weeds and some grasses in Sugarcane and Soybeans as indicated.

APPLICATION RATES: SUGARCANE:

SOIL TYPE	CLAY %		DOSAGE
	PLANT CANE	RATOON CANE	kg / ha
Sandy loam	7 - 20 %*	< 21 %	0,80
Sandy loam to sandy clay loam	21 - 35 %	21 - 35 %	0,90
Sandy clay soil	> 35 %	> 35 %	1,2

* Avoid use on plant cane with soils of a clay content of less than 7 %

SOYBEANS:

SOIL TYPE [Clay %]	EXPERTCANE 750WDG Dosage ALONE	Product Dosage [g or L / ha]	
	kg / ha	EXPERTCANE 750WDG +	Metolachlor 960 EC
Sandy Loam [7 – 20 %]	100g	100g +	1,15L
Sandy loamy to sandy clay loam [21 – 35 %]	100g	100g +	1,15L



ALWAYS READ THE LABEL

Your Farming Partner

Expert Diuron 800 SC

Active Ingredients: Diuron 800g/L

A pre-emergent herbicide with long residual action for the control of annual weeds as listed, in citrus, avocados, bananas, coffee, mangoes, pineapples, macadamia and pecan nuts, sugar cane, as well as in industrial areas, along rail tracks and on road shoulders.

CROP	LITRE/HA	REMARKS
Citrus, Avocados, Mangoes, Bananas (established orchards)	4L	Apply onto clean cultivated soil during growing season. Repeat application after 2 – 3 months if required.
Pineapples (post plant or established plants)	4L	Apply to clean cultivated moist soil. Split applications at half rates at 4 monthly intervals are preferable to a single application at full rate.
Coffee, macadamia and pecan nuts (established orchards only)	2L	Apply to clean cultivated soil during Spring. Repeat applications after 2 – 3 months.
Plant sugarcane and ratoon crops	3-4L	Apply as a uniform overall spray pre-plant or at the pre-emergence stage for weeds. Use higher rates for severe weed infestation or less susceptible weed.
Industrial use	10L	Roadside, railways and industrial sites.
Sport Treatment	50ml	Treats an area of 50 square metres.

SOME WEEDS SPECIES NORMALLY CONTROLLED BY DIURON 800 SC:

<i>Amaranthus hybridus</i>	Common pigweed	<i>Digitaria sanguinalis</i>	Crab finger grass
<i>Amaranthus spinosus</i>	Thorny pigweed	<i>Eleusine indica</i>	Goose grass
<i>Amaranthus thunbergii</i>	Red pigweed	<i>Gallinsoga parviflora</i>	Gallant Soldier
<i>Bidens bipinnata</i>	Spanish blackjack	<i>Hibiscus trionum</i>	Kenaf
<i>Bidens pilosa</i>	Common blackjack	<i>Portulaca oleracea</i>	Pigweed
<i>Chenopodium album</i>	Fat hen	<i>Schkuhria pinnata</i>	Dwarf marigold
<i>Chenopodium carinatum</i>	Green goosefoot	<i>Setaria verticillata</i>	Burr bristle grass
<i>Cosmos bipinnatus</i>	Cosmos	<i>Tagetes minuta</i>	Tall khaki weed

ALWAYS READ THE LABEL



Your Farming Partner

Expert GA 200 SL

Active Ingredients: Glufosinate-ammonium 200g/L

EXPERT GA 200 SL is absorbed into the foliage and green stems of actively growing plants. It is inactive in the soil and is not translocated as an active herbicide, so thorough coverage of the target weed is essential for good results. Visual effects of the spray will become noticed generally within 5-10 days after treatment under ideal growing conditions. Rainfall within 6 hours of application may reduce the effectiveness of the product and re-spraying may be required. **DO NOT** mow or cultivate until weeds start to brown-off. Avoid contact with the green parts and immature bark of the desirable plants as damage may occur.

CROP	Target	Dosage	
Avocado, banana, guava, mango, pawpaw, passionfruit, pineapple, plantations raspberry, strawberries	Perennial and annual weeds and dicots	3 to 5 L/Ha	DO NOT allow spray or spray drift to contact desirable foliage or green bark.
Citrus orchards, vines			EXPERT GA 200 SL may be used around trees/vines less than two years old provided they are effectively <u>shielded from spray and spray drift</u> .
Sugarcane			Apply spray mixture across the inter-row area between cane rows. Avoid all contact with cane shoot growing points and minimise spray contact with green cane foliage. Excessive contact with sugarcane plants may result in damage.
Commercial & industrial areas, forest plantations.			DO NOT allow spray or spray drift to contact desirable plants.

ALWAYS READ THE LABEL



Your Farming Partner

Expert Hexazinone 750 WDG

Active Ingredients: Hexazinone 750g/kg

A water dispersible granule herbicide for the pre-and early post emergent selective control of certain weeds in ratoon sugarcane and non-selective use in sugarcane verges and breaks.

RATOON SUGARCANE:

Time of Application	Soil Type and Percent Clay	Pre-emerge of Weeds	Post-emerge of Weeds
		EXPERT HEXAZINONE 750 WDG	EXPERT HEXAZINONE 750 WDG +Ametryn 500 SC or Diuron 800 SC
Early Season	Light – Loamy Sand: 5 - 15% Loamy Sand – Sandy Clay	560 – 720 g/ha	+3.0L Ametryn 500 SC or +1.0L/kg Diuron 800 SC
	Loam: 16 – 35% Sandy Clay – Clay	720 – 880 g/ha	+3.0-4.0L Ametryn 500SC or +1.0-1.5L/kg Diuron 800 SC
	>35%	800g – 1.0 kg/ha	+4.0L Ametryn 500SC or +1.5-2.0L/kg Diuron 800SC
Mid Season	Light – Loamy Sand: 5 – 15% Loamy Sand – Sandy Clay	560 – 640 g/ha	+3.0L Ametryn 500SC or +1.0L/kg Diuron 800 SC/WG
	Loam: 16 – 35% Sandy clay – Clay	640 – 720 g/ha	+3.0-4.0L Ametryn 500SC or +1.0-1.5L/kg Diuron 800 SC/WG
	>35%	640 – 800 g/ha	+4.0L Ametryn 500 SC or +1.5-2.0L/kg Diuron 800 SC/WG
Late Season	Light – Loamy Sand: 5 – 15% Loamy Sand – Sandy Clay	320 – 360 g/ha	+3.0L Ametryn 500SC or +1.0L/kg Diuron 800 SC/WG
	Loam: 16 – 35% Sandy clay – Clay	640 g/ha	+3.0-4.0L Ametryn 500SC or +1.0-1.5L/kg Diuron 800 SC/WG
	>35%	720 g/ha	+4.0L Ametryn 500 SC or +1.5-2.0L/kg Diuron 800 SC/WG

BROAD LEAF WEEDS CONTROLLED:

Ageratum conyzoides
Amaranthus hybridus
Argemone Mexicana
Bidens pilosa
Chenopodium murale
Cosmos bipinnatus
Datura stramonium

Invading Ageratum
Common pigweed
Yellow Mexican poppy
Black jack
Nettle-leaved Goosefoot
Cosmos
Thorn apple

Emex australis
Galinsoga parviflora
Hibiscus trionum
Nicandra physaloides
Portulaca oleracea
Sida rhombifolia
Solanum nigrum
Siegesbeckia orientalis

Spiny Emex
Gallant soldier
Bladder weed
Apple of Peru
Purslane
Flannel weed
Nightshade
St. Paul's wort

GRASSES CONTROLLED:

Brachiaria eruciformis
Digitaria sanguinalis
Digitaria species
Eleusine coracana
Eleusine indica

Sweet signal grass
Crab finger grass
Finger grass
African goose grass
Goose grass

Panicum maximum
Panicum schinzii
Panicum subalbidum
Setaria verticillata
Setaria pallide-fusca

Common buffalo grass
Sweet buffalo grass
Elbow buffalo grass
Stickly bristle grass
Red bristle grass

ALWAYS READ THE LABEL

Common buffalo grass



Sweet signal grass



Goose grass



Your Farming Partner

Expert Turbo 500 SC

Active Ingredients: Tebuthiuron 500g/L

A suspension concentrate herbicide for the control of broadleaf weeds and certain annual grasses as listed in sugarcane .

PRE-EMERGENCE.

% CLAY	GROUND APPLICATIONS ℓ/ha
8 to 30 (Sand and sandy clay loam)	1.5 litres per 600 liters of water per hectare
31 to 50 (Sandy clay loam to sandy clay)	2 litres per 600 liters of water per hectare

POST-EMERGENCE TANK MIX

% CLAY	GROUND APPLICATIONS L/ha	AEIRIAL APPLICATIONS L/ha
8 to 30 (Sand and sandy clay loam)	EXPERT TURBO 500 SC 2,0L + AMETRYN SC 4,0L or DIURON SC 2,5L	EXPERT TURBO 500 SC 2,25L + AMETRYN SC 4,5L or DIURON SC 2,75 L +
31 to 50 (Sandy clay loam to sandy clay)	EXPERT TURBO 500 SC 2,5L + AMETRYN SC 4,0L or DIURON SC 2,5 L + any wetting agents.	EXPERT TURBO 500 SC 2,75L+ AMETRYN SC 4,5L or DIURON SC 2,75L + any wetting agents.

BROADLEAF WEEDS

Acalypha ecklonii -
Ageratum conyzoides Blueweed
Amaranthus deflexus Pigweed
Amaranthus hybridus Cape pigweed
Amaranthus spinosus Thorny pigweed
Amaranthus thunbergii Red pigweed
Argemone mexicana Yellow poppy
Bidens pilosa Common blackjack
Chenopodium album White goosefoot
Chenopodium carinatum Green goosefoot
Commelina benghalensis Wandering Jew
Conyza bonariensis Flax-leaf fleabane
Euphorbia peplus Milkweed
Galinoga parviflora Small-flowered quickweed
Gnaphalium pensylvanicum Cudweed
Hibiscus trionum Bladder Hibiscus

Lepidium africanum
Nicandra physaloides
Physalis angulata
Portulaca oleracea
Richardia brasiliensis
Sida rhombifolia
Sigesbeckia orientalis
Solanum nigrum
Tagetes minuta

Pepper cress
 Apple-of-Peru
 Wild gooseberry
 Purslane
 Mexican Ricardia
 Arrowleaf Sida
 Common St Paul's wort
 Nightshade
 Tall khaki weed

SOME OF GRASSES CONTROLLED

Digitaria sanguinalis
Eleusine indica
Fimbristylis hispidula
Panicum maximum
Panicum schinzii
Tragus berteronianus

Crab finger-grass
 Goose grass
 Slender sedge
 Common buffalo grass
 Sweet buffalo grass
 Large carrotseed grass

ALWAYS READ THE LABEL

Amaranthus spinosus



Fimbristylis hispidula



Gnaphalium pensylvanicum



Your Farming Partner

Fluazifop-p-butyl 12.5 EC

Active Ingredient: Fluazifop-p-butyl 125g/l

A selective, systemic herbicide that is applied as a post-emergent spray for the control of annual and perennial grasses in crops as indicated and for the chemical ripening of sugarcane.

MODE OF ACTION

FLUAZIFOP-P-BUTYL 12.5 EC is a systemic selective grass herbicide for use in broadleaf crops and as a sugarcane ripener. It penetrates into the grass leaves and translocates upwards and downwards to the growing points giving long-lasting control of perennial grasses. Although weeds die slowly (7-21 days), they stop growing and competing within 48 hours.

CROPS ON WHICH THE HERBICIDE IS USED

Banana, Deciduous fruit, Dry Beans, Grape vines, Groundnuts, Lucerne, Peas, Pineapples, Potatoes and Soybeans.

SPECTRUM OF ACTIVITY

FLUAZIFOP-P-BUTYL 12.5 EC controls most annual and perennial grasses.

WARNINGS: Clean water should always be used. DO NOT plant any of the following crops within 2 months of a FLUAZIFOP-P-BUTYL 12.5 EC application:- Maize, Sorghum, Wheat, Barley or Grasses.

A relatively short contact period of 1,5-2 hours without rain is required for satisfactory results. FLUAZIFOP-P-BUTYL 12.5 EC contains a wetter. No additional wetter is required. FLUAZIFOP-P-BUTYL 12.5 EC may be applied through any sprayer fitted with normal fan, cane or flood jet nozzles.

DIRECTIONS FOR USE

a) As a Herbicide: FLUAZIFOP-P-BUTYL 12.5 EC may be used to control most annual and perennial grass weeds.

b) As a Sugarcane Ripener: FLUAZIFOP-P-BUTYL 12.5 EC should be applied to early season sugar cane harvests (April-June harvest)

Application: Early Season

Dosage: 330ml/ha

The time of application is related to the date of harvest (i.e. 6-10 weeks prior to the set harvesting date), however application also depends on cane maturity.

Application volume:

Ground: 100-400 litres/ha of spray mixture.

Aerial: 20-30 litres/ha of spray mixture.

WEEDS/WEED HEIGHT	RATE L/HA
Annual Grasses <120mm 120-250mm >250mm	1 1,5 2,0-2,5
Mature Perennial Grasses A) undisturbed rhizomes B) fragmented rhizomes	3,0-8,0 1,5-3,5
Shamva grass & Volunteer Sorghum Up to 200mm in height	0,5
Volunteer Wheat & volunteer Barley Up to 5 leaf stage	1,5

(*Hordeum murinum*) Wild barley



Rough love grass
(*Eragrostis aspera*)



Feathertop cloris
(*Chloris virgata*)



ALWAYS READ THE LABEL

Your Farming Partner

Glyphosate 41SL

Active Ingredients: glyphosate (as isopropylamine salt) 41%

A systemic herbicide for use in certain agricultural situations, orchard crops, forestry and industrial areas.

GLYPHOSATE has no soil residual activity and MUST BE APPLIED TO EMERGED WEEDS ONLY.

CITRUS, COFFEE, DECIDUOUS FRUIT, SUB-TROPICAL FRUIT/NUTS, TEA AND VINES		
Weed Species	Rates L/ha	Remarks
Annual broadleaf weeds and grasses (established from seed.)	0,5 - 3,0	<ul style="list-style-type: none"> - Only use as a directed spray in mature orchids. - Use lower rates for young seedlings and higher rates for established weeds/ grasses. - Use minimum of 3,02L/ha for <i>Conyza</i> spp.
Perennial weeds and grasses including <i>Cynodon dactylon</i> and Sedges	6,0 - 8,0	<ul style="list-style-type: none"> - Use higher rates for well established grasses and more difficult to control species, e.g. <i>Hyparrhenia</i> and <i>Imperata</i> spp. - Spot spray regrowth with a 3% solution.
Kikuyu	4,0	

AGRICULTURE GENERAL	- MINIMUM/NO TILL SITUATION	
Weed species as above. Tomato/Tobacco Transplants - see remarks opposite	as above	<ul style="list-style-type: none"> - Only spray PRE-PLANTING or AFTER CROP MATURITY. Note: Pre-plant weed control - sprays on sandy soils (below 10% clay), should take place 7 - 10 days before transplanting tomato and tobacco seedlings.

FORESTRY		
Weed species as above.	as above	<ul style="list-style-type: none"> - Used to establish firebreaks - Pre-plant in row weed eradication. - Weed control within compartments as a directed spray.

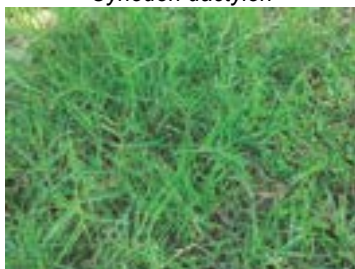
NOXIOUS AND INDUSTRIAL WEED CONTROL		
Lantana camara	4,0 - 5,0 litres/ 100L water	- Slash plants above 1,5m and spray regrowth at 500mm.
Annual and Perennial weeds.		- Use rates listed under Citrus, Coffee etc.

ALWAYS READ THE LABEL

Lantana camara



Cynodon dactylon



Kikuyu



Your Farming Partner

Halosulfron 75WDG

Active Ingredient: Halosulfron 750g/kg

A selective post-emergence herbicide for the control of nutsedge (cyperus spp) and other weeds in Maize and Sugar cane

Crop	Dosage/ Hectare	Directions for Application
Maize & Sugarcane	50g	<p>Halosulfron 75WG should be sprayed uniformly on emerged weeds by tractor-mounted boom sprayers or knapsack sprayers with flat fan nozzles using 200-300 litres of clean water</p> <ul style="list-style-type: none"> - For best results, use Halosulfron 75WG on young active growing weeds at the 2-4 leaf stage under moist conditions. - Fill tank 25-50% full with clean water and start agitating. Use hydraulic or mechanical action. Mix required amount of Halosulfron 75WG in a small amount of water to make a slurry and add this to the spray- tank and then fill it with the required amount of water. Mix well during this process and continue to agitate. Ensure that all the Halosulfron 75WG is thoroughly mixed before adding another product.

ALWAYS READ THE LABEL

Cyperus Rotundus



Cyperus michelianus



Cyperus cyperoides



Your Farming Partner

Imazapyr 250 SL

Active Ingredients: Imazapyr 250g/L

A water soluble non-selective herbicide for the control of perennial and annual weed plants in afforestation, non-crop and industrial areas.

- **IMAZAPYR 250 SL** is a systemic herbicide with limited variation in selectivity. Eucalyptus species are especially susceptible therefore it can be used for eradication and stump control of such species in most scenarios. Invader plants may also be controlled by **IMAZAPYR 250 SL** in forestry, conservation areas, industrial stands and grazing areas.
- The product is readily absorbed through foliage, roots and freshly cut sapwood regions, and then rapidly translocated to the meristematic tissues.
- Optimal effect of Imazapyr is achieved by applying it onto cut stumps where it gets into contact with the growing tissues from where it is translocated to other meristematic areas of the plant. This is more effective than foliar applications. The cut stump application method requires minimum amount of product and therefore minimises environmental exposure.
- Although **IMAZAPYR 250 SL** appears to be slow acting, growth is halted soon following application, and response to the herbicide is especially rapid under ideal growing conditions.
- When the target plants are under dormant or stressed conditions, slower action can be expected. Deformed leaf and shoot growth may appear under certain conditions, but further treatment will only be necessary if normal re-growth occurs after that.
- Optimal control of woody species will be achieved when the stems are cut close to the ground before **IMAZAPYR 250 SL** is applied onto the cut surface areas. Only treat newly cut surfaces. Branched or multi stem plants should be treated as individual plants.
- Alternatively, expose the sapwood by means of frilling right around the stem before applying the recommended dosage of **IMAZAPYR 250 SL**.
- Cut stems and frills must be performed as close to the ground as possible.

CROP	DOSAGE RATE	REMARKS
Black wattle (<i>Acacia mearnsii</i>)	400ml/10 litres of water	Only use this product in Pine- and Wattle plantations in the case of forestry use.
Gum tree (<i>Eucalyptus grandis</i>)	200ml/10 litres of water	The listed target species are controlled optimally by cut stump treatments with IMAZAPYR 250 SL in grazing, industrial and conservation areas.
Bug weed (<i>Solanum mauritianum</i>)	80ml/10 litres of water	Cut the stems of target plants as close to the ground as possible and apply the IMAZAPYR 250 SL solution before cut surfaces dry out. It is recommended to apply the solution with low pressure applicators, a dosing gun or a knapsack sprayer. Never use high pressure applicators. The solution may also be poured on. Apply 10ml solution per 100mm cut stem diameter.
Gum tree (<i>Eucalyptus grandis</i>)	50ml/10 litres of water	Foliar application: Apply coppice re-growth when it reaches 0.5 to 1.0 metre height.
Bug weed (<i>Solanum mauritianum</i>)	25ml/10 litres of water	Foliar application: Apply coppice re-growth when it reaches 0.5 to 1.0 metre height.
Katbos (<i>Protasparagus</i> spp.)	25ml/10 litres of water	Apply to actively growing plants.

ALWAYS READ THE LABEL

Solanum mauritianum



Gum tree



Protasparagus



Your Farming Partner

Jake 20DF

Active Ingredient: Metsulfuron-Methyl 600g/kg

A selective post weed emergence, for the control of volunteer Soyabeans and broadleaf weeds in Wheat and Barley

CROP	STAGE OF APPLICATION	DOSAGE RATE/HA	REMARKS
Ground Application Winter Wheat and Barley	Weed seedlings	JACK 3-4g. Add Wetter (Agral 90) 100ml/100Litres spray mix	Apply JACK when wheat/barley crop is in the 3-5 leaf stage, but after the weeds have emerged (3-5cm high)
Aerial Application Winter Wheat and Barley	Weed seedlings	JACK 3-4g. Add Wetter (Agral 90). Add antidrift agent 50g/100 litres spray mix	When using an antidrift agent please refer to the mixing requirements

WEEDS CONTROLLED

Stinkblaar
Gallant soldier
Apple of peru
Fat hen
Black jack
Volunteer soyabeans

(*Daturastramonium*)
(*Galinsoga parviflora*)
(*Nicandra physaloides*)
(*Chenopodium album*)
(*Bidens pilosa*)
(*Glycine max*)

ALWAYS READ THE LABEL

Gallant soldier



Fat hen



Black jack



Your Farming Partner

Mesotrione 480 EC

Active Ingredient: Mesotrione 480 g/L

A suspension concentrate systemic pre- and post- emergence herbicide for the control of annual broadleaf weeds, grasses and the suppression of certain weeds in maize and sugarcane.

Scientific name	Common name	IN COMBINATION WITH	
		MESOTRIONE 480 EC	METOLACHLOR
<i>Acanthospermum hispidum</i> <i>Chenopodium album</i> <i>Echinochloa colona</i> <i>Nicandra physaloides</i> <i>Physalis angulata</i>	Upright satarbur White goosefoot Marsh grass Apple-of-Peru Wild gooseberry	104 ml/ha	325-812 ml/ha

Scientific name	Common name	IN COMBINATION WITH	
		MESOTRIONE 480 EC	METOLACHLOR
<i>Chenopodium carinatum</i> <i>Setaria pallida-fusca</i> <i>Eleusine indica</i> <i>Panicum schinzii</i>	Green goosefoot Red bristle grass Goose grass Sweet buffalo grass	156 ml/ha	487-812 ml/ha

Scientific name	Common name	IN COMBINATION WITH	
		MESOTRIONE 480 EC	METOLACHLOR
<i>Amaranthus hybridus</i> <i>Brachiaria eruciformis</i> <i>Datura ferox</i> <i>Eragrostis curvula</i> <i>Hibiscus trionum</i> <i>Polygonum aviculare</i> <i>Cleome monophylla</i> <i>Commelina benghalensis</i> <i>Digitaria sanguinalis</i> <i>Hibiscus cannabinus</i> <i>Triumfetta pilosa</i>	Common pigweed Sweet signal grass Large thorn apple Weeping love grass Bladder weed Postrate knotweed Spindlepod Benghal wandering Jew Crab fingergrass Kenaf Burs	208 ml/ha	649-812 ml/ha

Scientific name	Common name	IN COMBINATION WITH	
		MESOTRIONE 480 EC	METOLACHLOR
<i>Urochloa panicoides</i> <i>Xanthium strumarium</i>	Herringbone grass Cocklebur	260 ml/ha	812 ml/ha

ALWAYS READ THE LABEL

Chenopodium album



Echinochloa colona



Setaria pallidefusca



Your Farming Partner

Metolachlor 960EC

Active Ingredients: Metolachlor 960g/litre

Metolachlor 960EC is a pre-emergent herbicide, which is applied to the soil and must be activated by rain or irrigation within 2 days after application, or by a shallow mechanical incorporation into the soil; if not, weed control efficacy may be reduced. **Metolachlor 960EC** will not control established weeds and must be applied to a well prepared seed bed before emergence of weeds.

Yellow Nutsedge control: For the best chances of control, the following must occur in rapid sequence:

1. The land should be disced
2. The crop should be planted.
3. **Metolachlor 960EC** should be applied at the full rate for the soil type.
4. At least 12mm of rain or irrigation should fall within approximately 5 days after herbicide application

CROP	WEEDS	SOIL CLAY%	RATE OF METOLACHLOR 960EC/HA	APPLICATION
Cotton	Annual grasses & most broadleaf weeds	0-30 30 +	1.25 1.5	Apply before crop emergence with a registered broadleaf herbicide
	Yellow nutsedge, annual grasses & some broadleaf weeds	0-30 30 +	1.5 1.75	
Groundnuts	Annual grasses & most broadleaf weeds	0-30 30 +	1.25 1.5	Apply before crop emergence
	Yellow nutsedge, annual grasses & certain broadleaf weeds	0-30 30 +	1.5 1.75	
Maize	Annual grasses & most broadleaf weeds	0-15 16-30 30+	1.25-15 1.25-15 1.75	Apply before crop emergence. Use higher rate for grasses semi-resistant to atrazine
	Yellow nutsedge, annual grasses & certain broadleaf weeds	0-15 16-30 30 +	1.5 1.75 2.0	
Soyabeans	Annual grasses & most broadleaf weeds	0-30 30 +	1.25 1.5	Apply before crop emergence
	Yellow nutsedge, annual grasses & certain broadleaf weeds	0-30 30 +	1.5 1.75	
Plantation crops: Tea & Coffee Transplant Established	Annual grasses	<20% >20% <20% >20%	2,0 2,5 2,0 2,5	Apply as a directed spray immediately after transplanting.

ALWAYS READ THE LABEL

Herringbone grass



Postrate knotweed



Sweet buffalo grass



Weeping love grass



Your Farming Partner

Metribuzin 480 SC

Active Ingredient: Metribuzin 480g

A suspension concentrate herbicide for the control of a variety of annual broadleaf weeds and grasses in transplanted plants as listed

RECOMMENDATIONS

Metribuzin 480 SC is absorbed both through the leaves and roots of weeds. Best results are obtained when Metribuzin 480 SC is applied to a moist soil before weed emergence (pre-emergent application) or when weeds are young (post-emergent application). Climatic conditions should be warm and optimal for weed growth. Metribuzin 480 SC should normally control weeds for a period of 8 - 16 weeks depending on the concentration applied.

Crop	Soil Type	% Clay	Rate/ha	Remarks
Barley (Post- emergence, 3-5 leaf stage)			200ml	Apply as a post- emergent application to actively growing seedling weeds when the crop is at the 3-5 leaf stage.
Potatoes (Pre-emergence)	Light to Medium Medium-heavy to Heavy	Up to 30% 30 - 50%	1.1L 1.5L	Apply uniformly to the soil directly after planting and ridging until 14 days after planting or before emergence of the crop. Metribuzin 480 SC may be applied by ground or air.
Soyabeans (Pre-emergence)	Light Medium Medium - heavy Heavy	Up to 20% 20 - 30% 30 - 40% 40 - 50%	NR 0.6L 0.9L 1.1L	Not recommended on light soils. On other soils apply pre-crop emergence on varieties Duiker, Sable, Rosa, Kudu, Oribo, Buffalo or SC SI. Use these rates in combination with Alachlor, Metolachlor, Dimethenamid, or following preplanting incorporation of Trifluralin. To enhance selectivity ensure seed is at least 3,5 - 4cm deep and avoid leaving a furrow in the planting row after planting. For even greater selectivity make a small ridge over the seed row with a suitable attachment fitted to the planter. If possible irrigate with 12mm water after application if rain is not imminent.
Tomato transplants (Post-emergence)	Light to Medium Medium - heavy to Heavy	Up to 30% 30 - 50%	1.1L - 1.5L 2.2L	Apply uniformly to the soil. Weeds should not be taller than 40mm and grasses preferably at emergence. Transplants should not be treated for at least 14 days after transplanting. Due to sensitivity of certain tomato cultivars, Metribuzin 480 SC should be applied as a directed spray between rows, unless experience has shown a particular cultivar to be tolerant.
Sugarcane (Post-emergence)			0.6L + 1.6kg ametryne	Apply as an overall early-post emergent spray. Post-emergent applications should be made early with respect to weed growth, and weeds should not be taller than 80-100mm. For sugarcane beyond the 5 leaf stage apply as a directed spray to the inter-row and base of the crop.
			Lasso/alachlor 3.0L pre-emergence 0.6L Metribuzin 480 SC post-emergence	When Lasso (alachlor) has been used pre-emergence, follow up with Metribuzin 480 SC early post-emergence. Applications should be made early with respect to weed growth. Metribuzin 480 SC can be sprayed directly over cane without injury.

ALWAYS READ THE LABEL



Your Farming Partner

Nicosulfuron 75 WDG

Active Ingredient: Nicosulfuron 750g/kg

For the control of Shamva grass and some broadleaf weeds in commercial Maize & Sugarcane

For the best results, apply **Nicosulfuron 75WDG** post-emergent to the crop and weeds at the growth stages listed in the table below.

CROP	RATE/HA	LEAF STAGE		
Commercial Maize & Sugarcane	45g + Wetter	Crop Stage	Maize & Sugarcane	4 - 6
		Weed Stage	Shamva Grass	3 - 6
			Broadleaf	3 - 4

MODE OF ACTION: Nicosulfuron 75 WDG is rapidly absorbed by the weed roots and foliage. Susceptible weeds will cease growth immediately after application - discoloration of the younger leaves will be observed within 4 to 5 days followed by necrosis which spreads to the whole plant. Complete kill occurs within 20 to 25 days under normal conditions, this can take a little longer in cooler temperatures.

BROADLEAVED WEEDS CONTROLLED:

(*Acanthospermum hispidum*) Upright starburr
(*Bidens pilosa*) Blackjack
(*Nicandra physaloides*) Apple of peru
(*Richardia scabra*) Mexican clover

(*Schkuhriapinnata*) Dwarf marigold
(*Tagetes minuta*) Mexican marigold
(*Amaranthus hybridus*) Pigweed
(*Chenopodium album*) Fat hen
(*Datura stramonium*) Stinkblaar

ANNUAL GRASSES CONTROLLED BY NICOSULFURON 75 WDG

(*Rottboellia conchinchinesis*), Shamva grass

ALWAYS READ THE LABEL

Mexican clover



Pigweed



Mexican marigold



Your Farming Partner

Pendimethalin 500 CS

Active Ingredient: Pendimethalin 500g/litre

A water-based capsule suspension herbicide for the selective pre-emergent control of certain annual grasses and broadleaf weeds in various crops as listed.

RATES OF APPLICATION	SOIL TYPE APPLICATION RATE (L / ha)
Light sand to sandy loam (5 - 20 % clay)	2.2L (1.45L **)
Sandy clay loam (21 - 35 % clay)	3.3L (2.2L **)
Sandy clay (36 - 50 % clay)	4.4L (2.9L **)

* Do not apply the lower rates of **PENDIMETHALIN 500 CS**, with aerial application

** The lower rates, are only to be used where **PENDIMETHALIN 500 CS** is mechanically incorporated and control of annual grasses only is required.

CROP	Dosage (L/ha)	Method of Application
Cotton	2.5 - 3.0	Pre-plant incorporation before sowing or pre-emergence surface spray within 2-3 days of sowing. Mechanical incorporation: Cotton can be planted after the PENDIMETHALIN 500 CS herbicide incorporation, in un-ridged soil and should be done as soon as possible, in order to obtain maximum period of weed control. When planting in ridges, first prepare the ridges, then apply and incorporate the herbicide, before planting. Water incorporation: Incorporation by means of 20-50mm sprinkler irrigation must be carried out, after the cotton has been planted and the herbicide applied.
Maize	2.5 - 3.0	Pre-emergence surface spray within two to three days of sowing
Sugarcane	2.5 - 3.0	Pre emergence application to control annual grasses. Reduce rate when used with a broad leaf herbicide. If PENDIMETHALIN 500 CS is targeted at controlling <i>Rottboellia cochinchinensis</i> , the higher rate of 4,4L / ha is recommended, irrespective of soil type. Plant cane: Apply within two days of planting. Ratoon cane: Apply not later than seven days after cutting. Mechanical incorporation: Sugarcane can be planted after the PENDIMETHALIN 500 CS herbicide incorporation. Water incorporation: Incorporation, by means of 20 - 50 mm sprinkler irrigation, must be carried out after the sugarcane has been planted and the herbicide applied
Potatoes	2.2 - 4.4	Apply after planting to the leveled soil or pre-made ridges and incorporate mechanically. Prevent direct contact of tubers with treated soil.
Groundnuts	2.2 - 4.4	pre-emergence surface spray within 3 days of sowing. Water incorporation increases spectrum of activity.

WEEDS CONTROLLED

The following weed species are normally controlled by a pre-emergent application of **PENDIMETHALIN 500 CS** at the dosage rates indicated.

ALWAYS READ THE LABEL

ANNUAL GRASSES

Common name	Scientific name	Common name	Scientific name
Goose grass	<i>Eleusine corocana</i>	Herringbone grass	<i>Urochloa panicoides</i>
Rhodes grass	<i>Chloris gayana</i>	Gisekia	<i>Gisekia pharnacioides</i>
Feather-top chloris	<i>Chloris virgata</i>	Sweet buffalo grass	<i>Panicum schinzii</i>
Spiderweb chloris	<i>Chloris pycnothrix</i>	Guinea grass	<i>Panicum maximum</i>
Crowfoot grass	<i>Dactyloctenium aegyptium</i>	Shamva grass	<i>Rottboellia cochinchinensis</i>
Crab finger grass	<i>Digitaria sanguinalis</i>	Sticky bristle grass	<i>Setaria verticillata</i>
Marsh grass	<i>Echinochloa colona</i>	Small carrotseed grass	<i>Tragus berteronianus</i>
Barnyard grass	<i>Echinochloa crus-galli</i>	Large carrotseed grass	<i>Tragus racemosus</i>
Bread Signal grass	<i>Brachiaria brizantha</i>	Love grass	<i>Eragrostis spp</i>

Propaquizafop 100 EC

Active Ingredient: Propaquizafop 100%

A post-emergence herbicide for the control of annual and perennial grasses in cotton, soyabeans, groundnuts, field beans and tobacco lands.

WEEDS	GROWTH STAGE	DOSAGE	NOTES
(A) Annual grasses (including Rottboellia cochinchinensis and volunteer cereals)	3rd leaf to early tillering	0,5- 1,0 litres per hectare	(use the lower rate when the weeds are young and the higher rate when the weeds are in the mid to late tillering growing stage)
(B) Perennial grasses (including Sorghum halepense from rhizomes)	3rd leaf to shooting (early post tillering)	1,0- 2,0 litres per hectare	



Your Farming Partner

S-Metolachlor 960EC

Active Ingredient: S - Metolachlor .960g/L

A selective pre-emergent herbicide for the control of grasses and some broad leaved weeds in various crops as listed.

CROP	WEEDS	SOIL CLAY %	RATE OF S-METOLACHLOR 96EC/HA	APPLICATION
Cotton	Annual grasses & most broadleaf weeds	0-30 30+	0.7 L/ha 0.9	Apply before crop emergence with a registered broadleaf herbicide.
	Yellow nutsedge, annual grasses & some broadleaf weeds	0-30 30+	1.5 L/ha 1.75 L/ha	
Groundnuts	Annual grasses & most broadleaf weeds	0-30 30+	1.0 L/ha 1.2 L/ha	Apply before crop emergence.
Maize	Annual grasses & most broadleaf weeds	0-15 16-30 30+	1.15 L/ha 1.15 L/ha 1.0 L/ha	Apply before crop emergence. Use higher rate for grasses or semi-resistant to atrazine.
	Yellow nutsedge, annual grasses & certain broadleaf weeds	0-15 16-30 30+	1.0 L/ha 1.0 L/ha 1.2 L/ha	
Soyabeans	Annual grasses & most broadleaf weeds	0-30 30+	1.2 L/ha 1.2 L/ha	Apply before crop emergence.
	Yellow nutsedge, annual grasses & certain broadleaf weeds	0-30 30+	1 L/ha 1.2 L/ha	



ALWAYS READ THE LABEL

Your Farming Partner

Sulfan 480 SC

Active Ingredient: Sulfentrazone 480g/L

A suspension concentrate herbicide for the control of sedges, broadleaf weeds and annual grasses as indicated.

Timing	SOIL CLASSIFICATION CHART		
	Coarse	Medium	Fine
	Sand	Sandy clay loam	Silty clay loam
	Loamy sand	Sandy clay	Silty clay
	Sandy loam	Silt loam	Clay loam
		Silt	Clay
Pre-emergence	Not recommended	1.25 to 1.9 L/ha	1.5 to 1.9 L/ha
Pre- to early Post-emergence	Not recommended	1.25L + MCPA or ametryn or acetochlor or diuron or Diquat	
Late Post-emergence	0.55L/ha + surfactant or 0.55L/ha + MCPA		

Pre-Emergence application in plant- and ratoon sugarcane for the control of purple watergrass (*Cyperus rotundus*)

TIMING	RATE OF USE	SOIL TYPE	COMMENTS
Pre-emergence	1.9L/ha	Fine soil Medium soil	Annual application will result in reduction of sedge tuber population.

SOYA BEANS: Ensure soya seed is planted at least 3.5 to 4cm deep and avoid leaving a furrow in the row after planting. Apply **Sulfan 480 SC** to soil of good tilth, post-planting and pre-emergence of crop and weeds at the following rates:

CLAY	ml per hectare
Upto 15%	Not recommended
16-35%	700ml/ha
>35%	780ml/ha

List of some weeds controlled

Sedges	Broadleaf weeds	Grasses
<i>Cyperus rotundus</i> <i>Cyperus esculentus</i> <i>Bulbostylus hispidula</i>	<i>Ageratum conyzoides</i> <i>Amaranthus spp.</i> <i>Commelina benghalensis</i> <i>Conyza floribunda</i> <i>Datura stramonium</i> <i>Emex australis</i> <i>Ipomeae purpurea</i> <i>Portulaca oleracea</i> <i>Senecio madagascarensis</i> <i>Solanum nigrum</i> <i>Sonchus oleraceus</i> <i>Sysimbrium thellingii</i> <i>Acanthospermum hispidum</i>	<i>Eleusine indica</i> <i>Setaria verticillata</i> <i>Digitaria sanguinalis</i> <i>Paspalum dilatatum</i> <i>Sorghum bicolor</i> <i>Panicum maximum (from seed only)</i> <i>Digitaria sanguinalis</i> <i>Echinochloa colona</i> <i>Eleusine coracana</i> <i>Eragrostis spp</i> <i>Panicum maximum</i>

ALWAYS READ THE LABEL

Conyza floribunda



Emex australis



Paspalum dilatatum



Ipomeae purpurea



Echinochloa colona



Your Farming Partner

Superior 75DF

Active Ingredient: Tribenuron

A water dispersible granule formulation for use in wheat, barley and oats, winter rye and winter triticale against annual broad leaf weeds and creeping thistle.

SITUATION	WEEDS CONTROLLED	RATE g/ha	WEED GROWTH STAGE AT APPLICATION	CRITICAL COMMENTS
As a herbicide resistance countering measure, DO NOT use an ALS inhibitor herbicide in the crop following the use of SUPERIOR Herbicide alone as a preceding fallow or pre-crop treatment.				
FALLOW and PRE-CROP (Refer to Crop Options section for minimum intervals between application and sowing)	Amaranthus / Boggabri Weed (<i>Amaranthus mitchellii</i>)	25	Apply up to the 10 leaf stage	
	Caltrop / Yellowvine (<i>Tribulus terrestris</i>)			
	Common Sowthistle /Milk Thistle (<i>Sonchus oleraceus</i>)	Apply up to the 6 leaf stage	If weeds are at a more advanced growth stage and/or are present in high numbers (greater than 50 per m2) use a Glyphosate mixture as specified in SUPERIOR Herbicide + Glyphosate Tank mix table.	
	Deadnettle (<i>Lamium amplexicaule</i>)			
	Medics (Native) (<i>Medicago spp.</i>)	30	Apply up to 5cm diameter	
	New Zealand Spinach (<i>Tetragonia tetragonoides</i>)	20	Apply up to the 10 leaf stage	
	Prickly Lettuce (<i>Lactuca serriola</i>)	30	Apply up to the 4 leaf stage	If weeds are at a more advanced growth stage and/or are present in high numbers (greater than 50 per m2) use a Glyphosate mixture as specified in SUPERIOR Herbicide + Glyphosate Tank mix table.
	Turnip Weed (<i>Rapistrum rugosum</i>)	30	Apply up to flowering	
Always add non-ionic surfactant (1,000 g/L – non buffering type) at 100ml/100L (0.1 % v/v) of final spray volume.				
SUPERIOR HERBICIDE + GLYPHOSATE TANK MIXES - NSW AND QLD ONLY				
SITUATION	WEEDS CONTROLLED	RATE g/ha	WEED GROWTH STAGE AT APPLICATION	CRITICAL COMMENTS
For the control of these weeds in addition to those in the SUPERIOR Herbicide alone table..				
FALLOW and PRE-CROP (Refer to Crop options section for minimum intervals between application and sowing)	Black Bindweed (<i>Fallopia convolvulus</i>)	25 + Glyphosate (450g/L) 600ml/ha	Apply up to the 10 leaf stage	For best control, apply to small actively growing weeds. Larger weeds are more difficult to control.
	Common Thornapple (<i>Datura stramonium</i>)	20 + Glyphosate (450g/L) 400ml/ha	Apply up to the 8 leaf stage	
	Deadnettle (<i>Lamium amplexicaule</i>)	25 + Glyphosate (450g/L) 400ml/ha	Apply up to the 10 leaf stage	
	Mintweed (<i>Salvia reflexa</i>)	15 + Glyphosate (450g/L) 600ml/ha		
	Pigweed / Portulaca (<i>Portulaca oleracea</i>)	20 + Glyphosate (450g/L) 600ml/ha		
	Prickly Lettuce (<i>Lactuca serriola</i>)		Apply up to the 6 leaf stage	
Always add non-ionic surfactant (1,000 g/L – non buffering type) at 100ml/100L (0.1 % v/v) of final spray volume.				

ALWAYS READ THE LABEL

Common Sowthistle



Prickly Lettuce



Mintweed



Turnip Weed



Your Farming Partner

MCPA 40 SL

Active Ingredient: M.C.P.A

A selective soluble concentrate, hormonal type herbicide for the post-emergent control of many annual broadleaf weeds in wheat, barley, pastures and lawns.

CROP	DOSAGE(L/ha)	REMARKS
Barley	2,0 -3,0	Apply when crop has reached the 3-5 leaf stage and when the weeds are still small.
Wheat	2,0 -3,0	Apply when crop has reached the 3-5 leaf stage and when the weeds are still small.
Grass pastures (Established)	2,0 -3,0	An application of Nitrogenous fertilizer 2-3 weeks before applying MCPA 40 SL is recommended.
Lawns (Established)	5ml/10m ²	Fertilize prior to treatment as for grass pastures. Repeat application may be necessary.

WEED SPECIES CONTROLLED BY USE OF MCPA 40 SL		WEED SPECIES SHOWING RESISTANCE TO MCPA 40 SL	
<i>Ageratum conyzoides</i>	Billygoat weed	<i>Richardia spp</i>	Mexican clover
<i>Amaranthus spp</i>	Pigweed	<i>Datura spp</i>	Stinkblaar
<i>Bidens pilosa</i>	Black Jack	<i>Physalis angulata</i>	Wild gooseberry
<i>Chenopodium album</i>	Fat hen		
<i>Commelina benghalensis</i>	Wandering Jew		
<i>Portulaca oleracea</i>	Purslane		
<i>Tagetes minuta</i>	Mexican marigold		
<i>Tribulus terrestris</i>	Devil thorn		
<i>Xanthium spp</i>	Volunteer Soyabeans		

ALWAYS READ THE LABEL

Ageratum conyzoides



Tribulus terrestris



Tagetes minuta



Your Farming Partner

Ametryn 500 SC

Active Ingredient: Ametryn 500g/L

A suspension concentrate herbicide for the control of annual broadleaved weeds and grasses in sugarcane, bananas and pineapples as indicated.

CROP	REMARKS
AMETRYN 500 SC PLUS MCPA 400 SL	Apply 4.0 to 5.0 litres AMETRYN 500 SC plus 3.5 litres MCPA 400 SL Add a non-ionic wetter at 0.2 % of spray volume.

AMETRYN 500 SC may be applied at any development stage of the cane, but weeds must be actively growing and not larger than 6cm.

NOTES

1. Direct spray between the rows from the 5-leaf stage of the sugarcane.
2. Only apply up to the 2- to 3-leaf stage of sugarcane.
3. Apply the lower **AMETRYN 500 SC** dosage on light to medium soils. Use the higher dosage on medium to heavy soils.
4. Apply before emergence of the weeds.
5. Apply before the tillering stage of annual grasses.
6. Use the higher dosage rates on heavy soils.

AMETRYN 500 SC recommendations for use in bananas.

SOIL TYPE	Litres/ha
ALL Types	Apply AMETRYN 500 SC 6.4L/ha

AMETRYN 500 SC as a post emergence application in pineapples.

% Clay in soil	Litres/ha
< 20 %	8.0
21 to 35 %	11.2
> 35%	Not recommended

Broadleaf weeds controlled by AMETRYN 500 SC:

<i>Amaranthus</i> spp.	Pigweed	<i>Euphorbia</i> spp.	Milkweed
<i>Bidens bipinnata</i>	Spanish black jack	<i>Galinsoga parviflora</i>	Gallant soldier
<i>Bidens pilosa</i>	Common black jack	<i>Nicandra physaloides</i>	Apple-of-Peru
<i>Chenopodium album</i>	White goosefoot	<i>Portulaca oleraceae</i>	Common purslane
<i>Cleome monophylla</i>	Spindlepod	<i>Richardia brasiliensis</i>	Tropical richardia
<i>Commelina benghalensis</i>	Benghal wandering jew	<i>Sida cordifolia</i>	Flannel weed
<i>Conyza canadensis</i>	Horseweed fleabane	<i>Solanum nigrum</i>	Black nightshade
<i>Datura</i> spp.	Thornapple	<i>Sonchus oleraceus</i>	Common sowthistle

Grass weeds controlled by AMETRYN 500 SC:

<i>Panicum schinzii</i>	Sweet buffalo grass	<i>Digitaria sanguinalis</i>	Crab finger-grass
<i>Panicum maximum</i>	Common buffalo grass	<i>Setaria verticillata</i>	Burr bristle grass
<i>Panicum subalbidum</i>	Elbow grass	<i>Setaria pallidifusca</i>	Red bristle grass
<i>Echinochloa crusgalli</i>	Barnyard grass	<i>Urochloa panicoides</i>	Herringbone grass
<i>Eleusine indica</i>	Goose grass		

ALWAYS READ THE LABEL

Your Farming Partner



FERTILIZERS

Expert Choice Agrochemicals provides the best nutritional management solutions to help in crop enhancement ensuring crops grown reach their full potential.

Plant nutrition refers to the need for basic chemical elements for plant growth and the interrelated steps by which a living organism assimilates food and uses it for growth and replacement of tissue.

What are fertilizers?

Think of fertilizers as plant food. Fertilizers are combination of the nutrients that plants must have to grow, in a form they can use.

Primary nutrients are major macro elements often formulated as Nitrogen (N), Phosphorus (P) and Potassium (K), compounds or blends.

Secondary Nutrients (Sulphur, Calcium and Magnesium) are essential macro elements after the primary elements.

Micronutrients are as important as other macro elements although needed in small quantities. Micro nutrients include Boron, Chlorine, Copper, Iron, Manganese, Molybdenum, Nickel and Zinc.

These plant nutrients can be supplied through organic fertilizers such as plant residues or livestock manure, or mineral fertilizers, which are chemically processed to meet crop needs.

A deficiency in any nutrient whether primary, secondary or micro-nutrients affects the yields directly.



Your **Farming** Partner

ExpertBoost

Legume Supplement Water Soluble Foliar Fertilizer



Highlights

- * A unique specialty product for legumes.
- * A total nitrogen fixation enabler in root nodules from atmosphere
- * An efficient pulses booster
- * Synthesizes chlorophyll, carbohydrates production, cell respiration which helps in nitrogen fixation
- * Helps the plant system to produce bold grains
- * Helps plants manage stress and minimizes loss of moisture during drought
- * All the above results in good quality produce

Composition:

Heterocyclic Nitrogen	: 20.00% N
Phosphonic Acid	: 6.00% as P ₂ O ₅
Iron	: 5.00% Fe
Sulphur	: 10.00% S
Inert Ingredients	: Q.S

Recommendations : 2g per litre of water

Crops: *Pulses & Legumes*: Soyabean, Groundnut, Cowpea, Shelling Pea, Mung Pea, Dry Beans and other Legume crops.

Time of application: Depending on the crop duration, first application at 30-40 days from the date of sowing / at the time of flower Initiation and second application at the time of pre formation.

ALWAYS READ THE LABEL

Ammonium Nitrate 34.5%N

A concentrated granular nitrogen fertilizer to provide agricultural plants with nitrogen in the early spring, as well as after cut and grazing to promote after growing, active growth and development of green material. It contains equal amounts of ammonia and nitrate nitrogen, and is a universal and high-performance mineral fertilizer. The prolonged use gives an acidifying effect on the soil, thus requiring periodic calcification.



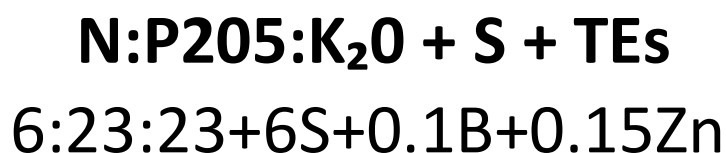
ALWAYS READ THE LABEL

Your **Farming** Partner



ExpertFert

Expert Blend



Potassium (K) is required by all plant and animal life. While potassium is not a commonly limiting soil nutrient in crop production in Zimbabwe, about 15 per cent of Zimbabwe soils used for annual crop production are estimated to have slight to moderate potassium deficiency.

Adequate potassium results in superior quality of the whole plant due to the improved efficiency of photosynthesis, increased resistance to some diseases and greater water use efficiency. Potassium helps maintain a normal balance between carbohydrates and proteins.

Sufficient potassium results in stronger straw of cereal crops and assists in seed filling. Potassium deficiency in cereal crops results in reduced growth, delayed maturity, lodging caused by weaker straw and lower bushel weight. Potassium deficiencies are most common on well drained, coarse-textured soils. These deficiencies can be corrected with potassium (potash) fertilizer (K_2O).



ALWAYS READ THE LABEL

Your **Farming** Partner

Expert Grainfert 250 EC

Molybdenum (Mol) 170g/kg=250g/L

For the prevention and correction of molybdenum deficiency by foliar application

Apply whenever a deficiency is observed or expected but after the 3 leaf stage or as soon as there is sufficient foliage available to allow uptake by the plant. Best results will be obtained from applications during the evening or early morning when moisture is present in the plant. **DO NOT** apply in the extremes of temperature, very bright sunlight or when the crop is under drought or other stress.

RATES OF USE AND TIMINGS: Apply in at least 200 litres of water per hectare.

CROP	RATE	REMARKS
Beans and peas:	25ml/ha	Apply when plants are 5-15cm tall. For moderate to severe deficiency, repeat at 10-14 day intervals.
Broccoli, brussels sprouts, cabbage, calabrese	25ml/ha	Apply from the 4-6 leaf stage. For moderate to severe deficiency, repeat at 10-14 day intervals.
Cauliflower:	25ml/ha	Apply from 4-6 leaf stage. For moderate to severe deficiency, repeat at 10-14 day intervals, or make a second application at early head development or buttoning.
Kale:	25ml/ha	Apply from 4-6 leaf stage. For moderate to severe deficiency, repeat at 10-14 day intervals.
Leeks	25ml/ha	Apply two weeks after transplanting, or in case of direct sown crops, when the crop is 15cm tall. One or two further applications may be necessary at 10-14 day intervals.
Oilseed rape	25ml/ha	Apply at the 4-6 leaf stage followed by 0.25 l/ha at the onset of stem extension. A further application can be made at 10-14 days later for a severe deficiency. Avoid application during flowering.
Onions	25ml/ha	Apply as soon as there is sufficient leaf cover to intercept the spray. Repeat two weeks later if necessary.
Parsnip	25ml/ha	Apply at 10-14 days after transplanting or when the crop is 15cm tall. Repeat two weeks later if necessary.
Swede, turnip	25ml/ha	Apply at the 4-6 leaf stage. For moderate to severe deficiency, repeat at 10-14 day intervals.

COMPATIBILITY:

Molybdenum 250 is physically compatible with many spray-applied agricultural chemicals. Consult your distributor for the latest information.

STORAGE:

Two years from the date of manufacture if stored in the original unopened container under constant cool and dry conditions.

ALWAYS READ THE LABEL

Calcium Nitrate

Active Ingredients: 15.0%N:24-26%Ca

Crop Segments: All



CALCIUM NITRATE

Calcium nitrate is mainly produced as a fertilizer, used for plant nutrition purposes, and for wastewater treatment. It is a source of both calcium and nitrogen, for plants.

Calcium nitrate is a very soluble compound with a solubility of 172 oz/gal in 68° F, and it is widely used in fertigation. In various places, it is also available in a solution form.

The formula of calcium nitrate is $\text{Ca}(\text{NO}_3)_2$ and it is manufactured by one of the following processes:

The increasing demand is driven by the rising demand for grain crops and for wastewater treatment. Nitrogen is a macro element, required by plants in large quantities. It is a building block of the chlorophyll and of amino acids.

Calcium is an important component of the cell walls and proper supply of calcium is essential to plant development. It improves fruit quality, shelf life, strengthen the cell wall and helps protecting the plant from stress and diseases. Calcium moves in plants only up from the roots, with the water flow, and is immobile once incorporated in plant tissue. Therefore, a constant supply is required.

ALWAYS READ THE LABEL

Other Fertilizers

Crop Segments: Various Crops



Cereal Blend

Active Ingredients: 6%N:23%P:23K

Compound C

Active Ingredients: 6%N:24%P:20%K

Compound D

Active Ingredients: N7:P14:K7

Compound DD

Active Ingredients: 14%N:28%P:14K

Compound S

Active Ingredients: 7%:21%P:7%K:8%S

Sodium Molybdate

Active Ingredients: 39.5%Mo

ALWAYS READ THE LABEL

Mono Ammonium Phosphate

Active Ingredients:

Crop Segments: All



Mono-Ammonium Phosphate (MAP)

MAP is a high analysis source of phosphorus.
A cost effective granular product.

Low in heavy metals.

Good handling characteristics.

The nitrogen in MAP is in the ammonium form, which resists leaching and is a slower release form of nitrogen.

The product has an acid reaction in the soil which can be an advantage in neutral and high pH soils. Therefore MAP is used in preference to DAP on alkaline soils.

MAP is used extensively in cropping systems and for sowing pastures. The low level of nitrogen makes it useful as a 'starter' fertiliser and as there is no free ammonia, the risk of affecting germinating seeds is minimal.

ALWAYS READ THE LABEL

Murate of Potash

Active Ingredients: 55-60%: K20%

Crop Segments: All

MOP is used extensively for fertilising pastures, sugar cane, fruit trees, vegetables, and other field crops.



Muriate of Potash (MOP) or Potassium Chloride

Potassium stimulates the growth of strong stems and gives the plant some disease resistance by promoting thickness of the outer cell walls. Adequate potassium can reduce moisture loss from growing plants, thereby giving some drought resistance.

Potassium improves colour, flavour and storing quality of fruit and vegetables.

MOP is the most concentrated form of granular potassium and typically the most cost effective.

The even granule size of **MOP** allows for accurate spreading. **MOP** is commonly blended with SSP to supply major nutrients for pasture based systems

Typical Analysis

N%P%K%S%Zn%005000

Chemical name: Potassium chloride

Features: Most economic form of soluble potassium.

Blending: Blends with most other products.

Occurs as a natural salt and after processing to cleanse out unwanted salts (especially common salt), it is usually compacted into 'chips' and screened to meet size specifications.

Storage: **MOP** stores well in bulk or in bags. It is not hygroscopic. **MOP** is particularly corrosive and so metal parts should be protected.

Restrictions: **MOP** should **not be** used on salt sensitive crops, where soil salt levels are high or increasing, or where irrigation water has high salt levels. **DO NOT** place **MOP** near seed unless the seed has been protected by lime-coating or inoculation.

ALWAYS READ THE LABEL

Your **Farming** Partner

Potassium Nitrate

Active Ingredients: 13%N:46%K₂O



POTASSIUM NITRATE

Potassium nitrate (KNO₃) is a soluble source of two major essential plant nutrients. It's commonly used as a fertilizer for high-value crops that benefit from nitrate (NO₃⁻) nutrition and a source of potassium (K⁺) free of chloride (Cl⁻).

Growers value fertilizing with KNO₃ especially in conditions where a highly soluble, chloride-free nutrient source is needed. In such soils, all of the Nitrogen is immediately available for plant uptake as nitrate, requiring no additional microbial action and soil transformation.

Growers of high-value vegetable and orchard crops sometime prefer to use a nitrate-based source of nutrition in an effort to boost yield and quality.

Both Nitrogen and Potassium are required by plants to support harvest quality, protein formation, disease resistance and water-use efficiency. Therefore, to support healthy growth, farmers often apply KNO₃ to soil or through the irrigation system during the growing season.

ALWAYS READ THE LABEL

Single Super Phosphate

Active Ingredients: 20%P: 20%S

Crop Segments: All

Features: Source of phosphorus, calcium and sulphur.



Single Superphosphate (SSP)

SSP provides the ideal balance of phosphorus, sulphur and calcium for improving pasture, hay and livestock profitability, contained within the one granule. Strong source of phosphorus, readily available for plant uptake. The ratio of phosphorus and sulphur suits many crop and pasture needs.

Contains calcium and sulphur keeping soil in good shape by maintaining soil structure and providing a balance of nutrients that mimics pasture growth.

Blending: Blends with most fertilisers except Urea and DAP.

Storage: Can be stored easily for long periods, without taking up moisture.

Typical Analysis

N%P%K%S%Ca%08.801119

The product is a low cost source of phosphorus and sulphur in a wide range of pasture situations. SSP is a traditional product for supplying phosphorus and sulphur to pastures, the main two nutrients required for pasture production. Generally mixed with Sulphate of Ammonia and Muriate of Potash, but can be blended with other fertilisers.

ALWAYS READ THE LABEL

Sulphate of Potash

Active Ingredients: 50%K₂O SOP

Crop Segments: All



Sulphate of Potash (SOP) or Potassium Sulphate

SOP provides both potassium and sulphur in soluble forms.

SOP contains no chloride and hence has a much lower salt index than MOP. Where soils are saline or sodic and where irrigation water may have high chloride levels SOP is the preferred form of potassium to use.

Where seeds or transplants are placed in direct contact with fertiliser, SOP is much less likely to cause root burn of plants.

Potassium stimulates the growth of strong stems and gives the plant some disease resistance by promoting thickness of the outer cell walls. Adequate potassium can reduce moisture loss from growing plants, thereby giving some drought resistance. Potassium improves colour, flavour and storing quality of fruit and vegetables.

Uses: Potassium sulphate (SOP) can be a more expensive source of potassium than MOP and so its uses are often restricted to areas.

- (i). Where soil or irrigation water salt levels are high and MOP is undesirable.
- (ii). Where chloride sensitive crops are being grown; for example, berries and vines.
- (iii). Where high chloride levels occur in irrigation water.

ALWAYS READ THE LABEL

Storage & Handling

Potassium sulphate can be stored in bulk bags. It does not bond in the heap. Potassium sulphate is slightly hygroscopic and is neutral in reaction. All potassium fertilisers are corrosive and care should be taken when the fertiliser is in contact with metal.



SEED TREATMENT

Seed treatment refers to the application of fungicide, insecticide, or a combination of both, to seeds so as to disinfect and disinfect them from seed-borne or soil-borne pathogenic organisms and storage insects. It also refers to the subjecting of seeds to solar energy exposure, immersion in conditioned water, etc.

The seed treatment is done to achieve the following benefits.

Benefits of Seed Treatment:

- 1) Prevents spread of plant diseases.
- 2) Protects seed from seed rot and seedling blights
- 3) Improves germination
- 4) Provides protection from storage insects
- 5) Controls soil insects.

Types of Seed Treatment:

- 1) **Seed disinfection:** Seed disinfection refers to the eradication of fungal spores that have become established within the seed coat, or in more deep-seated tissues. For effective control, the fungicidal treatment must actually penetrate the seed in order to kill the fungus that is present.
- 2) **Seed disinfection:** Seed disinfection refers to the destruction of surface-borne organisms that have contaminated the seed surface but not infected the seed surface. Chemical dips, soaks, fungicides applied as dust, slurry or liquid have been found successful.
- 3) **Seed Protection:** The purpose of seed protection is to protect the seed and young seedling from organisms in the soil which might otherwise cause decay of the seed before germination.

Conditions under which seed must be treated

- 1) **Injured Seeds:** Any break in the seed coat of a seed affords an excellent opportunity for fungi to enter the seed and either kill it, or awaken the seedling that will be produced from it. Seeds suffer mechanical injury during combining and threshing operations, or from being dropped from excessive heights. They may also be injured by weather or improper storage.
- 2) **Diseased seed:** Seed may be infected by disease organisms even at the time of harvest, or may become infected during processing, if processed on contaminated machinery or if stored in contaminated containers or warehouses.
- 3) **Undesirable soil conditions:** Seeds are sometimes planted under unfavourable soil conditions such as cold and damp soils, or extremely dry soils. Such unfavourable soil conditions may be favourable to the growth and development of certain fungi spores enabling them to attack and damage the seeds.
- 4) **Disease-free seed:** Seeds are invariably infected, by disease organisms ranging from no economic consequence to severe economic consequences. Seed treatment provides a good insurance against diseases, soil-borne organisms and thus affords protection to weak seeds enabling them to germinate and produce seedlings.

ExpertGold 35 FS

Active Ingredients: Fludioxonil 25g/l + Metalaxyl-M 10g/l

A water-based seed treatment fungicide for the control of Damping-off diseases caused by *Pythium* and *Rhizoctonia*, seedling blackleg in Canola, and Damping-off and root rot caused by *Pythium* and *Fusarium* in Maize, Sweet Corn and Sorghum.

MODE OF ACTION

EXPERTGOLD 35 FS controls seedling blackleg and damping-off diseases caused by *Rhizoctonia* and *Pythium* for 3 to 4 weeks after emergence.

APPLICATION AND MIXING INSTRUCTIONS

Treatment in small lots by the farmer

May be applied to seed in an enclosed drum or cement mixer.

1. Premix EXPERTGOLD 35 FS with water to a total volume of not less than 800 ml not more than 1.6l/100 kg of seed.
2. Apply solution to seed and vigorously mix for 1 to 2 minutes. Remove the treated seed from enclosed drum or cement mixer and spread on a drying rack allowing full circulation of air. Allow treated seeds to dry until there are no traces of dampness. Check for non-sticking or clumping of seeds. When the treated seeds are dried they will be loose and coated with colour.

Treatment of large seed lots by commercial seed-treatment equipment

For large-scale seed treatment, the product should be applied diluted with water in specialised seed treatment equipment. As for all such seed treatments, a good flow and metering system for the initial prepared solution is important. Depending on the type of seed treatment equipment, it may be necessary to adjust the recommended amount of water slightly in order to ensure an optimal flow of the solution and an even treatment of seed.

Prepare the solution as follows:

1. Fill the solution tank with the required volume of water and mix with the appropriate volume of EXPERTGOLD 35 FS. Total volumes of not less than 800 ml and not more than 1.6l/100 kg of seed are recommended.
2. Switch on the stirring system and stir for 10 minutes. Allow treated seeds to dry until there are no traces of dampness. Check for non-sticking or clumping of seeds. When the treated seeds are dried, they will be loose and coated with colour.

CROP	PEST	APPLICATION RATE	APPLICATION REMARKS
Canola	<i>Pythium</i> spp. <i>Rhizoctonia solani</i>	200 to 400 ml/ 100 kg of seed	Apply diluted with water to clean seed before sowing. If stored under dry, cool, well ventilated conditions treated seed can be retained for up to 24 months following treatment.
	Seedling Blackleg Suppression	400 ml/100 kg of seed	
Maize and Sweet corn	Damping-off and root rot caused by <i>Pythium</i> and <i>Fusarium</i> spp.	100 to 200 ml/ 100 kg of seed	Apply diluted with water to clean, healthy seed before sowing. Thorough mixing is required to ensure complete coverage. Coverage of all seeds is essential. Allow seed to dry before bagging. Use the higher rate (200 ml) in paddocks where soil conditions are expected to be very wet following sowing for improved control.
Sorghum	Damping-off and root rot caused by <i>Pythium</i> and <i>Fusarium</i> spp.	100 to 200 ml/ 100 kg of seed	

ALWAYS READ THE LABEL

Your Farming Partner

ExpertRouge 400 FS

Active Ingredients: Carboxin 200g/L + Thiram 200g/L

A flowable concentrate seed treatment fungicide for the control of Loose Smut (*Ustilago tritici*) and Stinking Smut (Bunt) (*Tilletia foetida*) in Wheat and Covered Smut (*Ustilago hordei*) and Loose Smut (*Ustilago nuda*) in Barley and seedling disease (*Rhizoctonia solani*) in Cotton and other seed as listed

COMPATIBILITY:

EXPERTROUGE 400 FS is compatible with most registered seed protectants presently in use. EXPERTROUGE 400 FS may be used as a follow-up treatment on seed already treated.

MIXING INSTRUCTIONS:

1. Thorough agitation of EXPERTROUGE 400 FS before use is recommended.
2. EXPERTROUGE 400 FS can be applied with any seed treatment equipment suitable for slurry application. Ensure thorough coverage of seed during application. Ensure that seed treatment equipment is properly calibrated to apply correct dosage rate as prescribed.

ON-FARM TREATMENT

First mix 150 ml of EXPERTROUGE 400 FS with 300 ml of water before adding it to 50 kg of seed. Mix thoroughly with the seed. Seed treated with EXPERTROUGE 400 FS may be carried over to the next season.

Treatment of large seed lots by commercial seed-treatment equipment

For large-scale seed treatment, the product should be applied diluted with water in specialised seed treatment equipment. As for all such seed treatments, a good flow and metering system for the initial prepared solution is important. Depending on the type of seed treatment equipment, it may be necessary to adjust the recommended amount of water slightly in order to ensure an optimal flow of the solution and an even treatment of seed.

Prepare the solution as follows:

1. Fill the solution tank with the required volume of water and mix with the appropriate volume of EXPERTROUGE 400 FS. Total volumes of not less than 800 ml and not more than 1.6l/100 kg of seed are recommended.
2. Switch on the stirring system and stir for 10 minutes. Allow treated seeds to dry until there are no traces of dampness. Check for non-sticking or clumping of seeds. When the treated seeds are dried, they will be loose and coated with colour.

CROP	DISEASE/PEST	DOSAGE/100KG OF SEED
Wheat	Stinking Smut (Bunt), Loose Smut	300 ml
Barley	Covered Smut, Loose Smut	300 ml
Cotton	Seedling disease (<i>Rhizoctonia solani</i>)	300 ml (Acid delinted seed)
Maize	Seed rot, Damping off diseases (<i>Pythium</i> spp.)	300 ml
Soyabeans	Root rot, collar rot, Pythium, charcoal rot	300 ml
Sorghum	Damping-off diseases (<i>Pythium</i> spp.)	300 ml
Vegetables	Seedling diseases (<i>Pythium</i> spp)	300 ml

WARNINGS:

DO NOT use treated seed for animal or human consumption.

DO NOT use treated seed for meal or oil extraction.

DO NOT allow treated seed to contaminate grain or other seed which is intended for animal or human consumption.

DO NOT feed treated seed, or otherwise expose, to wild or domestic birds.

Any spillage of treated seed which occurs either during the seed treatment process or in the field operations must be cleaned up immediately, preferably by recovery and re-use.

When treated seed is stored, it should be kept apart from other grain and the bags or other containers should be clearly marked to indicate that the contents have been treated. Bags which have held treated seed should not be used for any other purpose.

ALWAYS READ THE LABEL

Your Farming Partner

Expert Star 600 FS

Imidacloprid 600g/L

For the control of various insect pests in a range of crops, protection against insect pests of stored cereal grains and the prevention of spread of barley yellow dwarf virus in cereal crops, as listed.

CROP	PEST	RATE	REMARKS
Cotton	Thrips	875ml or 1.17L/ 100kg seed	Thrips damage is dependent upon thrips infesting cotton seedlings and the subsequent growth rate of the plants. Choose a higher rate if thrips pressure is expected.
	Aphids		When applied for thrips control, these rates will also control early season aphids.
	Brown Flea Beetle		These rates will also reduce damage to cotyledons caused by brown flea beetle.
	Wireworms	875ml or 1.17L/ 100kg seed	Use the higher rate if Wireworms pressure is expected.
Maize, Sorghum, Sunflower, Sweetcorn	Sugarcane Wireworm, (<i>Agrypnus variabilis</i>), Eastern False Wireworm (<i>Pterohelaeus darlingensis</i>), Striate False Wireworm (<i>Pterohelaeus alternatus</i>), Southern False Wireworm (<i>Gonocephalum macleayi</i>), Black Field Earwig (<i>Naiva lividipes</i>), Wingless Coackroach (<i>Cosmozosteria</i> spp.), <i>Calolampira elegans</i> , <i>C. solidata</i> , Field Cricket (<i>Teleogryllus commodus</i>), Black Sunflower Scarab (<i>Pseudoheteonix basicollis</i>)	Maize: 1.4ml/ 1000 seeds Sorghum, sunflower, sweet corn: 430ml/ 100kg of seed	Apply only to high quality seed. Ensure thorough coverage of seed.
Cereals	Wheat aphid and corn aphid	120ml or 240ml/ 100kg of seed	Use higher rate for increased length of control and in areas of high risk.
	Protection against insect pests of stored grains: Granary weevil (<i>Sitophilus granarius</i>) Indian meal moth (<i>Plodia interpunctella</i>) Lesser grain borer (<i>Rhyzopertha dominica</i>) Rice weevil (<i>Sitophilus oryzae</i>) Rust-red flour beetle (<i>Tribolium castaneum</i>) Sawtoothed grain beetle (<i>Oryzaephilus surinamensis</i>) Tropical warehouse moth (<i>Ephesia cautella</i>)	120ml/ 100kg of seed	Expert Star 600 FS will control insect pests during the storage of cereal grains to be used for seed only. Seed treated with Expert Star 600 FS is not to be used for human consumption or animal feed.

HARMFUL TO BEES - DO NOT spray flowering crops with **Expert Star 600 FS** during foraging activity of honey bees.

When treated seed is stored, it should be kept apart from other grain, and the bags or other containers should be clearly marked to indicate the contents have been treated with this product. **DO NOT** allow seed treated with this product to contaminate seed intended for human consumption. **DO NOT** use treated seed for human consumption. Bags which have held treated seed are not to be used for any other purpose

ALWAYS READ THE LABEL

Your Farming Partner

GROWTH REGULATORS



Plant growth regulators

Plant growth regulators (PGRs) are chemicals used to modify plant growth such as increasing branching, suppressing shoot growth, increasing return bloom, removing excess fruit, or altering fruit maturity. Numerous factors affect PGR performance including how well the chemical is absorbed by the plant, tree vigour and age, dose, timing, cultivar, and weather conditions before, during, and after application.

Plant growth regulators can be grouped into five classes: compounds related to auxins, gibberellins and inhibitors of gibberellin biosynthesis, cytokinins, abscisic acid and compounds affecting the ethylene status. Products that block the biosynthesis of plant hormones are also available.

The five groups of plant growth regulators used in fruit crops include:

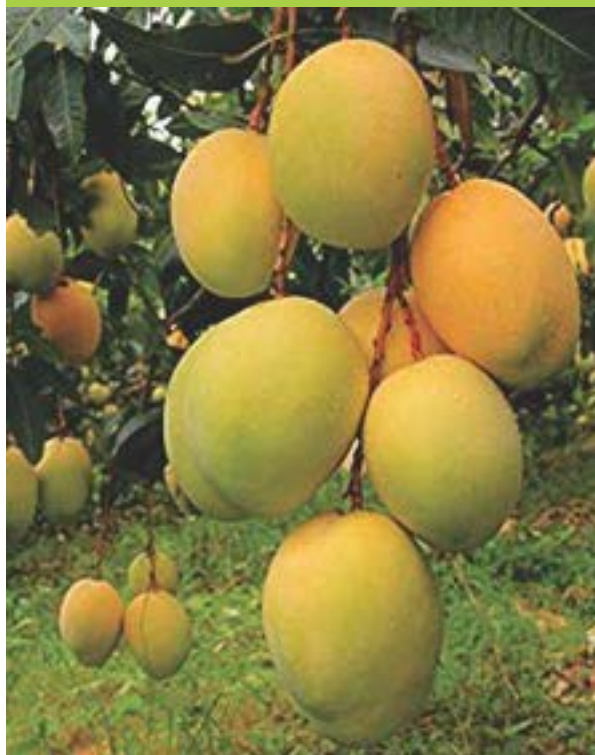
Auxins: These are growth promoting substances that contribute to the elongation of shoots, but at high concentrations they can inhibit growth of lateral buds. In addition to being used as plant growth regulators, auxins can also be herbicides (2, 4-D etc.).

Gibberellins: Gibberellins (GA) promote cell elongation, shoot growth, and are involved in regulating dormancy. They have been used to improve fruit size and reduce russetting in apples. They are used to delay ripening, improve fruit firmness and extend the harvest period in sweet cherries. Gibberellins are used in tart cherries to manage flowering to avoid over production. They are used to modify the morphology of trees (apple and cherries) and to control runner production in strawberries.

Cytokinins: Cytokinins promote cell division. Cytokinins are involved in branching and stimulating bud initiation. They are used as fruit thinners.

Absciscic Acid: Absciscic acid controls the dormancy of buds and seeds, inhibits shoot growth and is involved in regulating water loss from plants.

Ethylene: Ethylene promotes abscission of leaves and fruits, inhibits shoot elongation and inhibits lateral bud development. In apples and cherries, ethylene is involved in the transition of fruit from being physiologically mature to ripe. Ethephon (Ethrel®) is a synthetic compound that releases ethylene upon application. Retain interferes with ethylene biosynthesis and allows fruit to hang on trees longer and lengthens storage life.



Cyanamide 520 EC

Active Ingredient: Cyanamide 520g/L

A soluble concentrate growth regulant for delayed foliation in apples, apricots, plums, cherries, wine and table grapes, kiwi fruit, as well as advancement of budding in sultana grapes and berries listed.

CROP	Dosage / 100L water	REMARKS
GRAPES	3.0 - 5,0L	Apply 3 to 4 weeks prior to normal budbreak.
SULTANAS	3.0 - 5,0L	Apply approximately 7 – 6 weeks before normal budbreak.
APPLES Non-bearing trees (1 – 3yrs old)	4,0L	Apply during the period 1 to 10 September or 4 – 5 weeks prior to expected bud break.
Bearing trees:		Apply about 4 – 6 weeks prior to expected full bloom
BERRIES: Blueberries (Brigitta & Elliott)	3,0 - 5,0L	Apply as full cover spray during bud swell for effective uniform restbreaking.
PLUMS: Non-bearing trees:		NOT RECOMMENDED
PLUMS: Bearing trees:	0,5L Plus Mineral oil 2,0 – 4,0L	Apply about 4–6 weeks prior to expected full bloom
APRICOTS: Bearing trees:	0,5L Plus Mineral oil 2,0 – 3,0L	Apply about 4 – 6 weeks prior to expected full bloom

Inconsistent results may occur on trees suffering from stress conditions such as temporary water logging during time of application.

Do not apply **CYANAMIDE** within 4 hours prior to rain or shortly after rain, when plants are still wet.

Do not leave spray mixture to stand overnight.

The application of **CYANAMIDE** by brushes or sponges is strongly discouraged.

NOTE: Manual application increases the risk of skin contamination, which may lead to severe skin burns.

ALWAYS READ THE LABEL

Ethephon 480 SL

Active Ingredients: Ethephon 480g/L

Soluble concentrate plant growth regulator for use on crops as indicated.

ETHEPHLON 480 SL must only be applied with a calibrated sprayer that is in good working order.

Mixing instructions:

- Fill the spray tank with half of the required amount of water.
- Add the required amount of **ETHEPHON 480 SL** while agitating.
- Add the remaining amount of water.
- Ensure thorough agitation of the mixture in the tank during mixing and spraying.
- Prepare only as much spray solution as can be used on one day of spraying.
- Do not allow the spray solution to stand overnight.
- Thoroughly flush out the spraying equipment at the end of the spraying operation.



CROP	USE	DOSAGE RATE	REMARKS
Citrus	Early detection of latent Citrus black spot	8 ml / 1 litre of water	Prepare an ETHEPHON 480 SL suspension in a suitable container. Dip fruit into the suspension for five (5) minutes. Ensure all fruit are submerged. After removing the fruit from dipping, let them air-dry overnight. Store the fruit at approximately +/- 25°C under dry conditions for fourteen (14) days. Destroy fruit after inspection.
Sugarcane	Increase sucrose content	1.5 litre / 30 litres of water per ha	Ensure thorough coverage by means of aerial application. To obtain maximum benefit, apply only to actively growing cane 6 to 12 weeks before harvest.
Wheat	Reducing the incidence of lodging	1.0 to 1.25 litres / ha	Ensure the spray boom is approximately 50 cm above the crop. Apply as a full cover spray in 250 to 450 litres water per hectare. Allow 7 days between last application and harvest or grazing.
Cotton	To accelerate opening of mature, unopened cotton bolls	2.0 to 3.0 litres / ha	Apply as full cover spray when 60 % of the bolls are open or mature. A boll is mature when it is very hard and won't dent when squeezed, is difficult to slice with a sharp knife and the seed coat is light brown in colour. Ensure bolls are well covered by the spray. Ground application: Apply in 150 to 350 litres water per hectare. Aerial application: Apply in 40 to 50 litres water per hectare. Use the lower rate only on wide spaced cotton.
Apples	Improved colour development (Starking types) and Enhancement of maturity (Starking types & Granny Smith)	75 to 85 ml / 100 l water	Application as a full cover spray should be performed 2 to 3 weeks before anticipated harvest. Use the lower dosage rate if high temperature conditions occur whilst spraying.

ALWAYS READ THE LABEL

Expert Flame

Active Ingredient: Flumetralin 15.0%

A plant growth regulator for the control of sucker growth on burley, cigar, dark, flue-cured, and Maryland tobacco. One application will provide full season control of excessive sucker development in tobacco.

CROP	PEST	RATE	REMARKS
<u>TOBACCO</u> Burley Cigar Dark Flue-Cured Maryland	Tobacco Suckers	15 ml / 1 litre water 8 ml / plant	<p>Use of a Contact (fatty alcohol): A contact (fatty alcohol) is commonly used to control early suckers and provide a more uniform crop. If used, follow this sequence:</p> <ol style="list-style-type: none"> 1. Apply contact material according to its label. 2. About 5 days after application of contact material, apply EXPERT FLAME as directed below for rates and timing of application. <p>Where a contact (fatty alcohol) is not used and a wide range of flowering exists, early flowering plants should be topped and suckers removed by hand.</p> <p>Apply as a coarse spray directed downward to the top of the tobacco stalk. This is best accomplished with 3 full cone nozzles per row; one nozzle directed downward over the center of the row and one 17-22cm to each side of the center, directed at the top of the stalk.</p>

ALWAYS READ THE LABEL

Gibberellic Acid

Active ingredient: Gibberellic acid 32 g/L

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.
- **Gibberellic acid** increases fruit set.
- **Gibberellic acid** 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.

Label recommendations

To reduce rind creasing:

Apply 16 - 64 mℓ / 100 ℓ water **Gibberellic acid** depending on citrus type and cultivar.

To increase fruit set:

Apply 8 - 32 mℓ / 100 ℓ water depending on citrus type and cultivar.

ALWAYS READ THE LABEL

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 **Gibberellic acid** may be applied.
- An oil may be applied 5 to 10 days after a **Gibberellic acid** application.
- Adjust the pH of the spray mixture to between 5.5 and 6.5.
- Do not apply to orchards under stress.

N. Decanol 79% EC

Active ingredient: N-decanol 79%

A compound for the control of sucker growth on flue- cured and burley tobacco

DILUTION RATE AND VOLUME OF APPLICATION:

To 1 part of **N. Decanol**, add 25 parts water. For very early topping (top leaf less than about 100 mm), use a more dilute solution of 1 part of **N. Decanol** to 33 parts water. If a more dilute solution is used, a second application of suckercide will be necessary and it should be diluted as 1 part of **N. Decanol** to 25 parts water. The second treatment is applied once the top leaves have grown sufficiently (100-150 mm long). To ensure satisfactory emulsification, always add the water to the **N. Decanol**. Apply 8 -12 ml of the diluted emulsion per plant at topping, depending upon the size of the crop. This can be determined by watching the material flow down the stalk and ensuring it reaches the base of the stalk touching every sucker on the way (excess suckercide at the base of the stalk will not do any harm). **DO NOT** allow the mixture to stand for prolonged periods before application.

APPLICATION METHODS

1. **KNAPSACK SPRAYER** - Use coarse solid cone nozzle held 150 - 200 mm above top leaves of the plant and a pressure of no more than 150 - 200 kPa.
2. **FERTILIZER CUP** - Pour over top of stalk.
3. **DOSAGE GUN** - Apply over top of stalk.

TIME OF APPLICATION:

Straighten any leaning plants. Remove all suckers over 20 mm long.

BEFORE TOPPING - For early sucker control, apply 5 ml of **N. Decanol** to plants about two thirds grown. The suckercide must not be applied to the top of the plant since it burns the small developing leaves in the heart, it should be applied to the axil of a reasonably well-developed leaf (about 300mm long). This treatment must be followed by the normal application of suckercide at topping time.

AFTER TOPPING - Top the tobacco plants as soon as the uppermost required leaf is of such size that it will not be damaged by the topping action. Apply diluted emulsion as soon as possible after topping and preferably within 2 days. Even crops can be treated when 10% of plants are at the correct topping stage. Top plants at the correct stage and treat all plants. Top remaining plants within the next 10 days. Uneven crops should be topped and treated as the plants reach the correct stage.

DO NOT apply if plants are wet from rain or dew. Allow plants to dry before treatment. For effective sucker control, there should be no rain for 2 hours after application.

DO NOT spray wilted plants, or apply on very hot, sunny days when temperatures are over 30°C as some scorching of leaves may occur. If wind has turned leaves over, these must be returned to their original position before application, as burning can occur on the more tender under-leaf surface.

COMPATIBILITY:

Apply the recommended mixture on its own. **DO NOT** apply with insecticides, fungicides etc., or apply to plants that have recently been treated with such chemicals, unless experience has shown that it is safe to do so.

ALWAYS READ THE LABEL

Ex Benzolar 50WG

Active Ingredients: Acibenzolar-S-methyl 50%

A selective, non-pesticidal systemic compound used for the control of several listed fungal, bacterial, and viral plant diseases.

Ex Benzolar 50WG must only be applied with a calibrated sprayer that is in good working order at the rate of 200 litres of water per hectare.

Mixing instructions:

- Prepare no more spray mixture than is needed for the immediate operation.
- Keep product container tightly closed when not in use.
- Agitate the spray solution before and during application.
- **DO NOT** let the spray mixture stand overnight in the spray tank.
- **Ex Benzolar 50WG** Plant Activator needs to be applied to healthy, actively growing plants.
- **Ex Benzolar 50WG** Plant Activator must not be applied to plants that are stressed due to drought, excessive moisture, or herbicide injury.

CROP	PEST	DOSAGE RATE 100 litres of water/ha	REMARKS
Leafy Vegetables (except spinach)	Downy Mildew <i>Black Rot</i>	70g/ha,	Begin applications 7-10 days after thinning. Apply preventatively. Pre-Harvest Interval (PHI): 7 days
Cucurbits	Angular Leaf Spot, Bacterial Fruit Blotch, Bacterial Leaf Spot, Downy Mildew, Powdery Mildew, Scab.	70g/ha,	Apply preventively prior to disease development. Pre-Harvest Interval (PHI): 0 days
Onion	Downy Mildew, Iris Yellow Spot, Leaf Blight.	70g/ha	Begin applications after thinning or after the 3-4 leaf stage. Pre-Harvest Interval (PHI): 7 days
Pepper	Bacterial Spot	60g/ha	Apply within one week of transplanting. Pre-Harvest Interval (PHI): 14 days
Tomato	Bacterial Spot Bacterial Speck	60g/ha	Begin applications within one week of transplanting or emergence. Pre-Harvest Interval (PHI): 14 days
Apples	Fire Blight	70-140g/ha	Apply 2-3 applications between 20% bloom and petal fall depending on the environmental conditions. Pre-Harvest Interval (PHI): 60 days

DO NOT exceed 4 applications per crop per season.

ALWAYS READ THE LABEL



Your Farming Partner

Expert Landpack

Expert Landpack

Lambda Cyhalothrin 25g/l

Acetamiprid 20%SP

N Decanol 79% EC

Expert Flame
(Flumetralin 15% SL)

Expert Power
(Emamectin benzoate 100g/kg
Lufenuron 400g/kg)

Expert Activate
(Lambda 30g/L +
Acetamiprid 150g/L)

Ex Benzolar 50 WG
(Acibenzolar S-Methyl 50%)

Expert Cloud
(Azoxystrobin 125g/L +
Difenoconazole 200g/L SC)

Tobacco Blend Fertilizer 6:28:23 8 Bags

AN Fertilizer 3 Bags



"Make Agriculture Matter"

Your **Farming** Partner

Expert Seedpack

Deltamethrin 25g/L EC

Clomazone 480g/L EC

Copper Oxychloride 85% WP

Triadimenol 25g/L EC

Imidacloprid 70% WP

Compound S 7:21:7 10kg

AN 34,5N 500g



"Make Agriculture Matter"

Your **Farming** Partner



Your **Farming** Partner





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