



Ardee™ XL

Ardee XL is a systemic herbicide, as a soluble concentrate, for the control of annual and perennial grass and broad-leaved weeds in:

- Barley
- Durum Wheat
- Field beans
- Forest
- Forest nursery
- Grassland
- Green cover on land not being used for crop production
- Linseed
- Non-cropped areas
- Oats
- Oilseed rape
- Orchards: apple, pear, cherry, damson and plum
- Peas (combining)
- Stubbles of all edible and non-edible crops
- Wheat

Contains 360 g/l (30.9% w/w)
glyphosate acid

Manufacturer:
Barclay Chemicals Manufacturing Ltd.,
Damastown Way,
Damastown Industrial Park,
Mulhuddart, Dublin 15, Ireland.
Tel: +353 1 8112900
Fax: +353 1 8224678
E-mail: info@barclay.ie
Website: www.barclay.ie

**FOR USE ONLY AS AN AGRICULTURAL, HORTICULTURAL, INDUSTRIAL
AND FORESTRY NON-SELECTIVE HERBICIDE**
(Please see inside for DIRECTIONS FOR USE)

FOR PROFESSIONAL USE ONLY

Approval Holder:
Barclay Chemicals (R&D) Ltd.
Contact details as above.

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SAFETY INFORMATION

Keep out of reach of children.

Avoid breathing spray.

Wear protective gloves/protective clothing/eye protection/face protection.

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

IF ON SKIN: Gently wash with plenty of soap and water.

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

Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for triple rinsed 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. 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).

PCS No: 05571

PROTECT FROM FROST

20 Litres

PRECAUTIONS

In case of emergency contact the Poisons Information Centre Tel: +353 1 8092566 or +353 1 8379964

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).

DIRECTIONS FOR USE

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

FOR USE ONLY AS AN AGRICULTURAL, HORTICULTURAL, INDUSTRIAL AND FORESTRY NON-SELECTIVE HERBICIDE				
Crop or situation	Maximum individual dose of product	Maximum number of treatments	Latest time of application	Maximum Total Dose of product
Winter and spring wheat Winter and spring barley Winter and spring oats Durum Wheat	4 l/ha	One per season	7 days before harvest	4 l/ha
Oilseed rape, linseed	4 l/ha	One per season	14 days before harvest	4 l/ha
Peas (combining), field beans	4 l/ha	One per crop	7 days before harvest	4 l/ha
Orchards of: Apple and pear	5 l/ha	One per season	After leaf fall/before green cluster stage	5 l/ha
Orchards of: Cherry, damson and plum	5 l/ha	One per season	After leaf fall/before white bud stage	5 l/ha
Forestry: weed control Forestry nursery	5 l/ha	Two per year	-	10 l/ha
Stubbles of all crops	1.5 l/ha 4 l/ha	One per season One per season	2 days before drilling 5 days before drilling	1.5 l/ha 4 l/ha
Grassland	6 l/ha	One per season	5 days before cutting/grazing	6 l/ha
Non-cropped areas	6 l/ha	Two per year	-	12 l/ha
Green cover on land not being used for crop production (set-aside)	4 l/ha	One per season	24 hours before cultivating	4 l/ha

GENERAL INFORMATION

Ardee 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 is most susceptible to Ardee 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 Ardee 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 Ardee XL.

Note: Ardee 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 IN STANDING CEREAL CROPS (PRE-HARVEST)		
Weeds Controlled: Couch/scutch grass (<i>Elymus repens</i>) Black bent (<i>Agrostis gigantea</i>) Creeping bent (<i>Agrostis stolonifera</i>) Onion couch (<i>Arrhenatherum elatius var. bulbosum</i>) in winter barley only - see Note. Perennial broad-leaved weeds.		
Crops: Winter and spring wheat, including durum wheat, and winter and spring oats destined for milling or feed. Barley destined for malting or feed. (Consult purchasers of crops grown on contract and prospective purchasers of malting grade barley before treatment). DO NOT TREAT CROPS INTENDED FOR SEED. DO NOT TREAT UNDERSOWN CROPS.		
Time	Method	Dose Rate
Spray when the moisture content of the grain measures less than 30%. Target weeds must be green, actively growing and accessible to the spray.	Spray the crop and weeds overall. Use high clearance tractors with narrow wheels and crop dividers. Adjust boom height to maximise spray retention on the target weeds. After spraying: Wait at least 7 days before harvesting. Treated straw must be chopped and incorporated or removed, after which normal cultivations may be resumed. Treated straw must be used for feed and litter, but must not be used for horticultural purposes.	Annual weeds and grass or low couch/scutch grass infestations up to 25 shoots/m²: 2 l/ha Apply in 80-150 l/ha water for this dose rate Low-medium couch/scutch-grass infestations, up to 75 shoots/m²: 3 l/ha Medium-high couch/scutch-grass infestations, over to 75 shoots/m²: 4 l/ha Perennial broad-leaved weeds; other perennial grasses: 4 l/ha Apply in 150 - 250 l/ha water.
Note: to gain successful control of onion couch with Ardee 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.		

WEED CONTROL IN STANDING OILSEED RAPE AND LINSEED (PRE-HARVEST)		
Weeds Controlled: Couch/scutch grass (<i>Elymus repens</i>) Black bent (<i>Agrostis gigantea</i>) Creeping bent (<i>Agrostis stolonifera</i>) Perennial broad-leaved weeds.		
Crops: Oilseed rape, winter or spring. Linseed, winter or spring This treatment is suitable only for uniform, evenly maturing crops proceeding to harvest in prime condition. DO NOT TREAT CROPS INTENDED FOR SEED.		
Time	Method	Dose Rate
Weed control: Spray 2-3 weeks before harvest 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: 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 infestations, up to 75 shoots/m² : 3 l/ha Medium-high couch/scutch-grass infestations, over 75 shoots/m² : 4 l/ha Perennial broad-leaved weeds; other perennial grasses: 4 l/ha Apply in 200 - 250 l/ha water.

WEED CONTROL IN FIELD BEANS AND PEAS (PRE-HARVEST)		
Weeds Controlled: Couch/scutch grass (<i>Elymus repens</i>) Black bent (<i>Agrostis gigantea</i>) Creeping bent (<i>Agrostis stolonifera</i>) Perennial broad-leaved weeds		
Crops: Field beans, winter or spring. Peas to be harvested dry. DO NOT TREAT CROPS INTENDED FOR SEED. Note: This treatment is intended for weed control and not for crop desiccation.		
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 infestations up to 75 shoots/m²: 3 l/ha Medium-high couch/scutch grass infestations over 75 shoots/m²: 4 l/ha Apply in 200-250 l/ha water.

ORCHARDS		
Weeds Controlled: Most annual and perennial weeds.		
Crop	Time and Method	Dose Rate
Established (minimum 2 years) trees of: Apple Pear Cherry Damson Plum	Apply as a directed MEDIUM or COARSE spray. Spray after leaf fall in autumn or before green cluster stage of apple and pear or white bud stage of stone fruit. Avoid spraying or allowing drift to contact the trunk above 30cm (12") from the ground, or any branches. Spray must not contact any damaged bark.	5 l/ha Apply in 250 l/ha water.

FORESTRY/WOODLANDS		
Use	Dose Rate	Remarks
Before planting: Most broad-leaved and grass weeds. Moderate control of many young woody weeds	5 l/ha 4 l/ha <i>Hydraulic sprayers:</i> apply in 80 - 250 l/ha water . <i>Rotary atomisers:</i> apply in total spray volume of 40 l/ha.	If the ground has been disturbed by forestry operations, allow the weeds to recover. Apply when weeds are showing green leaf and are actively growing. Wait at least 7 days before any cultivations or before planting trees.

STUBBLE - ANNUAL AND PERENNIAL WEEDS, VOLUNTEERS		
Weeds Controlled: Couch/scutch grass (<i>Elymus repens</i>) Creeping bent (<i>Agrostis stolonifera</i>) Annual grasses and broad-leaved weeds		
Crops: Any crop to follow application on stubble.		
Weeds Controlled: Black bent (<i>Agrostis gigantea</i>) Perennial broad-leaved weeds Volunteer cereals and potatoes (autumn only).		
Time	Method	Dose Rate
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: <ul style="list-style-type: none"> 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 low couch/scutch grass infestations up to 25 shoots/m²: 2 l/ha Apply in 80-150 l/ha water for this dose rate. Low-medium couch/scutch-grass infestations, up to 75 shoots/m²: 3 l/ha Medium-high couch/scutch-grass infestations, over 75 shoots/m² and volunteer potatoes: 4 l/ha Apply in 150 - 250 l/ha water. Note: the effect of 2 litres product/ha rate as the long-term control of couch/scutch grass is not known.
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: <ul style="list-style-type: none"> 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.	Apply in 150 - 250 l/ha water. Note: the effect of 2 litres product/ha rate as the long-term control of couch/scutch grass is not known.

STUBBLE/CULTIVATED LAND - ANNUAL WEEDS/VOLUNTEERS		
Weeds Controlled: Annual grasses and broad-leaved weeds Crops: Any crop to follow application.		
Weeds Controlled: Volunteer cereals		
Time	Method	Dose Rate
Autumn/spring/summer applications: Spray when weeds are actively growing. For optimum control: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> Wait at least 24 hours before cultivating. Wait at least 48 hours before drilling. 	1.5 l/ha Apply in 80-250 l/ha water.

GRASSLAND		
Weeds controlled: Annual meadow-grass (<i>Poa annua</i>) Italian ryegrass (<i>Lolium multiflorum</i>) Perennial ryegrass (<i>Lolium perenne</i>) Broadleaf dock (<i>Rumex obtusifolius</i>) Common nettle (<i>Urtica dioica</i>)		
Crop: Any crop to follow application.		
Time	Method	Dose Rate
Spray when grasses and weeds are actively growing at the following times and growth stages: Annual grasses and annual broad-leaved weeds: <ul style="list-style-type: none"> • Spring, summer or autumn. • Annual grasses have at least 10cm of green leaf. • Annual broad-leaved weeds have at least 2 expanded true leaves. Perennial grasses and perennial broad-leaved weeds: <ul style="list-style-type: none"> • Mid to late summer. • Perennial grasses have at least 12cm of leaf or 5 fully expanded leaves. • Perennial broad-leaved weeds have substantial leaf area or are near flowering. 	<ul style="list-style-type: none"> • Lightly cut or graze and allow regrowth for about 4 weeks until the recommended growth stages are reached. • Spray at the dose rate recommended for the weed or grass type. • Wait at least 5 days, when the leaves become yellowed, before removing the growth for conservation or by grazing as required, prior to cultivating or drilling. <p>Surface mats of old grassland must be thoroughly broken by cultivations before reseeding. Either defer seeding until the following spring to allow surface mats to decompose or apply 2.5 tonnes/ha (1 tonne/ac) of ground limestone to the surface mat not less than seven days after treatment followed by rotary cultivation to break the surface and incorporate the ground limestone into the soil. Seeding may be conducted as required thereafter provided that the seeds are in contact with mineral soil.</p>	1-2 years old, only annual weeds and grasses: 3 l/ha 2-4 years old, with perennial grasses: 4 l/ha Long leys e.g. 4-7 years old with perennial broad-leaved weeds: 5 l/ha Permanent grassland with ragwort or predominantly fine-leaved grasses: 6 l/ha Apply the recommended dose in 200-250 l/ha water.

LAND NOT INTENDED TO BEAR VEGETATION: General use around the farm and on amenity and industrial areas		
Weeds Controlled: Most annual and perennial weeds.		
Area of use	Time and Method	Dose Rate
Around buildings. On industrial sites. Firebreaks. Pavements. Verges along public paths and roadways. Around traffic signs and advertising hoardings. Site preparation for landscaping projects; golf courses etc.	Apply at any time of the year when weeds are showing green leaf and are actively growing. Weeds germinating after application will not be controlled. Avoid drift onto crops, lawns, amenity plants or any desirable species. DO NOT USE UNDER GLASS OR POLYTHENE. DO NOT SPRAY HEDGE BOTTOMS.	General Use: 4 l/ha Perennial broad-leaved weeds present: 6 l/ha <i>Hydraulic sprayers:</i> apply in 80 - 250 l/ha water <i>Knapsack sprayers:</i> apply in 100 - 250 l/ha water <i>Rotary atomisers:</i> apply in total spray volume of 40 l/ha.
Important: If poisonous weeds, such as ragwort, had been present before treatment, then grazing animals, such as horses, should be kept clear of treated areas until such time that poisonous weeds have been removed.		

GREEN COVER ON LAND NOT BEING USED FOR CROP PRODUCTION (SET-ASIDE)		
Weeds controlled: Annual meadow grass (<i>Poa annua</i>) Italian ryegrass (<i>Lolium multiflorum</i>) Perennial ryegrass (<i>Lolium perenne</i>) Broadleaf dock (<i>Rumex obtusifolius</i>) Common nettle (<i>Urtica dioica</i>)		
Crop: Any crop to follow application.		
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.		
Time	Method	Dose Rate
Spray whilst the green cover is actively growing at any time consistent with the prevailing weather conditions and within the management rules of any grant aided scheme. Deep-rooted perennial broad-leaved weeds are best controlled when well grown and are at or near flowering.	<ul style="list-style-type: none"> Do not cut or cultivate prior to applying this product in this situation. 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 1 day (after 1.5 l/ha) or 5 days (after 3-6 l/ha) after application. 	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). Dense and/or well established green cover: 3 l/ha Perennial grasses and broad-leaved weeds: 4 l/ha Apply in 150-250 l/ha water.

WICK/WIPER APPLICATORS (E.G. WEEDWIPER MINI)

Certain weeds, particularly those with an erect growth habit and having a spatial separation from desirable species, can be effectively controlled by wiping a concentrated solution of Ardee XL onto the leaves or stems. Weeds must be actively growing at application. 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.

Ardee XL dilution

The maximum concentration used must not exceed the following:

Weedwiper mini: 1 volumes of product : 2 volumes of water
Other wipers: 1 volumes of product : 1 volumes of water for normal conditions; under warm, dry conditions use 1 : 2 dilution with water.

Weedwipers may be used in any crop where the wiper does not touch the growing crop.

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.

MIXING

Tractor mounted sprayers

Pour the recommended quantity of Ardee 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 Ardee 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. 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 ARDEE 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) at nozzle pressures not exceeding 2.5 bar (35 psi).

Ardee XL is a systemic weedkiller and is active at low doses. **Always take care to avoid spray drift. DO NOT SPRAY in windy weather or near to desirable species or amenity plants.**

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

Ardee 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 Ardee XL.

COMPATIBILITY

DO NOT mix with any herbicide, insecticide or fungicide.

FUTURE PLANTING

Ardee 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 crops sprayed later.

KNAPSACK RATE RECKONER	
MEDIUM VOLUME APPLICATION	
Product Recommendation (Litres of product in l/ha of water)	Amount of Ardee XL per 10 litres to treat 400 m²
3L in 250L per hectare	120 ml
4L in 250L per hectare	160 ml
5L in 250L per hectare	200 ml
6L in 250L per hectare	240 ml
LOW VOLUME APPLICATION	
Product Recommendation (Litres of product in l/ha of water)	Amount of Ardee XL per 10 litres to treat 1000 m²
3L in 100L per hectare	300 ml
4L in 100L per hectare	400 ml
5L in 100L per hectare	500 ml
6L in 100L per hectare	600 ml