

# **Greenhouse & Nursery Product Guide**

Nufarm is dedicated to promoting healthy growth for your plants and your business. Our insecticide, herbicide, fungicide and plant growth regulator solutions deliver results that help ensure your success.





Protect your crops from diseases with Nufarm's complete line of plant protection products. Contact your Nufarm representative to customize your plan.

	DISEASE POTENTIAL	BACTERIAL BLIGHT	BOTRYTIS	POINSETTIA SCAB	POWDERY MILDEW	PYTHIUM	RHIZOCTONIA	THIELAVIOPSIS
	<b>26/36</b> ® FRAC 1 + 2		•		•		•	•
	<b>3336® DG LITE</b> FRAC 1		•				٠	•
	<b>3336® EG</b> FRAC 1		٠				٠	•
	<b>3336® F</b> FRAC 1		•				٠	•
	ADORN® FRAC 43					٠		
FUNGICIDES	<b>AFFIRM</b> ™ FRAC 19		•		•		•	•
	AGRI-MYCIN® 50 FRAC 25	•						
	<b>ALUDE</b> ™ FRAC 33					•		
	CUPROXAT® FL FRAC M1	•	•					
	<b>PROTECT<sup>™</sup> DF</b> FRAC M3	•	•	•			•	
	<b>SPECTRO® 90</b> FRAC 1 + M5		•				•	•
	SPIRATO® GHN FRAC 12		٠				٠	•



#### **FUNGICIDE SOLUTIONS**

**26/36**°

26/36\*

Incorporating 26/36\* fungicide into an integrated disease management program provides effective control of key ornamental diseases.

**KEY USES** 

Ornamentals

**KEY DISEASES CONTROLLED** Botrytis, Cercospora, Thielaviopsis

(see label for complete list) RATE / 1 GAL RATE / 100 GAL

2 - 4 tsp 33 - 84 fl oz (spray) 13.5 fl oz (drench) 33 - 66 fl oz (dip)

(see label for specific rates)

3336° DG ....

#### 3336\* DG LITE

3336° DG Lite is formulated with patented granular dispersing technology making it an excellent choice for soil media applications to control a wide range of diseases.

#### **KEV LISES**

Annual and perennial flowers, bedding plants, deciduous and evergreen trees and shrubs, foliage plants, groundcovers

#### **KEY DISEASES CONTROLLED**

Botrytis, Cercospora, Rhizoctonia, Thielaviopsis (see label for complete list)

RATE / 1000 SQ FT 22 - 30 lb (see label for specific rates)

#### ACTIVE INGR. iprodione (19.65%), thiophanate-methyl (19.65%) FORMULATION flowable CHEM. FAMILY dicarboxamide, thiophanates FRAC NO. 1&2 REI 12 hours (ornamentals) PACKAGE SIZE 2 x 2.5 gal APPLICATION spray, drench, dip

228-630

EPA REG. NO.

1001-89

FORMULATION water-dispersible granule

1

thiophanates

spray, drench, dip

EPA REG. NO.

ACTIVE INGR.

CHEM. FAMILY

APPLICATION

PACKAGE SIZE 4 x 5 lb

FRAC NO.

EPA REG. NO.	1001-70		
ACTIVE INGR.	thiophanate	e-methy	ıl (2.08%)
FORMULATION	granular		
CHEM. FAMILY	thiophanate	es	
FRAC NO.	1	REI	12 hours
PACKAGE SIZE	30 lb bag		
APPLICATION	broadcast, t	op dres	s, soil incorporation
	_		

thiophanate-methyl (50%)

REI 12 hours

## 3336° EG

#### 3336\* EG

3336\* EG is a broad-spectrum systemic fungicide which controls a variety of foliar, stem and root diseases on a wide range of commercially important plants. 3336 EG is also effective as a pre-plant dip on cuttings and bulbs.

#### **KEY USES**

Annual and perennial flowers, bedding plants, deciduous and evergreen trees and shrubs, foliage plants, greenhouse, groundcovers, shadehouses and lathhouses

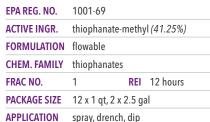
#### **KEY DISEASES CONTROLLED**

Anthracnose, black spot of rose, Botrytis, Cercospora, Curvalaria, Fusarium, Fusicladium, leaf spots and blights, powdery mildews, Rhizoctonia, rust diseases, Thielaviopsis, Venturia leaf scabs (see label for complete list)

RATE / 1000 SQ FT 2 - 6 oz (see label for specific rates)

1001-69 EPA REG. NO. thiophanate-methyl (41.25%) ACTIVE INGR. flowable FORMULATION CHEM. FAMILY thiophanates FRAC NO. REI 12 hours 1 PACKAGE SIZE 12 x 1 qt, 2 x 2.5 gal APPLICATION spray, drench, dip

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#### **KEY DISEASES CONTROLLED**

Botrytis, Cercospora, powdery mildew, Rhizoctonia, Thielaviopsis (see label for complete list)

RATE / 1 GAL RATE / 100 GAL 8 - 24 fl oz (spray) 8-16 fl oz (drench) 16 - 24 fl oz (dip)

(see label for specific rates)



3336<sup>®</sup> F is a water-based broad-spectrum systemic fungicide with preventive and curative properties. Its unique formulation is compatible with drench or spray applications over a wide range of ornamental settings.

#### **KEY USES**

Annual and perennial flowers, bedding plants, deciduous and evergreen trees and shrubs, foliage plants, groundcovers



GREENHOUSE

**EDIBLES** 

OMRI OMRI LISTED DANGER





0.5 - 1.5 tsp

## Actinovate<sup>®</sup> SP

#### ACTINOVATE<sup>®</sup> SP

Actinovate<sup>®</sup> SP Biological Fungicide suppresses and controls root rot and foliar fungal pathogens including powdery and downy mildew, Botrytis, Sclerotinia and Alternaria. When used as a soil drench, it also suppresses and controls soil-borne fungi including Fusarium, Rhizoctonia, Pythium, Phytophthora, Sclerotinia and Verticillium.

#### **KEY USES**

Bedding and foliage plants, ornamentals, shrubs

# Adorn

#### ADORN<sup>®</sup>

With a novel mode of action, Adorn<sup>®</sup> is an excellent addition to fungicide rotations and plays a key role in resistance management programs to defeat downy mildew, Phytophthora and Pythium.

#### **KEY USES**

Bedding and foliage plants, groundcovers, ornamentals, shrubs



#### AFFIRM<sup>™</sup> WDG

Affirm<sup>™</sup> WDG is a concentrated, easy-to-mix waterdispersible granule formulation that delivers excellent disease control.

**KEY USES** Edibles, ornamentals

#### **KEY DISEASES CONTROLLED**

Downy mildew, leaf spots and rusts, powdery mildew, Phytophthora and Pythium spp., Rhizoctonia spp. (see label for complete list)

RATE /	2 GAL
RATE /	100 GAL

1 tsp (*drench*) 6 - 12 oz (spray) 4 - 6 oz (drench)

(see label for specific rates)

#### **KEY DISEASES CONTROLLED**

Downy mildew, Phytophthora and Pythium spp. (see label for complete list)

RATE / 100 GAL 1 - 4 fl oz (see label for specific rates)

#### **KEY DISEASES CONTROLLED**

Botrytis, powdery mildew, Rhizoctonia (see label for complete list) RATE / 1 GAL Consult label (see label for specific rates)

## Agri-Mycin<sup>®</sup> 50

#### AGRI-MYCIN<sup>®</sup> 50

For years, Agri-Mycin<sup>®</sup> 50 has been the industry standard bactericide. It provides effective, economical control for three to four days. Its specific mode of action is unique to streptomycin and is an essential part of any bacterial disease control program.

#### **KEY USES**

Apples, celery, pear, peppers, potatoes, tobacco, tomatoes, tree crops



#### ALUDF"

A systemic fungicide, Alude<sup>™</sup> provides effective control of various plant diseases.

#### **KEY USES**

Annual and perennial flowers, bedding plants, deciduous and evergreen trees and shrubs, foliage plants, groundcovers, vegetable transplants

**KEY DISEASES CONTROLLED** 

Bacterial blight, bacterial speck\*, bacterial spot, blue mold, fire blight, soft rot blackleg, wild fire (see label for complete list)

RATE / 5 GAL 1 - 4.5 tsp (spray, dip) RATE / 100 GAL 4 - 16 oz (spray, dip) (see label for specific rates)

#### **KEY DISEASES CONTROLLED**

Bacterial blight, downy mildew, fire blight, Phytophthora and Pythium spp. (see label for complete list)

RATE / 1 GAL	1.5 – 3.6 tsp (spray)
	0.3 – 0.6 tsp (drench)
<b>RATE / 100 GAL</b>	26 - 54 fl oz (spray)
	5 – 10 fl oz (drench)
(see label for specific r	atos)

(see label for specific rates)

EPA REG. NO.	73314-1
ACTIVE INGR.	Streptomyces lydicus WYEC 108 (0.0371%)
FORMULATION	soluble powder
CHEM. FAMILY	glucopyranosyl biopesticide antibiotic
FRAC NO.	25 REI 1 hour*
PACKAGE SIZE	12 x 18 oz bag
FACKAGE SIZE	12 X 10 02 bug
APPLICATION	spray, drench, dip
APPLICATION S. lydicus WYEC is a ubiq	spray, drench, dip uitous, naturally occurring soil izes root tips and acts as a mycoparasite.

EPA REG. NO.	59639-141			
ACTIVE INGR.	fluopicolide (	39.5%	6)	
FORMULATION	flowable			
CHEM. FAMILY	benzamides			
FRAC NO.	43	REI	12 hours	
PACKAGE SIZE	12 x 1 qt bott	le		
APPLICATION	spray, drench			

EPA REG. NO.	68173-3-10	01	
ACTIVE INGR.	polyoxin D	zinc salt	:(11.3%)
FORMULATION	water-dispe	rsible g	ranules
CHEM. FAMILY	polyoxins		
FRAC NO.	19	REI	4 hours
PACKAGE SIZE	4 x 0.5 lb re 3 x 2.4 lb p		e bag,
APPLICATION	spray, dren	ch	
Cleary Chemical, LLC is a	wholly owned subs	idiary of Nu	farm.

APPLICATION	spray, dip		
PACKAGE SIZE	3 lb bag		
FRAC NO.	25	REI	12 hours
CHEM. FAMILY	glucopyrand	osyl	
FORMULATION	wettable po	wder	
ACTIVE INGR.	streptomyci <i>(equivalent</i>		ie (65.8%) streptomycin base)
EPA REG. NO.	55146-98		

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EPA REG. NO.	55146-83		
ACTIVE INGR.			odium, potassium osphites (53.6%)
FORMULATION	liquid		
CHEM. FAMILY	phosphite		
FRAC NO.	33	REI	4 hours
PACKAGE SIZE	2 x 2.5 gal		
APPLICATION	spray, drench		





#### **CUPROXAT<sup>®</sup> FL**

Cuproxat\* FL premium tri-basic copper fungicide is engineered with uniform particles which deliver better plant coverage and protection against fungal and bacterial diseases.

#### **KEY USES**

Greenhouse, shade crops, ornamentals

#### **KEY DISEASES CONTROLLED**

**KEY DISEASES CONTROLLED** 

RATE

Anthracnose, Botrytis, dieback, downy mildew, leaf spot, powdery mildew, scab, Septoria leaf spot, Volutella leaf blight (see label for complete list) RATE

Consult label

**NOW OMRI LISTED® FOR ORGANIC CROP PRODUCTION** 

Botrytis, Cercospora (see label for complete list)

Consult label

## **Protect DF**

#### **PROTECT<sup>™</sup> DF**

Protect<sup>™</sup> DF provides excellent control of a variety of important plant diseases.

#### **KEY USES**

Field, greenhouse, groundcovers and herbaceous plants, nursery, ornamental and shade trees

#### **KEY DISEASES CONTROLLED**

Botrytis, Cercospora, Rhizoctonia (see label for complete list) RATE Consult label

#### SPECTRO<sup>®</sup> 90 WDG

Spectro<sup>®</sup>90<sup>WDG</sup>

Spectro® 90 WDG combines two broad-spectrum fungicides to deliver contact and systemic plant disease protection. Spectro 90 WDG prevents and controls disease in annual and perennial flowers, as well as bedding plants, groundcovers and trees and shrubs.

#### **KEY USES**

More than 110 ornamental species including annual and perennial flowers, bedding plants, deciduous and evergreen trees and shrubs, foliage plants, groundcovers



#### **SPIRATO\* GHN**

Through all stages of production, Spirato\* GHN is a go to product for foliar, stem and root diseases providing defense and control with low use rates and an easy-to-use liquid formulation. This versatile fungicide demands the number one spot in the rotation for disease management.

#### **KFY USFS**

More than 45 ornamental species including African violet, aster, azalea, begonia, pansy, petunia, poinsettia, brassica leafy vegetables, leafy vegetables, herbs

# Strider™

#### **STRIDFR**<sup>™</sup>

Strider<sup>™</sup> is a high-quality fungicide formulation with both preventive and curative modes of action.

#### **KEY USES**

Nursery and outdoor ornamentals

#### **KEY DISEASES CONTROLLED**

Aerial blight, Alternaria leaf spot and blight, Botrytis blight, black root rot, Cercospora leaf spot, Cylindrocladium stem and root rot, Fusarium stem and root rot, Rhizoctonia stem and root rot, Septoria leaf spot, Southern blight (see label for complete list) RATE **Consult Label** 

#### **KEY DISEASES CONTROLLED**

Botrytis, Cercospora, powdery mildew (see label for complete list)

RATE / 100 GAL 2 - 24 oz (see label for specific rates)

EPA REG. NO.	55146-151
ACTIVE INGR.	basic copper sulfate (27.1%)
FORMULATION	flowable
CHEM. FAMILY	inorganic
FRAC NO.	M1
REI	24 hours (greenhouse), 48 hours
PACKAGE SIZE	4 x 1 gal
APPLICATION	spray

EPA REG. NO.	1001-77			
ACTIVE INGR.	mancozeb (7	5%)		
FORMULATION	dry flowable			
CHEM. FAMILY	dithiocarbarr	nate		
FRAC NO.	M3	REI	24 hours	
PACKAGE SIZE	6 x 6 lb			
APPLICATION	spray			



EPA REG. NO.	1001-72		
ACTIVE INGR.	chlorothalonil (72%), thiophanate-methyl (18%)		
FORMULATION	water-dispersible granules		
CHEM. FAMILY	chloronitriles, thiophanates		
FRAC NO.	1 & M5 REI 12 hours		
PACKAGE SIZE	4 x 5 lb, 1 x 24 lb pail		
APPLICATION	spray		

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EPA REG. NO.	228-723
ACTIVE INGR.	fludioxonil (40.3%)
FORMULATION	liquid
CHEM. FAMILY	phenylpyrrole
FRAC NO.	12
REI	12 hours
PACKAGE SIZE	8 x 1 pt
APPLICATION	spray, drench

EPA REG. NO.	228-623			
ACTIVE INGR.	propicon	azole (1	4.	3%)
FORMULATION	liquid			
CHEM. FAMILY	triazole			
FRAC NO.	3	RE	I	24 hours
PACKAGE SIZE	4 x 1 gal	2 x 2.5	ga	al
APPLICATION	spray			



GREENHOUSE

**EDIBLES** 

OMRI OMRI LISTED





DANGER

CAUTION



# Torque

#### TORQUE™

Torque™ provides long-lasting curative and preventive control against tough ornamental diseases such as scabs, phomopsis, mildews and rusts. Plus, its easy-to-use, water-based liquid suspension formula prevents settling after mixing.

Tourney\* controls a broad-spectrum of tough diseases

affecting outdoor woody ornamental plants in nursery

#### **KEY USES**

**TOURNEY**\*

KEY USES Outdoor ornamentals

**Outdoor ornamentals** 

Tourney

and landscape settings.

#### **KEY DISEASES CONTROLLED**

Anthracnose, black spot, leaf spots, petal blight, powdery mildew, rust, scab, southern blight (see label for complete list)

Anthracnose, apple scab, leaf spots, powdery mildew, Rhizoctonia, rusts (see label for complete list)

1 – 4 oz

**RATE / 100 GAL** 4 - 10 fl oz (see label for specific rates)

**KEY DISEASES CONTROLLED** 

(see label for specific rates)

RATE / 100 GAL

# EPA REG. NO. 1001-87 ACTIVE INGR. tebuconazole (38.7%) FORMULATION liquid suspension CHEM. FAMILY triazole FRAC NO. 3 REI 12 hours PACKAGE SIZE 5 x 1 gal APPLICATION spray

EPA REG. NO.	59639-144			
ACTIVE INGR.	metconazole	(50%)		
FORMULATION	water-dispers	sible g	ranule	
CHEM. FAMILY	triazole			
FRAC NO.	3	REI	12 hours	
PACKAGE SIZE	4 x 5 lb			
APPLICATION	spray, drench			

NOTES





#### PLANT GROWTH REGULATOR SOLUTIONS

## Fascination

#### **FASCINATION**\*

Fascination<sup>\*</sup> is an effective tool for more presentable, more marketable Easter and LA hybrid lilies, poinsettias and other ornamentals.

#### **KEY USES**

Greenhouse ornamentals including lilies

#### **KEY PERFORMANCE BENEFITS**

**KEY PERFORMANCE BENEFITS** 

(see label for complete list)

(see label for specific rates)

RATE / 1 GAL

Increases lateral or basal branching, promotes flowering and reduces overall plant height

Delays leaf yellowing, increases flower size and number, prolongs flowering, plant vigor and growth (see label for complete list)

RATE

Consult label

18 - 540 ml

0.3 - 19.4 oz

50 - 3000 ppm

EPA REG. NO.73049-41ACTIVE INGR.benzyladenine (1.8%), gibberellins (1.8%)FORMULATIONliquidCHEM. FAMILYgibberellinsREI4 hoursPACKAGE SIZE4 x 0.5 gal caseAPPLICATIONspray



EPA REG. NO.	71368-60
ACTIVE INGR.	benzyladenine (6-BA) (1.9%)
FORMULATION	liquid
CHEM. FAMILY	purine
REI	12 hours
PACKAGE SIZE	4 x 1 gal
APPLICATION	spray



59639-37
uniconazole-P (.055%)
liquid
triazole
12 hours
4 x 1 gal, 15 gal drum
spray

# **RiteWay**®

RiteWay<sup>®</sup> increases lateral branching and promotes flowering to help improve crop marketability. RiteWay contains 1.9 percent 6-BA and is easy to mix and apply.

**KEY USES** 

SUMAGIC\*

KEY USES Greenhouse

Christmas cactus, echinacea, hosta

Sumagic<sup>®</sup>

with an increased shelf life.

Consistent and reliable, Sumagic<sup>®</sup> delivers more marketable, attractive and compact ornamentals

#### **KEY PERFORMANCE BENEFITS**

Enhances floral density and foliage color, improves stress tolerance, increases plant shelf life (see label for complete list)

RATE Consult label

NOTES



GREENHOUSE







# LOCK IN PROTECTION. TIMES 2.

At Nufarm, we believe in taking care of your crops every step of the way. Whether the season is just starting or you're getting ready for sale, our complete line of plant protection products has you covered.

For locked-in protection against devastating insect pests, consider drench-applied Safari<sup>®</sup> Insecticide for lasting residual and TriStar<sup>®</sup> Insecticide for shorter action as you near delivery dates.



#### **START STRONG WITH SAFARI.**

Safari® is the leading drench/spray insecticide in the market for a good reason: performance. Safari controls more insects faster and longer than any comparable insecticide. It provides excellent control of Q-biotype and B-biotype whiteflies, aphids, fungus gnats, leafhoppers, leafminers, mealybugs, armored scales and soft scales.



#### FINISH STRONGER WITH TRISTAR.

TriStar<sup>®</sup> the leading midway-to-finish spray insecticide. With its broad-spectrum control and quick knockdown of many challenging insects, TriStar protects plants during their important transition to store shelves. Plus, TriStar is an alternative where pollinator impact is a concern.



#### **INSECTICIDE SOLUTIONS**

## Chlorpyrifos SPC 4

#### **NUFARM CHLORPYRIFOS SPC 4**

Achieve consistent, proven control of more than 200 outdoor destructive pests with Nufarm Chlorpyrifos SPC 4. Approved for selective USDA quarantine applications.

#### **KEY USES**

Greenhouse and outdoor ornamentals

#### **KEY PESTS CONTROLLED**

Ants, armyworms, fleas, mole crickets, ticks, white grubs, wood infesting insects (see label for complete list) RATE Consult label

EPA REG. NO.	228-624			
ACTIVE INGR.	chlorpyrifos (44.7%)			
FORMULATION	liquid			
CHEM. FAMILY	organophosphate			
IRAC NO.	1B	REI	24 hours	
PACKAGE SIZE	2 x 2.5 gal			
APPLICATION	spray, drench			

Bacillus thuringiensis (54%)

REI 4 hours

Nufarm Chlorpyrifos SPC 4 Insecticide is an EPA Restricted-Use Pesticide. Always read and follow label directions.

# DiPel<sup>®</sup> PRO DF

#### DIPEL\* PRO DF BIOLOGICAL INSECTICIDE

Widely used, DiPel\* PRO DF delivers outstanding worm control while being friendly to workers, the environment and beneficial insects.

#### **KEY USES**

Landscape, ornamentals

#### **KEY PESTS CONTROLLED**

Lepidopterous worms: armyworms, loopers, tent caterpillars, tobacco budworms, various bagworms and many other worms (see label for complete list)

**RATE / ACRE** 0.25 – 2 lb (see label for specific rates)

## Distance<sup>®</sup>

#### **DISTANCE\* IGR**

Distance\* IGR breaks the life cycle of whiteflies, fungus gnats and other insects, providing growers with a resistance management tool that effectively controls harmful insects.

#### **KEY USES**

Greenhouse and outdoor ornamentals, groundcovers, non-bearing fruit trees, shrubs and ornamental trees

## Gnatrol<sup>®</sup> WDG

#### **GNATROL\* WDG BIOLOGICAL LARVICIDE**

Gnatrol<sup>®</sup> offers highly selective, effective control of fungus gnat larvae, especially for those growers concerned with worker safety, the environment and resistance management.

#### **KEY USES**

Edibles, ornamentals, nursery, vegetable plants

#### **KEY PESTS CONTROLLED**

**KEY PESTS CONTROLLED** 

(see label for specific rates)

RATE / 100 GAL

Fungus gnat larvae (see label for complete list)

3.2 - 6.4 oz (drench)

13 - 26 oz (heavy infestation)

Fungus gnats, leafminers, scales, shore flies, whiteflies (see label for complete list)

RATE / 100 GAL 6 - 12 fl oz (spray) 2 - 6 fl oz (drench) (see label for specific rates)

# APPLICATION spray

73049-39

dry flowable

30 x 1 lb case

bacilus

11A

EPA REG. NO.

ACTIVE INGR.

FORMULATION

CHEM. FAMILY

PACKAGE SIZE

IRAC NO.

59639-96		
pyriproxyfen (11.23%)		
emulsifiable concentrate		
pyriproxyfen		
7C	REI	12 hours
4 x 1 qt tip-n-	pour	
spray, drench		
	pyriproxyfen ( emulsifiable o pyriproxyfen 7C 4 x 1 qt tip-n-j	pyriproxyfen (11.2) emulsifiable conce pyriproxyfen 7C REI 4 x 1 qt tip-n-pour

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EPA REG. NO.	73049-56		
ACTIVE INGR.	Bacillus thuringiensis (37.4%)		
FORMULATION	water-dispersible granule		
CHEM. FAMILY	bacillus		
IRAC NO.	11A	REI	4 hours
PACKAGE SIZE	16 lb pail		
APPLICATION	chemigation,	dren	ch, drip
000	<b>•</b>		



GREENHOUSE

EDIBLES

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#### MALLET<sup>®</sup> 2F T&O

Mallet\* 2F T&O is the economical standard for soil-based insect control programs. Use on indoor and outdoor ornamentals (includes greenhouse and interior plantscapes) for long-residual, upward systemic control of piercing and sucking pests.

**KEY USES** 

Greenhouse and nursery

## (antra<sup>®</sup> 60 WSP

#### MANTRA\* 60 WSP

Mantra<sup>®</sup> 60 WSP is a systemic insecticide for greenhouse ornamentals providing long-residual, upward systemic control of piercing and sucking pests.

**KEY USES** 

Greenhouse and nursery

#### **KEY PESTS CONTROLLED**

**KEY PESTS CONTROLLED** 

**KEY PESTS CONTROLLED** 

(see label for complete list)

**KEY PESTS CONTROLLED** 

**KEY PESTS CONTROLLED** 

(see label for specific rates)

RATE / 100 GAL

**RATE / 1000 GAL** 

RATE / 100 GAL

Aphids, leafminers, mealybugs, scales, whiteflies (see label for complete list) RATE

Consult label

Aphids, mealybugs, whiteflies (see label for complete list)

(see label for specific rates including drench rates)

Aphids, leafminers, mealybugs, scales, whiteflies

(see label for specific rates including topical rates)

15 oz (broadcast)

20 gram pack (spray)

#### EPA REG. NO. 228-695 ACTIVE INGR. imidacloprid (21.4%) FORMULATION liquid CHEM. FAMILY neonicotinoid IRAC NO. REI 12 hours 4Δ 4 x 1 gal, 2 x 2.5 gal PACKAGE SIZE APPLICATION spray, drench



EPA REG. NO.	228-681			
ACTIVE INGR.	imidacloprid (60%)			
FORMULATION	water-soluble packet			
CHEM. FAMILY	neonicotinoic	ł		
IRAC NO.	4A	REI	12 hours	
PACKAGE SIZE	4 x 4 x (5 x 20	) gm)	case	
APPLICATION	spray, drench			



EPA REG. NO.	228-523			
ACTIVE INGR.	imidacloprid (1.0%)			
FORMULATION	granular			
CHEM. FAMILY	neonicotinoid	1		
IRAC NO.	4A	REI	12 hours	
PACKAGE SIZE	4 x 5 lb, 50 lb	drum	l	
APPLICATION	spray, drench			
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EPA REG. NO.	228-736			
ACTIVE INGR.	abamectin (2.0%)			
FORMULATION	microemulsion			
CHEM. FAMILY	avermectin			
IRAC NO.	6	REI	12 hours	
PACKAGE SIZE	4 x 1 qt, 4 x 1 gal			
APPLICATION	spray			



EPA REG. NO.	59639-125	5	
ACTIVE INGR.	pyridalyl (3	35%)	
FORMULATION	wettable p	owder	
CHEM. FAMILY	pyridine		
IRAC NO.	UN	REI	12 hours
PACKAGE SIZE	8 x 2 oz W	SP packe	t
APPLICATION	spray		

# ∕∕(antra®1G

for soil media applications.

MANTRA<sup>®</sup> 1G Mantra\* 1G is a granular formulation for greenhouse ornamentals providing long-residual, upward systemic control of piercing and sucking pests. An excellent choice

#### **KEY USES**

Ornamental plants in greenhouses, nurseries and interior plantscapes



#### MINX<sup>™</sup> 2

Minx<sup>™</sup> 2 delivers broad-spectrum mite and leafminer control in a new low VOC (volatile organic compound) water-based formula.

#### **KEY USES**

Greenhouse and nursery ornamentals

Aphids, leafminers, mites, thrips, whiteflies (see label for complete list) RATE Consult label

Lepidopterous worms, thrips (see label for complete list)

8 oz

# verture

#### OVERTURE® 35 WP

Due to its novel chemistry, Overture® provides outstanding control of immature adult thrips, even those that are considered tolerant or resistant to other insecticides. Plus, Overture is soft on beneficial insects.

**KEY USES** Enclosed commercial greenhouses



This guide is intended to provide a product overview. See product labels for complete details and labeled use listing.

# Safari

#### SAFARI<sup>®</sup> 20 SG

**KEY USES** 

Safari<sup>®</sup> 20 SG is the market-leading drench/spray insecticide for good reason: performance. It controls a broad-spectrum of ornamental pests faster and longer than any comparable insecticide.

#### **KEY PESTS CONTROLLED**

Aphids, armored and soft scales, fungus gnats, leafminers, mealybugs, whiteflies (including Q- and B-biotype) and many more (see label for complete list)

RATE / 1 GAL RATE / 100 GAL

12 - 24 oz (basal bark) 4 - 8 oz (sprav) 12 - 24 oz (drench)

(see label for specific rates)

# **fame**

Greenhouse, ornamentals, nursery

#### TAME<sup>®</sup> 2.4 EC SPRAY

Tame\* delivers broad-spectrum knockdown of numerous insect/mite pest problems and is an excellent tank-mix partner.

#### **KEY USES**

Commercial lathhouses, greenhouses, outdoor ornamentals, shadehouses

Tame® is an EPA Restricted-Use Pesticide. Always read and follow label directions.

# TetraSan

#### TETRASAN<sup>®</sup> 5 WDG

With excellent translaminar movement and outstanding residual activity, TetraSan® affects spider mites at all life stages without harming most beneficial insects.

**KEY USES** Greenhouse, landscape, nursery

#### **KEY PESTS CONTROLLED**

Aphids, glassy-winged sharpshooters, mites, scales, whiteflies (see label for complete list) RATE Consult label

**KEY PESTS CONTROLLED** 

Spider mites (see label for complete list) RATE Consult label

## TriStar<sup>® 8.5 SL</sup>

#### TRISTAR<sup>\*</sup> 8.5 SL

TriStar® 8.5 SL provides excellent control of a wide range of ornamental pests. Its contact, systemic and translaminar activity provides a fast-acting, low-odor foliar spray for indoor and outdoor ornamentals (includes greenhouse and interior plantscapes).

#### **KEY USES**

Ornamental and flowering plants grown outdoors and in greenhouses, shadehouses and lathhouses

#### **KEY PESTS CONTROLLED**

Aphids, leafminers, mealybugs, scales, thrips, whiteflies (see label for complete list) RATE

Consult label

#### SEE THE PRODUCT LABEL

**EXHIBITS LOWER RISK TO POLLINATORS** 

REDUCED RISK INSECTICIDE

EPA REG. NO.	86203-11-59639			
ACTIVE INGR.	dinotefuran (20%)			
FORMULATION	water so	luble grani	ıle	
CHEM. FAMILY	neonico	tinoid		
IRAC NO.	4A	REI	12 hours	
PACKAGE SIZE	16 x 12 oz bottle, 4 x 3 lb bottle			
APPLICATION	spray, drench, basal bark			



EPA REG. NO.	59639-77			
ACTIVE INGR.	fenpropathrin (30.9%)			
FORMULATION	liquid			
CHEM. FAMILY	pyrethroid			
IRAC NO.	3	REI	24 hours	
PACKAGE SIZE	12 x 1 qt bot	tle		
APPLICATION	spray			



EPA REG. NO.	59639-108		
ACTIVE INGR.	etoxazole (5%)		
FORMULATION	water-dispersible granule		
CHEM. FAMILY	oxazoline		
IRAC NO.	10B <b>REI</b> 12 hou	rs	
PACKAGE SIZE	8 x 2 oz WSP packet		
APPLICATION	spray		

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EPA REG. NO.	8033-106-1001		
ACTIVE INGR.	acetamiprid (8.5%)		
FORMULATION	soluble liquid		
CHEM. FAMILY	neonicotinoid		
IRAC NO.	4A <b>REI</b> 12 hours		
PACKAGE SIZE	8 x 4 oz tip-n-pour, 4 x 1 qt, 4 x 1 gal		
APPLICATION	spray		





GREENHOUSE EDIBLES

OMRI OMRI LISTED DANGER







#### NON-SELECTIVE HERBICIDE SOLUTIONS

#### Nufarm **Diquat SPC 2L**

Greenhouse and nursery ornamentals

#### NUFARM DIQUAT SPC 2L

Nufarm Diguat SPC 2L herbicide provides non-selective control of aquatic weeds on contact. It spreads through the water for broad-spectrum control and is completely inactivated on contact with soil.

#### **KEY WEEDS CONTROLLED**

Bladderwort, cattail, duckweed, frog's bit, hydrilla, pennywort, water hyacinth, water lettuce, watermilfoils (see label for complete list)

RATE / 15 GAL 16 - 32 fl oz (broadcast) RATE / 100 GAL 32 - 64 fl oz (spot) (see label for specific rates)

EPA REG. NO.	228-675			
ACTIVE INGR.	diquat dibromide (37.3%)			
FORMULATION	liquid			
CHEM. FAMILY	bipyridylium	ı		
HRAC NO.	22	REI	24 hours	
PACKAGE SIZE	4 x 1 gal, 2 x	2.5 ga		
APPLICATION	spray			
	_			

glyphosate (40.15%), prodiamine (7.51%)

REI 12 hours\*



FORMULATION liquid

228-509

9&3

spray

228-366

glycine, dinitroaniline

4 x 1 gal, 2 x 2.5 gal

8 x 64 oz squeeze-and-pour,

EPA REG. NO.

ACTIVE INGR.

CHEM. FAMILY

PACKAGE SIZE

APPLICATION

\*or until spravs have dried

HRAC NO.

<b>ProDéuce</b> ®

#### **PRODEUCE**\*

**KEY USES** 

Eliminates existing weeds and prevents new growth in cracks and crevices, along fences and foundations and throughout gravel areas.

#### **KEY USES**

On cracks and crevices in driveways, sidewalks, walkways and patios, along fences, foundations, curbs, retaining walls and edges of lawns, around the base or in mulched beds of well-established (at least 6 months old) plants, shrubs or trees, on gravel areas



#### RAZOR

Razor<sup>®</sup> is a water-soluble glyphosate formulation for broad-spectrum non-selective control of hard-to-kill weeds.

#### **KEV LISES**

Non-selective weed control, post-emergent

#### **KEY WEEDS CONTROLLED**

Bermudagrass, cheat, chickweed, crabgrass, kochia, lambsquarters, mustard, pigweed, rye, shepherd'spurse, spurge, thistle (see label for complete list)

RATE / 1000 SQ FT 3 - 5.75 oz (broadcast) (see label for specific rates)

#### **KEY WEEDS CONTROLLED**

Many annual and perennial weeds and woody brush (see label for complete list)

RATE / 1 GAL 0.67 - 13 fl oz RATE / 100 GAL 64 - 320 fl oz (see label for specific rates)

EPA REG. NO. ACTIVE INGR.

glyphosate (41%) FORMULATION liquid glycine CHEM. FAMILY HRAC NO. 9 **REI** 4 hours\* PACKAGE SIZE 2 x 2.5 gal, 30 gal APPLICATION spray \*or until spravs have dried 

Ra <u>or</u> eBurn®
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#### **RAZOR BURN\***

Razor Burn® non-selective post-emergence herbicide combines the fast contact activity of diquat with the systemic control of glyphosate in one high-performance liquid formulation.

#### **KEY USES**

Non-selective weed control, post-emergent

#### **KEY WEEDS CONTROLLED**

Many annual and perennial weeds and woody brush (see label for complete list)

RATE

Consult label

EPA REG. NO.	228-446
ACTIVE INGR.	glyphosate (41.0%), diquat dibromide (2.1%)
FORMULATION	liquid
CHEM. FAMILY	glycine derivative, bipyridylium
HRAC NO.	9 & 22
PACKAGE SIZE	8 x 64 oz squeeze-and-pour, 4 x 1 gal
APPLICATION	spray
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#### **RAZOR\* PRO**

This premium formulation of glyphosate with proprietary surfactants delivers non-selective weed control in a broad range of settings.

#### **KEY USES** Ornamental weed control

#### **KEY WEEDS CONTROLLED**

Many annual and perennial weeds and woody brush (see label for complete list) RATE

Consult label

EPA REG. NO.	228-366		
ACTIVE INGR.	glyphosate (4	41.0%	)
FORMULATION	liquid		
CHEM. FAMILY	glycine deriv	ative	
HRAC NO.	9	REI	4 hours*
PACKAGE SIZE	5 x 1 gal, 2 x	2.5 ga	al, 30 gal
APPLICATION	spray		
*or until sprays have drie	d		



#### **SELECTIVE HERBICIDE SOLUTIONS**

# Envoy Plus<sup>®</sup>

#### **ENVOY PLUS**\*

Envoy Plus® is the most effective post-emergence grass control herbicide. It provides over-the-top control of both annual and perennial grasses with excellent plant safety.

#### **KEV LISES**

Conifer trees, garden flowers and plants, groundcovers, ornamental trees and shrubs

#### PRE-EMERGE WITH RESIDUAL CONTROL

## **BroadStar**

#### **BROADSTAR**<sup>\*</sup>

BroadStar<sup>™</sup> is the best pre-emergence granular herbicide because it controls tough broadleaf and grassy weeds with the longest residual performance.

#### **KEY USES**

Container and field grown ornamentals, non-bearing fruit and nut trees and vines, non-crop areas and around buildings, fencerows, gravel surfaces, driveways, ground mats, and other similar sites

#### **KEY WEEDS CONTROLLED**

**KEY WEEDS CONTROLLED** 

(see label for complete list)

(see label for specific rates)

**RATE / 1000 SQ FT** 

Annual and perennial grasses

Bittercress, chickweed, common groundsel, liverwort, oxalis, Palmer amaranth, spiny amaranth, spurge (see label for complete list)

0.4 - 0.8 fl oz

**RATE / ACRE** 150 lb **RATE / 1000 SQ FT** 3.5 lb (see label for specific rates)

FIELD-GROWN

NURSERY CONTAINER-GROWN

NURSERY

#### 59639-132 EPA REG. NO. ACTIVE INGR. clethodim (12.6%) FORMULATION liquid CHEM. FAMILY cyclohexene oxime REI 24 hours HRAC NO. 1 PACKAGE SIZE 4 x 1 gal APPLICATION spray

EPA REG. NO.	59639-128			
ACTIVE INGR.	flumioxazin	(0.25%	5)	
FORMULATION	granule			
CHEM. FAMILY	N-phenylphthalimide			
HRAC NO.	14	REI	12 hours	
PACKAGE SIZE	50 lb bag			
APPLICATION	broadcast			



KEY WEEDS CONTROLLED		EPA REG. NO.	228-632		
Chickweed, clover, dandelion, groundsel, lambsquarters, oxalis, pigweed, shepherd's-purse, spurge (garden, hairy, prostrate, spotted) (see label for complete list) RATE / ACRE 50 – 100 lbs (broadcast dry) (see label for specific rates)		ACTIVE INGR.	oxyfluorfen (2	2%), o	ryzalin (1%)
	FORMULATION	granular			
	CHEM. FAMILY	dinitroaniline, diphenylether			
	, , , , , , , , , , , , , , , , , , , ,	HRAC NO.	3 & 14	REI	24 hours
	es/	PACKAGE SIZE	50 lb bag		
		APPLICATION	broadcast		





#### **DOUBLE O<sup>™</sup> SPC**

Keep ornamentals free from a broad range of weeds for up to three months with this low-odor and low-dust formulation.

#### **KEY USES**

Container-grown ornamentals, field-grown ornamentals and labeled Christmas trees, landscape ornamentals, cut flower and foliage crops

GREENHOUSE

EDIBLES

OMRI OMRI LISTED DANGER

WARNING CAUTION



## SureGuard®

#### SUREGUARD\*

SureGuard<sup>®</sup> is the best pre-emergence sprayable herbicide because it controls a broad-spectrum of tough broadleaf and grassy weeds with the longest residual activity available.

#### **KEY USES**

Container and field grown ornamentals, non-bearing fruit and nut trees and vines, non-crop areas and around buildings, fencerows, gravel surfaces, driveways, ground mats, and other similar sites

## SureGuard<sup>®</sup>SC

#### SUREGUARD\* SC

SureGuard<sup>®</sup> SC, now in a convenient new liquid formulation, controls grass and broadleaf weeds with the same long-lasting residual that you have come to expect from SureGuard.

#### **KEY USES**

Container and field grown ornamentals, non-bearing fruit and nut trees and vines, non-crop areas and around buildings, fencerows, gravel surfaces, driveways, ground mats and slow moving or quiescent aquatic sites

#### **KEY WEEDS CONTROLLED**

Bittercress, chickweed, common groundsel, oxalis, Palmer amaranth, spiny amaranth, spurge (see label for complete list)

Bittercress, chickweed, eclipta, field pennycress, Florida beggarweed, Florida pusley, groundsel, kochia, lambsquarters, mallow, morningglory, nightshade,

Palmer amaranth, Pennsylvania smartweed, pigweed, prickly sida (teaweed), puncturevine, ragweed,

amaranth, spurge, velvetleaf, waterhemp, yellow rocket.

8 - 12 fl oz

AQUATIC WEEDS: Alligator weed, duckweed, frog's bit,

redmaids, Russian thistle, shepherd's-purse, spiny

water fern, water lettuce, watermeal

(see label for complete list)

(see label for specific rates)

RATE / ACRE

RATE / ACRE 8 – 12 oz (see label for specific rates)

**KEY WEEDS CONTROLLED** 

# EPA REG. NO.59639-120ACTIVE INGR.flumioxazin (51%)FORMULATIONwater-dispersible granuleCHEM. FAMILYN-phenylphthalimideHRAC NO.14REIPACKAGE SIZE4 x 1 lb, 4 x 5 lbAPPLICATIONspray



EPA REG. NO.	71368-1	14		
ACTIVE INGR.	flumioxa	zin (44%)		
FORMULATION	liquid			
CHEM. FAMILY	N-phenylphthalimide			
HRAC NO.	14	REI	12 hours	
PACKAGE SIZE	8 x 1 pt, 4	4 x 64 oz		
APPLICATION	spray			

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NOTES







## TAKE A CLOSER LOOK AND SEE THE DIFFERENCE

## SUREGUARD® AND MARENGO® LOOK SIMILAR ON PAPER, BUT THEY ARE TWO VERY DIFFERENT HERBICIDES.

Although SureGuard and Marengo are both effective pre-emerge herbicide solutions, they deliver different weed control results. It helps to understand the differences between these tools as they relate to your weed control needs. SureGuard outperforms Marengo when controlling annual winter weeds including bittercress and other mustards. SureGuard also provides post-emerge weed control, empowering you to take down existing weeds while stopping new weeds before they start.

#### **SUREGUARD PERFORMANCE BENEFITS:**

- Controls annual winter weeds including bittercress and other mustards
- Provides post-emerge weed control
- Improves glyphosate spectrum and speed
- Better tolerated by cool-season turf
- SureGuard SC now available same power as SureGuard in a convenient liquid formulation

SUREGUARD VS. MARENGO PERFORMANCE	SUREGUARD	MARENGO
PRE-EMERGE WEED CONTROL	YES	YES
POST-EMERGE WEED CONTROL	YES	NO except a few very small weeds
IMPROVES GLYPHOSATE SPECTRUM WHEN MIXED	YES	NO
IMPROVES GLYPHOSATE SPEED WHEN MIXED	YES	NO
ANNUAL GRASS CONTROL	GOOD	VERY GOOD
SUMMER BROADLEAF WEED CONTROL	VERY GOOD	VERY GOOD
WINTER ANNUAL WEED CONTROL	VERY GOOD	FAIR TO GOOD weak on bittercress and other mustards
ROOT PRUNING HERBICIDE	NO	YES
COOL-SEASON TURFGRASS TOLERANCE (SPRAY APPLICATION)	FAIR TO GOOD	NO
WARM-SEASON TURFGRASS TOLERANCE (SPRAY APPLICATION)	DORMANT ONLY	YES

# GROWING BETTER SINCE 1916

More than 100 years ago, our history began with a goal to help New Zealand's farmers. From New Zealand, we have grown to serve more than 100 countries worldwide.

Today, our founders' passion to help growers through quality solutions and unparalleled customer service remains at the heart of everything we do.

#### **100 YEARS AND STILL GROWING**

FARMERS FERTILIZER Cos WO



Nufarm Chlorpyrifos SPC 4 and Tame® are EPA Restricted-Use Pesticides. Always read and follow label directions.

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