

# LUXIMO®



**DISCOVER A  
NEW DAWN FOR  
WEED CONTROL**

**□ - BASF**

We create chemistry





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# WHEN WAS THE LAST TIME YOU FELT IN CONTROL OF YOUR WEED PROBLEM?

INCREASED  
RESISTANCE

LOSS OF  
CHEMISTRY

SEED BANK  
PRESSURE

SEED  
MULTIPLICATION

Battling black-grass, and other problem weeds such as ryegrass can feel like an uphill struggle.

Increasing resistance to herbicides, loss of authorised chemistry and continually increasing seed banks; as well as prolific seed populations, are all factors playing against you and it can feel impossible to get to the 97% control needed to beat your black-grass for good.

In partnership with cultural controls, the industry is desperately seeking the light at the end of the tunnel, to help sustainably and reliably take back control over black-grass and other problem weeds.





## A NEW DAWN FOR WEED CONTROL

Available as **Luxinum® Plus + Stomp® Aqua**, **Luximo®** is a soil residual active substance for winter wheat and spring barley, for use at pre and early post emergence. To be used as part of an IPM strategy, **Luximo®** provides a vital tool for controlling black-grass and Italian ryegrass and ushers in a new dawn for weed control.

**NEW MODE OF ACTION:** **Luximo®** has a different HRAC group to other cereal herbicide active substances. This means it attacks a different target within grass weeds.

**NEW STANDARD FOR BLACK-GRASS CONTROL:** Across 106 trials over four years, solo **Luximo®** gave an extra 22 percentage points of control over solo flufenacet.

**NEW STANDARD FOR RYEGRASS CONTROL:** Across 17 trials over five years, solo **Luximo®** gave an extra 29 percentage points of control over solo flufenacet.

**IDEAL MIX OF CHEMICAL PROPERTIES:** **Luximo®** is mainly taken up by the roots of weeds and its ideal combination of properties helps get it where it needs to be, and keep it there long enough to get the job done.

### THE LIGHT AT THE END OF THE TUNNEL FOR PROFITABLE FARMING



#### IT'S DIFFERENT

A brand new mode of action in the fight against difficult to control grass weeds.



#### IT'S POWERFUL

Providing a new standard in black-grass and Italian ryegrass control.



#### IT'S THE FUTURE

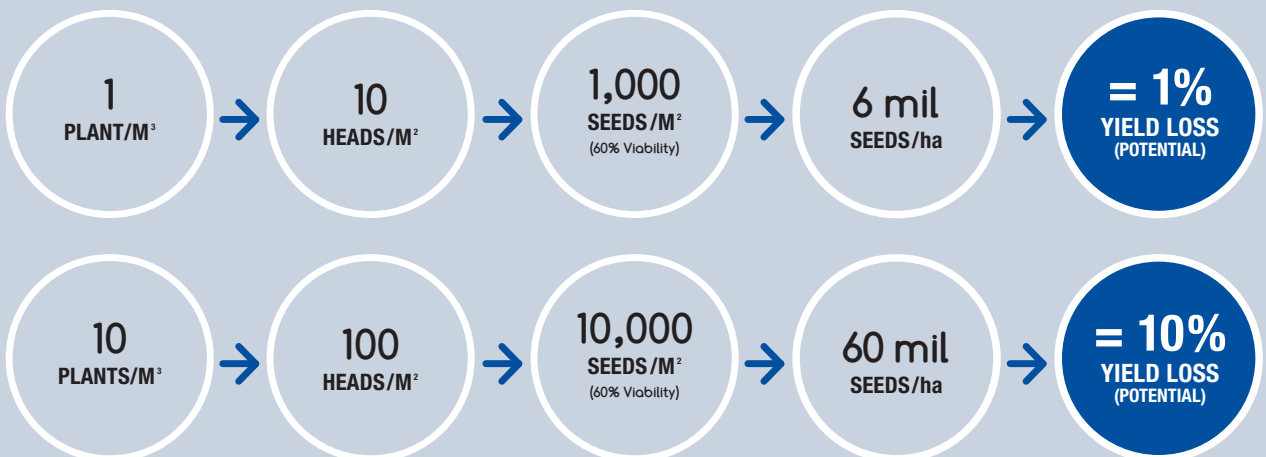
**Luximo®** makes breaking the vicious cycle of black-grass reproduction possible.



## GIVE YOUR SEED BANK A FIGHTING CHANCE

Compared to flufenacet, **Luximo**® more than halves the seed return over time. In partnership with cultural controls, **Luximo**® gives you a long term strategy to manage seed populations.

### BLACK-GRASS MULTIPLICATION RATES







## A BRAND NEW MODE OF ACTION HAS COME TO LIGHT

Luximo® has a completely new mode of action. It is classified by the Herbicide Resistance Action Committee (HRAC) as an inhibitor of fatty acid thioesterase (group 30).

Luximo® inhibits cell membrane production in the weed, meaning the weed can no longer grow.

In the field, root and shoot growth of sensitive plants is inhibited and often the weeds never emerge. Where they do emerge, leaves show yellowing and discolouration, before the plant withers and dies.

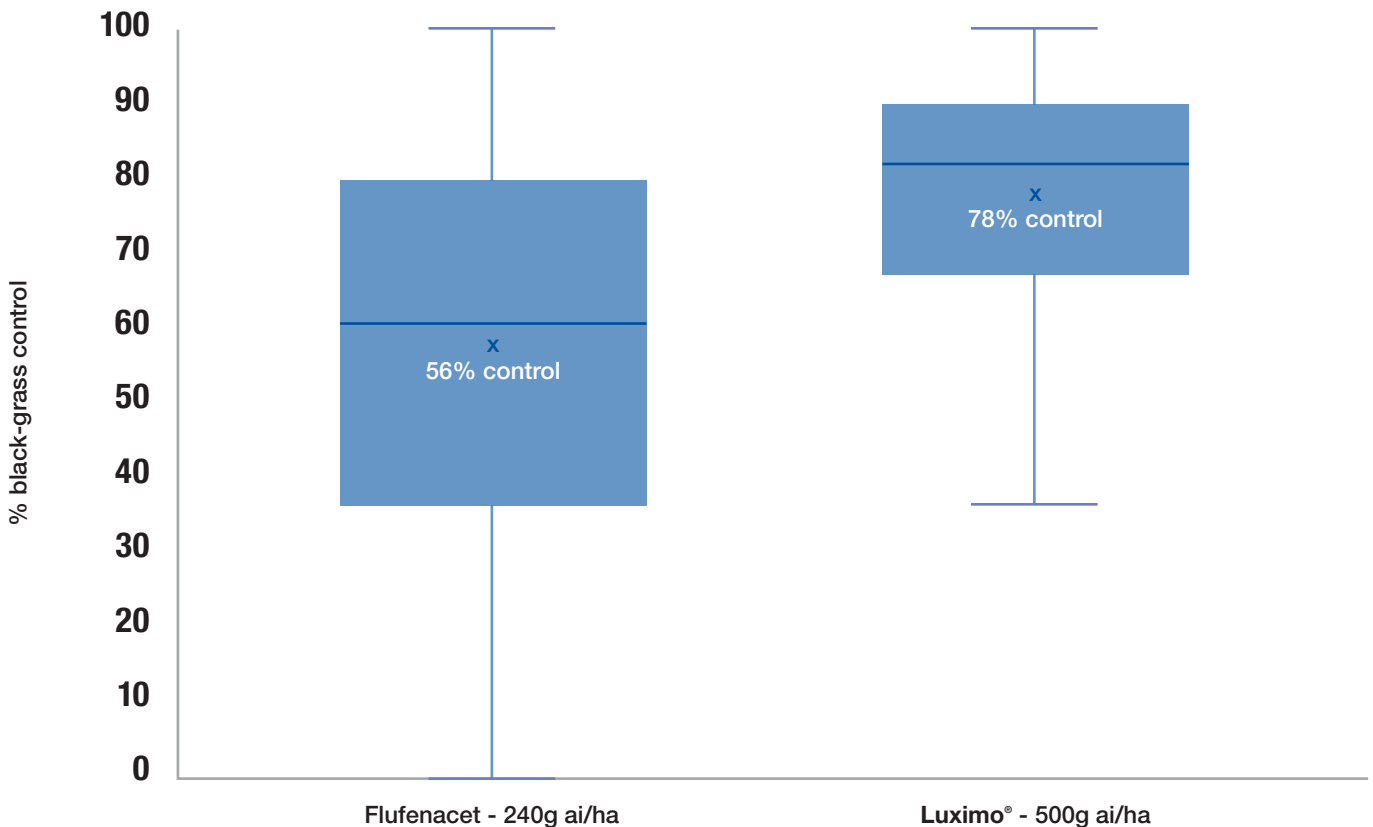
This novel mode of action enables Luximo® to work against even resistant biotypes, making it possible to break the vicious cycle of black-grass reproduction.

# A NEW STANDARD FOR BLACK-GRASS CONTROL

**Luximo**® delivers superior performance to current market standards. In trials, solo **Luximo**® has consistently outperformed solo flufenacet, demonstrating, on average, an extra 22 percentage points of control against black-grass.



**SOLO LUXIMO® VERSUS SOLO FLUFENACET: PRE-EM BLACK-GRASS CONTROL**  
N = 106, TRIALS OVER 4 YEARS



The chart shows the black-grass control from solo **Luximo**® versus solo flufenacet, expressed as a box plot. It is based on 106 trials over four years.

The chart shows that solo flufenacet averaged 56% black-grass control, while solo **Luximo**® averaged 78% control.

The smaller **Luximo**® box indicates a more consistent and reliable performance from **Luximo**® compared to flufenacet.

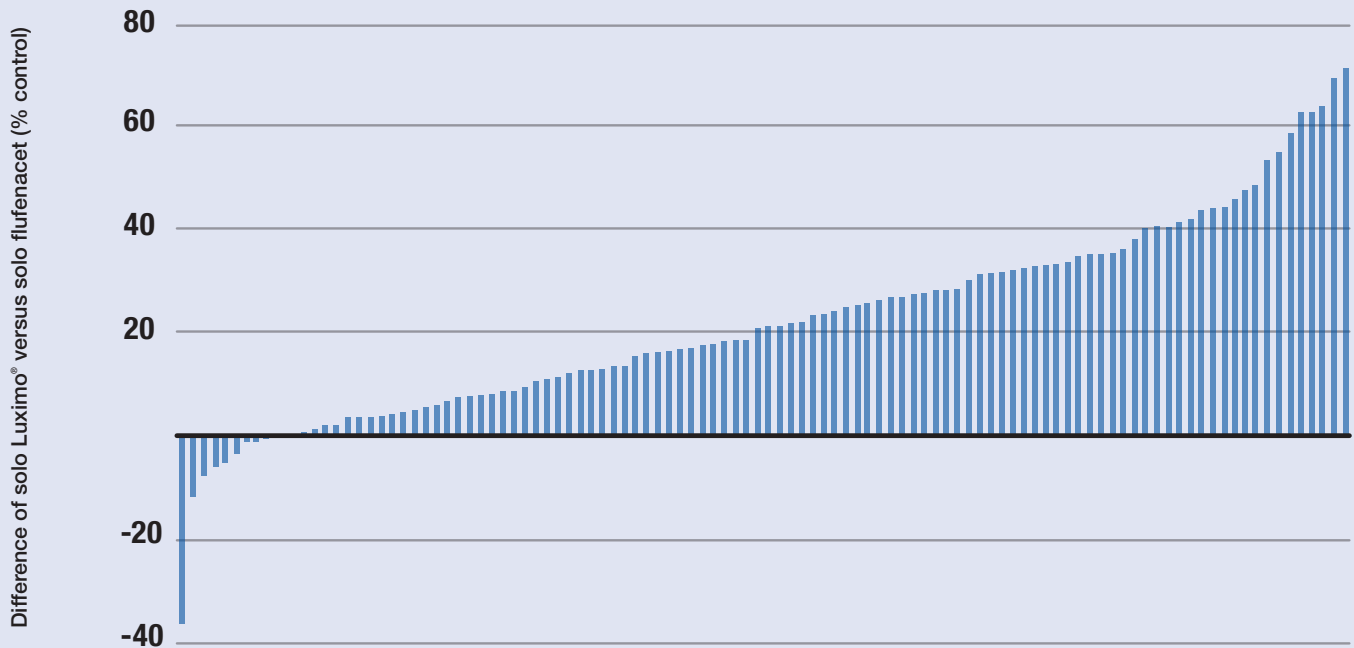
The graph supports the summary that **Luximo**® gives greater black-grass control than flufenacet and is likely to give that better control across a wide range of conditions and populations.



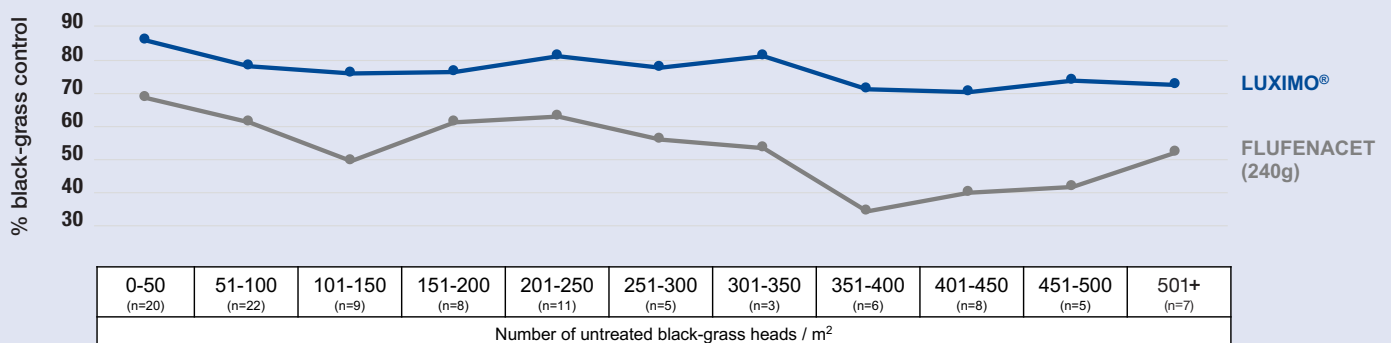
# ON AVERAGE, LUXIMO® GAVE AN EXTRA 22 PERCENTAGE POINTS IN CONTROL OVER FLUFENACET

Each bar represents a pre-em black-grass control trial. The bars above the black line show where solo Luximo® outperformed solo flufenacet in the trial. The bars below the black line show where solo flufenacet outperformed solo Luximo® in the trial.

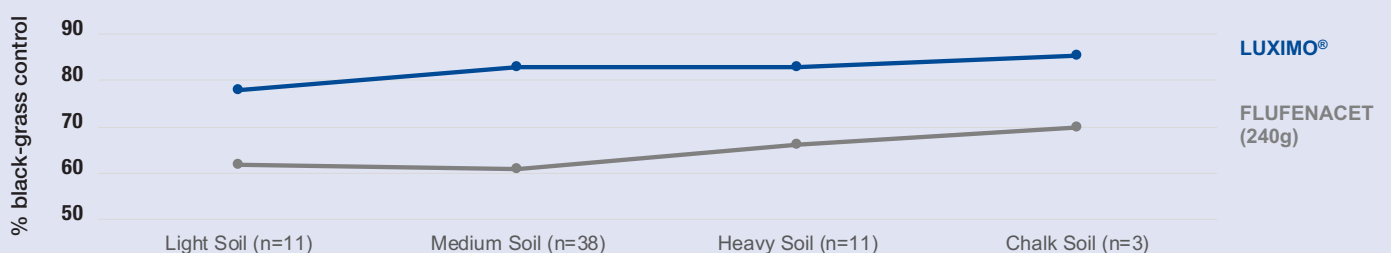
## PERFORMANCE OF SOLO LUXIMO® VERSUS SOLO FLUFENACET: PRE-EM BLACK-GRASS CONTROL N=106, TRIALS OVER 4 YEARS



## PERFORMANCE BY DIFFERENT BLACK-GRASS POPULATIONS: PRE-EM BLACK-GRASS CONTROL N = 105, TRIALS OVER 4 YEARS

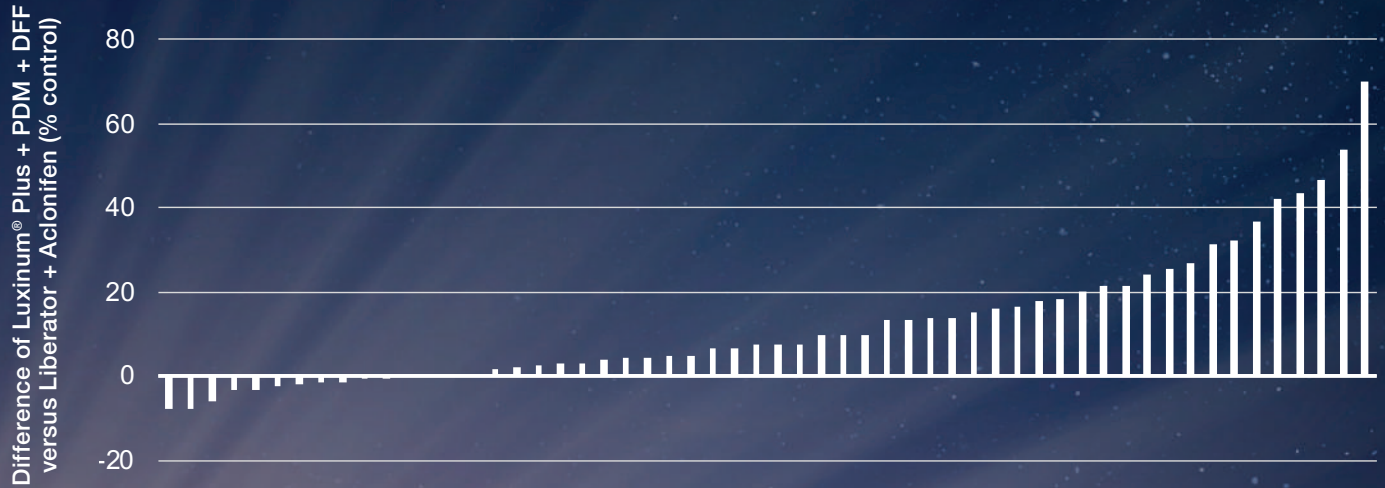


## PERFORMANCE BY DIFFERENT SOIL TYPES: PRE-EM BLACK-GRASS CONTROL N = 63, TRIALS OVER 4 YEARS



# PERFORMANCE OF LUXINUM® PLUS + PENDIMETHALIN (PDM) + DIFLUFENICAN (DFF) VERSUS LIBERATOR + ACLONIFEN

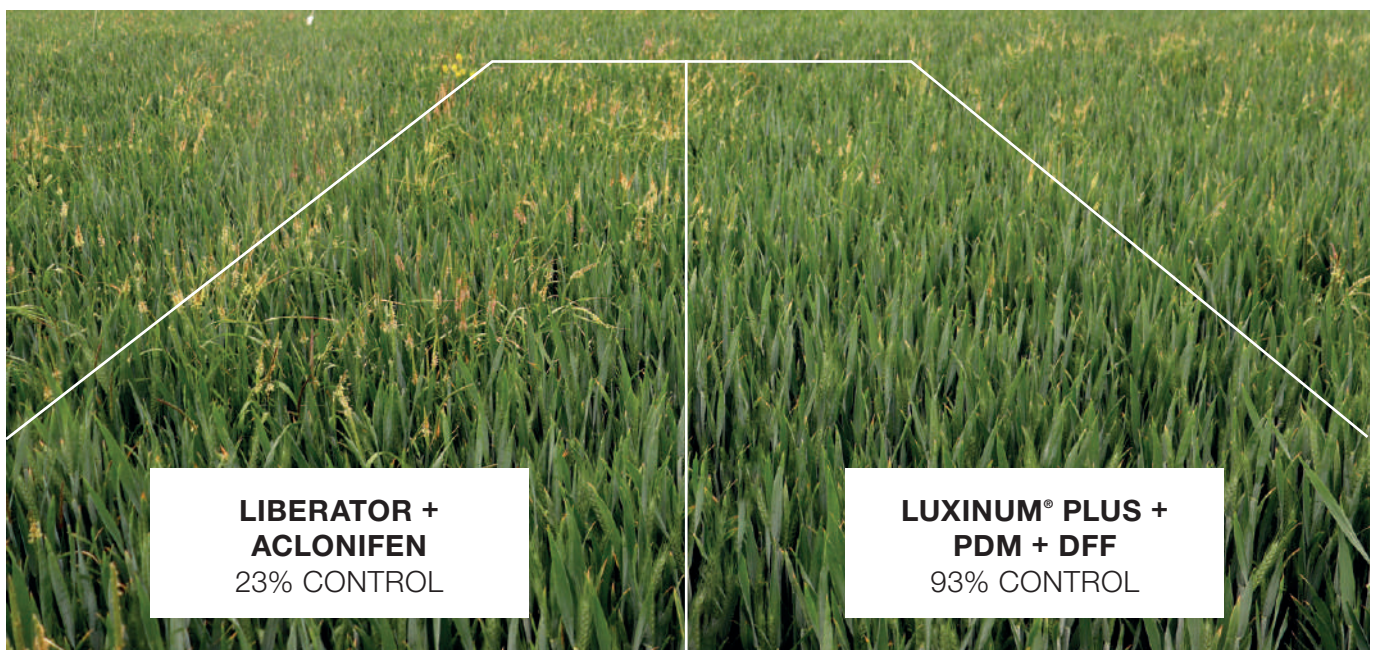
N=56, TRIALS OVER 3 YEARS



**AVERAGE LEVEL OF CONTROL:**  
LUXINUM® PLUS + PDM + DFF = 84%  
LIBERATOR + ACLONIFEN = 72%

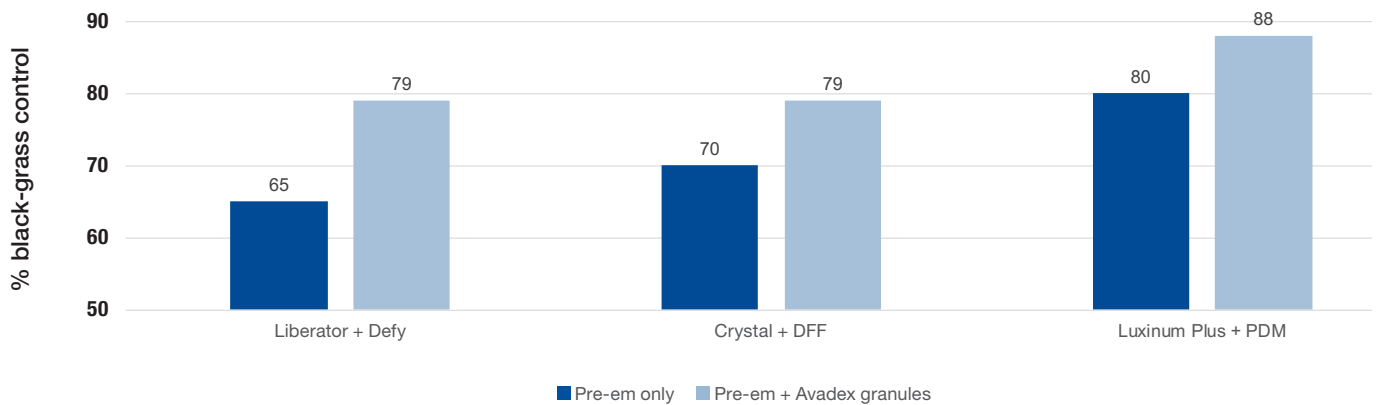
Across 56 pre-emergence black-grass trials across three years, the Luximo® based treatment outperformed Liberator + aclonifen by an average of 12.5 percentage points in control.

## BRADWELL-ON-SEA, ESSEX, 2021/22 PRE-EM BLACK-GRASS TRIAL





**PERFORMANCE OF PRE-EMS WITH/WITHOUT AVADEX GRANULES: PRE-EM BLACK-GRASS CONTROL**  
**N = 21, TRIALS OVER 3 YEARS**



In the data set above of 21 pre-emergence black-grass trials across three years, comparing stand-alone use of pre-ems with and without sequenced Avadex granules, Luxinum® Plus + pendimethalin strongly outperformed current market standards, without Avadex granules.

However, perhaps most compelling is that Luxinum® Plus + pendimethalin, without Avadex granules, delivered equivalent performance to

current market standards when these were used in sequence with Avadex granules.

When Luxinum® Plus + pendimethalin was used in sequence with Avadex granules, it provided a 9% uplift in control versus market standards using Avadex granules.

This data set gives further confidence that no matter the approach, **Luximo®** sets a new standard for black-grass control.



*“The **Luximo®** based programme has definitely showed an uplift in performance over flufenacet for black-grass control.”*

**Daniel King,**  
**Farmer & Luximo®**  
**trialist**



*“Luximo’s efficacy is inherently stronger than flufenacet.”*

**John Cussans,**  
**NIABTAG Weed Biology**  
**& Management**  
**Specialist**

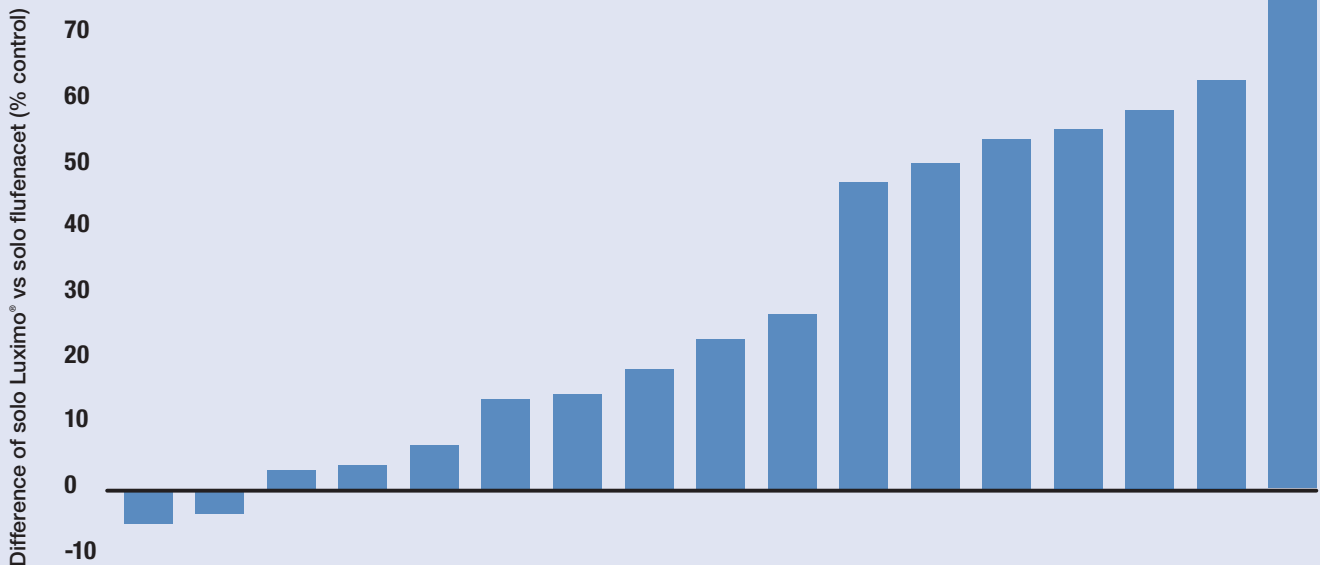


*“Putting **Luximo®** to the test for a couple of years, on high black-grass population sites, has shown it consistently leaps above the older farm standards.”*

**Craig Green,**  
**Independent**  
**Agronomist &**  
**Luximo® trialist**

# A NEW STANDARD FOR RYEGRASS CONTROL

## PERFORMANCE OF SOLO LUXIMO® VERSUS SOLO FLUFENACET: PRE-EM RYEGRASS CONTROL N = 17, TRIALS OVER 4 YEARS



AVERAGE LEVEL OF CONTROL:  
SOLO FLUFENACET = 52% SOLO LUXIMO® = 81%

**ON AVERAGE, LUXIMO® GAVE AN EXTRA 29 PERCENTAGE POINTS IN CONTROL**

Each bar represents a pre-em Italian ryegrass control trial. The bars above the black line show where solo **Luximo**® outperformed solo flufenacet in the trial. The bars below the black line show where solo flufenacet outperformed solo **Luximo**® in the trial.

## DEREHAM, NORFOLK, 2021/22 PRE-EM RYEGRASS TRIAL

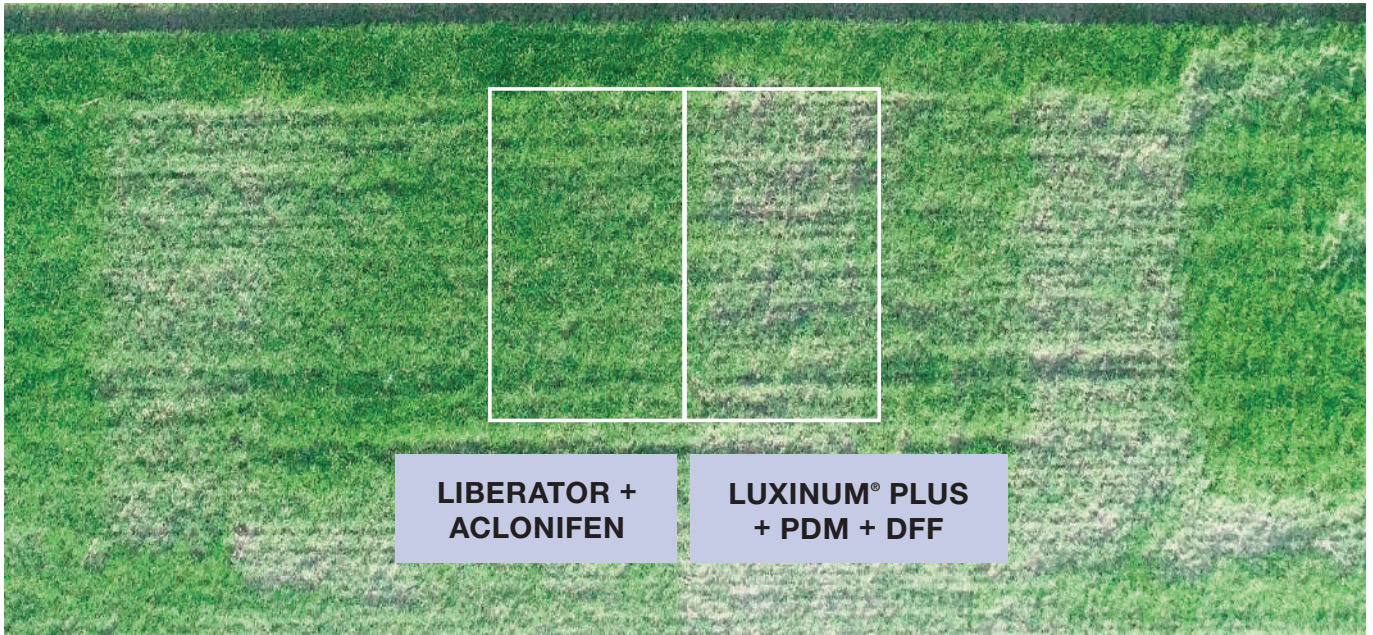
**SOLO LUXIMO®**  
85% CONTROL

**SOLO FLUFENACET**  
35% CONTROL

**UNTREATED**  
350 HEADS/M<sup>2</sup>



# KIRK HAMMERTON, YORKSHIRE 2021/22 PRE-EM RYEGRASS TRIAL



This drone photo shows the increased level of control of ryegrass from the **Luximo**® treatment over competitor products.



*“Luximo® offers growers the greatest efficacy in a cereal grass weed herbicide programme, and we recommend it as a replacement to flufenacet as the base of black-grass and ryegrass control programmes.”*

**Stuart Kevis, Business Development Manager, BASF**

This unsprayed patch on a high pressure ryegrass field in Essex from spring 2023 demonstrates the outstanding ryegrass control from the **Luximo**® based programme.





## IDEAL MIX OF CHEMICAL PROPERTIES

**Luximo®** is primarily taken up by the roots of weeds and its ideal combination of chemical properties helps get it where it needs to be, and keep it there long enough to get the job done.

### LOW SOLUBILITY

Aclonifen  
Diflufenican  
Pendimethalin  
Picolinafen

Prosulfocarb

### MODERATE SOLUBILITY

**Luximo®**  
Flufenacet

### LONG RESIDUAL LIFE

Aclonifen  
Diflufenican  
Pendimethalin

**Luximo®**  
Flufenacet  
Picolinafen

### SHORT RESIDUAL LIFE

Prosulfocarb

### STRONG ADSORPTION

Pendimethalin  
Picolinafen

**Luximo®**  
Aclonifen  
Diflufenican

Prosulfocarb

Flufenacet

### WEAK ADSORPTION

### NON-MOBILE

**Luximo®**  
Aclonifen  
Pendimethalin  
Picolinafen

Diflufenican  
Prosulfocarb

### MODERATELY MOBILE

Flufenacet

Sources: University of Hertfordshire – Pesticide Properties Database & BASF.

## SOLUBILITY

The greater the solubility, the more the active dissolves in soil pore water.

## BINDING STRENGTH

Adsorption is the ability of the active to bind to soil particle surfaces.

## RESIDUAL LIFE

The length of time the active substance remains active and effective in the soil.

## MOBILITY

The likelihood the active substance can move through the soil profile.







# PRODUCT PROFILE

**Luximo® is available this autumn as Luxinum® Plus + Stomp® Aqua and delivers excellent control of black-grass, ryegrass, annual meadow-grass, poppy and a wide range of broad-leaved weeds, whilst also delivering the same level of brome control as current residual market standards.**



To get the best from **Luximo®**, apply pre-emergence and within 24-48 hours of drilling.

This mix will achieve a new level of grass weed control in winter wheat and spring barley. For tank mix enquiries, please speak to your local BASF Agronomy Manager or call the BASF Technical Hotline.

**Luximo®** is available in a 5ha box containing 3.5L of Luxinum® Plus – in a 5L can – and 2 x 5L cans of Stomp® Aqua.

Do not apply **Luximo®** pre-emergence to winter wheat crops drilled after 15th November. Wait for the crop to emerge and apply post-emergence.



## Product profile: Luxinum® Plus + Stomp® Aqua

Active ingredients	714 g/l cinmethylin + 455 g/l pendimethalin
Formulation	Emulsifiable concentrate (EC) + Capsule Suspension (CS)
Crops	Winter wheat and spring barley
Label claims	Black-grass, Italian and perennial ryegrass, annual and rough meadow-grass, loose silky bent, common poppy and a wide range of broad-leaved weeds
Pack size	1 x 3.5 litres Luxinum® Plus + 2 x 5 litres Stomp® Aqua
Pack treatment area	5 hectares
Dose	0.7 l/ha Luxinum® Plus + 2.0 l/ha Stomp® Aqua
Application window	Pre-em up to GS 30 (Pre-em application recommended for best control)
Water volume	100-300 l/ha
Non-target plant buffer zone	5m from non-cropped land



## BEST PRACTICE APPLICATION

To achieve the best results, and to ensure responsible resistance management, **Luximo®** must be used with a partner product and as part of an integrated weed management approach.

As with all soil residual herbicides, it is also important to adhere to the following application guidelines to maximise performance and crop safety:

- Apply pre-emergence herbicides as soon as possible after drilling, ideally within 24-48 hours
- Ideally spray on to moist, clod-free and consolidated seedbeds, with minimal trash
- Ensure seed is adequately covered by a minimum of 32 mm settled soil
- If direct drilling, make sure slots are closed before application
- **Luximo®** has been proven to deliver consistent results across a range of water volumes and nozzle types, allowing you flexibility in choosing the right set up to get the job done



*“One key to effective grass weed control is understanding that it is a numbers game. You should ensure that following your IPM measures you have minimised the surviving weeds that your chemistry has to tackle; the correct strategy uses all available techniques to get that number of weeds to as near zero as possible.”*

**Steve Dennis, Head of Business Development, BASF**



*“**Luximo®** is a brand new mode of action to help the fight against black-grass and ryegrass but the cultural controls that the industry has been using up until now continue to be vital. It’s important that **Luximo®** is used as part of an integrated weed management programme.”*

**Hugo Pryce, Agronomy Specialist, BASF**

# CEREAL WEED CONTROL IPM

## IPM Game Plan

Turning the tide on challenging weeds such as black-grass and ryegrass can feel like an impossible task, but with a strong IPM Game Plan, and Luximo® in your corner, it can be done.

### *Know the Opposition*

Knowledge is power. The better you know your weed competition, the better able you are to defeat it.

- Learn more about the weeds on your farm as different species thrive in different conditions
- Map and measure populations to monitor problem areas and track progress
- In the spring, keep an eye on emerging weeds and growth stages
- Identify where seeds may sit in the soil profile
- Test for resistance every 3-5 years on an individual field basis

### *Keep it Clean*

A clean game is a good game. Farm hygiene is key to stopping the introduction and spread of grass weeds on farm.

- Leave dirty fields until last at harvest
- Clean machinery between fields
- Try to avoid moving dirty straw to another field
- Ensure any farm saved seed is from clean fields
- Avoid disturbing weed seeds at drilling
- Control grass weeds in non-cropped areas where permissible



## *Plan the Attack*

**Attack is the best form of defence. Cultural controls are at the heart of a winning strategy. Below are some key tactics for consideration.**

- Soil health management
- Stubble management
- Stale seedbeds
- Rotational ploughing
- Delayed drilling
- Competitive crops
- Spring cropping
- Fallow / grass leys
- Roguing
- Crop destruction

## *Optimise your Last Line of Defence*

**Don't fall at the last hurdle. Herbicide applications are a vital step in achieving good control.**

- Use a combination of different modes of action
- Apply your best chemistry pre-em
- Aim to spray 24 - 48 hours after drilling for the best control
- Apply on to moist, clod-free and consolidated seedbeds
- Ensure seed is covered by a minimum of 32mm of settled soil
- If direct drilling, ensure slots are closed

For more detailed information go to [agricentre.basf.co.uk/luximo](https://agricentre.basf.co.uk/luximo)

Want to share the key parts of your IPM strategy?  
Tell us on Twitter using **#IPMGamePlan**



# LUXIMO®

Use plant protection products safely. Always read the label and product information before use. For further product information including warning phrases and symbols refer to [www.agricentre.basf.co.uk](http://www.agricentre.basf.co.uk). Luxinum® Plus contains cinmethylin (Luximo®). Liberator contains flufenacet and diflufenican. Avadex contains triallate. Crystal contains flufenacet and pendimethalin. Crystal, Luxinum® and Luximo® are registered trademarks of BASF. All other brand names used in this publication are trademarks of other manufacturers in which proprietary rights may exist. © BASF 2023. All rights reserved.

 **BASF**

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