



**SYNGENTA  
VARIETY GUIDE  
2021**

**GROWING  
TOGETHER**  
THROUGH EXPERIENCES

**syngenta**<sup>®</sup>





**Cereal production in the UK faces lots of uncertainties and challenges. This season we have already seen the increasingly frequent extreme weather periods due to climate change. This, together with other factors, such as the need for more sustainable farming, Brexit fall-out and societal demands, means that resilience and agility in our farming businesses and our varieties are essential for achieving the best possible yield, quality, and profit.**

Syngenta are proud of supplying practical on-farm advice about where best to grow our varieties and how to get the best out of them. We breed cereal varieties that can cope with a range of your on-farm challenges and match your quality demands. Even in difficult times we are certain that together we can use our genetics to help you manage a balance of trying the new whilst managing risk.

Syngenta is viewed by farmers and agronomists as the forward-thinking leader in the cereals breeding industry and continues to be your trusted partner on-farm. We hope that this guide provides some inspiration on where best to position your cereal varieties on-farm to get great results!

We always listen to feedback so please do get in touch to tell us what you think of our guide, we would love to hear from you.



**JAMES TAYLOR-ALFORD**  
**SYNGENTA, HEAD OF SEEDS**  
**UK & IRELAND**

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**VIEW OUR WEBSITE AT**  
**WWW.SYNGENTA.CO.UK FOR**  
**FURTHER EXPERT ADVICE ON:**

- Rooting and establishment
- Cereal disease management
- Grass weeds
- Integrated pest management
- Sustainable farming
- Agronomy tools

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**BEFORE 31ST MAY 2021:**

Claim 1 BASIS point by logging onto the member area at [www.basis-reg.co.uk/member-area](http://www.basis-reg.co.uk/member-area) and enter the reference number **CP/111631/2021/g** or e-mail [cpd@basis-reg.co.uk](mailto:cpd@basis-reg.co.uk) and quote the reference number **CP/111631/2021/g**.

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**FROM 1ST JUNE 2021:**

Claim 2 NRoSO points by e-mailing [nrososupport@cityandguilds.com](mailto:nrososupport@cityandguilds.com) and quote the reference number **N0469352f**.



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**ASK US A QUESTION, WE WOULD**  
**LIKE TO HEAR FROM YOU.**

We hope this guide provides you with useful information on the best variety for your farm and how to maximise its potential. If you have a question for one of our experts, you can email us:

**?** [CUSTOMER.SERVICES@SYNGENTA.COM](mailto:CUSTOMER.SERVICES@SYNGENTA.COM)





## GROWING FOR END MARKETS

### HOW TO GET THE MOST FROM YOUR WINTER WHEAT VARIETIES

Once you have decided on the crops you are growing, finding the most suitable cereal variety from such a vast amount of options can be difficult. There are many factors to consider from intended drilling date to end market requirements.

We have provided agronomic insights for each of our wheat varieties to assist with choosing the best option for your farm.



### SYNGENTA WINTER WHEAT VARIETIES

Here's a reminder of the main features of the winter wheats from the Syngenta family:



The very high yielding barn filler with excellent grain quality.



The secure, consistent feed wheat, with outstanding *Septoria tritici* resistance.



The high yielding, adaptable and flexible variety with a very wide drilling window.

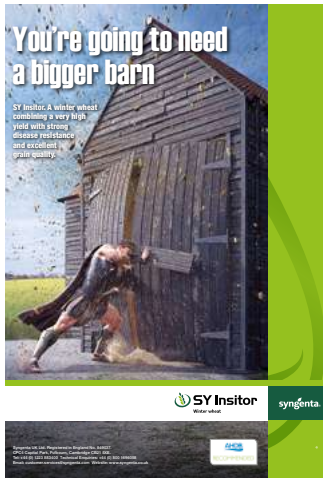


The high yielding wheat variety that performs particularly well on light land and in second wheat situations.



# SY Insitor

Winter wheat



**BREEDING INSIGHTS**  
 SY INSITOR adds to our current hard feed wheat portfolio and brings an exciting combination of outstanding yield, disease resistance and OWBM resistance. It is a taller variety but responds well to a PGR. It has a high specific weight and good grain quality making it an outstanding all round variety.

KATE COBBOLD, Syngenta

## VARIETY DESCRIPTION

SY INSITOR is the highest yielding hard feed wheat on the AHDB Recommended List. It is a secure high yielding barn filler that has excellent grain quality. Launched on farm in 2020, SY INSITOR will be a strong choice for the feed wheat grower this autumn.

Outstanding yields across the whole of the UK and on all soil types.

Strong *Septoria tritici* resistance and a very good untreated yield, coupled with OWBM resistance.

Very high specific weight.

## WHERE TO GROW SY INSITOR

SY INSITOR is the highest yielding hard feed wheat.

- An exceptional choice for the whole of the UK
- The highest yielding variety available for the North, and on light land
- Performs outstandingly on both light and heavy lands
- Very high yields in the mid-late drill slot

## WHERE NOT TO GROW SY INSITOR

SY INSITOR has a vigorous overwinter growth habit and tall straw. It should not be drilled in early September.

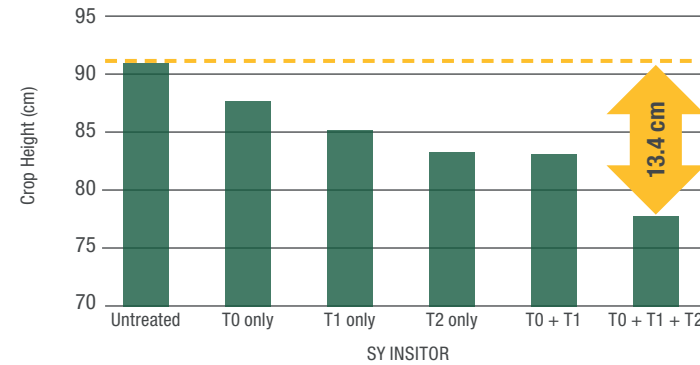
SY INSITOR KEY STATISTICS	
SEPTORIA TRITICI	6.8
UK TREATED YIELD (% CM)	104
EAST	104
WEST	104
NORTH	105
SPECIFIC WEIGHT	78.4

## DID YOU KNOW?

SY INSITOR produces large numbers of erect tillers. It has good tiller survival over winter and can carry these through the season to deliver outstanding yields. Its early development and speed to GS30 means nitrogen timing is key to feed the rapid early growth.

## HOW TO GET THE MOST FROM YOUR WINTER FEED WHEAT

### GROWTH HABIT



- Quick early development with erect growth habit
- Relatively fast to GS30
- Later maturing, allowing more time to build yield

SY INSITOR is a taller variety (with no PGR). However, it responds well to PGR applications to reduce height and lodging risk.

Source: Syngenta PGR Trials, Harvest 2020

### DISEASE

- Excellent resistance to *Septoria tritici* at 6.8
- Yellow rust = 5
- Both Brown and Yellow rust should be actively managed in order to maximise SY INSITOR yield potential
- SY INSITOR has the best combination of *Septoria tritici* resistance and treated yield of any of the hard Group 4 varieties

### ORANGE WHEAT BLOSSOM MIDGE

SY INSITOR also has OWBM resistance – adding security if midge numbers are high.

### OUTSTANDING YIELD POTENTIAL

HIGHEST yielding hard Group 4 variety

HIGHEST yielding variety in the North

HIGHEST yielding variety on light soils

HIGHEST yielding hard Group 4 as a 1st cereal

### GRAIN QUALITY

With a specific weight of 78.4 kg/hl and a Hagberg falling number of 273 – SY INSITOR has one of the best quality profiles of the hard feed wheats.

**THE 6 AND ABOVE CLUB**  
 SY INSITOR JOINS THE CLUB  
 Combining high yield and robust disease resistance for *Septoria tritici*



# Gleam

Winter wheat



## VARIETY DESCRIPTION

GLEAM was added to the AHDB Recommended List in 2018 and is the most popular variety for harvest 2021. It is a very high yielding, adaptable hard feed winter wheat variety that performs in all seasons, all regions and on all soil types.

Consistently high yielding in all situations.

Wide drilling window, suitable from early September through to mid-February.

Excellent overall disease and OWBM resistance.

### WHERE TO GROW GLEAM

Excellent option as a first and second wheat, its prostrate growth habit means its good as an early drilling variety, but early maturity means it also suits drilling up to mid-February.

### WHERE NOT TO GROW GLEAM

You can grow it everywhere!

### GLEAM KEY STATISTICS

UK TREATED YIELD (% cm)	103
EAST	103
WEST	103
NORTH	102
1ST CEREAL	103
2ND CEREAL	103
ALL DRILLING DATES	103
LIGHT SOILS	102
HEAVY SOILS	103

### DID YOU KNOW?

Due to its slow growth habit, excellent disease resistance and stiff straw, GLEAM can be drilled from 1st September onwards. Having high tillering ability and early maturity it is also highly suited to later drilling.

GLEAM is highly adaptable. It has one of the safest late sowing dates and good late drilling performance.

GLEAM has shown good yield consistency over a number of very different seasons.

## HOW TO GET THE MOST FROM YOUR WINTER FEED WHEAT

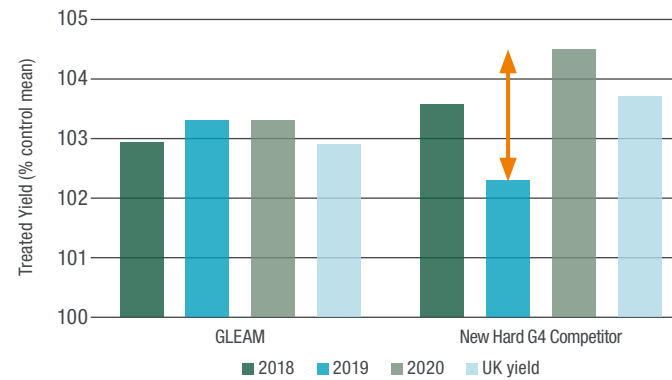
### GROWTH HABIT

- Slow growth habit throughout winter and can often look 'backward'
- Later to reach stem extension
- Rapidly catches up from GS30 onwards
- Earlier maturity (0)

GLEAM generates large numbers of tillers early on and maintains them through the growing season to flowering. High tillering varieties need sufficient nitrogen to support their growth and maintain tiller survival, but care needs to be taken to maximise yield without risking lodging.

Luckily GLEAM is a short, stiff-strawed variety that has good lodging resistance.

### GLEAM DEMONSTRATES CONSISTENCY ACROSS YEARS

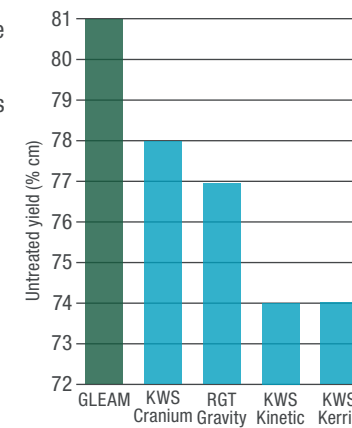


Source: AHDB Winter Wheat Recommended List 2021/22

### DISEASE

- Good all round disease resistance
- *Septoria tritici* = 6.1
- Consistently high untreated yields

GLEAM delivers a uniquely strong combination of high *Septoria tritici* resistance and high consistent yields, both treated and untreated.



Source: AHDB Winter Wheat Recommended List 2021/22

### GRAIN QUALITY

GLEAM has reliable grain quality with a good specific weight of 76.3 kg/hl. It has a good Hagberg Falling Number which means it is less likely to sprout in wet harvest conditions.

GLEAM has early maturity with a ripening score of 0 (+/- Skyfall). It will be one of the earliest varieties to combine on farm, thus spreading the workload and risk at harvest.

### OWBM

Added to its excellent disease profile, GLEAM is also OWBM resistant which means it is a very secure variety if midge numbers are high.

### BREEDING INSIGHTS

Very high yielding hard feed with excellent yield and strong disease resistance. Early maturity and OWBM resistance are welcome benefits. Good straw strength and consistent performance are attractive traits.

TRACY CREASY, Syngenta

**THE 6 AND ABOVE CLUB**

**GLEAM**  
Combining high yield and robust disease resistance, with a 6.1 for *Septoria tritici* resistance

### CONSISTENCY

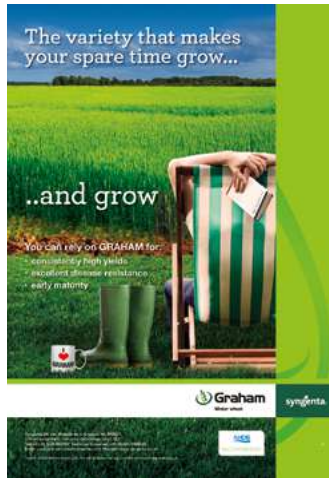
GLEAM is extremely consistent, giving high yields in:

- Every region
- All rotational positions
- All soil types
- Every year

It is reliable for disease resistance, straw strength, grain quality and has the bonus of OWBM resistance. GLEAM really is the variety for every farm.

# Graham

Winter wheat



## VARIETY DESCRIPTION

**GRAHAM is a high yielding, hard Group 4 feed winter wheat added to the AHDB Recommended List in 2016.**

Very high resistance to *Septoria tritici* and Yellow rust.

Flexible drilling window from early September onwards.

The joint earliest maturing variety on the AHDB Recommended List.

Reliable straw and grain quality.

### WHERE TO GROW GRAHAM

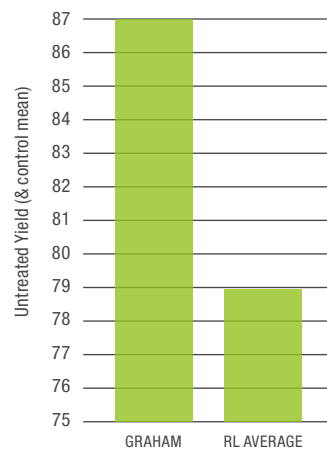
GRAHAM is best suited in a first wheat situation, and can be drilled from the 1st September to the end of January.

### WHERE NOT TO GROW GRAHAM

Syngenta do not advise GRAHAM to be grown north of Edinburgh.

GRAHAM KEY STATISTICS	
SEPTORIA TRITICI	6.8
YELLOW RUST	8
RESISTANCE TO LODGING WITHOUT PGR	7
RESISTANCE TO LODGING WITH PGR	8
SPECIFIC WEIGHT (kg/hl)	76.8
EARLY MATURITY	-1

GRAHAM delivers high untreated yield, 8% above the average on the Recommended List.



Source: AHDB Winter Wheat Recommended List 2021/22

## HOW TO GET THE MOST FROM YOUR WINTER FEED WHEAT

### GROWTH HABIT

- Slower, prostrate growth habit throughout winter
- Later to reach stem extension
- Rapidly catches up from GS30 onwards, and moves through the later growth stages relatively quickly
- The joint earliest maturing winter wheat variety

### DISEASE

GRAHAM is a low risk variety with excellent resistance to *Septoria tritici* (6.8) and Yellow rust (8).

GRAHAM is resilient under high disease pressure resulting in high untreated yields. This gives you greater flexibility when spray timings are compromised.

### OWBM

OWBM will need to be monitored and treated accordingly if midge numbers reach threshold, as GRAHAM does not have resistance to this pest, however an application of HALLMARK Zeon® should provide good control.

### AGRONOMICS

As well as excellent disease resistance, GRAHAM has an easy to manage agronomic profile with good straw strength. It responds well to a PGR and is rated as an 8 for lodging resistance (with PGR).

GRAHAM is the joint earliest maturing variety on the AHDB Recommended List, and will ripen and mature earlier than other varieties.

Although rated as a -1 (days +/- Skyfall), our trials have shown GRAHAM to be earlier than this in the field. In reality GRAHAM will mature 7-10 days earlier than many crops.

GRAHAM has been shown to have low Take-all build up in first wheat situations which reduces the risk in following wheat crops.

### GRAIN QUALITY

GRAHAM was originally bred as a bread wheat. Although classed as a Group 4 feed wheat, there are some end-users that will accept GRAHAM in their grist. GRAHAM has a very good grain quality profile that is significantly better than other hard feed varieties. It is worth checking with your local purchaser to see if there are premiums available for GRAHAM.

- Growing for straight feed = a standard nitrogen programme
- Growing for an end-use = check the protein specification and adapt nitrogen applications

A good fungicide programme will further enhance the already robust specific weight of GRAHAM. The high and stable Hagberg adds security to the crop at harvest, this added to early maturity makes GRAHAM a reliable choice for grain quality.

	PROTEIN CONTENT (when grown as feed) %	HAGBERG FALLING NUMBER	SPECIFIC WEIGHT KG/HL
GRAHAM	11.5	279	76.8
KWS SISKIN	12.0	289	76.9

### DID YOU KNOW?

GRAHAM is the joint highest yielding variety in the West. Its combination of disease resistance and agronomics make it an outstanding choice for the wetter West.

**BREEDING INSIGHTS**  
GRAHAM is a firm favourite and would be one of the first varieties on my list. With proven on-farm performance and an excellent disease profile which gives that extra flexibility when application timings are compromised, GRAHAM is a difficult variety to beat.  
MATT BULL, Syngenta

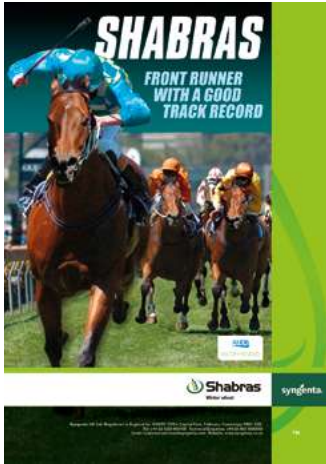
**11.5%**  
PROTEIN CONTENT

**279**  
HAGBERG FALLING NUMBER

**76.8**  
SPECIFIC WEIGHT KG/HL

# Shabras

Winter wheat



## VARIETY DESCRIPTION

SHABRAS is a high performing, reliable hard Group 4 feed wheat.

Good yields on light land and in second wheat situations.

Consistent yields across all years in official trials (showing good adaptability across different seasons).

Quick growth habit and thick canopy structure makes it a more competitive option in grass weed scenarios.

Strong *Septoria tritici* resistance.

### WHERE TO GROW SHABRAS

All regions, on light soil types and particularly suited to a second wheat position.

### WHERE NOT TO GROW SHABRAS

A robust PGR programme should be applied in high risk scenarios.

### SHABRAS KEY STATISTICS

SEPTORIA TRITICI	6.1
YELLOW RUST	5
BROWN RUST	5
LIGHT SOILS YIELD (% cm)	101
2ND CEREAL YIELD (% cm)	102

## HOW TO GET THE MOST FROM YOUR WINTER FEED WHEAT

### GROWTH HABIT

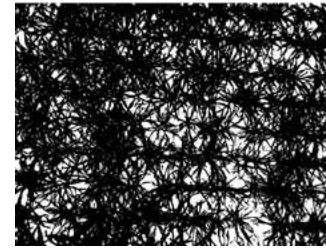
- Fast spring growth and high tillering capacity
- SHABRAS is often noted for its lush growth and thick leaf shape early on in the season
- Quick to reach stem extension and is a priority variety for early nitrogen and T0
- Early maturity

### DID YOU KNOW?

SHABRAS builds its yield by maintaining a lot of tillers. Feeding these tillers early on is a key nitrogen timing, as SHABRAS quickly reaches stem extension and therefore utilises the available soil nutrients quickly.

Once at stem extension, SHABRAS will move at an even pace and will reach major fungicide timings at similar times to Skyfall.

SHABRAS covers the ground well over winter and is early to reach GS30 and has rapid spring re-growth making it more competitive against grass weeds.



SHABRAS: 78% ground cover



KWS Kerrin: 68% ground cover

SHABRAS is suited to light soils and in a second cereal position.

Key considerations:

- Take-all in a second wheat situation
- Drought and nutrient deficiencies on light land

For both these situations increased rooting mass can be a huge benefit to mitigate these issues. Early nitrogen and seed dressing choice can make a big difference in protecting root growth.

SHABRAS is a strong variety in these situations, and the seed treatment VIBRANCE® Duo can also bring big advantages by enhancing rooting.

### MATURITY AND GRAIN QUALITY

SHABRAS has a ripening score of 0 (+/- Skyfall) on the AHDB Recommended List, and is one of the earliest maturing hard feed wheats.

- Harvest work load can be spread by choosing a range of maturities on farm

- Early maturity will give added security in wet harvests
- SHABRAS has a Hagberg Falling Number of 211. A solid Hagberg Falling Number will be beneficial for sprouting resistance

SHABRAS has secure grain quality characteristics.

	PROTEIN CONTENT %	HAGBERG FALLING NUMBER	SPECIFIC WEIGHT KG/HL
SHABRAS	11.5	211	76.0
RGT GRAVITY	11.5	199	75.9
GLEAM	11.5	217	76.3
KWS KERRIN	10.9	148	76.2

### DISEASE

SHABRAS has good resistance to *Septoria tritici* but is likely to benefit from rust control if conditions are conducive. An application of ELATUS™ Era will help keep this disease at bay.

### OWBM

SHABRAS does not have OWBM resistance, so will need to be monitored and treated accordingly if midge numbers reach threshold. A well-timed application of HALLMARK Zeon should provide good control.

### AGRONOMICS

SHABRAS will respond well to a PGR, especially on a high potential site. A split application of MODDUS® will help maintain the canopy and protect yield.

### BREEDING INSIGHTS

A very high yielding variety with full UK recommendation. SHABRAS has outstanding second wheat yields plus strong performances on heavy and light soils.

Its very early maturity coupled with its robust Hagberg Falling Number means it is a safe bet for harvest.

TRACY CREASY, Syngenta



# Choosing a hard group 4 wheat variety

With so many to choose from, selecting the best wheat variety for your farm can be difficult. Syngenta has a hard group 4 wheat variety for every situation:



Winter wheat

**SAFE SOWING DATES**

14 September to 31 January

**Excellent first + second wheat with impressive yields on lighter land**





Winter wheat

**SAFE SOWING DATES**

14 September to 14 February

**Excels as a second wheat**





Winter wheat

**SAFE SOWING DATES**

01 September to 14 February

**Very good first + second wheat with very wide drilling window**





Winter wheat

**SAFE SOWING DATES**

01 September to 31 January

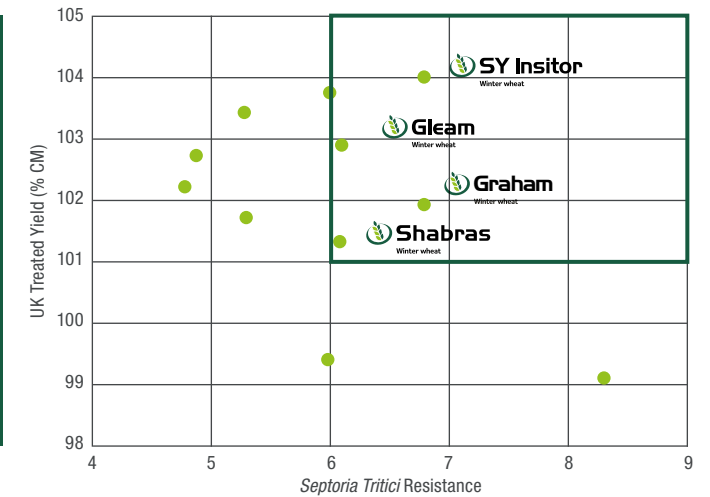
**First wheat preferred and strong early drilled option**



## SYNGENTA VARIETIES OFFER COMBINATION OF HIGH YIELD AND SEPTORIA TRITICI RESISTANCE IN THE HARD FEED SECTOR

**VARIETAL RESISTANCE IS THE FIRST LINE OF DEFENCE AGAINST SEPTORIA TRITICI**

- ✓ Greater flexibility in fungicide timings
- ✓ Maintain yield potential in high disease pressure years
- ✓ Potential for reducing fungicide inputs



Source: AHDB RL 2021/22, Hard G4 varieties only

## A hard feed wheat for every situation



**SY Insignia**  
Winter wheat



**Gleam**  
Winter wheat



**Graham**  
Winter wheat



**Shabras**  
Winter wheat





## GROWING FOR END MARKETS

### HOW TO GET THE MOST FROM YOUR WINTER MALTING BARLEY

Syngenta have a long standing reputation for high yielding varieties with excellent malting quality.

CRAFT and ELECTRUM are the only winter malting barleys on the AHDB Recommended List.

CRAFT, ELECTRUM, and our heritage barley FLAGON all have Full MBC Approval for Brewing.



Most winter malting barley varieties will be aiming for a malting contract for brewing. Typically the following will be required:

- A grain nitrogen content of 1.6-1.75%
- 94% screenings over a 2.25 mm sieve

In order to achieve this, all our varieties require a similar nitrogen programme of approximately 100-120 kg N/ha applied in 2 splits, by the end of March.

This will vary depending on soil type, farm history and weather.

### SYNGENTA WINTER BARLEY VARIETIES

Here's a reminder of the main features of the winter barleys from the Syngenta family:



The leading winter malting variety in the UK. CRAFT combines big bold grain with outstanding malting potential. CRAFT is the most purchased winter barley by maltsters and has a strong end-user following.



The new winter malt bringing high yields, good quality and very early maturity to the UK.

**Now with MBC Approval for Brewing!**



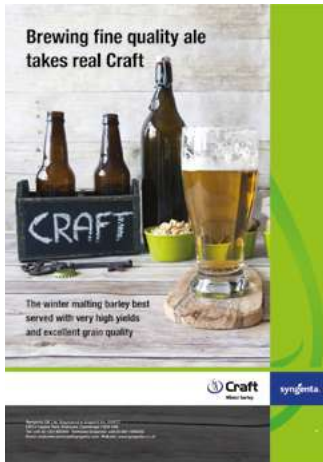
The heritage malt for East Anglia. FLAGON has been a sought after variety in this region for many years and remains an important winter malt for the East.

Varieties such as ELECTRUM, FLAGON and SURGE will benefit from a PGR programme in order to protect grain quality.

All varieties will have a different disease resistance programme and fungicide programmes should be adapted to suit the variety, region and weather in the season.







**BREEDING INSIGHTS**  
**CRAFT is a step forward over SY VENTURE - higher yielding with bigger, bolder grain. CRAFT has Full MBC Approval for Brewing and has strong support from end users. Contracts are widely available.**  
**TRACY CREASY, Syngenta**

**VARIETY DESCRIPTION**

**CRAFT has Full MBC Approval for Brewing with multiple contracts and strong demand from maltsters.**

- High yielding across all regions with a strong disease profile.
- Stiff straw with the highest lodging resistance of all winter malting varieties.
- Big bold grain with high specific weight and low screenings.
- Excellent brewing quality with the highest hot water extract available.

**WHERE TO GROW CRAFT**

CRAFT shows strong performance in all regions.

**WHERE NOT TO GROW CRAFT**

You can grow it everywhere!

**CRAFT KEY STATISTICS**

LODGING	8
SPECIFIC WEIGHT (kg/hl)	69.5
SCREENINGS	2.25 mm = 2.1% 2.5 mm = 6.6%



**BREEDING INSIGHTS**  
**ELECTRUM is the highest yielding winter malt with an excellent combination of yield, disease resistance, very early maturity and agronomics. Low screenings, good nitrogen and HWE makes it an attractive variety for the maltster too.**  
**KATHRYN HAMLIN, Syngenta**

**VARIETY DESCRIPTION**

**ELECTRUM is the highest yielding malting variety on the AHDB Recommended List.**

- ELECTRUM now has MBC Approval for Brewing. This is the highest yielding winter malting barley and has strong interest from end users.
- Strong disease profile with high untreated yields.
- Very good grain quality and specific weight (69.2 kg/hl) with very low screening losses.
- Earliest maturing winter malt variety on the Recommended List. The joint earliest of any variety.

**WHERE TO GROW ELECTRUM**

UK wide, but ELECTRUM is particularly strong in the East and the West.

**WHERE NOT TO GROW ELECTRUM**

On very high lodging risk sites.

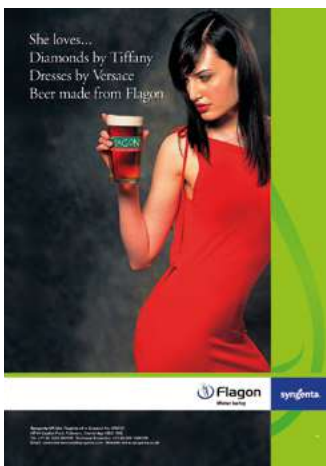


**ELECTRUM KEY STATISTICS**

TREATED YIELD	97%
SPECIFIC WEIGHT (kg/hl)	69.2
RIPENING (+/- KWS Orwell)	-1

**ELECTRUM HAS SLIGHTLY WEAKER STRAW THAN CRAFT AND WILL BENEFIT FROM A PGR PROGRAMME.**





**VARIETY DESCRIPTION**

**FLAGON is a heritage variety used for brewing.**

Full MBC Approval for Brewing with good support from several English maltsters.

Early ripening.

High specific weight.

FLAGON is weaker strawed and a full PGR programme will be needed to ensure the crop remains standing.

Net blotch will also need to be monitored and an application of an SDHI is recommended in a higher risk situation.

**WHERE TO GROW FLAGON**

Strong support from end users in East Anglia.

**WHERE NOT TO GROW FLAGON**

Only grow if you have a contract for this variety.

**FLAGON KEY STATISTICS**

<b>SPECIFIC WEIGHT (kg/hl)</b>	<b>69.5</b>
<b>RIPENING (+/- Cassata)</b>	<b>-1</b>

Data is from the AHDB RL 2016/17 as Flagon is no longer the Recommended List.

**BREEDING INSIGHTS**  
**FLAGON remains one of the UK's heritage winter malts. It has outstanding quality characteristics and strong support with English Maltsters and Brewers, especially in East Anglia where there are many contracts available.**  
**TRACY CREASY, Syngenta**



**VARIETY DESCRIPTION**

**SURGE is a high yielding 2 row feed variety.**

Good treated yields with high specific weight.

Very good disease resistance with the joint highest untreated yield of the 2-row winter barleys.

SURGE has relatively stiff straw, but in high risk situations it will benefit from a PGR programme.

**WHERE TO GROW SURGE**

Very strong in the West and East regions.

**WHERE NOT TO GROW SURGE**

SURGE can be grown across the whole of the UK, but will yield best in the West and East.

**SURGE KEY STATISTICS**

<b>RHYNCHOSPORIUM</b>	<b>7</b>
<b>NET BLOTCH</b>	<b>6</b>
<b>UNTREATED YIELD</b>	<b>86%</b>

**BREEDING INSIGHTS**  
**SURGE is a high yielding feed with excellent disease resistance and untreated yield. SURGE is marketed and distributed by Wynnstay Woodheads.**  
**KATE COBBOLD, Syngenta**



## GROWING FOR END MARKETS

### HOW TO GET THE MOST FROM YOUR SPRING MALTING BARLEY

Spring barley varieties will be growing quickly now. Attention needs to be paid to fungicide choice, PGR requirements and nitrogen as we move towards harvest.

Nitrogen should be applied depending on which market you are growing for, and the contract specifications if growing for malt.



	BREWING USE	MALT DISTILLING	GRAIN DISTILLING	FEED
How big is this market?	382,500 ha	235,500 ha	10,000 ha	120,000 ha
Main geographic region	UK (mainly England)	Northern England and Scotland	Mainly Scotland but increasingly grown in England too	West and North of UK
What do end markets need?	1.6-1.75% N (up to 1.85% N for export) 94% screenings over a 2.25 mm sieve (England)	1.5-1.65% N Non-GN 90% screenings over a 2.5 mm sieve (Scotland)	Above 1.85% N Non-GN 90% screenings over a 2.5 mm sieve (Scotland)	High yield with good specific weight
Nitrogen programme to achieve this	2 splits Nitrogen	Lower total Nitrogen, 1 to 2 splits	High total Nitrogen, later applications	Normal practice following RB209
Syngenta varieties	LAUREATE SY TUNGSTEN (provisional) SY SPLENDOR (provisional)	LAUREATE SY TUNGSTEN (provisional)	FAIRING	WAGGON SCHOLAR KELIM



### BREWING

**GRAIN N TARGET: 1.6-1.75% FOR DOMESTIC USE UP TO 1.85% FOR EXPORT**

Syngenta trials have shown LAUREATE has an increasing yield response up to 150 kg N/ha total dose without impacting % grain N in England.

Suggested application timings - 2 doses to be applied by GS15.

For export, higher total dose and later timings may help to achieve the higher grain N, PROPINO has an innately higher grain N which suits the export market.



### MALT DISTILLING

**GRAIN N TARGET: 1.65% AND BELOW**

Syngenta trials have shown total N from 100-125 kg N/ha increased yield without adversely affecting % grain N in LAUREATE.

Suggested application timings - either applied 100% in the seedbed or as a split dose applied before GS15.



### GRAIN DISTILLING

**GRAIN N TARGET: 1.85% AND ABOVE**

Specialist varieties for grain distilling contain very high levels of enzymes to convert starch into sugar during the fermentation process. These varieties are in general lower yielding, but have higher innate grain N than the brewing and malt distilling varieties.

FAIRING has consistently seen improving yields when increasing N up to a total dose of 150 kg N/ha, after this yield tends to plateau, however % grain N continues to increase up to a total N dose of 200 kg/ha.

Suggested application timings - 2 doses to be applied by GS21.





### SYNGENTA SPRING BARLEY VARIETIES

Here's a reminder of the main features of the spring barleys from the Syngenta family:



**Laureate**  
Spring barley

Very high yielding spring malting barley with FULL MBC Approval for Brewing and Malt Distilling. LAUREATE has an excellent overall agronomic package with strong maltster support.



**SY Tungsten**  
Spring barley

Newly recommended spring malting barley with outstanding quality for both the distilling and brewing markets. Provisionally MBC Approved for Brewing and Distilling.



**SY Splendor**  
Spring barley

Newly recommended spring malting barley for the brewing market. Outstanding yields with good malt potential. Provisionally MBC Approved for Brewing.



**Propino**  
Spring barley

PROPINO has been the mainstay of the brewing market for a number of years but no longer has MBC Approval. It remains popular on farm for its consistency.



**Fairing**  
Spring barley

The only fully MBC Approved variety for Grain Distilling, with contracts available in this market. Very early ripening and excellent *Rhynchosporium* resistance makes FAIRING very suited to the grain distilling market.

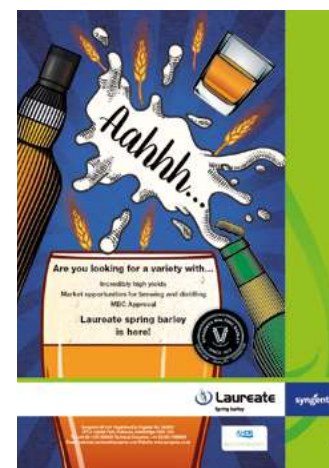


**Scholar**  
Spring barley

A spring feed barley with consistent yield performance, stiff straw and very high specific weight, SCHOLAR is a very good option for the feed market.



**Laureate**  
Spring barley



**BREEDING INSIGHTS**  
LAUREATE is the leading spring barley variety in the UK. It has full MBC Approval for both brewing and distilling. It is the mainstay of the distilling industry and a leading variety in the brewing sector. LAUREATE has shown outstanding consistency over very different growing seasons and has consistently performed for both growers and end-users.  
**KATHRYN HAMLEN, Syngenta**

### VARIETY DESCRIPTION

**LAUREATE is a very high yielding spring malting barley with an excellent disease and agronomic profile.**

Non-GN variety with Full MBC Approval for Brewing and Malt Distilling.

Very strong support from all end users and contracts available for both markets across the UK.

High disease resistance with very strong untreated yields.

#### WHERE TO GROW LAUREATE

All regions and soil types. LAUREATE is approved for both brewing and malt distilling so can be grown for both markets (with nitrogen applied accordingly).

#### WHERE NOT TO GROW LAUREATE

Care should be taken on high lodging risk sites, a full PGR programme will be needed.

#### THE STORY OF LAUREATE

Have you ever wondered how the varieties in your field end up in your whisky or beer? Watch our video at [www.syngenta.co.uk/syngenta-malting-barley-excellence](http://www.syngenta.co.uk/syngenta-malting-barley-excellence) to see how the variety LAUREATE was bred and how it finds its way to a drink near you!

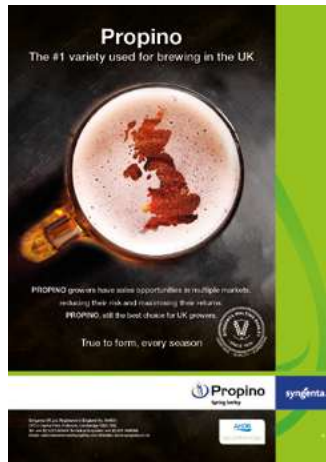
#### LAUREATE KEY STATISTICS

<b>RHYNCHOSPORIUM</b>	<b>6</b>
<b>BROWN RUST</b>	<b>5</b>
<b>UNTREATED YIELD (% cm)</b>	<b>93</b>
<b>TREATED YIELD (% cm)</b>	<b>101</b>

Many of the new high yielding spring barley varieties have increased weight in the ear, as a result the straw is at increased risk of lodging, so in high risk situations a PGR programme of MODDUS + chlormequat followed by a height reduction application of ethephon at GS39 if the risk is still high.

## Propino

Spring barley



**BREEDING INSIGHTS**  
**PROPINO** has been the mainstay of the English brewing market for the past ten years. It is consistent, tried and trusted. Many growers still like it and it still has its place. It is no longer MBC Approved, and growers may want to look to move to LAUREATE, or the newer provisionally approved varieties SY TUNGSTEN and SY SPLENDOR.  
**TRACY CREASY, Syngenta**

### VARIETY DESCRIPTION

**PROPINO** is a spring malting barley that has been on the Recommended List since 2010. Although no longer on the MBC Approved List many growers still value **PROPINO** and there are still options with many maltsters and with exporters.

Consistent yields across all regions.

Excellent grain quality with big, bold grain and high specific weight.

**PROPINO** has the lowest screenings of all spring malting varieties.

#### WHERE TO GROW PROPINO

Mainly in the East and West for the domestic and export markets. Check with your local maltster for contracts and acceptability.

#### WHERE NOT TO GROW PROPINO

Only grow **PROPINO** if you have a contract or end-user who will accept it. If grown in Scotland it will most likely go for feed.

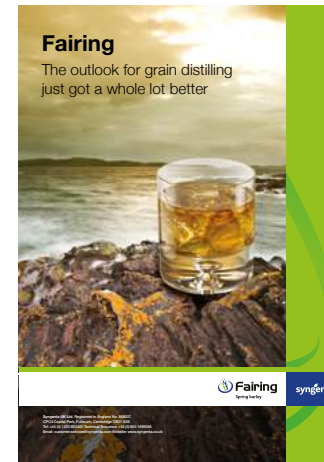
#### PROPINO KEY STATISTICS

SPECIFIC WEIGHT (kg/ha)	68.1
SCREENINGS	2.25 mm = 1.0% 2.5 mm = 2.2%

Protecting the crop through the growing season will be essential to maintain green leaf area and obtain the best yields. Each variety will have different strengths and weaknesses, therefore fungicide programmes should be adapted accordingly, also taking into consideration location and weather conditions for this season. **ELATUS Era** has approval for malting barley and is a very strong tool for the control of Brown rust and other foliar diseases.

## Fairing

Spring barley



**BREEDING INSIGHTS**  
**FAIRING** was specifically bred for the Scottish grain distilling market. It is now a popular variety in England, due to significant contracts available. It has very high grain N and big bold grain, with low screenings and high specific weight.  
**KATHRYN HAMLIN, Syngenta**

### VARIETY DESCRIPTION

**FAIRING** is a spring malting barley with Full MBC Approval for Grain Distilling. It was specifically bred for this market and has high grain nitrogen content required for the end use.

Excellent resistance to wet weather diseases.

The earliest spring barley to mature on the AHDB Recommended List 2021.

Excellent grain quality with high specific weight and low screenings.

#### WHERE TO GROW FAIRING

**FAIRING** is a specialist variety grown on contract in Scotland and Eastern England.

#### WHERE NOT TO GROW FAIRING

It is a specialist variety bred specifically for the grain distilling market, with lower yields and higher nitrogen, therefore it is advised to only grow **FAIRING** if you have a contract in place.

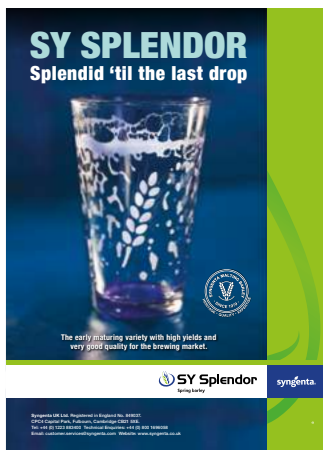
#### FAIRING KEY STATISTICS

RHYNCHOSPORIUM	6
RIPENING (+/- Concerto)	-1
SPECIFIC WEIGHT (kg/ha)	68.2



## SY Splendor

Spring barley



### VARIETY DESCRIPTION

**SY SPLENDOR** is a very high yielding malting barley on the AHDB Recommended List. It is a non-GN variety that is Provisionally Approved for Brewing.

Excellent quality for the brewing market.

SY SPLENDOR is currently undergoing MBC pilots with full approval for brewing possible by June 2022.

The second highest yielding spring barley variety on the RL.

Very consistent variety that performs well in every region and in every year.

Its high yields and competitive nature mean SY SPLENDOR is also a good option as a feed variety.

#### SY SPLENDOR KEY STATISTICS

UK TREATED YIELD (% cm)	103
BRACKLING	8
LODGING UNTREATED (% cm)	7
SPECIFIC WEIGHT (kg/hl)	67.9

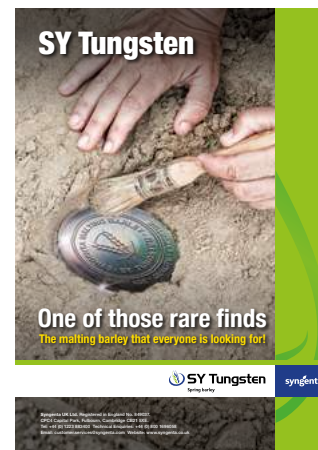
#### BREEDING INSIGHTS

SY SPLENDOR looks very promising. We identified it early due to its excellent malting quality and it is undergoing large scale testing from grain produced in H2020. SY SPLENDOR has 2 years to complete industrial pilots and should have MBC Approval by June 2022.

TRACY CREASY, Syngenta

## SY Tungsten

Spring barley



### VARIETY DESCRIPTION

**SY TUNGSTEN** is a very high yielding dual purpose variety on the AHDB Recommended List. It is a non-GN variety with excellent potential for both the malt distilling and brewing markets.

The highest yielding variety on the RL with potential for brewing and malt distilling.

Currently under evaluation by maltsters and end-users with the potential for full MBC approval by June 2022.

Very strong support from all UK maltsters.

The highest yielding variety for the North.

Good grain characteristics with high specific weight.

#### SY TUNGSTEN KEY STATISTICS

UK TREATED YIELD (% cm)	103
LODGING UNTREATED (% cm)	7
SPECIFIC WEIGHT (kg/hl)	67.4

#### BREEDING INSIGHTS

SY TUNGSTEN has outstanding yield and good all round characteristics. It is attractive for maltsters as it is a dual purpose variety that can be used for both brewing and malt distilling, and should follow the likes of LAUREATE in the UK. Its very high Northern yields re-enforce its suitability for Scotland.

KATHRYN HAMLEN, Syngenta



## GROWING FOR END MARKETS

### HOW TO GET THE MOST FROM YOUR HYBRID FEED BARLEY

Which varieties should you choose this autumn? A brief introduction to our current hybrid barley portfolio is shown on the right. Each variety can bring something different to your farm, but the underlying benefit of hybrid barley is based on its high yield potential which is uniquely driven by hybrid vigour.

Our strong hybrid barley breeding and genetics means you can depend on our varieties consistently performing across all regions and all years.



### SYNGENTA HYBRID FEED BARLEY VARIETIES

Here's a reminder of the main features of the hybrid feed barleys in the Syngenta family:

#### **SY Thunderbolt** Hyvido®

**NEW!** The variety with consistently high regional yields. Strong on heavy land, great grain quality and early to mature

#### **SY Kingston** Hyvido®

**NEW!** A strong performer for the North, West and on light land. Early maturing and great grain quality

#### **SY Kingsbarn** Hyvido®

The high-performing all-rounder. Ideal choice for all regions with great grain quality and easy to grow

#### **Bazooka** Hyvido®

Proven on farm performance. Strong track record of grass weed suppression and wet weather disease resistance

#### **Belmont** Hyvido®

The number 1 variety for UK yield. Top choice for the East and strong on light land

#### **Belfry** Hyvido®

High yield, resilient and easy to manage. Robust disease and lodging profile for management flexibility

#### **SY Baracooda** Hyvido®

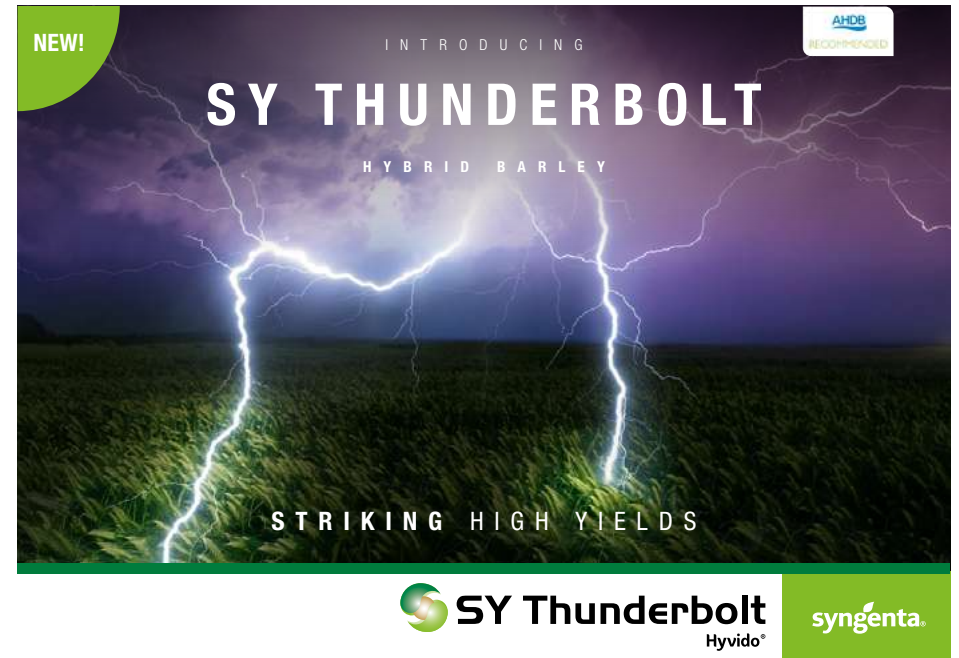
The high yielding variety for all regions. Good disease resistance and grass weed suppression

#### **SY Armadillo** Hyvido®

Toughen up your disease protection. Great choice for the North with exceptional *Rhynchosporium* resistance

#### **Libra** Hyvido®


Exceptional grain quality. Consistent regional grain quality and good wet weather disease resistance



**NEW!** INTRODUCING **SY THUNDERBOLT**  
HYBRID BARLEY

AHDB RECOMMENDED

STRIKING HIGH YIELDS

 **SY Thunderbolt**  
Hyvido®

syngenta.



AHDB RECOMMENDED

**YOU NEED TO EAT YOUR SY KINGSBARN**  
THE FEED BARLEY WITH SUPERIOR GRAIN QUALITY

 **SY Kingsbarn**  
Hyvido®

syngenta.



## HYBRID BARLEY VARIETIES OFFER MUCH MORE THAN HIGH YIELD

Hybrid barley offers a wide range of benefits in addition to consistently high yields:

<b>GRASS WEED SUPPRESSION</b>	<b>STRONG ALTERNATIVE TO 2ND WHEATS</b>
<b>EXTRA INCOME FROM STRAW</b>	<b>MORE FLEXIBLE DISEASE MANAGEMENT</b>
<b>IDEAL ENTRY FOR WOSR</b>	<b>HIGH SPECIFIC WEIGHT FOR GRAIN CONTRACTS</b>
<b>EARLY HARVEST GIVES WORKLOAD &amp; CASH FLOW BENEFITS</b>	<b>DEPENDABLE PERFORMANCE REDUCES RISK</b>

Grass weed suppression is an added strength and hybrid barley should be an integral part of your grass weed management strategy on-farm.

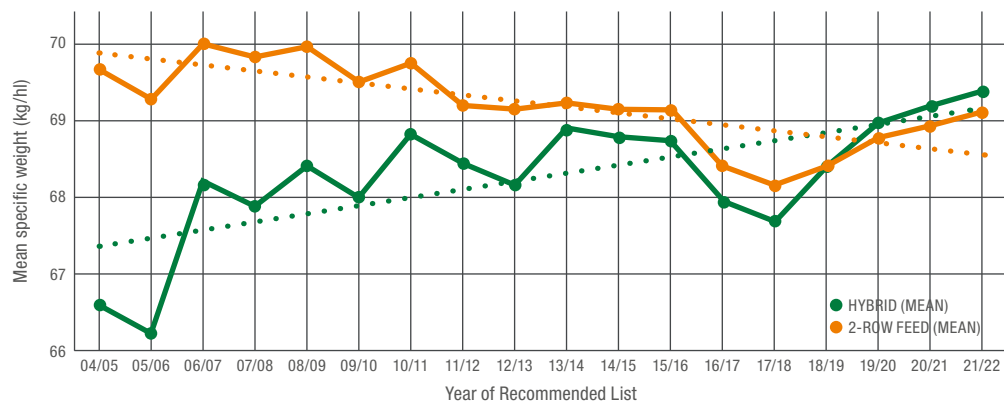
Our varieties also offer management flexibility. For example, early ripening provides an opportunity to spread workload at harvest, avoid overlap with the wheat harvest and drill following crops of winter oilseed rape. Likewise, the robust disease resistance profile of some varieties provides greater flexibility for fungicide application timings.

Barley straw is valued more highly than wheat straw. The straw from hybrid barley crops offers an extra income opportunity.

With all this in mind, many growers choose to grow hybrid barley as a great alternative to second wheats.

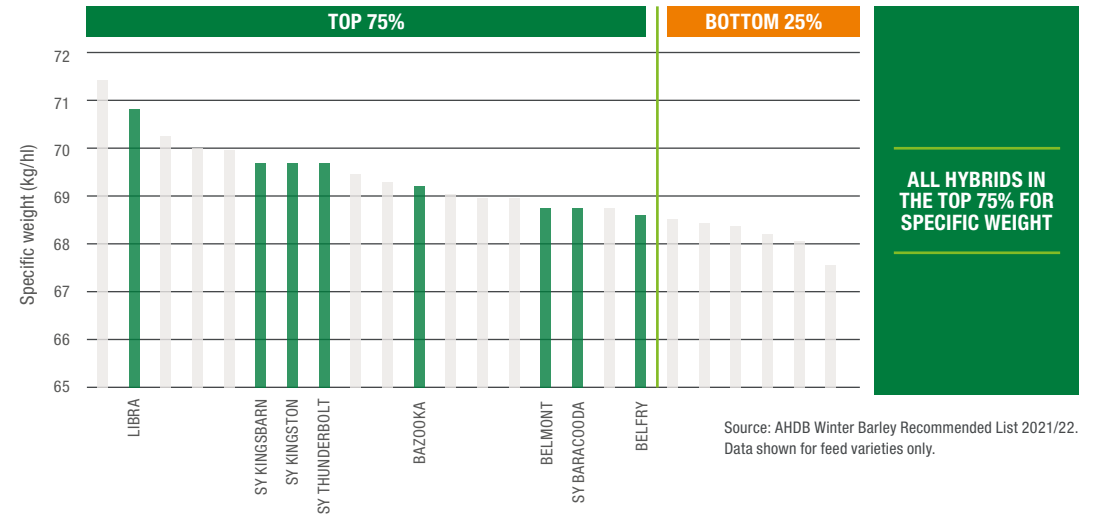
## GRAIN QUALITY

Meanwhile, improved grain quality has been a key target for our breeding programme and the specific weight of our latest generation of hybrids is now equivalent to the two-row feed varieties.



Source: AHDB Winter Barley Recommended Lists 2004/05 to 2021/22. Data shown for hybrids vs 2-row feed varieties.

## ALL HYBRIDS OFFER GOOD SPECIFIC WEIGHT



Source: AHDB Winter Barley Recommended List 2021/22. Data shown for feed varieties only.

ALL HYBRIDS IN THE TOP 75% FOR SPECIFIC WEIGHT

## HYBRID BARLEY IS EASY TO GROW

### SIX CRITICAL STEPS

Many growers have found that hybrid barley is an easy crop to grow successfully. On-farm experience over many seasons has shown that it pays to focus on six critical steps:

- 1 GOOD AUTUMN ESTABLISHMENT**  
– variety, seed rate, seed treatment, seedbed & drill timing are all key
- 2 Apply AUTUMN INSECTICIDE TO CONTROL BYDV if required**
- 3 EARLY NITROGEN IS KEY**
- 4 APPROPRIATE GROWTH REGULATION with a programmed approach**
- 5 Use a ROBUST fungicide programme at T1 & T2**
- 6 OPTIMISE combine harvester set-up**

**SEED RATE AND  
DRILLING DATE**

Aim to establish a uniform crop across the whole field (especially in a grass weed scenario). Typically, you should plan to drill hybrid barley at 200-250 seeds per m<sup>2</sup> at normal drill timings (and select a seed rate at the upper end of this range in grass weed situations or tougher conditions).

The traditional window for drilling hybrid barley is mid-September to mid-October, and this still stands. However, delaying the start of drilling by a few weeks may be beneficial for BYDV and grass weed management.



**THE ROCHE APPROACH**

Paul Roche, our Seeds Technical Manager, gives in-season agronomy advice and variety updates for hybrid barley.

For more information see our Roche Approach playlist on our Hybrid Barley page [www.syngenta.co.uk/varieties/hybrid-barley](http://www.syngenta.co.uk/varieties/hybrid-barley)



**MANAGING YOUR HYBRID BARLEY CROP DURING THE SEASON**

**NITROGEN TIMING**

Once you have successfully established your hybrid barley crop, you should focus on growing the canopy and maintaining green leaf area for as long as possible. To do this, you need to ensure you optimise your nitrogen, PGR and fungicide timings. A typical Syngenta programme is summarised here.

Consult a FACTS qualified advisor for specific advice for each field.

SPLIT	TIMING	% OF TOTAL TARGET N
1	Early spring (approx. GS25) as soon as application is possible	30
2	At or just before GS31 (typically 3-4 weeks after application)	50
3	2-3 weeks after second application	20

**FUNGICIDE AND PGR TIMINGS**

TIMING	FUNGICIDE	PGR	WHY?
T0 (GS30)	KAYAK® 0.5-0.7 l/ha (plus partner if mildew or rust are established)	MODDUS 0.1-0.2 l/ha + chlormequat*	Remove overwintered disease in lush crops, protect new growth and help with rooting
T1 (GS31-32)	Triazole/SDHI/ strobe/cyprodinil	MODDUS 0.1-0.2 l/ha + chlormequat*	Keep lower leaves green, keep out disease and aid stem strengthening
T2 (GS39-59)	ELATUS Era 0.7 l/ha + folpet	Terpal 0.75-1.5 l/ha <b>Do NOT apply after GS39</b>	Drive final yield and maintain specific weight, reduce brackling

\*chlormequat at ~50% dose rate. Various products and formulations exist. Rates dependent on situation. Consult a BASIS qualified advisor for specific advice for each field.



## SY Thunderbolt

Hyvido®

**NEW ON THE RECOMMENDED LIST THIS YEAR!**  
THE VARIETY WITH CONSISTENTLY HIGH REGIONAL YIELDS. STRONG ON HEAVY LAND, GREAT GRAIN QUALITY AND EARLY TO MATURE.

- TOP CHOICE FOR THE NORTH AND WEST**

Fantastic yields (107%) in the North – 10 t/ha every year
- STRONG ON HEAVY LAND**

Performs particularly well on heavy land
- EARLY TO MATURE**

Early ripening means following WOSR crops can be drilled earlier to increase yield potential
- HYVIDO BEATS GRASS WEEDS**

Grass weed suppression uniquely powered by hybrid vigour and superior plant architecture

**BREEDING INSIGHTS**  
SY THUNDERBOLT is our newest variety showing strong yields across all regions and has performed well [111%] on heavy soils. It is also early maturing to help with harvest flexibility.

SARAH HUGHES, Syngenta

## SY Kingston

Hyvido®

**NEW ON THE RECOMMENDED LIST THIS YEAR!**  
A STRONG PERFORMER FOR THE NORTH, WEST AND ON LIGHT LAND. EARLY MATURING AND GREAT GRAIN QUALITY.

- TOP CHOICE FOR THE NORTH AND WEST**

Fantastic yields (107%) in the North – 10 t/ha+ yields every year on average
- STRONG ON LIGHT LAND**

Performs particularly well on light land
- EARLY TO MATURE**

Early ripening means following WOSR crops can be drilled earlier to increase yield potential
- HYVIDO BEATS GRASS WEEDS**

Grass weed suppression uniquely powered by hybrid vigour and superior plant architecture

**BREEDING INSIGHTS**  
SY KINGSTON is a fantastic variety for the North and West and is great on light land too. This variety has also produced an average yield of 10.4 t/ha in trials over the past 4 seasons. Very early ripening provides an opportunity to spread workload at harvest and drill following oilseed rape crops earlier.

PAUL ROCHE, Syngenta

## SY Kingsbarn

Hyvido®

**THE HIGH-PERFORMING ALL-ROUNDER.**  
IDEAL CHOICE FOR ALL REGIONS WITH GREAT GRAIN QUALITY AND EASY TO GROW.

- GREAT CHOICE FOR ALL REGIONS**

Reliable 5-year high yields across all regions
- SUPERB GRAIN QUALITY**

Consistently delivers outstanding grain quality every year
- GOOD RESISTANCE TO DISEASE AND LODGING**

Good all-round resistance to disease and lodging
- HYVIDO BEATS GRASS WEEDS**

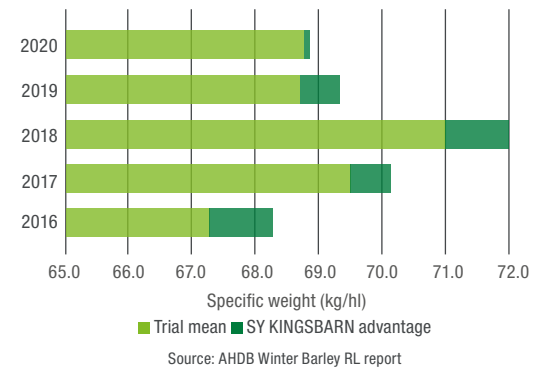
Grass weed suppression uniquely powered by hybrid vigour and superior plant architecture

**BREEDING INSIGHTS**  
SY KINGSBARN is the next step forward in hybrid technology. This variety combines increased yield with improved agronomics: it's a great package.

PAUL ROCHE, Syngenta

### WHAT MAKES SY KINGSBARN YOUR VARIETY OF CHOICE?

Apart from being a top yielding variety, SY KINGSBARN has consistently delivered high specific weights every year for the past five years (even in a difficult year like 2016).





**PROVEN ON FARM PERFORMANCE. STRONG TRACK RECORD OF GRASS WEED SUPPRESSION AND WET WEATHER DISEASE RESISTANCE.**

- PROVEN TRACK RECORD ON-FARM**  
 Consistently high performance across all regions and soil types over many years
- TRIED & TRUSTED**  
 Improved specific weight for better grain quality
- WET WEATHER DISEASE PROTECTION**  
 Good all-round resistance to disease and lodging
- HYVIDO BEATS GRASS WEEDS**  
 Grass weed suppression uniquely powered by hybrid vigour and superior plant architecture

**BREEDING INSIGHTS**  
 BAZOOKA performs particularly well in the East where grass weeds are often an issue. The powerful spring growth of this variety boosts its grass weed suppression. If you are looking for a variety with a proven track record then BAZOOKA is the one for you. PAUL ROCHE, Syngenta

**HYBRID BARLEY AS A TOOL FOR MANAGING "THE TROUBLESOME TRIO"**

Over the past few years we have shown that hybrid barley can be an integral part of your strategy for managing grass weeds. Trials have shown that hybrid barley offers better suppression of black-grass, brome and ryegrass than winter wheat and 2-row winter barley. This benefit, which is uniquely powered by hybrid vigour, is a common feature of all of our hybrid varieties.

- BLACK-GRASS IS COMPETITIVE**
- BROME IS VERY COMPETITIVE**
- RYEGRASS IS VERY COMPETITIVE**

**GRASS WEED SUPPRESSION: HYBRID BARLEY WORKS WELL AGAINST THE "TROUBLESOME TRIO"**



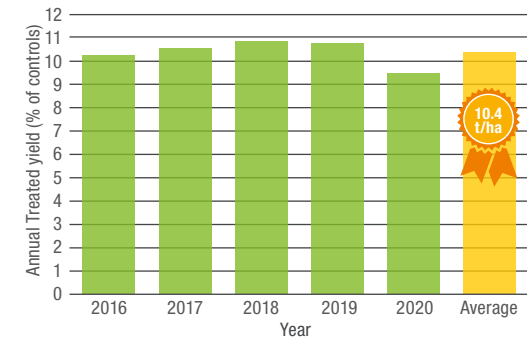
**THE NUMBER 1 VARIETY FOR UK YIELD. TOP CHOICE FOR THE EAST AND STRONG ON LIGHT LAND.**

- TOP CHOICE FOR THE EAST**  
 Highest yielding winter barley variety in the East
- STRONG ON LIGHT LAND**  
 Performs particularly well on light land
- PROVEN TRACK RECORD ON-FARM**  
 Consistently high performance across all regions and soil types over many years
- HYVIDO BEATS GRASS WEEDS**  
 Grass weed suppression uniquely powered by hybrid vigour and superior plant architecture

**BREEDING INSIGHTS**  
 BELMONT is an exceptional variety that offers best in-class yields in the East. BELMONT will have a special appeal to barley growers looking for a reliable variety that will perform in black-grass areas. SARAH HUGHES, Syngenta

**BELMONT IS YOUR RELIABLE CHOICE**

BELMONT, a commercially-proven variety with a strong track record, has been the UK number 1 for yield over the past 5 years. To ensure you give it the best opportunity to deliver, you should focus on optimising the nutrition, PGR and fungicide programme so that it can achieve its full potential on farm.



Source: AHDB Winter Barley Recommended List 2021/22

**WHERE DOES BELMONT GROW BEST?**

BELMONT has shown strong performance in all regions and all soil types in the UK. It will help you to achieve high yields with confidence on your farm.







# GROWING FOR END MARKETS



**HIGH YIELD, RESILIENT AND EASY TO MANAGE. ROBUST DISEASE AND LODGING PROFILE FOR MANAGEMENT FLEXIBILITY.**

- GREAT CHOICE FOR THE WEST AND HEAVY LAND** - Proven and reliable on-farm performance in the UK but especially in the West
- LODGING RESISTANCE** - The hybrid with the best lodging resistance and shortest straw to reduce risk and protect returns
- GOOD DISEASE RESISTANCE** - Good all-round resistance to disease and lodging
- HYVIDO BEATS GRASS WEEDS** - Grass weed suppression uniquely powered by hybrid vigour and superior plant architecture

**BREEDING INSIGHTS**  
The hybrid variety with high yields that is easy to manage. The strong disease resistance scores and shorter straw make this the hybrid of choice for those situations where spray timings may be compromised.  
**JAMES TAYLOR-ALFORD, Syngenta**



**THE HIGH YIELDING VARIETY FOR ALL REGIONS. GOOD DISEASE RESISTANCE AND GRASS WEED SUPPRESSION.**

- HIGH YIELDS FOR ALL REGIONS** - Reliable 5-year high yields across all regions
- CONSISTENT PERFORMANCE ACROSS REGIONS** - Consistently delivers high yields to improve return on investment
- GOOD DISEASE RESISTANCE** - Good all-round resistance to disease and lodging
- HYVIDO BEATS GRASS WEEDS** - Grass weed suppression uniquely powered by hybrid vigour and superior plant architecture

**BREEDING INSIGHTS**  
SY BARACOODA has excellent treated and untreated yields. Consistent performance and good agronomics make this variety an exciting option for growers.  
**SARAH HUGHES, Syngenta**



**NEW! TOUGHEN UP YOUR DISEASE PROTECTION. GREAT CHOICE FOR THE NORTH WITH EXCEPTIONAL RHYNCHOSPORIUM RESISTANCE.**

- GREAT CHOICE FOR THE NORTH AND ON LIGHT LAND** - Superb yields in the North (10 t/ha+) coupled with strong light land performance
- ROBUST AGRONOMICS ADD FLEXIBILITY** - Exceptional *Rhynchosporium* resistance provides a strong foundation for disease control
- WET WEATHER DISEASE PROTECTION** - Good all-round resistance to disease and lodging
- HYVIDO BEATS GRASS WEEDS** - Grass weed suppression uniquely powered by hybrid vigour and superior plant architecture

**BREEDING INSIGHTS**  
SY ARMADILLO offers outstanding protection against *Rhynchosporium* in combination with high yield (especially in the North), low brackling and good grain quality.  
**PAUL ROCHE, Syngenta**



**EXCEPTIONAL GRAIN QUALITY, CONSISTENT REGIONAL SPECIFIC WEIGHT AND GOOD WET WEATHER DISEASE RESISTANCE.**

- SUPERB GRAIN QUALITY** - Superb grain quality, sets the new standard for 6-rows
- CONSISTENT PERFORMANCE ACROSS REGIONS** - Consistently delivers high yields to improve return on investment
- WET WEATHER DISEASE PROTECTION** - Good all-round resistance to disease and lodging
- HYVIDO BEATS GRASS WEEDS** - Grass weed suppression uniquely powered by hybrid vigour and superior plant architecture

**BREEDING INSIGHTS**  
This variety has outstanding specific weight and yields 5% more than KWS Cassia. An excellent combination.  
**SARAH HUGHES, Syngenta**



## ROOTING AND ESTABLISHMENT

SEASONS CONTINUE TO BRING EXTREMES OF WEATHER, FROM THE 'BEAST FROM THE EAST', TO DROUGHTS AND FLOODING.

When you purchase your seed, you don't know what conditions your seed will be drilled into, or the weather conditions for the remainder of the season.

Fast emergence, good rooting and strong early crop development help to build a more resilient crop that can better cope with whatever the season throws at it.



### ESTABLISHMENT CONSIDERATIONS



**Unpredictable weather** can have an impact on the health of the crop throughout the season.



**Drilling date** impacts temperature, moisture and availability of sunlight, affecting germination and establishment speed but also risks from certain pests.



**Soil types** pose different challenges:

- Light land – less able to deal with drought
- Heavy land – more difficult to cultivate for an optimum seedbed



**Previous cropping** can impact on the risk of certain diseases. For example, with second cereals, the risk of Take-all increases.



**Grass weed mitigation** involves delaying drilling to allow time for a flush of weeds and a good stale seedbed, but also balancing this with establishing a competitive crop.



**Aphid avoidance** through delayed drilling can help to reduce the risk of BYDV.

### SEED- AND SOIL-BORNE DISEASES

Seed- and soil-borne pathogens present the first risk in the cropping year. They have the potential to reduce the number of healthy plants able to establish and are a long-term risk to yield and quality.

We are able to protect against them through effective seed treating.

#### KNOW YOUR RISK

It is important to understand the quality of your seed by testing for seed-borne diseases.

Below are the key diseases to test for in wheat and barley.

#### WHEAT



Bunt



Microdochium

If you suspect a further problem in wheat, test for *Fusarium* seedling blight, *Septoria nodorum*, ergot and loose smut.

#### BARLEY



Leaf stripe



Loose smut

Loose smut and leaf stripe can seem to be of a low risk if the number of infected seeds are low however, disease levels will increase rapidly if seed is not treated.

If you suspect a further problem in barley, test for ergot, *Microdochium* and *Fusarium* seedling blights and covered smut.



Remember, having clean seed is one aspect of minimising disease risk. Don't overlook the risk in your soil.







## ROOTING AND ESTABLISHMENT

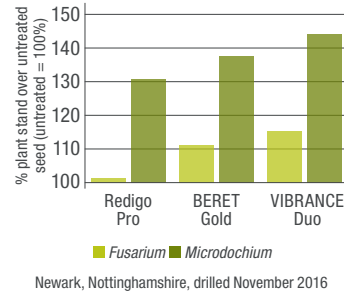
In cereals a fungicidal seed dressing provides protection from seed- and soil-borne diseases, helps to ensure good crop establishment and lays the foundations to maximise crop yield and quality.

### CHOOSING A WHEAT SEED TREATMENT

BERET® Gold provides excellent overall seedling disease protection. It is especially strong on *Fusarium* and *Microdochium* which can significantly impact crop establishment.

However, VIBRANCE Duo is the best technical product against seed- and soil-borne diseases. It gives fast emergence, proven rooting benefits and strong early crop development which can help to build a more resilient crop to cope with stress.

### FUSARIUM AND MICRODOCHMIUM SEED INFECTED TRIALS



### WHEN TO UPGRADE TO VIBRANCE DUO

- 0.34 t/ha INCREASE IN YIELD**  
Faster, improved emergence when delaying drilling
- 0.38 t/ha INCREASE IN YIELD**  
Improved rooting for better drought tolerance on light soils
- 0.51 t/ha INCREASE IN YIELD**  
Improved establishment and rooting an excellent partner for Latitude
- 0.34 t/ha INCREASE IN YIELD**  
Faster, improved emergence when delaying drilling

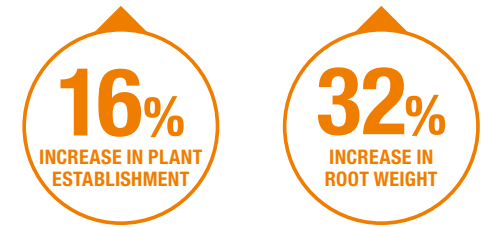
Delayed drilling = sites drilled after the first week of October  
 Delayed drilling: based on 34 sites in 2018.  
 Light land: based on 17 sites in 2018.  
 2nd wheats: based on 13 sites in 2018.  
 Yield benefit of VIBRANCE Duo over SPD.

### BUILDING A RESILIENT CROP

Whether you plan to drill early or late, at the time you buy your seed you don't know what the weather has in store, but you can mitigate against adverse conditions.

This season we have experienced a very wet winter followed by very cold and dry conditions into spring which has led to stressed crops.

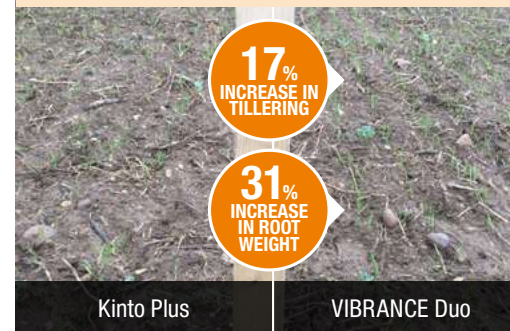
Treating seed is the first step in building a more resilient crop and using VIBRANCE Duo can improve establishment and rooting as can be seen below.



VIBRANCE Duo vs Redigo Pro establishment and rooting comparisons across 49 sites from seasons 2018 and 2019.

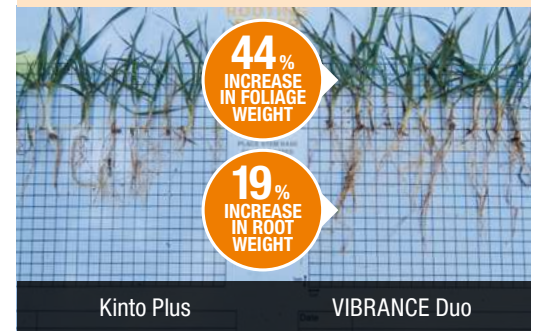
Whether drilling early or late, VIBRANCE Duo has been proven to consistently give establishment and rooting benefits, helping to build a more resilient crop no matter the season.

### WINTER WHEAT IMPROVED ESTABLISHMENT



Newark, Nottinghamshire SY INSITOR drilled 15th October 2020.

### WINTER WHEAT INCREASED ROOTING



Banbury, Oxfordshire SY INSITOR drilled 14th October 2020.

### STEWARDSHIP

**Let's protect our available chemistry and go back to basics:**

- TARGET YOUR CHEMISTRY** – some diseases cannot be controlled by foliar sprays. Seed treatments are highly targeted so the field only receives a small amount of active ingredient. Choose your chemistry wisely.
- ALWAYS READ AND FOLLOW THE LABEL** – adhere to cut-off dates, drilling depth and safety advice.
- ENSURE SAFE HANDLING OF TREATED SEED** – always wear the right PPE according to label requirements.
- REDUCE DUST** – reduce the risk of dust by avoiding filling the hopper too quickly or from a height. Avoid shaking seed bags as they empty. Avoid breathing in dust and ensure all equipment is cleaned following use.
- ENSURE DRILLING IS ON TARGET** – ensure no seed is released in transit to the field and that the drill vents are in the soil and the drill is moving forward before the seed is released.
- MANAGE SPILL RISKS** – carry a spill kit containing a spade and seed bag when drilling. Fill the drill in an area where a spill can be easily cleared up. Small spills can be buried, larger spills will require clearing up into a bag for safe disposal later.
- ENSURE ALL TREATED SEED IS BURIED** – during drilling visually check difficult areas of the field, such as corners and headlands to ensure all treated seed is buried to protect wildlife.

## CHOOSING A BARLEY SEED TREATMENT

VIBRANCE Duo now has registration for use as a seed treatment for winter and spring barley for the control of seed-borne *Microdochium* seedling blight, covered smut and moderate control of leaf stripe.

As in wheat, the VIBRANCE effect can also be seen in barley: VIBRANCE Duo has excellent establishment and rooting benefits.

### SUMMARY OF VIBRANCE DUO ACTIVITY IN BARLEY

LATIN NAME	COMMON NAME	Active ingredient (Ai)	
		SEDAXANE	FLUDIOXONIL
<i>Microdochium nivale</i>	Snow mould	3	3
<i>Fusarium spp.*</i>	Foot rot*	1	3
<i>Ustilago hordei</i>	Covered smut	3	3
<i>Ustilago nuda#</i>	Loose Smut #	2	1
<i>Pyrenophora graminea</i>	Leaf Stripe	2	2

Level of control: ■ Excellent ■ Good ■ Weak

\* *Fusarium spp.* control in barley is not claimed on the VIBRANCE Duo product label. Trials have shown that BERET Gold (fludioxonil) in barley is very effective on the disease so control is likely.

# = Loose smut control is not claimed on the VIBRANCE Duo label but trials have shown Sedaxane to have good activity.

In higher risk loose smut situations Syngenta recommend co-application with a loose smut active partner, such as Rancona I-MIX.

#### WHEN IS THE RISK OF LOOSE SMUT HIGHER?

- Untested or loose smut infected farm saved seed.
- When planning to farm save your crop.

### WINTER BARLEY IMPROVED ESTABLISHMENT

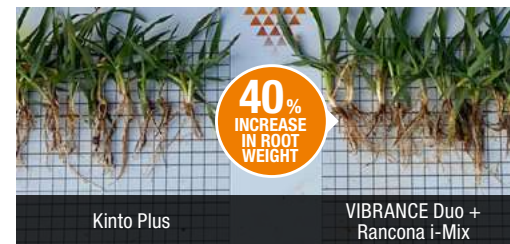


Brandon, Suffolk, SY THUNDERBOLT hybrid winter barley drilled 18th September 2020. Picture taken 9th October 2020 and rooting assessed 15th March 2021.

### IMPROVED ROOTING IN WINTER BARLEY

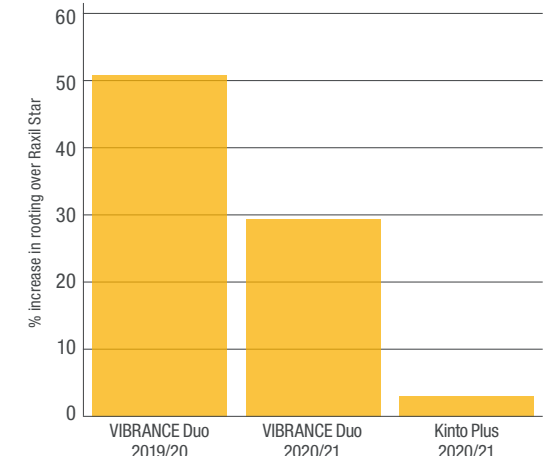


Doncaster, Yorkshire, sandy loam soil, SY THUNDERBOLT hybrid winter barley drilled 6th October 2020. Picture taken 19th April 2021.



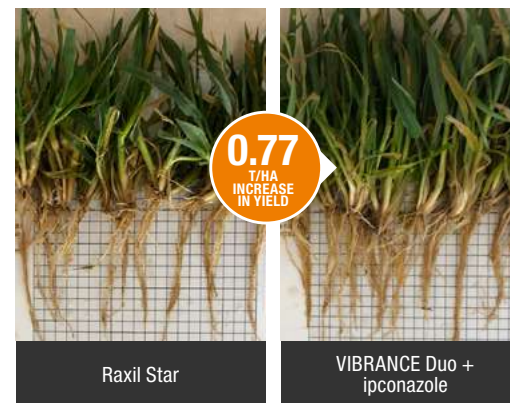
Shropshire, light soil, SY KINGSBARN hybrid winter barley, drilled early October. Assessed 2nd March 2021.

Trials have shown excellent rooting benefits in barley with both VIBRANCE Duo alone and co-applied with a loose smut active partner.



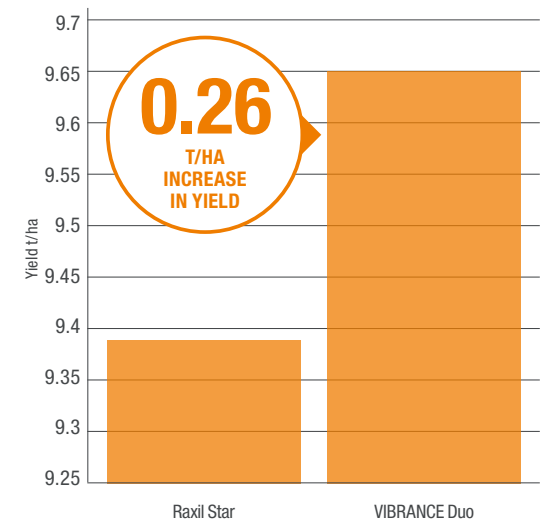
Winter barley average yield data across 29 sites (13 hybrid barley and 16 winter barley).

### INCREASED YIELD FROM VIBRANCE DUO



VIBRANCE Duo 36% increase in rooting and 65% increase in foliage over Raxil Star. 0.77 t/ha increase in yield over Raxil Star. Berwick, SY KINGSBARN winter barley drilled 12th September 2019. Assessed 19th March 2020.

#### Yield difference of VIBRANCE Duo compared to Raxil Star



Hybrid winter barley average yield data across 13 sites 2019-2020.



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SCAN ME

HALLMARK ZEON® (MAPP 12629) contains lambda-cyhalothrin, VIBRANCE® Duo (MAPP 17838) contains fludioxonil and sedaxane, MODDUS® (MAPP 15151) contains trinexapac-ethyl, ELATUS™ Era (MAPP 17889) contains benzovindiflupyr and prothioconazole and KAYAK® (MAPP 14847) contains cyprodinil, BERET® Gold (MAPP 16430) contains fludioxonil and are Registered Trademarks of a Syngenta Group Company. All other brand names used are Trademarks of other manufacturers in which proprietary rights may exist. 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.syngenta.co.uk](http://www.syngenta.co.uk)  
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Syngenta UK Ltd. Registered in England No. 849037. CPC4, Capital Park, Fulbourn, Cambridge CB21 5XE.

Tel: 01223 883400 Fax: 01223 882195  
Email: [customer.services@syngenta.com](mailto:customer.services@syngenta.com)

Technical Enquiries Tel: 0800 169 6058

  [syngenta.co.uk](http://syngenta.co.uk)

