



# Roundup<sup>®</sup> ProVantage XL



 - Herbicide

Bayer Amenity

**A foliar applied translocated herbicide for the control of emerged weeds in industrial and amenity situations, in grassland, orchards, forestry and in aquatic areas.**

Degraded by micro-organisms/microbes in the soil.

A soluble concentrate containing 450 g/L glyphosate, present as 550 g/L (42.2 w/w) of the potassium salt of glyphosate

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

**MAPP Number 21188**

**PROTECT FROM FROST**

GROUP	9	HERBICIDE
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A1 – GB30461667a

**e 5 Litres**

**Bayer CropScience Ltd**  
230 Cambridge Science Park, Milton Road,  
Cambridge, CB4 0WB, UK.

Telephone: 01223 226500;  
<https://cropscience.bayer.co.uk/>

**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)**

**National Poisons Information Centre Dublin:  
+353 1 809 2166**



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**ROUNDUP PROVANTAGE XL** UFI: 1WS1-P03G-1006-F4ED  
Contains potassium salt of glyphosate and fatty alkyl ether alkyl  
amine ethoxylate.

#### Warning

**Causes serious eye irritation.**

**Toxic to aquatic life with long lasting effects.**



Wash thoroughly after handling.

Wear protective gloves/ eye protection/ face protection.

Keep only in original container.

IF IN EYES: Rinse cautiously with water for several minutes. Remove  
contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

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.

**COMPLIANCE WITH THE FOLLOWING CONDITIONS OF USE AND ALL SAFETY PRECAUTIONS MARKED\* IS A LEGAL REQUIREMENT**  
FOR PROFESSIONAL USE ONLY AS AN AGRICULTURAL / HORTICULTURAL / INDUSTRIAL / FORESTRY / AQUATIC HERBICIDE

All edible and non-edible crops (destruction, before sowing/planting). Grassland. Natural surfaces not intended to bear vegetation; permeable  
surfaces overlaying soil; hard surfaces. Enclosed waters, open waters, land immediately adjacent to aquatic areas. Forest, forest nursery  
(weed control, stump application and chemical thinning). Apples, pears; plums, cherries, damsons. Amenity vegetation. Forestry, Farm forestry.

Maximum individual dose: }  
Maximum number of treatments: }  
Latest time of application: }  
Other specific restrictions: }

Full details are given in the Statutory Area  
on the attached leaflet  
Crop Specific Information – marked #

**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.\*\***

## SAFETY PRECAUTIONS

### Operator protection

*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 when handling contaminated surfaces.

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS), SUITABLE  
PROTECTIVE GLOVES AND RUBBER BOOTS when using hand-held  
sprayers, hand-held rotary atomisers or spot gun equipment.  
WASH HANDS AND EXPOSED SKIN before eating and drinking and  
after work.

*However, engineering controls may replace personal protective  
equipment if a COSHH assessment shows they provide an equal or  
higher standard of protection.*

### Environmental protection

Do not contaminate water with the product or its container except when  
used as directed. Do not clean application equipment near surface water.

Avoid contamination via drains from farmyards and roads.

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 ProVantage XL  
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.

KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.

RINSE CONTAINER THOROUGHLY by using an integrated  
pressure-rinsing device or manually rinse three times. Add  
washings to sprayer at time of filling and dispose of safely.



**MAPP: 21188**

GB30461668a A 1

Crop specific information

	MAXIMUM INDIVIDUAL DOSE (litres product/ hectare)	MAXIMUM TOTAL DOSE (litres of product/ hectare/crop or situation/annum)	LATEST TIME OF APPLICATION
CROPS OR SITUATIONS			
Grassland	4.8	4.8	5 days before harvest, grazing or drilling
Apple and pear orchards	4.0	4.0	After harvest but before green cluster stage
Cherry, plum and damson orchards	4.0	4.0	After harvest (post leaf fall) but before white bud stage
All edible and non-edible crops (destruction, before sowing/planting).	4.0	-	-
Natural surfaces not intended to bear vegetation, permeable surfaces overlying soil, hard surfaces including railway ballast.	4.0	-	-
Enclosed waters, open waters, land immediately adjacent to aquatic area (see Other Specific Restrictions).	4.8	-	-
Forestry, Farm forestry: Weed control Stump application	8.0 litres/hectare 160 ml/litre of water (16% solution of product in water)	-	-
Chemical thinning (by injection)	1.6 ml per 10 cm diameter (or less) of tree	-	-
Amenity vegetation	4.0	-	-
<b>OTHER SPECIFIC RESTRICTIONS:</b> 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. The maximum concentration of active substance in treated water should not exceed 0.04 ppm. When applying through rotary atomisers, the spray droplet spectra produced must be of a minimum Volume Median Diameter (VMD) of 200 microns.			

AMENITY, INDUSTRIAL AND GENERAL WEED CONTROL

Exclusion Times

People, pets and wildlife need not be kept out of treated areas. It is best not to walk in areas where the spray is still wet as transfer to other vegetation may lead to unwanted damage to other foliage. Once the spray is dry this cannot occur.

Area of Use

Roundup ProVantage XL is recommended for control of annual and perennial grasses and broad-leaved weeds in non-crop areas, for cleaning up weedy ground prior to planting or sowing and for aquatic weed control. Roundup ProVantage XL may also be used as a directed spray in ornamental plantings, orchards and for spot treating in grassland. Roundup ProVantage XL must be targeted only at weed growth on hard surfaces such as roadsides and paths, (see recommendation table for details).

Application Rate

1.0 to 4.8 litres/ha – refer to Recommendation Tables

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.

**Warnings**  
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 PROVANTAGE XL IN GALVANISED OR UNLINED STEEL CONTAINERS OR SPRAY TANKS.  
DO NOT leave spray mixtures in tank for long periods and make sure tanks are WELL VENTED.

**Restrictions**  
A period without rain of at least 6 hours, and preferably 24 hours, must follow application of Roundup ProVantage XL herbicide.

(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 stage.
- ANNUAL GRASSES AND BROAD-LEAVED WEEDS should have at least 5 cm of leaf, or 2 expanded true leaves, respectively.
- BRACKEN should be treated after frond tips are unfurled, but pre – senescence. This product will not give an acceptable level of control of Horsetails (*Equisetum arvense*) – repeat treatment will be necessary.

Aquatic

AQUATIC WEEDS should be treated when the weeds are actively growing with full emergence of green leaf, at flowering and before dieback. Best results are obtained from applications in the periods from mid-July to mid-August on Water-lily and mid-August to mid-September on reeds.

OTHER SPECIES – recommendations for specific areas of use are given in the Recommendation Tables.

**Following crops**  
(Subsequent land use following application of Roundup ProVantage XL)  
Upon soil adsorption the herbicidal properties of Roundup Roundup ProVantage XL are lost permitting the drilling of crops 48 hours after application.

**Weeds controlled**  
Roundup ProVantage XL herbicide controls most emerged grasses and broad-leaved weeds. 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

Apply Roundup ProVantage XL herbicide where there is full emergence of grasses and broad-leaved weeds and they have ACTIVELY GROWING green leaves.  
• PERENNIAL GRASSES must have full emergence of healthy, green leaf.

	SPRAYING WITH 3.75 L/Ha	
HYDRAULIC SPRAYERS	STANDARD VOLUME (200 L/Ha)*	LOW VOLUME (100 L/Ha)
Boom sprayer	4 litres in 200 litres water covers 1 ha	4 litres in 100 litres water covers 1 ha
Knapsack / handheld sprayer*	200 ml in 10 litres water covers 500 m²	400 ml in 10 litres water covers 1000 m²

\* Walking speed of 1 m/second and 1 m swath

Roundup ProVantage XLcan also be applied using rotary atomisers and weed wipers. See 'Mixing and Spraying' section

Mixing and spraying

Roundup ProVantage XL mixes readily with water and can be applied in spray volumes ranging from 10 – 400 L/ha using tractor mounted, knapsack, rotary atomisers and hand-held sprayers. Specialised application equipment such as weed wipers, stem injection and spot gun applicators may be used where indicated.

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

a) Tractor mounted and powered hydraulic sprayers

These should be capable of applying accurately 80 – 400 L/ha within a pressure range of 1.5 – 2.5 bars (20 – 35 psi).

Half fill the spray tank with clean water, start gentle agitation, and then add the correct amount of Roundup ProVantage XL. Top up the tank with water to the required level. To avoid foaming do not use top tank agitation. Use of a defoamer may be necessary.

Medium Volume application

(150–300 L/ha)  
Apply high water volumes (>300 L/ha) which may lead to run-off from the treated

vegetation, resulting in reduced control. Low drift nozzles such as air induction and pre-orifice types producing a medium or coarse spray (BCPC definition) should be used to minimise the risk of drift.

**Low Volume Application** (minimum 80 L/ha)  
Low volume application can be achieved by reducing pressure and the appropriate nozzle selection. Low drift nozzles which produce a medium spray quality (BCPC definition) should be used to minimise the risk of drift.

b) Knapsack Sprayers

Recommended delivery range is 80 - 250 L/ha.  
Half fill the spray tank with clean water, add the correct amount of Roundup ProVantage XL and top up with water.

When used at a walking speed of 1 metre/second to apply a swath of 1 metre width, most knapsack sprayers fitted with a Hypro AN 1.2 or similar nozzle deliver approximately 200 L/ha spray volume (or 10 L per 500 m²). To apply 4.0 L/ha of Roundup ProVantage XL, therefore, use a 2.0% solution, i.e. 200ml Roundup ProVantage XL made up to 10 litres. Similarly, knapsack sprayers fitted with low volume nozzles such as Hypro DT 1.5 typically deliver approximately 100 L/ha spray volume. To apply 4.0 L/ha Roundup ProVantage XL in this case use 4.0% solution.

c) Rotary Atomisers

Hand-held machines can be used to apply a spray volume of 10-40 L/ha, e.g. Herbi and Herbaflex.  
Tractor-mounted rotary atomiser boom sprayers are suitable for use in amenity, industrial, forestry, orchards and aquatic areas situations to apply a spray volume of 10-40 L/ha.

When conventional rotary atomisers are used to apply Roundup ProVantage XL ensure that the droplet diameter falls within the range 200-300 microns for all uses.

Roundup ProVantage XL may be applied neat through specialised ULV applicators which have drift reducing systems or at a spray volume of 10-40 L/ha through conventional rotary atomisers.

d) Weed Wipers

For ropewick applicators use a concentration of 1 part Roundup ProVantage XL to 2.75 parts of water and add a water-soluble dye if required. Care should be taken to avoid dripping onto wanted vegetation.

For new generation weed wipers, use 1 part Roundup ProVantage XL to 10 or 20 parts of water or as directed by manufacturer's instructions. A list of machines is included in the Company Advisory section at the end of this label.

e) Cut Stump Applicators

For cut stump treatment an Enso attachment to rotary saws may be used. This technique is specific to scrub clearance in forestry. A suitable water soluble dye may be used.

f) Stem injection

Use a hatchet to cut one notch in trees up to 10 cm diameter and two to three notches in trees above 10 cm diameter. Use 1.6 ml of undiluted Roundup ProVantage XL per notch. Specialist stem injection equipment can be used to inject 1.6 mls Roundup ProVantage XL into hollow stems such as Japanese Knotweed and Giant Hogweed.

g) Spot Gun Applicators

Spot gun applicators are for the treatment of individual weeds. Apply 4 ml of spray to target weed, using a narrow cone TG-3 or TG-5 nozzle.

SPOT DIAMETER (METRES)	AMOUNT OF ROUNDUP PROVANTAGE XL (ML) PER 5 LITRES SPRAY SOLUTION FOR TARGETED DOSAGES OF:		
	2.4 L/Ha	3.2 L/Ha	4.0 L/Ha
0.3	16	2.4	28
0.6	68	88	112

When used in paddocks keep livestock out of treated area until treated Ragwort or other poisonous weeds have either been removed or died down completely.

Boat mounted sprayers

For use in aquatic situations. Prepare sprayer as for knapsack sprayers (Section b above). Calibrate and spray at the lowest speed possible.

Always apply against the direction of any current.

Compatibility

For hydraulic sprayers: maintain continuous agitation when using ROUNDUP Roundup ProVantage XL in tank mixture.

For knapsack sprayers: mix thoroughly and use immediately when using ROUNDUP ST Roundup ProVantage XL AR in tank mixture.

Roundup ProVantage XL is compatible with Mixture B NF (ADJ 0570). Where conventional hydraulic sprayers are being used Mixture B may be added to the spray tank solution, at a rate of 2% of the final water volume, for all pre-plant and post-plant directed sprays only.

DO NOT APPLY WITH MIXTURE B NF TO EDIBLE CROPS< GRASSLAND OR AQUATIC WEEDS.

Do not tank mix Roundup ProVantage XL with adjuvants, pesticides or fertilisers except as advised by Bayer CropScience. For up to date information on compatible products contact Bayer CropScience.

Do not tank-mix ROUNDUP ProVantage XL when using rotary atomiser sprayers.

COMPANY ADVISORY INFORMATION

This section is not part of the Product Label under the Plant Protection Products Regulations 2011 and provides additional advice on the product.

General Information

Roundup ProVantage XL is an advanced glyphosate formulation that offers a high standard of operator safety.

To maximise the intrinsic safety of Roundup ProVantage XL to operator, consumer and environment, the label recommendations and the Code of Practice for Using Plant Protection Products should be adhered to.

Roundup ProVantage XL herbicide is a foliar-acting herbicide with broad-spectrum activity. It is taken up by foliage and translocated to underground roots, rhizomes and stolons, providing control of both annual and perennial grasses and broad-leaved weeds. Roundup Roundup ProVantage XL 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 Roundup ProVantage XL spray drift may be used immediately for irrigation purposes.

Until degraded, the active ingredient in Roundup ProVantage XL, glyphosate, is practically immobile in soils and is, therefore, unlikely to contaminate groundwater.

Roundup Roundup ProVantage XL is recommended for control of annual and perennial weeds in non-crop areas such as railways, roadsides, paths and hard surfaces.

Symptoms on the weeds

Symptoms of treatment are generally first seen 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 of nettles is slow.

Weed resistance strategy

There is low risk for the development of weed resistance to Roundup ProVantage XL.

Users are encouraged to implement a weed resistance strategy based on (a) good industrial practices and

- 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

Calibration

All sprayers should always be calibrated before use. This is essential when nozzles are changed or if a different dose of product is to be applied.

Unused Spray Mixture

Once Roundup Roundup ProVantage XL has been diluted in the spray tank, it should be used as soon as possible. However, if unexpected delays occur the diluted spray can be safely stored. Storage for longer than 3 days may result in reduced efficacy

Sprayer Maintenance

Ensure the sprayer is in good working order and replace damaged, worn or malfunctioning parts before use. Carry out maintenance according to the instructions of the sprayer manufacturer.

Sprayer hygiene

It is essential to thoroughly clean-out spray tanks, pumps and pipelines and nozzle or disc assemblies, with a recommended detergent cleaner, between applying this product and other pesticides to avoid contamination from pesticide residues.

Disposal

Follow the guidance on the disposal of surplus spray solution, tank washings, concentrate and containers as given in the Code of Practice for Using Plant Protection Products.

Material Safety Data Sheet

Following the instructions on this Product Label for the specified uses should ensure that the product is used safely and efficaciously for those uses.

A Material Safety Data Sheet is available on request.

Download from  
<https://cropsscience.bayer.co.uk/our-products/amenity>

or Telephone: 01223 226500

Roundup is a Registered Trademark of the Bayer group



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IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention.  
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.  
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All edible and non-edible crops (destruction, before sowing/planting). Grassland. Natural surfaces not intended to bear vegetation; permeable surfaces overlaying soil; hard surfaces. Enclosed waters, open waters, land immediately adjacent to aquatic areas. Forest, forest nursery (weed control, stump application and chemical thinning). Apples, pears, plums, cherries, damsons. Amenity vegetation. Forestry, Farm forestry.

Maximum individual dose:  
Maximum number of treatments:  
Latest time of application:  
Other specific restrictions:

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**SAFETY PRECAUTIONS**  
**Operator protection**  
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 when handling contaminated surfaces.  
WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS), SUITABLE PROTECTIVE GLOVES AND RUBBER BOOTS when using hand-held sprayers, hand-held rotary atomisers or spot gun equipment.  
WASH HANDS AND EXPOSED SKIN before eating and drinking and after work.  
However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection.  
**Environmental protection**  
Do not contaminate water with the product or its container except when used as directed. Do not clean application equipment near surface water. Avoid contamination via drains from farmyards and roads.  
**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 Roundup ProVantage XL 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.  
KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.  
RINSE CONTAINER THOROUGHLY by using an integrated pressure-rinsing device or manually rinse three times. Add washings to sprayer at time of filling and dispose of safely.

MAPP: 21188

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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
ALL EDIBLE AND NON-EDIBLE CROPS (DESTRUCTION, BEFORE SOWING/PLANTING)	Vegetation management	-	Annual weeds	1.2	80-250 L/ha* or hand-held equipment section	*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 in or alongside hedgerows Do not use under polythene or glass
			Perennial grasses	3.2		
			Perennial broad-leaved weeds	4.0		
GRASSLAND - DESTRUCTION	GRASS	Short rotation Ryegrass, longer leys and permanent pasture	Short rotation Ryegrass with annual weeds	2.4	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, 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	3.2		
			Long leys 4-7 years old with perennial broad-leaved weeds	4.0		
			Permanent pasture See Weed Table below	4.8		

APPLICATION RATE FOR GRASSLAND DESTRUCTION							
2.4 L/HA		3.2 L/HA		4.0 L/HA		4.8 L/HA	
Annual Meadow-grass	Meadow Fescue	Black-bent	Creeping Soft-grass	Bracken**	Red Clover	Common Ragwort	<i>Nardus</i> (Mat grass)
Common Chickweed	Meadow Foxtail	Broad-leaved Dock	Curled Dock	Common Sorrel	Sedges	Hard Rush	Red Fescue
Common Mouse-ear	Rough Meadow-grass	Cock's-foot	Perennial Ryegrass	Common Nettle	Sheep's Sorrel	Heath Rush	White Clover*
Dock Seedlings	Speedwell species	Common Bent	Plantains	Creeping Buttercup*	Soft Rush	Jointed Rush	Yellow Rattle
Italian Rye-grass	Timothy	Common Couch	Soft Brome	Creeping Thistle	Spear Thistle	<i>Molinia</i> (Purple Moor-grass)	Sheep's Fescue
Mayweed species		Creeping Bent	Yorkshire Fog	Daisy	Tufted Hairgrass		
				Dwarf Thistle	Yarrow		
				Perennial Sow-thistle			

\* 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 L/HA	WATER VOLUME	APPLICATION TIMING AND GUIDANCE
NATURAL SURFACES NOT INTENDED TO BEAR VEGETATION, PERMEABLE SURFACES OVERLYING SOIL, RAILWAY BALLAST	Vegetation management	Including roadsides, paths and along fences	Annual weeds	1.2	Hydraulic sprayers (boom and knapsack) at water volumes 80-250 L/ha or Rotary atomisers* or hand-held equipment. See Mixing & Spraying section.	Do not use under polythene or glass.
			Perennial grasses and broad-leaved weeds	4.0		
HARD SURFACES (EXCLUDING RAILWAY BALLAST)	Vegetation management	including roadsides, paths, concrete and alongside walls	Annual weeds	1.2	Hydraulic sprayers (boom and knapsack) at water volumes 80-250 L/ha or Rotary atomisers* or hand-held equipment. See Mixing & Spraying section.	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 30 cm swath covering the kerb edge and road gully – do not overspray drains
			Perennial grasses and broad-leaved weeds	4.0		
AMENITY VEGETATION	Vegetation management	Ornamental areas	Annual weeds	1.2	Hydraulic sprayers (boom and knapsack) at water volumes 80-400 L/ha or Rotary atomisers* at water volumes 10-40 L/ha or hand-held equipment. See Mixing & Spraying section.	Do not use under polythene or glass.
			Perennial grasses and broad-leaved weeds	4.0		

\*Rotary atomisers may be used at a water volume of 10-40 L/ha. Ensure droplet diameter falls within the range 200-300 microns

Japanese Knotweed control

Japanese Knotweed is an invasive alien species reducing biodiversity in areas where it become established and propagating from tiny fragments of root, often spreading along watercourses. It is scheduled under the Wildlife and Countryside Act 1981 and all parts of the plant must be treated as Controlled Waste under the Environmental Protection Act 1990.

Roundup ProVantage XL can be used alone as part of an eradication programme or as part of an integrated programme in conjunction with soil disturbance or removal. Dormant rhizomes will not be controlled by Roundup ProVantage XL, but may be stimulated to grow by soil disturbance and then sprayed. It is particularly suitable for use near water. Sites must be monitored for at least three years and re-treated as necessary.

AREA OF USE	TARGET WEED	METHOD	APPLICATION RATE / WATER VOLUME	APPLICATION TIMING AND GUIDANCE
Amenity vegetation; Forestry; Natural surfaces not intended to bear vegetation, permeable surfaces overlying soil, hard surfaces; Enclosed waters, open waters, land immediately adjacent to aquatic area	Japanese Knotweed	Foliar application	4.0 L/ha Hydraulic sprayers 80-250 L/ha or hand-held equipment	For best results apply after the onset of flowering (usually August/September) but before dieback. Use specialist extending hand lances for stands 2-3 m tall. Good coverage is essential; spray the underside as well as the upper surface of the leaves. Or Only as part of an integrated programme, spray when stems are 1-1.5 m high (Usually at end of May) and repeat once re-growth reaches 1-1.5 m again later in same season or the following year. (More re-growth will occur from this timing.)
		Stem filling technique	10 ml of 16% solution per stem	See National Trust Methodology for full details*. Cut stems approx. 200 mm above base of cane & 40 mm above node. Rupture the central stem tissue with a screwdriver and use a spot gun to insert Roundup ProVantage XL into the hollow stem within 15 minutes of cutting.
		Stem injection technique	1.6 ml of neat solution per stem	Using specialist stem injection equipment, inject directly into individual stems.
		Hand-held weed wiper	1 part Roundup ProVantage XL to 2.75 parts water	Use where overall spraying is not desirable or target plants are small or unsuitable for stem filling, (< 8 mm) e.g. in re-treatment following foliar spraying.

AREA OF USE	CROP/SITUATION	TARGET WEEDS/USAGE	WEED INFESTATION	APPLICATION RATE L/HA	WATER VOLUME	APPLICATION TIMING AND GUIDANCE
ORCHARDS	APPLE, PEAR, PLUM, CHERRY, DAMSON	Perennial grasses, broad-leaved weeds	All levels of most species	4.0	200-400 L/ha	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.
		Root suckers	-	4.0		
ENCLOSED WATERS, OPEN WATERS, LAND IMMEDIATELY ADJACENT TO AQUATIC AREAS	-	Emerged Weeds - Reeds, Rushes, Sedges, Grasses and Watercress	All levels/species	4.0	200-400 L/ha Optimum 250 L/ha or hand-held equipment (p.12)	Consult appropriate Environment Agency regional office before use. On water-lilies it is preferable to use a tractor or boat-mounted sprayer. During spraying do not exceed a pressure of 2.0 bars (30 p.s.i.). When using a tractor mounted sprayer do not exceed 8 kph (5 mph). Use boat-mounted sprayers at slowest practical speed. Always apply against direction of any current. When disturbed by wash, WATER-LILIES may require re-treatment.
		Floating Weeds - White water-lily - Yellow water-lily	All levels	4.8	100-200 L/ha or hand-held equipment (p.12)	

AREA OF USE	CROP/SITUATION	TARGET WEEDS/USAGE	WEED INFESTATION	APPLICATION RATE L/HA	WATER VOLUME	APPLICATION TIMING AND GUIDANCE
GRASSLAND, PLANT FREE AREAS, ORNAMENTAL PLANTINGS, AMENITY VEGETATION	-	Individual weeds	All levels	1:2.75 dilution with water for wick-type weed wipers OR 1:1.5 dilution with water in hot, dry conditions. For 'new generation' wipers consult the manufacturer for guidance.		Weeds must be 10+ cm taller, and wiper 5+ cm higher, than desired vegetation. Contact Bayer Crop Science or your distributor for specific recommended weed wiper applicators. Treated POISONOUS WEEDS must be removed or allowed to completely degenerate before grazing or conserving. If Ragwort is present, the guidance in the 'DIRECTIONS FOR USE' must be followed.

Forestry weed control

Roundup ProVantage can be used for site preparation and for weed control in planted out trees.

AREA OF USE	TARGET WEEDS/USAGE	WEED INFESTATION	APPLICATION RATE L/HA.	WATER VOLUME	APPLICATION GUIDANCE
Forestry: - Pre-planting	Arable land, planting, replanting, & grassland areas	Arable weeds Grassland weeds	3.2 4.0	Hydraulic sprayers: 80-250 L/ha or rotary atomizers: 40 L/ha*	All tree species may be planted 7 days or more after treatment *Where rotary atomisers are used their droplet diameter must fall within the range 200-300µm.
Forestry: - Post-planting (directed) in conifers & broad-leaved trees	Clean-up around trees with knapsack applications.	Annual/perennial grasses and broad-leaves	3.2	Knapsack sprayers: 200-250 L/ha or Weed wiper mini: 1 part ROUNDUP PROVANTAGE XL to 2.75 parts water	It is ESSENTIAL to use a TREE GUARD for all applications made in the growing season. Treat bracken after frond tips are unfurled but before senescence. Treat heather late August to end September. All other woody weeds are treated June-August, before leaf senescence (but after new growth of crop has hardened).
		Woody weeds: Bracken/Beech Brush/Brambles Sycamore/Oak Hazel/Willow/Ash	2.4		
		Heather (peat soils) Heather (mineral soils)	3.2 4.8		
		Rhododendron (*)	8.0		
				250 L/ha	Cut back and treat regrowth when at least 1 metre in height throughout the entire coppice.

(\*) For improved control of Rhododendron add Mixture B (ADJ AO570) at a concentration of 2% final water volume to 6.0 L/ha of Roundup ProVantage XL. Application using the weed wiper is not suitable.

AREA OF USE	TARGET WEEDS/USAGE	WEED INFESTATION	APPLICATION RATE L/HA.	WATER VOLUME	APPLICATION GUIDANCE
Forestry: - Post-planting (overall dormant season in certain conifers – conifer release)	Grass weeds - Lowland areas - Upland areas  Bracken Beech & Birch Brambles	Black Bent, Cock's-foot, Common Couch, Creeping Soft-grass, False Oat-grass, Fescues, Meadow-grasses, Other Bent species, Purple Moor-grass, Sweet Vernal-grass, Tufted Hair-grass, Wavy Hair-grass, Wood Small-reed (Bush grass)  All levels of all species All levels of all species All levels of all species	1.2 1.6  1.6 1.6 2.4	Hydraulic sprayers: 200-250 L/ha or Hand-held equipment - see 'Mixing and Spraying' section	Species safe to spray when fully dormant and leader growth has hardened: Corsican, Lodgepole and Scots Pines, Norway Spruce, Sitka Spruce, Lawson Cypress, Western Red Cedar. Douglas Fir and Noble Fir – safe to spray when fully dormant and leader growth has hardened but NOT in spring. If overall application takes place after the optimum timing weed control may be reduced. It is advisable to spray a limited area of forest to test crop safety under local conditions before widespread overall application in subsequent years. These recommended application rates refer to forestry usage only. Inadequate control may result if used in other areas. Caution: The timing of hardening of leader growth varies considerably between locations and between seasons. It may occur as early as the end of July or be delayed to October or later. To avoid damage to Lammas growth, sprays should be directed away from leaders.
Forestry: - Stump application for chemical thinning	Deciduous trees  Coniferous trees	All species  All species	8% solution of Roundup ProVantage XL in water  16% solution of Roundup ProVantage XL in water		Apply the solution to saturate the rim of the newly cut surface, with a suitable adapted clearing saw, spot gun or paintbrush. Treat as soon as possible after felling, in the period November to March/April. Do not apply in the period of active sap flow in the spring/early summer. Do not cut trenches or drill holes and fill with the solution or use undiluted product. Note: for ease of identification of treated areas a suitable, commercially available, water-soluble dye may be added to the prepared spray solution.
Forestry: - Chemical thinning by injection of tree stems	Coniferous and deciduous species	-	1.6 ml neat Roundup ProVantage XL per cut per 10 cm diameter (or less) tree		Use a hatchet to cut one notch in trees up to 10 cm diameter and apply 1.6 ml of the solution to each cut. Use two or three notches in trees over 10 cm diameter. Do not treat in the period of active sap flow in the spring/early summer.