CLIPPER®

GROUP 9 HERBICIDE

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MAPP 14820

A foliar applied translocated herbicide for the control of annual and perennial grass and broad-leaved weeds before sowing or planting all crops.

For use pre-emergence and pre-harvest in cereals and certain other crops, destruction of grassland, and in set-aside, stubbles, orchards, forestry, industrial, amenity and non-crop areas.

A soluble concentrate containing 360 g/l glyphosate, present as 31% w/w of the potassium salt of glyphosate.

ADAMA

Keep out of reach of children.

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

FR R3.2.6 OCT21

20 litres

To access the Safety Data Sheet for this product scan the QR code or use the weblink: http://goo.gl/IIM0j5 - Alternatively, contact your supplier.

Scan for Safety Data Sheet

This leaflet is part of the approved label.
For advice on medical emergencies, fires or major spills telephone the National Chemical Emergency Centre on 01865 407333

IMPORTANT INFORMATION

FOR PROFESSIONAL USE ONLY AS AN AGRICULTURAL/HORTICULTURAL/FORESTRY/INDUSTRIAL HERBICIDE

Crop/situations	Maximum individual dose (litres product/ha)	Maximum total dose per crop (litres product/ha)	Latest time of application
Pre-harvest of winter wheat, winter barley, winter oats, spring wheat, spring barley, spring oats, durum wheat, combining peas, field beans	4.0	4.0 L/ha/crop	7 days before harvest
Pre-harvest of oilseed rape and linseed	4.0	4.0 L/ha/crop	14 days before harvest
Pre-harvest of mustard	4.0	4.0 L/ha/crop	8 days before harvest
Post-planting and pre-emergence of wheat, barley, oats, oilseed rape, combining and vining pea, field bean, mustard, linseed, sugar beet, swede, turnip, bulb onions, leek	1.5	1.5 L/ha/crop	Pre-emergence
Asparagus	5.0	5.0 L/ha/year	Pre-emergence
Stubbles (of all crops)	Either: 4.0 Or: 1.5	4.0 L/ha/year 3.0 L/ha/year	5 days before drilling or planting of the following crop 2 days before the drilling or planting of the following crop or 24 hours before cultivating
Permanent grassland (destruction) Rotational grass (destruction)	6.0	6.0 L/ha/year	5 days before harvest, grazing or drilling
Natural surfaces not intended to bear vegetation, permeable surfaces overlaying soil, hard surfaces	5.0	-	-
Apple and pear orchards	5.0	5.0 L/ha/year	After harvest but before green cluster stage
Cherry, plum and damson orchards	5.0	5.0 L/ha/year	After harvest but before white bud stage
Green cover on land temporarily removed from production	6.0	6.0 L/ha/year	24 hours before cultivating
Amenity vegetation	5.0	-	-
All edible and non-edible crops (destruction, before sowing/planting)	5.0	5.0 L/ha/year	-
Forestry, forest nursery: Weed control	5.0		

Other specific restrictions:
The maximum individual dose must not exceed 22.5 g/l glyphosate for hydraulic knapsack sprayers.

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

Weed wipers may be used in any crop where the wiper or chemical does not touch the growing crop.

For weed wiper applications, the maximum concentrations must not exceed the following:

Weed wiper Mini	1:2 dilution with water	} Refer to weed wiper guidance under
Other wipers	1:1 dilution with water	} 'Mixing & Spraying' section

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 or handling contaminated surfaces.
WEAR SUITABLE PROTECTIVE GLOVES AND RUBBER BOOTS when applying by hand-held controlled droplet application (CDA) equipment.
WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS), SUITABLE PROTECTIVE GLOVES AND RUBBER BOOTS when applying by hand-held weed wiper.
However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection.
WHEN USING, DO NOT EAT, DRINK OR SMOKE.
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.

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.

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 NON TARGET PLANTS.

DO NOT MIX, STORE OR APPLY CLIPPER® 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 of at least 6 hours and preferably 24 hours rain-free must follow application of CLIPPER.

Do not spray onto weeds which are naturally senescing, or where growth is impaired by drought, high temperatures, a covering of dust, flooding or frost at, or immediately after application, otherwise poor control may result.

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

After application, large concentrations of decaying foliage, stolons, roots or rhizomes should be dispersed or buried by thorough cultivation before crop drilling.

Applications of lime, fertilizer, farmyard manure and pesticides should be delayed until 5 days after application of CLIPPER.

Crops should not be re-entered until spray residues are dry.

WEEDS CONTROLLED

CLIPPER is a foliar acting, translocated herbicide which controls annual and perennial grasses and most broad-leaved weeds when used as directed. It is important that all weeds are at the correct stage when treated, otherwise some re-growth may occur and this will need re-treatment.

Apply CLIPPER herbicide once grasses and broad-leaved weeds have emerged and they have ACTIVELY GROWING green leaves.

- PERENNIAL GRASSES must have a full emergence of healthy, green leaf. (Common couch, for example, becomes susceptible at the onset of tillering and new rhizome growth commences 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. 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 require re-treatment.
- OTHER SPECIES – recommendations for specific Areas of Use are given in the Recommendation Tables, pages 4 to 10.
- This product will not give an acceptable level of control of horsetails (*Equisetum arvense*) – repeat treatment will be necessary.

FOLLOWING CROPS

Upon soil adsorption the herbicidal properties of CLIPPER are lost permitting the drilling of crops 48 hours after application.

Planting of trees, shrubs etc may take place 7 days after application. Grass seed may be sown from 5 days after treatment; see the 'Recommendation Tables' for specific restrictions on direct drilled crops.

WEED RESISTANCE STRATEGY

There is low risk for the development of weed resistance to CLIPPER.

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 AHDB, CPA, your distributor, crop adviser or product manufacturer.

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 complementary 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 Adama Agricultural Solutions UK Ltd.

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. Traces of CLIPPER left in the equipment may seriously damage or destroy crops sprayed later.

RECOMMENDATION TABLES

#CROP SPECIFIC INFORMATION

AREA OF USE	TARGET WEEDS/ USAGE	CROP/SITUATION	WEED INFESTATION	APPLICATION RATE L/HA	WATER VOLUME
PRE-HARVEST ARABLE CROPS	Common couch	Winter and spring wheat, durum wheat, winter and spring barley and winter and spring oats	1 to 25 shoots/m^2 Up to 75 shoots/m^2 Over 75 shoots/m^2	2.0 (+) 3.0 4.0	80-250 L/ha*
		Oilseed rape and mustards	Up to 75 shoot/m^2 Over 75 shoots/m^2	3.0 4.0	100-250 L/ha#
		Combining peas, field beans	Up to 75 shoot/m^2 Over 75 shoots/m^2	3.0 4.0	80-250 L/ha*
		Linseed	Up to 75 shoot/m^2 Over 75 shoots/m^2	3.0 4.0	80-250 L/ha*
	Perennial broad-leaved weeds, other perennial grasses	Winter and spring wheat, durum wheat, winter and spring barley and winter and spring oats	All levels of species	4.0	80-250 L/ha*
		Oilseed rape and mustards	All levels of species	4.0	100-250 L/ha#
		Combining peas, field beans	All levels of species	4.0	80-250 L/ha*
		Linseed	All levels of species	4.0	80-250 L/ha*
	Harvest management	Winter and spring wheat, durum wheat, winter and spring barley and winter and spring oats	Annual grasses, crop stems and leaves Annual broad-leaved weeds	1.0 (+) 1.5 (+)	80-250 L/ha*
	Crop desiccation and annual weeds prior to direct combining	Oilseed rape and mustards	All levels/species	3.0	100-250 L/ha#
		Linseed	All levels/species	3.0	80-250 L/ha
STUBBLES PRE-SOWING AND PRE-PLANTING	Common couch	Before all crops except orchards	Up to 75 shoots/m^2 Over 75 shoots/m^2	3.0 4.0	80-250 L/ha*
	Other perennial grasses, volunteer potatoes (autumn only)		All levels of all species	4.0	
	Volunteer cereals and annual weeds		All levels of all species	1.5 (+)	
	Perennial broad-leaved weeds		All levels of all species	4.0	
	Perennial grasses and broad-leaved weeds	Before orchard planting	Arable weeds Pasture weeds	4.0 4.0	

APPLICATION TIMING AND GUIDANCE

PRE-HARVEST ARABLE CROPS

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

Use high clearance, narrow wheeled tractors, wide booms and crop dividers.

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. Consult grain merchant or processor before use.

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 a horticultural mulch.

DO NOT TREAT CROPS GROWN FOR SEED.

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

Use higher volumes for dense canopies.

(+) For optimum results use Frigate as an adjuvant at 0.5% spray solution as described in 'Compatibility' section.

STUBBLES PRE-SOWING AND PRE-PLANTING

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:

- 24 hours before cultivating
- 48 hours before drilling

Allow 7 days before planting trees

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

(+) For optimum results use Frigate as an adjuvant at 0.5% spray solution as described in 'Compatibility' section.

AREA OF USE	TARGET WEEDS/ USAGE	CROP/SITUATION	WEED INFESTATION	APPLICATION RATE L/HA	WATER VOLUME
POST SOWING/ PLANTING, PRE-EMERGENCE OF THE CROP	Volunteer cereals and annual weeds	Listed cereals, oilseed rape, mustard, linseed, peas, field beans, sugar beet, swede, turnip, onion and leek	All levels/species	1.5	80-250 L/ha*
	Annual weeds Perennial grasses Perennial broad-leaved weeds	Asparagus	All levels/species	1.5 4.0 5.0	
ALL EDIBLE CROPS (BEFORE PLANTING) AND NON-EDIBLE CROPS (BEFORE PLANTING)		Vegetation management	Annual weeds Perennial grasses Perennial broad-leaved weeds	1.5 4.0 5.0	80-250 L/ha* or hand-held equipment (pg 11)
GREEN COVER ON LAND NOT BEING USED FOR CROP PRODUCTION e.g 'SET-ASIDE'	Common couch	Before or during removal from production e.g. prior to growing a set aside mixture	Up to 75 shoots/m^2 Over 75 shoots/m^2	3.0 4.0	80-250 L/ha* or hand-held equipment (p.11) or tractor mounted weed wiper (p.11)
	Perennial broad-leaved weeds and other perennial grasses		All levels/species	4.0	
	Annual weeds - Early autumn/ spring - Late spring/ summer		All levels/species All levels/species	1.5 3.0	
	Natural regeneration and cover crop destruction	After short rotation or long term removal from production	Annual weeds only Perennial grasses Perennial broad-leaved weeds Perennial broad-leaved weeds as listed below.	3.0 4.0 5.0 6.0+	150-250 L/ha*
PERMANENT GRASSLAND (DESTRUCTION) **ROTATIONAL GRASS (DESTRUCTION)**	Short rotation ryegrass, longer leys and permanent pasture	Grass	Short rotation ryegrass with annual weeds Leys 2-4 years old with perennial grass weeds Long leys 4-7 years old with perennial broad-leaved weeds Permanent pasture *See following weed table*	3.0 4.0 5.0 6.0	150-250 L/ha*

APPLICATION TIMING AND GUIDANCE

POST SOWING/PLANTING, PRE-EMERGENCE OF THE CROP

CAUTION – Ensure that spraying precedes ANY crop emergence.

CAUTION – Ensure that spraying precedes ANY new spear emergence.

ALL EDIBLE CROPS (BEFORE PLANTING) AND NON-EDIBLE CROPS (BEFORE PLANTING)

*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 under polythene or glass

Do not use alongside or in hedgerows.

Apply at the annual weed dose at least 2 days before sowing/planting.

Apply at the perennial weed dose at least 5 days before sowing/planting.

GREEN COVER ON LAND NOT BEING USED FOR CROP PRODUCTION e.g 'SET-ASIDE'

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

For ANNUAL weed control, allow:

- 24 hours before cultivating

Do not direct drill after set-aside.

Avoid applications during stem elongation as reduced control and re-spray is likely.

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

Best control of annual grasses is achieved between full ear emergence and senescence.

+ Only for weeds listed as per grassland destruction application rate table below.

PERMANENT GRASSLAND (DESTRUCTION)

ROTATIONAL GRASS (DESTRUCTION)

Treat EITHER before grazing/mowing in June-Oct, when growth is 30-60 cm, not dense and lacking mature seeds, OR re-growth 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. 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. 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.

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.

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

APPLICATION RATES FOR GRASSLAND DESTRUCTION			
3.0 L/ha		**4.0 L/ha**	
Annual meadow-grass	Meadow fescue	Black bent	Creeping soft-grass
Common chickweed	Meadow foxtail	Broad-leaved dock	Curled dock
Common mouse-ear	Rough meadow-grass	Cock's foot	Perennial ryegrass
Dock seedlings	Speedwell species	Common bent	Plantains
Italian ryegrass	Timothy	Common couch	Soft brome
Mayweed species		Creeping bent	Yorkshire fog

APPLICATION RATES FOR GRASSLAND DESTRUCTION			
5.0 L/ha		**6.0 L/ha**	
Common sorrel	Red clover	Common ragwort	White clover*
Common nettle	Sedges	Hard rush	Yellow rattle
Creeping buttercup*	Sheep's sorrel	Heath rush	Sheep's fescue
Creeping thistle	Soft rush	Jointed rush	
Daisy	Spear thistle	Molinia (Purple moor-grass)	
Dwarf thistle	Tufted hair-grass	Nardus (Mat grass)	
Perennial sow thistle	Yarrow	Red fescue	

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

AREA OF USE	TARGET WEEDS/ USAGE	CROP/SITUATION	WEED INFESTATION	APPLICATION RATE L/HA	WATER VOLUME
NATURAL SURFACES NOT INTENDED TO BEAR VEGETATION, PERMEABLE SURFACES OVERLYING SOIL, HARD SURFACES	Annual weeds Perennial grasses Perennial broad-leaved weeds	-	All levels/species All levels/species All levels/species	1.5 4.0 5.0	Hydraulic sprayers: 80–250 L/ha or Rotary atomisers 40 L/ha*
AMENITY VEGETATION	Vegetation management	Areas of semi-natural or ornamental vegetation including trees. Areas of bare soil around ornamental plants or areas intended for ornamental planting.	Annual weeds	1.5	80-400 L/ha
			Perennial grasses and broad-leaved weeds	4.0-5.0	
ORCHARDS	Perennial grasses and broad-leaved weeds	Within orchards of apple, pear, plum, cherry or damson	All level of most species	5.0	200-400 L/ha
	Root suckers	-	All species	5.0	

APPLICATION TIMING AND GUIDANCE

NATURAL SURFACES NOT INTENDED TO BEAR VEGETATION, PERMEABLE SURFACES OVERLYING SOIL, HARD SURFACES

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

Use areas include:

Roadsides, paths, hard surfaces, along fences and walls and total weed control on industrial sites.

DO NOT USE IN OR ALONGSIDE HEDGEROWS.

DO NOT USE UNDER GLASS OR POLYETHYLENE.

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 gulley – do not overspray drains.

AMENITY VEGETATION

Hydraulic sprayers, rotary atomisers or weed wipers may be used.

DO NOT USE IN OR ALONGSIDE HEDGEROWS.

* 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 UNDER POLYTHENE OR GLASS.

ORCHARDS

Trees must have been established for 2 years before spraying.

Spray AFTER autumn leaf-fall and BEFORE;

Apples, pears – green cluster stage.

Stone fruit – white bud stage.

Avoid contact with tree branches and trunks above 30 cm from the ground.

Treat suckers in late spring only.

Forestry Weed Control
CLIPPER 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
Forestry: **- Pre-planting**	Arable land, planting, replanting, & grassland areas	Arable weeds Grassland weeds	4.0 5.0	80-250 L/ha*
Forestry: **- Post-planting (directed) in conifers & broad-leaved trees**	Clean up around trees with knapsack applications.	Annual/perennial grasses and broad-leaves	4.0	Knapsack sprayers: 200-250 L/ha or Weed wiper mini: 1 part CLIPPER to 2 parts water See 'Mixing and Spraying' section.
APPLICATION TIMING AND GUIDANCE				
Forestry: - Pre-planting All tree species may be planted 7 days or more after treatment. * Rotary atomisers may be used at a water volume of 40 L/ha. Ensure droplet diameter falls within the range 200-300 microns.				
Forestry: - Post-planting (directed) in conifers & broad-leaved trees It is ESSENTIAL to use a TREE GUARD for all applications made in the growing season.				

MIXING AND SPRAYING

CLIPPER mixes readily with water and can be applied in spray volumes ranging from 80-400 L/ha using tractor mounted, knapsack, rotary atomisers and hand-held sprayers. Specialised application equipment such as weed wipers 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 sprayers

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

Half-fill the spray tank with clean water, start gentle agitation, and then add the correct amount of CLIPPER. 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.

All applications using hydraulic sprayers (including knapsack sprayers) to be as 'MEDIUM' or 'COARSE' spray quality (BCPC definition).

Medium Volume application (150-300 L/ha)
Avoid 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 80-300 L/ha. Half-fill the spray tank with clean water, add the correct amount to CLIPPER and top up with water. Fill according to best practice as given on the CPA's Voluntary Initiative website: www. voluntaryinitiative.org.uk

When used at a walking speed of 1 m/sec to apply a swath of 1 m width, most knapsack sprayers fitted with a Hypro Polijet AN 1.2 or similar nozzle deliver approximately 200 L/ha spray volume (or 10 L per 500 m^2). To apply 4.0 L/ha of CLIPPER, therefore, use 40 ml of product for each 2 litres of spray liquid required. Similarly, knapsack sprayers fitted with low volume nozzles such as Hypro Polijet AN0.6 typically deliver approximately 100 L/ha spray volume. To apply 4.0 L/ha CLIPPER in this case, use 80 ml of product for each 2 litres of spray liquid required.

c) Rotary Atomisers

Tractor-mounted boom sprayers and hand-held machines are suitable for use in some situations to apply a minimum spray volume of 40 L/ha.

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

Stir the correct amount of CLIPPER to control the particular target species into the sprayer bottle half-filled with clean water. Top up with water, close the top and shake gently to ensure good mixing.

Do not tank-mix CLIPPER when using rotary atomiser sprayers.

d) Weed Wipers

For ropewick applicators use a concentration of 1 part CLIPPER to 2 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 CLIPPER to 10 to 20 parts of water or as directed by manufacturer's instructions.

e) Spot Gun Applicators

Spot gun applicators are for the 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 CLIPPER (ml) per 5 litres spray solution for targeted dosages of:		
	3.0 L/ha	4.0 L/ha	5.0 L/ha
0.3	20	28	35
0.6	85	110	140

Compatibility

Consult Adama Agricultural Solutions UK Ltd before tank-mixing with any adjuvants or pesticides.

COMPANY ADVISORY INFORMATION

This section is not part of the Product Label under Regulation (EC) 1107/2009 (GB/NI) and provides additional advice on product use.

General Information

CLIPPER 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. CLIPPER is rapidly adsorbed onto particulate matter in soils and water and is quickly degraded by the micro-organism present in soil and aquatic bottom sediments. Until degraded, the active ingredient in CLIPPER, glyphosate, is practically immobile in soils and is, therefore, unlikely to contaminate groundwater.

To maximise the safety of CLIPPER to the operator, consumer and environment, the label recommendations and the DEFRA/HSE and the National Assembly for Wales Environment, Planning and Countryside Department publication 'Code of Practice for using Plant Protection Products' should be adhered to.

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.

Effects of Weather

See Directions for Use (Restrictions).

CLIPPER 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. Reduced control is likely where weed growth is impaired by natural senescence, drought, high temperature, a covering of dust, flooding or severe prolonged frost at, or immediately after, application.

Agronomic Advice

Applications of lime, fertiliser, farmyard manure and pesticides should be delayed until 5 days AFTER application of CLIPPER.

General Cautions

Take extreme care to avoid drift, particularly when using near or alongside hedgerows. The use of low drift nozzles such as 'air induction' and 'pre-orifice' nozzles are recommended.

After application, large concentrations of decaying foliage, stolons, roots or rhizomes should be dispersed or buried by thorough cultivation before crop drilling.

New Generation Weed Wipers

Logic Contact 2000
Carier Rollmaster
Allman Ecowipe
Rotowiper (UK) Ltd
C-Dax™ Eliminator
Weedswiper™

Disposal

Follow the guidance on the disposal of surplus spray solution, tank washings, concentrate and containers as given in Part 5 of the DEFRA/HSE and the National Assembly for Wales Environment, Planning and Countryside Department publication 'Code of Practice for Using Plant Protection Products'.

Adama Agricultural Solutions UK Ltd does not warrant that the purchase or use of equipment mentioned in this document will not infringe any patent or trademark registration.

DISCLAIMER/CONDITIONS OF SUPPLY

The specified properties of our products and the mode of application stated on this label have been established on the basis of research and experience. Products conform to specification at the time of delivery but, as we exercise no control over their subsequent storage, handling, mixing or use or the weather conditions before, during and after application, all of which may affect the performance of the products, no responsibility or liability will be accepted by us or our re-sellers for any failure in performance, damage or injury to person or property whatsoever arising from the storage, handling, application or use of the products. These conditions cannot be varied by our staff or agents whether or not they supervise or assist in or make recommendations concerning the use of such products. We recommend you contact your dealer to request advice on the suitability of this product for any new and/or unusual growing methods or for new varieties not listed on this label.

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