



CAUTION

KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING

Nufarm

Nugrex[®]

Selective Herbicide

**ACTIVE CONSTITUENTS: 250 g/L MCPA present as the ethyl hexyl ester
25 g/L DIFLUFENICAN**

SOLVENTS: 362 g/L N-METHYL-2-PYRROLIDONE

GROUP **F I** INSECTICIDE

For the control of certain broadleaf weeds in winter cereals and clover as specified in Directions for Use Table.

READ COMPLETE DIRECTIONS FOR USE BEFORE USING THIS PRODUCT.

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APVMA Approval No.: 55535/0609

WEED LIST

WEED

Canola (Rape)	<i>Brassica napus</i>
Capeweed	<i>Arctotheca calendula</i>
Charlock	<i>Sinapis arvensis</i>
Chickweed	<i>Stellaria media</i>
Common sowthistle (Milk thistle)	<i>Sonchus oleraceus</i>
Corn Gromwell	<i>Buglossoides arvensis</i>
Cowvine	<i>Ipomoea lonchophylla</i>
Crassula	<i>Crassula</i> spp.
Deadnettle	<i>Lamium amplexicaule</i>
Dense-flower fumitory	<i>Fumaria densiflora</i>
Dock	<i>Rumex</i> spp.
Doublegee (Spiny emex)	<i>Emex australis</i>
Fat hen	<i>Chenopodium album</i>
Fireweed	<i>Senecio</i> spp.
Fumitory	<i>Fumitory</i> spp.
Hedge mustard	<i>Sisymbrium officinale</i>
Hexham scent (King Island Melilot)	<i>Melilotus indicus</i>
Horehound	<i>Marrubium vulgare</i>
Hyssop loosestrife	<i>Lythrum hyssopifolia</i>
Iceplant	<i>Mesembryanthemum</i> spp.
Indian hedge mustard	<i>Sisymbrium orientale</i>
London rocket	<i>Sisymbrium irio</i>
Long storksbill	<i>Erodium botrys</i>
Marshmallow	<i>Malva parviflora</i>
Mouse-eared chickweed	<i>Cerastium glomeratum</i>
Night-scented stock	<i>Matthiola longipetala</i>
Paterson's curse	<i>Echium plantagineum</i>
Peppercress	<i>Lepidium</i> spp.
Prickly lettuce	<i>Lactuca serriola</i>
Purple goosefoot	<i>Scleroblitum atriplicinum</i>
Rough poppy	<i>Papaver hybridum</i>
Saffron thistle	<i>Carthamus lanatus</i>
Scarlet pimpernel	<i>Anagallis arvensis</i>
Shepherd's purse	<i>Capsella bursa-pastoris</i>
Skeleton weed	<i>Chondrilla juncea</i>
Sorrel	<i>Rumex</i> spp.
Stemless thistle	<i>Onopordum acaulon</i>
Toad rush	<i>Juncus bufonius</i>
Tree hogweed	<i>Polygonum patulum</i>

Turnip weed	<i>Rapistrum rugosum</i>
Variegated thistle	<i>Silybum marianum</i>
Vetch (Tares)	<i>Vicia sativa</i>
Volunteer lupins	<i>Lupinus spp.</i>
Ward's weed	<i>Carrichtera annua</i>
Wild radish	<i>Raphanus raphanistrum</i>
Wild turnip	<i>Brassica toumefortii</i>
Wireweed (Hogweed)	<i>Polygonum aviculare</i>

DIRECTIONS FOR USE**RESTRAINT**

DO NOT apply to crops or weeds which are stressed due to dry or excessively moist conditions.

DO NOT apply to crops under stress due to disease or insect damage.

DO NOT apply to frost affected crops or if frosts are imminent.

DO NOT apply when heavy rain is expected within 4 hours.

CROP	WEEDS CONTROLLED	STAGE OF WEED GROWTH	STATE	RATE	CRITICAL COMMENTS
CEREALS Wheat, Barley, Oats, Triticale, Cereal rye (including cereals undersown with clover) PASTURE Newly Sown and Established Clover-based pasture, Clover for Hay and Seed Production	Wild radish	Up to the 2 leaf stage and not more than 60mm in diameter	WA only	250mL/ha	CROP STAGE Cereals Up to 750mL (3 leaf to late tillering stage - Z13-30) Over 750mL (5 leaf to late tillering stage - Z15-30) Optimum results are achieved when sprayed at 3-5 leaf crop stage (generally 4-8 weeks post sowing). WA only: DO NOT apply to Barley or Kulin wheat before the 5 leaf stage (Z15). Warning: Nugrex may cause transient crop yellowing of cereals. Some varieties of oats have not been tested. (Refer to " Crop Tolerance " section of General Instructions). Clover Application is recommended prior to the eighth trifoliolate leaf stage, however, applications prior to the third leaf stage may result in crop damage especially under stressed conditions and in sandy soils. DO NOT apply to Annual Medics. Warning: Nugrex may cause transient crop yellowing of clover, and may affect growth and seed set of some varieties of clover. (Refer to " Crop Tolerance " section of General Instructions). WEED STAGE Apply when weeds are actively growing. In most situations the rate specified for each weed size will give satisfactory control. Under certain conditions such as: • high crop and weed density • late season germinations • abnormal weed growth (including early flowering), high rate of product (up to the maximum rate of application specified for that weed) may be required. Nugrex will not effectively control: • regrowth of suppressed weeds; • transplanted weeds; • regrowth from rhizomes or roots; • weeds growing under stress from previous herbicide applications. GRAZING Efficacy on larger weeds will be improved by grazing with normal levels of stock after 7 day withholding period. Refer to 'Protection of Livestock' for grazing precautions. APPLICATION Activity of this product will be reduced if weeds are stressed. Optimum results will be obtained if good soil moisture exists at and after application. Where crop or weed density is high, water volume should be increased. WILD RADISH Nugrex will provide residual control of wild radish for up to 4 weeks after application. Effective residual activity of this product may be reduced where: • rates lower than 1.0L/ha are used; • dry conditions prevail; • poor coverage of the soil surface is achieved; • crop is planted in non-wetting sand; • soils contain a high content of organic matter.
		Up to the 4 leaf stage and not more than 120mm in diameter	All States	500mL/ha	
		Up to the 6 leaf stage and not more than 150mm in diameter		750mL/ha	
		Up to the 8 leaf stage and not more than 180mm in diameter		1.0L/ha	
	Charlock, Hedge mustard, Indian hedge mustard, Shepherd's purse, Turnip weed, Wild turnip	Up to the 2 leaf stage and not more than 60mm in diameter		500mL/ha	
		Up to the 4 leaf stage and not more than 120mm in diameter		750mL/ha	
		Up to the 6 leaf stage and not more than 150mm in diameter		1.0L/ha	
	London rocket	Up to the 5 leaf stage and not more than 120mm in diameter	Qld only	750mL/ha	
	Ward's weed		SA only		
	Capeweed	Up to the 2 leaf stage and not more than 60mm in diameter	All States	500mL/ha	
		Up to the 4 leaf stage and not more than 120mm in diameter		1.0L/ha	
	Crassula	Up to the 2 leaf stage		500mL/ha	
		Up to the 4 leaf stage and not more than 120mm in diameter		1.0L/ha	
	Prickly lettuce	Up to the 2 leaf stage		500mL/ha	
		Up to the 4 leaf stage		750mL/ha	
Up to the 6 leaf stage			1.0L/ha		
Dense-flower fumitory	Up to the 2 leaf stage		750mL/ha		
Corn gromwell, Saffron thistle, Toad rush			1.0L/ha		
Deadnettle		NSW, Vic SA only			

CROP	WEEDS CONTROLLED	STAGE OF WEED GROWTH	STATE	RATE	CRITICAL COMMENTS
CEREALS Wheat, Barley, Oats, Triticale, Cereal rye (including cereals undersown with clover) PASTURE Newly Sown and Established Clover-based pasture, Clover for Hay and Seed Production (cont)	Sorrel	Up to the 2 leaf stage	Vic only	1.0L/ha	Continued from previous page Optimum results will be obtained if good soil moisture exists at and after application.
	Canola (Rape)	Up to the 4 leaf stage	All States	500mL/ha	
	Purple goosefoot	Up to the 6 leaf stage	Qld only	500mL/ha	
	Turnip weed, Wild turnip	Cotyledon to 2 leaf stage	SA only (Eyre Peninsula north of the line between Venus Bay and Cowell) NSW only (West of Newell Hwy.)	350mL/ha	
CEREALS Wheat, Barley, Oats, Triticale, Cereal rye	Fumitory	2-6 leaf stage	All States	500/ha + 200mL terbutryn (500g/L)	
CEREALS Wheat, Barley, Oats, Triticale, Cereal rye (including cereals undersown with clover) PASTURE Newly Sown and Established Clover based pasture, Clover for Hay and seed Production	SUPPRESSION OF THE FOLLOWING WEEDS				
	Saffron thistle	Up to the 6 leaf stage	All States	1.0L/ha	
	Chickweed, Fireweed, Hexham scent (King Island Melilot), Ice plant, Mouse-eared Chickweed, Nightstock, Paterson's curse, Peppergrass, Skeleton weed, Long Storksbill, Volunteer Lupins.	Up to the 4 leaf stage	All States	1.0L/ha	
	Wireweed (hogweed)			750mL/ha	
	Common sowthistle (Milk thistle), Cowvine, Dock, Doublegee (Spiny emex), Fat hen, Horehound, Hyssop Loosestrife, Marshmallow, Rough poppy, Scarlet pimpernel, Stemless thistle, Tree hogweed, Varigated thistle, Vetch (Tares).	Up to the 2 leaf stage		1.0L/ha	
CEREALS Wheat, Barley, Oats, Triticale, Cereal rye	Wild radish	Up to the 4 leaf stage and not more than 120mm in diameter	All States	350mL/ha plus 200mL L.V.E. MCPA (500g/L)	Refer also to all Critical Comments relating to weed stage, grazing, application and wild radish above. * Reduced efficacy (suppression only) maybe achieved on wild radish larger than 8 leaf or greater than 180mm in diameter. DO NOT use this tank-mix if cereals are undersown with lucerne or annual medics. <u>Crop Stage</u> Nugrex 350mL + L.V.E. MCPA 200mL: Apply from 3 leaf to fully tillered (Z13-30). Nugrex 500mL + L.V.E. MCPA 200mL: Apply from 3 leaf to fully tillered (Z13-Z30). Nugrex 500mL + L.V.E. MCPA 400mL: Apply from 5 leaf stage to fully tillered (Z16-Z30). Optimum results are achieved when sprayed at 3-5 leaf crop stage (generally 4-8 weeks post-sowing). WA only: DO NOT apply to Barley or Kulin wheat before the 5 leaf stage (Z15). Warning: Nugrex may cause transient crop yellowing of cereals. Some varieties of oats have not been tested. (Refer to "CropTolerance" section of General Instructions). Observe instructions also on L.V.E. MCPA product label.
		Up to the 6 leaf stage and not more than 150mm in diameter		500mL/ha plus 200mL L.V.E. MCPA (500g/L)	
		Up to the 8 leaf stage and not more than 180mm in diameter*		500mL/ha plus 400mL L.V.E. MCPA (500g/L)	

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

WITHHOLDING PERIOD: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 7 DAYS AFTER APPLICATION.

GENERAL INSTRUCTIONS**RESISTANCE WEEDS WARNING**

GROUP	F	I	HERBICIDE
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Nugrex is a member of the phenoxy and nicotinanilide groups of herbicides and acts by inhibiting carotenoid biosynthesis and disrupting plant cell growth. For weed resistance management Nugrex is both a Group F and a Group I herbicide. Some naturally occurring weed biotypes resistant to Nugrex and other Group F and Group I herbicides may exist through normal genetic variability in any weed population if these herbicides are used repeatedly. These resistant weeds will not be controlled by Nugrex or other Group F or Group I herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Nufarm Australia Limited accepts no liability for any losses that may result from the failure of Nugrex to control resistant weeds.

CROP TOLERANCE

Some pre-emergence herbicides, such as atrazine, can cause stress to certain crops resulting in an increase in crop damage when using this product. Sub-clover is particularly sensitive.

CEREALS

After application some transient crop yellowing may occur. This usually appears as yellow or white banding on leaves. Provided the crop is not under stress from pre-emergent herbicide, root disease, insect damage, frost, dry or excessively moist conditions, the development of the crop and subsequent growth will be unaffected.

WARNING (OATS)

The tolerance of varieties Esk and Nile (the two main varieties grown in Tasmania) to Nugrex has not been tested. Test a small area of crop before using Nugrex over large areas. Consult your local Nufarm Australia Limited representative for advice on specific varieties.

PASTURE

The tolerance of clover varieties to Nugrex can vary with rate of application, soil type, crop health, stage of growth and degree of moisture and temperature stress.

WARNING

Nugrex may result in transient crop yellowing and suppression of growth with a resultant initial reduction in dry matter, particularly at rates in excess of 500mL/ha and in areas of double spray. For this reason application is recommended prior to the 8th trifoliolate leaf stage. However, at the lower rates (500mL/ha and less) and under normal growing conditions, subsequent growth and seed yield should not be affected.

Under normal growing conditions, the following varieties have shown acceptable levels of foliage tolerance to Nugrex applied at 500mL/ha:

Arrow Leaf: Zulu

Balansa: Paradana

Berseem: Sacromonte

Persian: Kyambro, Lupers, Maral

White: Haifa

Subterranean Clover: Daliak, Dalkeith, Denmark, Esperance, Geraldton, Goulburn, Karridale, Larissa, Leura, Mt. Barker, Nungarin, Rosedale, Seaton Park, Trikkala and Woogenellup. The effects of Nugrex on clover seed yield have been tested on the following varieties. Under normal growing conditions they show levels of tolerance to Nugrex applied at 500mL/ha

Subterranean Clover: Esperance, Goulburn, Larissa, Seaton Park and Trikkala.

WARNING

Rose and Strawberry clover have shown increased sensitivity to Nugrex. Nugrex may affect the seed of yield of subterranean variety Woogenellup. Some pasture grasses, including Phalaris and Cocksfoot, may show some initial reduction in vegetative growth after application of Nugrex. Care should be exercised if sensitive clover varieties or grasses are included in the pasture sward.

Varieties not listed should be tested before using Nugrex over large areas. Consult your local Nufarm Australia Limited representative for advice on specific varieties.

SUBSEQUENT CROPS

To reduce effect on susceptible crops (eg canola), ensure thorough cultivation of soil prior to the sowing of these crops.

MIXING

To ensure even mixing, half fill the spray tank with clean water and add the required amount of product. Agitate thoroughly then add the remainder of the water. Agitate again before spraying commences. Reseal part-used product container immediately after use. Spray mixtures containing Nugrex should not be left to stand overnight. Prolonged periods of exposure to cold temperature could result in settling out of the product in the mixture.

Warning

The rubber components present in some spraying units may be affected by exposure to the solvents in Nugrex and some other agricultural products. To reduce the risk it is recommended that the spray unit be thoroughly washed with a boom cleaner and freshwater after use. Contact the spray unit manufacturer to determine the suitability of the rubber components for use with agricultural products.

APPLICATION**Boom Sprayer**

A minimum of 50L of water per hectare should be used, however, for optimum results water rates of 70-100L/ha are recommended. Increase the water volume if weed infestation is heavy or crop cover is dense. Complete coverage of weeds is essential.

Aircraft (NSW, Vic, SA only)

Apply in a minimum of 30L water per hectare. Effective control will only be achieved where good coverage of leaf surface is achieved.

COMPATIBILITY

The following products are physically compatible with Nugrex as a two-way mixture in the spray tank but should only be used for the crops specified:

Crop	Nugrex	Compatible Product
Wheat, Triticale and Cereal rye only	Up to 750mL/ha	Nugrass® (also barley), Puma* Progress (wild oats only), Tristar* Advance (1.5L rate only), Wildcat* (wild oats only)
Cereals (including undersown)	All rates	Chlorpyrifos (500g/L), dimethoate, endosulfan
Cereals (not undersown)	Up to 500mL/ha	Associate®/Brushkiller®, Lusta®, L.V.E. MCPA, Nugran®
	All rates	Bromicide®200, Amicide®625, Archer, Tordon* 50-D, Kamba®Dry (up to 115g only), Eclipse*
Wheat, Barley, Triticale, and Cereal Rye only (not undersown)		Achieve*
Wheat only (not undersown)		Topik*
Clover	Up to 750mL/ha	Targa*, Fusilade*
		Simazine Liquid, Simazine Liquid + Nuquat mixture
Sub clover	Up to 1.0L/ha	Buttress®

When mixing with other herbicides, crop yellowing may be enhanced. When mixing with Nugrass®, Wildcat*, Puma* Progress or Tristar* Advance some reduction in the efficacy and speed of action of these products may occur. If the crop is stressed, the application of the herbicide tank-mixtures may cause yield reduction. When mixing with Kamba® Dry a temporary wilting may be evident in some crops after application. Growers should seek advice before spraying recently released cereal varieties.

Use the recommended rates for both herbicides in the tank-mixture as well as the surfactant recommendation of the grass herbicide. If another herbicide is applied as a tank mix, observe the plant back restrictions on that label. DO NOT add surfactant when mixing Nugrex and Ally/Associate.

Simazine: Refer to the simazine label for correct application rates, especially with regard to soil types.

This product may be mixed in the spray tank with one of the following insecticides according to the directions for use on the product: Hallmark* 50EC, Dominex* 100EC, Karate*, Decis Forte* EC, and Talstar*.

WARNING

DO NOT apply under weather conditions, or from spraying equipment, that may cause spray vapour to drift onto nearby susceptible plants/crops (such as cotton, tobacco, tomatoes, vines, lupins, fruit trees and ornamentals), cropping lands or pastures.

PROTECTION OF CROPS, NATIVE AND OTHER NON TARGET PLANTS

DO NOT apply under weather conditions, or from spraying equipment, that may cause spray to drift onto nearby non-target plants/crops, cropping lands or pastures.

PROTECTION OF LIVESTOCK**Grazing Precaution**

Sprayed weeds may become more palatable to stock and a higher intake of some weeds may result in stock poisoning and death from causes such as nitrate poisoning. Care should be taken especially where capeweed, Paterson's curse and variegated thistles predominate in the pasture. Avoid grazing with young or breeding stock. DO NOT graze horses or pigs on Paterson's curse. If in doubt, contact your nearest Department of Agriculture.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Dangerous to fish. DO NOT contaminate streams, rivers or waterways with the chemical or used containers.

STORAGE AND DISPOSAL

Store in the closed, original container in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight.

5L, 10L, 20L containers only

Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and setup for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and products should NOT be burnt.

Envirodrum 110L Mini Bulk Returnable Container (110L only)

DO NOT tamper with the Micro Matic valve or the security seal. DO NOT contaminate the Envirodrum with water or any other foreign matter. After each use of the product, please ensure that the Micro Matic coupler, delivery system and hoses are disconnected, triple rinsed with clean water and drained accordingly. When the contents of the Envirodrum have been used, please return the empty Envirodrum to the point of purchase. The Envirodrum remains the property of Nufarm Australia Limited.

Refillable containers (1000L only)

Store in the closed original container in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

SAFETY DIRECTIONS

Harmful if swallowed. Will damage eyes. Will irritate the skin. Avoid contact with eyes and skin. DO NOT inhale vapour. When opening the container, preparing spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist, washable hat, elbow length PVC gloves and goggles. If product in eyes, wash it out immediately with water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use wash gloves, goggles and contaminated clothing.

FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 13 11 26). If swallowed, DO NOT induce vomiting. Give a glass of water. If in eyes wash out immediately with water.

MATERIAL SAFETY DATA SHEET

For further information refer to the Material Safety Data Sheet (MSDS), which can be obtained from your supplier or from the Nufarm website – <http://www.nufarm.com.au>

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

CONDITIONS OF SALE

“Any provisions or rights under the Trade Practices Act 1974 or relevant state legislation which cannot be excluded by those statutes or by law are not intended to be excluded by these conditions of sale. Subject to the foregoing, all warranties, conditions, rights and remedies, expressed or implied under common law, statute or otherwise, in relation to the sale, supply, use or application of this product, are excluded. Nufarm Australia Limited and/or its affiliates (“Nufarm”) shall not accept any liability whatsoever (including consequential loss), or howsoever arising (including negligence) for any damage, injury or death connected with the sale, supply, use or application of this product except for liability which cannot be excluded by statute.”

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