



 **Proliance Quattro**[®]

syngenta[®]

The fast acting, high
performance glyphosate

TM

Features and benefits...

- Ultimate power and performance
- Fast reliable broad spectrum control of annual and perennial weeds
- Incorporation of the unique **System 4 Technology** to optimise:
 - 1 Weed contact
 - 2 Contains beneficial ions to enhance performance in hard water areas
 - 3 Leaf penetration
 - 4 Movement through the plant
- Reduced foaming and smell
- Easy to handle, formulated glyphosate
- Excellent environmental profile

System 4
Technology

Contents...

Introduction	1
Proliance Quattro properties	2
System 4 Technology explained	4
Weeds controlled	7
Making the most of Proliance Quattro	8
Application techniques	11
Precautions	12
Frequently asked questions	13
Summary	14

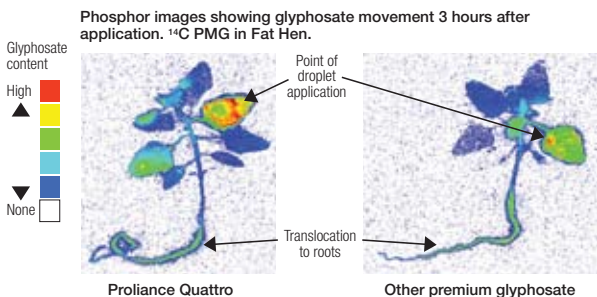
Introduction

Proliance Quattro is a fast acting, high performance, non selective herbicide from Syngenta. It combines a specialised high performance glyphosate, optimally formulated with **System 4 Technology**.



High performance control – across a wide variety of conditions. **Proliance Quattro** is a unique glyphosate formulation that works more effectively in a wider range of conditions.

Fast acting – thanks to its unique System 4 Technology. **Proliance Quattro** gets into the plant unhindered, so you can be sure of faster results.



Reliable control – with fast moving System 4 Technology. **Proliance Quattro** moves rapidly to the plants growing points, giving reliable performance, time after time.

Proliance Quattro properties

Patented System 4 Technology

The **Proliance Quattro** formulation contains patented System 4 Technology, a novel, multi-functional delivery system for powerful performance. The active ingredient (glyphosate 360 g/l SL) and the adjuvant system are truly integrated, such that it is best described as an Enhanced Active Ingredient.

Excellent contact

The special new blend of alkylpolyglucoside non-ionic surfactants (APG's), ensure excellent contact with the leaf surface and help rapidly deliver the glyphosate to the plants growing points'.

Penetration and translocation

System 4 Technology assists with penetration and translocation of **Proliance Quattro** into the plant under all conditions. This enhanced system helps combat the antagonistic effects of unwanted calcium and magnesium ions found in many hard water sources and on plant surfaces themselves. These ions can interfere with the activity of glyphosate herbicides.



Optimised performance

Proliance Quattro has been specifically designed for optimised performance. The extensive research and development that has gone into the design of **Proliance Quattro** provides many features that are beneficial for broad-spectrum use.

Alkylpolyglucosides (APG's) surfactant system details:

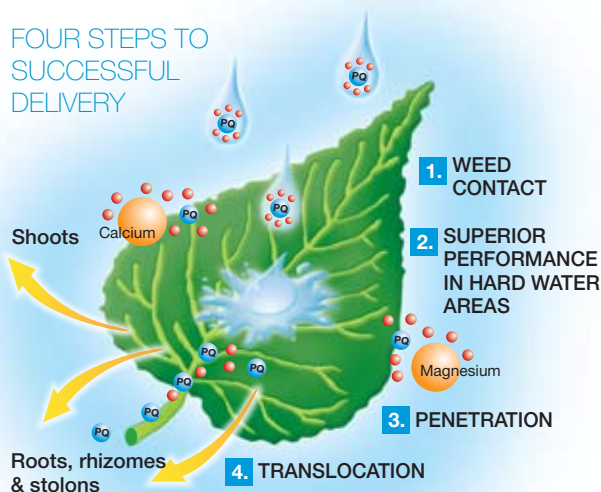
- Made from maize glucose
- High biodegradability
- Excellent safety and environmental properties
- Low dynamic surface tension
- Hygroscopic
- Improved rainfastness
- Use in hard water situations



System 4 Technology explained

System 4 Technology delivers the four key steps essential to the successful delivery of glyphosate to the growing points.

FOUR STEPS TO SUCCESSFUL DELIVERY



Key:

PQ = **Proliance Quattro** molecule

● = System 4 Technology surfactant

System 4
Technology

This patented herbicide delivery system integrates technically advanced ingredients which act on:

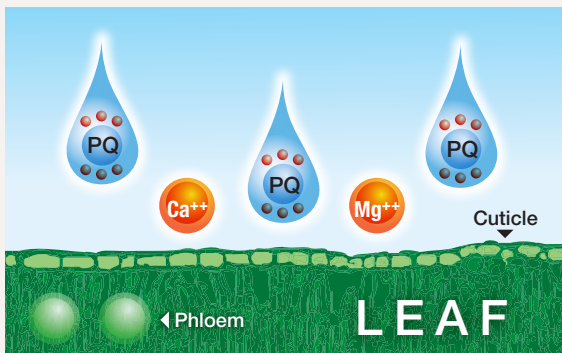
- 1 Weed contact
- 2 Superior performance in hard water areas
- 3 Penetration
- 4 Translocation

System 4 Technology glyphosate at its best

1. Weed contact

Getting it there...

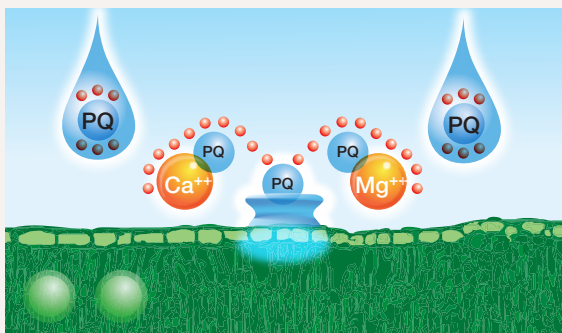
System 4 increases herbicide spray droplet retention on the surface of the leaf to optimise spreading.



2. Superior performance in hard water areas

Ready to work...

System 4 reduces the negative effects of ions such as magnesium and calcium, which can lock onto the glyphosate molecule rendering it inactive. This optimises the performance of the herbicide and maximises performance.



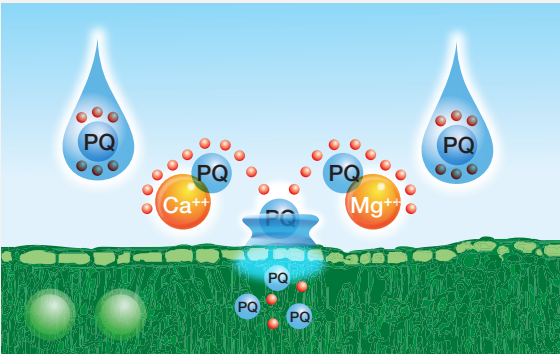
Key:

PQ = Proliance Quattro molecule ● = System 4 Technology surfactant

3. Penetration

Getting it in...

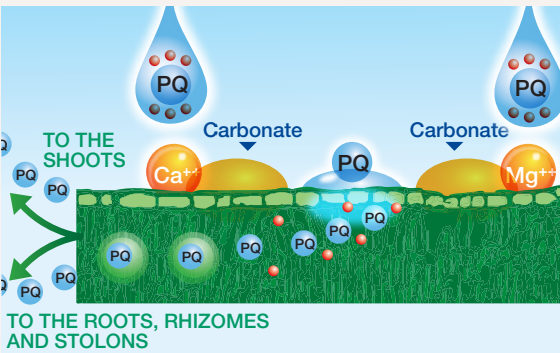
Uptake of **Proliance Quattro** into the cuticle and epidermis of target weeds is enhanced.



4. Translocation

Doing its job...

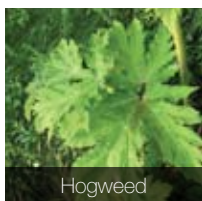
System 4 promotes the efficient translocation of the herbicide to shoots, roots, rhizomes and stolons, for a fast, effective and complete result.



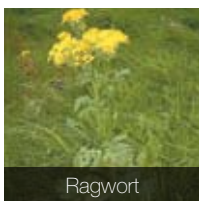
Key:

PQ = **Proliance Quattro** molecule ● = System 4 Technology surfactant

Weeds controlled



Hogweed



Ragwort



Willowherb

Grass weeds & rushes	Rate: l/ha			
	3	4	5	6
Annual meadow-grass	s	s	s	s
Barren brome	s	s	s	s
Black bent		s	s	s
Black-grass	s	s	s	s
Cock's-foot		s	s	s
Common bent		s	s	s
Common couch		s	s	s
Common reed			s	s
Creeping bent		s	s	s
Creeping soft-grass		s	s	s
Crested dog's-tail		s	s	s
False oat-grass		s	s	s
Hard rush				s
Italian ryegrass	s	s	s	s
Meadow fescue		s	s	s
Meadow foxtail			s	s
Perennial ryegrass		s	s	s
Red fescue				s
Rough meadow-grass	s	s	s	s
Sedges			s	s
Sheep's fescue				s
Smooth meadow-grass	s	s	s	s
Soft brome		s	s	s
Soft rush			s	s
Timothy		s	s	s
Tufted hairgrass			s	s
Wild-oats	s	s	s	s
Yorkshire fog		s	s	s

Broad-leaved weeds & bracken	Rate: l/ha			
	3	4	5	6
Amphibious bistort				s
Bracken (2)			s	s
Broad-leaved dock		s	s	s
Cleavers	s	s	s	s
Colt's-foot				s
Common chickweed	s	s	s	s
Common mouse-ear		s	s	s
Common nettle			s	s
Common ragwort				s
Common sorrel			s	s
Creeping buttercup (1)			s	s
Creeping cinquefoil			s	s
Creeping thistle			s	s
Curled dock			s	s
Dandelion		s	s	s
Dock seedlings	s	s	s	s
Ground-elder				s
Hogweeds (1)		s	s	s
Japanese knotweed				s
Mayweed species	s	s	s	s
Meadowsweet				s
Mugwort		s	s	s
Perennial sow-thistle			s	s
Plantains		s	s	s
Red clover			s	s
St John's-worts				s
Scotch thistle				s
Sheep's sorrel			s	s
Spear thistle			s	s
Speedwell species	s	s	s	s
White clover (1)				s
White dead-nettle			s	s
Willowherbs			s	s
Yarrow			s	s

Treat weeds not listed as follows:

	Rate: l/ha
Perennial broad-leaved weeds	6.0
Perennial grasses	4.0
Annual weeds	1.5

(1) Correct stage of growth at treatment is important.

(2) At full frond expansion.

S = Susceptible

Making the most of **Proliance Quattro**

Proliance Quattro applied to foliage is translocated throughout the plant, controlling all parts including shoots, roots, rhizomes and stolons. After treatment, discolouration of the leaves is seen first on grass weeds, but takes longer to appear on broad-leaved weeds. The time for complete kill of weeds depends on species and growing conditions, and may vary from a few days to a few weeks.



Japanese Knotweed



Nettles

To allow **Proliance Quattro** to translocate to maximum effect, it is important that perennial weeds are not broken up before treatment. Do not apply other pesticides for 5 days before or after application of **Proliance Quattro**.

Avoid drift and possible damage to neighbouring plants. Do not spray in windy weather, especially if applying a spray with smaller droplet sizes.

In good growing conditions **Proliance Quattro** is rainfast within 6 hours. Where weed growth and uptake is slowed by adverse conditions, a rain-free period of up to 24 hours following spraying may be necessary. For best results, **Proliance Quattro** should be applied to a dry target. **Proliance Quattro** that does not land on target leaves is quickly deactivated and degraded in soil.



Optimum control of weeds

For best control, apply Proliance Quattro to weeds which are actively growing, with enough leaf to absorb the product. Weeds are less susceptible to complete control when growth is restricted by natural senescence or by factors such as drought, waterlogging, frost or high temperature. Such conditions at, or soon after, spraying may result in reduced control.

Where a range of dose rates are given for the control of a weed, the higher rates will give the best and most reliable control. Rates may be reduced within the range indicated where weed growth is suitable and in good growing conditions. Reduced rates may give less than optimum levels of control, and should only be used where such control may be tolerated, as in the case of maintenance control of lower weed populations.

The **Proliance Quattro** formulation has been fully optimised such that additional tank mix adjuvants are not required when applying at minimum rates recommended on the label.

Timing for optimum control of weeds

Common couch and other perennial grass weeds - Treat only when a full emergence of actively growing green leaf is reached. Common couch reaches this susceptible stage of growth from the beginning of tillering and new rhizome growth, usually when plants have 4 or 5 leaves, with at least 10cm of new growth.

Perennial broad-leaved weeds - Best treated when actively growing and at or near flowering, but before senescence begins.

Annual weeds - Must be actively growing, with sufficient leaf area for uptake of the spray. Annual grasses should have at least 5cm of leaf and annual broad-leaved weeds at least 2 expanded true leaves before spraying. Annual weeds emerging after treatment will not be controlled.



Application techniques

Target	Uptake of glyphosate products can only occur when they are in solution on the leaf surface. Proliance Quattro is specially formulated to allow uptake over a longer period of time.
Drop size	Ideally Proliance Quattro should be applied with medium to coarse nozzles in order to achieve discrete spray droplets on the leaf surface, and minimise drift.
Nozzles	Use medium to coarse nozzles as they aid penetration. Very coarse spray generators such as air induction nozzles will generally perform well.
Mounted sprayer boom height	Boom height is very important. Too high and droplets tend to slow down before they hit the target, making them prone to sideways movement from wind etc. Optimum boom height is 40 cm above the top of the plant.
Pressure	A pressure of 2–3 bars is ideal.
Water volume (l/ha)	80–250 l/ha – 200–250 l/ha is the preferred volume where weeds are dense and good coverage is necessary.
Knapsack & CDA applicators	Knapsack applicators: Use 200 ml Proliance Quattro in 9.8 litres of CLEAN water to make 10 litres of spray liquid. Coverage 500 m ² at a dose rate equivalent to 4.0 l/ha, or 330 m ² at a dose rate equivalent to 6.0 l/ha. Cover weed leaves evenly, do not spray to run off. CDA Applicators: The spray droplet spectra produced must be of a minimum Volume Median Diameter (VMD) of 200 microns. Select the correct rate of Proliance Quattro and make up to desired volume with CLEAN water. Calibrate and operate according to manufacturer's instructions.
LERAP	None
Category	Proliance Quattro is rainfast within 6 hours of application under good growing conditions. Where weed growth and uptake is slowed by adverse conditions, a rain free period of up to 24 hours after spraying may be necessary.

Precautions

Safety profile

Proliance Quattro does not require any hazard classification and therefore no symbols or risk phrases appear on the label.

Toxicity studies performed on **Proliance Quattro** have shown that it is of low order toxicity.

Precautions

(a) 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 applying through hand held 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, drinking or smoking and after work.

(b) Environmental protection

KEEP LIVESTOCK OUT OF TREATED AREAS. 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.

(c) Storage and disposal

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

Proliance Quattro

Proliance Quattro is an aqueous concentrate containing 360 g/litre glyphosate, a surfactant and water conditioning system.

Keep out of reach of children. Keep away from food, drink and animal feeding stuffs. When using do not eat drink or smoke.

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

Frequently asked questions

Which salt is in **Proliance Quattro**?

Proliance Quattro does not contain a simple salt of glyphosate. In this formulation glyphosate is part of an integrated mix of various beneficial ions which promote activity.

Does **Proliance Quattro** contain a wetter?

Yes, and more. The enhanced active ingredient in **Proliance Quattro** is fully formulated with a special blend of alkylpolyglucosides, which ensure effective delivery of glyphosate to the target weeds.

Should a wetter be added to **Proliance Quattro**?

No, **Proliance Quattro** is a fully formulated, ready to use product.

What is the hazard classification of **Proliance Quattro**?

Proliance Quattro does not require any hazard classification and therefore no symbols or risk phrases appear on the label.

What is the safety profile of **Proliance Quattro**?

Proliance Quattro has low order toxicity. Used in accordance with label instructions, there is low risk to operators. **Proliance Quattro** has low risk to aquatic and beneficial organisms.

Summary



Formulation

Proliance Quattro is a soluble concentrate containing 360 g/litre glyphosate plus the enhanced System 4 Technology alkylpolyglucoside adjuvant system.

Target

Annual and perennial grass and broad-leaved weeds.

Application

Apply to weeds at the most susceptible growth stages. Apply when weeds are actively growing. Use appropriate spray quality based on size of target and water volume.

Dose

Use rates 1.5–6 l/ha.

Volume

Water volume of 80–250 l/ha, using higher volume for dense targets. Rotary atomisers – see label for details.

Timing

Do not cultivate for at least 3 weeks prior to, or for 14 days after application of **Proliance Quattro** for effective perennial weed control.

Pack sizes

10 litre.

Rainfastness

6 hours or 24 hours if adverse weather conditions.

Buffer zone restrictions

No LERAP.

Proliance Quattro[®] Herbicide

Proliance Quattro is a fast acting, high performance, non-selective herbicide from Syngenta. It combines a specialised high performance glyphosate, optimally formulated with System 4 Technology.



Proliance Quattro is available in a easy-to-use 10 litre S-pac.

Pack coverage: 1.67–6.67 ha depending on rate used.

Water volume: 80–250 l/ha.

Syngenta Crop Protection UK Ltd. Registered in England, No 849037.
CPC4, Capital Park, Fulbourn, Cambridge, CB21 5XE
E-mail: customer.services@syngenta.com **Web:** www.greencast.co.uk / www.greencast.ie

Distributed in the UK and Ireland by Scotts Professional

Tel: 08712 205353 **Email:** prof.sales@scotts.com

Proliance Quattro[®] is a Registered Trademark of a Syngenta Group Company. Proliance Quattro (MAPP 13760, PCS 03710) contains glyphosate. All other brand names used are trademarks of other manufacturers in which proprietary rights may exist.

Always read the label. Use pesticides safely.

©Syngenta December 2009. GQ 00723


www.greencast.co.uk
www.greencast.ie