



Guide

to the use of plant protection products in the West-Indies





MINISTÈRE DE L'AGRICULTURE ET DE LA PÊCHE
Mission de coopération phytosanitaire
CIRAD



# GUIDE TO THE USE OF PLANT PROTECTION PRODUCTS IN THE WEST-INDIES

### MINISTERE DES AFFAIRES ETRANGERES FONDS INTER-CARAIBES

# GUIDE TO THE USE OF PLANT PROTECTION PRODUCTS IN THE WEST-INDIES

Anguilla, Antigua and Barbuda, Barbados, British Virgin Islands, Dominica, Grenada, Guadeloupe, Martinique, Montserrat, Saint Kitts-Nevis, Saint Lucia, Saint Vincent and the Grenadines

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CIRAD-FLHOR

#### **FOREWORD**

#### CONTENTS OF THE MANUAL

The manual describes only part of integrated crop protection, that of the use of phytopharmaceutical products sold by the crop protection industry according to technical standards, regulations and commercial rules which can be verified by anybody.

The data concerning active ingredients are limited to a short description of the substances influencing product characteristics and especially environmental impact. In the manual, commercial products sold to farmers and gardeners are described according to their formulations and toxicological data.

#### **PREPARATION**

The manual includes and combines data from three sources – agrochemicals companies, national plant protection services and the Mission de Coopération Phytosanitaire (MCP).

Companies were questioned specially for the work and provided all the non-confidential information necessary. The names of those that replied to the survey and which manufacture and sell pesticides for West-Indies are listed on page 6.

#### LAYOUT OF THE MANUAL

The manual has been designed logically. General observations on products, toxicity, regulations and precautions for use are followed by a section on the choice of active ingredients recommended for specific crop health problems and the commercial products which contain the active ingredient in question, the companies which manufacture, formulate or distribute them. Finally, this procedure can be performed in the opposite direction using indexes: consulting a given trade name gives product characteristics and the pests or diseases targeted.

The layout is convenient with rapid access to information by using tables of active ingredients and product sheets.

#### READERSHIP

This manual is not intended for farmer end-users who would only use a fraction of the data but more for "information intermediaries" such as agricultural advisers of all kinds, co-operative technicians and extension workers, producers' groups, development and state companies and all those involved in the marketing of phytopharmaceutical products (importers, state agents, donors, etc.).

The manual may also be a source of general information for national registration committees where they exist and for departments responsible for plant protection regulations elsewhere.

#### List of the companies mentioned in the manual (see directory page 199)

#### Within the guide

Abbott Laboratories Abbott American Cyanamid Co. Cyanamid BASE A.G. BASF Bayer A.G. Bayer **CFPI** CFPI Agro DowElanco DowElanco Elf Atochem Agri Elf Atochem Du Pont de Nemours Du Pont

FMC Corp. FMC
Hoechst Schering AgrEvo GmbH AgrEvo
ISK Biosciences Corp. ISK
Merck AgVet Merck
Monsanto Co. Monsanto
Novartis Crop Protection A.G. Novartis

Rhône-Poulenc Agro

Sumitomo Chemical Company

Zeneca Agrochemicals

Rhône-Poulenc

Sumitomo

Zeneca

#### NOTICE TO THE READER

The authors cannot be held to be responsible for any errors or omissions in information concerning the agricultural chemicals mentioned in this work and the companies which market them. Users should at all times conform to the instructions on the label or instruction leaflets accompanying the products.

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#### LIST OF ABBREVIATIONS

<i>I</i>	per
d	. day
cont'd	. continued
d	day
g	gram
gal	gallon
ha	hectare
hl	hectolitre
kg	kilogram
I	litre
lb	pound
lbs	pounds
m <sup>2</sup>	square metre
m <sup>3</sup>	cubic metre
mg	milligram
fl. oz	fluid ounce / ounces
spp	species

#### LIST OF ACRONYMS

CIRAD Centre de Coopération Internationale en Recherche

Agronomique pour le Développement (Centre for International Cooperation in Agronomic Research for

Development)

FIC Fonds Inter-Caraïbes

FRGDEC Fédération Régionale des Groupements de Défense contre

les Ennemis des Cultures

MCP Mission de Coopération Phytosanitaire

WHO World Health Organisation

# **PART I**

**GENERALITIES** 



#### 1. TOXICITY AND RISKS

#### 1.1. Definitions

The toxicity of a substance is defined by its ability to cause damage when ingested by a living organism.

The risk consists of the potential for causing damage, with on the one hand the probability of damage occurring and on the other the seriousness of such damage.

Exposure of a living organism (animal or plant) to a pesticide, i.e. the risk run by the organism depends on several factors:

- the chemical properties of the product (breakdown, type of effect, etc.),
- product concentration and duration of exposure,
- the biology of the organism involved.

Risks for human health and/or the environment are examined for a substantial number of active substances and/or commercial products. These toxicological studies are aimed at showing the results of ingestion of crop protection products.

The pictograms used help to show the risks (to human health and the environment) during handling of the products.

# 1.2. Toxicological classification of substances according to WHO (World Health Organization) standards

				Acute LD <sub>50</sub>	(rat) (mg/kg)	
	W	HO hazard class	0	ral	Der	mal
			Solid	Liquid	Solid	Liquid
la	Extre	mely hazardous	5 or less	20 or less	10 or less	40 or less
lb	Highly	y hazardous	5 – 50	20 - 200	10 – 100	40 – 400
Ш	Mode	rately hazardous	50 – 500	200 - 2000	100 – 1000	400 – 4000
Ш	Slight	ly hazardous	> 500	> 2000	> 1000	> 4000
Tab	le 5	Technical products unlike	ely to present	acute hazard ir	n normal use	
Tab	le 6	Technical products not in or discontinued for use a		classification	and believed to	o be obsolete
Tab	le 7	List of gaseous or volatile classification of pesticide		ot classified und	der the WHO r	ecommended

LD50 is the concentration of a toxic substance in mg per kg live weight that causes the death of 50 % of the laboratory animals to which it is administered.

# 1.3. Classification of commercial crop protection preparations according to EC standards

Since most of the plant protection products marketed in the West-Indies are produced by European companies, hazard information for human health has been given by those companies according to EC regulations as follows:

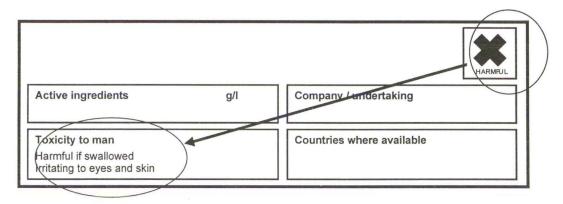












# Criteria for classification, indication of danger and choice of risk phrases Active ingredients

		Acute tox	icity	
EC classification			LC <sub>50</sub> Inl	nalation
	LD₅o Oral	LD <sub>50</sub> Dermal	aerosols or particulates	gases or vapours
Very toxic	25 or less	50 or less	0.25 or less	0.5 or less
Toxic	25 – 200	50 – 400	0.25 – 1	0.5 – 2
Harmful	200 – 2000	400 – 2000	1 – 5	2 – 20
Precision associated to the classification	if swallowed	in contact with skin	by inh	alation

LD50 Oral (rat) in mg/kg

LD50 Dermal (rat or rabbit) in mg/kg

LC50 Inhalation (rat) in mg/litre/4hr

#### Commercial products

Refer	ences	Classification
Oral LI	O <sub>50</sub> , mg/kg of body weight (rat)	,
<b>Solids</b> 5 or less 5 – 50 50 – 500	<b>Liquids</b> 25 or less 25 – 200 200 – 2000	Very toxic Toxic Harmful
Percutaneous LI	D <sub>50</sub> , mg/kg of body weight (rat or r	rabbit)
<b>Solids</b> 10 or less 10 – 100 100 – 1000	<b>Liquids</b> 50 or less 50 – 400 400 – 4000	Very toxic Toxic Harmful
	our inhalation), mg/litre air (rat), powder (diameter of particles less	than 50 microns)
0.5	r less - 2 - 20	Very toxic Toxic Harmful

#### 2. LABELS

Labels are a visual aid and a support for concise, practical, easily-understood information on the procedure for using a product and for protecting the user and the environment from risk of accident. A label bears the following features:

- phrases specifying type of exposure or the special nature of risks,
- phrases recommending care to be taken during storage and before, during and after handling and emergency procedure in case of accident,
- all necessary information concerning product composition, the way it affects pests, doses and recommended application methods,
- all useful information for good use, e.g. the possibility of combination with other products, the risk of secondary effects according to weather conditions, etc.).

When the pack is small, a leaflet to complete the label should accompany each unit sold separately.

However, the label will not replace the explanations that the distributor can provide. Thus, it is strongly recommended that you should consult your distributor if you have the slightest hesitation concerning the handling of pesticides.

#### 3. HANDLING AND STORAGE PRECAUTIONS

It is also recommended to take the following precautions when handling any crop protection product, and even those considered to be non-toxic.

#### 3.1. Storage



Keep in a locked place out of the reach of children.



Keep the recipient tightly closed in a cool, well-ventilated place.



Do not smoke during use.

#### 3.2. Preparation for application

Any decision to spray should be well considered and all use of the product must be justified:

- identification of the crop and its stage of growth,
- identification of the pest to be controlled.

When the decision to spray has been taken:

- determine the precise area to be sprayed,
- choose an effective product for the problem,
- obtain information from technicians, firms or representatives concerning the dosage and spraying methods,
- check that your equipment is in good working order.

Before handling the product:

- read the label carefully,
- find out and use the dosage specified,
- respect application periods, pre-harvest intervals and precautions for use.

Respecting a number of basic principles which apply to most cases should enable better results and reduce risk for the user, those around him, consumers and the environment.

Take the fullest possible precautions during the preparation phase. The risk is very high during preparation of a mix or a solution because the product handled is highly concentrated. Protect yourself effectively from accidental splashing, dust or fumes (refer on labels).

#### 3.3. Spraying

Do not spray on windy days to avoid all drift.

Check that the preparation (mix, powder, etc.) does not touch the operator of the neighbouring area.

Wear appropriate protection (refer on labels).

#### 3.4. After spraying

Clean the apparatus carefully and replace all worn parts – especially nozzles. Store used containers before returning them to the distributor who will then return them to the manufacturer. In order to protect the environment, packaging should not be rinsed or discarded at the site of spraying. Risk-free disposal is obligatory.

- · Combustible packaging:
  - paper bags, cloth, plastics, empty cardboard boxes and crates,
  - empty, well-rinsed plastic containers (except for PVC).

Burn in a strong fire and at distance from dwellings or frequented routes, taking wind direction into account. Do not breathe in the smoke.

- Non-combustible packaging:
  - empty, well-rinsed metal containers:
    - 50 and 200 I drums: return to the supplier, sell to a firm dealing in used containers or take to sanitary landfill dump. Do not re-use for any purpose,
    - small containers (up to 20 l): after rinsing, dispose of at a public dump or bury at least 50 cm deep at a private disposal site. Do not re-use for any purpose.

#### 3.5. Special precautions

In case of accidental splashing of skin or eyes:

Remove contaminated clothing and wash skin with soap and water. Rinse eyes immediately with water and consult a doctor or a dispensary.

In case of intoxication:

If the victim is hardly conscious or unconscious, place him with his head on the side.

Alert a doctor or dispensary, showing them the package and the label of the product.

Never give the patient anything to drink and especially not milk or alcoholic drinks.

Do not make the patient vomit, unless this is advised on the label of the product and, in this case, only if he is conscious.



# **PART II**

## **CHOICE OF ACTIVE INGREDIENTS**

#### **USING THE TABLES**

The tables below show a choice of active ingredients according to the pests, diseases and weeds previously identified. They are sometimes designed for more specific treatments (soil treatment, seed treatment, treatment of stored products), enabling effective control by application of the recommended amounts of active ingredients.

Each pest is associated with active ingredients and crop categories (vegetables, fruits, ornamentals, plus potatoes and bananas). Each active ingredient refers to a sheet in the list (Part III) covering the properties of the active ingredient in question and information on the corresponding commercial products (Part IV).

The amounts of active ingredients for open field treatments are generally given in g/ha or kg/ha but sometimes in g/plant (especially for orchard crops). It should be noted that we did not mention amounts in g/hl although it is the correct unit for waterbased sprays which must wet all the foliage in orchard crops. When necessary, divide by ten the amounts in g/ha to obtain the amount in g/hl. In this case, the amount of spray preparation depends on the amount of foliage and may exceed 10 hl/ha.

Amounts are also given in g/100 kg for stored products, in g/m<sup>2</sup> and g/m<sup>3</sup> for premises and g/kg for baits.

You can easily convert metric measurements in imperial or US measurements by using the table page 195.

Pre-harvest intervals are not given in this manual. As a matter of fact, they greatly depend on both the target crop and the climate conditions. Moreover, there is very few datas concerning pre-harvest intervals in tropical countries. Therefore, when choosing a plant protection product, users should at all times conform to the use specified by law (registration) and/or the use recommended by manufacturers.

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MITES	21
INSECTS	
Aphids	
Beetles	
Bugs	
Caterpillars	
Flies	
Leafhoppers	
Leaf miners.	
Psyllids	
Scale insects	
Thrips	
Weevils	
White flies.	
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All pests	
Cutworms	
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OTHER PESTS	
STORAGE INSECTS	
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# **VERIAL PESTS**

Pests	Active ingredients	Crops	Doses	Pages
MITES	abamectin	vegetables	9-21.6 g/ha	59
		ornamentals	4.5 - 9 g/ha	
	acrinathrin	vegetables	60 g/ha	09
		fruits	60 - 75 g/ha	
	azocyclotin	vegetables	300 g/ha	19
		fruits	300 g/ha	
	benzoximate	fruits	400 g/ha	62
	bifenthrin	vegetables	40 g/ha	62
		fruits	40 - 50 g/ha	
		ornamentals	40 g/ha	
	bifenthrin + clofentezine	fruits	20 + 100 g/ha	62+65
		ornamentals	30 + 150 g/ha	
	bifenthrin + dicofol	fruits	20 + 360 g/ha	62+67
	bromopropylate	fruits	500 g/ha	62
		ornamentals		
	chinomethionat	vegetables	125 g/ha	64
		fruits	125 g/ha	
	clofentezine	vegetables	200 g/ha	65
のの名は、世界の経済がある。		fruits	200 g/ha	
		ornamentals	200 g/ha	
	cypermethrin + profenofos	vegetables	40 + 400 g/ha	82 + 99
	dicofol	vegetables	500 g/ha	29
		fruits	500 g/ha	
		ornamentals	500 g/ha	
	endosulfan	vegetables	610 g/ha	89
	fenbutatin oxide	vegetables	500 g/ha	69
		fruits	500 g/ha	

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Pests	Active ingredients	Crops	Doses	Pages
MITES (cont'd)	fenbutatin oxide	fruits	350 g/ha	69
	+ flufenoxuron		+ 37.5	+ 71
	fenpropathrin	fruits	200 g/ha	20
	hexythiazox	vegetables	50 g/ha	73
		fruits	50 g/ha	
		ornamentals	50 g/ha	
INSECTS				
Aphids	acephate	vegetables	750 g/ha	29
		fruits	600 g/ha	
	alpha-cypermethrin	vegetables		09
		fruits	15 g/ha	
	bifenthrin	vegetables	12 g/ha	62
		fruits	7.5 - 10 g/ha	
		ornamentals	20 g/ha	
	cypermethrin	vegetables	30 g/ha	99
		potatoes	50 g/ha	
		fruits	50 g/ha	
	cypermethrin + profenofos	vegetables	40 + 400 g/ha	82 + 99
	deltamethrin	vegetables	7.5 - 12.5 g/ha	99
	· · · · · · · · · · · · · · · · · · ·	potatoes	7.5 g/ha	
		fruits	7.5 - 12.5 g/ha	
· · · · · · · · · · · · · · · · · · ·		ornamentals	7.5 g/ha	
	deltamethrin + heptenophos	vegetables	12.5 + 200 g/ha	66 + 72
		potatoes	12.5 + 200 g/ha	
	diazinon	fruits	300 g/ha	29
	dichlorvos	vegetables	1000 g/ha	29
		ornamentals	1000 g/ha	

Pests	Active ingredients	Crops	Doses	Pages
INSECTS (cont'd)				
Aphids (cont'd)	endosulfan	vegetables	610 g/ha	89
	· · · · · · · · · · · · · · · · · · ·	fruits	610 g/ha	
		ornamentals	610 g/ha	
	endosulfan + thiometon	vegetables	300 + 100 g/ha	68 + 80
	fenthion	fruits	825 g/ha	20
	· · · · · · · · · · · · · · · · · · ·	omamentals	825 g/ha	
	fenvalerate	potatoes	50 g/ha	70
		fruits	75 g/ha	
	fenvalerate + fenitrothion	potatoes	25 + 125 g/ha	69 + 02
		fruits	25 + 125 g/ha	
	formothion	vegetables	405 g/ha	72
		fruits	505 g/ha	
	imidacloprid	fruits	50 - 70 g/ha	73
		omamentals		
	lambda-cyhalothrin	vegetables	12.5 g/ha	74
		potatoes		
		fruits	7.5 g/ha	
· 一次	methidathion	fruits	300 g/ha	75
	methomyl	vegetables	250 g/ha	75
		fruits	500 g/ha	
		ornamentals	500 g/ha	
	mevinphos	vegetables	350 g/ha	7.5
		fruits	500 g/ha	
		omamentals	350 g/ha	
	oxydemeton-methyl	fruits	250 g/ha	92
		omamentals	250 g/ha	

Pests	Active ingredients	Crops	Doses	Pages
INSECTS (cont'd)				
Aphids (cont'd)	parathion	vegetables	200 - 225 g/ha	92
		fruits	185 - 250 g/ha	
		ornamentals	200 - 250 g/ha	
	permethrin	vegetables	50 - 75 g/ha	2.2
		ornamentals	50 g/ha	
	phosalone	vegetables	600 g/ha	77
		fruits	600 g/ha	
		ornamentals	600 g/ha	
	pirimicarb	vegetables	375 g/ha	77
		potatoes	250 g/ha	
		fruits	375 g/ha	
		ornamentals	375 g/ha	
**************************************	tau-fluvalinate	vegetables	48 - 72 g/ha	79
		fruits	48 - 72 g/ha	
	tralomethrin	fruits	17.3 g/ha	81
	triazamate	vegetables	70 g/ha	81
		potatoes	105 g/ha	
	vamidothion	fruits	500 g/ha	81
		ornamentals	500 g/ha	
Beetles	alpha-cypermethrin	potatoes	12.5 g/ha	09
	cyfluthrin	potatoes	15 g/ha	65
	cypermethrin	vegetables	25 g/ha	99
		potatoes	20 g/ha	
	deltamethrin	vegetables	5 - 7.5 g/ha	99
		potatoes	7.5 g/ha	
	endosulfan	potatoes	350 g/ha	89
	fenvalerate	potatoes	50 g/ha	20

Pests	Active ingredients	Crops	Doses	Pages
INSECTS (cont'd)				
Beetles (cont'd)	lambda-cyhalothrin	vegetables	5 - 7.5 g/ha	74
		potatoes	7.5 g/ha	
	methidathion	potatoes	300 g/ha	75
	parathion	vegetables		92
	phosalone	potatoes	600 g/ha	77
	tau-fluvalinate	potatoes	48 g/ha	62
	thiocyclam	vegetables	150 - 500 g/ha	80
		potatoes	150 - 500 g/ha	
Bugs	cypermethrin + profenofos	vegetables	40 + 400 g/ha	66 + 78
	endosulfan	fruits	610 g/ha	89
	lambda-cyhalothrin	fruits	7.5 g/ha	74
	permethrin	vegetables	50 - 75 g/ha	77
Caterpillars	acephate	vegetables	500 - 750 g/ha	59
	alpha-cypermethrin	vegetables	10 g/ha	09
	Bacillus thuringiensis	all crops		61
ところ がみの 着な とあが める	bifenthrin	vegetables	20 g/ha	62
		fruits	30 g/ha	
	carbaryl	fruits	1500 g/ha	63
	cyfluthrin	vegetables	15 g/ha	65
		fruits	15 g/ha	
		ornamentals		
	cypermethrin	vegetables	30 g/ha	99
		fruits	30 g/ha	
	cypermethrin + profenofos	vegetables	40 + 400 g/ha	82 + 99
	deltamethrin	vegetables	7.5 - 12.5 g/ha	99
		fruits	7.5 - 17.5 g/ha	
		ornamentals	7.5 g/ha	

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rests	Active ingredients	Crops	Doses	Pages
INSECTS (cont'd)				
Caterpillars (cont'd)	diazinon	fruits	30 g/ha	29
	fenpropathrin	fruits	100 - 125 g/ha	20
	fenthion	fruits	550 g/ha	2
	fenvalerate	vegetables	50 g/ha	70
		fruits		
	fenvalerate + fenitrothion	fruits	37.5 + 187.5 g/ha	69 + 02
	fenbutatin oxide	fruits	350 g/ha	69
	+ flufenoxuron		+ 37.5	+ 71
	formothion	fruits	507 g/ha	72
	lambda-cyhalothrin	vegetables	7.5 g/ha	74
		fruits	7.5 - 17.5 g/ha	
	methidathion	fruits	300 - 400 g/ha	22
	methomyl	vegetables	400 g/ha	75
		fruits	750 g/ha	
	mevinphos	fruits	500 g/ha	75
	parathion	vegetables	200 g/ha	92
		fruits	186 - 465 g/ha	
	permethrin	vegetables	50 - 75 g/ha	77
		ornamentals	50 - 75 g/ha	
	phosalone	fruits		22
	tau-fluvalinate	vegetables	72 g/ha	79
		fruits	144 g/ha	
	teflubenzuron	fruits	50 g/ha	79
· · · · · · · · · · · · · · · · · · ·	thiocyclam	vegetables	150 - 500 g/ha	80
		fruits	150 - 500 g/ha	
· · · · · · · · · · · · · · · · · · ·	tralomethrin	vegetables	8.6 g/ha	81
		fruits	24.8 g/ha	

Pests	Active ingredients	Crops	Doses	Pages
INSECTS (cont'd)				
Flies	acephate	vegetables	500 g/ha	59
	chlorfenvinphos	vegetables	600 g/ha	64
	diazinon	vegetables	300 g/ha	29
	· 在 · · · · · · · · · · · · · · · · · ·	fruits	300 g/ha	
	dimethoate	vegetables		89
		fruits	300 g/ha	
	fenthion	fruits	550 g/ha	20
	formothion	vegetables	405 - 505 g/ha	72
		fruits	338 - 505 g/ha	
	vamidothion	fruits	500 g/ha	81
Leafhoppers	cyfluthrin	fruits	35 g/ha	65
	deltamethrin	vegetables	12.5 g/ha	99
		fruits	12.5 g/ha	
	lambda-cyhalothrin	vegetables	12.5 g/ha	74
		fruits	12.5 g/ha	
Leaf miners	abamectin	vegetables	9 - 21 g/ha	59
	bifenthrin	fruits	30 g/ha	62
	cyfluthrin	fruits	15 g/ha	65
	cypermethrin	fruits	30 g/ha	99
	cyromazine	vegetables	400 g/ha	99
		ornamentals	400 g/ha	
	deltamethrin	fruits	7.5 - 17.5 g/ha	99
	fenpropathrin	fruits	100 g/ha	92
	fenvalerate	fruits	75 g/ha	20
	fenvalerate + fenitrothion	fruits	37.5 - 187.5 g/ha	69 + 02
	imidacloprid	fruits	70 g/ha	73
	lambda-cyhalothrin	fruits	7.5 - 17.5 g/ha	74

Pests	Active ingredients	Crops	Doses	Pages
INSECTS (cont'd)				
Leaf miners (cont'd)	methidathion	fruits	400 - 600 g/ha	75
	methomyl	fruits	500 - 750 g/ha	75
	mevinphos	fruits	500 g/ha	75
	parathion	fruits	186 g/ha	92
	permethrin	vegetables	50 - 75 g/ha	77
	phosalone	fruits	600 - 750 g/ha	7.7
	tau-fluvalinate	fruits	144 g/ha	79
	teflubenzuron	fruits	50 g/ha	79
	thiocyclam	vegetables	150 - 500 g/ha	80
Psyllids	abamectin	fruits	13.5 g/ha	59
	cypermethrin	fruits	60 g/ha	99
	deltamethrin	fruits	17.5 g/ha	99
	fenvalerate	fruits	100 g/ha	20
Scale insects	bifenthrin	ornamentals	20 g/ha	62
	chlorpyrifos	fruits	500 g/ha	65
	methidathion	vegetables	500 g/ha	7.5
		fruits	300 - 600 g/ha	
	parathion	ornamentals	230 g/ha	92
	quinalphos	fruits	363 g/ha	79
Thrips	abamectin	vegetables	21.6 g/ha	59
•		fruits	21.6 g/ha	
in the second se		ornamentals	9 g/ha	
	acrinathrin	vegetables	75 g/ha	09
		fruits	60 g/ha	
	alpha-cypermethrin	vegetables	12.5 g/ha	09
	bifenthrin	fruits	30 g/ha	62
	cypermethrin + profenofos	vegetables	40 + 400 g/ha	66 + 78

Pests	Active ingredients	Crops	Doses	Pages
INSECTS (cont'd)				
Thrips (cont'd)	deltamethrin	vegetables	12.5 g/ha	99
	endosulfan	fruits	610 g/ha	89
	formetanate	vegetables	500 g/ha	72
		fruits	500 g/ha	
	lambda-cyhalothrin	vegetables	6.25 g/ha	74
	であることが変数を変	fruits	17.5 g/ha	
	methomyl	fruits	750 g/ha	75
	tau-fluvalinate	vegetables	72 g/ha	79
Weevils	endosulfan	fruits	610 g/ha	89
	lambda-cyhalothrin	fruits	7.5 - 15 g/ha	74
White flies	bifenthrin	vegetables	40 g/ha	62
		ornamentals	40 g/ha	
	buprofezin	vegetables	132 g/ha	63
		ornamentals	132 g/ha	
	cypermethrin	vegetables	50 g/ha	99
	cypermethrin + profenofos	vegetables	40 + 400 g/ha	66 + 78
	deltamethrin	vegetables	12.5 g/ha	99
	permethrin	vegetables	50 - 75 g/ha	77

# SOIL BORNE PESTS

Pests	Active ingredients	Crops	Doses	Pages
SOIL INSECTS				
All pests	dazomet	all crops	700 g/ha	117
Cutworms	acephate	all crops	900 g/ha	59
	alpha-cypermethrin	all crops	10 g/ha	90
	carbaryl	all crops	1500 g/ha	63
	cyfluthrin	all crops	15 g/ha	65
	cypermethrin	all crops	30 g/ha	99
	deltamethrin	all crops	7.5 g/ha	99
	lambda-cyhalothrine	all crops	7.5 g/ha	74
	lindane	all crops	1200 g/ha	74
高級を のから ない かんしょうしょ	tralomethrin	vegetables	8.6 g/ha	81
Maggots	benfuracarb	vegetables	400 - 1000 g/ha	61
· · · · · · · · · · · · · · · · · · ·	carbofuran	vegetables	400 - 1000 g/ha	64
	chlorfenvinphos	vegetables	5000 - 6000 g/ha	64
	diazinon	vegetables	8000 g/ha	29
	fonofos	vegetables	2000 g/ha	71
Weevils	aldicarb	bananas	4000 g/ha	09
	benfuracarb	vegetables	1000 g/ha	61
を 一般の ないのか かいかん かんかん かんかん かんかん かんかん かんかん かんかん か	cadusafos	bananas	3 g/plant	63
	carbofuran	bananas	3 g/plant	49
	fipronil	bananas	0.3 g/plant	71
	fonofos	bananas	3 g/plant	71
	pirimiphos-ethyl	bananas	4000 g/ha	78
	terbufos	bananas	3 g/plant	80
White grubs	diazinon	all crops	10 kg/ha	29
	fipronil	all crops	150 g/ha	71

## GUIDE TO THE USE OF PLANT PROTECTION PRODUCTS \_\_\_\_ IN THE WEST-INDIES \_\_\_\_\_

Pests	Active ingredients	Crops	Doses	Pages
SOIL INSECTS (cont'd)				
Withe grubs (cont'd)	fonofos	all crops	4000 g/ha	71
	lindane	all crops	1200 g/ha	74
Wireworms	benfuracarb	vegetables	600 g/ha	61
	carbofuran	vegetables	600 g/ha	64
	diazinon	all crops	10 kg/ha	29
	ethoprophos	all crops	4000 g/ha	89
	fipronil	all crops	150 g/ha	71
	fonofos	all crops	4000 g/ha	71
	lindane	all crops	1200 g/ha	74
NEMATODES	1,3-dichloropropene	vegetables	190 kg/ha	29
		potatoes	190 kg/ha	
80000000000000000000000000000000000000	PROPERTY OF THE PROPERTY OF TH	fruits	560 kg/ha	
		bananas	560 kg/ha	
		ornamentals	260 - 560 kg/ha	
	aldicarb	fruits	10 kg/ha	09
		bananas	2 g/plant	
	cadusafos	bananas	3 g/plant	63
	dazomet	all crops	700 kg/ha	117
	ethoprophos	vegetables	10 kg/ha	89
		potatoes	6 - 10 kg/ha	
		pineapple	20 kg/ha	
THE REPORT OF THE PROPERTY OF		bananas	4.5 g/plant	
	fenamiphos	bananas	3 g/plant	69
	isazofos	bananas	3 g/plant	73
	oxamyl	bananas	3600 g/ha	92
		ornamentals	1000 g/ha	
	terbufos	bananas	3 g/plant	80

**OTHER PESTS** 

Pests	Active ingredients	Plants / commodities	Doses	Pages
STORAGE INSECTS	pirimiphos-methyl	grains	0.004 g/kg	82
		premises (spray)	0.2 g/m2	
		premises (fumigation)	0.07 g/m3	
		bags (empty)	0.25 g/m2	
MOLLUSCS	metaldehyde	all crops		118
	methiocarb	all crops		118
	thiodicarb	all crops	200 g/ha	118
RODENTS	brodifacoum			117
	chlorophacinone			117



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Fusarium	
Phoma	
Phytophthora	
Rhizoctonia	

# **AERIAL DISEASES**

Diseases	Active ingredients	Crops	Doses	Pages
Alternaria	chlorothalonil	vegetables	1500 g/ha	98
1000 000 000 000 000 000 000 000 000 00	difenoconazole	vegetables	125 g/ha	88
	hexaconazole	vegetables	40 g/ha	06
	iprodione	vegetables	750 g/ha	91
	mancozeb	vegetables	1600 g/ha	91
	No. 10 Per 10 Pe	potatoes	1250 - 1750 g/ha	
	maneb + thiophanate-methyl	vegetables	1500 + 750 g/ha	92 + 95
			300 400 2/42	<b>4</b> 8
Anthrachose	Delicity!	vegetables		8 8
	chiorothalonii	vegetables	1500 g/11a	00 0
	mancozeb	vegetables	1600 g/ha	91
		fruits	1600 g/ha	
	maneb + thiophanate-methyl	vegetables	1500 + 750 g/ha	92 + 95
Bacterial snot	copper hydroxide	vegetables	1250 - 2500 g/ha	87
		fruits	1250 - 2500 g/ha	
		omamentals	500 g/ha	
Botrytis	iprodione	vegetables	750 g/ha	91
		fruits	750 g/ha	
	mancozeb	vegetables	2000 g/ha	91
	maneb + thiophanate-methyl	vegetables	1500 + 750 g/ha	92 + 95
	propineb	vegetables	2100 g/ha	94
	thiophanate-methyl	vegetables	810 g/ha	92
		fruits	675 g/ha	

# GUIDE TO THE USE OF PLANT PROTECTION PRODUCTS \_\_\_\_\_ IN THE WEST-INDIES \_\_\_\_\_

Diseases	Active ingredients	Crops	Doses	Pages
Brown-rot	benomyl	fruits	300 g/ha	85
	bitertanol	fruits	300 g/ha	85
	flusilazole	fruits	40 g/ha	89
	hexaconazole	fruits	30 g/ha	06
	iprodione	fruits	750 g/ha	91
	pyrifenox	fruits	50 g/ha	94
	tebuconazole	fruits	125 g/ha	95
	thiophanate-methyl	fruits	675 g/ha	98
	triforine	fruits	330 g/ha	96
Cercospora	benomyl	bananas	250 g/ha	85
•	bromuconazole	bananas	250 g/ha	86
	epoxiconazole	bananas	100 g/ha	88
	mancozeb	vegetables	3200 g/ha	91
	propiconazole	bananas	100 g/ha	93
	tebuconazole	bananas	100 g/ha	92
	tridemorph	bananas	450 g/ha	96
Cladosporia	chlorothalonil	vegetables	1500 g/ha	98
•	mancozeb	vegetables	1600 g/ha	91
		fruits	1600 g/ha	
	maneb + thiophanate-methyl	vegetables	1500 + 750 g/ha	92 + 95
	thiophanate-methyl	vegetables	720 g/ha	95
	triforine	vegetables	285 g/ha	96
Downy mildew	chlorothalonil	vegetables	1500 g/ha 1500 g/ha	98

# GUIDE TO THE USE OF PLANT PROTECTION PRODUCTS \_\_\_\_\_ IN THE WEST-INDIES \_\_\_\_\_

Diseases	Active ingredients	Crops	Doses	Pages
Downy mildew (cont'd)	copper hydroxide	vegetables	1250 - 2500 g/ha	87
		potatoes	5000 g/ha	
· · · · · · · · · · · · · · · · · · ·	copper oxychloride	vegetables	665 g/ha	87
	+ mancozeb		+ 1025	+ 91
· · · · · · · · · · · · · · · · · · ·	+ cupric compounds	不是 · · · · · · · · · · · · · · · · · · ·	+410	
		potatoes	665 g/ha	
	かい というとう こうけんかい		+ 1025	
			+ 410	
	copper oxychloride	potatoes	1500 g/ha	87
	+ maneb		+ 500	+ 92
	+ zineb		+ 500	+ 97
	copper oxychloride	vegetables	637.5 g/ha	87
	+ cymoxanil	おというないないとなった。	+ 120	+ 87
	+ folpet		+ 240	+ 89
	+ mancozeb		+412.5	+ 91
	cymoxanil + folpet	vegetables	96 + 960 g/ha	87 + 89
· 人名英格兰人姓氏 · 人名 · · · · · · · · · · · · · · · · ·	cymoxanil + mancozeb	vegetables	102 + 1190 g/ha	87 + 91
		potatoes	102 + 1190 g/ha	
	cymoxanil	vegetables	80 g/ha	87
	+ mancozeb		+ 1400	+ 91
大 · · · · · · · · · · · · · · · · · · ·	+ oxadixyl	· · · · · · · · · · · · · · · · · · ·	+ 200	+ 93
		potatoes	80 g/ha	
			+ 1400	
			+ 200	
	cymoxanil	vegetables	80 g/ha	87
	+ folpet		+ 750	+ 89
	+ oxadixyl		+ 200	+ 93

Diseases	Active ingredients	Crops	Doses	Pages
Downy mildew (cont'd)	folpet + metalaxyl	vegetables	1275 + 225 g/ha	89 + 92
	fosetyl-aluminium	vegetables	3200 g/ha	06
	fosetyl-aluminium	vegetables	3200 g/ha	90
	mancozeb	vegetables	1600 g/ha	91
		potatoes	1260 - 1750 g/ha	
	mancozeb + metalaxyl	vegetables	1600 + 200 g/ha	91 + 92
		potatoes	1600 + 200 g/ha	
	maneb + thiophanate-methyl	vegetables	1500 + 750 g/ha	92 + 95
	metiram	vegetables	1600 g/ha	92
	propineb	vegetables	2100 g/ha	94
		potatoes	2100 g/ha	
	thiophanate-methyl	vegetables	810 g/ha	92
		10000000000000000000000000000000000000		
Phytophthora	fosetyl-aluminium	fruits	2000 g/ha	06
	mancozeb + metalaxyl	fruits	1600 + 200 g/ha	91 + 92
Powdery mildew	benomyl	fruits	300 kg/ha	85
	bitertanol	fruits	300 g/ha	85
		ornamentals	300 g/ha	
	chinomethionat	vegetables	75 g/ha	86
	高大学 はいしいかい のいろうかん	fruits	75 g/ha	
		ornamentals	75 g/ha	
	difenoconazole	vegetables	125 g/ha	88
		ornamentals	250 g/ha	
	fenarimol	vegetables	25 - 40 g/ha	88
		fruits	40 g/ha	
		ornamentais	50 g/ha	

# GUIDE TO THE USE OF PLANT PROTECTION PRODUCTS IN THE WEST-INDIES

Diseases	Active ingredients	Crops	Doses	Pages
Powdery mildew (cont'd)	fenpropimorph	vegetables	750 g/ha	68
	flusilazole	fruits	30 - 40 g/ha	88
	hexaconazole	vegetables	30 - 40 g/ha	06
		fruits	15 - 30 g/ha	
	maneb + thiophanate-methyl	vegetables	1500 + 750 g/ha	93
	penconazole	vegetables	25 - 35 g/ha	93
		fruits	50 g/ha	
	propiconazole	vegetables	125 g/ha	93
		ornamentals	50 g/ha	
	pyrazofos	vegetables	150 g/ha	94
		fruits	300 g/ha	
	pyrifenox	fruits	50 g/ha	94
		ornamentals	50 g/ha	
	thiophanate-methyl	vegetables	350 g/ha	92
		fruits	700 g/ha	
	triforine	vegetables	285 g/ha	96
		fruits	330 g/ha	
		ornamentals	675 g/ha	
· · · · · · · · · · · · · · · · · · ·				
Rhizoctonia	hexaconazole	vegetables	30 g/ha	06
	iprodione	vegetables	750 g/ha	91
	thiophanate-methyl	vegetables	810 g/ha	92
Rust	bitertanol	ornamentals	300 - 400 g/ha	85
	chlorothalonil	vegetables	1500 g/ha	98
	difenoconazole	vegetables	125 g/ha	88
· · · · · · · · · · · · · · · · · · ·		ornamentals	250 g/ha	

Diseases	Active ingredients	Crops	Doses	Pages
Rust (cont'd)	hexaconazole	vegetables	40 g/ha	06
	mancozeb	vegetables	1600 - 3200 g/ha	91
		fruits	1600 g/ha	
		ornamentals	1600 g/ha	
	maneb + thiophanate-methyl	vegetables	1500 + 750 g/ha	92 + 95
	propiconazole	vegetables	125 g/ha	93
		ornamentals	50 g/ha	
	tebuconazole	vegetables	250 g/ha	92
	triforine	vegetables	285 g/ha	96
Scab	bitertanol	fruits	185 g/ha	85
	copper hydroxide	fruits	2500 g/ha	87
	copper oxychloride	fruits	665 g/ha	87
	+ mancozeb		+ 1025	+ 91
	+ cupric compounds		+ 410	
	copper oxychloride	fruits	1500 g/ha	87
	+ maneb		+ 200	+ 92
	+ zineb		+ 500	+ 97
	difenoconazole	fruits	375 g/ha	88
	fenarimol	fruits	40 g/ha	88
	flusilazole	fruits	20 g/ha	89
	hexaconazole	fruits	15 g/ha	06
	mancozeb	fruits	1600 g/ha	91
	propineb	fruits	2100 g/ha	94
	triforine	fruits	380 g/ha	96
			750 che	δ
Sclerotinia	iprodione	Vegetables	l grig grid	- D

Diseases	Active ingredients	Crops	Doses	Pages
Septoria	benomyl	vegetables	400 g/ha	85
	copper hydroxide	fruits	2500 g/ha	87
	mancozeb	vegetables	1600 g/ha	91
		fruits	1600 g/ha	
	propineb	vegetables	2100 g/ha	94
Sooty blotch	bitertanol	fruits	185 g/ha	85
	triforine	fruits	330 g/ha	96

# POST-HARVEST DISEASES

Diseases	Active ingredients	Plants	Doses	Pages
All fungi	penomyl	bananas (soaking)	25 - 40 g/hi	85
	to the second control of the second of the s	citrus (soaking)	25 - 40 g/hl	
· · · · · · · · · · · · · · · · · · ·	imazalil	citrus (soaking)	100 - 150 g/hl	91
		citrus (wax coating)	0.2 - 0.3 g/100 kg	
	thiabendazole	fruits (soaking)	450 - 900 g/hl	98
		bananas (soaking)	450 g/hl	

Diseases	Active ingredients	Crops	Doses	Pages
Alternaria	8-hydroxyquinoline sulfate	all crops	2100 g/ha	85
	dazomet	all crops	700 kg/ha	117
	mancozeb	vegetables	15 kg/ha	91
	thiophanate-methyl	vegetables	675 g/ha	95
Black-rot	maneb + thiophanate-methyl	vegetables	1500 + 750 kg/ha	92 + 95
	thiophanate-methyl	vegetables	720 g/ha	95
Botrytis	8-hydroxyquinoline sulfate	all crops	2100 g/ha	85
	dazomet	all crops	700 kg/ha	117
	mancozeb	vegetables	15 kg/ha	91
	O budence interimental of		2400 0000	y
rusaliulii	o-riyaroxydamomic samate	all crops	Z100 g/11a	20
	dazomet	all crops	700 kg/ha	117
	thiophanate-methyl	vegetables	675 g/ha	95
Phoma	dazomet	all crops	700 kg/ha	117
Phytophthora	dazomet	all crops	700 kg/ha	117
•	folpet + metalaxyl	vegetables	4080 + 720 g/ha	89 + 92
	fosetyl-aluminium	vegetables	80 kg/ha	90
		fruit trees	80 kg/ha	
		omamentals	80 kg/ha	
	furalaxyl	ornamentals	25 - 100 kg/ha	06
	metalaxyl	vegetables	250 - 500 g/ha	92
		potatoes	250 - 500 g/ha	

SOIL BORNE DISEASES

## 43

Diseases	Active ingredients	Crops	Doses	Pages
Pythium	8-hydroxyquinoline sulfate	all crops	2100 g/ha	85
	dazomet	all crops	700 kg/ha	117
	fosetyl-aluminium	ornamentals	80 kg/ha	6
	furalaxyl	ornamentals	25 - 100 kg/ha	6
	mancozeb	vegetables	15 kg/ha	91
	metalaxyl	vegetables	250 - 500 g/ha	92
		potatoes	250 - 500 g/ha	
Rhizoctonia	dazomet	all crops	700 kg/ha	117
	iprodione	vegetables	750 g/ha	91
	mancozeb	vegetables	15 kg/ha	91
	thiophanate-methyl	vegetables	675 g/ha	92
Sclerotinia	dazomet	all crops	700 kg/ha	117
	iprodione	vegetables	750 g/ha	91
Verticillium	thiophanate-methyl	vegetables	675 g/ha	95

# GUIDE TO THE USE OF PLANT PROTECTION PRODUCTS IN THE WEST-INDIES

# **SEED TREATMENTS**

Diseases	Active ingredients	Plants	Doses	Pages
Alternaria	iprodione	vegetables	250 g/100 kg	91
Anthracnose	benomyl	vegetables	100 g/100 kg	85
	cymoxanil	legumes	20 g/100 kg	87
	+ mancozeb		+ 350	+ 91
	+ oxadixyl		+ 50	+ 93
Botrytis	iprodione	vegetables	150 -250 g/100 kg	91
	maneb + thiophanate-methyl	vegetables (soaking)	150 + 75 g/hl	92 + 95
	thiophanate-methyl	vegetables (soaking)	180 g/hl	95
Downy mildew	cymoxanil	legumes	20 g/100 kg	87
	+ mancozeb		+ 350	+ 91
	+ oxadixyl		+ 50	+ 93
Fusarium	maneb + thiophanate-methyl	vegetables (soaking)	150 + 75 g/hl	92 + 95
	thiophanate-methyl	vegetables (soaking)	180 g/hl	95
Phoma	iprodione	vegetables	250 g/100 kg	91
Phytophthora	fosetyl-aluminium	pineapple (soaking)	200 g/hl	90
Rhizoctonia	benomyl	potatoes	100 g/100 kg	85
	iprodione	potatoes (soaking)	400 g/hl	91
	mancozeb	potatoes	240 g/100 kg	91
	thiophanate-methyl	potatoes (soaking)	350 g/hl	95
	tolclofos-methyl	potatoes	5 g/100 kg	96



WEED CONTROL IN CROPS	48
All weeds	
Annual broadleaf weeds	
Annual grasses	50
Ferns	51
Perennial grasses	51
*	
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All weeds	52
Annual broadleaf weeds	52
Annual grasses	
Brushwood	52
Ferns	
Perennial grasses	
Perennial weeds	
DESSICANTS	53

# WEED CONTROL IN CROPS

Weeds	Active ingredients	Crops	Doses	Pages
All weeds	bromacil	pineapple	1600 g/ha	103
	diuron	sugarcane	1800 g/ha	104
		vegetables	600 - 1600 g/ha	
		fruit orchards	1800 g/ha	
		pineapple	1800 g/ha	
		bananas	1600 g/ha	
	diquat	vegetables	600 g/ha	104
**************************************		bananas	600 g/ha	
	diuron + paraquat	sugarcane	400 + 800 g/ha	104 + 110
		bananas	400 + 800 g/ha	
	glufosinate-ammonium	all crops	750 g/ha	105
		fruits trees	750 g/ha	
		omamentals	750 g/ha	
	glyphosate	all crops	1080 - 4320 g/ha	105
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	glyphosate-trimesium	all crops	1440 - 5760 g/ha	106
	が は 一般 の の の の の の の の の の の の の の の の の の	bananas	960 g/ha	
National Control of the Control of t	hexazinone	sugarcane	900 g/ha	106
	paraquat	all crops	600 g/ha	110
		fruit orchards	800 g/ha	
	propyzamide	vegetables	1500 g/ha	111
		fruit orchards	750 g/ha	
Annual broadleaf weeds	ametryn	sugarcane	4000 g/ha	101
		pineapple	3000 g/ha	
		bananas	2500 g/ha	

Weeds	Active ingredients	Crops	Doses	Pages
Annual broadleaf weeds	ametryn + atrazine	sugarcane	1500 + 1500 g/ha	101 + 102
(cont'd)		pineapple	1500 + 1500 g/ha	
	ametryn + simazine	bananas	1000 + 1000 g/ha	101+112
		pineapple	1000 + 1000 g/ha	
	atrazine	sugarcane	2000 - 3000 g/ha	102
		pineapple	2000 - 3000 g/ha	
	atrazine + terbutryn	sugarcane	2000 + 2000 g/ha	102 + 112
	carbetamide + oxadiazon	ornamentals	1800 + 2400 g/ha	103 + 110
	chlorthal-dimethyl	vegetables		103
	2,4-D	sugarcane	1440 g/ha	101
	2,4-D + ioxynil	sugarcane	900 + 150 g/ha	101+107
	diquat	all crops	800 g/ha	104
	isoxaben + oryzalin	ornamentals	535 + 2145 g/ha	107 + 109
	isoxaben + trifluralin	ornamentals	625 + 2500 g/ha	107 + 113
	linuron	vegetables	500 - 750 g/ha	107
	linuron + monolinuron	vegetables	357 + 357 g/ha	107 + 109
	metoxuron	vegetables	3200 g/ha	108
	oryzalin	fruit orchards	3840 g/ha	109
		bananas	1920 g/ha	
	oxadiazon	fruit orchards	2000 g/ha	110
		ornamentals		
	pendimethalin	vegetables	800 - 1320 g/ha	110
		fruit orchards	3200 g/ha	
	prometryn	vegetables	750 - 1500 g/ha	111
	pyridate	vegetables	900 g/ha	112
	simazine	vegetables	1000 g/ha	112
		fruit orchards	1000 g/ha	
		ornamentals	1000 g/ha	

Weeds	Active ingredients	Crops	Doses	Pages
Annual grasses	ametryn	sugarcane	4000 g/ha	101
		pineapple	3000 g/ha	
		bananas	2500 g/ha	
	ametryn + atrazine	sugarcane	1500 + 1500 g/ha	101 + 102
		pineapple	1500 + 1500 g/ha	
	ametryn + simazine	bananas	1000 + 1000 g/ha	101 + 112
		pineapple	1000 + 1000 g/ha	
	atrazine	sugarcane	2000 - 3000 g/ha	102
		pineapple	2000 - 3000 g/ha	
	atrazine + terbutryn	sugarcane	2000 + 2000 g/ha	102 + 112
	carbetamide + oxadiazon	ornamentals	1800 + 2400 g/ha	103 + 110
	chlorthal-dimethyl	vegetables	4500 + 9000 g/ha	103
	2,4-D	sugarcane	1440 g/ha	101
	2,4-D + ioxynil	sugarcane	900 + 150 g/ha	101 + 107
	fluazifop-P-butyl	vegetables	185 g/ha	105
		fruit orchards		
		pinapple	250 g/ha	
		bananas	250 g/ha	
		ornamentals	250 g/ha	
	isoxaben + oryzalin	ornamentals	535 + 2145 g/ha	107 + 109
	isoxaben + trifluralin	ornamentals	625 + 2500 g/ha	107 + 113
	linuron	vegetables	500 - 750 g/ha	107
	linuron + monolinuron	vegetables	357 + 357 g/ha	107 + 109
	metoxuron	vegetables	3200 g/ha	108
	oryzalin	fruit orchards	3840 g/ha	109
		bananas	1920 g/ha	
	oxadiazon	fruit orchards	2000 g/ha	110
		ornamentals	4000 g/ha	

Weeds	Active ingredients	Crops	Doses	Pages
Annual grasses (cont'd)	pendimethalin	vegetables	800 - 1320 g/ha	110
		fruit orchards	3200 g/ha	
	prometryn	vegetables	750 - 1500 g/ha	11
	simazine	vegetables	1000 g/ha	112
		fruit orchards	1000 g/ha	
		ornamentals	1000 g/ha	
Ferns	asulam	sugarcane	3600 g/ha	102
		vegetables	600 g/ha	
Perennial grasses	fluazifop-P-butyl	fruit orchards	750 g/ha	105
		pinapple	750 g/ha	
		bananas	750 g/ha	
		ornamentals	750 g/ha	

	Active ingredients	Uses	Doses	Pages
All weeds	2,4-D	pastures	660 g/ha	101
	+ MCPA		+ 570	+ 108
	+ picloram		+ 22.5	+ 111
	hexazinone	forests	1800 g/ha	106
	amitrole	non-crop land	2500 g/ha	102
	+ bromacil		+ 700	+ 103
	+ diuron		+ 2000	+ 104
	amitrole	non-crop land	1000 g/ha	102
	+ bromacil		+ 700	+ 103
	+ diuron		+ 2000	+ 104
	+ ammonium thiocyanate	の の	006+	
	imazapyr	non-crop land	2000 g/ha	106
		· · · · · · · · · · · · · · · · · · ·		
Annual broadleaf weeds	2,4-D + mecoprop	pastures	500 + 2000 g/ha	101 + 108
	2,4-D + MCPA	pastures	660 + 570 g/ha	101 + 108
	metsulfuron-methyl	pastures	20 - 30 g/ha	109
Annual grasses	2,4-D + mecoprop	pastures	500 + 2000 g/ha	101 + 108
	2,4-D + MCPA	pastures	660 + 570 g/ha	101 + 108
	fluazifop-P-butyl	forests	750 g/ha	105
	新 ·			
Brushwood	2,4-D + dichlorprop	forests	3600 + 3600 g/ha	101 + 104
	京 (	non-crop land	3600 + 3600 g/ha	
	2,4-D + picloram	non-crop land	2400 + 650 g/ha	101 + 111
	triclopyr	pastures	3600 g/ha	113
		forests	3600 g/ha	
	picloram	non-crop land	2400 g/ha	111

WEED CONTROL IN PASTURES, FORESTS AND NON-CROP LANDS

Weeds	Active ingredients	Uses	Doses	Pages
Ferns	asulam	forests	4000 g/ha	102
Perennial grasses	fluazifop-P-butyl	forests	750 g/ha	105
Perennial weeds	triclopyr	forests	3000000	113
		pastures	1200 g/ha	

# DESSICANTS

Active ingredients	Crops	Doses	Pages
diquat	potatoes	1000 g/ha	104
glufosinate-ammonium	potatoes	600 g/ha	105
paraquat	potatoes	1000 g/ha	110



# **PART III**

# **ACTIVE INGREDIENTS**

Insecticides
Acaricides
Nematicides



# 1,3-dichloropropene

#### Toxicity to man

Toxic if swallowed.

Harmful by inhalation and in contact with skin. Irritating to eyes, respiratory system and skin. May cause sensitisation by skin contact.

#### Mode of action

Soil fumigant nematicide. Also has secondary insecticidal and fungicidal activity.

Products & pages

135 D-D 92

138 DORLONE 2000

#### **Ecotoxicity**

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

WHO: Table 7

#### Other information

Phytotoxic.

Rapidly degraded in soil. Does not accumulate in the environment.

# Abamectin WHO:

#### Toxicity to man

Very toxic if swallowed.

#### Mode of action

Insecticide and acaricide with contact and stomach action. Acts by stimulating the release of GABA, an inhibitory neurotransmitter, thus causing an irreversible paralysis.

Products & pages

174 VERTIMEC

#### **Ecotoxicity**

Dangerous to fish and bees.

#### Other information

Non-phytotoxic when used as directed. Has limited plant systemic activity but with a proper application, abamectin penetrates the leaf tissue forming an abamectin reservoir within the leaf. Rapidly degraded by soil microgranisms. Does not accumulate in the environment.

Acephate who: III

organophosphorus

#### Toxicity to man

Harmful if swallowed.

#### Mode of action

Systemic insecticide with contact and stomach action. Cholinesterase inhibitor.

Products & pages

155 ORTHENE 50

#### **Ecotoxicity**

Dangerous to bees.

#### Other information

Non-phytotoxic to most crops.

Moderate residual activity. Rapidly degraded in soil.

Acrinathrin

WHO: III

pyrethroid

Toxicity to man

Harmful by inhalation.

**Ecotoxicity** 

Dangerous to fish.

Mode of action

Acaricide and insecticide with contact and stomach action. Mostly used as acaricide.

Other information

Non-phytotoxic when used as directed. Strongly adsorbed onto soil and immobile. Low solubility in water. Acrinathrin does not present a significant hazard under field conditions.

Products & pages

164 RUFAST

Aldicarb

WHO: la

carbamate

Toxicity to man

Very toxic in contact with skin and if swallowed.

**Ecotoxicity** 

Dangerous to fish and fauna.

Mode of action

Systemic insecticide with contact and stomach action. Also used against mites and nematodes. Absorbed through the roots and translocated acropetally. Cholinesterase inhibitor.

Other information

Long residual activity (50 days).

**Products & pages** 

170 TEMIK 10 G

Alpha-cypermethrin

WHO:

11

pyrethroid

Toxicity to man

Toxic if swallowed

**Ecotoxicity** 

Dangerous to fish.

Mode of action

Non-systemic insecticide with contact and stomach action. Also exhibits anti-feeding and repellent action.

Other information

Non-phytotoxic when used as directed.

Effective at low rates.

**Products & pages** 

140 FASTAC

# **Azocyclotin**

Toxicity to man

Harmful by inhalation, in contact with skin and if swallowed.

Mode of action

Acaricide with stomach and contact action. Effective against motile stages of mites. Has also some ovicidal activity.

**Products & pages** 

157 PEROPAL

#### **Ecotoxicity**

Dangerous to fish.

#### Other information

Non-phytotoxic when used as directed. Long residual activity on treated plants.

WHO .

WHO:

11

# Bacillus thuringiensis

biological agent

Toxicity to man

#### Mode of action

Bacillus thuringiensis is an aerobic sporeforming gram positive bacterium. At sporulation, crystals of protein, the d-endotoxin are formed. These crystals have insecticidal properties. d-endotoxins are insecticides with exclusive stomach action. Following ingestion, the epithelial cells of the midgut are damaged and destroyed by the d-endotoxin, insects quickly stop feeding and eventually starve to death.

Products & pages

123 AGREE 50 WP

127 BACTOSPEINE WP

138 DIPEL WP

# Benfuracarb

carbamate

#### Toxicity to man

Toxic if swallowed.

#### Mode of action

Insecticide with contact and stomach action. Cholinesterase inhibitor.

Products & pages 155 ONCOL S

#### Other information

**Ecotoxicity** 

Subspecies of *Bacillus thuringiensis* have very selective insecticide properties. Since they are also very safe to man and the environment, their use is suitable for integrated pest management strategies.

WHO: Ib

#### **Ecotoxicity**

Dangerous to fish.

#### Other information

Non-phytotoxic when used as directed. Rapidly degraded and metabolised to carbofuran (see this compound) or carbofuran phenol depending on soil conditions.

Benzoximate

Toxicity to man

Ecotoxicity
Dangerous to fish.

Mode of action
Non-systemic acaricide with contact and stomach action.

Other information
Non-phytotoxic when used as directed.
Rapidly degraded in soils.

Products & pages 126 ARTABAN

## **Bifenthrin**

pyrethroid

Toxicity to man

Toxic if swallowed.

Mode of action

Non-systemic insecticide and acaricide with contact and stomach action.

Products & pages

157 PERCUT (+ clofentezine)167 SLALOM (+ dicofol)

170 TALSTAR

# **Bromopropylate**

Toxicity to man

Mode of action

Non-systemic acaricide with contact action.

Products & pages 154 NEORON 250 EC

WHO: Table 5

WHO:

11

Ecotoxicity

**Ecotoxicity** 

Dangerous to fish.

Other information

Non-phytotoxic when used as directed.

Other information

Slight injury has been observed on certain varieties of apples.

Long residual activity.

# **Buprofezin**

Toxicity to man

**Ecotoxicity** 

#### Mode of action

Insecticide and acaricide with contact and stomach action. Inhibits moults of final instar larvae and nymphs, thus causing death. Treated insects lay non-viable eggs.

Other information

Slightly phytotoxic to Chinese cabbage and turnips.

WHO: Table 5

WHO: II

WHO: II

Products & pages

126 APPLAUD FL

# **Cadusafos**

organophosphorus

#### Toxicity to man

Very toxic by inhalation and in contact with skin. Toxic if swallowed.

#### **Ecotoxicity**

Dangerous to fish and fauna.

#### Mode of action

Insecticide with contact and stomach action. Cholinesterase inhibitor.

#### Other information

May cause injury if it comes in contact with the seeds of certain plants.

Cadusafos has low mobility in soil. Slowly degraded, it has long residual activity in soil.

**Products & pages** 

165 RUGBY 10 G

# Carbaryl

carbamate

#### Toxicity to man

Harmful if swallowed.

#### **Ecotoxicity**

Dangerous to fish and bees.

#### Mode of action

Insecticide with contact and stomach action, and slight systemic properties. Weak cholinesterase inhibitor.

#### Other information

Slightly phytotoxic. Rapidly degraded in soil.

Products & pages

166 SEVIN 80 S 166 SEVIN 85 WP

Carbofuran

WHO: Ib

carbamate

Toxicity to man

Very toxic by inhalation and if swallowed.

**Ecotoxicity** 

Dangerous to fish and fauna.

Mode of action

Systemic insecticide and nematicide with mainly contact and stomach action. Cholinesterase inhibitor.

Other information

Non-phytotoxic when used as directed. Long residual activity in soil (50 days).

Products & pages

142 **FURADAN 10 G** 142 **FURADAN 5 G** 

Chinomethionat

WHO: Table 5

Toxicity to man

Irritating to eyes.

May cause sensitisation by skin contact.

**Ecotoxicity** 

Dangerous to fish and some beneficial arthropods.

Mode of action

Control of summer eggs and motile stages of mites. Also has fungicidal activity (see page

Other information

Phytotoxic to ornamentals and some varieties of apple and pear.

Products & pages

153 MORESTAN

Chlorfenvinphos

WHO:

la

organophosphorus

Toxicity to man

Very toxic if swallowed.

Toxic in contact with skin.

**Ecotoxicity** 

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Dangerous to bees and fauna.

Mode of action

Insecticide with contact and stomach action. Cholinesterase inhibitor.

**Products & pages** 

Other information

Non-phytotoxic when used as directed. Long residual activity in soil.

159 PSILATOX GRANULES 5

# Chlorpyrifos

organophosphorus

#### Toxicity to man

Toxic in contact with skin and if swallowed.

#### **Ecotoxicity**

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

WHO: II

WHO: Table 5

WHO:

11

Dangerous to bees.

#### Mode of action

Non-systemic insecticide with contact, stomach and vapour action.

#### Other information

Non-phytotoxic when used as directed. It is slowly degraded with a half life of 60-120 days. It resists a long time to leaching and unexpected effects may occur because of accumulation in soils.

**Products & pages** 

139 DURSBAN 2

### Clofentezine

Toxicity to man

#### **Ecotoxicity**

#### Mode of action

Acaricide with contact action. Control of eggs and larvae (not effective against adults). Good translaminar activity.

#### Other information

Non-phytotoxic when used as directed except to some ornamentals.

Products & pages

126 APPOLO 50 SC

157 PERCUT (+ bifenthrin)

# Cyfluthrin

pyrethroid

#### Toxicity to man

Toxic by inhalation and if swallowed.

#### Ecotoxicity

Dangerous to fish.

#### Mode of action

Non-systemic insecticide with contact and stomach action. 161Rapid knock-down and long residual activity.

#### Other information

Non-phytotoxic when used as directed. Rapidly degraded in soil. Low mobility. Finally degraded to carbon dioxide by soil microorganisms.

Products & pages

130 BAYTHROID EC 050

# Cypermethrin

pyrethroid

#### Toxicity to man

Harmful by inhalation and if swallowed. Irritating to eyes and skin.

May cause sensitisation by skin contact.

#### **Ecotoxicity**

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

WHO: II

WHO: Table 5

WHO:

11

Toxic to bees.

#### Mode of action

Non-systemic insecticide with contact and stomach action. Also exhibits anti-feeding action.

#### Other information

Non-phytotoxic.

Good residual activity on treated plants.

Products & pages

124 AMBUSH C

134 CYMPERATOR 10 FOG

137 DEMON 40 WP

137 DEMONTC

147 KAFFIL SUPER 25 EC

166 SHERPA 10 EC

170 TAMBO 440 EC (+ profenofos)

# Cyromazine

Toxicity to man

#### Ecotoxicity

#### Mode of action

Systemic insecticide with contact action, only effective against larvae. Acts as an insect growth regulator which interferes with moulting and pupation.

Other information

Non-phytotoxic when used as directed. Cyromazine and its main metabolite melamine are moderately mobile. They are efficiently degraded by biological mechanisms.

Products & pages

173 TRIGARD 75 WP

## Deltamethrin

pyrethroid

#### Toxicity to man

Toxic by inhalation and if swallowed.

#### **Ecotoxicity**

Dangerous to fish.

#### Mode of action

Non-systemic insecticide with contact and stomach action. Fast-acting insecticide with some repellent activity.

#### Other information

Non-phytotoxic.

Degraded by soil micro-organisms within a week. No risk of leaching.

Products & pages

136 DECIS B (+ heptenophos)

136 DECISICE

136 DECIS FLO

Diazinon

WHO: II

organophosphorus

Toxicity to man

Harmful if swallowed.

**Ecotoxicity** 

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Dangerous to bees and fauna.

Mode of action

Insecticide and acaricide with contact, stomach and respiratory action. Cholinesterase inhibitor.

Other information

Non-phytotoxic when used as directed. Strongly adsorbed onto soil

Products & pages

128 BASUDIN 10 G

128 BASUDIN 40 WP 129 BASUDIN 5 G

129 BASUDIN 600 EC

129 BASUDINE 20 L

**Dichlorvos** 

organophosphorus

Toxicity to man

Toxic in contact with skin and if swallowed.

**Ecotoxicity** 

Dangerous to fish, bees and fauna.

Mode of action

Insecticide and acaricide with contact, respiratory and stomach action. Rapid knockdown but poor residual activity. Cholinesterase inhibitor.

Other information

Do not use on cucurbits.

Non-persistent in the environment.

Products & pages

154 NOGOS 500 EC

Dicofol

WHO: III

WHO:

lb

organochlorine

Toxicity to man

Harmful in contact with skin and if swallowed. Irritating to skin.

May cause sensitisation by skin contact.

**Ecotoxicity** 

Dangerous to fish.

Mode of action

Acaricide with contact action against mobile stages of all species of spider mites and their summer eggs.

Other information

Injury has occurred on eggplant. Low mobility in soil.

**Products & pages** 

131 CARBAX 360

148 KELTHANE 50 L

167 SLALOM (+ bifenthrin)

## Dimethoate

WHO:

WHO:

WHO:

la

11

Ш

organophosphorus

#### Toxicity to man

Harmful in contact with skin and if swallowed.

#### **Ecotoxicity**

Dangerous to fish, bees and fauna.

#### Mode of action

Systemic insecticide and acaricide with contact and stomach action. Cholinesterase inhibitor.

#### Other information

Non-phytotoxic when used as directed, except to some varieties of lemon, peach, tomato, bean, apples and some ornamentals.

Products & pages

Endosulfan

157 PERFEKTHION

163 ROGOR 50

organochlorine

#### Toxicity to man

Toxic in contact with skin and if swallowed. Irritating to eyes.

#### **Ecotoxicity**

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Dangerous to fauna.

#### Mode of action

Non-systemic insecticide and acaricide with contact and stomach action.

#### Other information

Endosulfan is mostly non-phytotoxic. Slowly degraded in soils.

Products & pages

139 DRIFENE AP (+ parathion) SERK EC (+ thiometon) 165

THIODAN 50 WP 171

# **Ethoprophos**

organophosphorus

#### Toxicity to man

Very toxic in contact with skin. Toxic if swallowed.

#### **Ecotoxicity**

Dangerous to fish and fauna.

#### Mode of action

Non-systemic insecticide and nematicide. Cholinesterase inhibitor with excellent contact action.

153 MOCAP 10 G **Products & pages** 153 MOCAP 20 EC

#### Other information

Non-phytotoxic when used as directed.

# **Fenamiphos**

organophosphorus

#### Toxicity to man

Very toxic if swallowed. Toxic in contact with skin.

#### Mode of action

Systemic nematicide with contact action. Absorbed by the roots. Cholinesterase inhibitor.

Products & pages

153 NEMACUR 5

154 NEMACUR GR 10

#### **Ecotoxicity**

Dangerous to fish, bees and fauna.

#### Other information

Non-phytotoxic when applied to the soil. Readily degradable in water, degradable on soil surfaces. Low mobility in soil. Fenamiphos has long residual activity in soil (4 months).

WHO:

WHO: Table 5

WHO:

11

la

# Fenbutatin oxide

organotin

#### Toxicity to man

Harmful in contact with skin. Irritating to eyes and skin.

#### Mode of action

Non-systemic acaricide with contact and stomach action.

#### **Ecotoxicity**

Dangerous to fish.

#### Other information

Non-phytotoxic, except to some ornamentals. Long residual control.

**Products & pages** 

143 GEMM (+ flufenoxuron)

172 TORQUES

# **Fenitrothion**

organophosphorus

#### Toxicity to man

Harmful if swallowed.

#### **Ecotoxicity**

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Dangerous to bees and fauna.

#### Mode of action

Non-systemic insecticide with contact and stomach action. Cholinesterase inhibitor.

#### Other information

Non-phytotoxic when used as directed.

**Products & pages** 

168 SUMICOMBI (+ fenvalerate)

# **Fenpropathrin**

pyrethroid

Toxicity to man

Very toxic by inhalation. Toxic if swallowed.

Mode of action

Acaricide and insecticide with repellent, contact and stomach action. Rapid knockdown.

Products & pages

135 DANITOL 10 EC

#### **Ecotoxicity**

Dangerous to fish and bees.

Other information

Non-phytotoxic when used as directed. Good residual activity.

Rapidly degraded in water. Duration of activity in soil is approximately 1 to 5 days.

WHO:

WHO:

WHO:

11

11

11

# **Fenthion**

organophosphorus

Toxicity to man

Toxic if swallowed.

Harmful in contact with skin.

**Ecotoxicity** 

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Dangerous to bees and fauna.

Mode of action

Insecticide with contact, stomach and respiratory action. Cholinesterase inhibitor.

Other information

Non-phytotoxic when used as directed.

Long residual activity.

Rapidly degraded in soil under aerobic conditions.

Products & pages

151 LEBAYCID EC 50

# **Fenvalerate**

pyrethroid

Toxicity to man

Harmful if swallowed.

**Ecotoxicity** 

Dangerous to fish.

Mode of action

Non-systemic insecticide and acaricide with contact and stomach action.

Other information

Non-phytotoxic when used as directed. Good residual activity.

Inherently biodegradable.

**Products & pages** 

168 SUMICIDIN 10

168 SUMICOMBI (+ fenitrothion)

# **Fipronil**

phenyl pyrazole

## Toxicity to man

Toxic by inhalation, in contact with skin and if swallowed.

Toxic: danger of serious damage to health by prolonged exposure if swallowed.

# **Ecotoxicity**

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

WHO:

WHO: Table 5

WHO:

Toxic to fauna. Toxic to bees.

# Mode of action

Insecticide with contact and stomach action. Blocker of the GABA-regulated chloride channel.

#### Other information

Effective at very low rates.

Control of insects tolerant to pyrethroid, organophosphorus, organochlorine and carbamate insecticides (resistance to fipronil has not yet been demonstrated).

**Products & pages** 

161 REGENT 5 GR

# **Flufenoxuron**

benzoylurea

# Toxicity to man

Possible risk of irreversible effects.

# Ecotoxicity

Dangerous to fish.

#### Mode of action

Insect and acarid growth regulator with stomach and contact action. Interferes with the synthesis of chitin, thus causing death of larvae between moults. Treated females lay non-viable eggs.

## Other information

Non-phytotoxic.

**Products & pages** 

143 GEMM (+ fenbutatin oxide)

# **Fonofos**

organophosphorus

## Toxicity to man

Very toxic in contact with skin and if swallowed.

# **Ecotoxicity**

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Dangerous to bees.

## Mode of action

Insecticide with contact and stomach action. Cholinesterase inhibitor.

## Other information

Non-phytotoxic when used as directed.

**Products & pages** 

139 DYFONATE 5 G

# **Formetanate**

WHO: Ib

carbamate

Toxicity to man

Very toxic if swallowed.

**Ecotoxicity** 

Dangerous to bees.

Mode of action

Insecticide and acaricide with contact and stomach action. Cholinesterase inhibitor.

Other information

Non-phytotoxic when used as directed. Rapidly degraded in soil.

Products & pages

137 DICARZOL 200

11

WHO:

# **Formothion**

organophosphorus

Toxicity to man

Harmful in contact with skin and if swallowed.

**Ecotoxicity** 

Dangerous to fish and bees.

Mode of action

Systemic insecticide with contact and low stomach action. Cholinesterase inhibitor.

Other information

Non-phytotoxic. In soil and in plants, formothion is rapidly metabolised to dimethoate (see this compound) and other related metabolites.

Products & pages

125 ANTHIO FORT

**Heptenophos** 

WHO:

Ib

organophosphorus

Toxicity to man

Toxic if swallowed.

**Ecotoxicity** 

Dangerous to bees.

Mode of action

Systemic insecticide with contact, stomach and respiratory action. Readily penetrates the plant tissues and quickly translocated in all directions. Cholinesterase inhibitor.

Other information

Non-phytotoxic when used as directed. Insecticide providing a quick knockdown and short residual effect.

Products & pages

136 DECIS B (+ deltamethrin)

# Hexythiazox

Toxicity to man

Ecotoxicity

# Mode of action

Non-systemic acaricide with contact and stomach action. Good translaminar activity. Control of eggs, larvae and pupae of mites. Not active against adults, but eggs laid by treated females are non-viable.

Other information

Non-phytotoxic to most crops.

WHO: Table 5

WHO:

WHO:

11

lb

Products & pages

132 CESAR

# **Imidacloprid**

Toxicity to man

Harmful if swallowed.

**Ecotoxicity** 

# Mode of action

Systemic insecticide with contact and stomach action. Acts on the central nervous system.

Other information

Non-phytotoxic when used as directed. Very low mobility in soil.

Products & pages

132 CONFIDOR SC 350

# Isazofos

organophosphorus

Toxicity to man

Toxic by inhalation, in contact with skin and if swallowed.

**Ecotoxicity** 

Dangerous to fauna.

#### Mode of action

Systemic insecticide and nematicide with contact and stomach action. Inhibits cholinesterase.

Other information

Phytotoxic to potatoes and tobacco.

**Products & pages** 

152 MIRAL 10 G

# Lambda-cyhalothrin

pyrethroid

# Toxicity to man

Very toxic by inhalation. Toxic if swallowed.

# **Ecotoxicity**

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

WHO: II

## Mode of action

Non-systemic insecticide with contact and stomach action and repellent properties.

# Other information

Non-phytotoxic when used as directed.

**Products & pages** 

132 COMMODORE 10 WP 148 KARATE 2.5 EC

Lindane WHO: II

organochlorine

# Toxicity to man

Toxic by inhalation, in contact with skin and if swallowed.

Irritating to eyes and skin.

# **Ecotoxicity**

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Dangerous to bees and fauna.

#### Mode of action

Insecticide with contact, stomach and respiratory action.

## Other information

Plant damage will occur if used in excessive amounts.

Relatively long residual effects.

Very long persistence in soil. Approximately 60% of the lindane applied in soil is eliminated within a year.

Products & pages

143 GAMMA COL

143 GAMMALIN 20

# Methidathion

organophosphorus

# Toxicity to man

Very toxic if swallowed. Harmful in contact with skin.

# **Ecotoxicity**

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

WHO .

WHO:

WHO:

la

Ib

lb

Dangerous to bees and fauna.

#### Mode of action

Non-systemic insecticide with contact and stomach action. Cholinesterase inhibitor.

#### Other information

Non-phytotoxic when used as directed. Relatively long residual effectiveness. Rapidly degraded in soil and water by chemical, photolytic and biological processes. Low mobility in soil.

**Products & pages** 

173 ULTRACIDE 20 LIQUIDE

# Methomyl

oxime carbamate

# Toxicity to man

Very toxic if swallowed.

#### Mode of action

Systemic insecticide and acaricide with contact and stomach action. A fast-acting cholinesterase inhibitor.

Products & pages

150 LANNATE 20 L

# **Ecotoxicity**

Dangerous to fish and bees.

#### Other information

Non-phytotoxic when used as recommended. Rapidly degraded in soil.

# Mevinphos

organophosphorus

#### Toxicity to man

Very toxic in contact with skin and if swallowed.

## **Ecotoxicity**

Dangerous to fish, bees and fauna.

## Mode of action

Systemic insecticide and acaricide with contact, stomach and respiratory action. Cholinesterase inhibitor.

## Other information

Non-phytotoxic.

Provides rapid knock-down, but short residual activity.

Products & pages

157 PHOSDRIN W 10

Oxamyl

oxime carbamate

# Toxicity to man

Very toxic by inhalation and if swallowed. Harmful in contact with skin.

#### Mode of action

Systemic insecticide, acaricide and nematicide with effective direct contact and stomach action. Fast-acting anticholinesterase agent.

Products & pages

174 VYDATE L

# Ecotoxicity

Dangerous to fish and bees.

# Other information

Non phytotoxic when used as directed. Poor residual activity.

Decomposes readily to carbon dioxide and organosoluble degradation products in water and soil.

WHO:

WHO:

WHO:

lb

lb

# Oxydemeton-methyl

organophosphorus

# Toxicity to man

Toxic in contact with skin and if swallowed.

# Mode of action

Systemic insecticide with contact and stomach action. Cholinesterase inhibitor.

# **Ecotoxicity**

Very toxic to aquatic organisms.

Dangerous to bees and fauna.

#### Other information

Injury to certain ornamentals has been reported, especially in combination with other pesticides.

Rapid knockdown and long residual activity. Rapidly degraded in soil.

**Products & pages** 

152 METASYSTOX R 250 EC

# **Parathion**

organophosphorus

## Toxicity to man

Very toxic in contact with skin and if swallowed.

## **Ecotoxicity**

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Dangerous to bees and fauna.

## Mode of action

Non-systemic insecticide with contact, stomach and respiratory action. Cholinesterase inhibitor.

## Other information

Non-phytotoxic except to some ornamentals and cucurbits.

Efficacy of parathion is enhanced by temperatures above 18°C.

Products & pages

139 DRIFENE AP (+ endosulfan)

156 PACOL 4,5

Permethrin

WHO: 11

pyrethroid

Toxicity to man

Harmful if swallowed.

**Ecotoxicity** 

Dangerous to fish and bees.

Mode of action

Non-systemic insecticide with contact and stomach action. Also exhibits repellent action.

Other information

Non-phytotoxic when used as recommended. Good residual activity on treated plants. Rapidly degraded in soil and water.

**Products & pages** 

124 AMBUSH 10 EC

124 AMBUSH 50 EC

> WHO: 11

**Phosalone** 

organophosphorus

Toxicity to man

Toxic if swallowed. Harmful in contact with skin. **Ecotoxicity** 

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Mode of action

Non-systemic insecticide with contact and stomach action. Cholinesterase inhibitor.

Other information

Non-phytotoxic when used as directed. Good residual activity. Low mobility in soil and rapidly degraded.

**Products & pages** 

**ZOLONE FLO** 175 **ZOLONE LIQUIDE** 175

**Pirimicarb** 

WHO: 11

carbamate

Toxicity to man

Toxic if swallowed.

**Ecotoxicity** 

Mode of action

Systemic insecticide with contact, stomach and respiratory action. Cholinesterase inhibitor.

Other information

Non-phytotoxic when used as recommended.

Fast-acting control of aphids. Also effective against organophosphorus resistant strains. Selective to many beneficial insects.

Products & pages

161 RAPID

# Pirimiphos-ethyl

organophosphorus

# Toxicity to man

Toxic if swallowed.

Harmful in contact with skin.

## **Ecotoxicity**

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

WHO:

WHO:

WHO:

111

lb

Dangerous to bees.

# Mode of action

Insecticide with contact and respiratory action.

Products & pages 130 BULLIT

158 PRIMICID 50 EC

#### Other information

Non-phytotoxic when used as directed.

# Pirimiphos-methyl

organophosphorus

## Toxicity to man

Harmful if swallowed.

# Mode of action

Insecticide with contact, ingestion and respiratory action.

## **Ecotoxicity**

Dangerous to fish and bees.

## Other information

Control of a wide range of insects and mites on crops, in warehouses, stored grain and industrial premises.

**Products & pages** 

121 ACTELLIC 50 EC

121 ACTELLIC DUST 2%

121 ACTELLIC LIQUIDE 121 ACTELLIC SG 20

# **Profenofos**

organophosphorus

# Toxicity to man

Harmful by inhalation, in contact with skin and if swallowed.

#### \_\_\_\_

Non-systemic insecticide and acaricide with contact and stomach action. Cholinesterase inhibitor. Has ovicidal properties.

# **Ecotoxicity**

Dangerous to fish and bees.

#### Mode of action Other information

Non-phytotoxic when used as directed. Rapidly degraded in soil.

Products & pages 170 TAMBO 440 EC (+ cypermethrin)

# Quinalphos

organophosphorus

# Toxicity to man

Toxic if swallowed.

Harmful in contact with skin.

## **Ecotoxicity**

Dangerous to bees.

## Mode of action

Insecticide and acaricide with contact and stomach action. Penetrates the plant tissues through translaminar action. Cholinesterase inhibitor.

Products & pages

140 EKALUX

140 EKALUX FORTE

# Other information

Slight injury has been observed on certain fruit trees.

WHO:

WHO: Table 5

WHO: Table 5

11

Rapidly degraded under aerobic conditions in soil.

Tau-fluvalinate

pyrethroid

# Toxicity to man

Harmful if swallowed.

# Ecotoxicity

Dangerous to fish.

#### Mode of action

Insecticide and acaricide with contact and stomach action.

Products & pages

149 KLARTAN 151 MAVRIK FLO

# Other information

Non-phytotoxic when used as directed. Rapidly degraded under aerobic conditions in soil.

Teflubenzuron

benzoylurea

Toxicity to man

## **Ecotoxicity**

# Mode of action

Non-systemic insect growth regulator with stomach action. Interferes with the synthesis of chitin, thus causing death of larvae between moults. May affect fertility of female insects after contact or ingestion.

Products & pages

135 DART

154 NOMOLT SC

# Other information

Non-phytotoxic when used as directed. Microbial degradation occurs in soil with rapid metabolism. Low persistence in the soil.

**Terbufos** 

WHO:

WHO:

WHO:

WHO:

Ш

lb

la

11

Toxicity to man

Very toxic in contact with skin and if swallowed.

Mode of action

Soil insecticide and nematicide with contact and stomach action. Cholinesterase inhibitor.

Products & pages

133 COUNTER 10 G

**Ecotoxicity** 

Dangerous to bees, fish and fauna.

Other information

Non-phytotoxic when used as directed. Rapidly degraded in soil.

**Thiocyclam** 

nereistoxin-derivative

Toxicity to man

Harmful in contact with skin and if swallowed.

Mode of action

Selective insecticide with contact and stomach action.

**Products & pages** 

140 EVISECT S

**Ecotoxicity** 

Dangerous to fish and bees.

Other information

Non-phytotoxic when used as directed. Rapidly metabolised in soil.

**Thiometon** 

organophosphorus

Toxicity to man

Toxic if swallowed.

Harmful in contact with skin.

**Ecotoxicity** 

Dangerous to fish and bees.

Mode of action

Systemic insecticide and acaricide with contact and stomach action. Cholinesterase inhibitor.

Other information

Non-phytotoxic except to some ornamentals. Rapidly degraded in soil.

Products & pages

165 SERK EC (+ endosulfan)

**Tralomethrin** 

pyrethroid

Toxicity to man

Toxic by inhalation and if swallowed.

**Ecotoxicity** 

Dangerous to fish.

Other information

Non-phytotoxic.

Mode of action

Non-systemic insecticide with contact and stomach action.

113

Strongly adsorbed in soil. No risk of leaching.

Products & pages

172 TRACKER 108 EC

# **Triazamate**

WHO:

# Toxicity to man

Toxic by inhalation and if swallowed.

May cause sensitisation by skin contact.

# **Ecotoxicity**

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Toxic to fauna.

## Mode of action

Fast-acting systemic aphicide with contact and stomach action. Cholinesterase inhibitor.

## Other information

Non-phytotoxic when used as directed. Rapidly degraded in the environment. Low potential for accumulation.

**Products & pages** 

127 AZTEC

# Vamidothion

WHO: Ib

organophosphorus

# Toxicity to man

Toxic if swallowed. Harmful in contact with skin.

# **Ecotoxicity**

Very toxic to aquatic organisms. Dangerous to bees.

#### Mode of action

Systemic insecticide with stomach action. Cholinesterase inhibitor.

#### Other information

Non-phytotoxic when used as directed. Long residual activity. Rapidly degraded in soil.

**Products & pages** 

149 KILVAL

# **Fungicides**



# 8-hydroxyquinoline sulfate

Toxicity to man

Harmful if swallowed.

Ecotoxicity

## Mode of action

Systemic fungicide and bactericide for soil treatment.

Other information

Non-phytotoxic.

**Products & pages** 

133 CRYPTONOL LIQUIDE

# **Benomyl**

benzimidazole

## Toxicity to man

Possible risk of irreversible effects.

## **Ecotoxicity**

Dangerous to fish.

# Mode of action

Systemic fungicide with protective and curative action. Absorbed through the leaves and roots, with translocation principally acropetally.

#### Other information

Non-phytotoxic when used as directed. Benomyl is rapidly converted to carbendazim in the environment

WHO: Table 6

WHO: Table 5

WHO: Table 5

**Products & pages** 

130 BENLATE 50 WP 130 BENLATE OD

# **Bitertanol**

triazole

# Toxicity to man

Harmful: danger of serious damage to health by prolonged exposure if swallowed.

# Ecotoxicity

## Mode of action

Foliar fungicide with protective and curative and also eradicating action. Ergosterol biosynthesis inhibitor.

## Other information

Non-phytotoxic when used as directed. Degradation in soil is rapid. Carbon dioxide is the major metabolite in soil. Low mobility in soil.

**Products & pages** 

129 BAYCOR EC 300

# **Bromuconazole**

triazole

# Toxicity to man

Harmful if swallowed.

# **Ecotoxicity**

Toxic to aquatic organisms, may cause longterm adverse effects in the aquatic environment.

WHO:

WHO: Table 5

WHO: Table 5

NC

#### Mode of action

Systemic fungicide with preventive and curative action. Ergosterol biosynthesis inhibitor.

**Products & pages** 

173 VECTRA BN

#### Other information

Bromuconazole is slowly degraded in soil. Very low mobility in soil.

# Chinomethionat

# Toxicity to man

Irritating to eyes.

May cause sensitisation by skin contact.

## **Ecotoxicity**

Dangerous to fish and some beneficial arthropods.

#### Mode of action

Contact fungicide with protective and eradicant action for the control of powdery mildew. Also has acaricidal activity (see page 64).

Products & pages

153 MORESTAN

## Other information

Phytotoxic to ornamentals and some varieties of apple and pear.

# Chlorothalonil

# Toxicity to man

Possible risk of irreversible effects.

# **Ecotoxicity**

Dangerous to fish.

#### Mode of action

Non-systemic fungicide with protective action. Inhibits enzymatic reactions, thus causing death of fungi.

## Other information

Non-phytotoxic when used as directed. Chlorothalonil is strongly adsorbed onto water sediments and degraded chemically and microbiologically within a few days. In soil, chlorothalonil is degraded within a few weeks.

**Products & pages** 

134 DACONIL 2787 W 75

134 DACONIL 500

# Copper hydroxide inorganic Toxicity to man Ecotoxicity Dangerous to fish. Mode of action Foliar fungicide and bactericide with preventive action. Products & pages 150 KOCIDE 101 PM

Copper oxy	chlo	oride	WHO: III		
Toxicity to man			Ecotoxicity  Dangerous to fish.		
Mode of action Foliar fungicide with pre	eventive	action.	Other information  Non-phytotoxic when used as directed, except to carrots and potatoes under certain conditions. Do not use on copper-sensitive crops.  Strongly adsorbed by soils.		
Products & pages	132 133 173 169	TRIMILTOX FORT (+ mancozeb / cupric compounds)			

Cymoxanil			WHO: III
Toxicity to man Harmful if swallowed.			Ecotoxicity  Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Mode of action			Other information
Products & pages	124 141 160 160 167 169 169	FULVAX 2000 (PULSAN (+ mar PULSAN PEPITE SIRDATE S (+ fol SYGAN S (+ fol	+ mancozeb) ncozeb / oxadixyl) E (+ mancozeb / oxadixyl) olpet / oxadixyl)

# Difenoconazole

triazole

# Toxicity to man

Harmful if swallowed.

Harmful: danger of serious damage to health by prolonged exposure if swallowed.

# **Ecotoxicity**

# Mode of action

Systemic fungicide with long-lasting preventive and curative action. Absorbed through leaves and stem. Ergosterol biosynthesis inhibitor.

Other information

Non-phytotoxic when used as directed. Slowly degraded and low mobility in soil.

WHO: III

WHO:

WHO: Table 5

Products & pages

165 SCORE 250 EC

# **Epoxiconazole**

## Toxicity to man

Harmful: danger of serious damage to health by prolonged exposure if swallowed.

## **Ecotoxicity**

Toxic to aquatic organisms, may cause longterm adverse effects in the aquatic environment.

#### Mode of action

Systemic fungicide with preventive, curative and eradicant action. Inhibits ergosterol biosynthesis.

Products & pages

88 OPUS

#### Other information

Non-phytotoxic when used as directed. Long residual activity on treated plants.

# **Fenarimol**

Toxicity to man

# **Ecotoxicity**

Dangerous to fish.

#### Mode of action

Systemic foliar fungicide with protectant, curative and eradicating properties. Ergosterol bio-synthesis inhibitor.

## Other information

Non-phytotoxic when used as directed. If used in excessive amounts, it will cause abnormal leaf development and darker green coloration. Slowly degraded in soil.

Products & pages

164 RUBIGAN 4

# **Fenpropimorph**

Toxicity to man

Harmful by inhalation.

Possible risk of harm to the unborn child.

#### Mode of action

Systemic fungicide with protective and curative action. Absorbed by the roots and the leaves. Ergosterol biosynthesis inhibitor.

**Products & pages** 

133 CORBEL

# Ecotoxicity

# Other information

Non-phytotoxic when used as directed. Strongly adsorbed to soil.

WHO: Table 5

WHO:

WHO: Table 5

III

# **Flusilazole**

triazole

## Toxicity to man

Harmful if swallowed.

Harmful: danger of serious damage to health by prolonged exposure if swallowed.

Possible risk of harm to the unborn child.

# **Ecotoxicity**

#### Mode of action

Systemic fungicide with long-lasting preventive and curative action.

Products & pages 160 PUNCH B 40 EC

### Other information

Non-phytotoxic when used as directed.

# **Folpet**

# Toxicity to man

Irritating to eyes.

May cause sensitisation by skin contact.

Possible risk of irreversible effects.

# **Ecotoxicity**

Dangerous to fish.

#### Mode of action

Foliar fungicide with preventive action.

#### Other information

Some fruits may be injured.

Good residual activity.

Strongly adsorbed and rapidly degraded in soil

# **Products & pages**

122 ACYLON SOLUDOSE (+ metalaxyl)

124 ANTEOR FLO (+ cymoxanil)

167 SIRDATE S (+ cymoxanil / oxadixyl)

169 SYGAN S (+ cymoxanil)

169 SYPHAL LS (+ copper oxychloride / cymoxanil / mancozeb)

# Fosetyl-aluminium Toxicity to man Ecotoxicity Mode of action Systemic fungicide with preventive and curative action. Absorbed through the leaves and also through the roots. Inhibits germination of spores and blocks the development of mycelium. Products & pages 123 ALIETTE

Furalaxyl acylalanine	WHO: III
Toxicity to man	Ecotoxicity
Mode of action Systemic fungicide, absorbed through the roots, stalk and leaves.	Other information  Non-phytotoxic when used as directed.  Good residual activity.
Products & pages 141 FONGARID 25 W	/P

Hexaconazole triazole	WHO: Table 5
Toxicity to man  Harmful: danger of serious damage to health by prolonged exposure if swallowed.	Ecotoxicity
Mode of action  Systemic fungicide with preventive and curative action. Ergosterol biosynthesis inhibitor.	Other information  Non-phytotoxic when used as directed. Hexaconazole is rapidly degraded in soil.
Products & pages 125 ANVIL 5 SC 125 ANVIL MS	

**Imazalil** 

Toxicity to man

Harmful if swallowed. Irritating to eyes.

Mode of action

Systemic fungicide with protective and curative action. Ergosterol biosynthesis inhibitor.

Products & pages

Dangerous to fish.

**Ecotoxicity** 

Other information

Mainly used as post-harvest treatment.

WHO:

WHO: Table 5

WHO: Table 5

11

136 DECCOZIL AGRUMES

**Iprodione** 

dicarboximide

Toxicity to man

Possible risk of irreversible effects.

**Ecotoxicity** 

Mode of action

Contact fungicide with preventive and curative action. Inhibits germination of spores and blocks the development of the mycelium.

Products & pages

164 ROVRAL

Other information

Non-phytotoxic when used as directed. Iprodione is relatively rapidly metabolised to carbon dioxide in soil.

Mancozeb

alkylenebis(dithiocarbamate)

Toxicity to man

Irritating to respiratory system.

May cause sensitisation by skin contact.

**Ecotoxicity** 

Mode of action

Non-systemic fungicide with protective action.

Other information

Non-phytotoxic when used as directed.

Good residual activity.

Rapidly degraded in the environment by hydrolysis, oxidation, photolysis and metabolism.

Products & pages 138

138 DITHANE M 45 QUINO

141 FULVAX 2000 (+ cymoxanil)

151 MANZATE 200

160 PULSAN (+ cymoxanil / oxadixyl)

160 PULSAN PEPITE (+ cymoxanil / oxadixyl)

162 RIDOMIL MZ 72 WP (+ metalaxyl)

169 SYPHAL LS (copper oxychloride / cymoxanil / folpet)

173 TRIMILTOX FORT (+ copper oxychloride / cupric compounds)

Maneb

alkylenebis(dithiocarbamate)

Toxicity to man

Irritating to respiratory system. May cause sensitisation by skin contact.

Mode of action

Non-systemic fungicide with protective action.

**Ecotoxicity** 

Dangerous to fish.

Other information

Varieties of cucurbits may be injured. Rapidly degraded in the environment by hydrolysis, oxidation, photolysis and

WHO: Table 5

WHO:

WHO: Table 5

III

metabolism.

Products & pages

133 CUPROSAN 311 SD (+ copper oxychloride / zineb)

156 PELTAR FLO (+ thiophanate-methyl)

Metalaxyl

acylalanine

Toxicity to man

Harmful if swallowed.

Mode of action

Systemic fungicide with preventive and curative action. Absorbed through leaves, stem and roots. Inhibits protein synthesis.

**Ecotoxicity** 

Other information

Long residual activity in soil.

**Products & pages** 

ACYLON SOLUDOSE (+ folpet) 122

162 RIDOMIL 5 G

162 RIDOMIL MZ 72 WP (+ mancozeb)

Metiram

alkylenebis(dithiocarbamate)

Toxicity to man

**Ecotoxicity** 

Mode of action

Non-systemic foliar fungicide with protective action.

Other information

Non-phytotoxic when used as directed. Rapidly degraded in the environment by hydrolysis, oxidation, photolysis and

metabolism.

**Products & pages** 

158 POLYRAM DF

#### Oxadixyl WHO: III Toxicity to man **Ecotoxicity** Mode of action Other information Systemic fungicide with preventive and curative Non-phytotoxic when used as directed. action. Absorbed by the leaves and roots. Often used in combination with other fungicides. Synergistic effect with contact fungicides, mainly mancozeb. Slowly degraded in soil. **Products & pages** 160 PULSAN (+ cymoxanil / mancozeb)

PULSAN PEPITE (+ cymoxanil / mancozeb)

Penconazole WHO: III triazole Toxicity to man **Ecotoxicity** Harmful: danger of serious damage to health by prolonged exposure if swallowed. Mode of action Other information Systemic fungicide with mainly preventive, but Non-phytotoxic when used as directed. also curative action. Absorbed through leaves Slowly degraded in soil.

SIRDATE S (+ cymoxanil / folpet)

160 167

and stem. Ergosterol biosynthesis inhibitor.

**Products & pages** 

171 TOPAS 100 EC

**Propiconazole** WHO: III triazole Toxicity to man **Ecotoxicity** Harmful if swallowed. Mode of action Other information Systemic fungicide with preventive and curative Non-phytotoxic when used as directed. action. Inhibits ergosterol biosynthesis. Slowly degraded in soil. 171 TILT 250 EC **Products & pages** 

# Propineb alkylenebis(dithiocarbamate) Toxicity to man Ecotoxicity Other information Non-phytotoxic when used as directed. Long residual activity. Rapidly degraded in the environment. Propineb is immobile in soil. Products & pages 125 ANTRACOL WP 70

Pyrazofos organophosphate	WHO: II
Toxicity to man Harmful if swallowed.	Ecotoxicity  Dangerous to fish.
Mode of action  Systemic fungicide with preventive and curative action. Absorbed by the leaves and the shoots.	Other information Non-phytotoxic when used as directed.
Products & pages 123 AFUGAN CE	

Pyrifenox pyridine	WHO: III
Toxicity to man	Ecotoxicity
Mode of action  Systemic fungicide with protective and curative action. Absorbed by the leaves and roots. Ergosterol biosynthesis inhibitor.	Other information  Non-phytotoxic when used as directed.  Extensive degradation in soil. No leaching.
Products & pages 138 DORADO 200 E	c

# **Tebuconazole**

1

WHO: Table 5

Toxicity to man

**Ecotoxicity** 

#### Mode of action

Systemic fungicide with protective and curative action. Ergosterol biosynthesis inhibitor.

Other information

Non-phytotoxic when used as directed. Long residual activity on treated plants.

Products & pages

141 FOLICUR 250 EW

# **Thiabendazole**

WHO: Table 5

benzimidazole

Toxicity to man

**Ecotoxicity** 

#### Mode of action

Systemic fungicide with protective, curative and eradicating action. Absorbed by the leaves and roots.

Other information

Non-phytotoxic when used as directed. Used to protect fruits and vegetables from storage diseases.

**Products & pages** 

152 MERTECT 20 S

# Thiophanate-methyl

WHO: Table 5

benzimidazole precursor

Toxicity to man

Possible risks of irreversible effects.

**Ecotoxicity** 

#### Mode of action

Systemic fungicide with protective and curative action. Absorbed by the leaves and roots, with translocation principally acropetally.

#### Other information

Non-phytotoxic when used as directed.
Thiophanate-methyl is converted to carbendazim in soil and water. Soil persistence is about 3 to 4 weeks.

**Products & pages** 

156 PELT 44 LIQUIDE

156 PELTAR FLO (+ maneb)

156 PELTIS 40

166 SIGMA

# Tolclofos-methyl

organophosphate ester

Toxicity to man

**Ecotoxicity** 

## Mode of action

Contact fungicide with protective and curative action. Inhibits germination of spores and growth of fungal mycelium.

**Products & pages** 

162 RIZOLEX

163 RIZOLEX 50 WP

# Other information

Non-phytotoxic when used as directed. Used as a seed treatment. Persistent in the soil.

WHO: Table 5

WHO: II

WHO: Table 5

Tridemorph

morpholine

Toxicity to man

Harmful in contact with skin and if swallowed.

Mode of action

Systemic fungicide with protective action. Absorbed by the leaves and roots. Ergosterol biosynthesis inhibitor.

**Products & pages** 

131 CALIXIN

**Ecotoxicity** 

Dangerous to fish.

Other information

Non-phytotoxic when used as directed.

**Triforine** 

Toxicity to man

**Ecotoxicity** 

Mode of action

Systemic fungicide with protective and curative action. Absorbed by the leaves and roots. Ergosterol biosynthesis inhibitor.

Products & pages

141 FUNGINEX 165 SAPROL 1 Other information

Non-phytotoxic when used as directed. Inherently biodegradable by hydrolysis. Does not accumulate in the environment.

# GUIDE TO THE USE OF PLANT PROTECTION PRODUCTS \_\_\_\_\_\_ IN THE WEST-INDIES \_\_\_\_\_

## **FUNGICIDES**

# **Zineb**

alkylenebis(dithiocarbamate)

# Toxicity to man

Irritating to respiratory system.

May cause sensitisation by skin contact.

## Mode of action

Foliar fungicide with protective action.

# **Ecotoxicity**

Dangerous to fish and fauna.

# Other information

Zinc-sensitive plants, such as tobacco and cucurbits are injured.

WHO: Table 5

Rapidly degraded in the environment by hydrolysis, oxidation, photolysis and metabolism.

**Products & pages** 

133 CUPROSAN 311 SD (+ copper oxychloride / maneb)



# **Herbicides**

# GUIDE TO THE USE OF PLANT PROTECTION PRODUCTS \_\_\_\_ IN THE WEST-INDIES \_\_\_\_\_

#### **HERBICIDES**

# 2,4-D

aryloxyalkanoic acid

## Toxicity to man

Harmful by inhalation, in contact with skin and if swallowed.

# **Ecotoxicity**

Dangerous to fish (esters).

#### Mode of action

Systemic herbicide. Salts are readily absorbed by the roots, whilst esters are readily absorbed by the leaves. Acts as a growth inhibitor.

#### Other information

Post-emergence control of broad-leaved weeds on crops and non-crop areas. 2,4-D is rapidly degraded by soil microorganisms.

WHO:

WHO:

III

11

## **Products & pages**

- 122 ACTRIL DS (+ ioxynil)
- 131 CERTROL DS (+ ioxynil)
- 135 DEBROUSSAILLANT 2D (+ dichlorprop)
- 158 POLYMONE 60 (+ mecoprop)
- 159 PRINTAZOL 75 (+ MCPA)
- 159 PRINTAZOL N (+ MCPA / picloram)
- 171 TORDON 101 (+ picloram)
- 174 WEEDONE LV 6

# **Ametryn**

1.3.5-triazine

## Toxicity to man

Harmful if swallowed.

# **Ecotoxicity**

Dangerous to fish.

# Mode of action

Systemic herbicide absorbed by the leaves and roots. Photosynthesis inhibitor.

# Other information

Pre- and post-emergence control of annual grass and broad-leaved weeds. Also used as a potato haulm desiccant.

Decomposed within months by soil microorganisms.

## **Products & pages**

- 144 GESAPAX 500 FW
- 144 GESAPAX 80 WP
- 144 GESAPAX COMBI 500 FW (+ atrazine)
- 145 GESATOPE Z (+ simazine)

# **Amitrole**

triazole

# Toxicity to man

Harmful: danger of serious damage to health by prolonged exposure if swallowed.

Possible risk of irreversible effects.

#### Mode of action

Non-selective systemic herbicide. Absorbed by the leaves and roots. Inhibits chlorophyll formation. Addition of ammonium thiocyanate increases the herbicidal potential of amitrole.

# **Ecotoxicity**

Toxic to aquatic organisms, may cause longterm adverse effects in the aquatic environment.

WHO: Table 5

WHO: Table 5

WHO: Table 5

#### Other information

Total control of broad-leaved weeds and grasses. Weed control on crops and non-crop areas.

Short persistence in soil.

**Products & pages** 

147 HERBACYL DT LIQUIDE (+ bromacil / diuron)

150 KYTROL GT (+ ammonium thiocyanate / bromacil / diuron)

# **Asulam**

Toxicity to man

# **Ecotoxicity**

#### Mode of action

Systemic herbicide absorbed by the leaves and roots. Interferes with the process of cell division.

#### Other information

Control of annual and perennial grasses and broad-leaved weeds on crops and non-crop areas.

Short persistence in soil.

Products & pages

127 ASULOX

# **Atrazine**

1,3,5-triazine

# Toxicity to man

Harmful by inhalation and if swallowed. Irritating to eyes.

May cause sensitisation by skin contact. Possible risk of irreversible effects.

# **Ecotoxicity**

# Mode of action

Systemic herbicide absorbed principally by the roots. Photosynthesis inhibitor.

# Other information

Pre- and post-emergence control of annual grasses and broad-leaved weeds.

Decomposed within months by soil microorganisms.

Products & pages

144 GESAPAX COMBI 500 FW (+ ametryn)

145 GESAPRIM 500 FW

145 GESAPRIM COMBI 80 WG (+ terbutryn)

## **Bromacil** WHO: Table 5 uracil Toxicity to man **Ecotoxicity** Mode of action Other information Herbicide mainly absorbed by the roots. Acts as Pre- and post-emergence control of annual a photosynthesis inhibitor. and perennial grasses and weeds in citrus and pineapple plantations. Also used for total weed control on non-crop areas. Long residual activity in soil. HERBACYL DT LIQUIDE (+ amitrole / diuron) **Products & pages** 147 147 HYVAR X

KYTROL GT (+ amitrole / ammonium thiocyanate / diuron)

Carbetamide carbamate	WHO : Table 5
Toxicity to man	Ecotoxicity
Mode of action Selective herbicide absorbed by the roots. Interferes with the process of cell division.	Other information  Control of annual grasses and broad-leaved weeds.  Moderately persistent in soil.
Products & pages 163 RONSTAR TX (+	oxadiazon)

150

Chlorthal-di	methyl		WHO : Table 5
Toxicity to man			Ecotoxicity
Mode of action Selective herbicide that	kills germinatin	g weeds.	Other information Pre-emergence control of annual grasses and broad-leaved weeds. Residual activity in soil is about 3 months.
Products & pages		HAL W-75 SIN PM	

# **Dichlorprop**

aryloxyalkanoic acid

# Toxicity to man

Harmful in contact with skin and if swallowed. Irritating to skin.

Risk of serious damage to eyes.

# **Ecotoxicity**

# Mode of action

Systemic herbicide. Absorbed by the leaves with translocation to the roots. Acts as a growth regulator.

#### Other information

Post-emergence control of broad-leaved weeds on crops and non-crop areas.

WHO:

WHO:

WHO: Table 5

II

111

Dichlorprop is rapidly degraded by soil microorganisms.

**Products & pages** 

135 DEBROUSSAILLANT 2D (+ 2,4-D)

# **Diquat**

bipyridilium

# Toxicity to man

Toxic in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin.

## **Ecotoxicity**

# Mode of action

Non-selective contact herbicide absorbed by the foliage with some translocation in the xylem. During photosynthesis, superoxide is generated, which damages cell membranes and cytoplasm.

# Other information

Control of annual broad-leaved weeds on crops and non-crop areas. Pre-harvest desiccation of field crops, destruction of potato haulms.

Diquat is rapidly and completely inactivated on contact with soil.

**Products & pages** 

161 REGLONE

# Diuron

urea

## Toxicity to man

Harmful: danger of serious damage to health by prolonged exposure if swallowed.

## **Ecotoxicity**

#### Mode of action

Systemic herbicide mainly absorbed by the roots. Photosynthesis inhibitor.

# Other information

Pre- and post-emergence control of germinating grass and broad-leaved weeds. Also used for total weed control on non-crop areas.

Long residual activity in soil

**Products & pages** 

146 GRAMOCIL (+ paraguat)

147 HERBACYL DT LIQUIDE (+ amitrole / bromacil)

148 KARMEX

150 KYTROL GT (+ amitrole / ammonium thiocyanate / bromacil)

# Fluazifop-P-butyl

2-(4-aryloxyphenoxy)propionic acid

Toxicity to man

**Ecotoxicity** 

# Mode of action

Selective systemic herbicide. Absorbed by the leaves and roots. Fatty acid synthesis inhibitor.

Products & pages

142 **FUSILADE** 

142 **FUSILADE 2**  Other information

Control of grasses on broad-leaved crops. Rapidly degraded in soil.

WHO: Table 5

WHO:

WHO: Table 5

III

# Glufosinate-ammonium

Toxicity to man

Harmful if swallowed.

**Ecotoxicity** 

## Mode of action

Non-selective contact herbicide. Photosynthesis inhibitor.

**Products & pages** 

BASTA F1 128 **BASTALS** 128

Other information

Control of a wide range of annual and perennial broad-leaved weeds and grasses.

Moderately persistent in soil.

# **Glyphosate**

Toxicity to man

**Ecotoxicity** 

# Mode of action

Non-selective systemic herbicide absorbed by the foliage. Glyphosate interferes with the formation of amino acids.

Products & pages

164 ROUNDUP

# Other information

Control of annual and perennial broad-leaved weeds and grasses.

Inactivated on contact with soil.

# Glyphosate-trimesium (sulfosate)

Toxicity to man

**Ecotoxicity** 

#### Mode of action

Non-selective systemic herbicide absorbed by the foliage. Acts on various enzyme systems, thus interfering with the formation of amino acids.

155 OURAGAN

172 TOUCHDOWN

## Other information

Control of annual and perennial broad-leaved weeds

WHO: Table 5

WHO:

WHO: Table 5

III

Inactivated on contact with soil.

Hexazinone

**Products & pages** 

Ecotoxicity

Toxicity to man

Harmful if swallowed.

#### Mode of action

Contact herbicide with secondary systemic activity. Absorbed by the leaves and the roots. Photosynthesis inhibitor.

# Other information

Pre- and post-emergence control of broadleaved weeds and most annual and perennial grasses. Weed control on crops and non-crop areas.

Decomposed within months by soil microorganisms.

**Products & pages** 

174 VELPAR S

**Imazapyr** 

imidazolinone

Toxicity to man

Irritating to eyes.

Ecotoxicity

## Mode of action

Non-selective systemic herbicide. Absorbed by the leaves and the roots. Blocks synthesis of aminoacids, thus causing interference with cell growth.

Products & pages 126 ARSENAL 50

# Other information

Pre- and post-emergence control of broadleaved weeds and annual and perennial grasses. Weed control on non-crop areas. Residual activity in the soil ranges from 3 to 6 months in tropical climates.

loxynil

WHO: II

hydroxybenzonitrile

### Toxicity to man

Toxic if swallowed.

Possible risk of harm to the unborn child.

Harmful in contact with skin.

### **Ecotoxicity**

Dangerous to fish.

### Mode of action

Contact herbicide with some systemic activity. Absorbed by the foliage. It is only effective in presence of light. Photosynthesis inhibitor.

### Other information

Post-emergence control of annual broad-leaved weeds.

Rapidly degraded in less toxic substances in soil.

**Products & pages** 

122 ACTRIL DS (+ 2,4-D)

131 CERTROL DS (+ 2,4-D)

# Isoxaben

WHO: III

amide

Toxicity to man

### **Ecotoxicity**

### Mode of action

Systemic herbicide absorbed by the roots. Inhibits protein synthesis.

# Other information

Pre-emergence control of broad-leaved weeds.

Moderate residual activity in soil.

**Products & pages** 

175 WINCH (+ oryzalin)

168 SNAPSHOT 2.5 G (+ trifluralin)

# Linuron

WHO: Table 5

urea

### Toxicity to man

Possible risk of irreversible effects.

### **Ecotoxicity**

### Mode of action

Systemic herbicide mainly absorbed by the roots. Photosynthesis inhibitor.

### Other information

Pre- and post-emergence control of annual grass and broad-leaved weeds.

Long residual activity in soil.

**Products & pages** 

122 AFALON SPECIAL PM (+ monolinuron)

131 CELATOX LEGUMES 75 PM

**MCPA** 

WHO:

III

aryloxyalkanoic acid

Toxicity to man

Harmful if swallowed.

Irritating to skin.

Risk of serious damage to eyes.

**Ecotoxicity** 

Dangerous to fish (esters).

Mode of action

Systemic herbicide absorbed by the leaves and roots. Acts as a growth inhibitor.

Other information

Post-emergence control of broad-leaved weeds on crops and non-crop areas.

Long residual activity in soil

Products & pages

159 PRINTAZOL 75 (+ 2.4-D)

159 PRINTAZOL N (+ 2,4-D / picloram)

Mecoprop aryloxyalkanoic acid

Toxicity to man

Harmful if swallowed.

Irritating to skin.

Risk of serious damage to eyes.

**Ecotoxicity** 

Mode of action

Systemic herbicide absorbed by the leaves. Acts as a growth inhibitor.

Other information

Post-emergence control of broad-leaved

Moderate residual activity in soil.

**Products & pages** 

158 POLYMONE 60 (+ 2,4-D)

Metoxuron

WHO: Table 5

WHO:

Ш

urea

Toxicity to man

Harmful by inhalation, in contact with skin and if swallowed.

**Ecotoxicity** 

Mode of action

Systemic herbicide absorbed by the leaves and the roots. Photosynthesis inhibitor.

**Products & pages** 

139 DOSANEX C

Other information

Pre- and post-emergence control of some grasses and most annual broad-leaved weeds.

# Metsulfuron-methyl

sulfonylurea

Toxicity to man

Irritating to eyes.

Mode of action

Systemic herbicide absorbed by the leaves and roots. Acts as a growth inhibitor.

**Products & pages** 

123 ALLIE

# Ecotoxicity

### Other information

Pre- and post-emergence control of broadleaved weeds and some grasses. Moderate residual activity in soil.

WHO:

WHO: Table 5

WHO: Table 5

III

# Monolinuron

urea

Toxicity to man

Harmful if swallowed.

### Mode of action

Systemic herbicide absorbed by the roots and leaves. Photosynthesis inhibitor.

**Ecotoxicity** 

### Other information

Pre- and post-emergence control of annual grass and broad-leaved weeds.

Moderate residual activity in soil.

**Products & pages** 

122 AFALON SPECIAL PM (+ linuron)

# Oryzalin

Toxicity to man

Selective herbicide inhibiting seed germination.

**Ecotoxicity** 

Pre-emergence control of many annual grasses and broad-leaved weeds on crops. Long residual activity.

Mode of action

Other information

**Products & pages** 

168 SURFLAN

175 WINCH (+ isoxaben)

# Oxadiazon

Toxicity to man

### **Ecotoxicity**

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

WHO: Table 5

WHO:

WHO:

111

II

### Mode of action

Contact herbicide.

### Other information

Pre- and post-emergence control of annual grasses and broad-leaved weeds. Strongly adsorbed in soil. Long residual activity.

**Products & pages** 

163 RONSTAR

163 RONSTAR TX (+ carbetamide)

# **Paraquat**

bipyridilium

### Toxicity to man

Toxic in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin.

### **Ecotoxicity**

# Mode of action

Non-selective herbicide with fast-acting contact action, absorbed by the leaves. During photosynthesis, superoxide is generated, which damages cell membranes and cytoplasm.

### Other information

Broad-spectrum herbicide for control of broadleaved weeds and grasses.

Paraquat is rapidly adsorbed and de-activated by soil.

**Products & pages** 

146 GRAMOCIL (+ diuron)

146 GRAMOXONE

146 **GRAMOXONE SUPER** 

161 R-BIX

# Pendimethalin

2.6-dinitroaniline

### Toxicity to man

Harmful if swallowed.

### **Ecotoxicity**

### Mode of action

Absorbed by the roots and the leaves. Inhibits Acts as a growth inhibitor.

### Other information

Pre-emergence control of most annual grasses and broad-leaved weeds.

Long residual activity in soil.

**Products & pages** 

159 PROWL

# **Picloram**

pyridinecarboxylic acid

Toxicity to man

**Ecotoxicity** 

Dangerous to fish (esters).

Mode of action

Systemic herbicide rapidly absorbed by the roots and leaves. Acts as a growth inhibitor.

Other information

Post-emergence control of broad-leaved weeds on crops and non-crop areas.

Slowly degraded by soil micro-organisms.

WHO: Table 5

WHO:

WHO: Table 5

III

**Products & pages** 

159 PRINTAZOL N (+ 2,4-D / MCPA)

171 TORDON 101 (+ 2,4-D)

172 TORDON 22 K

# **Prometryn**

1,3,5-triazine

Toxicity to man

**Ecotoxicity** 

### Mode of action

Systemic herbicide absorbed by the leaves and roots. Photosynthesis inhibitor.

Other information

Pre- and post-emergence control of annual grasses and broad-leaved weeds.

Decomposed within months by soil microorganisms.

Products & pages

144 GESAGARD 50 WP

# **Propyzamide**

amide

Toxicity to man

Possible risk of irreversible effects.

**Ecotoxicity** 

Mode of action

Systemic herbicide absorbed by the roots. Photosynthesis inhibitor.

Other information

Pre-emergence control of annual and perennial grasses.

Propyzamide is immobile in soil with a residual activity lasting up to 6 months.

Products & pages

148 KERB FLO

# **Pyridate**

Toxicity to man

May cause sensitisation by skin contact.

**Ecotoxicity** 

Mode of action

Contact herbicide, mainly absorbed by the leaves. Photosynthesis inhibitor.

Other information

Post-emergence control of annual broadleaved weeds.

WHO:

III

Poor persistence in soil.

Products & pages

151 LENTAGRAN

Simazine

WHO : Table 5

1.3.5-triazine

Toxicity to man

Possible risk of irreversible effects.

**Ecotoxicity** 

Mode of action

Systemic herbicide, absorbed by the roots. Photosynthesis inhibitor.

Other information

Control of germinating annual grasses and broad-leaved weeds.

Decomposed within months by soil microorganisms.

WHO:

III

**Products & pages** 

145 GESATOP 500 FW

145 GESATOP Z (+ ametryn)

**Terbutryn** 

Ecotoxicity

Dangerous to fish.

Toxicity to man

1,3,5-triazine

Mode of action

Systemic herbicide absorbed by the roots and leaves. Photosynthesis inhibitor.

Other information

Pre-emergence control of annual grasses and broad-leaved weeds.

Decomposed within months by soil microorganisms.

Products & pages

145 GESAPRIM COMBI 80 WG (+ atrazine)

# **Triclopyr**

aryloxyalkanoic acid

Toxicity to man

Harmful if swallowed. Irritating to eyes.

l if swallowed. Dangerou

Mode of action

Systemic herbicide absorbed by the leaves and roots. Acts as a growth inhibitor.

**Products & pages** 

143 GARLON 4

### **Ecotoxicity**

Dangerous to fish (esters).

### Other information

Control of brushwood and perennial broadleaved weeds.

WHO:

WHO:

111

111

Rapidly degraded by soil microorganisms.

# **Trifluralin**

2.6-dinitroaniline

### Toxicity to man

Irritating to eyes.

May cause sensitisation by skin contact.

### **Ecotoxicity**

Dangerous to fish.

### Mode of action

Soil herbicide. Inhibits seed germination.

### Other information

Pre-emergence control of annual grasses and broad-leaved weeds.

Long residual activity in soil. Degraded by light at soil surface.

**Products & pages** 

168 SNAPSHOT 2.5 G (+ isoxaben)

# **Miscellaneous**

### MISCELLANEOUS

# **Brodifacoum**

WHO: la

coumarin

### Toxicity to man

Very toxic in contact with skin and if swallowed. Toxic: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed.

### **Ecotoxicity**

Dangerous to fish and fauna.

### Mode of action

Rodenticide with stomach action. It inhibits the vitamin K1 cycle and causes capillary lesions.

### Other information

Products & pages

149 KLERAT PELLETS

149 KLERAT WAX BLOCKS 169 TALON CUT WHEAT BAIT

# Chlorophacinone

WHO: la

### Toxicity to man

Very toxic in contact with skin and if swallowed. Toxic: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed.

### **Ecotoxicity**

Dangerous to fish and fauna.

### Mode of action

Rodenticide with stomach action. It inhibits the vitamin K cycle and causes internal bleeding.

162 RIMITOX

Other information

**Products & pages** 

**Dazomet** 

WHO: III

methyl isothiocyanate precursor

### Toxicity to man

Harmful if swallowed. Irritating to eyes.

### **Ecotoxicity**

Dangerous to fish.

### Mode of action

Soil sterilant, effective against pests, diseases and weeds. Soil fumigant which acts by decomposition to methyl isothiocyanate.

### Other information

Highly phytotoxic to all green plants. Treated soils should not be planted until shown to be free of dazomet and its degradation products.

**Products & pages** 

127 BASAMID GRANULAR

### **MISCELLANEOUS**

Metaldehyde

Toxicity to man

Harmful if swallowed.

Mode of action

Molluscicide with contact and stomach action.

Products & pages

122 AFFUT 158 PHYTOREX **Ecotoxicity** 

Dangerous to fauna.

Other information

Non-phytotoxic when used as directed. Rapidly decomposed by soil micro-organisms to carbon dioxide and water.

> WHO: 11

> > WHO:

11

WHO:

III

Toxicity to man

Toxic if swallowed.

Methiocarb

Mode of action

Molluscicide with contact and stomach action. Cholinesterase inhibitor.

**Products & pages** 

152 MESUROL RF

**Ecotoxicity** 

Dangerous to fish and fauna.

Other information

Non-phytotoxic when used as directed. Rapidly degraded in soil.

**Thiodicarb** 

oxime carbamate

Toxicity to man

Toxic if swallowed. Irritating to eyes.

Mode of action

Molluscicide with stomach action. Cholinesterase inhibitor.

167 SKIPPER Products & pages

**Ecotoxicity** 

Dangerous to fish and bees.

Other information

Control of slugs and nails.

# **PART IV**

# **COMMERCIAL PRODUCTS**

# Actellic 50 EC

Emulsifiable concentrate (EC)



Active ingredients	g/l
pirimiphos-methyl	500

Company / undertaking Zeneca

Toxicity to man

Harmful if swallowed Irritating to eyes and skin Countries where available

Dominica St Lucia Grenada St Vincent St Kitts

# Actellic dust 2%

Dispersible powder (DP)

Active ingredients g/kg pirimiphos-methyl 20 Company / undertaking Zeneca

Toxicity to man

Countries where available Grenada

# **Actellic liquide**

Emulsifiable concentrate (EC)

IRRITANT

Active ingredients
pirimiphos-methyl

Company / undertaking Zeneca

Toxicity to man

Irritating to eyes and skin

Countries where available
Guadeloupe Martinique

# Actellic SG 20

Smoke generator (FU)



Active ingredients
pirimiphos-methyl

g/kg 225

g/I

250

Company / undertaking Zeneca

Toxicity to man

Irritating to eyes and respiratory system

Countries where available Grenada

# **Actril DS**

Emulsifiable concentrate (EC)



Active ingredients	g/l
2,4-D	600
ioxynil	100

Company / undertaking Rhône-Poulenc

Toxicity to man
Harmful if swallowed

Countries where available St Kitts

# Acylon soludose

Wettable Powder (WP) in water soluble packets



Active ingredients	g/kg
folpet	510
metalaxyl	90

Company / undertaking Novartis

Toxicity to man

Possible risks of irreversible effects Risk of serious damage to eyes May cause sensitisation by skin contact Countries where available
Guadeloupe Martinique

# Afalon special PM

Wettable powder (WP)



Active ingredients	g/kg
linuron	238
monolinuron	238

Company / undertaking AgrEvo

Toxicity to man

Harmful if swallowed

Possible risks of irreversible effects

Countries where available
Guadeloupe Martinique

# **Affut**

Granular bait (GB)

ctive ingredients	g/kg
netaldehyde	50

Company / undertaking Novartis

Toxicity to man

Countries where available
Guadeloupe Martinique

g/I 294

# Afugan CE

Emulsifiable concentrate (EC)



Active ingredients
pyrazofos

Company / undertaking AgrEvo

Toxicity to man

Harmful by inhalation, in contact with skin and if swallowed

Irritating to skin

Risk of serious damage to eyes

Countries where available
Guadeloupe Martinique

Agree 50 WP

Wettable powder (WP)

Active ingredients g/kg
Bacillus thuringiensis 500

Toxicity to man

Company / undertaking Novartis

Countries where available St Lucia

# Aliette

Wettable powder (WP)

Active ingredients g/kg fosetyl-aluminium 800

Toxicity to man

Company / undertaking Rhône-Poulenc

Countries where available

Dominica St Vincent Grenada St Lucia

Allie

Water dispersible granules (WG)

Active ingredients g/kg
metsulfuron-methyl 200

Toxicity to man

Company / undertaking
Du Pont

Countries where available
Guadeloupe Martinique

# Ambush 10 EC

Emulsifiable concentrate (EC)



Active ingredients g/l permethrin 100

Company / undertaking Zeneca

Toxicity to man

Irritating to eyes and skin

Countries where available Grenada

# Ambush 50 EC

Emulsifiable concentrate (EC)



Active ingredients g/l permethrin 500

Company / undertaking Zeneca

Toxicity to man

Harmful if swallowed Irritating to eyes and skin Countries where available

Grenada St Kitts St Vincent

# **Ambush C**

Emulsifiable concentrate (EC)



Active ingredients g/l cypermethrin 100

Company / undertaking Zeneca

Toxicity to man

Irritating to eyes and skin May cause sensitisation by skin contact Countries where available Grenada

# Anteor flo

Suspension concentrate (SC)



Active ingredients g/l
cymoxanil 40
folpet 333.3

Company / undertaking AgrEvo

Toxicity to man

Possible risks of irreversible effects Irritating to eyes May cause sensitisation by skin contact Countries where available
Guadeloupe Martinique

g/kg 700

> g/I 250

# **Anthio fort**

Emulsifiable concentrate (EC)



Active ingredients	g/I
formothion	338

Company / undertaking Novartis

Toxicity to man
Harmful if swallowed

Irritating to eyes

Countries where available
Guadeloupe Martinique

# **Antracol WP 70**

Wettable powder (WP)

Active ingredients propineb

Company / undertaking Bayer

Toxicity to man

Countries where available

Grenada Guadeloupe Martinique

# Anvil 5 SC

Suspension concentrate (SC)

Active ingredients g/I hexaconazole 50

Company / undertaking Zeneca

Toxicity to man

Countries where available

Dominica St Lucia St Vincent

# **Anvil MS**

Oil miscible flowable concentrate (OF)



Active ingredients	
hexaconazole	

Company / undertaking Zeneca

Toxicity to man

Countries where available
Guadeloupe Martinique

Causes burns Harmful if swallowed

Applaud FL Suspension concentrate (SC)		
Active ingredients buprofezin	g/l 440	Company / undertaking Novartis
Toxicity to man		Countries where available Guadeloupe Martinique

Appolo 50 SC Suspension concentrate (EC)		
Active ingredients clofentezine	g/l 500	Company / undertaking AgrEvo
Toxicity to man		Countries where available Guadeloupe Martinique

Arsenal 50 Soluble concentrate (SL)		IRRITANT
Active ingredients imazapyr	<b>g/l</b> 50	Company / undertaking Cyanamid
Toxicity to man Irritating to eyes		Countries where available Guadeloupe Martinique

Artaban Emulsifiable concentrate (EC)		HARMFUL
Active ingredients benzoximate	<b>g/l</b> 200	Company / undertaking AgrEvo
Toxicity to man Harmful by inhalation		Countries where available Guadeloupe Martinique

# GUIDE TO THE USE OF PLANT PROTECTION PRODUCTS \_\_\_\_\_ IN THE WEST-INDIES \_\_\_\_\_

### **COMMERCIAL PRODUCTS**

# Asulox Soluble concentrate (SL) Active ingredients g/l asulam 400 Company / undertaking Rhône-Poulenc Countries where available Guadeloupe Martinique St Kitts

Aztec Emulsion, oil in water (EW)		HARMFUL
Active ingredients triazamate	g/I 140	Company / undertaking Cyanamid
Toxicity to man  Harmful by inhalation and if swall Irritating to eyes May cause sensitisation by skin of		Countries where available Guadeloupe Martinique

Bactospeine WP Wettable powder (WP)		
Active ingredients Bacillus thuringiensis	g/kg 32	Company / undertaking Abbott
Toxicity to man		Countries where available Guadeloupe Martinique St Lucia

Basamid granula Microgranules (MG)	ar			HARMFUL
Active ingredients dazomet	<b>g/kg</b> 970	Company / I	undertaking	
Toxicity to man Harmful if swallowed		Countries w Grenada	here available Guadeloupe	Martinique

# Basta F1

Soluble concentrate (SL)



**Active ingredients** g/I glufosinate-ammonium 150 Company / undertaking

Toxicity to man

Harmful by inhalation, in contact with skin and if swallowed

Risk of serious damage to eyes

AgrEvo

AgrEvo

Countries where available

Guadeloupe Martinique

## Basta LS

Soluble concentrate (SL)



**Active ingredients** g/I 200 glufosinate-ammonium

Toxicity to man

Harmful by inhalation, in contact with skin and if swallowed Irritating to eyes

Countries where available

Company / undertaking

Guadeloupe Martinique

# Basudin 10 G

Granules (GR)

**Active ingredients** g/kg diazinon 100

Company / undertaking

Novartis

Countries where available

Guadeloupe Martinique St Kitts

# Basudin 40 WP

Wettable powder (WP)

**Active ingredients** 

Toxicity to man

Company / undertaking g/kg 400 **Novartis** 

Toxicity to man

diazinon

Countries where available

Dominica Grenada St Vincent

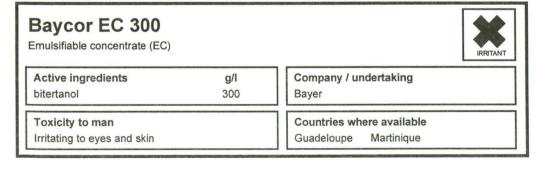
# GUIDE TO THE USE OF PLANT PROTECTION PRODUCTS \_\_\_\_\_ IN THE WEST-INDIES \_\_\_\_\_

### COMMERCIAL PRODUCTS

# Basudin 5 G Granules (GR) Active ingredients g/kg Company / undertaking Novartis Toxicity to man Countries where available Dominica

Basudin 600 EC Emulsifiable concentrate (EC)			HARMFUL
Active ingredients diazinon	<b>g/l</b> 600	Company / undertaking Novartis	
Toxicity to man Harmful if swallowed Irritating to skin May cause sensitisation by skin contact		Countries where available Grenada St Kitts St L St Vincent	ucia.

Basudine 20 L Emulsifiable concentrate (EC)		HARMFUL
Active ingredients diazinon	<b>g/l</b> 185	Company / undertaking Novartis
Toxicity to man Harmful if swallowed Irritating to skin		Countries where available Guadeloupe Martinique



# **Baythroid EC 050**

Emulsifiable concentrate (EC)



**Active ingredients** g/I cyfluthrin 50 Company / undertaking Bayer

Toxicity to man

Harmful by inhalation and in contact with skin Irritating to eyes and skin

Countries where available

Guadeloupe Martinique

# Benlate 50 WP

Wettable powder (WP)



**Active ingredients** benomyl

g/kg 500

g/I

Company / undertaking Du Pont

Toxicity to man

Harmful if swallowed Possible risks of irreversible effects Countries where available

Dominica Grenada Martinique St Kitts

Guadeloupe St Vincent

# **Benlate OD**

Wettable powder (WP)

**Active ingredients** g/kg 500 benomyl

Company / undertaking

Du Pont

Toxicity to man

Possible risks of irreversible effects

Countries where available

Guadeloupe St Lucia Martinique

# Bullit

Emulsifiable concentrate (EC)



**Active ingredients** pirimiphos-ethyl 250 Company / undertaking Zeneca

Toxicity to man

Harmful if swallowed Irritating to eyes

Countries where available Guadeloupe Martinique

g/I

# Calixin

Emulsifiable concentrate (EC)



**Active ingredients** tridemorph 750

Company / undertaking BASF

Toxicity to man

Harmful if swallowed Irritating to skin Risk of serious damage to eyes Countries where available

Dominica St Vincent Grenada St Lucia

Carbax 360

Emulsifiable concentrate (EC)

**Active ingredients** g/I dicofol 360 Company / undertaking Rhône-Poulenc

Toxicity to man

Harmful if swallowed Risk of serious damage to eyes May cause sensitisation y skin contact Countries where available Guadeloupe Martinique

Celatox legumes 75 PM

Wettable powder (WP)

Active ingredients g/kg linuron 75

Company / undertaking

Rhône-Poulenc

Toxicity to man

Countries where available Guadeloupe Martinique

**Certrol DS** 

Emulsifiable concentrate (EC)



Active ingredients g/I 2.4-D 600 ioxynil 100 Company / undertaking **CFPI** 

Toxicity to man

Harmful in contact with skin and if swallowed May cause harm to the unborn child

Countries where available Guadeloupe Martinique

# GUIDE TO THE USE OF PLANT PROTECTION PRODUCTS \_\_\_\_\_ IN THE WEST-INDIES \_\_\_\_\_

### COMMERCIAL PRODUCTS

Cesar Wettable powder (WP)		
Active ingredients hexythiazox	<b>g/kg</b> 100	Company / undertaking AgrEvo
Toxicity to man		Countries where available Guadeloupe Martinique



Confidor SC 350 Suspension concentrate (SC)		HARMFUL
Active ingredients imidacloprid	<b>g/l</b> 350	Company / undertaking Bayer
Toxicity to man  Harmful if swallowed  May cause sensitisation by ski	n contact	Countries where available Guadeloupe Martinique St Vincent

Coprarex Wettable powder (WP)		
Active ingredients copper oxychloride	<b>g/kg</b> 500	Company / undertaking Du Pont
Toxicity to man		Countries where available Guadeloupe Martinique

# Corbel

Emulsifiable concentrate (EC)



Active ingredients g/l fenpropimorph 750

Company / undertaking BASF

Toxicity to man

Harmful by inhalation Irritating to skin Countries where available
Guadeloupe Martinique

# Counter 10 G

Microgranules (MG)



Active ingredients g/kg terbufos 100

Company / undertaking Cyanamid

Toxicity to man

Very toxic in contact with skin and if swallowed

Countries where available
Guadeloupe Martinique

# **Cryptonol liquide**

Soluble concentrate (SL)

Active ingredients g/I Company / undertaking 8-hydroxyquinoline sulfate 140 Novartis

Toxicity to man Countries where available
Guadeloupe Martinique

# Cuprosan 311 SD

Wettable powder (WP)



Active ingredients	g/kg
copper oxychloride	300
maneb	100
zineb	100

Company / undertaking

Rhône-Poulenc

### Toxicity to man

Irritating to respiratory system Risk of serious damage to eyes May cause sensitisation by skin contact Countries where available

Dominica Guadeloupe Ma St Kitts St Lucia St

Martinique St Vincent

# **Cymperator 10 fog**

Emulsifiable concentrate (EC)



Active ingredients

cypermethrin

**g/l** 100 Company / undertaking

Zeneca

Toxicity to man

Irritating to eyes and skin

May cause sensitisation by skin contact

Countries where available

Dominica

Grenada

## **Daconil 2787 W 75**

Wettable powder (WP)



**Active ingredients** 

g/kg

750

Company / undertaking

**ISK Biosciences** 

Toxicity to man

chlorothalonil

Harmful by inhalation Risk of serious damage to eyes

Possible risks of irreversible effects May cause sensitisation by skin contact Countries where available

Dominica Martinique Grenada St Lucia Guadeloupe St Vincent

# Daconil 500

Suspension concentrate (SC)

HARMFUL

**Active ingredients** 

chlorothalonil

**g/l** 500 Company / undertaking

**ISK Biosciences** 

Toxicity to man

Possible risks of irreversible effects

Countries where available

St Lucia St Vincent

# **Dacthal W-75**

Wettable powder (WP)

Active ingredients g/kg chlorthal-dimethyl 750

Company / undertaking ISK Biosciences

Toxicity to man

Countries where available

Guadeloupe Martinique St Lucia St Vincent St Kitts

g/l

150

# **Danitol 10 EC**

Emulsifiable concentrate (EC)



Active ingredients	g/I
fenpropathrin	100

Company / undertaking Sumitomo

Toxicity to man

Toxic by inhalation, in contact with skin and if swallowed

Countries where available

Dominica

Grenada

St Lucia

# Dart

Suspension concentrate (SC)

Company / undertaking

Rhône-Poulenc

teflubenzuron

Toxicity to man

**Active ingredients** 

Countries where available
Guadeloupe Martinique

# D-D 92

Liquid to be applied undiluted (AL)

TOXIC

Active ingredients	g/l
1,3-dichloropropene	1110

Company / undertaking Cvanamid

Toxicity to man

Toxic if swallowed

Harmful by inhalation and in contact with skin Irritating to eyes, respiratory system and skin May cause sensitisation by skin contact

Countries where available
Guadeloupe Martinique

# Debroussaillant 2D

Emulsifiable concentrate (EC)



Active ingredients	g/I
2,4-D	240
2,4-D dichlorprop	240

Company / undertaking CFPI

Toxicity to man

Countries where available
Guadeloupe Martinique

Harmful if swallowed

### **Deccozil agrumes** Emulsifiable concentrate (EC) **Active ingredients** g/I Company / undertaking imazalil 200 Elf Atochem Countries where available Toxicity to man Guadeloupe Martinique

# Decis B

Emulsifiable concentrate (EC)



Active ingredients	g/I
deltamethrin	25
heptenophos	400

### Toxicity to man

Toxic by inhalation, in contact with skin and if swallowed Irritating to eyes and skin

Company / undertaking

AgrEvo

Countries where available

Guadeloupe Martinique

# **Decis CE**

Emulsifiable concentrate (EC)



Active ingredients	g/l
deltamethrin	25

Company / undertaking AgrEvo

Countries where available

Grenada

St Kitts

Dominica Martinique St Vincent

Guadeloupe St Lucia

Decis flo

Toxicity to man

Harmful if swallowed

Risk of severe damage to eyes

Suspension concentrate (SC)

**Active ingredients** g/I deltamethrin 25

Company / undertaking AgrEvo

Countries where available Toxicity to man Guadeloupe Martinique

# GUIDE TO THE USE OF PLANT PROTECTION PRODUCTS \_\_\_\_ IN THE WEST-INDIES \_\_\_\_\_

### COMMERCIAL PRODUCTS

# Delosin PM Wettable powder (WP) Active ingredients g/kg chlorthal-dimethyl 750 Company / undertaking Rhône-Poulenc Toxicity to man Countries where available Guadeloupe Martinique

Demon 40 WP Wettable powder (WP)		IRRITANT
Active ingredients cypermethrin	<b>g/kg</b> 400	Company / undertaking Zeneca
Toxicity to man Irritating to eyes		Countries where available Dominica St Lucia

Demon TC Emulsifiable concentrate (EC)		,	HARMFUL
Active ingredients cypermethrin	<b>g/l</b> 250	Company / undertaking Zeneca	
Toxicity to man Harmful if swallowed Risk of serious damage to eyes Irritating to skin		Countries where available St Lucia	

Dicarzol 200 Water soluble powder (SP)		HARMFUL
Active ingredients formetanate	g/kg 200	Company / undertaking AgrEvo
Toxicity to man Harmful if swallowed  Countries where available Guadeloupe Martinique		

# **Dipel WP**

Wettable powder (WP)



**Active ingredients** Bacillus thuringiensis

Toxicity to man

Irritating to eyes

g/kg 32

Company / undertaking

Abbott

Countries where available

Dominica St Kitts

Guadeloupe St Lucia

Martinique St Vincent

# Dithane M 45

Wettable powder (WP)



**Active ingredients** 

g/kg 800

Company / undertaking **Novartis** 

Toxicity to man

mancozeb

Irritating to respiratory system May cause sensitisation by skin contact Countries where available

Guadeloupe Martinique

# Dorado 200 EC

Emulsifiable concentrate (EC)



**Active ingredients** 

g/I

Company / undertaking

pyrifenox 200

**Novartis** 

Countries where available

Toxicity to man

Irritating to eyes and skin

Guadeloupe Martinique

# Dorlone 2000

Liquid to be applied undiluted (AL)



**Active ingredients** 1,3-dichloropropene

g/I 1179 Company / undertaking DowElanco

Toxicity to man

Toxic if swallowed

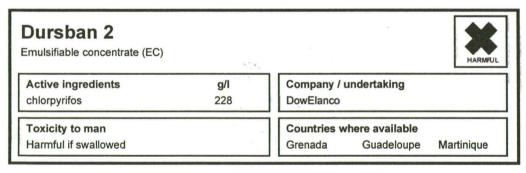
Harmful by inhalation and in contact with skin Irritating to eyes, respiratory system and skin May cause sensitisation by skin contact

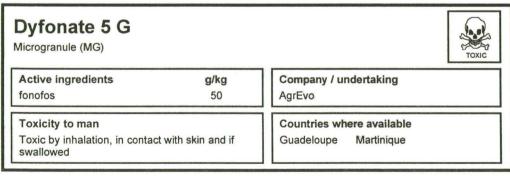
Countries where available

Guadeloupe Martinique

# Dosanex C Wettable powder (WP) Active ingredients g/kg Company / undertaking Novartis Toxicity to man Countries where available Guadeloupe Martinique St Vincent

# Drifene AP Emulsifiable concentrate (EC) Active ingredients g/I endosulfan 250 parathion 100 Company / undertaking Rhône-Poulenc Company / undertaking Rhône-Poulenc





## Ekalux

Emulsifiable concentrate (EC)



Active ingredients g/l quinalphos 242.5

Company / undertaking Novartis

Toxicity to man
Toxic if swallowed
Irritating to eyes

Countries where available
Guadeloupe Martinique

# **Ekalux forte**

Emulsifiable concentrate (EC)



Active ingredients g/l quinalphos 480

Company / undertaking Novartis

Toxicity to man

Toxic if swallowed Irritating to eyes Countries where available

St Vincent

# **Evisect S**

Water soluble powder (SP)



Active ingredients g/kg thiocyclam 500

Company / undertaking Novartis

Toxicity to man

Harmful by inhalation and if swallowed Irritating to eyes and skin May cause sensitisation by skin contact Countries where available

St Vincent

# **Fastac**

Emulsifiable concentrate (EC)



Active ingredients g/l alpha-cypermethrin 50

Company / undertaking
Cyanamid

Toxicity to man

Harmful by inhalation, in contact with skin and if swallowed

Countries where available

Guadeloupe Martinique St Vincent St Lucia

# Folicur 250 EW

Emulsion, oil in water (EW)



Active ingredients	g/I	
tebuconazole	250	

Company / undertaking Bayer

Toxicity to man

Harmful if swallowed Risk of serious damage to eyes Countries where available Guadeloupe Martinique

# Fongarid 25 WP

Wettable powder (WP)

**Active ingredients** g/kg 250 furalaxyl

Toxicity to man

Company / undertaking Novartis

Countries where available Guadeloupe Martinique

# Fulvax 2000

Wettable powder (WP)



Active ingredients	g/kg	
cymoxanil	60	
mancozeb	700	

Company / undertaking **Novartis** 

Toxicity to man

Irritating to respiratory system May cause sensitisation by skin contact

Countries where available Guadeloupe Martinique

# **Funginex**

Emulsifiable concentrate (EC)



**Active ingredients** g/I 190 triforine

Company / undertaking Rhône-Poulenc

Toxicity to man

Harmful by inhalation and in contact with skin Irritating to eyes and skin

Countries where available Guadeloupe Martinique

# Furadan 10 G

Granules (GR)

carbofuran



**Active ingredients** 

**g/kg** 100 Company / undertaking

FMC

Toxicity to man

Harmful by inhalation and if swallowed

Countries where available

Dominica St Vincent

Grenada

St Lucia

# Furadan 5 G

Granules (GR)

HARMEII

Active ingredients

carbofuran

g/kg 50 Company / undertaking

FMC

Toxicity to man

Harmful by inhalation and if swallowed

Countries where available

Guadeloupe Martinique

# **Fusilade**

Emulsifiable concentrate (EC)

S INDITANT

Active ingredients

fluazifop-P-butyl

Company / undertaking

Zeneca

Toxicity to man

Irritating to eyes and skin

Countries where available

Dominica St Kitts

# Fusilade 2

Emulsifiable concentrate (EC)



Active ingredients fluazifop-P-butyl

g/l 125

g/I

250

Company / undertaking

Zeneca

St Vincent

Toxicity to man

Risk of serious damage to eyes

Irritating to skin

Countries where available

Dominica Grenada Martinique St Kitts Guadeloupe St Lucia

### Gamma col

Suspension concentrate (SC)



Active ingredients

g/I Company / undertaking 800 Zeneca

Toxicity to man

Toxic by inhalation, in contact with skin and if swallowed Irritating to eyes and skin

Countries where available
Guadeloupe Martinique

### Gammalin 20

Emulsifiable concentrate (EC)



Active ingredients lindane

g/l 200 Company / undertaking Zeneca

Toxicity to man

Harmful if swallowed Irritating to eyes, respiratory system and skin Countries where available

Grenada

### Garlon 4

Emulsifiable concentrate (EC)



Active ingredients triclopyr

g/l 480 Company / undertaking DowElanco

Toxicity to man

Harmful if swallowed Irritating to skin

May cause sensitisation by skin contact

Countries where available

Guadeloupe Martinique

### Gemm

Combined packaging: Suspension concentrate (SC) / Dispersible concentrate (DC)



Active ingredients g/l fenbutatin oxide (SC) 550 flufenoxuron (DC) 100

Company / undertaking Cyanamid

Toxicity to man Irritating to eyes

# Gesagard 50 WP

Wettable powder (WP)



Active ingredients prometryn	g/kg 500	Company / undertaking Novartis
Toxicity to man		Countries where available
Irritating to eyes		St Kitts St Vincent

Gesapax 500 FW Suspension concentrate (SC)	
Active ingredients g/l ametryn 500	Company / undertaking Novartis
Toxicity to man	Countries where available Guadeloupe Martinique St Kitts St Lucia

Gesapax 80 WP Wettable powder (WP)		
Active ingredients ametryn	<b>g/kg</b> 800	Company / undertaking Novartis
Toxicity to man		Countries where available Dominica Guadeloupe Martinique

### Gesapax combi 500 FW Suspension concentrate (SC) **Active ingredients** g/I Company / undertaking 250 Novartis ametryn atrazine 250 Countries where available Toxicity to man Irritating to skin Grenada St Kitts St Vincent

Gesaprim 500 FW Suspension concentrate (SC)		
Active ingredients atrazine	g/l 500	Company / undertaking Novartis
Toxicity to man		Countries where available Grenada
Gesaprim combi 8 Water dispersible granules (WG)		
Active ingredients atrazine terbutryn	g/kg 400 400	Company / undertaking Novartis
Toxicity to man		Countries where available St Kitts
Gesatop 500 FW Suspension concentrate (SC)		
Active ingredients simazine	g/I 500	Company / undertaking Novartis
		Novartis
Toxicity to man		Countries where available Dominica Grenada Guadeloupe Martinique St Lucia
Gesatope Z Emulsifiable concentrate (EC)		Countries where available Dominica Grenada Guadeloupe Martinique St Lucia
Gesatope Z	<b>g/l</b> 250 250	Countries where available Dominica Grenada Guadeloupe Martinique St Lucia

Possible risks of irreversible effects

### Gramocil

Suspension concentrate (SC)



Active ingredients	g/l
diuron	100
paraquat	200

Company / undertaking Zeneca

### Toxicity to man

Toxic if swallowed Harmful in contact with skin Irritating to eyes and skin

Countries where available

Dominica St Vincent Grenada

St Lucia

### Gramoxone

Soluble concentrate (SL)



Active ingredients	g/l
paraquat	200

Company / undertaking Zeneca

### Toxicity to man

Toxic if swallowed Harmful in contact with skin Irritating to eyes and skin

Countries where available

Dominica Grenada St Kitts

# Gramoxone super

Soluble concentrate (SL)





200 paraquat

Company / undertaking Zeneca

### Toxicity to man

Toxic if swallowed Harmful in contact with skin Irritating to eyes and skin

Countries where available

Dominica Grenada St Kitts

# Herbacyl DT liquide

Suspension concentrate (SC)



g/I
167
46
134

Company / undertaking Rhône-Poulenc

Toxicity to man Harmful if swallowed Countries where available

Guadeloupe Martinique

# Hyvar X

Wettable powder (WP)

**Active ingredients** g/kg bromacil 800

Toxicity to man

Company / undertaking Du Pont

Countries where available

Dominica Grenada Martinique St Lucia

Guadeloupe St Vincent

# Kaffil super 25 EC

Emulsifiable concentrate (EC)

**Active ingredients** g/I cypermethrin 250

Company / undertaking Zeneca

Toxicity to man

Harmful if swallowed Risk of serious damage to eyes

Irritating to skin

Countries where available Guadeloupe Martinique

# Karate 2.5 EC

Emulsifiable concentrate (EC)



Active ingredients	g/I
lambda-cyhalothrin	25

Company / undertaking Zeneca

Toxicity to man

Harmful if swallowed Risk of serious damage to eyes

Irritating to skin

Countries where available

Dominica Grenada St Lucia St Vincent St Kitts

### Karmex

Wettable powder (WP)



**Active ingredients** diuron

g/kg 800

Company / undertaking

Du Pont

Toxicity to man

Harmful if swallowed

Countries where available

Dominica St Kitts

Guadeloupe St Lucia

Martinique St Vincent

### Kelthane 50 L

Emulsifiable concentrate (EC)



**Active ingredients** 

dicofol

g/I 425 Company / undertaking

**Novartis** 

Toxicity to man

Harmful in contact with skin Irritating to skin

May cause sensitisation by skin contact

Countries where available

Guadeloupe Martinique

### Kerb flo

Suspension concentrate (SC)



**Active ingredients** 

propyzamide

g/I 400

g/I

400

Company / undertaking AgrEvo

Toxicity to man

Possible risks of irreversible effects

Countries where available

Guadeloupe Martinique

### Kilval

Soluble concentrate (SL)



**Active ingredients** 

vamidothion

Company / undertaking Rhône-Poulenc

Toxicity to man

Irritating to eyes

Harmful by inhalation, in contact with skin and if swallowed

Countries where available Martinique

Guadeloupe

# **Klartan**

Emulsion, oil in water (EW)



Active ingredients g/I tau-fluvalinate 240

Company / undertaking Novartis

Toxicity to man

Harmful if swallowed Irritating to skin Countries where available
Guadeloupe Martinique

# Klerat pellets

Bait (RB)

Active ingredients g/kg brodifacoum 0.05

Company / undertaking Zeneca

Toxicity to man

May cause mild irritation following eye contact

Countries where available

Grenada

St Kitts

Dominica Martinique St Vincent Guadeloupe St Lucia

### Klerat wax blocks

Block bait (BB)

Active ingredients g/kg brodifacoum 0.05 Company / undertaking Zeneca

Toxicity to man

May cause mild irritation following eye contact

Countries where available
St Lucia St Vincent

# Kocide 101 PM

Wettable powder (WP)

Active ingredients g/kg copper hydroxide 500

Company / undertaking Rhône-Poulenc

Toxicity to man

Countries where available

Dominica Grenada Martinique St Lucia Guadeloupe St Vincent

# **Kytrol GT**

Suspension concentrate (SC)



Active ingredients	g/I
amitrole	100
ammonium thiocyanate	90
bromacil	70
diuron	200

Company / undertaking CFPI

### Toxicity to man

Irritating to eyes

Danger of serious damage to health by prolonged exposure, by ingestion Possible risks of irreversible effects

Countries where available
Guadeloupe Martinique

### Lannate 20 L

Emulsifiable concentrate (EC)

TOXIC

Active ingredients g/l methomyl 200

Company / undertaking Du Pont

Toxicity to man

Toxic by inhalation and if swallowed Irritating to eyes Countries where available

Dominica Grenada Martinique St Lucia Guadeloupe

# Lebaycid EC 50

Emulsifiable concentrate (EC)



Active ingredients g/l fenthion 550

Company / undertaking Bayer

Toxicity to man

Toxic if swallowed Harmful by inhalation and in contact with skin Irritating to skin

### Lentagran

Wettable powder (WP)



**Active ingredients** pyridate

g/kg 450

Company / undertaking

**Novartis** 

Toxicity to man

Irritating to eyes

May cause sensitisation by contact with skin

Countries where available

Guadeloupe Martinique

### Manzate 200

Wettable powder (WP)



**Active ingredients** 

g/kg 800

Company / undertaking

Du Pont

Toxicity to man

mancozeb

Irritating to respiratory system

May cause sensitisation by contact with skin

Countries where available

Dominica Martinique Grenada St Kitts

Guadeloupe St Lucia

St Vincent

Mavrik flo

Emulsion, oil in water (EW)



**Active ingredients** 

tau-fluvalinate

g/I 240 Company / undertaking Novartis

Toxicity to man

Harmful if swallowed

Irritating to skin

Countries where available

Guadeloupe Martinique

Mertect 20 S

Soluble concentrate (SL)

**Active ingredients** thiabendazole

g/I 220 Company / undertaking

Merck

Toxicity to man

Countries where available

Dominica St Vincent Grenada

St Lucia

### Mesurol RF

Bait ready for use (RB)



Active ingredients g/kg methiocarb 40

Company / undertaking Bayer

Toxicity to man

Harmful if swallowed

Countries where available
Guadeloupe Martinique

# Metasystox R 250 EC

Emulsifiable concentrate (EC)



Active ingredients g/l oxydemeton-methyl 250

Company / undertaking Bayer

Toxicity to man

Toxic in contact with skin and if swallowed Irritating to eyes

May cause sensitisation by skin contact Countries where available

Grenada St Lucia Guadeloupe Martinique

### Miral 10 G

Granules (GR)



Active ingredients g/kg isazofos 100

Company / undertaking Novartis

Toxicity to man
Harmful if swallowed

Countries where available

Dominica

St Lucia

St Vincent

# Mocap 10 G

Granules (GR)



Active ingredients g/kg ethoprophos 100

Company / undertaking Rhône-Poulenc

Toxicity to man

Harmful in contact with skin and if swallowed

Countries where available

Grenada Guadeloupe St Lucia St Vincent Martinique

# Mocap 20 EC

Emulsifiable concentrate (EC)



Active ingredients	g/l
ethoprophos	200

Company / undertaking Rhône-Poulenc

Toxicity to man

Very toxic in contact with skin Toxic if swallowed

Countries where available

Dominica Guadeloupe Martinique

### Morestan

Wettable powder (WP)

**Active ingredients** g/kg chinomethionat 250

Toxicity to man

Company / undertaking Baver

Countries where available Guadeloupe Martinique

### Nemacur 5

Granules (GR)

Active ingredients	g/kg
fenamiphos	50

Toxicity to man Toxic if swallowed Company / undertaking Bayer

Countries where available Guadeloupe Martinique

### Nemacur GR 10

Granules (EC)



St Lucia

Active ingredients	g/kg
fenamiphos	100

Company / undertaking Bayer

Toxicity to man Toxic if swallowed

Countries where available Dominica Grenada

### Neoron 250 EC

Emulsifiable concentrate (EC)



Active ingredients g/l bromopropylate 250

Company / undertaking Novartis

Toxicity to man

Harmful by inhalation

Countries where available
Guadeloupe Martinique

# Nogos 500 EC

Emulsifiable concentrate (EC)



Active ingredients g/l dichlorvos 500

Toxicity to man

Very toxic by inhalation and in contact with skin Toxic if swallowed May cause sensitisation by skin contact Company / undertaking Novartis

Countries where available

Grenada

### Nomolt SC

Suspension concentrate (SC)

Active ingredients g/l teflubenzuron 150

Company / undertaking Cvanamid

Toxicity to man

Countries where available

Dominica St Kitts St Lucia St Vincent

### Oncol S

Microgranule (MG)

Active ingredients g/kg
benfuracarb 86

Company / undertaking
Du Pont

Toxicity to man

# GUIDE TO THE USE OF PLANT PROTECTION PRODUCTS \_\_\_\_\_ IN THE WEST-INDIES \_\_\_\_\_

### **COMMERCIAL PRODUCTS**

# Opus Suspension concentrate (SC) Active ingredients g/I epoxiconazole 125 Company / undertaking BASF Toxicity to man Possible risks of irreversible effects Countries where available Guadeloupe Martinique

Orthene 50 Water soluble powder (SP)		
Active ingredients acephate	<b>g/kg</b> 500	Company / undertaking Rhône-Poulenc
Toxicity to man		Countries where available Guadeloupe Martinique

Ouragan Soluble concentrate (SL)		HARMFUL	
Active ingredients glyphosate-trimesium	<b>g/kg</b> 480		
Toxicity to man Harmful if swallowed		Countries where available Guadeloupe Martinique	

Pacol 4,5 Emulsion, water in oil (EO)		TOXIC	
Active ingredients parathion	g/l 45	Company / undertaking Rhône-Poulenc	
Toxicity to man Toxic in contact with skin Harmful if swallowed		Countries where available Guadeloupe Martinique	

# Pelt 44 liquide

Suspension concentrate (SC)



Active ingredients g/l thiophanate-methyl 450

Company / undertaking AgrEvo

Toxicity to man

Possible risks of irreversible effects

Countries where available
Guadeloupe Martinique

### Peltar flo

Suspension concentrate (SC)



Active ingredients	g/l
maneb	300
maneb thiophanate-methyl	150

Company / undertaking AgrEvo

Toxicity to man

Possible risks of irreversible effects May cause sensitisation by skin contact Countries where available
Guadeloupe Martinique

# Peltis 40

Emulsifiable concentrate (SC)



Active ingredients g/I thiophanate-methyl 400

Company / undertaking AgrEvo

Toxicity to man

Possible risks of irreversible effects

Countries where available
Guadeloupe Martinique

# **Percut**

Emulsifiable concentrate (EC)



g/l
40
200

Company / undertaking AgrEvo

Toxicity to man Irritating to eyes

### Perfekthion

Emulsifiable concentrate (EC)



**Active ingredients** dimethoate

g/I 400 Company / undertaking

Toxicity to man

Harmful in contact with skin and if swallowed

Countries where available

Grenada St Kitts St Vincent

### Peropal

Wettable powder (WP)



**Active ingredients** azocyclotin

g/kg 250

Company / undertaking

Toxicity to man

Irritating to eyes and skin

Countries where available Guadeloupe Martinique

### Phosdrin W 10

Soluble concentrate (SL)



**Active ingredients** mevinphos

g/I 100 Company / undertaking Cvanamid

Toxicity to man

Toxic by inhalation, in contact with skin and if swallowed

Countries where available Guadeloupe

Martinique

**Phytorex** 

Grain bait (AB)

**Active ingredients** 

metaldehyde

g/kg 50

Company / undertaking

Bayer

Toxicity to man

# Polymone 60

Soluble concentrate (SL)



Active ingredients	g/I
2,4-D	100
mecoprop	400

Company / undertaking Zeneca

Toxicity to man

Harmful if swallowed Irritating to eyes and skin Countries where available
Guadeloupe Martinique

# Polyram DF

Water dispersible granules (WG)



Active ingredients	g/kg
metiram	700

Company / undertaking BASF

Toxicity to man

May cause sensitisation by skin contact

Countries where available St Lucia

### Primicid 50 EC

Emulsifiable concentrate (EC)



Active ingredients	g/l
pirimiphos-ethyl	500

Company / undertaking Zeneca

Toxicity to man

Harmful in contact with skin and if swallowed

Countries where available

Dominica Grenada St Lucia St Vincent

### **Printazol 75**

Soluble concentrate (SL)



Active ingredients	g/l
2,4-D MCPA	561
MCPA	463

Company / undertaking AgrEvo

Toxicity to man

Harmful by inhalation, in contact with skin and if swallowed

### Printazol N

Soluble concentrate (SL)



g/I
561
463
15

Company / undertaking AgrEvo

Toxicity to man

Harmful by inhalation, in contact with skin and if swallowed

Countries where available
Guadeloupe Martinique

### Prowl

Suspension concentrate (SC)

Active ingredients g/l pendimethalin 400

Company / undertaking Cyanamid

Toxicity to man

Mild skin and eye irritant

Countries where available
Guadeloupe Martinique

# Psilatox granules 5

Granules (GR)



Active ingredients	g/kg
chlorfenvinphos	50

Company / undertaking Rhône-Poulenc

Toxicity to man

Harmful if swallowed

Countries where available
Guadeloupe Martinique

# Pulsan

Wettable powder (WP)



Active ingredients	g/kg
cymoxanil	32
mancozeb	560
oxadixyl	80

Company / undertaking Novartis

Toxicity to man

Irritating to respiratory system

May cause sensitisation by contact with skin

# Pulsan pepite

Water dispersible granules (WG)



Active ingredients	g/kg
cymoxanil	32
mancozeb	560
oxadixyl	80

Company / undertaking **Novartis** 

### Toxicity to man

Irritating to respiratory system

May cause sensitisation by contact with skin

Countries where available Guadeloupe Martinique

### Punch B 40 EC

Emulsifiable concentrate (EC)



Active ingredients	g/kg
flusilazole	400

Toxicity to man

Harmful if swallowed Possible risks of irreversible effects Company / undertaking Du Pont

Countries where available

Dominica Grenada Martinique

Guadeloupe

# Rapid

Emulsifiable concentrate (EC)



Active ingredients	g/l
pirimicarb	50

Countries where available Guadeloupe Martinique

Company / undertaking

Zeneca

Toxicity to man

Irritating to eyes and skin

# R-bix

Soluble concentrate (SL)



Active ingredients	g/l
paraquat	100

Company / undertaking Zeneca

### Toxicity to man

Toxic if swallowed Harmful in contact with skin Irritating to eyes and skin

# Regent 5 GR Granules (GR) Active ingredients g/kg fipronil 0.5 Company / undertaking Rhône-Poulenc Countries where available Dominica Guadeloupe Martinique St Kitts St Vincent

Regione Soluble concentrate (SL)				HARMFUL
Active ingredients diquat	<b>g/l</b> 200	Company / u Zeneca	indertaking	
Toxicity to man Harmful if swallowed Irritating to eyes and skin		Countries will Dominica Martinique St Vincent	here available Grenada St Kitts	Guadeloupe St Lucia

Ridomil 5 G Granules (GR)			
Active ingredients metalaxyl	<b>g/kg</b> 50	Company / undertaking Novartis	
Toxicity to man		Countries where available St Lucia	

### Ridomil MZ 72 WP Wettable powder (WP) **Active ingredients** Company / undertaking g/kg Novartis 640 mancozeb metalaxyl 80 Toxicity to man Countries where available St Lucia Irritating to skin Dominica Grenada May cause sensitisation by skin contact St Vincent

Rimitox Grain bait (AB)			
Active ingredients chlorophacinone	<b>g/kg</b> 0.08	Company / undertaking Rhône-Poulenc	
Toxicity to man		Countries where available Guadeloupe Martinique	
Rizolex Flowable concentrate for seed treatment	ent (FS)		
Active ingredients tolclofos-methyl	<b>g/l</b> 250	Company / undertaking Zeneca	
Toxicity to man		Countries where available Grenada	
Rizolex 50 WP Wettable powder (WP)			
Active ingredients tolclofos-methyl	<b>g/kg</b> 500	Company / undertaking Sumitomo	
Toxicity to man		Countries where available  Dominica Grenada	St Lucia
Rogor 50 Emulsifiable concentrate (EC)			HARMFUL
Active ingredients dimethoate	g/l 500	Company / undertaking Zeneca	
Toxicity to man  Harmful by inhalation, in contact with swallowed Irritating to eyes and skin	skin and if	Countries where available Guadeloupe Martinique	

### Ronstar Emulsifiable concentrate (EC) **Active ingredients** g/I Company / undertaking 250 oxadiazon Rhône-poulenc Toxicity to man Countries where available Irritating to eyes St Kitts **Ronstar TX** Granules (GR) Company / undertaking **Active ingredients** g/kg carbetamide 15 Rhône-Poulenc

20

oxadiazon

Toxicity to man

Roundup Soluble concentrate (SL)		HARME
Active ingredients glyphosate	g/l 360	Company / undertaking Monsanto
Toxicity to man Harmful by inhalation Irritating to eyes		Countries where available Guadeloupe Martinique

Countries where available

Martinique

Guadeloupe

Rovral Wettable powder (WP)		
Active ingredients iprodione	<b>g/kg</b> 500	Company / undertaking Rhône-poulenc
Toxicity to man		Countries where available Guadeloupe Martinique

g/l

40

g/I

# Rubigan 4

Emulsifiable concentrate (EC)

**Active ingredients** fenarimol

Toxicity to man

Company / undertaking

DowElanco

Countries where available Guadeloupe Martinique

### Rufast

Emulsifiable concentrate (EC)

**Active ingredients** 

acrinathrin 150 Company / undertaking AgrEvo

Toxicity to man

May impair fertility May cause harm to the unborn child Irritating to respiratory system Risk of serious damage to eyes

Countries where available

Guadeloupe Martinique

# Rugby 10 G

Granules (GR)

**Active ingredients** g/kg cadusafos 100

Company / undertaking **FMC** 

Toxicity to man

Toxic by inhalation and in contact with skin Harmful if swallowed

Countries where available

Dominica Guadeloupe Martinique St Lucia St Vincent

Saprol 1

Emulsifiable concentrate (EC)



**Active ingredients** 

g/I triforine 210 Company / undertaking Cyanamid

Toxicity to man

Harmful in contact with skin and if swallowed Irritating to eyes and skin

### Score 250 EC

Emulsifiable concentrate (EC)



Active ingredients g/l difenoconazole 250

Company / undertaking Novartis

Toxicity to man

Irritating to eyes
Risk of serious damage to eyes

Countries where available
Guadeloupe Martinique

### Serk EC

Emulsifiable concentrate (EC)



Active ingredients g/l endosulfan 200 thiometon 66.7

Novartis

Company / undertaking

Toxicity to man
Toxic if swallowed

Countries where available
Guadeloupe Martinique

# Sevin 80 S

Wettable powder (WP)



Active ingredients g/kg carbaryl 800

Company / undertaking Rhône-Poulenc

Toxicity to man

Harmful by inhalation and if swallowed

Countries where available Grenada

### Sevin 85 WP

Wettable powder (WP)



Active ingredients g/kg carbaryl 850

Company / undertaking Rhône-Poulenc

Toxicity to man

Harmful by inhalation and if swallowed

Countries where available

Dominica Grenada

Dominica St Lucia St Kitts

# Sherpa 10 EC Emulsifiable concentrate (EC) Active ingredients g/l Company / undertaking Rhône-Poulenc Toxicity to man Countries where available St Lucia

Sigma Oil miscible flowable concentrate	e (OF)	
Active ingredients thiophanate-methyl	g/l 400	Company / undertaking Rhône-Poulenc
Toxicity to man	mponent in the section of the sectio	Countries where available Grenada St Lucia

### Sirdate S Suspension concentrate (SC) Company / undertaking **Active ingredients** g/I 48 Du Pont cymoxanil folpet 300 oxadixyl Toxicity to man Countries where available Harmful if swallowed Guadeloupe Martinique Irritating to eyes May cause sensitisation by skin contact

<b>Skipper</b> Granular bait (GB)		HARM
Active ingredients thiodicarb	<b>g/kg</b> 40	Company / undertaking Rhône-Poulenc
Toxicity to man Harmful if swallowed		Countries where available Guadeloupe Martinique

### Slalom

Emulsifiable concentrate (EC)



Active ingredients	g/I
bifenthrin	20
dicofol	360

Company / undertaking Rhône-Poulenc

### Toxicity to man

Harmful if swallowed Irritating to eyes

May cause sensitisation by skin contact

Countries where available
Guadeloupe Martinique

# Snapshot 2.5 G

Granules (GR)

g/kg
5
20

Company / undertaking DowElanco

Toxicity to man

Countries where available
Guadeloupe Martinique

# Sumicidin 10

Emulsifiable concentrate (EC)



Active ingredients	g/l
fenvalerate	100

Company / undertaking Cyanamid

### Toxicity to man

Harmful by inhalation, in contact with skin and if swallowed

Irritating to eyes and skin

### Sumicombi

Emulsifiable concentrate (EC)



Active ingredients g/l fenitrothion 250 fenvalerate 50

Company / undertaking Cyanamid

Toxicity to man

Harmful by inhalation, in contact with skin and if swallowed Irritating to eyes and skin

Countries where available
Guadeloupe Martinique

# Surflan

Suspension concentrate (SC)



Active ingredients g/l oryzalin 480

Company / undertaking DowElanco

Toxicity to man

May cause sensitisation by skin contact

Countries where available

Dominica Grenada St Lucia

# Sygan S

Suspension concentrate (SC)



Active ingredients g/l cymoxanil 48 folpet 480

Company / undertaking
Du Pont

Toxicity to man

Harmful if swallowed Irritating to eyes

May cause sensitisation by skin contact

# Syphal LS

Water dispersible granules (WG)



Active ingredients	g/I
copper oxychloride	250
cymoxanil	48
folpet	96
mancozeb	160

Company / undertaking
Du Pont

Toxicity to man Irritating to eyes Countries where available
Guadeloupe Martinique

# Talon cut wheat bait

Grain bait (AB)

Active ingredients g/kg brodifacoum 0.05

Company / undertaking Zeneca

Toxicity to man

Countries where available
Grenada St Lucia

### **Talstar**

Emulsifiable concentrate (EC)



Active ingredients g/l bifenthrin 100

Company / undertaking Rhône-Poulenc

Toxicity to man

Harmful if swallowed Irritating to eyes Countries where available
Guadeloupe Martinique

### Tambo 440 EC

Emulsifiable concentrate (EC)



Active ingredients	g/l
cypermethrin	40
cypermethrin profenofos	400

Company / undertaking Novartis

Toxicity to man

Harmful if swallowed Irritating to skin

May cause sensitisation by skin contact

Countries where available

Dominica Grenada St Lucia

### Temik 10 G

Granules (GR)



Active ingredients g/kg aldicarb 100

Company / undertaking Rhône-Poulenc

Toxicity to man

Toxic in contact with skin and if swallowed

Countries where available

Guadeloupe Martinique

### Thiodan 50 WP

Wettable powder (WP)



Active ingredients g/kg endosulfan 500

Company / undertaking AgrEvo

Toxicity to man

Very toxic by inhalation Toxic if swallowed Harmful in contact with skin Countries where available

St Lucia

### Tilt 250 EC

Emulsifiable concentrate (EC)



Active ingredients g/l propiconazole 250

Company / undertaking Novartis

Toxicity to man Irritating to eyes Countries where available

Dominica Grenada

Martinique St Lucia

Guadeloupe St Vincent

# Topas 100 EC

Emulsifiable concentrate (EC)



Active ingredients g/l penconazole 100

Company / undertaking Novartis

Countries where available

Toxicity to man Irritating to eyes

Guadeloupe

Martinique

St Vincent

### Tordon 101

Soluble concentrate (SL)



Active ingredients	g/l
2,4-D	240
2,4-D picloram	65

Company / undertaking DowElanco

Toxicity to man

May cause sensitisation by skin contact

Countries where available

Guadeloupe Martinique St Vincent

### Tordon 22 K

Soluble concentrate (SL)

Company / undertaking
DowElanco

Active ingredients g/l picloram 240

Countries where available
Guadeloupe Martinique

Toxicity to man

# **Torque S**

Suspension concentrate (SC)

Company / undertaking

Active ingredients fenbutatin oxide

Cyanamid

q/I

550

Toxicity to man

Countries where available

Grenada Guadeloupe Martinique

# **Touchdown**

Soluble concentrate (SL)



Active ingredients g/l glyphosate-trimesium 480

Company / undertaking Zeneca

Toxicity to man

Harmful if swallowed

Countries where available

Dominica Grenada St Lucia St Kitts

### Tracker 108 EC

Emulsifiable concentrate (EC)



Active ingredients g/l tralomethrin 108

Company / undertaking
Du Pont

Toxicity to man

Harmful by inhalation and if swallowed Risk of serious damage to eyes

Countries where available

Guadeloupe Martinique

# Trigard 75 WP

Wettable powder (WP)

Active ingredients g/kg cyromazine 750

Company / undertaking Novartis

Toxicity to man

Countries where available

Dominica St Lucia Guadeloupe Ma St Vincent

Martinique

### **Trimiltox fort**

Wettable powder (WP)

IRRITANT

Active ingredients g/kg
copper oxychloride 234
mancozeb 200
cupric compounds 219

Company / undertaking Novartis

Toxicity to man

Irritating to respiratory system

May cause sensitisation by contact with skin

Countries where available

Dominica

St Kitts

St Vincent

# Ultracide 20 liquide

Emulsifiable concentrate (EC)



Active ingredients g/l methidathion 193

Company / undertaking Novartis

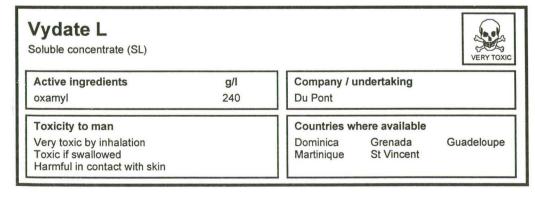
Toxicity to man

Toxic in contact with skin and if swallowed

# Vectra BN Oil miscible liquid (OL) Active ingredients g/l Company / undertaking Rhône-Poulenc Toxicity to man Countries where available Dominica St Vincent

Velpar S Water soluble powder (SP)		IRRITANT
Active ingredients hexazinone	<b>g/kg</b> 900	Company / undertaking Du Pont
Toxicity to man Irritating to eyes	,	Countries where available Guadeloupe Martinique St Lucia

Vertimec Emulsifiable concentrate (EC)		HARMFUL
Active ingredients abamectin	<b>g/l</b> 18	Company / undertaking Merck
Toxicity to man  Harmful by inhalation and if swallowed Irritating to eyes and skin		Countries where available Guadeloupe Martinique St Vincent



### Weedone LV 6

Emulsifiable concentrate (EC)



Active ingredients	g/l
2,4-D	720

Company / undertaking
CFPI

Toxicity to man

Harmful if swallowed Irritating to eyes and skin Countries where available
Guadeloupe Martinique

### Winch

Suspension concentrate (SC)

Active ingredients g/l isoxaben 107 oryzalin 428

Company / undertaking DowElanco

Toxicity to man

Countries where available
Guadeloupe Martinique

# Zolone flo

Suspension concentrate (SC)



Active ingredients g/l phosalone 500

Company / undertaking Rhône-poulenc

Toxicity to man
Harmful if swallowed

Countries where available Guadeloupe Martinique

# Zolone liquide

Emulsifiable concentrate (EC)



Active ingredients g/l phosalone 350

Company / undertaking Rhône-poulenc

Toxicity to man Irritating to eyes

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# Vegetables and fruits harvested in the West-Indies

#### **VEGETABLES**

**English name** French name Latin name Annatto Roucou Bixa orellana Arrow-root Toloman Canna edulis Asparagus Asperge Asparagus officinalis Assai Palmiste franc Euterpe oleracea Beet Betterave Beta vulgaris Bottle gourd Gourde Lagenaria vulgaris Breadfruit Fruit à pain Artocarpus incisa

Brassicas Choux Brassica oleracea
Carrot Carotte Daucus carota
Cassava Manioc Manihot esculenta
Cassia Casse Cassia fistula
Castor bean Ricin Ricinus communis

Castor bean Ricin Ricin Ricinus communis
Celery Céleri Apium graveolens
Christophene Christophine Sechium edule

Cinnamon Cannelle Cinnamonum zeylandicum

Corn Maïs Zea mays
Corn salad Mâche Valerianella olitoria

Pois de canne Dolichos sinensis Cowpea Cucumber Concombre Cucumis sativus Colocasia esculenta Dasheen Madère, tarot Solanum melongena Eggplant Aubergine Gherkin Massissi Cucumis anguria Ginger Gingembre Zingiber officinalis

Hyacynth bean Pois Bourcoussou Dolichos lablab
Leek Poireau Allium porrum
Lettuce Laitue Lactuca sativa
Lima bean Pois souche Phaseolus lunatus

MelonMelonCucumis meloMintMentheMentha spicataNutmegNoix de muscadeMyristica fragrans

Okra Gombo Hibiscus esculentus
Onion Oignon Allium cepa

Palm cabbage Chou palmiste montagne Sabal palmetto

Parsley Persil Petroselinum crispum
Pea Pois Pisum spp.

Peanut Arachide, "pistache" Arachis hypogea

English name	French name	Latin name
Pepper	Piment	Capsicum annuum
Plantain	Plantain	Musa paradisiaca
Poke	Calalou	Phytolacca decandra
Potato	Pomme de terre	Solanum tuberosum
Pumpkin	Citrouille	Cucurbita pepo
Radish	Radis	Raphanus sativus
Royal palm	Palmier royal	Roystonea regia
Spinach	Epinard	Spinacia oleracea
String bean	Haricot vert	Phaseolus vulgaris
Sweet potato	Patate douce	lpomea batatas
Tamarind	Tamarin	Tamarindus indica
Tannia	Malanga, chou caraïbe	Xanthosoma spp.
Thyme	Thym	Thymus vulgaris
Tomato	Tomate	Lycopersicum esculentum
Topinambur	Topinambour	Helianthus tuberosus
Turnip	Navet	Brassica napus
Vanilla	Vanille	Vanilla planifolia
Water cress	Cresson de fontaine	Nasturtium officinale
Water melon	Pastèque	Citrullus vulgaris
Welsh onion	Cive	Allium fistulosum
Yam	Igname	Dioscorea spp.
Zucchini	Courgette	Cucurbita melopepo

#### **FRUITS**

English name	French name	Latin name
Avocado	Avocat	Persea americana
Banana	Banane	Musa paradisiaca sapientum
Carambola	Carambole	Averrhoa carambola
Chestnut	Chataîgne	Castanea sativa
Citrus	Agrumes	Citrus spp.
Cocoaplum	Icaque	Chysobalanus icaquo
Coconut	Noix de coco	Cocos nucifera
Genip tree	Quenette	Melicocca bijuga
Giant granadilla	Barbadine	Passiflora quadrangularis
Golden apple	Pomme Cythère	Spondias cytherea
Guava	Goyave	Psidium guajava
Jujube	Surette	Zisyphus jujuba
Litchi	Litchi	Litchi sinensis
Mammee apple	Abricot de St-Domingue	Mammea americana
Mango	Mangue	Mangifera indica
Monbin	Prune monbin	Spondias lutea
Passion fruit	Grenadille	Passiflora edulis
Pawpaw	Papaye	Carica papaya
Pigeon pea	Pois cajan	Cajanus cajan
Pineapple	Ananas	Ananas comosus
Pistachio	Pistache	Pistacia vera
Plum	Prune	Prunus domestica
Pomegranate	Grenade	Punica granatum
Pomerac	Pomme d'Haïti	Eugenia malaccensis
Red monbin	Prune rouge	Spondias purpurea
Rose apple	Pomme rose ou d'eau	Eugenia jambos
Sapodilla	Sapotille	Achras sapota
Sapote	Sapote	Calocarpum sapota
Sea grape	Raisin de bord de mer	Coccoloba uvifera
Soursop	Corossol	Annona muricata
Strawberry	Fraise	Fragaria spp.
Sugar apple	Pomme cannelle	Annona squamosa
Tropical almond	Amande des Antilles	Terminalia catappa
Water nut	Macre	Trapa natans
West Indian cherry	Cerisier de Ste-Lucie	Prunus mahaleb

# Conversion factors

#### Conversions

#### **Usual rates**

1 g/kg = 0.0160 oz./lb.

1 g/l = 0.1601 oz./gal. (imperial)

**0.1336** oz./gal. (US)

1 l/ha = 0.0890 gal./acre (imperial)

0.1069 gal./acre (US)

1 g/ha = 0.0143 oz./acre

#### **Conversion factors**

#### Mass

1 g = 0.0353 oz. 1 kg = 2.2046 lbs.

#### Area

1 ha = 2.4711 acre

#### Volume

1 I = 35.195 fl. oz. (imperial) 33.813 fl. oz. (US) 0.2199 gal. (imperial) 0.2642 gal. (US)

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