



(H) - Herbicide

GROUP 9 HERBICIDE

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-WOQC-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://croppscience.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.



GB, B,051M, 10KG, 30476382A rA3

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 - DESTRUCTION	GRASS	SHORT ROTATION RYEGRASS, LONGER LEYS AND PERMANENT PASTURE	Short rotation Ryegrass with annual weeds	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. Select the application rate which controls/destroys the least susceptible weed and grass species present in the sward. Grass may be conserved or grazed by cattle, dairy cows or sheep 5+ days after spraying. REMOVE POISONOUS PLANTS BEFORE GRAZING/MOWING. 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.
			Leys 2-4 years old with perennial grass weeds	2.0		
			Long leys 4-7 years old with perennial broad- leaved weeds	2.5		
			Permanent pasture	3.0		
			See Weed Table on side of bag			

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
2.5 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

* White Clover is best cut in June and sprayed one month later.

** At full frond expansion

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	Emerg ed weeds: reeds, rushes, sedges, grasses and watercress. Floating weeds: white lilies; yellow lilies.	All stages	2.5	200-400 L/ha	Apply to floating weeds between mid June and mid August.
				3.0		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 gully – do not overspray drains. Do not use under polythene or glass.

Mixing and spraying

ROUNDUP POWERMAX is a water-soluble granular formulation.

The free-flowing, dust-free granules dissolve rapidly and completely in water and can be applied in spray volumes ranging from 80-400 L/ha using tractor-mounted 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

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

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

Filling the Sprayer

Half fill the spray tank with water and, on tractor-mounted sprayers, start agitation. Add the appropriate quantity of ROUNDUP POWERMAX. Top up the tank 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 been introduced.

Knapsack Sprayer Applicators – Use in non-crop areas, aquatic situations and orchards.

When used at a walking speed of 1 m/sec to apply a swath of 1 m width, most knapsack sprayers deliver 200 L/ha spray volume (or 10 litres per 500 m²). To apply 2.0 kg/ha of ROUNDUP POWERMAX, therefore, use 20g product for each 2 litres of spray liquid required.

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

* Knapsack sprayer calibrated to deliver 200 litres/ha (medium volume) or 100 litres/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.

Hand-held Weed Wiper Applicator (e.g. Weed Wiper Mini) – 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.

Spot diameter (metres)	Amount of ROUNDUP POWERMAX (g) per 5 litres spray solution			
	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 POWERMAX in tank mixture.

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

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, Hazelnut, 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

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.

Sprayer Hygiene

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

Disposal

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.



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RECOMMENDATION TABLES

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

AREA OF USE	CROP/SITUATION	TARGET WEEDS/USAGE	WEED INFESTATION	APPLICATION RATE (L/ha)	WATER VOLUME	APPLICATION TIMING AND GUIDANCE
STUBBLES, PRE-SOWING and PRE-PLANTING	BEFORE ALL CROPS (edible and non-edible) EXCEPT ORCHARDS	Common Couch	Up to 75 shoots/m² Over 75 shoots/m²	1.5 2.0	80-250 L/ha	Do not cultivate immediately before spraying. For PERENNIAL weed control, 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 Allow 7 days before planting trees Refer to 'Weeds Controlled' section and 'Company Advisory Information' for guidance on weather and growing conditions of target weeds a t time of application.
		Other perennial grasses; volunteer potatoes (autumn only)	All levels/species	2.0		
		Perennial broad-leaved weeds	All levels/species	2.5		
		Volunteer cereals and annual weeds at small sizes – before growth stage 26 (BBCH scale)	All levels/species	0.75		
		Volunteer cereals and annual weeds at large sizes – after growth stage 26 (BBCH scale)	All levels/species	1.0		
	BEFORE ORCHARD PLANTING	Perennial grasses and broad-leaved weeds	Arable Weeds Pasture Weeds	2.0 2.5		
POST SOWING/ PLANTING, PRE-EMERGENCE 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-EDIBLE CROPS (DESTRUCTION, BEFORE SOWING/ PLANTING)	VEGETATION MANAGEMENT	-	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 PRODUCTION, e.g. SET-ASIDE	BEFORE or DURING REMOVAL FROM PRODUCTION	Common Couch	Up to 75 shoots/m² Over 75 shoots/m²	1.5 2.0	80-250 L/ha or Hand-held equipment or tractor mounted weed wiper (see Mixing & Spraying Section)	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 before application. For PERENNIAL weed control, allow: - 21+ days growth before spraying in spring 5 days before cultivating or drilling.
		Perennial broad-leaved weeds and other perennial grasses	All levels/species	2.0		
		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 PRODUCTION	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 rush, Molinia (purple moor-grass), Sheep's fescue, Red fescue, White Clover (best cut in June and sprayed one month later and Yellow rattle	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

AREA OF USE	CROP/SITUATION	TARGET WEEDS/USAGE	WEED INFESTATION	APPLICATION RATE (L/ha)	WATER VOLUME	APPLICATION TIMING AND GUIDANCE
IN-CROP (TRACTOR-MOUNTED WICK-TYPE WEED WIPER APPLICATION)	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.
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 applications	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.