H - Herbicide

Unlock the weed killing power of

ROUNDUP® PRO BIACTIVE®

Herbicide by Monsanto

The professionals' choice.

For the control of annual and perennial grass and broad-leaved weeds.

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

Degraded by micro-organisms/microbes in the soil.

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

This product contains a soluble concentrate containing 360 g/l glyphosate, present as 480 g/l (41.1% ww) of the isopropylamine salt of glyphosate.

Contents ℮ 5 litres

MAPP Number 10330

PROTECT FROM FROST

Imported

Lot number/production date:

The Voluntary Initiative

This label has been produced according to the Crop Protection Association Voluntary Initiative (VI) guidance.

To avoid risks to man and the environment, comply with the instructions for use

MONSANTO UK LIMITED,
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In case of emergency day or night, telephone National Chemical Emergency Centre: (01865) 407333

IMPORTANT INFORMATION

FOR USE ONLY AN INDUSTRIAL/HORTICULTURAL/FORESTRY/AQUATIC HERBICIDE

Crops/situations:

Natural surfaces not intended to bear vegetation; permeable surfaces overlaying soil; hard surfaces.
Enclosed waters, open waters, land immediately adjacent to aquatic area.
Forest, forest nursery.
Amenity vegetation.
All edible crops, all non-edible crops (destruction before sowing/planting).

Maximum individual dose: } Full details are given in
Maximum number of treatments: } the attached leaflet
Latest time of application: } (see Crop Specific Information -
Other specific restrictions: } 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, weed wiper equipment, spot gun equipment or when making cut stump applications.

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS), SUITABLE PROTECTIVE GLOVES, RUBBER BOOTS AND FACE PROTECTION (FACESHIELD) when using stem injection equipment.

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

WASH HANDS AND EXPOSED SKIN before eating and drinking or smoking 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]. † except when used as directed

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 Pro Biactive 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. Triple rinsed containers may be disposed of as non-hazardous waste.

Medical advice

Medical guidance is available on a 24 hour basis by telephoning the National Chemical Emergency Centre on 01865 407333 or for doctors, from the National Poisons Information Service on 0870 600 6266.

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 PRO BIACTIVE 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 Pro Biactive.

Do not spray on weeds where growth is impaired by natural senescence, drought, high temperature, a covering of dust, flooding or severe/prolonged frost at, or immediately after application, otherwise poor control may result.

Do not spray in windy conditions as drift onto desired crops or vegetation can severely damage or destroy them.

Applications of lime, fertiliser, farmyard manure and pesticides should be delayed until 5 days after application of Roundup Pro Biactive.

Do not tank-mix Roundup Pro Biactive with adjuvants, pesticides or fertilisers, except as specified in the 'Compatibility' section.

Weeds controlled

<u>Amenity, Forestry & Industrial</u>

Roundup Pro Biactive 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 Pro Biactive herbicide where there is full emergence of grasses and broad-leaved weeds and they have ACTIVELY GROWING green leaves. All weeds should be treated before growth slows down or stops in the autumn.

Perennial grasses, including Couch - at least 4-5 leaves of length 10-15 cm

Perennial broad-leaved weeds	-	around flowering
Annual grasses	-	5 cm of leaf
Annual broad-leaved weeds	-	2 leaves or more

This product will not give an acceptable control of Horsetails (*Equisetum arvense*) - repeat treatment will be necessary.

Note: the effects of treatment on the long-term control of perennial broad-leaved weeds has not been investigated.

Aquatic

Roundup Pro Biactive herbicide controls emerged and floating aquatic weeds including Common Reed, Reed Sweet-grass, Reed Canary-grass and Water-lily.

Treat 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-lilies and mid-August to mid-September on reeds.

Crop specific information

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Crops/situations	Maximum individual dose
Natural surfaces not intended to bear vegetation, permeable surfaces overlaying soil, hard surfaces	5 litres per hectare
Enclosed waters, open waters, land immediately adjacent to aquatic area (see Other Specific Restrictions).	6 litres per hectare
Forest, Forest nursery:	
• Weed control	10 litres per hectare
• Stump application	200 ml per litre of water (20% solution of product in water)
• Chemical thinning (by injection)	2 ml per 10 cm diameter (or less) of tree
Amenity vegetation	5 litres per hectare
All edible crops, all non-edible crops (destruction before sowing/planting).	5 litres per hectare

Other specific restrictions:

When applying through rotary atomisers, the spray droplet spectra produced must be of a minimum Volume Median Diameter (VMD) of 200 microns.

When using weed wipers, the maximum concentration must not exceed the following:
(a) Weed wiper mini - 1:2 dilution with water
(b) Other wipers - 1:1 dilution with water

For stump application, the maximum concentration must not exceed 200 ml of product per litre of water (i.e., a 20% solution).

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.

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 Pro Biactive is recommended for control of annual and perennial grasses and broad-leaved weeds in non-crop areas such as roadsides, paths, hard surfaces and along fences and walls. It is recommended for cleaning up weedy ground prior to planting or sowing, for total weed control on industrial sites and for aquatic weed control. Roundup Pro Biactive may also be used as a directed spray in ornamental plantings.

Application Rate

1.5 to 5.0 litres/ha – refer to Recommendation Tables

Application Guidance

Use the following guidance when spraying Roundup Pro Biactive at a rate of 5 l/ha.

	Spraying with 5 l/ha Roundup Pro Biactive		
HYDRAULIC SPRAYERS	**Standard nozzles (200 l/ha)**	**Low volume nozzles (100 l/ha)**	**VLV nozzles (50 l/ha)**
Boom sprayer	5 litres in 200 litres water covers 1 ha	5 litres in 100 litres water covers 1 ha	N/A
Knapsack sprayer *	250ml in 10 litres water covers 500 m^2	500 ml in 10 litres water covers 1000 m^2	1000 ml in 10 litres water covers 2000 m^2
* Walking speed of 1m/second and 1m swath			

Roundup Pro Biactive can also be applied using rotary atomisers and weed wipers. See 'Mixing and Spraying' section.

RECOMMENDATION TABLES

All edible crops, all non-edible crops (destruction before sowing/planting).

Area of Use	Target Weeds/Usage	Weed Infestation	Application Rate l/ha.	Water Volume	Application Guidance
All edible crops, all non-edible crops (destruction before sowing/ planting).	Vegetation management	Annual weeds Perennial grass weeds Perennial broad-leaved weeds	1.5 4.0 5.0	Hydraulic sprayers 80-250 l/ha* or hand-held equipment	Do not use under polythene or glass. *Rotary atomisers may be used at a water volume of 40 l/ha. Ensure droplet diameter falls within the range 200-300 microns Do not use in or alongside hedgerows

Amenity Vegetation

Area of Use	Target Weeds/Usage	Weed Infestation	Application Rate l/ha.	Water Volume	Application Guidance
Amenity vegetation	Vegetation management – ornamental areas	Annual weeds Perennial grass weeds Perennial broad-leaved weeds	1.5 4.0 5.0	Hydraulic sprayers 80-250 l/ha* or hand-held equipment	Do not use under polythene or glass. *Rotary atomisers may be used at a water volume of 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 becomes 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 Pro Biactive 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 Pro Biactive, 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 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	5l/ha Hydraulic sprayers 80-250 l/ha or hand-held equipment	For best results apply at flowering (usually August/September) but before dieback. Use specialist extending hand lances for stands 2-3m tall. Good coverage is essential; spray the underside as well as the upper surface of the leaves. Or As part of an integrated programme, spray when stems are 1-1.5m high (Usually at end of May) and repeat once re-growth reaches 1-1.5m again later in same season or the following year.
		Stem filling technique	10 ml of 20% solution per stem	Use where overall spraying is not desirable, especially near watercourses or among desirable plants. See National Trust Methodology for full details*. Timing: After mid August but before leaf fall. Stems must be >8mm diameter Cut stems approx. 200mm above base of cane & 40mm above node. Rupture the central stem tissue with a screwdriver and use a spot gun to insert Roundup Pro Biactive into the hollow stem within 15 minutes of cutting.
		Hand-held weed wiper	1 part Roundup Pro Biactive to 2 parts water	Use where overall spraying is not desirable or target plants are small or unsuitable for stem filling, (< 8mm) e.g. in re-treatment following foliar spraying.

*Download from http://www.projects.ex.ac.uk/knotweed or contact the Monsanto Technical Helpline 01223 849540

Natural surfaces not intended to bear vegetation, permeable surfaces overlying soil, hard surfaces

Area of Use	Target Weeds/Usage	Weed Infestation	Application Rate l/ha.	Water Volume	Application Guidance
Natural surfaces not intended to bear vegetation, permeable surfaces overlying soil, hard surfaces	Vegetation management - including roadsides, paths, hard surfaces and along fences and walls	Annual weeds Perennial grass weeds Perennial broad-leaved weeds	1.5 4.0 5.0	Hydraulic sprayers 80-250 l/ha* or hand-held equipment	Do not use under polythene or glass. *Rotary atomisers may be used at a water volume of 40 l/ha. Ensure droplet diameter falls within the range 200-300 microns

Forestry weed control

Roundup Pro Biactive 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	4.0 5.0	Hydraulic sprayers 80-250 l/ha or rotary atomisers 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 applicatiors	Annual/perennial grasses and broad-leaves	4.0	Apply as a concentration of 1 part Roundup Pro Biactive to 49 parts water (2%) or Weed wiper mini: 1 part Roundup Pro Biactive to 2 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	3.0		
		Heather (peat soils) Heather (mineral soils) Rhododendron (*)	4.0 6.0 10.0 or 4.0% solution	250 l/ha	Cut back Rhododendron and treat entire coppice when at least 1 metre in height. Spray to just before point of run-off.

(*) For improved control of Rhododendron add Mixture B (ADJ AO161) at a concentration of 2% final water volume to 8.0 l/ha of Roundup Pro Biactive. 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	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)	1.5 2.0	Hydraulic sprayers: 200-250 l/ha or Hand-held equipment - see 'Mixing and Spraying' section	DO NOT OVERALL SPRAY trees being grown for ORNAMENTAL PURPOSES, including CHRISTMAS TREES. 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.
	Bracken Beech & Birch Brambles	All levels of all species	2.0 2.0 3.0		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. See Caution below
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.					

Area of Use	Target Weeds/Usage	Weed Infestation	Application Rate l/ha.	Water Volume	Application Guidance
Forestry: - Stump application for chemical thinning	Deciduous trees	All species	10% solution of Roundup Pro Biactive 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.
	Coniferous trees	All species	20% solution of Roundup Pro Biactive in water		
Forestry: - Chemical thinning by injection of tree stems	Coniferous and deciduous species	-	2 ml neat Roundup Pro Biactive per cut per 10 cm diameter (or less) tree		Use a hatchet to cut one notch in trees up to 10cm diameter and apply 2 ml of the solution to each cut. Use two or three notches in trees over 10cm diameter. Do not treat in the period of active sap flow in the spring/early summer.

ENCLOSED WATERS, OPEN WATERS, LAND IMMEDIATELY ADJACENT TO AQUATIC AREAS

Target Weeds	Hydraulic Sprayers	Amount of Roundup Pro Biactive	Area Treated	Water Volume
Emergent weeds eg reed, grasses, water cress	Boom sprayer	5.0 litres	1 ha	200-400 litres Optimum 250 litres
	Knapsack sprayer	50 ml	100 m²	2.0 to 4.0 litres
Floating weeds eg water-lilies	Boom Sprayer	6.0 litres	1 ha	100-200 litres
	Knapsack Sprayer	60 ml	100 m²	4.0 litres

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 psi). When using a tractor-mounted sprayer, do not exceed 8 kph (5 mph). With a boat-mounted sprayer, use a slow forward speed to cause minimum disturbance to the floating leaves of the weeds. The use of a boat may result in some leaves being disturbed before Roundup Pro Biactive herbicide can be absorbed. Applications made in flowing water should be sprayed against the directions of the flow.

Roundup Pro Biactive herbicide MAY BE USED for the control of aquatic weeds in the presence of fish if used in strict accordance with the recommendations in this section.

Users must consult the appropriate Environment Agency regional office or Scottish Environmental Protection Agency before applying Roundup Pro Biactive herbicide in reservoirs, watercourses and waterways.

Following Crops

Subsequent Land Use Following Crops

Planting of trees, shrubs, etc. may take place 7 days after application. Grass may be sown 15 days after treatment.

Mixing and spraying

Conventional hydraulic sprayers

Knapsack sprayers, tractor-mounted, boat-mounted or powered sprayers may be used. These should be capable of applying accurately 80-400 l/ha within a pressure range of 1.5-2.5 bars (20-35 psi).

Avoid high water volumes which may lead to run-off from the treated vegetation, resulting in reduced control.

Nozzles producing a medium or coarse spray (BCPC definition) should be used to minimise the risk of drift. Below are examples of suitable nozzles:

Medium Volume Application (2-2.5% solution or 200-250 l/ha)

Knapsack	Lurmark AN2, AN 4.0, Cooper Pegler Deflector tips yellow, green, blue or red
Tractor	Lurmark 04-F110 - 08F110,TeeJet® 11004 -11008, DG11004, DG11005, Sprays International 110-SF-04

Low Volume Application (5-6% solution or 80 -100l/ha)

Knapsack	Cooper Pegler VLV DT1.5, Lurmark AN 1.5, Sprays International DEF-015
Tractor	Lurmark Lo-Drift, TeeJet® DG,XR,TT-110015, Sprays International 110-UF02

Filling the Sprayer

Fill according to best practice as given on the CPA's Voluntary Initiative website (www.voluntaryinitiative.org.uk)

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

Rotary atomisers

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

- Rotary atomisers may be used for the control of aquatic weeds at a spray volume of 40 litres/ha.

Filling the sprayer bottle - hand-held machines

Stir the correct amount of Roundup Pro Biactive into the sprayer bottle half filled with clean water. Top up with water, close the top and shake gently to ensure good mixing.

Overall, non-selective applications

Hand-held wipers

Roundup Pro Biactive may be applied through the Weed wiper mini. Use a concentration of 1 part Roundup Pro Biactive to 2 parts of water (a 1:2 ratio) and add 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.

Cut stump application

Enso attachment to rotary saws

This technique is specific to scrub clearance in Forestry. A water-soluble dye may be added to Roundup Pro Biactive to help identify treated stumps.

Spot gun applicators

For treatment of individual weeds.

Apply 5 ml of spray to target weed, using a narrow cone TG-3 or TG-5 nozzle.

Spot Diameter (metres)	Amount of Roundup Pro Biactive (ml) per 5 litres spray solution			
	3.0 l/ha	4.0 l/ha	5.0 l/ha	10.0 l/ha
0.3 0.6	20 85	28 110	35 140	70 280

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.

Compatibility

Roundup Pro Biactive is compatible with:

Mixture B (adjuvant)

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 Pro Biactive herbicide is an advanced formulation containing glyphosate. Roundup Pro Biactive 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 Pro Biactive 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. Until degraded, the active ingredient in Roundup Pro Biactive, glyphosate, is practically immobile in soils and is, therefore, unlikely to contaminate groundwater.

Roundup Pro Biactive is a glyphosate formulation which, having no hazard classification, offers a high standard of operator safety. To maximise the intrinsic safety of Roundup Pro Biactive to operator, consumer and environment, the label recommendations and the DEFRA/HSC/NAW publication "Code of Practice for Using Plant Protection Products" of January 2006, should be adhered to.

Symptoms on the weeds

Amenity, Forestry & Industrial

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.

IMPORTANT: To obtain optimum weed control, weeds must be left undisturbed with no further treatment or cultivation for 7 days after application. Allow 2-3 weeks for symptoms to develop then re-treat any unaffected plants using spot treatments.

Aquatic

On reeds and grasses, leaf symptoms usually appear within 14-21 days of spraying in the early autumn. Complete foliage desiccation usually occurs 30-40 days after spraying. At this stage, the reeds can be cut and removed. During cold conditions leaf symptoms may not appear before natural dieback but no growth will occur in the season following spraying.

Weed resistance strategy

There is low risk for the development of weed resistance to Roundup Pro Biactive.

Strains of some annual weeds (e.g. Black-grass, Wild oats and Italian Ryegrass) have developed resistance to herbicides which may lead to poor control. 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 (Monsanto).

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 Monsanto UK Ltd (Tel: 01223 849540)

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.

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 Section 5 of the DEFRA/HSC/NAW

publication "Code of Practice for Using Plant Protection Products" of January 2006.

Environmental Information Sheet

An Environmental Information Sheet for this product is available from the CPA's Voluntary Initiative website (www.voluntaryinitiative.org.uk)

Trade Mark References

Roundup® is a registered trade mark of Monsanto Technology LLC.
Biactive® is a registered trade mark of Monsanto Technology LLC.
Monsanto® and the Vine symbol are registered trade marks of Monsanto Technology LLC.
All other brand names referred to are trade marks of other manufacturers in which proprietary rights may exist.

Monsanto does not warrant that the purchase or use of equipment mentioned in this document will not infringe any patent or trade mark registration.

SAFETY DATA SHEET

This Safety Data Sheet does not form part of the label approved under the Plant Protection Products Regulations 1995.

Following the instructions on this Product Label for the specified uses should ensure that the product is used 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 (telephone Monsanto Technical Helpline 01223 849540) or can be downloaded from the Monsanto website: www.monsanto-ag.co.uk

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