









A foliar applied herbicide for the control of annual and perennial grass and broad-leaved weeds, before sowing or planting all crops, pre-emergence and pre-harvest in cereals and certain other crops, and set-aside and for use in stubbles, orchards, vineyards, aquatic and non-crop areas.

This product is a water soluble granule containing 72% w/w glyphosate present as 79.2% w/w as the ammonium salt

The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work

MAPP Number 21220





SAFETY INFORMATION ROUNDUP POWERMAX

UFI: JAW1-W0QC-800Y-WSQY

Contains 72% w/w glyphosate present as 79.2% w/w as glyphosate ammonium salt.

Toxic to aquatic life with long lasting effects. Keep only in original container.

protection. Collect spillage. Dispose of contents/container to a licensed hazardous-waste

disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste. To avoid risks to human health and the environment, comply

Asparagus.

with the instructions for use.

IMPORTANT INFORMATION AREA FOR PROFESSIONAL USE ONLY, AS AN OUTDOOR AGRICULTURAL/HORTICULTURAL/ AQUATIC HERBICIDE

Crops/situations: Wheat (winter), barley (winter), oats (winter), wheat (spring), barley (spring), oats (spring), durum wheat, oilseed rape, combining and vining peas, field beans, mustard, linseed, sugar beet, potatoes, swedes, turnip, bulb and salad onions, leeks.

All edible crops (stubble), all non-edible crops (stubble). Green cover on land not being used for crop production.

b) Other wipers: 1 kg: 3.8 litres dilution with water

All edible and non-edible crops (destruction, before sowing/planting). Natural surfaces not intended to bear vegetation, permeable surfaces overlying soil,

Apple, pear, plum, cherry, damson orchards.

Vineyards (Table and wine grapes) Aquatic (enclosed waters, land immediately adjacent to aquatic areas)

Maximum individual dose: } Maximum number of treatments: } Full details are given in Crop Specific Latest time of application: 
} Information on the attached leaflet

Other specific restrictions: Users must consult the appropriate water regulatory body (Environment Agency/Scottish Environmental Protection Agency) before using the product near water and must obtain their agreement before using this product to control aquatic weeds. Users must apply to the appropriate water regulatory body to determine the maximum allowable 'concentration in based on local conditions before using 'ROUNDUP POWERMAX'. Weed wipers may be used in any recommended crop where the wiper or chemical does not touch the growing crop. For weed wiper applications the maximum concentrations must not exceed the following: a) Weed wiper mini: 1 kg: 5.5 litres dilution with water

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS.



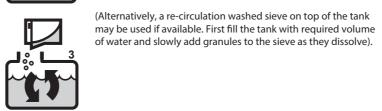
# USAGE INSTRUCTIONS

1. Fill the spray tank with 2/3 of the required quantity of water.



2. Switch on the agitation and re-circulation. 3. Add the granules "progressively" and when completed add

the remaining water. Continue agitation for a minimum of 5



SAFETY PRECAUTIONS

Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment: WEAR SUITABLE PROTECTIVE GLOVES when handling the concentrate and

contaminated surfaces. WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) SUITABLE PROTECTIVE GLOVES AND RUBBER BOOTS when using hand-held equipment

However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection. WASH ALL PROTECTIVE CLOTHING thoroughly after use, especially the insides of

WHEN USING DO NOT EAT OR DRINK OR SMOKE. WASH DUST/GRANULES FROM skin or eyes immediately. DO NOT BREATHE SPRAY

WASH HANDS AND EXPOSED SKIN before eating and drinking and after work. **Environmental Protection** 

Do not contaminate water with the product or its container (do not clean application equipment near surface water/avoid contamination via drains from farmyards and roads). It is essential that when this product is used to control weeds on hard surfaces,

Recommendations apply to the use of this herbicide for the control of weeds growing in or by water and must be read in conjunction with the Official Code of Practice entitled "Guidelines for the Use of Herbicides on Weeds in or near Watercourses and Lakes" obtainable from Department of Environment and Rural Affairs (DEFRA publications tel:

08459 556000), Scottish Executive, Environment and Rural Affairs Department, Department of Agriculture and Rural Development for Northern Ireland and the National Assembly for Wales Agriculture Department. The Water Act, 1989, The Water Resources Act 1991, the Control of Pollution Act 1974, The Northern Ireland Water Resources Act 1992 and the Control of Pollution and Local

Government (Northern Ireland) Order 1978, may apply to the act of applying ROUNDUP POWERMAX for the control of weeds growing in or by reservoirs and water courses, eg rivers, streams, ditches, drains and ponds/lakes discharging into such water courses. Storage and disposal

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDINGSTUFFS. KEEP OUT OF REACH OF CHILDREN.

that the directions for use are strictly adhered to.

KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place. EMPTY CONTAINER COMPLETELY and dispose of safely. Dispose of contents/container to a licensed hazardous waste disposal contractor or Weed resistance strategy collection site, except for empty clean containers which can be disposed of as non-hazardous waste.

**DIRECTIONS FOR USE** 

IMPORTANT: This information is approved as part of the Product Label. All instructions within this section must be read carefully in order to obtain safe and successful use of this product.

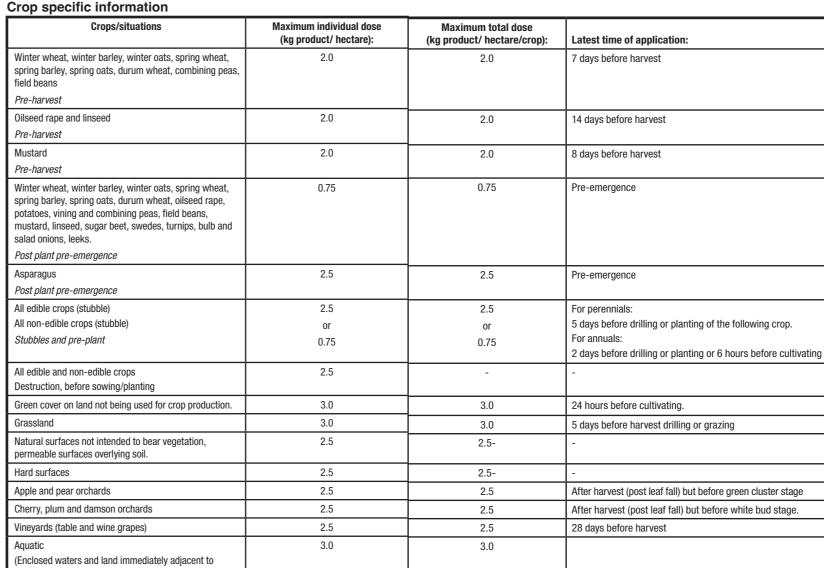
EXTREME CARE SHOULD BE TAKEN TO AVOID SPRAY DRIFT AS THIS CAN SEVERELY DAMAGE NEIGHBOURING CROPS OR PLANTS. DO NOT MIX, STORE OR APPLY ROUNDUP POWERMAX IN GALVANISED OR UNLINED STEEL CONTAINERS OR SPRAY TANKS. DO NOT leave spray mixtures in tank for long periods and make sure tanks are

Restrictions

Rain within 6 hours may reduce efficacy. TREATED POISONOUS PLANT SPECIES MUST BE REMOVED BEFORE REGRAZING OR CONSERVING. Where Ragwort is present users should consult the Code of Practice on How to Prevent the Spread of Ragwort. Ragwort plants

sprayed with this herbicide are more palatable and contain higher levels of toxins.

aguatic areas)

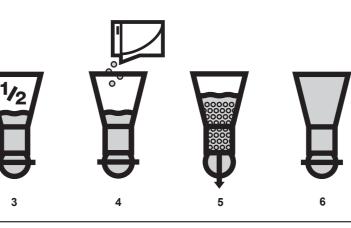




3. Half fill the bowl with water. 4. Add product until within 2 cm of the water's surface.

5 + 6. Open the valve to empty the bowl into the main tank and close when all the contents have emptied. Do not leave the induction valve permanently open or excessive air

entrapment will occur. Repeat until the required amount of product has been introduced.



Animals should be excluded from treated areas until any ragwort has completely recovered or died and there is no visible sign of the dead weed. Do not include treated Ragwort in hay or silage crops.

Applications of lime, fertiliser, farmyard manure and pesticides should be delayed until 5 days after application of ROUNDUP POWERMAX.

Extreme care must be taken to avoid spray drift onto non-crop plants outside of the target area, particularly when using near or alongside hedgerows. Do not spray on to weeds suffering from drought, water-logging, a covering of dust,

heat or frost, otherwise poor control may result. Do not tank mix ROUNDUP POWERMAX with adjuvants, pesticides or fertilisers except as specified under Directions for Use - Compatibility.

# Weeds controlled

All target weeds must be actively growing at spraying. It is important that all weeds are at the correct growth stage when treated, otherwise some re-growth may occur and this will need re-treatment.

PERENNIAL GRASSES must have full emergence of healthy, green leaf. (Common Couch, for example, becomes susceptible at the onset of tillering and new rhizome growth, which usually occurs when plants have 4-5 leaves, each with 10-15 cm of new growth).

PERENNIAL BROAD-LEAVED WEEDS are most susceptible around the flowering Where long-term PERENNIAL WEED control is sought it is important that perennial

weeds are not disturbed prior to treatment so cultivation should not be carried out ANNUAL GRASSES AND BROAD-LEAVED WEEDS should have at least 5 cm of leaf, or 2 expanded true leaves, respectively. In set-aside, annual grasses are best treated at full ear emergence, or before stem elongation. Application during stem

extension phase of annual grasses e.g. Black-grass and Brome species on set-aside between the end of April and end of May, may result in poor control and BRACKEN should be treated after frond tips are unfurled, but pre-senescence.

OTHER SPECIES - recommendations for specific areas of use are given in the Recommendation Tables. See booklet attached. This product will not give an acceptable level of control of Horsetails (Equisetum arvense) - repeat treatment will be necessary.

There is a low risk for the development of weed resistance to ROUNDUP POWERMAX. Strains of some annual weeds (e.g. Black-grass, Wild oats and Italian Ryegrass) have developed resistance to certain herbicides which may lead to poor control using those products. A strategy for preventing and managing such resistance should be adopted. This should include integrating herbicides with a programme of cultural control measures. Guidelines have been produced by the Weed Resistance Action Group and copies are available from the HGCA, CPA, your distributor, crop adviser or product manufacturer (Bayer Crop Science). Growers are encouraged to implement a weed resistance strategy based on (a) good agricultural practices and (b) good plant protection practices by:

 Following label recommendations The adoption of complimentary weed control practices

 Minimising the risk of spreading weed infestations The implementation of good spraying practice to maintain effective weed control

• Using the correct nozzles to maximise coverage Application only under appropriate weather conditions

 Monitoring performance and reporting any unexpected results to Bayer CropScience Ltd

Following Crops

Upon adsorption, the herbicidal properties of ROUNDUP POWERMAX are lost, permitting drilling of crops within 48 hours of application.

ENVIRONMENTALLY HAZARDOUS **UN 3077** SUBSTANCE, SOLID, N.O.S. (GLYPHOSATE, AMMONIUM SALT MIXTURE) Bayer CropScience Ltd, Material Safety Data Sheet 230 Cambridge Science Park, Milton Road, The Safety Data Sheet included in the booklet attached Cambridge, CB4 0WB, UK. does not form part of the label approved under the Plant Telephone: 01223 226500; Protection Products Regulations 1995. Website: https://cropscience.bayer.co.uk/ Following the instructions on this Product Label for the specified uses should ensure that the product is used For 24 hour emergency information contact Bayer CropScience Ltd.

Telephone: 0330 678 3382 (24 hr) **National Poisons Information Centre UK:** 

0344 892 0111 (medical professionals only)

+353 1 809 2166

**National Poisons Information Centre Dublin:** 

safely and efficaciously for those uses. The information on this Safety Data Sheet is based on the best available information at the time of going to print. Any updates to this Safety Data Sheet from the date of printing are available on request from https://cropscience.bayer.co.uk/ or call Telephone: 01223 226500







A foliar applied herbicide for the control of annual and perennial grass and broad-leaved weeds, before sowing or planting all crops, pre-emergence and pre-harvest in cereals and certain other crops, and set-aside and for use in stubbles, orchards, vineyards, aquatic and non-crop areas.

This product is a water soluble granule containing 72% w/w glyphosate present as 79.2% w/w as the ammonium salt

The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work.

#### ROUNDUP POWER MAX

LIFI: .IAW1-W00C-800Y-WS0Y

Contains 72% w/w glyphosate present as 79.2% w/w as glyphosate ammonium salt.



Toxic to aquatic life with long lasting effects.

Keep only in original container.

Wear protective gloves/protective clothing/eye protection/face protection. Collect spillage.

Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

To avoid risks to human health and the environment, comply with the instructions for use.

#### Bayer CropScience Ltd

230 Cambridge Science Park, Milton Road. Cambridge, CB4 0WB, UK. Website: https://cropscience.bayer.co.uk/ Telephone: 01223 226500

#### MAPP Number 21220

Protect from frost, store in a cool, dry place.

Not for reformulation or repackaging.

No licence is granted under any patent.

For 24-hour emergency information contact Bayer CropScience Ltd.

Tel: 0330 678 3382 (24 hr)

National Poisons Information Centre UK: 0344 892 0111

(medical professionals only)

National Poisons Information Centre Dublin: +353 1 809 2166



## **RECOMMENDATION TABLES continued**

AREA OF USE	CROP/ SITUATION	TARGET WEEDS/USAGE	WEED INFESTATION	APPLICATION RATE (L/ha)	WATER VOLUME	APPLICATION TIMING AND GUIDANCE
ROTATIONAL GRASS, PERMANENT GRASSLAND	GRASS	SHORT ROTATION RYEGRASS, LONGER	Short rotation Ryegrass with annual weeds Leys 2-4	1.5	150-250 L/ha	Treat EITHER before grazing/mowing in June-Oct, when growth is 30-60 cm, not dense and lacking mature seeds, OR regrowth after grazing/mowing.
- DESTRUCTION		LEYS AND PERMANENT PASTURE	years old with perennial grass weeds Long leys 4-7			Select the application rate which controls/destroys the least susceptible weed and grass species present in the sward.
			years old with perennial broad- leaved weeds Permanent	2.5 3.0		Grass may be conserved or grazed by cattle, dairy cows or sheep 5+ days after spraying. REMOVE POISONOUS PLANTS BEFORE GRAZING/MOWING.
			pasture See Weed Table on side of bag			If Ragwort is present, the guidance in the 'DIRECTIONS FOR USE must be followed  ONLY direct drill grass and clover
						EITHER into 1-2 year leys without mat, all surface trash should be removed before direct drilling, 5+ days after spraying, OR long leys with some
						mat, in the spring following autumn application.

APPLICATION RATE FOR GRASSLAND DESTRUCTION						
1	.5 kg/ha		2.0 kg/ha			
Annual Meadow-grass Common Chickweed Common Mouse-ear Dock seedlings Italian Rye-grass Mayweed species	Meadow Fescue Meadow Foxtail Rough Meadow-grass Speedwell species Timothy	Black-bent Broad-leaved Dock Cock's-foot Common Bent Common Couch Creeping Bent	Creeping Soft-grass Curled Dock Perennial Rye-grass Plantains Soft Brome Yorkshire Fog			
2	2.5 kg/ha		3.0 kg/ha			
Bracken** Common Sorrel Common Nettle Creeping Buttercup Creeping Thistle Daisy Dwarf Thistle Perennial Sow-thistle	Red Clover Sedges Sheep's Sorrel Soft Rush Spear Thistle Tufted Hairgrass Yarrow	Common Ragwort Hard Rush Heath Rush Jointed Rush Molinia (Purple Moor-grass) Sheep's Fescue	Nardus (Mat grass) Red Fescue White Clover* Yellow Rattle			

<sup>\*</sup> White Clover is best cut in June and sprayed one month later.

AREA OF USE	CROP/ SITUATION	TARGET WEEDS/USAGE	WEED Infestation	APPLICATION RATE (kg/ha)	WATER VOLUME	APPLICATION TIMING AND GUIDANCE
VINEYARDS (Table and wine grapes)	TABLE GRAPES WINE GRAPES (inter row)	Perennial grasses and broadleaved weeds	All levels	2.5	200-400 L/ha	Latest application date 28 days before harvest. Do not apply in vines <4 years old and avoid foliage of the vines.
AQUATIC	Enclosed waters and land immediately adjacent to aquatic areas	Emerged weeds: reeds, rushes, sedges, grasses and watercress. Floating weeds: white lilies; yellow lilies.	All stages	2.5 3.0	200-400 L/ha	Apply to floating weeds between mid June and mid August. Apply to reeds between mid August and mid September.
NATURAL SURFACES NOT INTENDED TO BEAR VEGETATION, PERMEABLE SURFACES OVERLYING SOIL, ALL SITUATIONS.	Vegetation management	Including farmyards and roadsides, paths and along fences	Annual weeds Perennial grasses and broad-leaved weeds	0.75 2.0-2.5	Hydraulic sprayers (boom and knapsack) at water volumes 80-400 L/ha See Mixing & Spraying section for spot applications.	Do not use under polythene or glass.
HARD SURFACES	Vegetation management	Including non-porous farm yards roads, paths and alongside walls	Annual weeds Perennial grasses and broad-leaved weeds	0.75 2.0-2.5	Hydraulic sprayers (boom and knapsack) at water volumes 80-400 L/ha See Mixing & Spraying section for spot applications.	Apply this product carefully. Ensure spraying takes place only when weeds are actively growing (normally March to October) and is confined only to visible weeds including those in the 30cm swath covering the kerb edge and road gulley — do not overspray drains.  Do not use under polythene or glass.

### Mixing and spraying

ROUNDUP POWERMAX is a water-soluble granular formulation.

he free-flowing, dust-free granules dissolve rapidly and completely in water nd can be applied in spray volumes ranging from 80-400 L/ha using tractornounted and knapsack sprayers.

Specialised spraying equipment such as weed wiper applicators may be used where indicated.

Correctly calibrate all sprayers under field or use conditions prior to application.

Spray Quality

MEDIUM or COARSE quality spray (BCPC definition) should be applied for ptimum results and to reduce the risk of drift.

ntional hydraulic sprayers with a pressure range 1.5-2.5 bar is suitable.

#### lling the Sprayer

lalf fill the spray tank with water and, on tractor-mounted sprayers, start igitation. Add the appropriate quantity of ROUNDUP POWERMAX. Top up the ank to the level required.

When using a chemical induction bowl or hopper, half fill the bowl with water and add ROUNDUP POWERMAX until within 2 cm (1 inch) of the surface of the water. With the rinsing system on, open the valve to empty the bowl into the main tank. Repeat until the required amount of ROUNDUP POWERMAX has

napsack Sprayer Applicators – Use in non-crop areas, aquatic situations and rehards.

en used at a walking speed of 1 m/sec to apply a swath of 1 m width, most psack sprayers deliver 200 L/ha spray volume (or 10 litres per 500 m²). To POWERMAX in tank mixture. It is a few of spray liquid required.

For hydraulic sprayers: mixt be powerful of the provided by the provided

Application guide for hydraulic sprayers

EQUIPMENT	Boom Sprayer	Knapsack Sprayer
AMOUNT OF ROUNDUP POWERMAX	2.5 Kg	12.5 g
AREA TREATED	1.0 ha	50 m² per litre
MEDIUM VOLUME Amount of Water	200 litres	1 litre
LOW VOLUME Amount of Water	100 litres	0.5 litres

apsack sprayer calibrated to deliver 200 litres/ha (medium volume) or 100 s/ha (low volume).

When used as above, knapsack sprayers fitted with low volume nozzles typically deliver 100 L/ha spray volume (or 10 litres per 1000 m²). To apply 2.0 kg/ha ROUNDUP POWERMAX in this case, use 40g product for each 2 litres of spray liquid required.

<u>Hand-held Weed Wiper Applicator (e.g. Weed Wiper Mini)</u> – use in non-crop, and orchards.

Apply a solution of 180 g ROUNDUP POWERMAX per 1 litre of water adding a water-based dye if required. Care should be taken to avoid dripping onto wanted vegetation.

A suitable dye may be obtained from Certis, telephone (01980) 676500.

Spot Gun Applicators – treatment of individual weeds in orchards and non-crop situations. Apply 5 ml of spray to target weed, using a narrow cone TG-3 or TG-5 nozzle.

pot liameter	Amount of ROUNDUP POWERMAX (g) per 5 litres spray solution							
metres)	1.5 kg/ha	2.0 kg/ha	2.5 kg/ha	8.6 kg/ha				
0.3	12	16	19	37				
0.6	43	62	74	149				

#### Boat mounted sprayers

For use in aquatic situations. Prepare sprayer as for knapsack sprayers.

Calibrate and spray at the lowest speed possible. Always apply against the direction of any current.

#### Compatibility

Do not tank mix ROUNDUP POWERMAX with adjuvants, pesticides or fertilisers except as advised by Bayer Crop Science. For up to date information on compatible products contact Bayer Crop Science

(https://cropscience.bayer.co.uk/ or call Telephone: 01223 226500).
For hydraulic sprayers: maintain continuous agitation when using ROUNDUP

For knapsack sprayers: mix thoroughly and use immediately when using ROUNDUP POWERMAX in tank mixture.

### COMPANY ADVISORY INFORMATION

This section is not part of the Product Label under the Plant Protection Products Regulations 1995 and provides additional advice on the product.

#### **General Information**

ROUNDUP POWERMAX is a foliar-acting herbicide with broad-spectrum activity. It is translocated from treated green growth to underground roots, rhizomes and stolons, providing control of both annual and perennial weeds. ROUNDUP POWERMAX is rapidly adsorbed onto particulate matter in soils and water and is quickly degraded by the micro-organisms present in soil and aquatic bottom sediments. When used as directed any water subjected to ROUNDUP POWERMAX spray drift may be used immediately for irrigation purposes. Until degraded, the active ingredient in ROUNDUP POWERMAX, glyphosate, is practically immobile in soils and is, therefore, unlikely to contaminate groundwater. All edible and non-edible crops may be sown or planted at specified intervals following the use of this product.

#### Extensions of Authorisation

These extensions of the authorised use provide for the use of 'Roundup Powermax' in respect of crops and situations other than those included on the product label (above). Neither the efficacy nor the phytotoxicity of the product for which these Extensions of authorisation have been granted have been assessed and, as such, the user bears the risk in respect of failures concerning its efficacy and phytotoxicity.

Roundup PowerMax has the following Extensions of Authorisation for minor use.

Users must have a copy which can be downloaded from

Pre harvest : Buckwheat, Canary Seed, Millet, Sorghum (20141313), Hemp and Quinoa (20141321) grown for bird seed; Lupins, (20141321) and Rye, (20141307);

Outdoor Rhubarb, (20141320).
Inter-row: Bilberry, Blueberry, Blackcurrant, Cranberry,
Gooseberry Redcurrant and Whitecurrant. (20141316): Chestnut. Hazlenut.

Gooseberry Redcurrant, and Whitecurrant, (20141316); Chestnut, Hazlenut, Kentish Cob, Walnut, (20141317); Outdoor crops of Beetroot, Carrot, Garlic, Horseradish, Leek, Onion, Parsley root, Parsnip, Salad Onion, Salsify, Shallot, Swede, Turnip, (20141305)

Non food crops: Miscanthus, Game cover, Hemp, Woad, non-fruiting hops, soft fruit and top fruit, (20141320)

#### Agronomic advice

www.secure.pesticides.gov.uk/offlabellist before use.

Applied pre-harvest of specified crops, ROUNDUP POWERMAX provides, in addition to weed control, a diverse range of harvest management benefits accruing from the removal of green material from the crop.

After application, large concentrations of decaying foliage, stolons, roots or rhizomes should be dispersed or buried by thorough cultivation before crop drilling. Direct drilling into such a mat of decaying material may occasionally cause a slight check to crop growth.

To maximise the safety of ROUNDUP POWERMAX to operator, consumer and environment, the label recommendations and the DEFRA/HSE/NAW publication "Code of practice for using plant protection products" of January 2006 should be adhered to.

#### Effects of weather

See Directions for Use (Restrictions).

ROUNDUP POWERMAX will remain efficacious at low but not freezing temperatures however, the onset of symptoms will be delayed.

A covering of dew may reduce efficacy where run off occurs.

# Symptoms of weeds

Symptoms of treatment are generally seen first 7-10 days, or longer (if growth is slow), after spraying. These take the form of leaf reddening followed by yellowing and are usually quicker to appear on grasses than on broad-leaved weeds.

Reaction to nettles is slow.

#### ayer Hygiene

It is essential to thoroughly clean out the entire sprayer system, using a recommended cleaner, between applying ROUNDUP POWERMAX and other pesticides.

#### JUSAI

Follow the guidance on the disposal of surplus spray solution, tank washings, concentrate and containers as given in Section 5 of the DEFRA/HSE/NAW publication "Code of practice for using plant protection products" of January 2006.

Roundun



A foliar applied herbicide for the control of annual and perennial grass and broad-leaved weeds, before sowing or planting all crops, pre-emergence and pre-harvest in cereals and certain other crops, and set-aside and for use in stubbles, orchards, vineyards, aquatic and non-crop areas.

This product is a water soluble granule containing 72% w/w glyphosate present as 79.2% w/w as the ammonium salt.

The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work.

# ROUNDUP POWER MAX

UFI: JAW1-W0QC-800Y-WSQY

Contains 72% w/w glyphosate present as 79.2% w/w as glyphosate ammonium salt.

Toxic to aquatic life with long lasting effects.

Keep only in original container.

Wear protective gloves/protective clothing/eye protection/face protection. Collect spillage.

Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

To avoid risks to human health and the environment, comply with the instructions for use.

#### Bayer CropScience Ltd

230 Cambridge Science Park, Milton Road. Cambridge, CB4 0WB, UK. Website: https://cropscience.bayer.co.uk/ Telephone: 01223 226500

# MAPP Number 21220

Protect from frost, store in a cool, dry place.

Not for reformulation or repackaging.

No licence is granted under any patent.

For 24-hour emergency information contact Bayer CropScience Ltd. Tel: 0330 678 3382 (24 hr)

National Poisons Information Centre UK: 0344 892 0111 (medical professionals only)

National Poisons Information Centre Dublin: +353 1 809 2166

This booklet is part of the approved Product Label.

<sup>\*\*</sup> At full frond expansion

# RECOMMENDATION TABLES

AREA OF USE	CROP/SITUATION	TARGET WEEDS/USAGE	WEED Infestation	APPLICATION RATE (L/ha)	WATER VOLUME	APPLICATION TIMING AND GUIDANCE
				, ,		
PRE- HARVEST	WINTER AND SPRING WHEAT,	Common Couch	1-25 shoots/m²	1.0	80-250 L/ha	Grain/seed moisture must not exceed 30% at spraying.
ARABLE	DURUM WHEAT,		Up to 75 shoots/m <sup>2</sup>	1.5	L/IIa	Harvest intervals:
CROPS	WINTER AND		Over 75 shoots/m <sup>2</sup>	2.0		CEREALS, PEAS, BEANS 7+ days
	SPRING BARLEY					OILSEED RAPE 14-21 days
	AND WINTER AND					LINSEED 14-28 days
	SPRING OATS					MUSTARDS 8-10 days
	OILSEED RAPE,		Up to 75 shoots/m <sup>2</sup>	1.5	100-250	Use high clearance, narrow wheeled
	MUSTARDS		Over 75 shoots/m <sup>2</sup>	2.0	L/ha#	tractors, wide booms and crop
	COMBINING PEAS		Up to 75 shoots/m <sup>2</sup>	1.5	80-250	dividers.
	FIELD BEANS		Over 75 shoots/m <sup>2</sup>	2.0	L/ha	DO NOT TREAT CROPS GROWN FOR SEED
	LINSEED					Where desiccating crops, check
	WINTER AND	Perennial	All levels/species	2.0	80-250	susceptibility of any weeds present.
	SPRING WHEAT,	broad-leaved	7 111 10 1010, 0 0 0 0 10 0	2.0	L/ha	Do not attempt to desiccate
	DURUM WHEAT,	weeds and				OILSEED RAPE or MUSTARD crops
	WINTER AND	other perennial				with significant secondary growth,
	SPRING BARLEY AND WINTER AND	grasses				uneven maturity, disease or stress.
	SPRING OATS					Desiccate LINSEED when seeds are
			All levels/session	0.0	100.050	light brown and capsules brown; stems/leaves may be yellow/green.
	OILSEED RAPE MUSTARDS		All levels/species	2.0	100-250 L/ha#	Effects on brewing and baking have
						not been tested.
	COMBINING PEAS FIELD BEANS		All levels/species	2.0	80-250 L/ha	Consult grain merchant or processor
	LINSEED				L/IIa	before use.
	-					At harvest management rates,
	WINTER and SPRING	Harvest	Annual grasses,	0.5	80-250	ANNUAL NETTLE, VOLUNTEER
	WHEAT, DURUM WHEAT, WINTER	management	crop stems and leaves		L/ha	POTATO, ROSEBAY WILLOW HERB and POLYGONUM WEEDS will not be
	and SPRING BARLEY		Annual broad-			susceptible. WHEAT crops, WHEAT
	and WINTER and		leaved weeds	0.75		VOLUNTEERS and BROAD-LEAVED
	SPRING OATS					WEEDS may require up to 14 days
	OILSEED RAPE	Crop desiccation	All levels/species	1.5	100-250	before harvest.
	MUSTARDS	and annual			L/ha#	Treated straw must not be used as an horticultural mulch.
		weeds prior to				# Use higher volumes for dense
		direct combining				canopies.
	LINSEED		All levels/species	1.5	80-250	
					L/ha	

AREA OF JSE	CROP/ SITUATION	TARGET WEEDS/ USAGE	WEED Infestation	APPLICATION RATE (L/ha)	WATER VOLUME	APPLICATION TIMING AND GUIDANCE
STUBBLES, PRE-		Common Couch	Up to 75 shoots/m <sup>2</sup> Over 75 shoots/m <sup>2</sup>	1.5 2.0	80-250 L/ha	Do not cultivate immediately before spraying.
SOWING and PRE- PLANTING	and non-edible) EXCEPT ORCHARDS	Other perennial grasses; volunteer potatoes (autumn only)	All levels/species	2.0	allow: - 21+ days growth before spraying in spring  VOLUNTEER POTATOES to make ample top growth - 5 days before cultivating or drilling  For ANNUAL weed control, allow - 6 hours before cultivating.  Where applications are made to larger weeds in stubble in the spring (Feb/Mar) it is recommended to wait 24 hours before cultivating 48 hours before direct drilling	- 21+ days growth before spraying in spring
		Perennial broad- leaved weeds	All levels/species	2.5		ample top growth
		Volunteer cereals and annual weeds at small sizes – before growth stage 26 (BBCH scale)	All levels/species	0.75		drilling  For ANNUAL weed control, allow:  - 6 hours before cultivating.  Where applications are made to larger weeds in stubble
BEFORE ORCHARD PLANTING		Volunteer cereals and annual weeds at large sizes – after growth stage 26 (BBCH scale)	All levels/species	1.0		recommended to wait 24 hours before cultivating. - 48 hours before direct drilling Allow 7 days before planting trees Refer to 'Weeds Controlled'
	ORCHARD	Perennial grasses and broad-leaved weeds	Arable Weeds Pasture Weeds	2.0 2.5		
POST SOWING/ PLANTING, PRE-EMER- GENCE OF THE CROP	LISTED CEREALS, OILSEED RAPE, POTATOES, MUSTARD, LINSEED, PEAS, FIELD BEANS, SUGAR BEET, SWEDE, TURNIP, ONION and LEEK	Volunteer cereals and annual weeds	All levels/species	0.75	80-250 L/ha	CAUTION - Ensure that spraying precedes ANY crop emergence.
	ASPARAGUS	Annual weeds Perennial grasses Perennial broad- leaved weeds	All levels/species	0.75 2.0 2.5	80-250 L/ha	CAUTION - Ensure that spraying precedes ANY new spear emergence.

AREA OF USE	CROP/ SITUATION	TARGET WEEDS/USAGE	WEED Infestation	APPLICATION RATE (L/ha)	WATER VOLUME	APPLICATION TIMING AND GUIDANCE	
ALL EDIBLE AND NON-EDI- BLE CROPS (DESTRUC- TION, BEFORE SOWING/ PLANTING)	VEGETATION MANAGE- MENT	-	Annual weeds Perennial grasses Perennial broad- leaved weeds	0.75 2.0 2.5	80-250 L/ha* or hand-held equipment	*Rotary atomisers may be used at a water volume of 10-40 L/ha. Ensure droplet diameter falls within the range 200-300 microns Do not use under polythene or glass. Do not use in or alongside hedgerows.	
GREEN COVER ON LAND NOT BEING USED FOR CROP	BEFORE or DURING REMOVAL FROM PRO- DUCTION	Common Couch	Up to 75 shoots/m² Over 75 shoots/m²	1.5 2.0	L/ha produscher or Hand-held equipment or tractor mounted weed wiper produscher  L/ha produscher mana or befor cr tractor For P mounted in spi	Before using on land taken out of production as part of a grant aided scheme, ensure compliance with the management rules of that scheme.  Do not 'top' or cultivate immediately	
PRODUC- TION, e.g. SET-ASIDE		Perennial broad-leaved weeds and other perennial grasses	All levels/species	2.0		or tractor For PERENNIAL weed control weed wiper in spring	before application.  For PERENNIAL weed control, allow:  - 21+ days growth before spraying
		Annual weeds: - autumn/spring of year 1 only - summer of year 1 and thereafter	All levels/species All levels/species	0.75 1.5			
	AFTER SHORT ROTATION or LONG TERM REMOVAL FROM PRO- DUCTION	Natural regeneration and cover crop destruction	Annual weeds only Perennial grasses Perennial broad- leaved weeds Perennial broad- leaved weeds as follows; Common ragwort, Nardus (matgrass), Hard rush, Heath rush, Jointed	1.5 2.0 2.5 3.0	150-250 L/ha	For ANNUAL weed control, allow: - 6 hours before cultivating. Do not direct drill after set-aside	
			rush, Molinia (purple moor-grass), Sheep's fescue, Red fescue, White Clover (best cut in June and sprayed one month later and Yellow rattle				

AREA OF USE	CROP/ SITUATION	TARGET WEEDS/ USAGE	WEED Infestation	APPLICATION RATE kg/ha & Water Volume	APPLICATION TIMING AND GUIDANCE
N-CROP TRACTOR- MOUNTED VICK-TYPE VEED WIPER IPPLICATION)	ARABLE CROPS GRASSLAND SET-ASIDE	Bolters, weed beet, other weeds	All levels	265 g product per 1 litre water (26% solution) OR 360 g product per 2 litres water in hot, dry conditions. (18% solution) For 'new generation' wipers consult the manufacturer for guidance	Weeds must be 10+ cm taller, and wiper 5+ cm higher, than desired vegetation. Wipe dense populations twice, in opposite directions. BOLTING BEET requires three applications, 2 weeks apart, from early July to early August. Contact Bayer or your Distributor for specific recommended weed wiper applicators. IN GRASSLAND SITUATIONS REMOVE POISONOUS PLANTS BEFORE GRAZING/MOWING. If Ragwort is present, the guidance in the 'DIRECTIONS FOR USE must be followed.

AREA OF USE	CROP/ SITUATION	TARGET WEEDS/USAGE	WEED Infestation	APPLICATION RATE (L/ha)	WATER VOLUME	APPLICATION TIMING AND GUIDANCE
ORCHARDS (Hydraulic sprayers or hand held weed wipers)	APPLE, PEAR, PLUM, CHERRY, DAMSON	Perennial grasses, broad-leaved weeds Root Suckers	All levels of most species	2.5 18% solution of the product for hand held weed wipers 2.5 18% solution of the product for hand held weed wipers	200-400 L/ha See Mixing & Spraying section for spot appli- cations	Spray AFTER autumn leaf-fall and BEFORE: Apples, pears – green cluster stage Stone fruit – white bud stage Treat root suckers in late spring only. Trees must have been established 2+ years. Avoid contact with tree 30+ cm above ground.