

PRECAUTIONS

In case of emergency contact the Poisons Information Centre Tel: +353 1 8092566 or +353 1 8379964 If medical advice is needed, have product container or label at hand.

STORAGE AND DISPOSAL KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS. KEEP OUT OF REACH OF CHILDREN. KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place. WASH OUT CONTAINER THOROUGHLY, empty washings into spray tank, and dispose of safely.

DIRECTIONS FOR USE

tion The following table pertains to and forms part of the statutory conditions relating to use

Crop or situation	Maximum individual dose of product	Maximum number of applications	Maximum total dose	Latest time of application
Post-planting & pre-crop emergence: Barley, bulb onion, combining pea, durum wheat, field bean, leek, linseed, mustard, oats, oilseed rape, sugar beet, swede, turnip, vining pea, wheat	1.33 L/ha		1,33 L/ha/crop	Pre-emergence of crop
* Pre-harvest - Wheat, barley, oats	4.0 L/ha	1	4.0 L/ha	7 days before harvest
* Pre-harvest - Oilseed rape, linseed	4.0 L/ha	1	4.0 L/ha	14 days before harvest
* Pre-harvest Peas (combining)	4.0 L/ha	1	4.0 L/ha	7 days before harvest
Stubbles (including destruction of cover crops)	4.0 L/ha	-	4.0 L/ha/year	2-5 days pre- cultivation/drilling/planting
Green cover for land not being used for production (fallow)	4.0 L/ha	-	4.0 L/ha/year	2-5 days pre- cultivation/drilling/planting
Grassland destruction	4.0 L/ha	1 per year	4.0 L/ha	5 days before cutting/grazing
Apples, pears	5.0 L/ha	-	5.0 L/ha/year	Post-harvest before green cluster stage
Cherries, plums	5.0 L/ha	-	5.0 L/ha/year	After leaf fall/before white-bud stage
Asparagus	5.0 L/ha	-	5.0 L/ha	Pre-emergence
Non-cropped areas (hard and permeable surfaces)	5.0 L/ha	-	5.0 L/ha/year	-
Forestry (Pre and post planting)	4.0 L/ha	-	4.0 L/ha	-
Other specific restrictions: * May only be applied when crop is> BBCI	l 87 and grain/seed m	noisture < 30 %	1	

Method of application:	Tractor mounted or powered hydraulic sprayer/knapsack
Particulars of direct or indirect adverse effects:	Extreme care must be taken to avoid spray drift onto non-crop plants outside of the target area.
Directions for the safe disposal of the plant protection product and of the packaging.	Dispose of contents/container to a licenced hazardous waste disposal contractor or collection site except for triple rinsed empty containers which can be disposed of as non-hazardous waste.
Restriction on category of user	Professional use only
Specific uses:	See directions for use table

GENERAL INFORMATION

Barbarian XL is a foliar acting herbicide that controls annual and perennial grasses and most broad-leaved weeds when used as directed. It is translocated from treated vegetative growth to underground roots, rhizomes or stolons. Leaf symptoms, being a reddening then yellowing of the foliage, are first seen on grass weeds but take longer to appear on broad leaved weeds.

It is particularly important that the weeds have sufficient leaf growth and are actively growing when treated.

Perennial grass weeds must have produced fresh leaves, which are green and vigorous. Common couch/scutch grass is most susceptible to Barbarian XL when it is tillering and when new rhizomes have begun to grow. This is usually when the plants have about 5 - 6 leaves, each with approximately 12-15cm (5-6") of new growth.

The majority of perennial broad-leaved weeds are most susceptible if treated when they are actively growing and are at or near flowering stage. Annual weeds should be actively growing with grasses having at least 5cm (2") of leaf and broad-leaved weeds at least two expanded true leaves when sprayed. Couch/scutch grasses and other grass and broad-leaved weeds are less susceptible to Barbarian XL when growth is restricted by drought, waterlogging, frost, very high temperatures or natural dieback. Efficacy will be reduced if such conditions occur at or immediately after spraying.

Occasionally a slight check to crop growth may occur, particularly after direct drilling when crop seeds germinate amongst a mass of decaying foliage, stolons, rhizomes or roots. Thorough cultivations are necessary to disperse or bury decaying organic matter. Consolidate loose soils and ensure crops are adequately fertilised and appropriate measures are taken to prevent insect and fungal damage to the following crop, especially where following grassland.

Do not apply lime, fertiliser, farmyard manure, pesticides or similar materials within 7 days of Barbarian XL.

Note: Barbarian XL does not give acceptable control of horsetail (Equisetum arvense).

WEATHER CONDITIONS

A period of at least 6 hours and preferably 24 hours free of rain must follow spraying. Do not spray onto weeds suffering from drought stress as reduced control may occur. Do not spray in windy conditions as drift onto other crops or vegetation can cause severe injury or destruction. Do not spray during frosty weather that prevents active growth and can induce weed senescence.



WEED CONTROL PRE-EMERGENCE OF DRILLED CROPS

Weeds Controlled: Emerged annual, perennial and biennial weeds.

Seed must be drilled and drills firmly closed with a minimum 15 mm (½") of settled soil above the seed. Annual weeds must be small when treated following direct drilling. DO NOT ALLOW SPRAY TO CONTACT THE LEAVES OF ANY CROP CAUTION: Ensure that spraying precedes ANY crop emergence.

Сгор	Time and Method	Dose Rate
Barley, bulb onion, combining pea, durum wheat, field bean,	Spray whilst the crop is dormant before ALL new spear emergence.	All crops: 1.33 l/ha
leek, linseed, mustard, oats, oilseed rape, sugar beet,	Spray must not contact the spears/foliage of the crop. At least 15 mm of firmly settled soil must be	Asparagus: 5 l/ha
swede, turnip, vining pea, wheat, asparagus	covering crowns and spears. Spray up to 48h after drilling	Apply in 100-400 l/ha water

WEE	D CONTROL IN STANDING CEREAL CRO	OPS (PRE-HARVEST)
	uch/scutch grass (Elymus repens) eping bent (Agrostis stolonifera)	Black bent (Agrostis gigantea)
	on couch (Arrhenatherum elatius var. bulbosum) in	n winter barley only - see Note.
Per	ennial broad-leaved weeds.	
	ter and spring wheat, including durum wheat, and wir	
	ley destined for malting or feed. (Consult purchasers	of crops grown on contract and prospective
	chasers of malting grade barley before treatment). NOT TREAT CROPS INTENDED FOR SEED. DO	NOT TREAT UNDERSOWN CROPS
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Time	Method	Dose Rate
Spray when the moisture content of the grain measures	Spray the crop and weeds overall. Use high clearance tractors with narrow wheels and crop	Annual weeds and grass or couch/ scutch grass infestations up to 75 shoots/m ² :
less than 30%.	dividers. Adjust boom height to maximise spray	grass intestations up to 75 shoots/m ⁻ . 3 l/ha
	retention on the target weeds.	
Target weeds must be green,		Couch/scutch-grass infestations, over 75
actively growing and	After spraying:	shoots/m ² : 4 l/ha
accessible to the spray.	Wait at least 7 days before harvesting. Treated	Devenued heard woods, other
	straw must be chopped and incorporated or removed, after which normal cultivations may	Perennial broad-leaved weeds; other perennial grasses: 4 l/ha
	be resumed. Treated straw must be used for	
	feed and litter, but must not be used for	Apply in 150 - 250 l/ha water.
	heartier dat mel mumo e e e	
	horticultural purposes.	

Note: to gain successful control of onion couch with Barbarian XL, the weed must be treated BEFORE the bulbous bases have matured. Application when the bulbous bases have matured will not prevent regeneration of the weed. Early ripening winter barley is the only crop likely to present an opportunity for pre-harvest control of onion couch.

WEE	D CONTR	ROL IN STANDING OILSEED RAPE AND L	INSEED (PRE-HARVEST)	
Weeds Controlled:		0 ()	lack bent (Agrostis gigantea) erennial broad-leaved weeds.	
Crops:	Linsee This tre	I rape, winter or spring. d, winter or spring atment is suitable only for uniform, evenly maturing IT TREAT CROPS INTENDED FOR SEED.	crops proceeding to harvest in prime condi	tion.
Time		Method	Dose Rate	
Weed control: Spray 2 before harvest when the ripening of the seed is		Spray the crop and weeds overall. Minimise crop damage by use of high clearance tractors with narrow wheels and crop dividers.	Low-medium couch/scutch-grass infestations, up to 75 shoots/m ² :	3 l/ha
progressing and the mo content of the seed me less than 30%.		After spraying: Wait at least 14 days before harvesting oilseed	Medium-high couch/scutch-grass infestations, over 75 shoots/m ² :	4 l/ha
Target weeds must be g actively growing and ac to the spray.	•	rape. Wait at least 14 days before harvesting linseed. Direct combine harvest the crop when fit. Treated straw must be chopped and incorporated or removed, after which normal cultivations may be resumed.	Perennial broad-leaved weeds; other perennial grasses: Apply in 200 - 250 l/ha water.	4 l/ha

Crops: Pe DC	uch/scutch grass (<i>Elymus repens</i>) eeping bent (<i>Agrostis stolonifera</i>) as (combining). NOT TREAT CROPS INTENDED FOR SEED. te: This treatment is intended for weed control.	Black bent (<i>Agrostis gigantea</i>) Perennial broad-leaved weeds
Time	Method	Dose Rate
Spray when the natural ripening of the seed is progressing and the moisture content of the seed measures less than 30%. Target weeds must be green, actively growing and accessible to the spray.	Spray the crop and weeds overall. Minimise crop damage by use of high clearance tractors with narrow wheels and crop dividers. After spraying: Wait at least 7 days before harvesting. Direct combine harvest the crop when fit. Treated straw must be chopped and incorporated or removed, after which normal cultivations may be resumed.	Low-medium couch/scutch grass infestati up to 75 shoots/m ² : 3 l/ha Medium-high couch/scutch grass infestat over 75 shoots/m ² : 4 l/ha Apply in 200-250 l/ha water.
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STUBBLE AND GROUND PREPARATION PRE-SOWING AND PRE-PLANTING (INCLUDING DESTRUCTION OF COVER CROPS) - ANNUAL AND PERENNIAL WEEDS, VOLUNTEERS

Creepir Annual	ng bent (<i>Agrostis stolonifera</i>) Perennial grasses and broad-leaved weeds. Volunteer	t (Agrostis gigantea) broad-leaved weeds. cereals and potatoes (autumn only).
	op to follow application on stubble.	
Time	Method	Dose Rate
For PERENNIAL weed control in Autumn/winter applications: Spray when perennial weeds are actively growing, especially after mid-October. Couch/scutch grass should have at least 6 new leaves approx. 12cm long.	After harvest: • Do not cultivate. • Remove straw. • Allow weeds to regrow. • Spray during mild conditions. • Allow volunteer potatoes to make ample top growth and spray well before onset of frost or natural senescence. After spraying: If before mid-November, wait at least 5 days before cultivating. If after mid-November, wait for perennial grass leaves to turn red/yellow before cultivating.	Annual weeds and grasses or couch/scutch grass infestations up to 75 shoots/m ² : 3 l/ha Couch/scutch-grass infestations, over 75 shoots/m ² and volunteer potatoes: 4 l/ha Apply in 150 - 250 l/ha water.
For PERENNIAL weed control in Spring applications: Spray when weeds are actively growing as for autumn applications. Roots chopped by cultivations must show new leaf growth to be killed.	After harvest: • Cultivate as required. • Leave for regrowth to appear - allow a minimum 21 days weed growth before spraying. After spraying: Wait at least 5 days before cultivating. Re-treatment may be necessary pre-harvest or in autumn as emergence in spring may be incomplete.	
For ANNUAL weed and cereal volunteer control in Autumn/spring/summer applications: Spray when weeds are actively growing. For optimum control: • Annual grasses should have at least 10cm of green leaf. • Annual broad-leaved weeds should have at least 2 true leaves.	 After harvest or cultivations: Allow ground to remain undisturbed for as long as practicable to allow weeds to regrow. After spraying: Wait at least 24 hours before cultivating. Wait at least 48 hours before drilling. 	4 l/ha Apply in 80-250 l/ha water.

GREEN COVER ON LAND NOT BEING USED FOR CROP PRODUCTION (FALLOW)

Weeds controlled:	Annual meadow grass (Poa annua)
	Perennial ryegrass (Lolium perenne)
	Common nettle (Urtica dioca)
Crop:	Any crop to follow application.

Italian ryegrass (Lolium multiflorum) Broadleaf dock (Rumex obtusifolius)

Users must ensure themselves compliant with the management rules of any grant-aided scheme before use; the guidance given in the following may be changed in future years. **.** .

 *Do not cut or cultivate prior to applying this product in this situation. *Do not cut or cultivate prior to applying this product in this situation. *Spray before weeds set seed. *Spray before weeds set seed. *After spraying do not cut, cultivate or prepare land for the next crop until permitted to do so by the management rules; in any event do not cut or cultivate for 2 days (after 1.5 l/ha) after application. *Annual weeds and grasses: 1.5 l/ha Annual weeds and grasses: 1.5 l/ha Apply in 80-150 l/ha water for this dose rate (note - if the green cover is dense and/or well established, use the higher dose of 3 l/ha in 150-250 l/ha water - see below). *After spraying do not cut, cultivate for 2 days (after 1.5 l/ha) or 5 days (after 3-6 l/ha) after application.
broadleaved weeds and fine-leaved grasses present: 4 l/h: Apply in 150-250 l/ha water.

GRASSLAND DESTRUCTION Weeds controlled: Rough stalked meadow grass (Poa pratense) Scentless Mayweed (Matricaria inodorum), Ivyleaf speedwell (Veronica hederifolia) Pathgrass (Poa annua) Common field speedwell (Veronica persica) Ryegrass (Lolium multiflorum) Couch grass (Agropyron repens) Perennial ryegrass (Lolium perenne) Broadleaf dock (Rumex obtusifoluis) Common nettle (Urtica dioca) Field sowthistle (Sonchus arvensis) Any crop to follow application. Crop: Time Method Dose Rate Sprav when grasses and weeds are Lightly cut or graze and allow regrowth for about 4 1-2 years old, only annual weeds actively growing at the following times weeks until the recommended growth stages are and grasses: 3 l/ha and growth stages: reached. Spray at the dose rate recommended for the weed 2-4 years old, with perennial Annual grasses and annual broador grass type. grasses: 4 l/ha leaved weeds: Wait at least 5 days, when the leaves become · Spring, summer or autumn. yellowed, before removing the growth for Long leys e.g. 4-7 years old with · Annual grasses have at least 10cm conservation or by grazing as required, prior to perennial broad-leaved weeds: (4") of green leaf. cultivating or drilling. 4 l/ha Annual broad-leaved weeds have at least 2 expanded true leaves. Surface mats of old grassland must be thoroughly Permanent grassland with ragwort broken by cultivations before reseeding. Either defer or predominantly fine-leaved Perennial grasses and perennial seeding until the following spring to allow surface grasses: 4 l/ha broad-leaved weeds: mats to decompose or apply 2.5 tonnes/ha (1 Apply the recommended dose in 200-Mid to late summer. tonne/ac) of ground limestone to the surface mat not Perennial grasses have at least 12cm less than seven days after treatment followed by 250 l/ha water of leaf or 5 fully expanded leaves. rotary cultivation to break the surface and Perennial broad-leaved weeds have incorporate the ground limestone into the soil. substantial leaf area or are near Seeding may be conducted as required thereafter flowering. provided that the seeds are in contact with mineral soil.

NATURAL SURFACES NOT INTENDED TO BEAR VEGETATION, PERMEABLE SURFACES OVERLYING SOIL, HARD SURFACES: General use on non-cropped areas around the farm and on amenity and industrial areas.

	Time and Method	Dose Rate
Around buildings.	Apply at any time of the year when weeds are showing	General Use: 4 l/ha
On industrial sites.	green leaf and are actively growing. Weeds germinating after application will not be controlled. Avoid drift onto crops, lawns, amenity plants	Perennial broad-leaved weeds presen
Firebreaks.	or any desirable species.	
Pavements.	DO NOT USE UNDER GLASS OR POLYTHENE.	Mounted Hydraulic sprayers: apply in 80 - 250 l/ha water.
Verges along public paths	DO NOT SPRAY HEDGE BOTTOMS.	Knapsack sprayers:
and roadways.		apply in 100 - 250 l/ha water.
Around traffic signs and		
advertising hoardings.		
Site preparation for		, ,
landscaping projects; golf courses etc.		
projects, gon courses etc.		
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FORESTRY/WOODLANDS		
Use	Dose	Remarks
Pre planting: Most broad-leaved and grass weeds.	4 l/ha	If the ground has been disturbed by forestry operations, allow the weeds to
NOSt broad-leaved and grass weeds.	Apply in 80-250 I/ha water.	recover. Apply when weeds are showing
After planting	Apply in 60-230 i/na water.	green leaf and are actively growing. Wait
Arter planting	Apply at the appropriate dose for the	at least 7 days before any cultivation or
Most annual and perennial grasses and	species to be treated as detailed below:	before planting trees.
broad-leaved weeds.		Apply by knapsack sprayer around fully
	4 l/ha in 250 l/ha water	guarded trees. It is ESSENTIAL to use a
Moderate control of Broad-leaved woody		TREE GUARD for all applications made
weeds: bracken, beech, brush, bramble,	4 l/ha in 250 l/ha water	in the growing season.
sycamore, oak, hazel, willow, ash.		Treat bracken after frond tips are unfurled
-		but pre-senescence. Treat heather late-
		August to end-September. Treat all other
		woody weeds June to August before leaf
		senescence, but after new growth of crop
		has hardened.
		Important:
		The time of hardening of leader growth in
		any year varies with species, location,
		and weather amongst other factors;
		hardening might occur from end-July up
		to October or even later. Always direct
		the spray away from leaders to avoid
		damage to Lammas growth.

Note: for ease of identification of treated weeds, a suitable commercially available water-soluble dye may be added to the prepared solution at 1ml dye per 10 litres of prepared spray solution.

Do not apply when rain is expected within 6 hours as, apart from unsatisfactory weed control, herbicide might be transferred to desirable species by rain splash or foliar contact.

MIXING

Tractor mounted sprayers

Pour the recommended quantity of Barbarian XL into the spray tank already half-filled with clean water and under agitation. Top up the spray tank with more clean water to the required level, whilst maintaining agitation Spray out on the day of mixing.

Knapsack sprayers

Add the recommended quantity of Barbarian XL to the knapsack spray tank approximately one-third filled with clean water. Agitate thoroughly with a clean rod or by shaking after replacing the lid until thoroughly mixed. Add the required quantity of authorised surfactant and agitate again in the same manner until thoroughly mixed. Top up the tank with more clean water to the required level and agitate thoroughly before use. Spray out on the day of mixing.

DO NOT MIX, APPLY OR STORE BARBARIAN XL IN GALVANISED OR UNLINED MILD STEEL CONTAINERS OR TANKS. KEEP TANKS WELL VENTED AND CLEAR OF ALL SOURCES OF IGNITION.

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

APPLICATION & SPRAY QUALITY

Conventional hydraulic sprayers

Knapsack sprayers

Prepared spray solution should be applied as a MEDIUM of COURSE quality spray (BCPC definition) through conventional hydraulic sprayers (tractor mounted/ drawn or knapsack) at nozzle pressures not exceeding 2.5 bar (35 psi).

Barbarian XL is a systemic weedkiller and is active at low doses. Always take extreme care to avoid spray drift.

DO NOT SPRAY in windy weather or near to desirable species or amenity plants as drift onto other crops or vegetation can cause severe plant injury or destruction.

SUITABLE NOZZLES FOR HYDRAULIC SPRAYERS		
Sprayer type	Low Volume Application	Medium Volume Application
Tractor mounted or drawn	Hardi 4110-14 or equivalent nozzles	Hardi 4110-20: 4110-30; Lumark 04-F110; 08-F110 Teejet 11004; 11008 or equivalent nozzles
Knapsack	Cooper Pegler VLV Orange VLV Blue	Hardi 4110-16 Lumark 03-F110 Polyjet green; blue: red

SOILS

Barbarian XL may be used to control weeds on all mineral or organic soils or surfaces, including ash and gravel. Only weeds showing green leaf at the time of application can be killed. There is no residual activity with Barbarian XL.

COMPATIBILITY

DO NOT mix with any herbicide, insecticide or fungicide.

FUTURE PLANTING

Barbarian XL has no long-lasting herbicidal activity in soils after application. Agricultural and horticultural quality soils may be planted up with trees after not less than 7 days after application, unless directed otherwise. Other amenity plants may be planted after the treated vegetation has died back or after cultivation. Under normal weather conditions, cultivations may be conducted 7 days after treatment. Under poor growing conditions wait for the characteristic red/yellow leaf symptoms to appear before cultivating.

CARE OF EQUIPMENT

Wash equipment thoroughly after use with water and cleaning agent to remove traces of herbicide. Traces of herbicide left in the equipment may damage or destroy crops sprayed with the same equipment at a later date.

STORAGE

Keep temperatures above 0°c but not exceeding 30°c.

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KNAPSACK R	ATE RECKONER
METRIC MEDIUM V	OLUME APPLICATION
Product Recommendation (Litres of product in I/ha of water)	Amount of Barbarian XL per 10 litres to treat 400 m ²
3L in 250L per hectare 4L in 250L per hectare 5L in 250L per hectare	120 ml 160 ml 200 ml
LOW VOLUM	E APPLICATION
Product Recommendation (Litres of product in I/ha of water)	Amount of Barbarian XL per 10 litres to treat 1000 m ²
3L in 100L per hectare 4L in 100L per hectare 5L in 100L per hectare	300 ml 400 ml 500 ml
	12