

Product Name: DACTHAL 900 WG PRE-EMERGENCE HERBICIDE  
 APVMA Approval No: 59137/113217



Label Name:	DACTHAL 900 WG PRE-EMERGENCE HERBICIDE
Signal Headings:	CAUTION KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Constituent Statements:	900 g/kg CHLORTHAL-DIMETHYL
Mode of Action:	GROUP <b>D</b> HERBICIDE
Statement of Claims:	For pre-emergence weed control in certain vegetable crops including: Brassicas, Beans, Peas, Garlic, Onions, Leeks, Carrots, Lettuce, Potatoes, Turnips and for weed control in Strawberries, Cotton, Lucerne, Perennial Grass Crops, Lawns and Ornamentals as specified in the directions for use table.
Net Contents:	2 kg 5 - 20 kg
Restrains:	
Directions for Use:	Please refer to Page 4-5.
Other Limitations:	
Withholding Periods:	Harvest Lettuce – DO NOT HARVEST FOR 4 WEEKS AFTER APPLICATION.

	<p>Other Crops - NOT REQUIRED WHEN USED AS DIRECTED.</p> <p>Grazing DO NOT FEED TREATED FOLIAGE TO LIVESTOCK OR GRAZE TREATED AREAS.</p>
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Trade Advice:	<p><b>EXPORT OF TREATED PRODUCE</b>          Growers should note that suitable MRLs or import tolerances do not exist in all markets for produce treated with Dacthal 900WG. If you are growing lettuce for export, please check with Crop Care Australasia Pty Ltd or your industry body for the latest information on any potential trade issues and their management before using Dacthal 900WG.</p>
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General Instructions:	Please refer to Page 6.
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Resistance Warning:	<p><b>RESISTANT WEEDS WARNING</b>  <b>GROUP D HERBICIDE</b></p> <p>DACTHAL 900 WG Pre-Emergence Herbicide is a member of the Benzoic acid group of herbicides. The product has the inhibitors of tubulin formation mode of action. For weed resistance management, the product is a Group D herbicide.</p> <p>Some naturally occurring weed biotypes resistant to the product and other Group D herbicides may exist through normal genetic variability in any weed population. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds will not be controlled by this product or other Group D herbicides.</p> <p>Since the occurrence of resistant weeds is difficult to detect prior to use, Crop Care Australasia Pty Ltd accepts no liability for any losses that may result from the failure of this product to control resistant weeds.</p>
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Precautions:	
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Protections:	<p><b>PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS</b>          DO NOT apply under weather conditions or from spraying equipment which may cause spray to drift onto nearby susceptible plants/crops, cropping lands or pastures.</p> <p><b>PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT</b>          DO NOT contaminate streams, rivers or waterways with the chemical or used containers.</p>
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Storage and Disposal:	<p><b>STORAGE AND DISPOSAL (2 kg only)</b>          Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight.</p> <p>Shake remainder into spray tank. Single rinse before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on-site. Puncture and bury empty bags in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.</p> <p><b>STORAGE AND DISPOSAL (5kg - 20kg only)</b>          Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight.</p>
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Shake bag/box contents into spray tank until the bag/box is empty. Do not dispose of undiluted chemicals on-site. Break, crush, or puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots, in compliance with relevant local, state or territory government regulations. Do not burn empty containers or product.

**Safety Directions:**

Will irritate the eyes and skin. Avoid contact with the eyes and skin. Do not inhale dust. If product on skin, immediately wash area with soap and water. If product in eyes, wash it out immediately with water. Wash hands after use. When opening the container and preparing spray wear cotton overalls, over normal clothing, buttoned to the neck and wrist and a washable hat, elbow length PVC gloves, goggles and disposable dust face mask covering mouth and nose. If applying by hand wear cotton overalls, over normal clothing, buttoned to the neck and wrist, elbow length PVC gloves and disposable dust face mask covering mouth and nose. After each day's use, wash gloves, goggles and contaminated clothing.

**First Aid Instructions:**

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone 13 11 26).

**First Aid Warnings:**

**DIRECTIONS FOR USE**

<b>Crop</b>	<b>Weeds Controlled</b>		<b>Rate/ha</b>	<b>WHP</b>	<b>Critical Comments</b>
Cabbage, Broccoli, Brussels sprouts, Cauliflower and Asian Brassicas	Annual sedge Apple-of-Peru Barnyard grass Black bindweed, Climbing buckwheat	<i>Cyperus</i> spp. <i>Nicandra physalodes</i> <i>Echinochloa</i> spp. <i>Fallopia convolvulus</i>	5 –12.5kg	-	Spray at time of seeding or transplanting. Use lower rates on lighter soils.
Beans, Snap beans, Mung beans, Soybeans, Castor beans	Blackberry nightshade Blue pimpernel	<i>Solanum nigrum</i> <i>Anagallis arvensis</i> var. <i>caerulea</i>			
Peas	Caltrop	<i>Tribulus terrestris</i>		-	Spray at time of seeding. Use lower rate on lighter soils.
Turnips, Radish, Collards, Kale, Mustard greens, Turnips (greens and roots) and other Brassica leafy vegetables	Canary grass Cape gooseberries Capeweed Chickweed Columbus grass Corn spurry Crowsfoot grass Crabgrass Crowfoot, Storksbill Dandelion	<i>Phalaris canariensis</i> <i>Physalis</i> spp. <i>Arctotheca calendula</i> <i>Stellaria media</i> <i>Sorghum almum</i> <i>Spergula arvensis</i> <i>Eleusine indica</i> <i>Digitaria sanguinalis</i> <i>Erodium</i> spp. <i>Taraxacum officinale</i>		-	
Lettuce (head and leafy varieties)	Deadnettle Docks Dodder Fat-hen Fescues Giant pigweed Green amaranth Heliotrope Innocent weed Sand burr Johnson grass	<i>Lamium amplexicaule</i> <i>Rumex</i> spp. <i>Cuscuta</i> spp. <i>Chenopodium album</i> <i>Festuca</i> spp. <i>Trianthema portulacastrum</i> <i>Amaranthus viridis</i> <i>Heliotropium europaeum</i> <i>Cenchrus</i> spp. <i>Cenchrus tribuloides</i> <i>Sorghum halepense</i>	6.25kg	4 weeks	Spray at time of transplanting. For maximum effectiveness use on light to medium soils only. Some harder to kill species, eg. wireweed, black bindweed, docks and milk/sow thistle may not be controlled.
Onions, Garlic Leeks	Kidney weed Love grasses Mexican clover Mossman River grass Mouse-ear chickweed Petty spurge Pheasants eye Pigeon grass Pigweed, Neverdie	<i>Dichondra repens</i> <i>Eragrostis</i> spp. <i>Richardia brasiliensis</i> <i>Cenchrus echinatus</i> <i>Cerastium glomeratum</i> <i>Euphorbia peplus</i> <i>Adonis microcarpa</i> <i>Setaria</i> spp. <i>Portulaca oleracea</i>	5 –12.5kg	-	Spray at time of seeding or transplanting. Can be sprayed directly over transplants. Lay-by applications can be made on onions up to 14 weeks after planting or transplanting. Should weeds emerge, weed or cultivate prior to spraying.
Shallots, Spring Onions	Prickly paddy melon Prince of Wales Feather Red Natal grass Redshank, Prince of Wales Feather Ribgrass, Lamb's Tongue Rolypoly, Buckbush Ryegrass Salvation Jane,	<i>Cucumis myriocarpus</i> <i>Amaranthus</i> spp. <i>Rhynchelytrum repens</i> <i>Amaranthus cruentus</i> <i>Plantago lanceolata</i> <i>Salsola kali</i> <i>Lolium</i> spp. <i>Echium plantagineum</i>		-	For seed sown crops, apply at or just prior to seeding. For transplants, apply before transplanting. DO NOT apply over the top of the transplants. Apply in at least 450L water/ha. Do not apply more than once per crop.
Potatoes	Paterson's curse Scarlet pimpernel	<i>Anagallis arvensis</i>		-	Spray at planting, drag-off or lay-by.

Sweet potatoes, Yams	Sow thistle, Milk thistle Spiny burr grass Spiny emex,	<i>Sonchus oleraceus</i> <i>Cenchrus pauciflorus</i> <i>Emex australis</i>		-	Spray at transplanting. Lay-by application can be made up to 6 weeks after transplanting.
Carrots	Doublegee, Threecornered Jack Stagger weed	<i>Stachys arvensis</i>	9 – 12.5kg	-	Spray at planting. Use lower rate on lighter soils.
Strawberries (new plantings)	Stinging nettle Summer grass Toadflax Urochloa or	<i>Urtica urens</i> <i>Digitaria sanguinalis</i> <i>Kickxia spp.</i> <i>Urochloa panicoides</i>	7.5– 11kg	-	Apply at transplanting. Use lower rate on lighter soils.
Strawberries (established plantings)	Liverseed grass Ward's weed Windmill grass, Rhodes grass Winter grass	<i>Carrichtera annua</i> <i>Chloris spp.</i>		-	Apply in autumn and early spring. Do NOT apply after first bloom. Can be sprayed over plants without injury.
Cotton	Wireweed	<i>Poa annua</i> <i>Polygonum aviculare</i>	5 – 12.5kg	-	Apply at time of planting. Use higher rate for areas under irrigation. Lay-by application can be made at 6-11kg/ha but not after bolls open.
Lucerne			9 – 12.5kg	-	Apply at seeding or early spring for established plantings before weeds germinate.
Perennial grasses				-	Apply autumn and early spring.
Lawns (established), Ornamentals				-	Apply to lawns in autumn and early spring to prevent winter grass and crab grass from germinating. DO NOT use on Bent grass lawns. Refer to the table of recommended ornamentals. DO NOT use on Bugle, Button pink, Carnation, Celosia, Germander, Geum, Mesembryanthemum, Pansy, Phlox, Ranunculus, Sweet William or Telanthera.

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

## GENERAL INSTRUCTIONS

Spray before weed seeds germinate. For best results cultivate and seed or plant and then spray and water-in on the same day. DO NOT apply more than 3 days after cultivation. If weeds have emerged the crop should be weeded or cultivated and watered prior to application. The quantity applied can be reduced by spraying strips over the crop and using cultivation or other herbicides between the rows. The lower rate is effective on lighter soils depending on weeds to be controlled and period of control required whereas the higher rate is recommended for heavier soil types or if soil incorporation is required.

## SOIL PREPARATION

Soil should be moist to the surface at the time of application. Soil must be thoroughly prepared to a fine even tilth, free of or low in trash. Seed or transplant within 24 hours of final cultivation. Spray immediately after seeding, transplanting or lay-by cultivation. Use sprinkler irrigation immediately after spraying or furrow irrigation until soil is wet. If rain is unlikely and sprinkler irrigation unavailable, shallow soil incorporation may improve effectiveness.

DO NOT incorporate more than 2.5cm deep. Cultivation will reduce effectiveness and should be avoided for as long as possible after application. A second application can be made after cultivation if required.

## MIXING

This product mixes readily with water. Fill the tank with clean water to 60 to 75% of the final volume and add the required quantity slowly to the spray vat with the **tank filter mesh removed** and the agitation running. Do not dump the product into the tank. Continue filling the tank to the final volume and wait until all of the product is fully dispersed before spraying. The agitation system should be running during addition of the product and throughout the entire spraying operation. If left to settle, stir and re-suspend any settled material before starting pump and spraying product. Avoid drawing accumulated particles into the outlet pipe. DO NOT pre-mix in a bucket as a paste.

Use 450 litres or more of water per hectare.

## WEEDS NOT CONTROLLED

Some weed species are not effectively controlled by DACTHAL. In many cases these specific weeds are highly susceptible to other herbicides and can be selectively controlled with these in some crops. Known species that are not controlled by DACTHAL include Galinsoga (Potato weed), Mustard, Clover, Bathurst Burr, Fumitory, Wild Oats and Nut grass. The following is a more detailed list.

### WEEDS NOT CONTROLLED

Common Name	Botanical Name	Common Name	Botanical Name
Annual ragweed	<i>Ambrosia artemisiifolia</i>	Noogoora burr	<i>Xanthium pungens</i>
Bathurst burr	<i>Xanthium spinosum</i>	Pepper cress	<i>Lepidium spp.</i>
Bellvine	<i>Ipomoea plebeia</i>	Potato weed	<i>Galinsoga parviflora</i>
Bitter cress, Lesser swine cress	<i>Coronopus didymus</i>	Prairie grass	<i>Bromus unioloides</i>
Bladder ketmia	<i>Hibiscus trionum</i>	Prickly lettuce	<i>Lactuca serriola</i>
Blue billygoat weed	<i>Ageratum houstonianum</i>	Shepherd's purse	<i>Capsella bursa-pastoris</i>
Charlock	<i>Sinapis arvensis</i>	Slender celery	<i>Apium leptophyllum</i>
Cobbler's pegs	<i>Bidens pilosa</i>	Spear thistle	<i>Cirsium vulgare</i>
Common cotula	<i>Cotula australis</i>	Starburr	<i>Acanthospermum hispidum</i>
Fumitoria	<i>Fumaria spp.</i>	Stinking roger	<i>Tagetes minuta</i>
Hairy Jo-Jo	<i>Soliva anthemifolia</i>	Tares, Vetch	<i>Vicia spp.</i>
Indian mustard	<i>Brassica juncea</i>	Thornapples	<i>Datura spp.</i>
Loosestrife	<i>Lythrum spp.</i>	Townsville lucerne	<i>Stylosanthes humilis</i>
Marshmallow	<i>Malva spp.</i>	Turnip weed	<i>Rapistrum rugosum</i>
Medics	<i>Medicago spp.</i>	Variiegated thistle	<i>Silybum marianum</i>
Mexican poppy	<i>Argemone mexicana</i>	Wild oats	<i>Avena spp.</i>
Mexican tea	<i>Chenopodium ambrosioides</i>	Wild radish	<i>Raphanus raphanistrum</i>
Mint weed	<i>Salvia reflexa</i>	Wild turnip	<i>Brassica tournefortii</i>

**CROP PLANT BACK**

DO NOT plant crops other than those on the label within 8 months of application. If replanting is required because of an early crop failure the planting of onions or potatoes may result in crop injury. However all crops on this label may be planted following harvest of a crop treated with DACTHAL.

**CROP SAFETY**

Applied according to directions and under conditions favourable for good plant growth DACTHAL will not harm crops for which its use is recommended. However conditions such as high salt concentration, seedling diseases, cold weather, deep planting, excessive moisture or drought may injure or weaken crops normally tolerant to DACTHAL, thereby increasing the possibility of herbicide damage. Under any of these conditions, one or more of the following may result: delayed crop development, reduced yields or reduced quality.

DACTHAL is recommended for use in the following deciduous and evergreen trees & shrubs, ground cover plants and herbaceous and flowering ornamental plants. The tolerance of all species, cultivars or varieties of ornamentals has not been determined therefore it is advisable to test crop safety on a small area first.

**DACTHAL can be Safely used in the following Ornamental Plants :**

Abelia ( <i>Abelia</i> )	Euonymus ( <i>Euonymus</i> )	Mourning bride ( <i>Scabiosa</i> )
Ageratum ( <i>Ageratum</i> )	Evening primrose ( <i>Oenothera</i> )	Nasturtium ( <i>Tropaeolum</i> )
Alyssum ( <i>Alyssum</i> , <i>Lobularia</i> )	Feverfew ( <i>Chrysanthemum</i> )	Oak ( <i>Quercus</i> )
Andromeda - Japanese ( <i>Pieris</i> )	Fir ( <i>Abies</i> )	Orpine ( <i>Sedum</i> )
Arborvitae ( <i>Thuja</i> )	Forget-me-not ( <i>Myosotis</i> )	Pachysandra ( <i>Pachysandra</i> )
Ash ( <i>Fraxinus</i> )	Forsythia ( <i>Forsythia</i> )	Peony ( <i>Paeonia</i> )
Aster ( <i>Aster</i> )	Four o'clock ( <i>Mirabilis</i> )	Petunia ( <i>Petunia</i> )
Azalea ( <i>Azalea</i> )	Foxglove ( <i>Digitalis</i> )	Pine ( <i>Pinus</i> )
Baby's Breath ( <i>Gypsophila</i> )	Gaillardia ( <i>Gaillardia</i> )	Pittosporum ( <i>Pittosporum</i> )
Barberry ( <i>Berberis</i> )	Geranium ( <i>Geranium</i> )	Podocarpus ( <i>Podocarpus</i> )
Bellflower ( <i>Campanula</i> )	Gladiolus ( <i>Gladiolus</i> )	Poplar ( <i>Populus</i> )
Birch ( <i>Betula</i> )	Golddust ( <i>Aucuba</i> )	Privet ( <i>Ligustrum</i> )
Bleedingheart ( <i>Dicentra</i> )	Hawthorn ( <i>Crataegus</i> )	Privet – variegated ( <i>Ligustrum</i> )
Bloodleaf ( <i>Iresine</i> )	Heath, pink ( <i>Erica</i> )	Redbud ( <i>Cercis</i> )
Boxwood ( <i>Buxus</i> )	Helichrysum ( <i>Helichrysum</i> )	Red-hot poker ( <i>Kniphofia</i> )
Bugloss ( <i>Anchusa</i> )	Holly ( <i>Ilex</i> )	Rhododendron ( <i>Rhododendron</i> )
Camellia ( <i>Camellia</i> )	Honeysuckle ( <i>Lonicera</i> )	Rose ( <i>Rosa</i> )
Candytufts ( <i>Iberis</i> )	Honey locust ( <i>Gleditsia</i> )	Russian olive ( <i>Elaeagnus</i> )
Chestnut ( <i>Castanea</i> )	Hydrangea ( <i>Hydrangea</i> )	Sage – scarlet ( <i>Salvia</i> )
Chrysanthemum ( <i>Chrysanthemum</i> )	Iris ( <i>Iris</i> )	Snapdragon ( <i>Antirrhinum</i> )
Cinquefoil ( <i>Potentilla</i> )	Ivy – Baltic, English ( <i>Hedera</i> )	Spiderwort ( <i>Tradescantia</i> )
Coleus ( <i>Coleus</i> )	Juniper ( <i>Juniperus</i> )	Spirea ( <i>Spirea</i> )
Columbine ( <i>Aquilegia</i> )	Lantana ( <i>Lantana</i> )	Spruce ( <i>Picea</i> )
Coneflower – purple ( <i>Echinacea</i> )	Larkspur – candle ( <i>Delphinium</i> )	Stonecrop ( <i>Sedum</i> )
Coreopsis ( <i>Coreopsis</i> )	Lavender – cotton ( <i>Santolina</i> )	Sunflower ( <i>Helianthus</i> )
Coral Bells ( <i>Heuchera</i> )	Lilac ( <i>Syringa</i> )	Sweet pea ( <i>Lathyrus</i> )
Cosmos ( <i>Cosmos</i> )	Lily ( <i>Lilium</i> )	Sycamore ( <i>Platanus</i> )

Cotoneaster ( <i>Cotoneaster</i> )	Liquidambar ( <i>Liquidambar</i> )	Tree peony ( <i>Paeonia</i> )
Cottonwood ( <i>Populus</i> )	Lupin ( <i>Lupinus</i> )	Tulip tree ( <i>Liriodendron</i> )
Crab apple ( <i>Pyrus</i> )	Magnolia ( <i>Magnolia</i> )	Viburnum ( <i>Viburnum</i> )
Cuphea ( <i>Cuphea</i> )	Maple ( <i>Acer</i> )	Violet – African ( <i>Saintpaulia</i> )
Cypress ( <i>Cupressus</i> , <i>Taxodium</i> )	Marguerite – golden ( <i>Chrysanthemum</i> )	Walnut ( <i>Juglans</i> )
Dahlia ( <i>Dahlia</i> )	Marigold ( <i>Calendula</i> , <i>Tagetes</i> )	Weigela ( <i>Diervilla</i> )
Delphinium ( <i>Delphinium</i> )	Mock orange ( <i>Philadelphus</i> )	Willow ( <i>Salix</i> )
Deutzia ( <i>Deutzia</i> )	Morning glory ( <i>Ipomoea</i> )	Wormwood ( <i>Artemisia</i> )
Dogwood ( <i>Cornus</i> )	Moss – rose ( <i>Portulaca</i> )	Yarrow – fernleaf ( <i>Achillea</i> )
Elaeagnus ( <i>Elaeagnus</i> )	Mother-of-Thyme ( <i>Thymus</i> )	Yew ( <i>Taxus</i> )
Elm ( <i>Ulmus</i> )	Mountain laurel ( <i>Kalmia</i> )	Zinnia ( <i>Zinnia</i> )

**DO NOT use DACTHAL on the following Ornamental Plants:**

Bugle (Yellow, Blue)	<i>Ajuga</i>
Button pink	<i>Dianthus</i>
Carnation	<i>Dianthus</i>
Celosia (Cockscomb, Prince of Wales feather)	<i>Celosia</i>
Germander	<i>Teucrium</i>
Geum	<i>Geum</i>
Mesembryanthemum	<i>Mesembryanthemum</i>
Pansy	<i>Viola</i>
Phlox	<i>Phlox</i>
Ranunculus	<i>Ranunculus</i>
Sweet William	<i>Dianthus</i>
Telanthera	<i>Telanthera</i> or <i>Alternanthera</i>