

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

# **Agro-Essence**

# **Diflufenican + MCPA**

# **275 Herbicide**

**ACTIVE CONSTITUENTS: 250 g/L MCPA present as the ethyl hexyl ester**  
**25 g/L DIFLUFENICAN**  
**SOLVENTS: 325 g/L LIQUID HYDROCARBONS**  
**150 g/L N-METHYL-2-PYRROLIDONE**

|              |           |                  |
|--------------|-----------|------------------|
| <b>GROUP</b> | <b>FI</b> | <b>HERBICIDE</b> |
|--------------|-----------|------------------|

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

**IMPORTANT: READ THIS BOOKLET BEFORE USE**

APVMA Approval No.: 67866/57003

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**WEED LIST**

| <b>WEED</b> | <b>Common Name</b>                 | <b>Scientific Name</b>    |
|-------------|------------------------------------|---------------------------|
|             | Canola (Rape)                      | Brassica napus            |
|             | Capeweed                           | Arctotheca calendula      |
|             | Charlock                           | Sinapis arvensis          |
|             | Chickweed                          | Stellaria media           |
|             | Common Sowthistle (Milk Thistle)   | Sonchus oleraceus         |
|             | Corn Gromwell                      | Buglossoides arvensis     |
|             | Cowvine                            | Ipomoea lonchophylla      |
|             | Crassula                           | Crassula spp.             |
|             | Deadnettle                         | Lamium amplexicaule       |
|             | Dense-flower Fumitory              | Fumaria densiflora        |
|             | Dock                               | Rumex spp.                |
|             | Doublegee (Spiny Emex)             | Emex australis            |
|             | Fat Hen                            | Chenopodium album         |
|             | Fireweed                           | Senecio spp.              |
|             | Fumitory                           | Fumitory spp.             |
|             | Hedge Mustard                      | Sisymbrium officinale     |
|             | Hexham Scent (King Island Melilot) | Melilotus indicus         |
|             | Horehound                          | Marrubium vulgare         |
|             | Hyssop Loosestrife                 | Lythrum hyssopifolia      |
|             | Iceplant                           | Mesembryanthemum spp.     |
|             | Indian Hedge Mustard               | Sisymbrium orientale      |
|             | London Rocket                      | Sisymbrium irio           |
|             | Long Storksbill                    | Erodium botrys            |
|             | Marshmallow                        | Malva parviflora          |
|             | Mouse-eared Chickweed              | Cerastium glomeratum      |
|             | Night-scented Stock                | Matthiola longipetala     |
|             | Paterson's Curse                   | Echium plantagineum       |
|             | Peppercress                        | Lepidium spp.             |
|             | Prickly Lettuce                    | Lactuca serriola          |
|             | Purple Goosefoot                   | Scleroblitum atriplicinum |
|             | Rough Poppy                        | Papaver hybridum          |
|             | Saffron Thistle                    | Carthamus lanatus         |
|             | Scarlet Pimpernel                  | Anagallis arvensis        |
|             | Shepherd's Purse                   | Capsella bursa-pastoris   |
|             | Skeleton Weed                      | Chondrilla juncea         |
|             | Sorrel                             | Rumex spp.                |
|             | Stemless Thistle                   | Onopordum acaulon         |
|             | Toad Rush                          | Juncus bufonius           |
|             | Tree Hogweed                       | Polygonum patulum         |
|             | Turnip Weed                        | Rapistrum rugosum         |
|             | Varigated Thistle                  | Silybum marianum          |
|             | Vetch (Tares)                      | Vicia sativa              |
|             | Volunteer Lupins                   | Lupinus spp.              |
|             | Ward's Weed                        | Carrichtera annua         |
|             | Wild Radish                        | Raphanus raphanistrum     |
|             | Wild Turnip                        | Brassica tournefortii     |
|             | Wireweed (Hogweed)                 | Polygonum aviculare       |

**DIRECTIONS FOR USE****RESTRAINTS**

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 /ha | CRITICAL COMMENTS   |
|---|---|--|------------|----------|---|
| <b>CEREALS</b><br>Wheat, Barley, Oats, Triticale, Cereal Rye (including cereals undersown with clover)<br><br><b>PASTURE</b><br>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    | <b>CROP STAGE</b><br><b>Cereals</b><br><b>Up to 750mL</b> (3 leaf to late tillering stage - Z13 to 30)<br><b>Over 750mL</b> (5 leaf to late tillering stage - Z15 to 30)<br>Optimum results are achieved when sprayed at 3-5 leaf crop stage (generally 4-8 weeks post sowing).<br><br><b>WA only:</b><br><b>DO NOT</b> apply to Barley or Kulin Wheat before the 5 leaf stage (Z15).<br><br><b>Warning:</b> Diflufenican + MCPA may cause transient crop yellowing of cereals. Some varieties of oats have not been tested. (Refer to ' <b>Crop Tolerance</b> ' section of <b>General Instructions</b> ).<br><br>Application is recommended prior to the eighth trifoliate leaf stage, however, applications prior to the third leaf stage may result in crop damage especially under stressed conditions and in sandy soils.<br>DO NOT apply to Annual Medics or Lucerne.<br><br><b>Warning:</b> Diflufenican + MCPA may cause transient crop yellowing of clover, and may affect growth and seed set of some varieties of clover. (Refer to ' <b>Crop Tolerance</b> ' section of <b>General Instructions</b> ).<br><br><b>WEED STAGE</b><br>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: <ul style="list-style-type: none"> <li>• high crop and weed density</li> <li>• late season germinations</li> </ul> |
|   |   | Up to the 4 leaf stage and not more than 120mm in diameter | All States | 500mL    |   |
|   |   | Up to the 6 leaf stage and not more than 150mm in diameter |            | 750mL    |   |
|   |   | Up to the 8 leaf stage and not more than 180mm in diameter |            | 1.0L     |   |
|   | 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  | Qld only   | 500mL    |   |
|   |   | Up to the 4 leaf stage and not more than 120mm in diameter |            | 750mL    |   |
|   |   | Up to the 6 leaf stage and not more than 150mm in diameter |            | 1.0L     |   |
|   | London Rocket   | Up to the 5 leaf stage and not more than 120mm in diameter | Qld only   | 750mL    |   |
|   | Ward's Weed   |  | SA only    |          |   |
|   | Capeweed  | Up to the 2 leaf stage and not more than 60mm in diameter  | All States | 500mL    |   |
|   |   | Up to the 4 leaf stage and not more than 120mm in diameter |            | 1.0L     |   |
|   | Crassula  | Up to the 2 leaf stage                                     |            | 500mL    |   |
|   |   | Up to the 4 leaf stage                                     |            | 750mL    |   |
|   | Prickly Lettuce   | Up to the 2 leaf stage                                     |            | 500mL    |   |
|   |   | Up to the 4 leaf stage                                     |            | 750mL    |   |
| Up to the 6 leaf stage  |   | 1.0L   |            |          |   |
| Dense-flower Fumitory   | Up to the 2 leaf stage  | 750mL  |            |          |   |
| Corn Gromwell, Saffron Thistle, Toad Rush   |   |  |            | 1.0L     |   |
|   |   |  |            |          |   |
| Deadnettle  |   | NSW,   | 1.0L       |          |   |

| CROP   | WEEDS CONTROLLED           | STAGE OF WEED GROWTH | STATE  | RATE /ha                          | CRITICAL COMMENTS   |
|--|----------------------------|----------------------|--|-----------------------------------|---|
|  |                            |                      | Vic SA only  |                                   | <ul style="list-style-type: none"> <li>• abnormal weed growth (including early flowering), high rate of product (up to the maximum rate of application specified for that weed) may be required.</li> <li>Diflufenican + MCPA will not effectively control:               <ul style="list-style-type: none"> <li>• regrowth of suppressed weeds;</li> <li>• transplanted weeds;</li> <li>• regrowth from rhizomes or roots;</li> <li>• weeds growing under stress from previous herbicide applications.</li> </ul> </li> </ul> <p><b>GRAZING</b><br/>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.</p> <p><b>APPLICATION</b><br/>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.</p> <p><b>WILD RADISH</b><br/>Diflufenican + MCPA will provide residual control of Wild Radish for up to 4 weeks after application. Effective residual activity of this product may be reduced where:               <ul style="list-style-type: none"> <li>• rates lower than 1.0L/ha are used;</li> <li>• dry conditions prevail;</li> <li>• poor coverage of the soil surface is achieved;</li> <li>• crop is planted in non-wetting sand;</li> <li>• soils contain a high content of organic matter.</li> </ul>               Optimum results will be obtained if good soil moisture exists at and after application.             </p> |
|  | Sorrel                     | Up to 2 leaf stage   | Vic only   | 1.0 L                             |   |
|  | Canola (Rape)              | Up to 4 leaf stage   | All States   | 500 mL                            |   |
|  | Purple Goosefoot           | Up to 6 leaf stage   | Qld only   | 500 mL                            |   |
|  | Turnip Weed<br>Wild Turnip | Cotyledon to 2 leaf  | NSW only (West of Newell Hwy.)<br>SA only (Eyre peninsul a north of the line between Venus Bay and Cowell) | 350 mL                            |   |
| <b>CEREALS</b><br>Wheat, Barley, Oats, Triticale, Cereal Rye | Fumitory                   | 2 – 6 leaf stage     | All States   | 500 + 200 mL terbu tryn (500 g/L) |   |

**SUPPRESSION OF THE FOLLOWING WEEDS**

| <b>CROP</b>   | <b>WEEDS CONTROLLED</b>   | <b>STAGE OF WEED GROWTH</b> | <b>STATE</b> | <b>RATE /ha</b> | <b>CRITICAL COMMENTS</b>                                   |
|---|---|-----------------------------|--------------|-----------------|--|
| <b>CEREALS</b><br>Wheat, Barley, Oats, Triticale, Cereal Rye (including cereals undersown with clover)<br><br><b>PASTURE</b><br>Newly Sown and Established Clover-based pasture, Clover for Hay and Seed Production | Saffron Thistle   | Up to 6 leaf stage          | All States   | 1.0 L           | <b>Refer to critical comments in the previous section.</b> |
|   | Chickweed, Fireweed, Hexham Scent (King Island Mellilot), Iceplant, Mouse-eared Chickweed, Night-scented Stock, Paterson's Curse, Peppergrass, Skeleton Weed, Long Storksbill, Volunteer Lupins.                                  | Up to 4 leaf stage          |              | 750 mL          |  |
|   | Wireweed (hogweed)  |                             |              | 1.0 L           |  |
|   | 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 2 leaf stage          |              |                 |  |

| CROP   | WEEDS CONTROLLED   | STAGE OF WEED GROWTH   | STATE             | RATE /ha                                     | CRITICAL COMMENTS   |
|--|--------------------|--|-------------------|--|---|
| <p><b>CEREALS</b><br/>Wheat, barley, oats, triticale, cereal rye</p> | <p>Wild radish</p> | <p>Up to the 4 leaf stage and not more than 120mm in diameter</p>  | <p>All States</p> | <p>350mL plus 200mL L.V.E. MCPA (500g/L)</p> | <p><b>Refer also to all Critical Comments relating to weed stage, grazing, application and wild radish above.</b></p> <p>*Reduced efficacy (suppression only) may be 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.</p> <p><b>Crop Stage</b></p> <p>Diflufenican + MCPA 350mL + L.V.E. MCPA 200mL: Apply from 3 leaf to fully tillered (Zadoks Z13 to Z30).<br/>                     Diflufenican + MCPA 500mL + L.V.E. MCPA 200mL: Apply from 3 leaf to fully tillered (Zadoks Z13 to Z30).<br/>                     Diflufenican + MCPA 500mL + L.V.E. MCPA 400mL: Apply from 5 leaf stage to fully tillered (Zadoks Z15 to Z30).<br/>                     Optimum results are achieved when sprayed at 3-5 leaf crop stage (generally 4-8 weeks post-sowing).</p> <p><b>WA only: DO NOT</b> apply to Barley or Kulin Wheat before the 5 leaf stage (Z15).<br/> <b>Warning:</b> Diflufenican + MCPA may cause transient crop yellowing of cereals. Some varieties of oats have not been tested. (Refer to 'Crop Tolerance' section of General Instructions).<br/>                     Observe instructions also on L.V.E. MCPA product label.</p> |
|  |                    | <p>Up to the 6 leaf stage and not more than 150mm in diameter</p>  |                   | <p>500mL plus 200mL L.V.E. MCPA (500g/L)</p> |   |
|  |                    | <p>Up to the 8 leaf stage and not more than 180mm in diameter*</p> |                   | <p>500mL plus 400mL L.V.E. MCPA (500g/L)</p> |   |

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

**WITHHOLDING PERIOD****CROP HARVEST: NOT REQUIRED WHEN USED AS DIRECTED**

**All Crops: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 7 DAYS AFTER APPLICATION.**

**GENERAL INSTRUCTIONS****RESISTANT WEEDS WARNING**

|       |            |           |
|-------|------------|-----------|
| GROUP | <b>F I</b> | HERBICIDE |
|-------|------------|-----------|

Diflufenican + MCPA is a member of the phenoxy and nicotinamide groups of herbicides and acts by inhibiting carotenoid biosynthesis and disrupting plant cell growth. For weed resistance management Diflufenican + MCPA is both a Group F and a Group I herbicide. Some naturally occurring weed biotypes resistant to Diflufenican + MCPA 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 Diflufenican + MCPA or other Group F or Group I herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Agro-Alliance (Australia) Pty Ltd accepts no liability for any losses that may result from the failure of Diflufenican + MCPA to control resistant weeds.

**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 Diflufenican + MCPA has not been tested. Test a small area of crop before using Diflufenican + MCPA over large areas. Consult your local Shandong Agro-Essence International Co Ltd representative for advice on specific varieties.

**Pasture**

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

**Warning**

Diflufenican + MCPA 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 8<sup>th</sup> trifoliate 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 Diflufenican + MCPA applied at 500mL/ha:

**ArrowLeaf:** 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 Diflufenican + MCPA on clover seed yield have been tested on the following varieties. Under normal growing conditions they show levels of tolerance to Diflufenican + MCPA applied at 500mL/ha

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

### Warning

Rose and Strawberry clover have shown increased sensitivity to Diflufenican + MCPA. Diflufenican + MCPA 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 Diflufenican + MCPA. Care should be exercised if sensitive clover varieties or grasses are included in the pasture sward. Varieties not listed should be tested before using Diflufenican + MCPA over large areas. Consult your local Shandong Agro-Essence International Co Ltd representative for advice on specific varieties.

### Subsequent Crops

To reduce effect on susceptible crops (e.g. 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 Diflufenican + MCPA 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 Diflufenican + MCPA and some other agricultural products. To reduce the risk it is recommended that the spray unit be thoroughly washed with a boom cleaner and fresh water 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.

### 275 Herbicide

#### 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 Diflufenican + MCPA as a two-way mixture in the spray tank but should only be used for the crops specified:

| Crop  | Diflufenican + MCPA | Compatible Product   |
|---|---------------------|--|
| Wheat, triticale and cereal rye only                          | Up to 750mL/ha      | Hoegrass (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 500 mL/ha     | Metsulfuron, Chlorsulfuron, L.V.E. MCPA, Triasulfuron  |
|   | All rates           | Bromoxynil (200g/L), Amine 625, clopyralid, Tordon 50-D, dicamba (900g/kg) (up to 115g only), Eclipse              |
| Wheat, Barley, Triticale, and Cereal Rye only (not undersown) |                     | Tralkoxydim  |
| Wheat only (not undersown)                                    |                     | Clodinafop   |
| Clover  | Up to 750mL/ha      | Targa, Fusilade  |
| Sub clover  |                     | Simazine Liquid, Simazine Liquid + Nuquat mixture  |
|   | Up to 1.0L/ha       | 2,4-DB amine (500g/L)  |

When mixing with other herbicides, crop yellowing may be enhanced. When mixing with Hoegrass, 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 dicamba 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 plantback restrictions on that label. DO NOT add surfactant when mixing Diflufenican + MCPA and Agro-Essence Metsulfuron.

**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 use crop oils with Diflufenican + MCPA or Diflufenican + MCPA mixtures with other products in cereals. As formulations of other manufacturer's products are beyond the control of Shandong Agro-Essence International Co Ltd, all mixtures should be tested prior to mixing commercial quantities.

### **PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS.**

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

### **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.

The method of disposal of the container depends on the container type. Read the 'Storage and Disposal' statement on the label that is attached to the container.

**SAFETY DIRECTIONS**

Harmful if swallowed. Will damage eyes. Will irritate the skin. Avoid contact with eyes and skin. When opening the container and preparing spray wear cotton overalls buttoned to the neck and wrist, a washable hat, elbow length PVC gloves and face shield or 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, face shield or 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 the supplier.

**CONDITIONS OF SALE**

The use of Agro-Essence Diflufenican + MCPA 275 Herbicide being beyond the control of the manufacturer, no warranty expressed or implied is given by Agro-Alliance (Australia) Pty Ltd regarding its suitability, fitness or efficiency for any purpose for which it is used by the buyer, whether in accordance with the directions or not and Agro-Alliance (Australia) Pty Ltd accepts with no responsibility for any consequences whatsoever resulting from the use of this product.